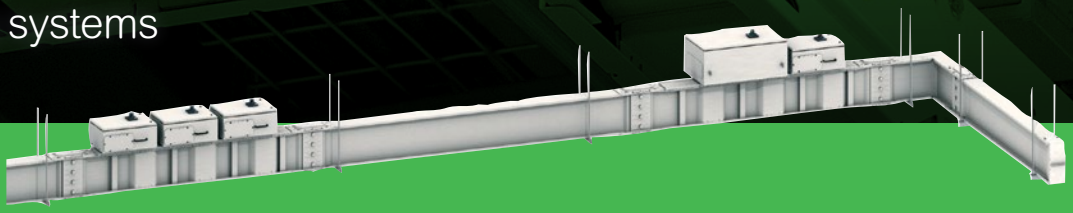
Line Series

Canalis KTA 800 - 5000 A

Catalogue 2022

Busbar trunking systems
Aluminium



se.com

Life Is On Schneider Electric

Green Premium™

An industry leading portfolio of offers delivering sustainable value

Green Premium™

More than 75% of our product sales offer superior transparency on the material content, regulatory information and environmental impact of our products:

- RoHS compliance
- REACh substance information
- Industry leading # of PEP's*
- Circularity instructions

Discover what we mean by green
Check your products!

The Green Premium program stands for our commitment to deliver customer valued sustainable performance. It has been upgraded with recognized environmental claims and extended to cover all offers including Products, Services and Solutions.

CO_2 and P&L impact through… Resource Performance

Green Premium brings improved resource efficiency throughout an asset's lifecycle. This includes efficient use of energy and natural resources, along with the minimization of CO_2 emissions.

Cost of ownership optimization through… Circular Performance

We're helping our customers optimize the total cost of ownership of their assets. To do this, we provide IoT-enabled solutions, as well as upgrade, repair, retrofit, and remanufacture services.

Peace of mind through… Well-being Performance

Green Premium products are RoHS and REACh compliant. We're going beyond regulatory compliance with step-by-step substitution of certain materials and substances from our products.

Improved sales through… Differentiation

Green Premium delivers strong value propositions through third-party labels and services. By collaborating with third-party organizations we can support our customers in meeting their sustainability goals such as green building certifications.

*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)

General content
Canalis KTA

Introduction

Canalis the ideal offer to match with your needs

P58950-90

+70,000

More than 70,000 km of Canalis busbar trunking has been sold around the world.

A total coordination with the Schneider Electric system

- Canalis is part of a comprehensive offering of Schneider Electric products designed to operate together.
- It guarantees and enhances the safety of people and equipment, and provides installation continuity of service, upgradeability and simplicity.
- This concept covers all low voltage electrical distribution components.
- The result is an optimised electrical installation with even higher performance through full electrical, mechanical and communication compatibility.
- It is perfectly suited to traditional applications (factories, warehouses, etc.)and to the distribution of electrical power from the incoming transformer on through to all types of loads in offices, commercial premises, laboratories, etc.

PD202088-104_r

Canalis KT provides you …

… more flexibility.

… ease of connection with the "plug and play" transformer and switchboard connections.

… more assistance with our teams ready to assist you throughout your project.

Introduction

A Canalis installation for every distribution system

Schneider Electric offers different distribution systems to fit all your operating needs.

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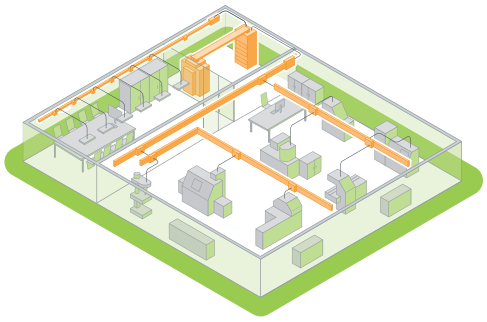

Decentralized distribution

For manufacturing industries

- Mechanical
- Textiles
- Lumber
- Injection moulding
- Electronics
- Pharmaceuticals
- Livestock, etc.

Decentralized distribution lets you

- Design installations without layout details
- Upgrade without shutting down production
- Get systems up and running sooner thanks to faster installation
- Generate savings depending on the number of loads.

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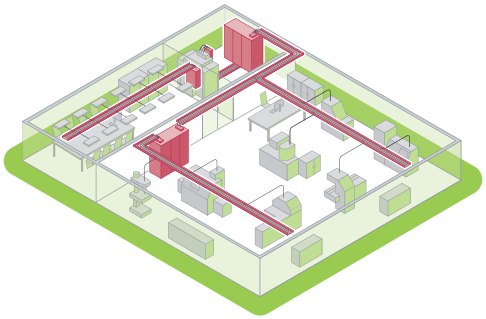

Centralized distribution

For all continuous processes

- Cement plants
- Oil and gas
- Petrochemicals
- Steel
- Paper, etc.

Centralized distribution offers

- Continuity of service
- Combined distribution of power, control and monitoring circuits
- Supervision, etc.

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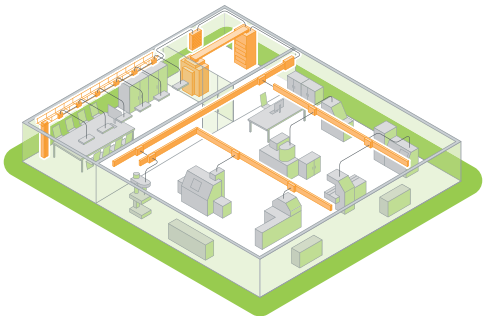


Combined distribution

Where the advantages of both centralized and decentralized distribution are required.

Commercial and service buildings

- Offices
- Stores
- Hospitals
- Exhibition halls, etc.

Infrastructures

- Airports
- Telecommunications
- Internet data centres
- Tunnels, etc.

Industrial facilities

- Pharmaceuticals
- Food processing, etc.

The Canalis decentralized distribution concept

Electrical power available at all points within the installation

Total coordination of the Schneider Electric system provides maximum safety of life and property, continuity of service, upgradeability and ease of installation.

Total coordination is made easy by the tables in the "Design Guide".
They help you choose the right combination of circuit breakers and busbar trunking.

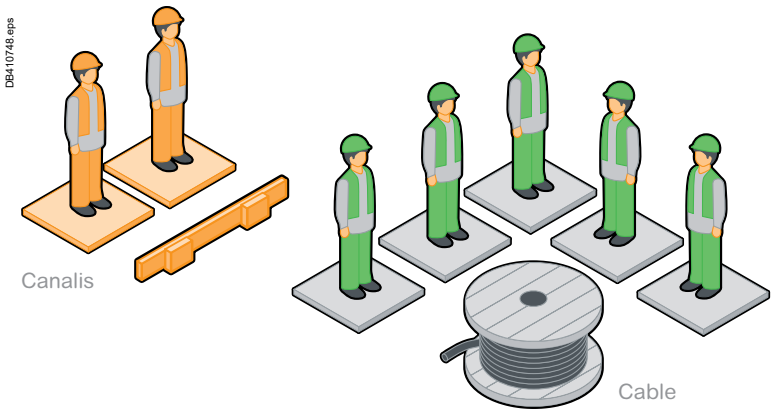
Product characteristics are verified by calculations and tests carried out in our laboratories.

Exclusive features of the Schneider Electric system

A competitive installation

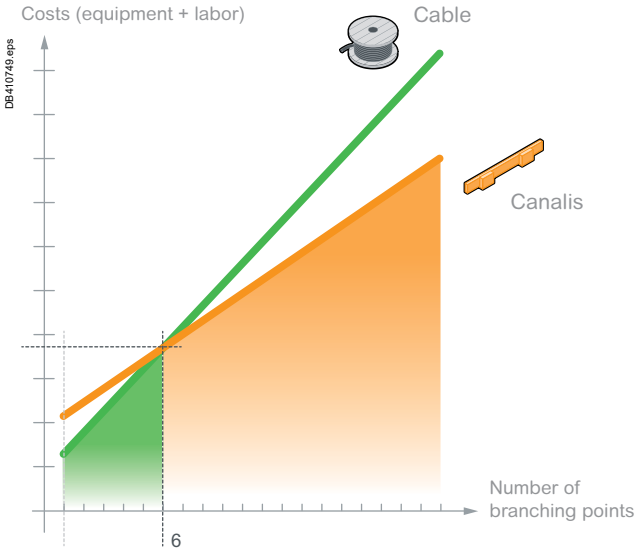
Simplicity, upgradeability, safety and continuity of service and operation.

Savings start as soon as the installation begins. With tap-off points every 3 metres, Canalis busbar trunking reduces installation costs.
Given the low cost of adding new circuits, savings increase as the number of loads increase, a natural consequence of the growth of your business.



Comparative investment

of 400 A electric power system equipment.



Introduction

The Canalis decentralized distribution concept

Upgradeable during operation

In decentralized distribution, evolving operating requirements and costs are integrated right from the start.

- The addition, relocation or replacement of load equipment can be carried out quickly, without de-energizing the supply trunking or shutting down operation.
- The cost of making such changes is greatly reduced:
  - loads are located close to supply points
  - tap-off points are always available
  - tap-units can be reused or new ones added quickly for load.

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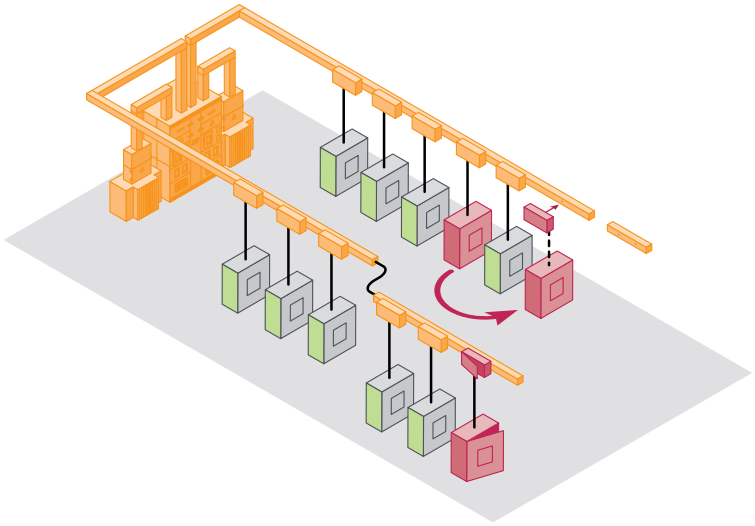


Reusable in the event of major changes

When making major modifications to your installation, the existing trunking can be easily dismantled and reused.

Product lifecycle

Power distribution is a major challenge in the construction and refurbishment of commercial, industrial buildings and data centers.

The choice of device is fundamental as it will have an effect on the building's lifecycle. Infrastructures must comply with existing requirements while being flexible, networked and smart. The Canalis concept is undoubtedly the best solution to meet the needs of today and the challenges of tomorrow.

Simple to estimate

Designing Canalis installations is straightforward as there is no need to know the exact location, nor the power rating of the loads to be supplied.

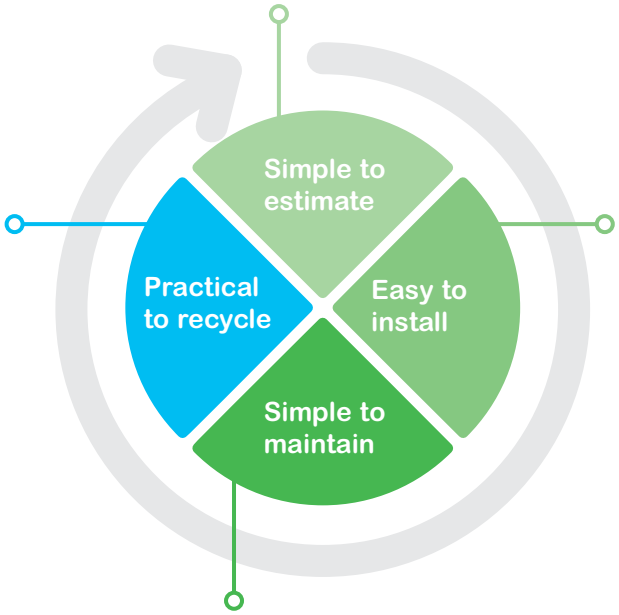
It is therefore very quick to cost the distribution functions. Moreover, Canalis's flexibility means you can invest in existing needs without adversely affecting future expansion.

Practical to recycle

Over the last 20 years, recycling has become a major challenge for industry.

The composition of Canalis ranges **guarantees a 95% recycling rate.**

But the Canalis offers go one better… if a site is being restructured or enlarged, **the products can simply be removed and reinstalled in their new environment.**



Easy to install

The compact nature of Canalis makes it easy to integrate in all parts of the building.
Since it is based on a decentralized architecture, Canalis can be installed at the same time as the building is being built, which optimizes site construction schedules.
Because of the delayed differentiation linked to the Canalis architecture, new constraints can be taken into account without adding to the installation time.

Controlling costs
The Canalis ranges are factory-tested, which ensures a very high level of quality on site and considerably improves the success of site acceptance tests.

Simple to maintain

- **No maintenance is required on the Canalis electrical contacts.**
- The clarity of the Canalis architecture simplifies building maintenance and upgrades:
  > enlarging office space,
  > adding check-outs in a supermarket…
  Decentralized distribution ensures continuity of service; when associated with a 100% maintained or non-maintained supply, the essential functions are guaranteed:
  > maintaining the cold chain in a hypermarket,
  > lighting system in a car park…

Introduction

Canalis, in total harmony with the environment

Safety of life and property

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With Canalis, no toxic emission in case of fire

The busbar trunking has a low combustible load.Its construction uses very little consumable material and is halogen free. In the event of a fire, the busbar trunking does not emit any gas or toxic smoke.

The busbar trunking helps prevent the propagation of a fire through partition walls and floors.

Halogen-sensitive applications

- Public buildings (infrastructures, hospitals, schools, etc.).
- Buildings with evacuation difficulties (high-rises, ships, etc.) and service-activity buildings.
- Sensitive processes (production of electronic components, etc.).

Canalis contains no PVCs

When PVCs burn, they produce large amounts of smoke that can be a serious safety hazard.

- **Reduced visibility:**
> risk of panic
> complicates rescue work.
- **Smoke toxicity:**
> hydrogen chloride gas (highly toxic)
> carbon monoxide (danger of asphyxiation).

Example:

Consequences of a fire in a 100 m² office with electrical distribution by cables.
200 kg of cables (i.e. 20 kg of PVC) produces:
- 4400 m^3 of smoke.
- 7.5 m^3 of hydrochloric acid.
- 3.7 kg of corroded steel.

Health

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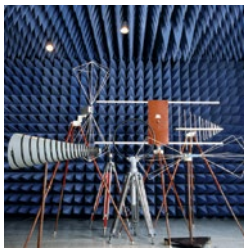


Canalis reduces the risk of exposure to electromagnetic fields

According to the WHO (World Health Organisation), exposure to electromagnetic fields can be a health hazard starting at levels as low as 0.2 micro-Teslas and could represent a long-term risk of cancer. Some countries have created standards that stipulate limits (e.g. 0.2 µT at 1 metre in Sweden).

All electrical conductors generate magnetic fields proportional to the distance between them. The design of Canalis busbar trunking with tightly spaced conductors in a metal enclosure helps to considerably reduce radiated electromagnetic fields.

The electromagnetic field characteristics of Canalis busbar trunking are well-defined and measurements show that they are far below potentially dangerous levels.

You will find the magnetic induction values of our products on the "Characteristics" pages.

Canalis, in total harmony with the environment

Environment

Canalis is fully recyclable

- Canalis busbar trunking can be reused. Canalis busbar trunking is designed for a long service life and can easily be dismantled, cleaned and reused.
- All packaging materials can be recycled (cardboard or recyclable polyethylene film).
- All Canalis products are designed for safe end-of-life recycling. PVC, on the other hand, requires neutralisation of the hydrochloric acid produced using lime and generates dioxins that are extremely toxic.

Example:

1 kg of PVC generates 1 kg of waste.

Canalis helps conserve natural resources

The depletion of raw materials (copper, plastics, etc.) is one of our ongoing concerns. For this reason, we have optimised the used of all materials used to make our busbar trunking.

- Reduction of dangerous or polluting materials. We design our products to meet future European directives.
- Reduction in the weight of insulating materials.
- Reduction in the use of plastics for improved fire performance: less energy released during combustion, thereby limiting propagation and facilitating extinction (lower calorific value).

Conservation of natural resources

Canalis reduces your line losses by 20 %

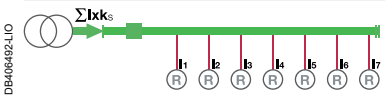
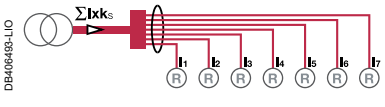
Canalis divides your consumption of plastic by a factor of four

The cost of an electrical installation includes the initial investment for the equipment and its installation, the cost of maintenance and the cost of energy losses during operation.

The concept of decentralised distribution is a way to merge all the circuits in one and thus to reduce to the maximum the low cross-section lengths and the weight of insulating materials.

Example:

34 m of Canalis KS 250 A trunking equipped with fourteen 4-pole 25 A feeders.

Type of distribution	Insulation	Consumption
DECENTRALISED		
	 23 kg	 1600 Joules
K_S: diversity coefficient = 0.6		
CENTRALISED		
	 90 kg	 2000 Joules
Ks: diversity coefficient = 0.6		

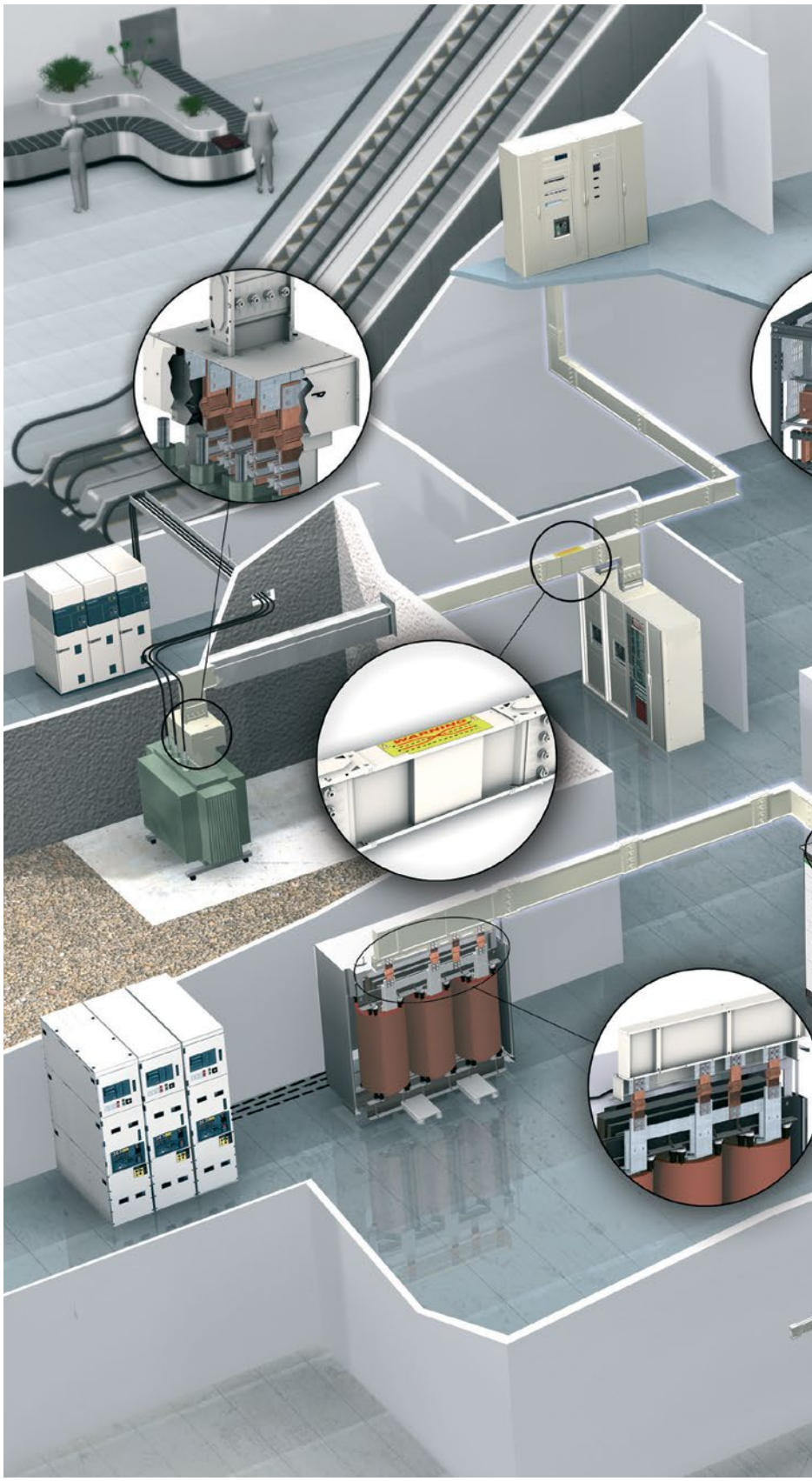
Introduction

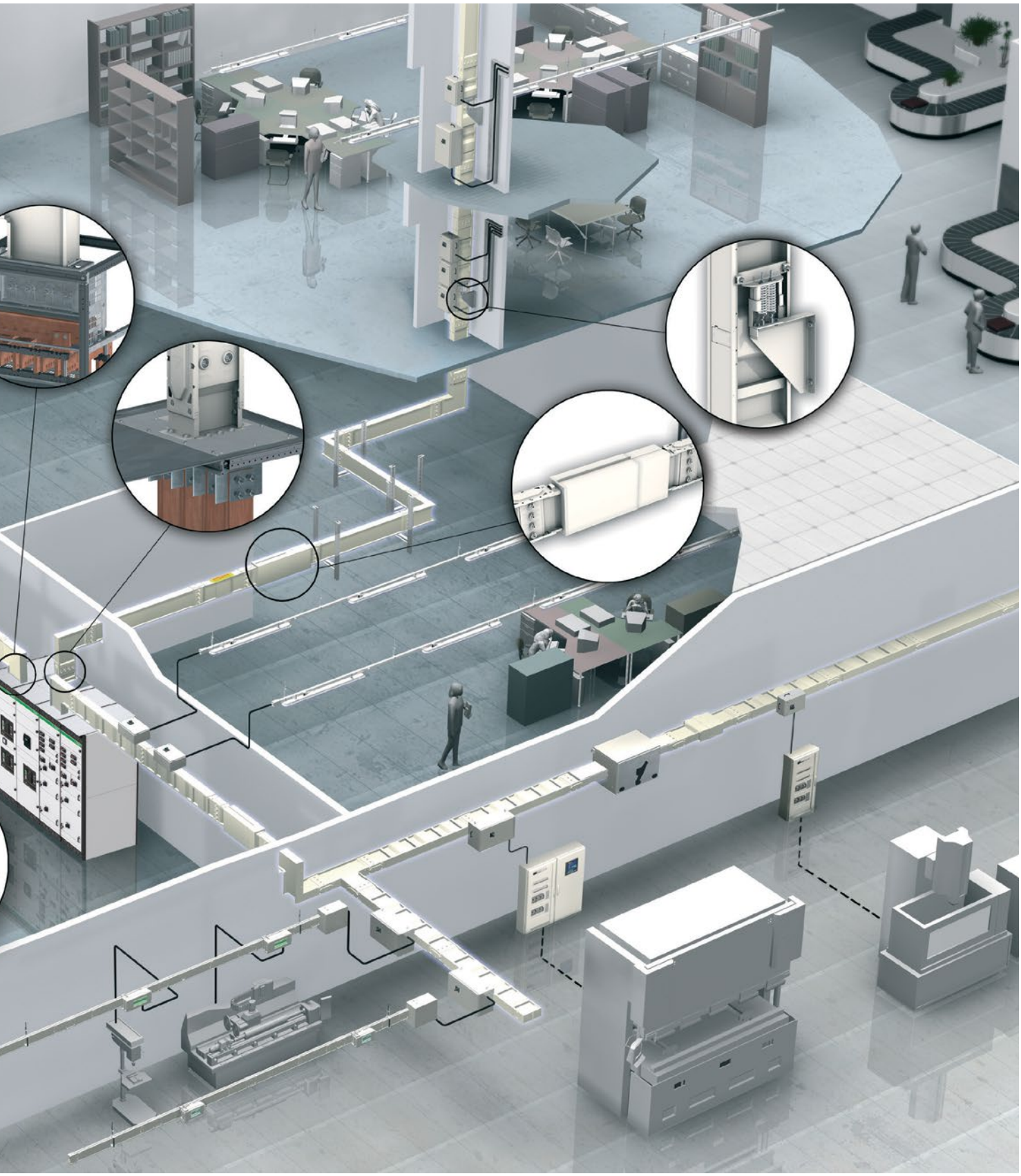
Canalis®

From the transport to the distribution...

Canalis is the core of your installation

DB411145





Introduction

Canalis KT, a display of advantages

A compact solution

DB406527

- The compact size of Canalis KT means it takes up very little space in the building:

> used as a rising main, it takes up only a minimum of space

> used for horizontal distribution, it fits easily into the building's structure (false floors, false ceilings, service shafts, etc).

- Changes in direction have been designed to optimise the space taken up, contrary to an equivalent installation using cables which requires large bending radii.
- Tap-off units, complete with protective devices, are fitted along the entire length of the busbar trunking thus reducing the floor area taken up by the electrical distribution switchboards.

A simple and economical system

PD202385_r

- The design study is easy to perform as it does not require a detailed layout of each load. Equipment choice is pre-determined and optimised.
- Installing the busbar trunking requires 2 or 3 people only, for a time equivalent to that for installing cableways. The time normally needed for laying cables is therefore saved.
- Connection to the MV/LV substation is made using a quick fitting joint block. The tap-off units can be prepared in the workshop thus reducing on-site time. Their connection to the busbar trunking is done in a single plugging-on operation.
- Installing busbar trunking lengths can be done as and when building work progresses, thus optimising on-site work and allowing possible unexpected events to be anticipated in advance.
- It is also important to note that busbar trunking is a factory tested solution, meaning the time needed for inspecting connections is reduced (visual inspection of tightening torque).

Operating continuity

When working on the electrical installation, the busbar trunking provides immediate readability of the electrical circuit thus allowing the appropriate zone to be quickly identified.

Tap-off units can be plugged-on and off without the need for a shutdown; service continuity is thus irreproachable.

Canalis KT, a display of advantages

Certified installation

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- Busbar trunking temperature rise and short-circuit withstand are known and independent of the installation. Coordination of the Schneider Electric system results in complete control of the electrical network.
- Installation standards UTE C 15-105 chapter B.6.2 and IEC 60364 chapter 5.523.6 stipulate t**hat above 4 parallel cables, it is preferable to use busbar trunking.** Paralleling many cables leads to uneven distribution of currents and the risk of abnormal temperature rise.
- Seismic certification to IEC 60980, Richter scale >7 and MSK 64 severity 9.
- The busbar trunking and tap-off units are designed to guarantee the safety of personnel and equipment:

>plug-on connections to silver-plated copper bars

> bolted connections with tightening torque guaranteed by torque nuts

> foolproof system to avoid the risk of assembly errors

> IP55 certified splash and dust protection

> **sprinkler** resistance test in compliance with Volkswagen specifications (valid only for top-mounted units)

> access to live parts have IPxxD protection (1 mm wire diameter).

Its metal enclosure and high protection degree protect the busbar trunking from all external aggressions (corrosion, rodents, etc).

A large range of tap-off units

Canalis KS tap-off units are fully compatible with Canalis KT:

- They cover all your requirements:
> Canalis KS tap-off units: 63 to 630 A
> Canalis KT tap-off units: 400 to 1250 A.
- They offer circuit breaker or fuse protection.

This offer includes tap-off units that can be fitted with the Transparent Ready system:

- They monitor your installation to avoid overloads, thus ensuring service continuity
- They provide metering to allow accurate management of your electrical distribution network (allocation of costs to each consumer).

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Introduction

Canalis is adapted for all types of buildings

Key points

Office and hospital buildings

- Fire barrier
- Halogen free
- Small size
- Operating continuity

Car industry and industrial buildings

- Operating continuity
- Able to be evolved
- Low voltage drops
- Network readability

Shopping centres, airports and exhibition centres

- Halogen free
- Distribution and metering
- Able to be evolved
- Sprinklers

Internet Data Centers

- Operating continuity
- High tap-off density
- Able to be evolved
- Network compactness and readability

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Image4-300

100144-300

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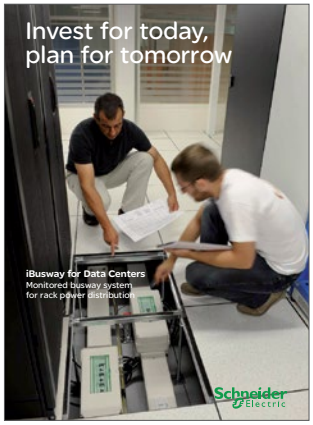
Canalis® Solutions

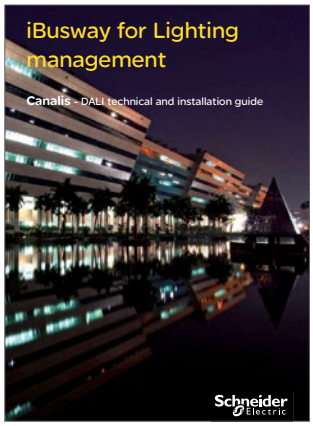
Solution for Data Center

- iBusway for Data Center catalogue: **DEBU028EN**
- iBusway for Data Center brochure: **DEBU027EN**



Solution for lighting management

- iBusway for lighting management: Canalis DALI technical installation guide **DEBU032EN**
- Brochure iBusway for lighting management: **DESWED112002EN**
- Catalogue iBusway for lighting management: **DEBU035EN**



Application datasheets/Guide

- In cruise ships: **DESWED105014EN**
- In livestock production buildings: **DESWED105010EN**
- In logistic centers: **DESWED105011EN**
- In car parks: **DESWED108011EN**
- In greenhouses: **DESWED105013EN**
- In garages: **DESWED106004EN**
- In hypermarkets: **KD0C98CTAHYEN**
- In automotive industry: **KD0C98CTAAUEN**

Introduction

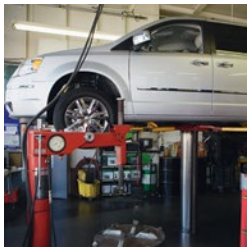
Canalis, the reference all around the world

Tertiary

Applications	Name	Lighting and low current		Medium current		High current	Country
		KBA	KBB	KN	KS	KT	
Offices							
 P117484-32	Air France (headquarters)				●		France
	Allianz				●	●	Germany
	Axa	●			●		France
	Chamber of Commerce					●	Luxembourg
	Commerz Bank		●		●		Germany
	Lexel			●	●		Sweden
	Telefónica					●	Spain
	Trade Center	●				●	Spain
	Tour du RDC				●	●	Tunisia
	Turning Torso				●		Sweden
	Vodafone			●			New Zealand
Internet Data Center							
 38EQI029-32	Banco Commercial Português				●	●	Portugal
	Colt			●		●	France
	Digiplex			●	●		Sweden
	IBM	●		●	●	●	Spain, Italy
	MCI-Worldcom	●		●	●	●	Italy, United Kingdom
Hotels and restaurants							
 032627-32	Hyatt					●	Tunisia
	Mc Donald's						France
	Soldeo Andorra Hotel				●	●	Spain
Hospitals							
 P119196-32	Children Clinic				●	●	Sweden
	Brussels University Hospital						Belgium
	Derby Hospital				●		United Kingdom
	Oran Hospital			●		●	Algeria
	St Joseph Hospital				●		France
	Stockholm Hospital				●		Sweden
	Val de Grâce Hospital				●		France
	Michalon Hospital				●	●	France
	Manussia Hospital				●		Egypt
Supermarkets and hypermarkets							
 054723-32	Alcampo	●		●		●	Spain
	Auchan	●	●	●	●	●	World
	B&Q		●	●	●		United Kingdom
	Carrefour	●	●	●	●	●	World
	Coop	●		●	●		Italy
	Fnac	●				●	Spain, France
	Ikea	●		●	●	●	China, Spain, France, Sweden
	Mark & Spencer	●					Belgium, Spain, United Kingdom
	Toys'R Us				●		Spain

Canalis, the reference all around the world

Industry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Applications	Name	Lighting and low current		Medium current		High current	Country
		KBA	KBB	KN	KS	KT	
Car industry							
	BMW	●	●	●	●		Italy
	Citroën	●	●	●	●	●	China, Spain, France
	Daewo				●		South Korea
	Dacia	●	●	●	●	●	Romania
	Iveco	●		●	●	●	Spain, Italy
	Peugeot		●	●	●	●	China, Spain, France
	Nissan	●	●	●	●	●	Spain
	Renault	●	●	●	●	●	Spain, France, Czech Republic
	Seat						Spain
	Valéo	●			●	●	China, France, Italy, Poland
	Volkswagen		●	●	●		Spain, Germany
Other industries							
Aerospace industry							
	Airbus	●			●	●	Italy
Food-processing industry							
	Coca-Cola	●				●	Spain, Italy, Belgium
	Danone	●			●	●	World
	Pasquier			●	●		France
Livestock production farms and greenhouses							
	Favier henhouse	●					France
	Greenhouse		●				Netherlands
Ceramic industry							
	Esmalglas ceramic	●	●	●	●	●	Spain
Electricity							
	Legrand	●					France, Turkey
Watch-making							
	Rolex	●			●	●	Switzerland
Microelectronics							
	Intel	●	●	●	●		Irelande
	ST Micro-electronique	●		●	●	●	France
Lead industry and water treatment							
	Grundfos				●		China
Industrial technology							
	Bosch	●			●		China
Telephony							
	Phillips				●		Netherlands
	Nokia	●			●		Sweden
Textile industry							
	Louis Vuitton	●		●	●		Spain
	Delta	●		●			Israel

Introduction

Canalis, the reference all around the world

Infrastructure

Applications	Name	Lighting and low current		Medium current		High current	Country
		KBA	KBB	KN	KS	KT	
Airports							
 PD202250_r	Paris Airport	●	●	●	●	●	France
	Cairo Airport				●		Egypt
	Heathrow Airport			●	●	●	United Kingdom
	Hong-Kong Airport					●	China
	Landvetter Airport				●		Sweden
	Arlanda	●			●	●	Sweden
	Satelite Barajas					●	Spain
Marine							
 PD202251_r	Chantier de l'Atlantique				●	●	France
	Meyerwerft				●	●	Germany
Undergrounds							
 PD202252_r	Guanghzou Underground	●					China
	London Underground		●				United Kingdom
	Madrid Underground	●				●	Spain
	Singapore Underground					●	Singapore
Other infrastructures							
	Alexandria Library				●	●	Egypt
	Centre international d'exposition de Suzhou	●			●		China
	CERN				●	●	Switzerland
	Stade de France				●	●	France

Working together on your solution

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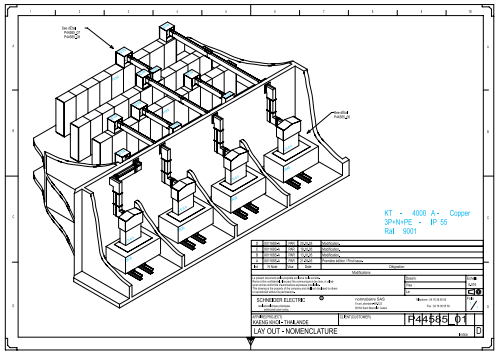


Our teams are available to provide customers with technical assistance throughout the installation of their projects.

Design of electrical distribution architectures:

- design of decentralized transport and distribution systems
- technical and financial optimization of busbar trunking design projects
- transformer/switchboard link
- installation coordination and discrimination.

Full installation drawings*:

- 3D AutoCAD drawings with corresponding parts lists
- 2D drawing with dimensions
- detailed connection drawings.

*All AutoCADs are available on Traceparts.com
BIM Models: are available on se.com.

Site supervision and commissioning assistance.

Training for designers and contractors.

Canalis Busway "Total Solution":

1	2	3	4	5	6	7	8
Project launch	Technical support	PowerSet Canalis Design drawing	Autocad drawing	Production	Project management	On-site instruction and installation	After-sales service

Introduction
Canalis tools and services

Empowering you with smart tools

DB433750

Not only providing experts to support you in your project but also provide you with smart solutions and tools for fully controllable solution.

Through QR codes on packaging, product and JB labellings sticker; customer experience haven't been more easier:

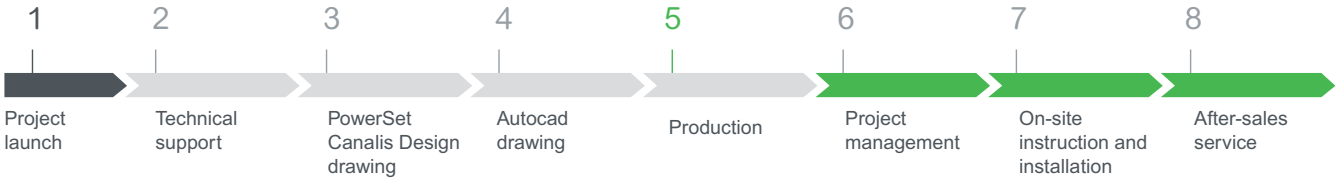
For Installers

- Easily check delivered products and dispatch it at it's future location for faster installation
- More agile access to product and installation instructions
- Easy and remote Installation tasks progression follow up through facility expert
- Can easily access all information needed for future extension.

For Facility Manager

- Resilient management of future installation through easily accessing all product and project data
- Agile maintenance management through assigning tasks on facility experts for certain junctions using QR codes and labeling sticker on JB.

Canalis Busway "Total Solution":



Label Sticker

Label Sticker

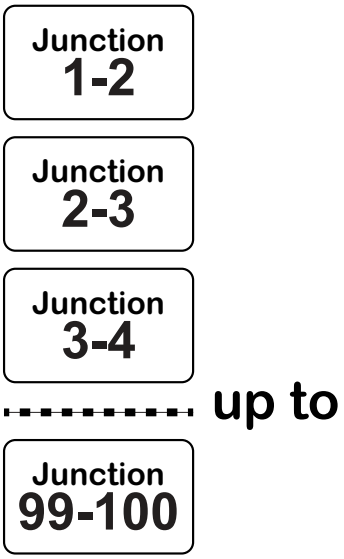
DB410976

Description	Cat. no
KT JB Positioning Label Sticker	KTB0100YL1

Label stickers to be stick on joint blocks in site during installation.
It ease maintenance management and maintenance people to detect JB position and assign tasks on facility expert (Optional Choice).

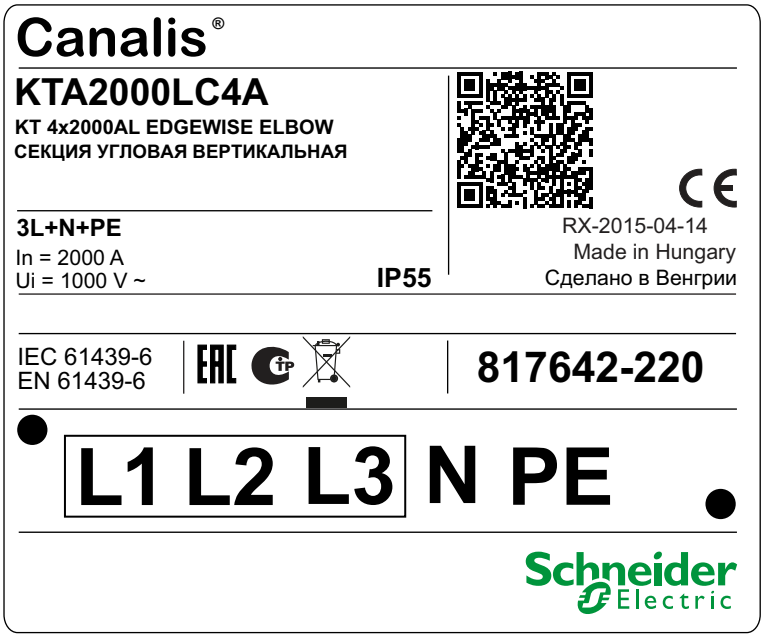
Example of label roll (Size: 15 mm x 25 mm)

DB433595



Label image

DB433594



Introduction

PowerSet Canalis Design

PowerSet Canalis Design gives you all the help you need

"Schneider Electric offers comprehensive design and costing software."

The **PowerSet Canalis Design** software by Schneider Electric was developed to help you design and cost Canalis busbar trunking runs.

PowerSet Canalis Design, Your comprehensive tool

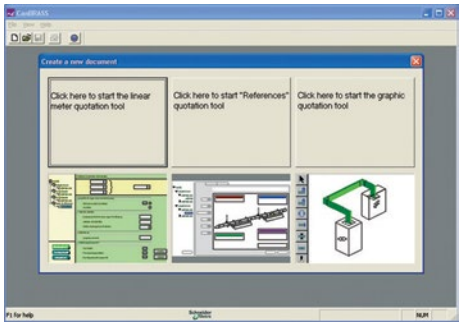
The PowerSet Canalis Design software allows you to quickly design the best layout for your project. It helps you:

- Choose the required material
- Define a list of catalogue numbers and their exact quantities
- Generate a comprehensive quote that includes material and labour.

There are 2 options:

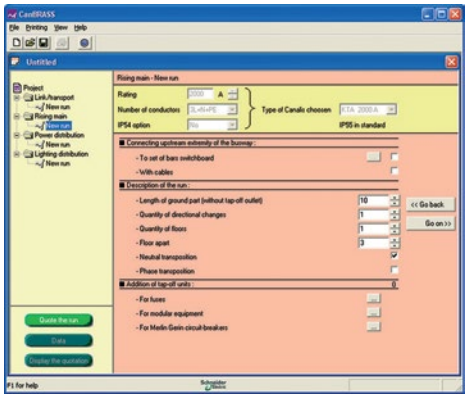
- Linear metre costing.
- Graphical costing.

PD202374



Design guide.

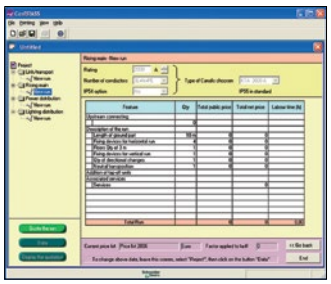
PD202375



Enter Canalis run characteristics.

Linear meter costing

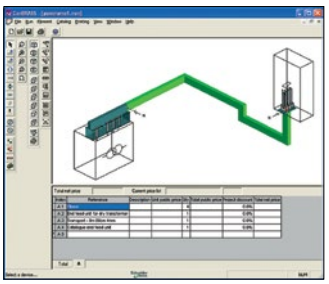
PD202376



Switchboard access estimation of material and labour costs.

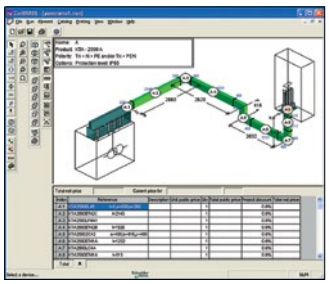
Graphical costing

PD202377



Definition of catalogue numbers

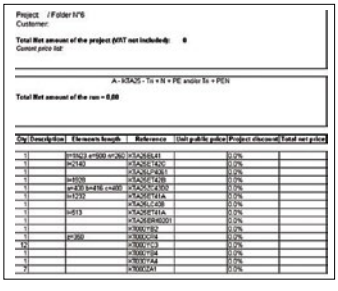
PD202378



Breakdown of the run by product function.

Quote

PD202379



Presentation and description

Panorama of Canalis range
Lighting distribution

Canalis KTA

Low & medium Power Solutions

PD202217_r2

PD202219_r

Busbar trunking for lighting and low power distribution from 25 to 40 A IP55

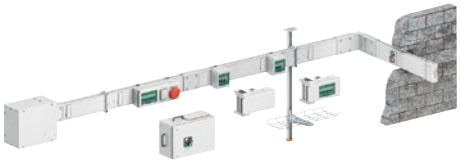
Rated service current	Permissible rated peak current	Rated insulation voltage	Color
Inc	**Ipk**	**Ui**	
KBA			
25 A 40 A	4.4 kA 9.6 kA	690 V	Pre-lacquered white (RAL9003)
KBB			
25 A 40 A	4.4 kA 9.6 kA	690 V	Pre-lacquered white (RAL9003)

PD202221_r_KN

Power distribution from 40 to 160 A IP55

Rated service current	Permissible rated peak current	Rated insulation voltage	Color
Inc	**Ipk**	**Ui**	
KN			
40 A 63 A 100 A 160 A	6 kA 11 kA 14 KA 20 kA	500 V	Pre-lacquered white (RAL9001)

PB115580-30



Horizontal and vertical distribution from 100 to 1000 A IP55

Rated service current		Permissible rated peak current	Rated insulation voltage	Color
Inc		**Ipk**	**Ui**	
KS				
Aluminium:	**Copper:**		690 V	Pre-lacquered white (RAL9001)
100 A		15.7 kA		
160 A	160 A	22 kA		
250 A	250 A	28 kA		
400 A	400 A	49.2 kA		
500 A		55 kA		
630 A	630 A	67.5 kA		
800 A	800 A	78.7 kA		
1000 A		78.7 kA		

	Line components		Branching points			Accessories
	Length of components	**Number of conductors**	**Center to center distance**		**Protection type**	
	2 m and 3 m	2 or 4 + PE	0.5 m, 1 m on 1 side	L + N + PE or 3L + N + PE (10/16 A) pre-cabled or to be cabled, with phase selection or fixed polarity, with lighting control	With fuses or without protection	> Flexible components > Fixing devices with quick adjustment > Communication bus (DALI, ASI) > Cable ducts
	2 m and 3 m	Single circuit 2 or 4 + PE Dual circuit 2 + 2 + PE 2 + 4 + PE 4 + 4 + PE	0.5 m or 1 m on 1 or 2 sides	L + N + PE or 3L + N + PE (10/16 A) pre-cabled or to be cabled, with phase selection or fixed polarity, with lighting control	With fuses or without protection	> Flexible components > Fixing devices with quick adjustment > Communication bus (DALI, ASI) > Cable ducts

	Line components		Branching points			Accessories
	Length of components	**Number of conductors**	**Center to center distance**		**Protection type**	
	2 m and 3 m	4 + PE	0.5 m, 1 m on 1 side	16 A to 63 A (plug-in)	Units for modular circuit breakers, fuses and sockets	> Flexible components > Fixing devices with quick adjustment > Remote control bus > Cable ducts > Installation accessories

	Line components		Branching points			Accessories
	Length of components	**Number of conductors**	**Center to center distance**		**Protection type**	
	3 m, 5 m and additional or customized components	4 + PE	0.5 m or 1 m on each side for horizontal version, and on one side for vertical version	16 A to 400 A (plug-in)	Units for circuit breakers (modular, Compact NSX), fuses, sockets	> Riser ducting offer > Fixing devices with quick adjustment > Cable ducts > Installation accessories > Fire barriers

Panorama of Canalis range
Power distribution

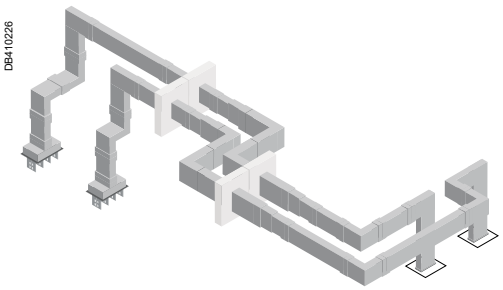
Canalis KTA

High Power Solutions

Power transmission and distribution from 800 to 6300 A
IP55

Rated service current		Permissible rated peak current		Rated insulation voltage	Color
Inc		Ipk		Ui	
KT *					
Aluminium:	**Copper:**	**Standard:**	**Optional:**	1000 V	Pre-lacquered white (RAL9001)
800 A	-	64 kA	73 kA		
1000 A	1000 A	110 kA	143 kA		
1250 A	1350 A	110 kA	143 kA		
1600 A	1600 A	143 kA	187 kA		
2000 A	2000 A	154 kA	242 kA		
2500 A	2500 A	176 kA	248 kA		
3200 A	3200 A	189 kA	248 kA		
4000 A	4000 A	198 kA	264 kA		
5000 A	5000 A	209 kA	264 kA		
-	6300 A	209 kA	264 kA		

* Canalis KT range is available on se.com or catalogue:
KTA: ref. DEBU021EN / KTC: ref. DEBU024EN



Power transmission for outdoor and harsh environment from 800 to 6300 A
IP68

Rated service current	Permissible rated peak current		Rated insulation voltage	Color
Inc	Ipk		Ui	
KR *				
	Aluminium:	**Copper:**	1000 V	Gray (RAL7030)
800 A	56 kA	-		
1000 A	56 kA	80 kA		
1250 A	117 kA	-		
1350 A	-	80 kA		
1600 A	117 kA	143 kA		
2000 A	143 kA	176 kA		
2500 A	176 kA	176 kA		
3200 A	220 kA	220 kA		
4000 A	220 kA	220 kA		
5000 A	220 kA	275 kA		
6300 A	-	275 kA		

* Canalis KR range is available on se.com or catalogue ref. DEBU031EN

	Line components		Branching points			Accessories
	Length of components	**Number of conductors**	**Center to center distance**		**Protection type**	
	2 m and 4 m	3P + PE 3P + N + PE 3P + N + PER	0.5 m or 1 m	25 A to 630 A (plug-in) 400 A to 1250 A (bolt-on)	Units for circuit breakers (modular, Compact NSX), fuses, sockets	> Power supply ends > Direction change angles and T-pieces > Fixing devices and fuses

	Line components		Branching points			Accessories
	Length of components	**Number of conductors**	**Center to center distance**		**Protection type**	
	Up to 3 m	3L 3L + N or 3L + PE or 3L + PEN 3L + N + PE	-	-	-	> Power supply ends > Direction change angles and T-pieces > Fixing devices > Fire resistant elements

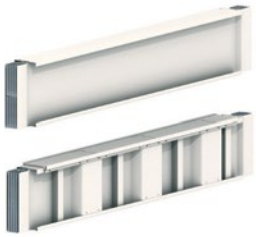
Canalis KTA from 800 to 5000 A
For horizontal transport and distribution

Canalis KTA

Run sections

- ■ Rating: 800 to 5000 A.
- ■ Transport sections:
- □ fixed lengths: 2 and 4 meters
- □ non-standard lengths: 0.5 and 3 meters
- ■ Distribution sections:
- □ fixed lengths: 2 and 4 meters.

PD202313_r



Tap-off units

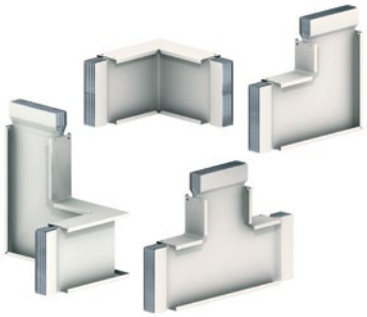
- ■ Plug-in tap-off units:
- □ protection by 25 to 630 A fuses
- □ protection by 100 to 630 A Compact NSX circuit breakers.
- ■ Fixed tap-off units:
- □ protection by 400 to 1250 A Compact NS and NSX circuit breakers
- □ protection by 400 to 1000 A fuses.

PD202314_r2

Change-of-direction sections

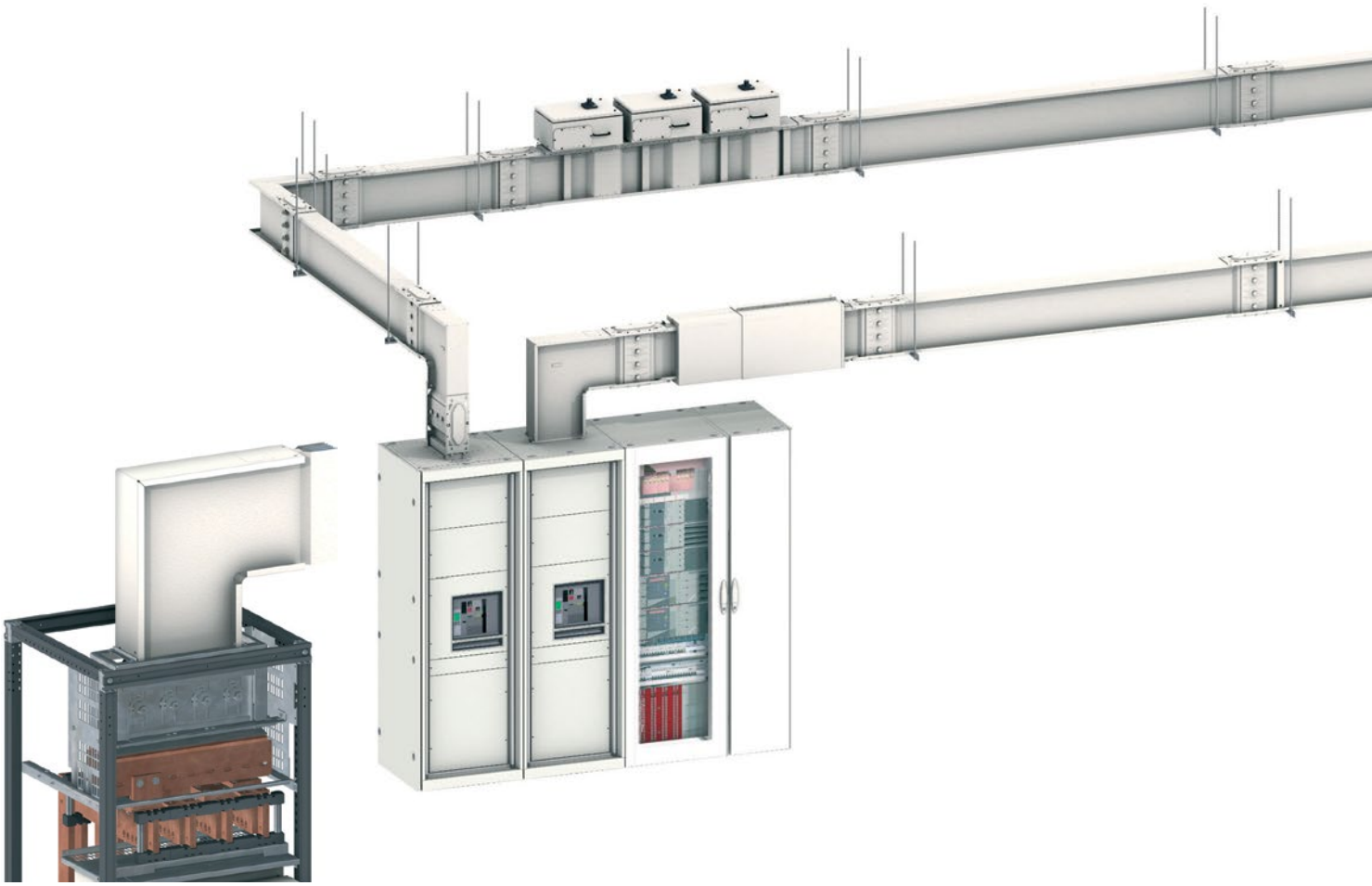
- ■ Change-of-direction sections adapt to all busbar trunking requirements.
- ■ There are both fixed and made-to-measure lengths.

PD202315_r



PD202312_r

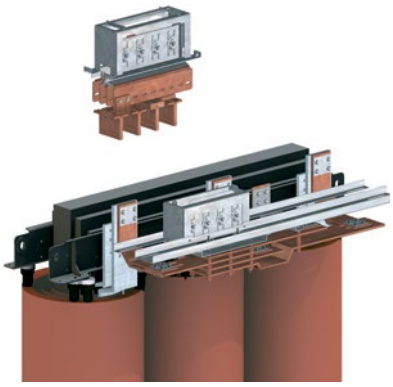
PD202328_r



Interface connections

■ Pre-fabricated interfaces connections can be incorporated into:
□ Prisma P and Okken switchboards
□ France Transfo dry-type transformers.

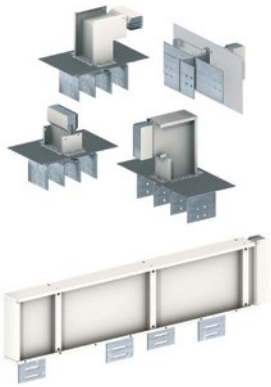
PD202431_r



Universal supply connections

■ Supply connections allow the busbar trunking to be connected to the switchboard's busbar or to the transformer.

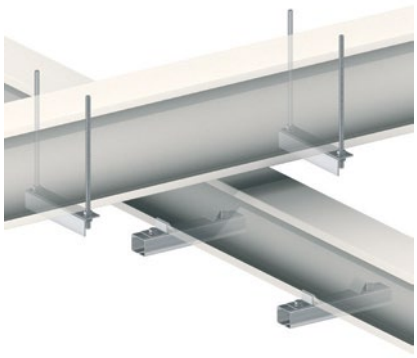
PD202317_r

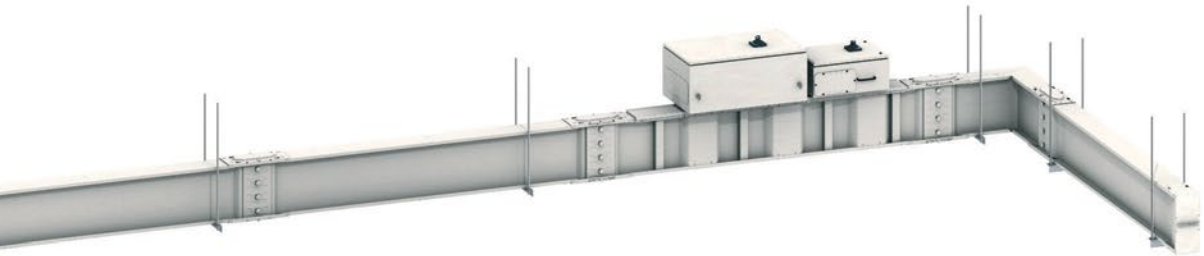


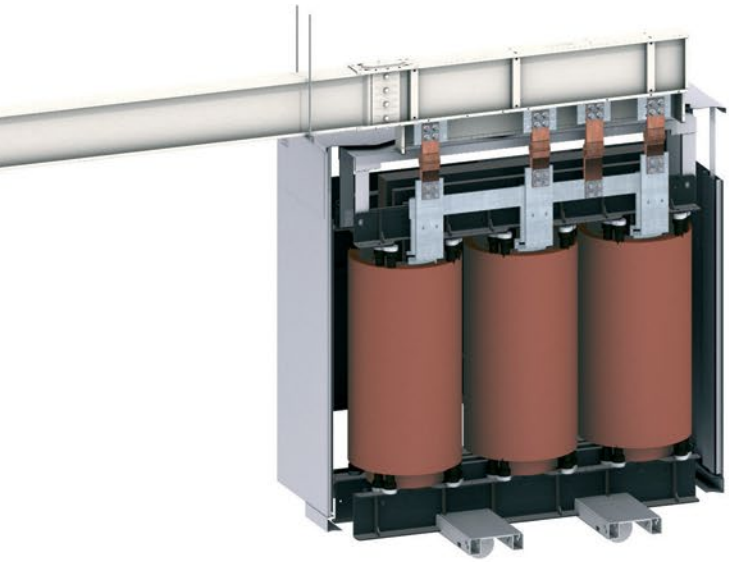
Horizontal fixing supports

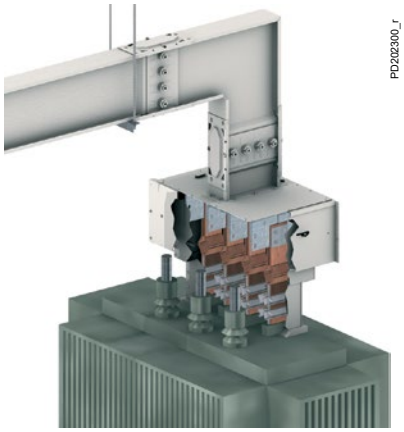
■ There are two types of support for installing the busbar trunking horizontally.
■ One type of fixing: to fix the busbar trunking to its support.

PD202318_r









PD202300_r

Canalis KTA from 800 to 5000 A

For distribution to different levels

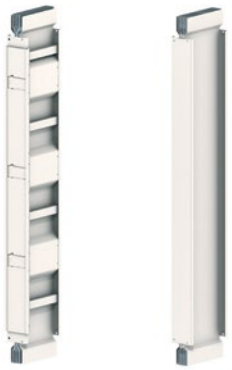
Rising mains

Canalis KTA

Run sections

■ Rating: 800 to 5000 A.
■ Distribution sections, fixed or made to measure.
■ Transport sections for going through floor slabs, made to measure 0.5 to 3 meter lengths.

PD202320_r



Vertical fixing support

■ For installing the busbar trunking vertically, they ensure:
□ height and depth adjustment
□ load sharing
□ absorption of expansions, vibrations, etc.
■ They can be fixed either to the floor, the wall or to a bracket.

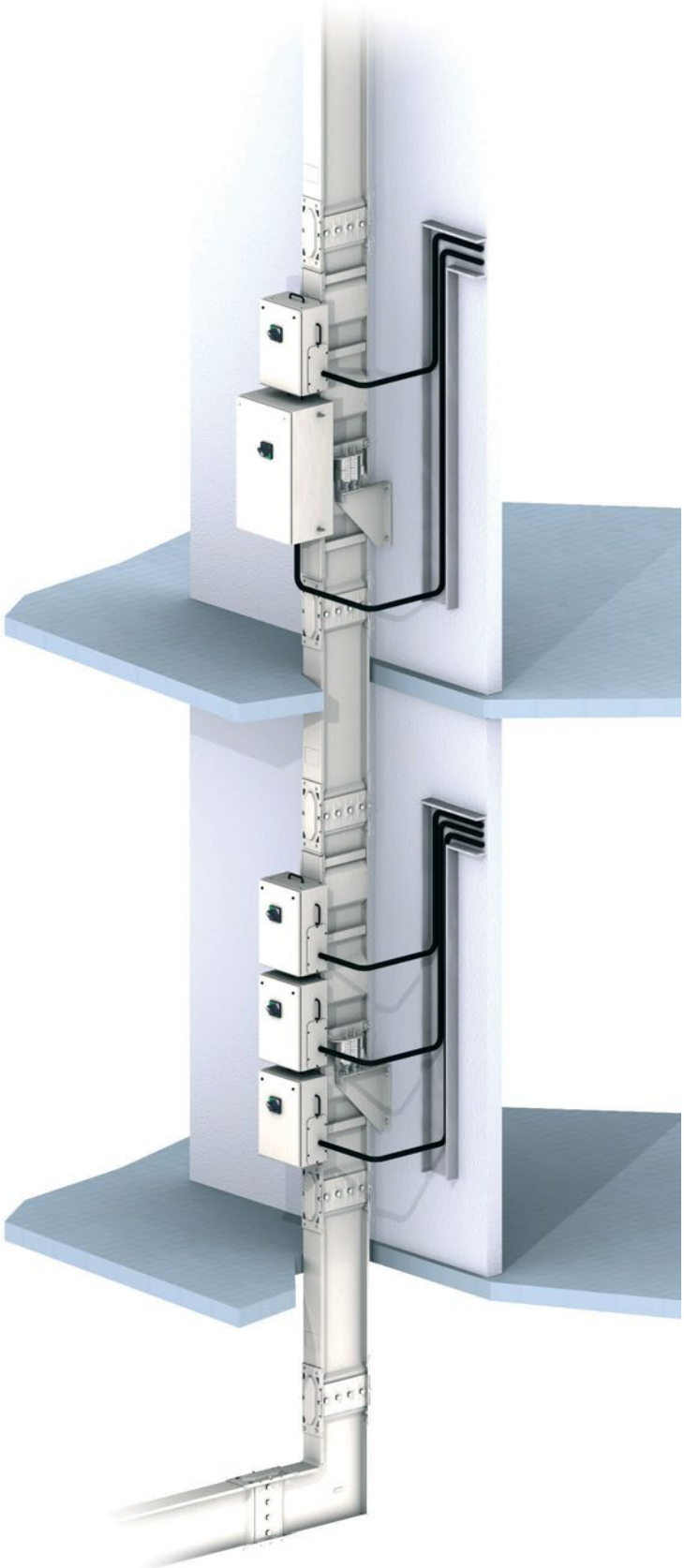
PD202321_r

Tap-off units

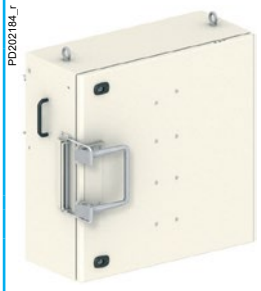
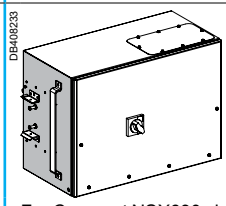
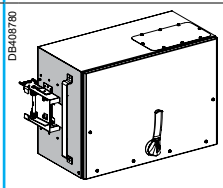
■ Plug-in tap-off units:
□ protection by 25 to 630 A fuses
□ protection by 100 to 630 A Compact NSX circuit breakers.
■ Fixed tap-off units:
□ protection by 400 to 1250 A Compact NS and NSX circuit breakers
□ protection by 400 to 1000 A fuses.

PD202322_r

PD202319_r



Tap-off units from 25 to 1250 A

Rating (A)	Type of protection			
	Modular switchgear	Compact NS and NSX	Fuses	Compact NSX with measurement and metering
Plug-on tap-off units				
25 to 100	 63 A, 8 x 18 mm modules  100 A, 12 x 18 mm modules	 For Compact NSX100 circuit breaker	 25/50 A for NF/DIN fuses 32 A for BS fuses  63 A for DIN fuses 100 A for NF/DIN fuses 80 A for BS fuses	
160	 For NG125/160 circuit breaker	 For Compact NSX160 circuit breaker	 160 A for NF/DIN/BS fuses	
250 to 400		 For Compact NSX250 circuit breaker  For Compact NSX400 circuit breaker	 250/400 A for NF/DIN fuses	Fitted with DIN rail for Powerlogic PM810  For Compact NSX250 circuit breaker  For Compact NSX400 circuit breaker
630		 For Compact NSX630 circuit breaker	 630 A for NF/DIN fuses	
Fixed tap-off units				
400 and 630		 For Compact NSX400 and NSX630 circuit breakers	 400 to 630 A for DIN fuses(1)	
800, 1000 and 1250		 For Compact NS800, NS1000 and NS1250(1) circuit breakers	 800 to 1000 A for DIN fuses(1)	

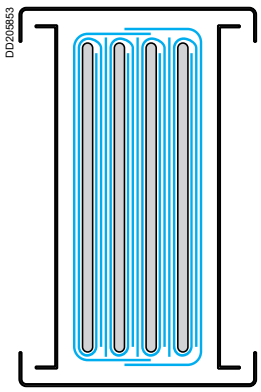
(1) Tap-off units for NS1250 and fuses (from 400 to 1000 A) in IP31 only.

General

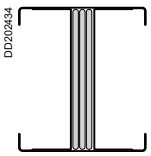
Canalis KTA

The Canalis KT busbar trunking is intended for high power distribution and transport in industrial, commercial and tertiary buildings.
Assembly of prefabricated sections that adapt to all run configurations.

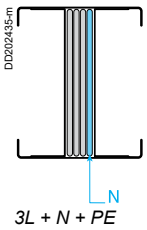
Run sections



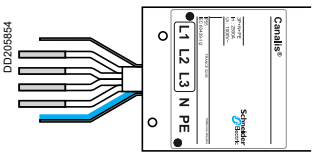
The conductors are sandwiched together inside the metal casing.

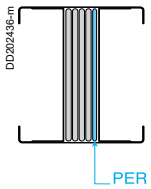


3L + PE



3L + N + PE





3L + N + PER

- 9 ratings are available, from 800 to 5000 A.
- 4 aluminium live conductors with identical cross-sections (3L + N + PE version).
- Conductors insulated using polyester film, class B 130°C, halogen free.
- Standard busbar trunking is IP55.
- Insulation voltage: 1000 Volts.
- Available polarities: 3L + PE, 3L + N +PE, 3L + N + PER (reinforced PE)

The KT busbar trunking is of compact design and can be installed edgewise, flat or vertically.
This design, allows the busbar trunking to be installed through a floor slab or fire barrier wall.
As standard, the Canalis KT busbar trunking acts as a fire barrier in accordance with IEC 61439-6.

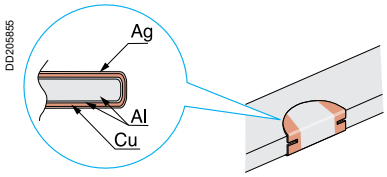
The compact technology allows Canalis KT busbar trunking to withstand high short-circuit currents and is suitable for most electricity distribution applications.

The RAL 9001 pre-lacquered galvanized steel casing provides protection and mechanical fixing of the conductors.
Further, it is used as the PE protective conductor (in accordance with NFC 15100 and IEC 60364).

In its reinforced version 3L + N + PER, the busbar trunking is fitted with an additional internal conductor with a cross-section equal to half that of the phase conductor.
A reinforced version can be supplied on demand. This version has lateral reinforcement (see page "Characteristics").

The Canalis KT busbar trunking is suitable for applications containing harmonics by taking into account the appropriate derating factor. See "Harmonic currents" in the Design guide.

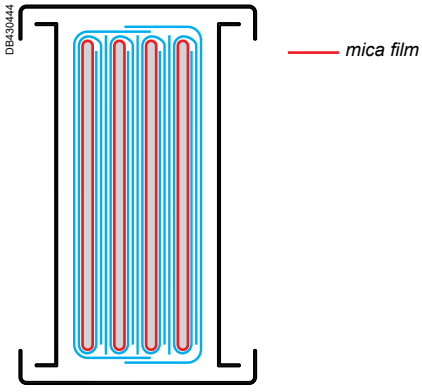
Tap-off contact



The electrical contact pads of the sections are made from bonded bimetallic aluminium/copper.

The KS plug-on tap-off units are connected to the busbar trunking whilst live (off-load) via spring jaw connections.
Contact zone coating:
- silver-plated copper at jaw contact points
- aluminium / silver-plated copper bimetallic saddle welded to the live conductors.

Fire rated components



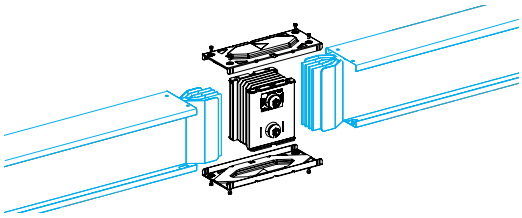
FT, FC and FP components are suitable for applications requiring continuity of service in case of fire. These components have the same cross section as the standard Canalis KT ones and are fully compatible and connectable.

These components comply with IEC 60331-1 and IEC 60331-21 for a duration of 480 minutes at 830°C.

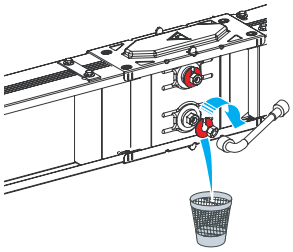
To achieve this performance, the conductors are wrapped in a mica film before being isolated by a polyster film. The plastic parts of the joint blocks are also reinforced to withstand higher temperatures.

Joint block

DD205856



DD205857



The junction between sections is made using a joint block.
The joint block provides the following:
■ electrical junction between live conductors and between PE protective conductors, mechanical link between the two sections.

It provides simultaneous continuity between all conductors.
It is tightened using torque bolt(s) (1 to 4 depending on the rating) with snap-off heads.
The nut head snaps-off, freeing a red washer, when the correct tightening torque is reached.

This operation is checked visually:
■ if the red washer is absent: it has been tightened
■ if the red washer is visible: it has not been tightened.

This device guarantees the necessary contact pressure between live conductors and is operator independent.

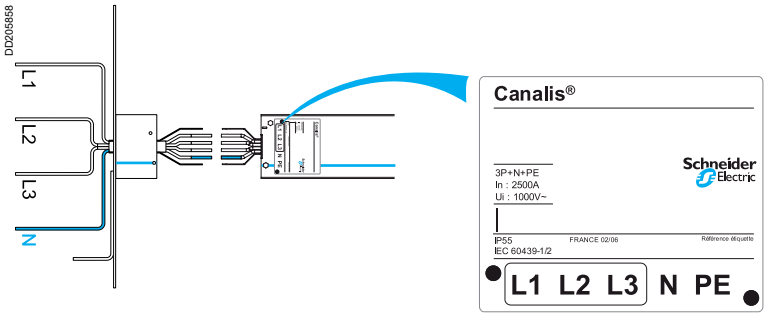
For dismantling or maintenance operations, the nut has a second head.
The tightening torque is 6 daN.m.

All sections (apart from ER and EL feed units) are supplied with their joint block, delivered in a separate parcel.
If the run has a feed unit (ER or EL) at each end, an additional joint block must be ordered.

Phase order

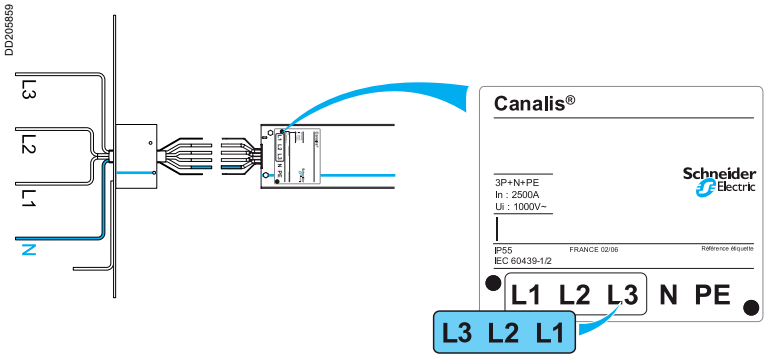
The standard phase order for the busbar trunking is denoted **N321**.

DD205858



However, this order can be changed to **N123**. A label showing the phase order "N123" is supplied with each element to indicate the change.

DD205859



Run sections

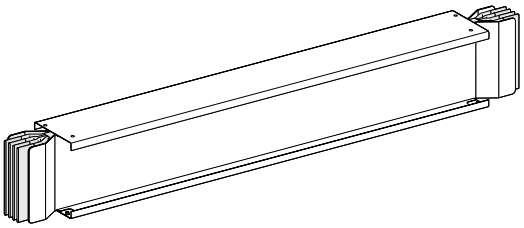
Canalis KTA

Straight sections

Transport sections - Type ET

Transport the current without tap-off points.
Available in 2 and 4 metre fixed lengths or made to measure from 0.50 to 3 metres.

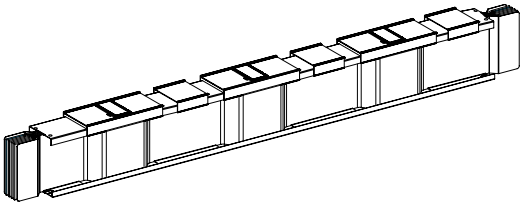
DD202390



Sections with tap-off points for plug-on tap-off units - Type ED

ED run sections are for current distribution.
They use 25 to 630 A KS tap-off units.
These tap-off units can be plugged-on whilst live, but off-load.
Available in fixed 2 and 4 metre lengths with 3 tap-off points on one side or made to measure from 2.5 to 3.5 metre.

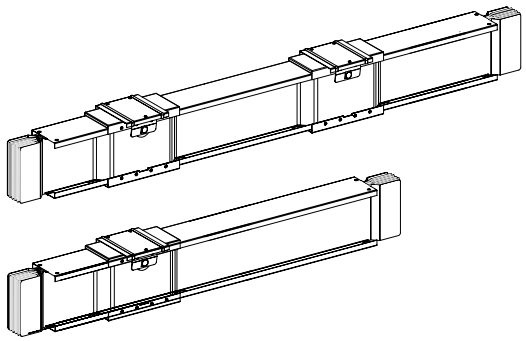
DD205860



Sections with tap-off points for fixed tap-off units - Type EB

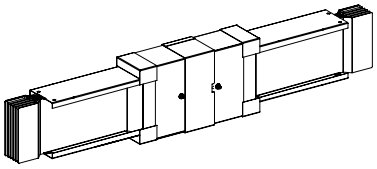
EB run sections are for current distribution.
They use specific KT 400 to 1250 A tap-off units.
These tap-off units can only be fitted / removed when the run is not energised.
Available in a 2 metre fixed length with one tap-off point or a 4 metre fixed length with 2 tap-off points.

DD205861



Other run sections
Disconnectors and run protective devices

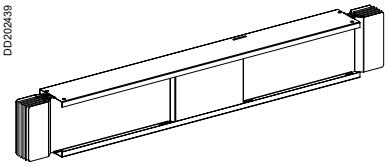
Other run sections



Expansion section - Type DB

It controls and absorbs the expansion of Canalis runs and must be used on runs over 30 metres and each time the busbar trunking passes through a building expansion joint.
Refer to the installation guide.

Available in a 1 metre length, it can be fitted vertically or horizontally.
At its centre it has flexible conductor joints and a sliding case able to absorb the relative movements of each part of the section.

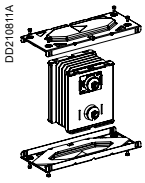


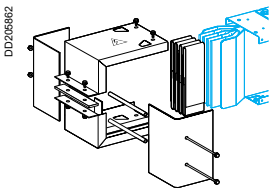
Transposition sections - Types TN, TP

Used when the phase order of the switchboard is different to that of the transformer.
Available in a 1 metre length and is the same physical size as a transport section.

■ The TN version transposes the neutral.

■ The TP type transposes the phases.





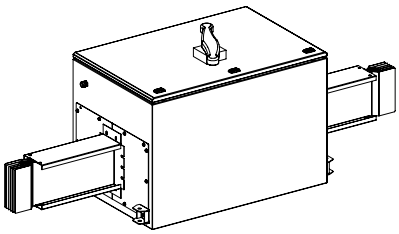
Additional joint block - Type YA

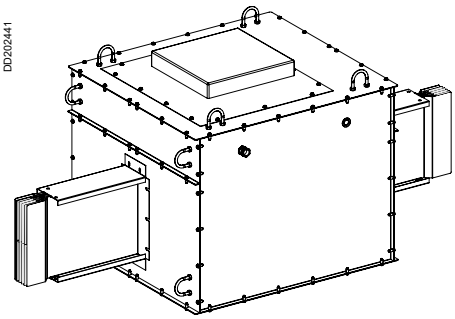
If the run has a feed unit (supplied without a joint block) at each end, an additional joint block must be ordered.
Each joint block is supplied with the necessary covers, nuts and bolts.

Run end cover - Type FA

The end cover protects and insulates the conductor ends and is fitted to the last section.

Disconnectors and run protective devices





Fitted between 2 flat or edgewise sections, they isolate or protect a busbar trunking part run.
Each assembly is supplied fitted with a 3 or 4-pole device complete with rotary handle.
Supplied with:
■ an auxiliary connection terminal
■ lifting rings
■ upstream and downstream terminal shields.
Colour: white RAL 9001, 100 % polyester paint on galvanized sheet steel.
Refer to manufacturer's data for switchgear characteristics.
Fitted with a rotary handle, the tap-off unit can only be opened once the device has been switched off.

Run disconnector tap-off units - Type SL

Type SL for:
■ **Compact NS1000** to **1600 A** type NA fixed isolators:
□ unhingeable door
□ 3-point closing (possibility of locking with key lock, not supplied)
■ **Interpact INV** isolator, **2000** to **2500 A**:
□ unhingeable door
□ 3-point closing (possibility of locking with key lock, not supplied)
■ **Masterpact NW3200 A** type HA fixed isolator supplied with:
□ transparent protection cover
□ adaptation kit for Ronis lock + 1 Ronis lock
□ complete Harting plug, not cabled.

Run protection tap-off units - Type PL

Type PL for:
■ **Compact NS1000** to **1600 A** type N fixed circuit-breakers:
□ unhingeable door
□ 3-point closing (possibility of locking with key lock, not supplied).
For circuit-breakers greater than 1600 A, consult the sales office.

Change of direction sections

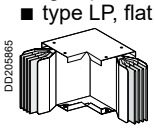
Canalis KTA

Simple changes of direction

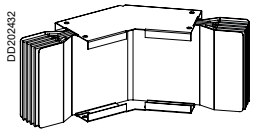
Elbows - Types LP and LC

To go up or down, to turn right or left:

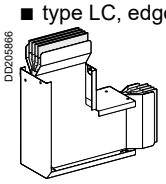
■ type LP, flat elbow available in fixed or made-to-measure lengths



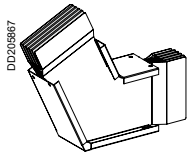
■ type LP●C, flat made-to-measure angled elbow



■ type LC, edgewise elbow available in fixed or made-to-measure lengths

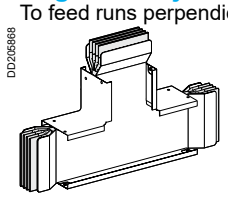


■ type LC●C, edgewise made-to-measure angled elbow.



Edgewise T junctions - Type TC

To feed runs perpendicular to the main run.



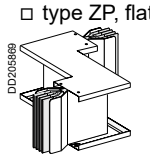
Changes of direction

Zeds - Types ZP, ZC and CP

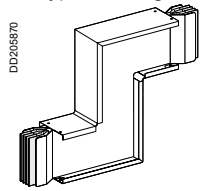
3-branch made-to-measure:

■ flat or edgewise, to move the run axis upwards, downwards, to the right or to the left without having to bend the busbar trunking:

□ type ZP, flat Zed

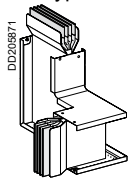


□ type ZC, edgewise Zed



■ edgewise / flat, to provide the busbar trunking with a bend:

□ Type CP, edgewise and/or flat Zed.



Connection sections

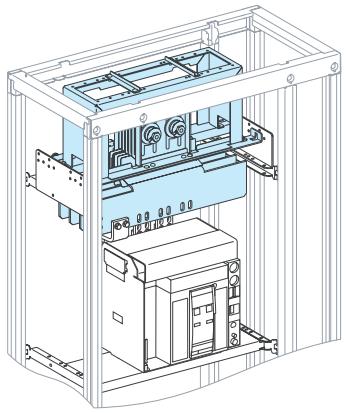
To connect the KTA busbar trunking to different terminals or to transformer, switchboard, generator set, etc. busbars. Canalis offers high performance connection sections which meet all requirements.

These sections provide installation flexibility combined with quick and simple assembly.

Further, the connections are made using torque bolts which provide both ease of installation (use of a standard spanner for tightening to 60 N.m) and a visual check before energising.

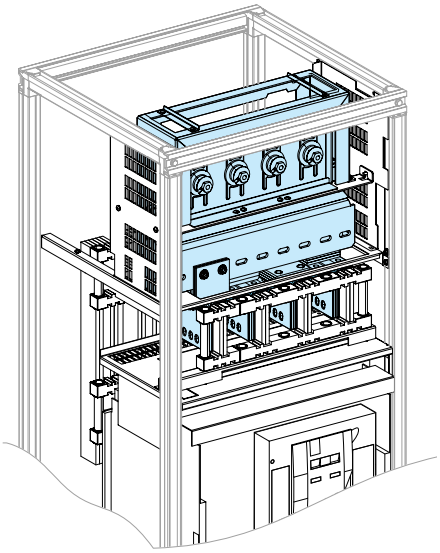
Connections via interface to Prisma P, Okken and Trihal

DD202306



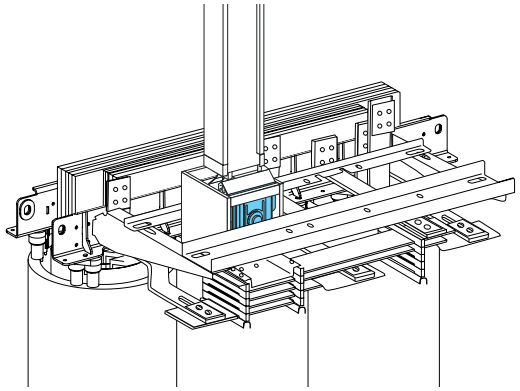
Prisma P switchboard.

DD202310



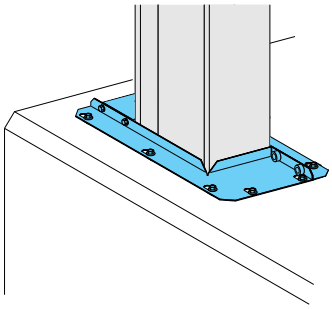
Okken switchboard.

DD202503



Direct connection to Trihal transformers and Prisma P & Okken switchboards.
Supplied factory or panelbuilder assembled and tested to IEC 61439-1 and IEC 61439-6.
Quick and simple connection of the busbar trunking to the interface.
Reduced size.
Joint block integrated into the interface.
A sealing kit (rating dependent) must be ordered.

DD202314



Sealing kit

Prisma P and Okken switchboards

For fixed or draw-out incoming device, front or rear connection:
- Masterpact NW08 to NW40 or NT06 to NT16 circuit-breaker
- Compact NS630b to NS1600 circuit-breaker.

Possibility of switching the phases around.

France Transfo Trihal dry type transformers

For naturally ventilated or force ventilated transformers.
Protection degree:
- IP00
- IP31.

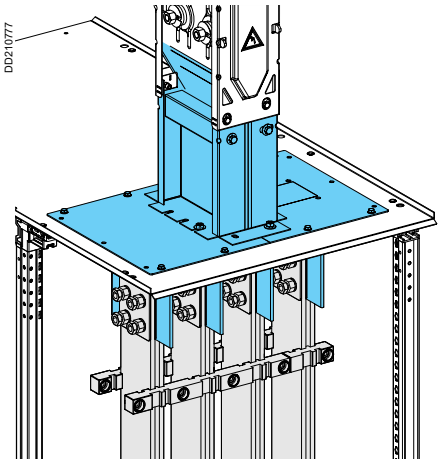
Secondary voltage: 410 V.

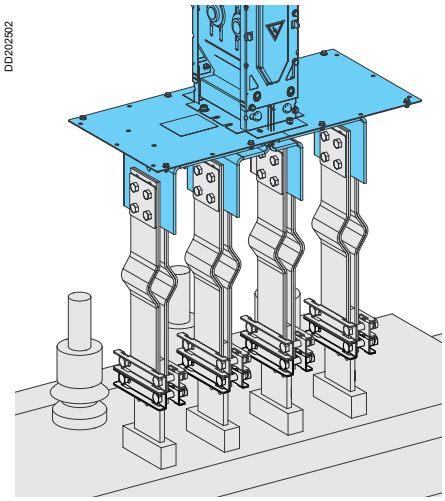
±15 mm adjustment in the 3 axes.

Connection sections

Canalis KTA

Universal connections to switchboards and oil immersed transformers



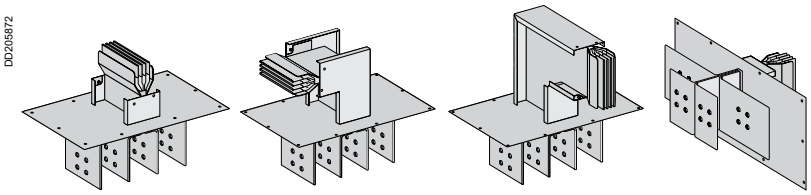


Feed units - Type ER

They allow the busbar trunking to be connected to a switchboard's busbar, or to the terminals of an oil immersed transformer, generator set, etc.

They come complete with a mounting plate fitted:
- either directly to the roof of the switchboard
- or via the intermediary of a protective cover.

Vertical or horizontal incoming busbar trunking.

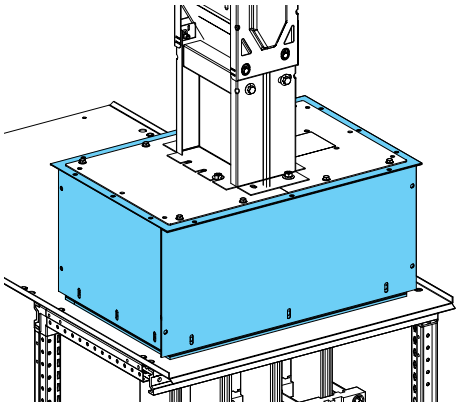


Types ER N1/N2 *Types ER N3/N4* *Types ER N5/N6* *Type ER N7*

Connection:
- either directly to the busbar
- or by flexible bars and connection plates
- or by braids
- or by cables.

- ER feed units are supplied without a joint block.
- If the run has a feed unit at each end, an additional joint block must be ordered.

DD210866



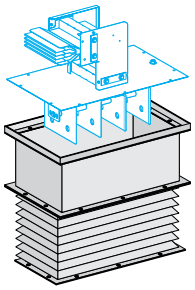
Protective covers - Types CS, CR, BC

Protects the external part of the connection.

■ Type CS

Height adaptable flexible protective cover adaptable for ER N1 to N6 feed units with a between centres distance of 115 mm.

DD210864

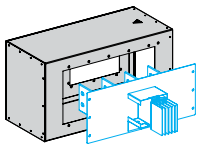


For a vertical incomer - Types CR1 to CR3

Made-to-measure rigid protective cover for ER N1 to N7 feed units.
They are height adjustable by ± 50 mm.

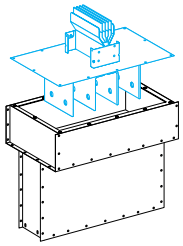
■ Type CR1 for a horizontal incomer.

DB428714

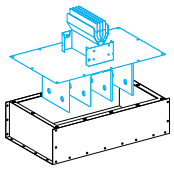


■ Types CR2 and CR3 for a vertical incomer.

DD210865



DD205624



■ Types CR7 and CR8

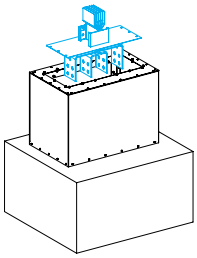
Protective covers for Minera oil immersed transformers.
Only for ER N1 to N6 feed units with a between centres distance of 150 or 170 mm depending on the rating.

Fit directly onto the BT series transformer tanks.

Never use with HV porcelaine bushings.

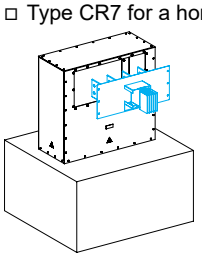
□ Type CR8 for a vertical incomer.

DB430192



□ Type CR7 for a horizontal incomer.

DB430191



□ Type BC

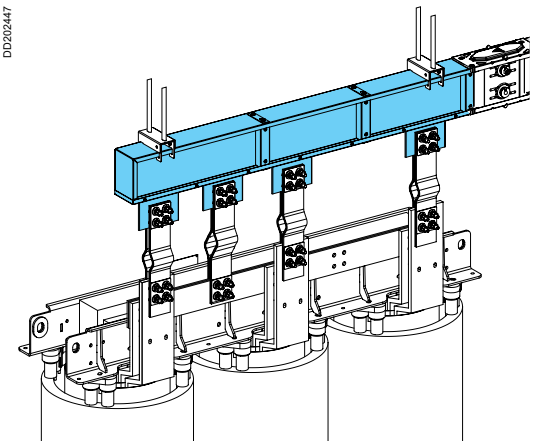
Protective cover for direct cable connection to ER N1 to N6 feed units with a between centres distance of 115 mm.

Connection sections

Canalis KTA

Universal connections to dry type transformers

DD202447

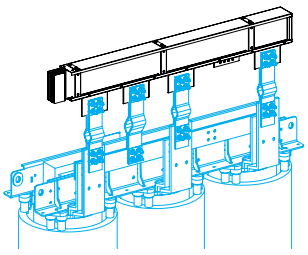


Feed units - Type EL

For dry type transformers with the neutral between the phases.
They allow optimum connection to the busbar trunking.

The junction with the busbar trunking is achieved:
- either from the side

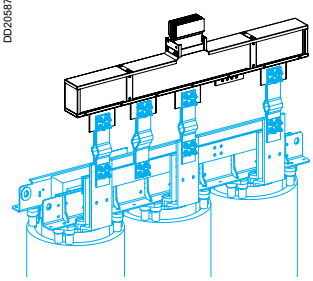
DD205874



Type EL N1/N2.

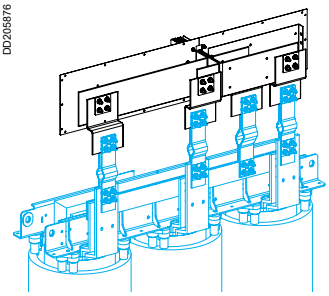
- or from the centre.

DD205875



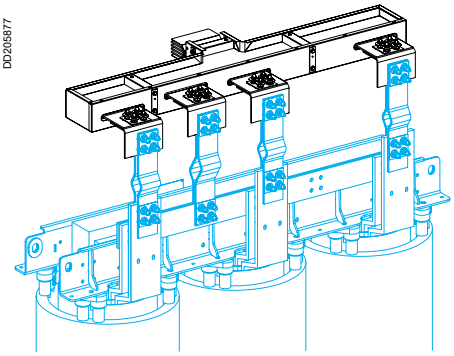
Type EL N3/N4.

DD205876



Type EL N5.

DD205877



They are of similar design to straight transport sections and can be installed edgewise or flat.
If installed flat, a set of angle brackets can be ordered.

The following must be specified at the time of order:
- phase order
- distance between phases (a ±20 mm lateral adjustment can be made use of on site).

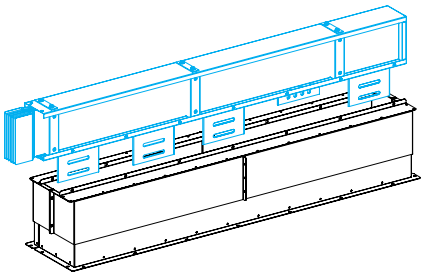
The link between the transformer terminals and the connection section is either by flexible bar connection plates or by braids.

Protective covers - Type CR4 to CR6

These protect the connections with an IP31 casing when connecting to a transformer.
They are height adjustable by ±50 mm.

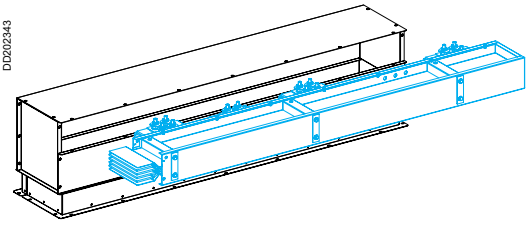
■ Type CR4
Protective cover for EL N1 to N4 feed units.
Edgewise assembly.

DD202342



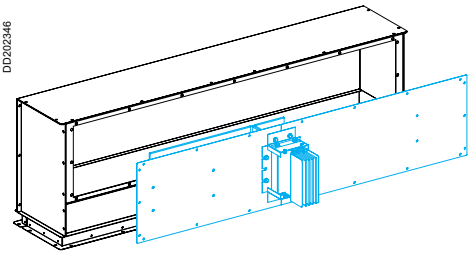
■ Type CR5
Protective cover for EL N1 to N4 feed units.
Flat assembly.

DD202343



■ Type CR6
Protective cover for EL N5 feed unit.
Edgewise assembly.

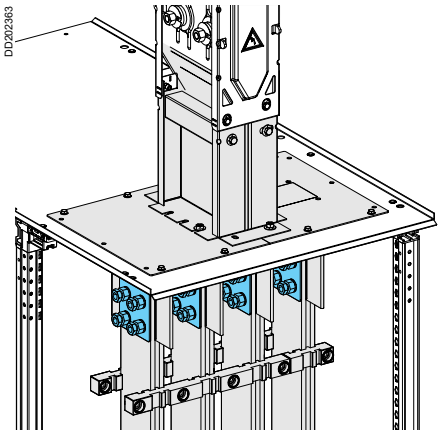
DD202346



Connection accessories

Canalis KTA

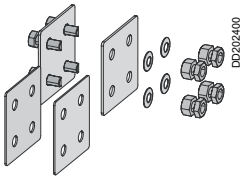
Accessories for direct connection to the switchboard



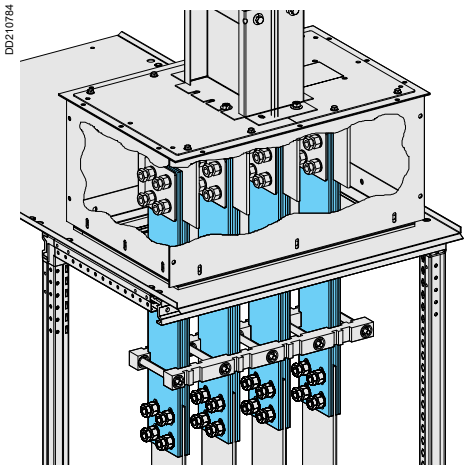
The conductors of ER N1 to N6 feed units are connected directly to the switchboard busbars.
YB2 copper spacers are available to compensate differences in thickness between the switchboard bars (10 mm) and the connection part (6 mm).

Make-up of kit:
- 8 x 2 mm thick copper spacers
- 16 off M12 x 60 mm bolts, class 8.8
- 16 contact washers
- 16 torque nuts
- 8 steel spacer plates.

Order a set per feed unit whatever the rating.



Switchboard connection accessories using connection plates



The conductors of ER N1 to N6 feed units are connected via connection plates to the switchboard busbars.

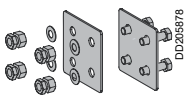
The YC are flexible bars made up of 5 copper sheets of 1 x 100/120 mm or of 5 bimetal aluminium/copper sheets 1.4 x 100/120 mm.
The number of connection plates needed is proportional to the busbar trunking rating.
There are 2 types:
- YC1, uninsulated bar, made-to-measure length of 250 to 600 mm with 4 oblong holes at the ER unit end.

The holes at the opposite side are made to measure to match with the switchboard connections.

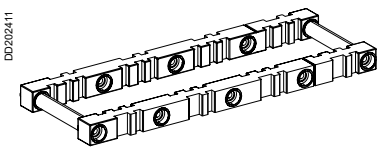
- YC5, insulated 600 or 1000 mm long flexible bar, stripped at one end and with 4 oblong holes.

The length of the holes at the switchboard side are to be adapted on-site.

Nuts and bolts
The connection plates are fixed to the feed unit using the YB3 nut and bolt kit, made up of:
- 16 off M12 x 60 mm bolts, class 8.8
- 16 contact washers
- 16 torque nuts
- 8 steel spacer plates.



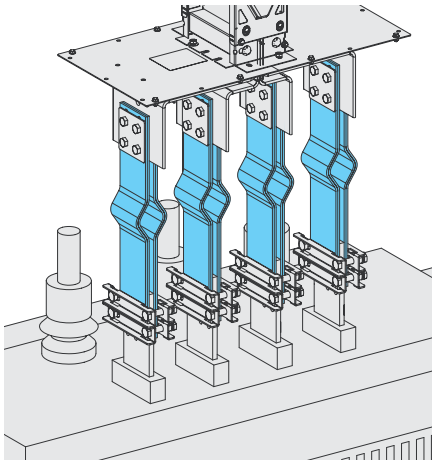
Clamps
YS1 clamps enable high short-circuit current levels to be withstood; only for bars with a 115 mm spacing.



Insulation
See page 43.

Transformer connections - Types YC, YT

DD226879



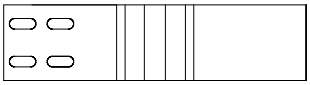
The feed unit conductors are connected to the transformer bars via connection plates or braids:
- the YC are flexible bars made up of 5 copper sheets 1 x 100/120 mm or of 5 bimetal aluminium/copper sheets 1.4 x 100/120 mm.
- braids, YT type, are copper braids with a 600 mm² cross-section.

The number of connection plates needed is proportional to the busbar trunking rating.

Connection plates

The YC3 is an uninsulated bar with an expansion kink; it is 250 to 600 mm long and has 4 holes at the ER unit end.
The holes at the opposite side are made-to-measure to match with the transformer connections.
They can be fitted to the transformer side:
- either using bar clamps (no drilling),
- or drilled and bolted (to be carried out on site).

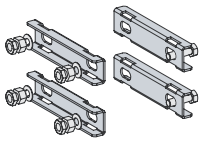
DD202412



YS2 and YS3 bar clamps enable connection without the need to drill the connection plates.
They allow height adjustment.
- Type YS2, bar clamps for 100 mm transformer connection terminals.
- Type YS3, bar clamps for 120 mm transformer connection terminals.

Make-up of kit: 1 set of 8 parts.

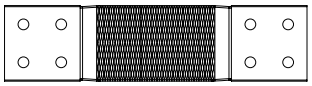
DD205880



Braids

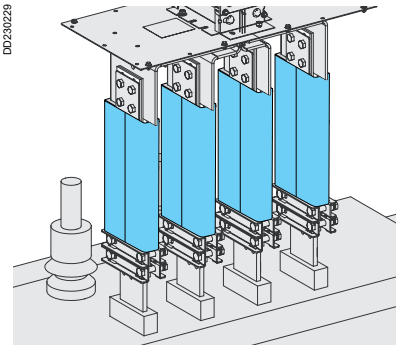
Type YT, 400 mm long insulated braid with 4 holes at each end.

DD202415



The connection plates and braids are fixed to the feed unit using the YB4 nut and bolt kit, made up of:
- 16 off M12 x 80 mm bolts, class 8.8
- 16 contact washers
- 16 torque nuts
- 8 steel spacer plates.

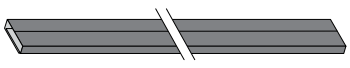
DD230229



Insulation

The YF conduit allows the various conductors of a connection performed with braids or with bare copper foils to be insulated.
Installation is performed after complete assembly of the connection, with scratch fastening for easier setup.
The insulating conduit is formed of a 2-metre plastic duct that can be cut to length as needed.

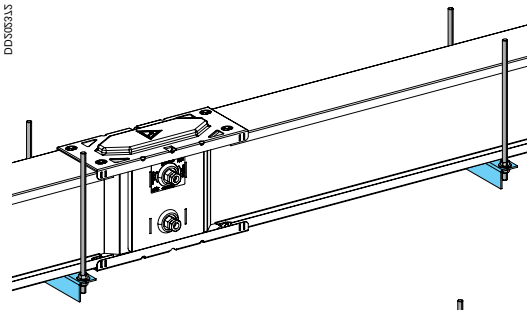
DD230230



Supports and fixings

Canalis KTA

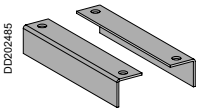
Horizontal supports

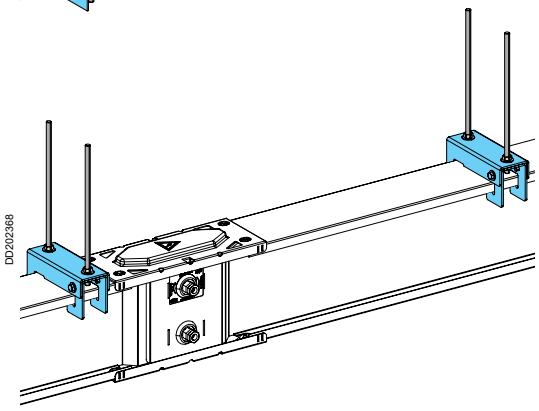


The ZA types allow the busbar trunking to be fixed and adjusted along its length, as well as absorbing its movements.

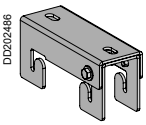
Supports for horizontal sections

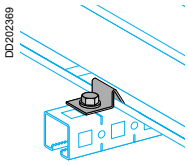
■ Type ZA1, to support edgewise busbar trunking only, consists of a steel angle bracket and 2 x 2 metre threaded M10 rods.
The maximum distance between supports is:
□ 3 metres for edgewise busbar trunking
□ 2 metres for flat busbar trunking.
See installation precautions.





■ Type ZA4, to support the busbar trunking from the top.
■ These supports are needed to fix edgewise EL N1 to N4 feed units for dry type transformers (rods not supplied).

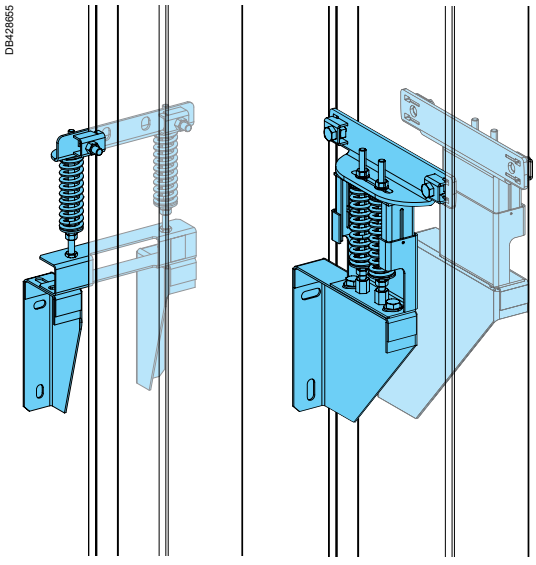




Fixing bracket

The ZA3 keeps the busbar trunking in place on its support, without blocking it, in order to allow expansion movements.

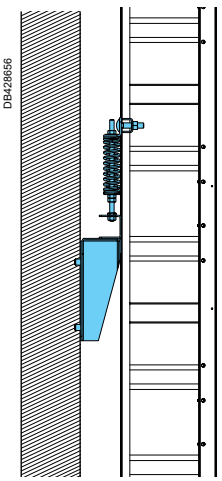
Vertical supports



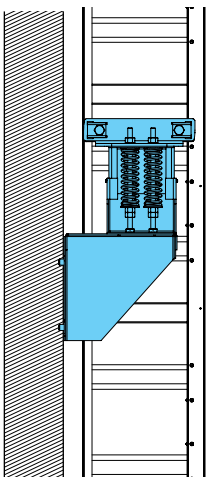
For KTA08 to KTA16.

For KTA20 to KTA40.

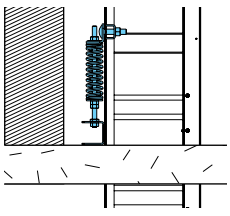
The ZA5 is for supporting vertical sections.
They fix sections of a vertical run to the building's structure.
This type of fixing support has the following advantages:
■ assembly:
□ to a wall
□ to a wall bracket
□ to the floor
■ height and depth adjustment
■ spring adjustment to ensure distribution of the load at each floor
■ avoids the transmission of building forces to the busbar trunking (expansion and vibration).



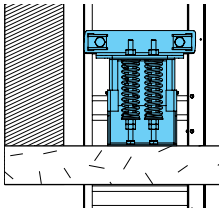
To a wall bracket KTB0164ZA5●.



To a wall bracket KTB0204ZA5● to KTB0404ZA5●.



To the floor KTB0164ZA51.

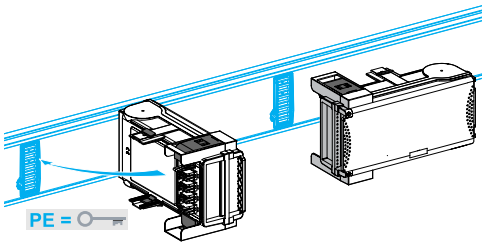


To the floor KTB0204ZA51 to KTB0404ZA51.

Tap-off units

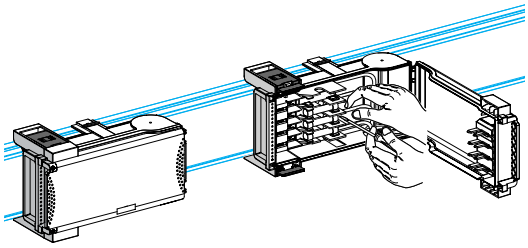
The tap-off units are used to instantly connect loads or secondary runs, and comply with installation standards and regulations (IEC 60364), whatever the earthing system (TT, TNS, TNC or IT).
When off-load, they can be plugged-on and off and be operated whilst live.
Plugging-on and plugging-off automatically opens and closes the tap-off point.

DD210275



No live part is accessible with the door open. The protection degree is IPXXB (finger protection).
They are IP55 by construction (no accessory is required).

DD210276



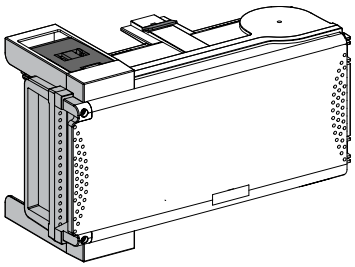
Safety and operation

Fuse and modular switchgear tap-off units (AC20) are isolated as soon as the tap-off unit door is opened.
Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised.
For circuit breaker tap-off units, there are safety mechanisms to prevent:
- the tap-off unit being plugged-on and plugged-off with the tap-off unit door closed
- the door being closed if the tap-off unit has not been locked onto the busbar trunking
- access to the electrical equipment and connection terminals when live
- the door being opened in the "ON" position for tap-off units fitted with a Compact NS or NSX or NG circuit breaker.

These tap-off units can be fitted with accessories such as:
- door early break contacts
- adapter for lead sealing
- etc.

The sheet steel tap-off units are fitted with a carrying handle.

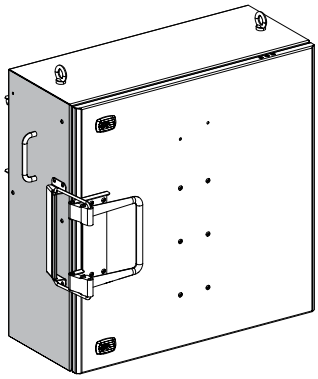
DD210466



Characteristics of tap-off units up to 100 A
- Colour:
  - white (RAL 9001) body and carrying handles
  - transparent green door (similar design to the Kaedra enclosures).
- Material: self-extinguishing, halogen-free insulating plastic (fire resistant and very high temperature withstand).

Other characteristics: cable gland drilling zone, stainless steel screws and the door can be lead sealed.

DD202012

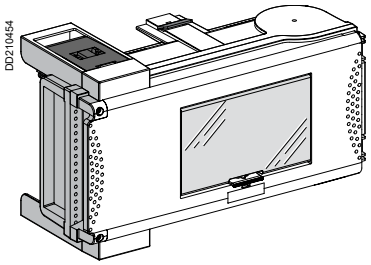


Characteristics of tap-off units from 160 to 400 A
- Colour:
  - white (RAL 9001) body
  - black carrying handles (RAL 9005)
  - 100 % polyester paint
- Material: galvanized sheet steel.

Other characteristics:
- unhingeable door (120° opening hinges)
- vertically bevelled polyurethane seals with a double fold for increased rigidity (similar design to the Sarel Spatial 3D enclosures)
- 25 mm grill type gland plates for a maximum access area.

Plug-on tap-off units for circuit breakers

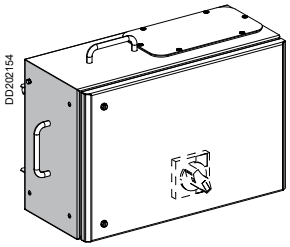
Canalis KTA



Isolator tap-off units for modular switchgear

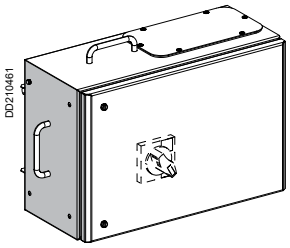
Most 18 mm Multi 9 modular devices can be fitted into these tap-off units.
They have a window on the front face for switchgear control and visualisation.

A transparent shutter ensures the window can be sealed.
Two tap-off ratings are available:
- 63 A nominal current for 8 modules
- 100 A nominal current for 12 modules (accepts C120 circuit breakers).



Tap-off units for NG type modular switchgear

These tap-off units are fitted with a DIN rail and upstream connections for 18 mm wide modular devices.
The switchgear is operated via a rotary handle which prevents door opening when the circuit breaker is in the "ON" position.
Nominal current: 160 A for a 13-module capacity (accepts NG125 or NG160 fitted with a Vigi unit).

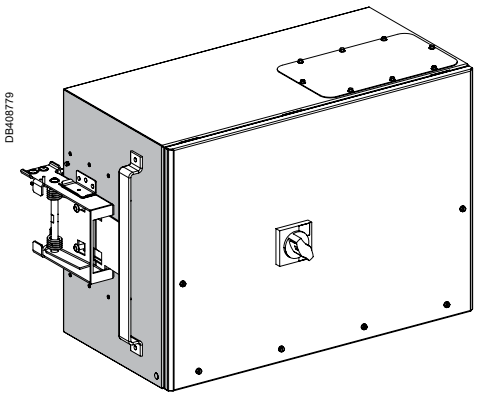


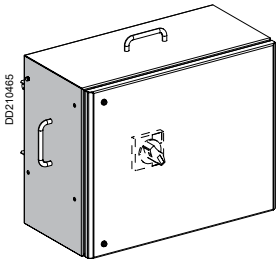
Isolator tap-off units for Compact NSX circuit breakers

These tap-off units are fitted with mounting plates and upstream connections for fixed, front-connected 100 to 630 A Compact NSX circuit breakers (N, H or L version) with a rotary handle.

The 400 A tap-off units can only be fitted onto straight lengths with a rating greater than 400 A.

For plug-on circuit breakers, Vigi units, etc, please consult your Schneider Electric contact.





Measurement and metering isolator tap-off units

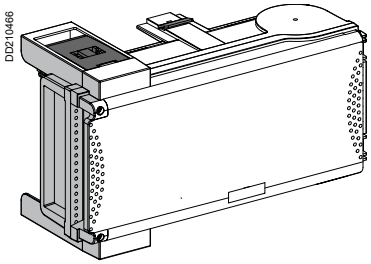
These tap-off units allow sub-metering to re-allocate power consumption costs by consumer and to monitor installations by, for example, following run load levels.
The values measured using the Compact NSX TI unit are sent to the measurement unit which then sends the information to a central unit via a bus (see Measurement and metering).

They are fitted with:
- a mounting plate for a Compact NSX250 or 400 A circuit breaker with an extended rotary handle and a Compact NSX current transformer module (TI unit)
- a DIN rail for installing a Powerlogic PM810 measurement unit, a set of terminals, etc.

In severe operating conditions (> 40 °C ambient temperature), we recommend the use of a PM810 without display.

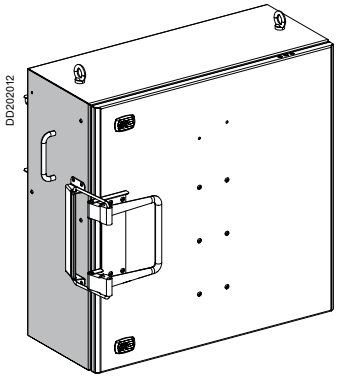
Plug-on tap-off units for fuses

These tap-off units provide the tap-offs with fuse protection (fuses not supplied).



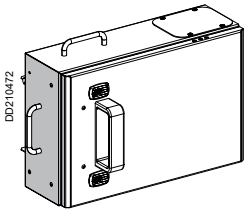
Plastic tap-off units

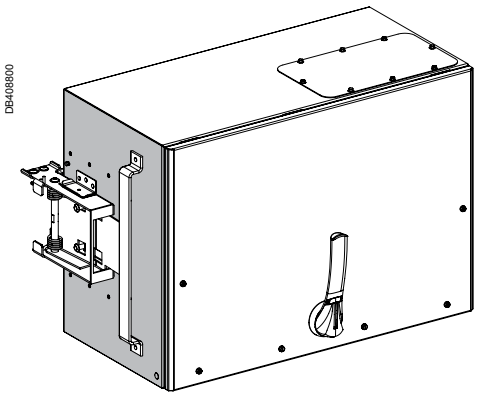
Fitted with carriers for:
- 50 to 100 A cylindrical NF fuses
- 25 to 63 A DIN screwed fuses
- 100 A DIN blade fuses
- 32 to 80 A BS screwed fuses.



Steel tap-off units

Fitted with carriers for:
- 160 to 400 A NF/DIN blade fuses
- 160 A BS screwed fuses
- fuses disconnector 630 A.





Fixed tap-off units for circuit breakers

Canalis KTA

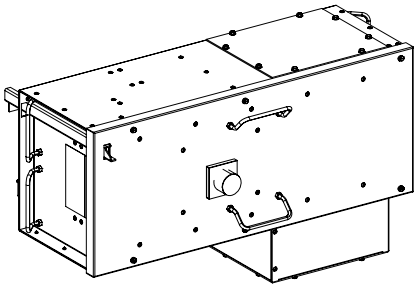
Safety and operation

The electrical connection is made by plugging-on the tap-off unit into dedicated tap-off point whilst the busbar trunking is de-energised (plugging-off the unit must also be done with the busbar trunking de-energised).
The connection is mechanically tightened using a one-use torque bolt (10 daN.m).
A mechanical foolproof system avoids the risk of incorrect assembly.
The door can only be opened once the load has been isolated (rotary handle).
The bolt can only be tightened or untightened with the door open.
No live part is accessible with the door open, protection degree IP2X.

Characteristics of tap-off units from 400 to 1250 A

■ Colour:
□ white (RAL 9001) body
■ Material: galvanized sheet steel.
■ Other characteristics:
□ the cables exit laterally through 2 aluminium plates (to be drilled by the installation contractor)
□ cabling space can be increased by using the cable box supplied with the tap-off unit
□ the door is fixed using 6 captive M6 screws and can be completely removed to facilitate cabling.

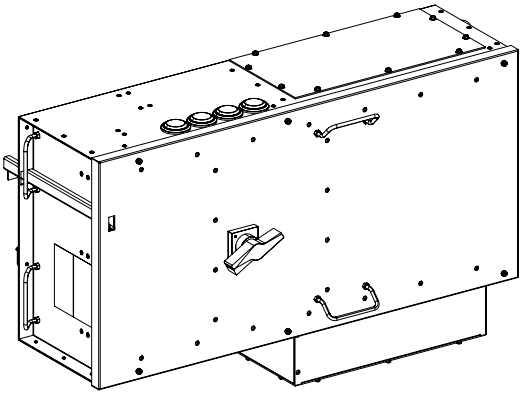
DD202451



Steel tap-off units

These tap-off units are used to supply loads or secondary runs (e.g. medium power distribution using Canalis KS).
They are fitted to specific EB type straight lengths.
They comply with installation standards and regulations, whatever the earthing system (TT, IT, TNS or TNC):
■ tap-off units fitted with a mounting plate for Compact NS and NSX 400/1250 A, 3 or 4 P:
□ fixed device
□ front connections
□ extended rotary handle.

DD202497



3 models:
■ Compact NSX400/630 A, connection capacity:
□ IP54
□ 3 x 300 mm² cables for the phases and neutral (hole diameter = 15 mm)
□ 150 mm² for the PE
■ Compact NS800/1000 A, connection capacity:
□ IP54
□ 4 x 300 mm² cables for the phases and neutral (hole diameter = 15 mm)
□ 200 mm² for the PE (cable clamp)
■ Compact NS1250 A, connection capacity:
□ IP31
□ 4 x 300 mm² cables for the phases and neutral (hole diameter = 15 mm)
□ 200 mm² for the PE (cable clamp).

Catalogue numbers and dimensions

Catalogue-number coding

Canalis KTA

Catalogue-number composition

■ One letter designating the material.

Type	Code
Aluminium	A
Non conducting	B
Copper	C

■ Two letters identifying the type of component.

Type	Code
Cable box	BC
Bolted tap-off unit	CB
Fire-barrier	CF
Edgewise and flat zed	CP
Rigid protective cover	CR
Flexible protective cover	CS
Expansion unit	DB
Tap-off unit for Compact NSX	DC
Distribution length for bolt-on tap-off units	EB
Distribution length for plug-in tap-off units	ED
Distribution length for KH plug-in tap-off units	EH
Feed unit for dry-type transformers	EL
Feed unit	ER
Feeder length	ET
End cover	FA
Bolted tap-off unit for fuses	HF
Connection KH/KT	HT
Edgewise elbow	LC
Flat elbow	LP
PER for Prisma P and Okken interfaces	PE
Tap-off unit with protective device	PL
Tap-off unit with fuse disconnectors	SD
Tap-off unit with switch-disconnector	SE
Tap-off unit with isolator	SL/RL
Edgewise tee	TC
Neutral crossover	TN
Phase crossover	TP
Sealing kit	TT
Connection device	YA
Connection torque nut kit	YB
Flexible bar	YC
Bracket	YE
Insulating sheath	YF
Connection plate	YP
Bar supports	YS
Braids	YT
Supports and fixing devices	ZA
Edgewise zed	ZC
Flat zed	ZP

K T ● ● ● ● ● ● ● ● ●

■ Four digits indicating the rating of the trunking.
Important: for an 800 A rating, indicate "**KTA0800**".

■ One digit indicating the trunking polarity

Polarity	PE protective conductor(1)	Short circuit level(1)	Code
3L + PE	Standard	Standard (2)	**3**
3L + N + PE	Standard	Standard	**4**
3L + N + PE	Standard	Reinforced	**6** (3)
3L + N + PER	In aluminium	Standard	**5**
3L + N + PER	In copper	Reinforced	**7**

(1) For further information, see page 152 "Characteristics".
(2) Reinforced version in 2000 and 2500 A.
(3) Reinforced version in 2500 and 3200 A only.

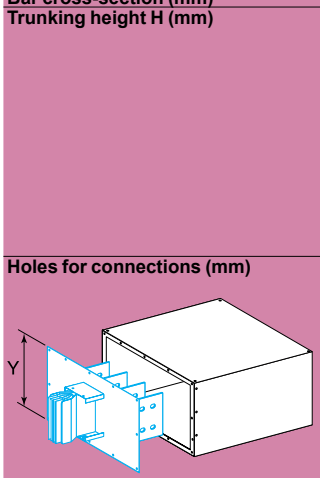
■ Variable number of alphanumeric characters indicating characteristics specific to the component.
See the section dealing with the given component.

■ Fire rated components.

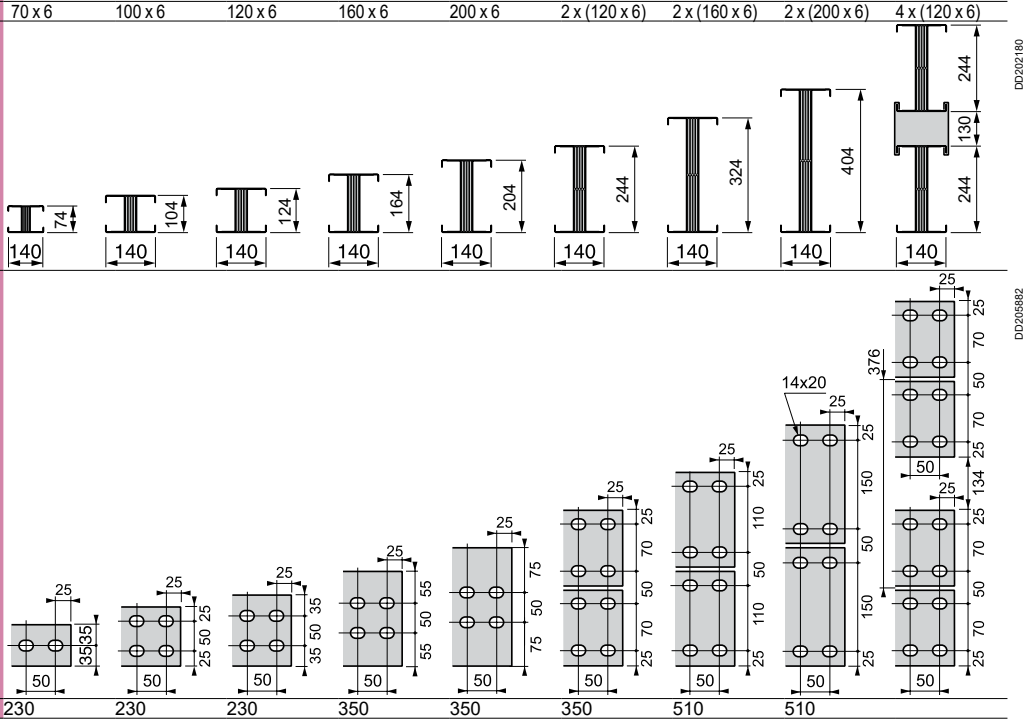
Type	Code
Fire rated straight feeder length	FT
Fire rated edgewise elbow	FC
Fire rated flat elbow	FP

Trunking cross section

Rating (A)	800	1000	1250	1600	2000	2500	3200	4000	5000
Number of bar jointing bolts	1	1	1	2	2	2	4	4	4
Bar cross-section (mm)	70 x 6	100 x 6	120 x 6	160 x 6	200 x 6	2 x (120 x 6)	2 x (160 x 6)	2 x (200 x 6)	4 x (120 x 6)
Trunking height H (mm)									
Holes for connections (mm)									
Y	230	230	230	350	350	350	510	510	



DD202181

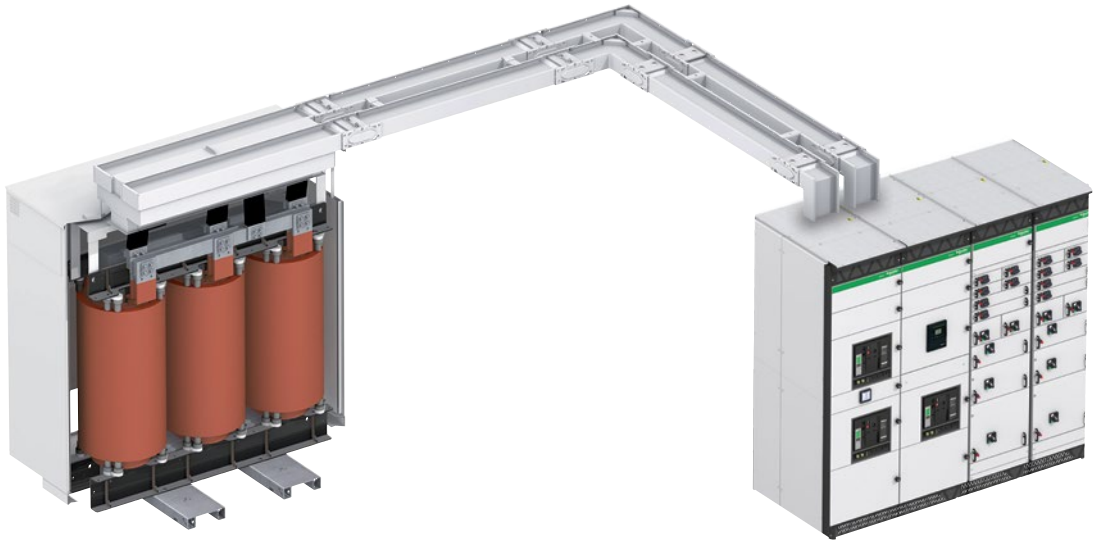


DD202180

DD205882

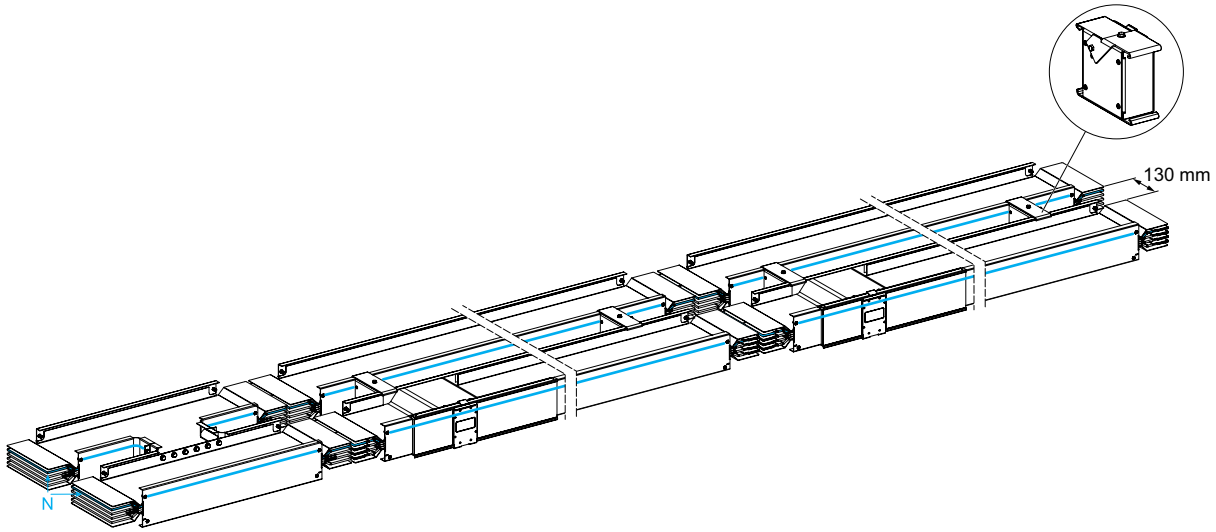
Canalis KTA

DB411146



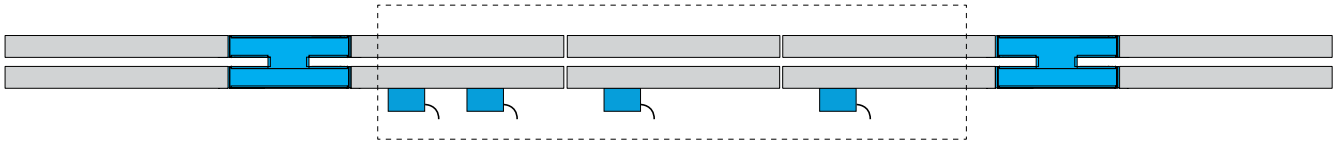
KTA5000 A is made of 2 units KTA2500 A linked together thanks to guide supports GS.

DB429011



The current has to be re-balanced between the 2 runs in distribution applications.

DB429012



If the total load of a group of tap-off units is above 1600 A, then add bridges (edgewise H units) between the 2 runs.
Bridges have to be placed before and after the group.

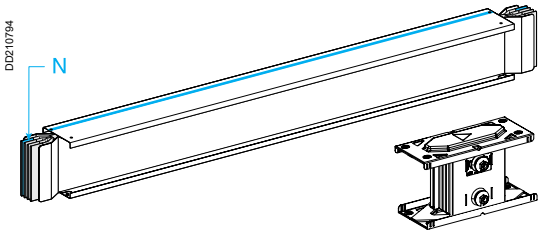
Run components
IP55

Canalis KTA 800 to 4000

Ordering

Complete the catalogue number by replacing "●●●●" by the rating.
Important:
■ for the 800 A rating, add a "0" in the catalogue number : **KTA0800**
■ add the dimensions of the selected component as a technical comment.
Example: the catalogue number of an 800 A feeder length, 3L + N + PE, 2450 mm long, is:
KTA0800ET42C, L = 2450
Rating

ET - Straight feeder lengths

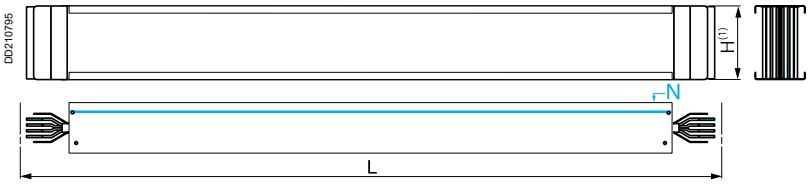


KTA●●●●ET●●●

Type	Length "L" (mm)	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	2000	KTA●●●●ET320	KTA●●●●ET420	KTA●●●●ET520
	4000	KTA●●●●ET340	KTA●●●●ET440	KTA●●●●ET540
Made to measure	500 to 1500	KTA●●●●ET31A	KTA●●●●ET41A	KTA●●●●ET51A
	1501 to 1999	KTA●●●●ET32B	KTA●●●●ET42B	KTA●●●●ET52B
	2001 to 2500	KTA●●●●ET32C	KTA●●●●ET42C	KTA●●●●ET52C
	2501 to 3000	KTA●●●●ET33D	KTA●●●●ET43D	KTA●●●●ET53D
	3001 to 3500	KTA●●●●ET33E	KTA●●●●ET43E	KTA●●●●ET53E
	3501 to 3999	KTA●●●●ET33F	KTA●●●●ET43F	KTA●●●●ET53F

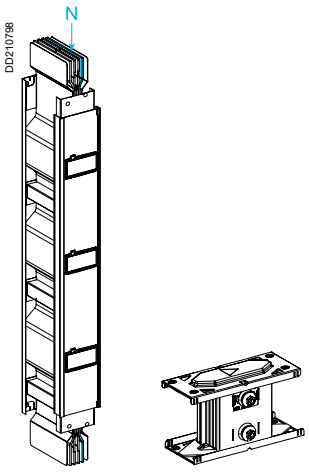
(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ET5●● by KTA●●●●ET7●●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ET4●● by KTA2500ET6●● and KTA3200ET4●● by KTA3200ET6●●.

KTA●●●●ET●●●

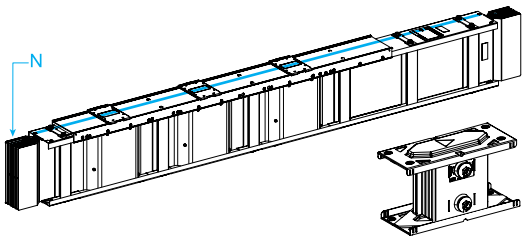


(1) See the "Trunking cross-section" table page 54.

ED - Straight lengths for KS plug-in tap-off units



KTA●●●●ED●●●●

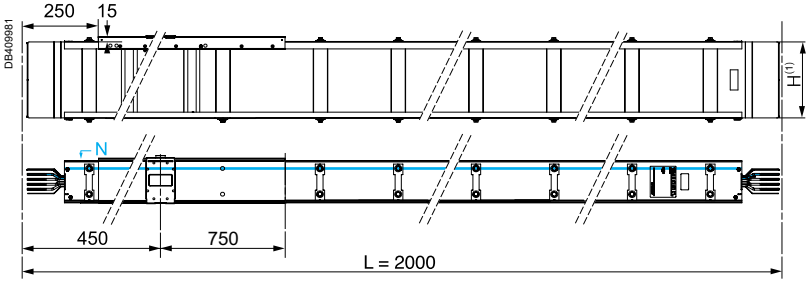


KTA●●●●ED●●●●

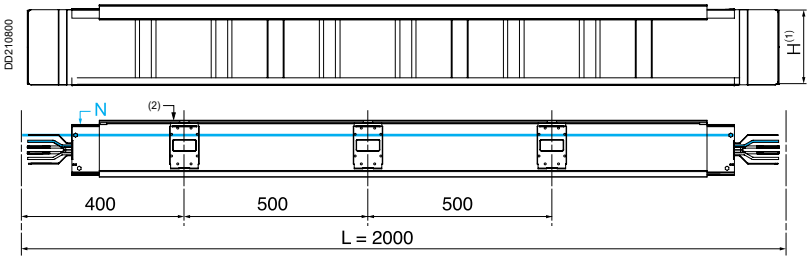
Type	Length "L" (mm)	Number of tap-offs	Cat. no.		
			3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	2000	1	KTA●●●●ED3201	KTA●●●●ED4201	KTA●●●●ED5201
		3	KTA●●●●ED3203	KTA●●●●ED4203	KTA●●●●ED5203
	4000	3	KTA●●●●ED3403	KTA●●●●ED4403	KTA●●●●ED5403
Made to measure	2500 to 3000	1	KTA●●●●ED3301	KTA●●●●ED4301	KTA●●●●ED5301
		2	KTA●●●●ED3302	KTA●●●●ED4302	KTA●●●●ED5302
	3001 to 3500	1	KTA●●●●ED3351	KTA●●●●ED4351	KTA●●●●ED5351
		3	KTA●●●●ED3353	KTA●●●●ED4353	KTA●●●●ED5353

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ED5●●● by KTA●●●●ED7●●●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ED4●●● by KTA2500ED6●●● and KTA3200ED4●●● by KTA3200ED6●●●.

KTA●●●●ED●201



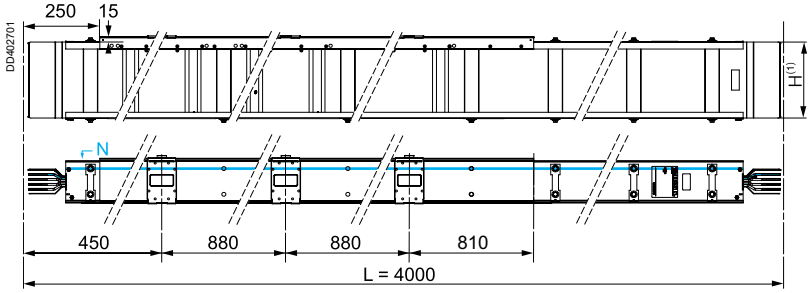
KTA●●●●ED●203



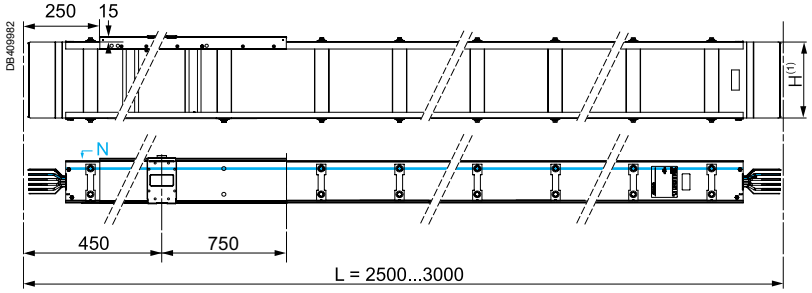
(1) See the "Trunking cross-section" table page 54.
(2) Tap-off units KTB630●●●●●● can not be installed at this outlet.

Straight lengths for KS plug-in tap-off units

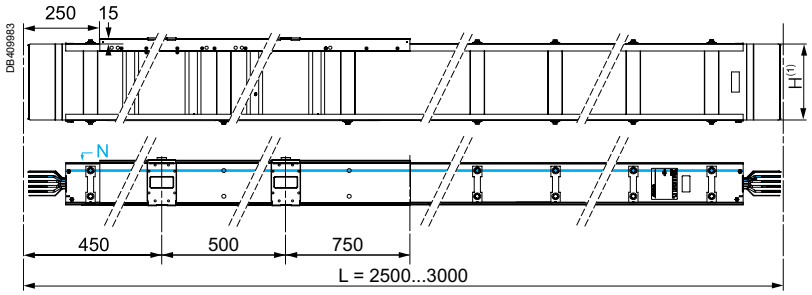
KTA●●●●ED●403



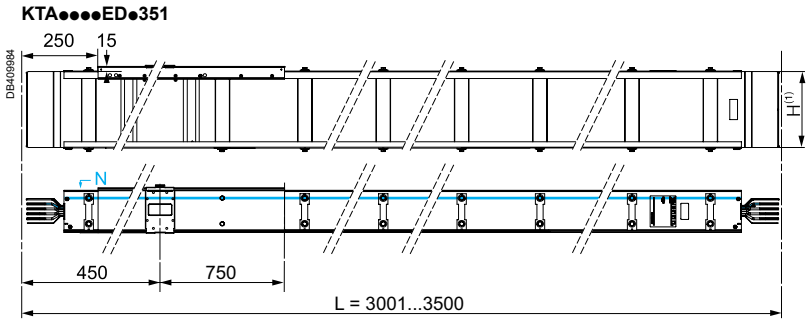
KTA●●●●ED●301



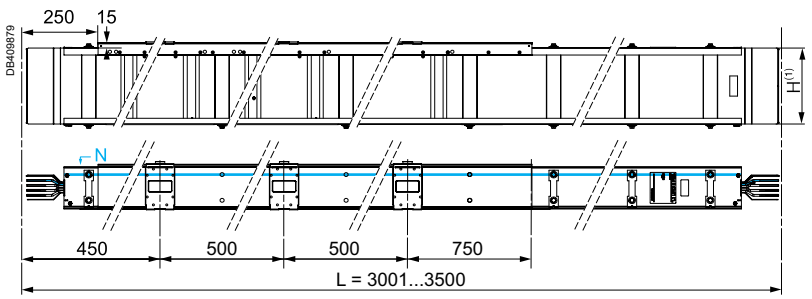
KTA●●●●ED●302



KTA●●●●ED●351



KTA●●●●ED●353

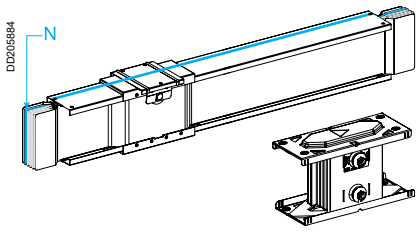


(1) *See the "Trunking cross-section" table page 54.*

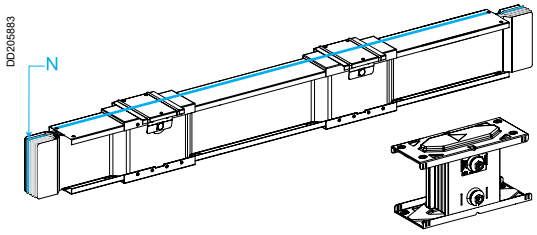
Run components
IP55

Canalis KTA 800 to 4000

EB - Straight lengths for bolted tap-off units



KTA●●●●EB●20

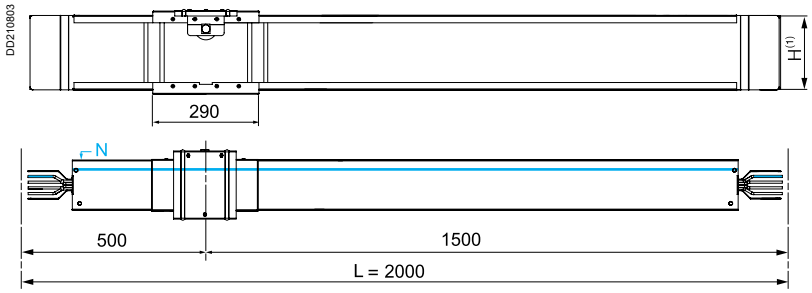


KTA●●●●EB●40

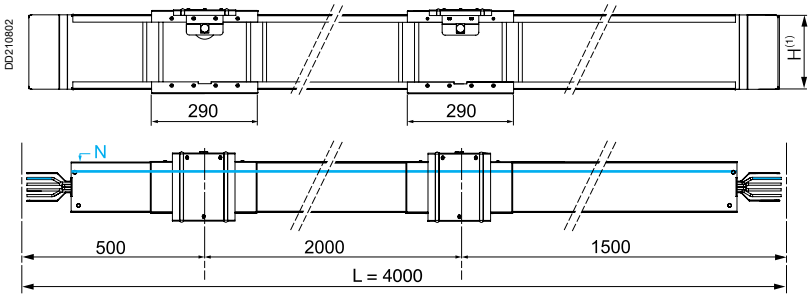
Type	Length "L" (mm)	Number of tap-offs	Cat. no.		
			3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	2000	1	KTA●●●●EB320	KTA●●●●EB420	KTA●●●●EB520
	4000	2	KTA●●●●EB340	KTA●●●●EB440	KTA●●●●EB540

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●EB5●● by KTA●●●●EB7●●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500EB4●● by KTA2500EB6●● and KTA3200EB4●● by KTA3200EB6●●.

KTA●●●●EB●20

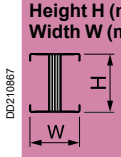


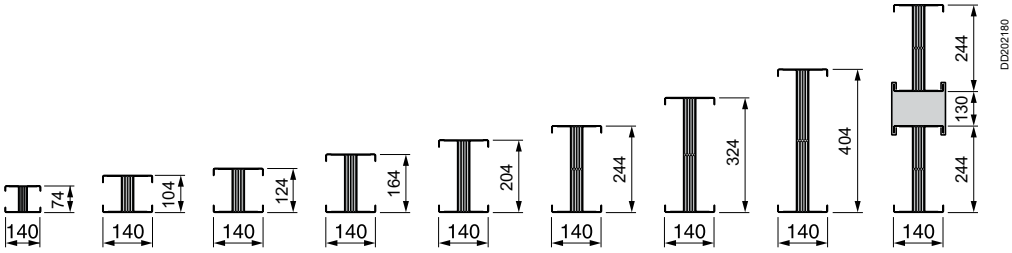
KTA●●●●EB●40



(1) See the "Trunking cross-section" table below.

Trunking cross-section

Rating (A)		800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Weight (kg/m)	3L + PE	12	14	16	19	22	25	31	38	50
	3L + N + PE	13	16	18	22	26	30	37	45	60
	3L + N + PER	15	19	21	26	31	36	46	56	72
Height H (mm) Width W (mm)										



*(1) **Important**: for the 800 A rating, indicate **"KTA0800"**.*

Ordering

Complete the catalogue number by replacing the "●●●●" with the rating.

***Important**: in the catalogue number, for a rating of 800 A, add a "0": KTA0800.*

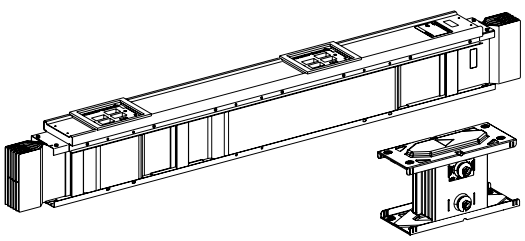
Example: a transport section 800 A, length 4 m.
Catalogue number for 3L+N+PE: **KTA0800EH440**.

EH - Straight lengths for KH plug-in tap-off units

Type	Length "L" (mm)	Number of tap-offs	Cat. no. (4)		
			3L+PE	3L + N + PE (2)	3L + N + PER (3)
Fixed	2000	2	**KTA●●●●EH320**	**KTA●●●●EH420**	**KTA●●●●EH520**
	4000	3	**KTA●●●●EH340**	**KTA●●●●EH440**	**KTA●●●●EH540**

***(1)** See the "Trunking cross-section" table page 54.*
***(2)** To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500EH4●● by KTA2500EH6●● and KTA3200EH4●● by KTA3200EH6●●.*
***(3)** To order the 3L+N+PER 2500 A and 3200 A version with reinforced Isc, replace KTA2500EH5●● by KTA2500EH7●● and KTA3200EH5●● by KTA3200EH7●●.*
***(4)** Not available for KTA5000.*

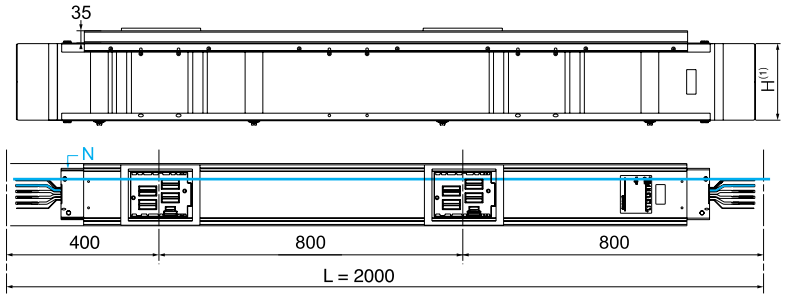
DB402102



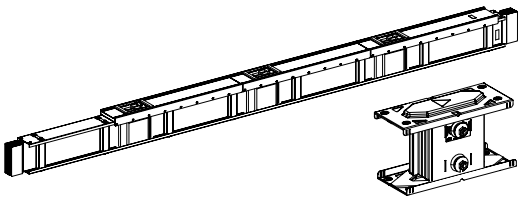
KTA●●●●EH●20

KTA●●●●EH●20

DB402025



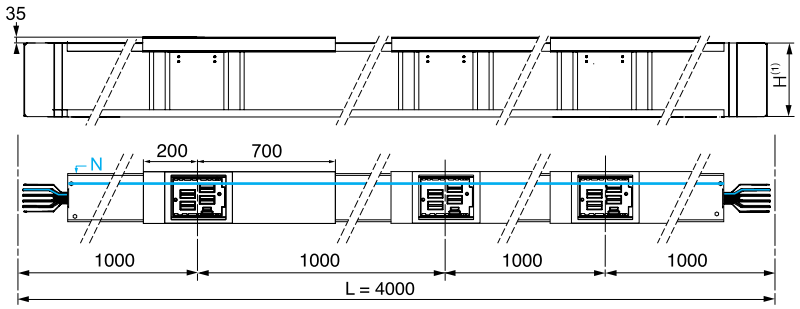
DB406461



KTA●●●●EH●40

KTA●●●●EH●40

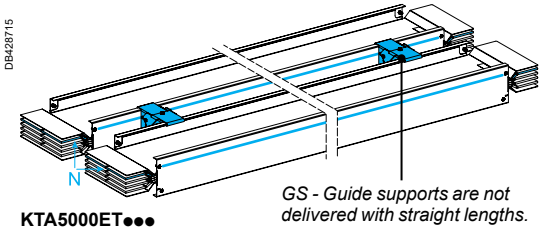
DB402127



Run components
IP55

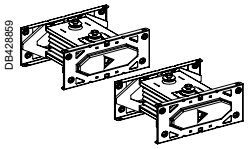
Canalis KTA 5000

ET - Straight feeder lengths



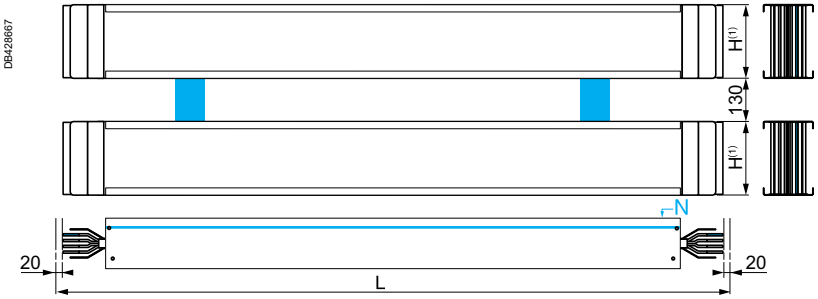
KTA5000ET●●●

GS - Guide supports are not delivered with straight lengths.



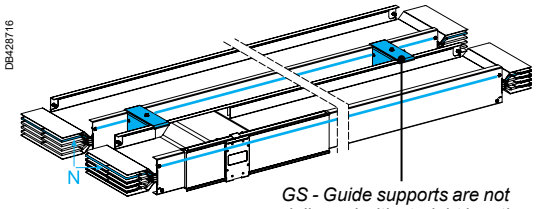
Type	Length "L" (mm)	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Fixed	2000	KTA5000ET320	KTA5000ET420	KTA5000ET520
	4000	KTA5000ET340	KTA5000ET440	KTA5000ET540
Made to measure	500 to 1500	KTA5000ET31A	KTA5000ET41A	KTA5000ET51A
	1501 to 1999	KTA5000ET32B	KTA5000ET42B	KTA5000ET52B
	2001 to 2500	KTA5000ET32C	KTA5000ET42C	KTA5000ET52C
	2501 to 3000	KTA5000ET33D	KTA5000ET43D	KTA5000ET53D
	3001 to 3500	KTA5000ET33E	KTA5000ET43E	KTA5000ET53E
	3501 to 3999	KTA5000ET33F	KTA5000ET43F	KTA5000ET53F

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000ET5●● by KTA5000ET7●●.



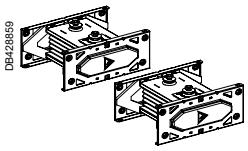
(1) See the "Trunking cross-section" table page 54.

ED - Straight lengths for KS plug-in tap-off units



KTA5000ED●●●

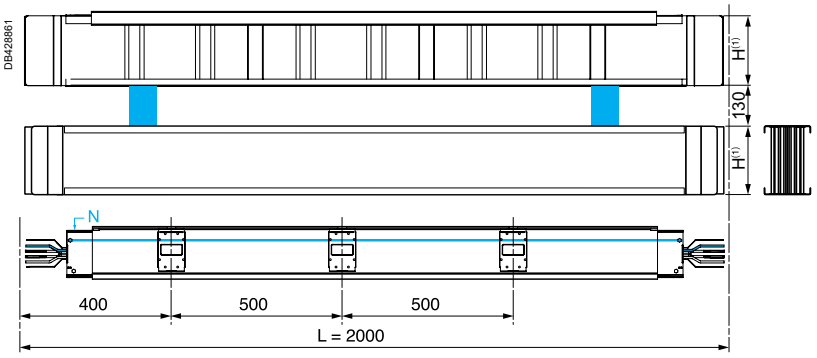
GS - Guide supports are not delivered with straight lengths.



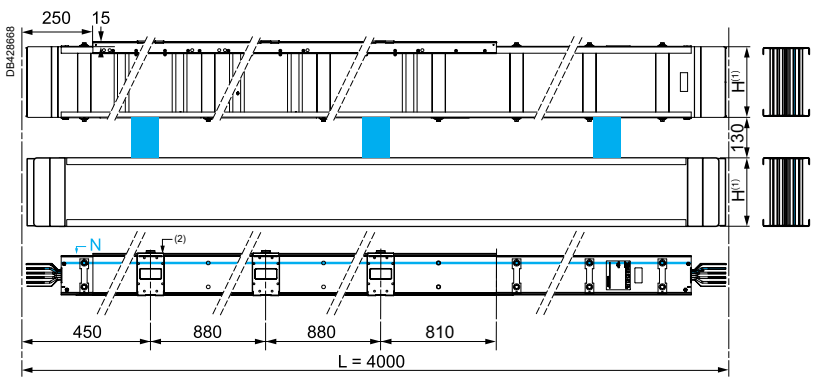
Type	Length "L" (mm)	Number of tap-offs	Cat. no.		
			3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	2000	3	KTA5000ED3203	KTA5000ED4203	KTA5000ED5203
	4000	3	KTA5000ED3403	KTA5000ED4403	KTA5000ED5403

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000ED5●●3 by KTA5000ED7●●3.

KTA●●●●ED●203



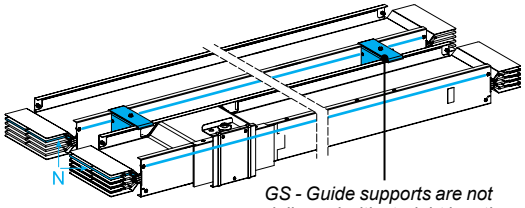
KTA●●●●ED●403



(1) See the "Trunking cross-section" table page 54.
(2) Tap-off units KTB630●●●●●● can not be installed at this outlet.

EB - Straight lengths for bolted tap-off units

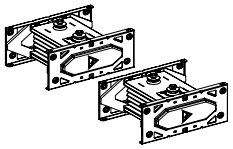
DB428717



GS - Guide supports are not delivered with straight lengths.

KTA5000EB●●●

DB428859

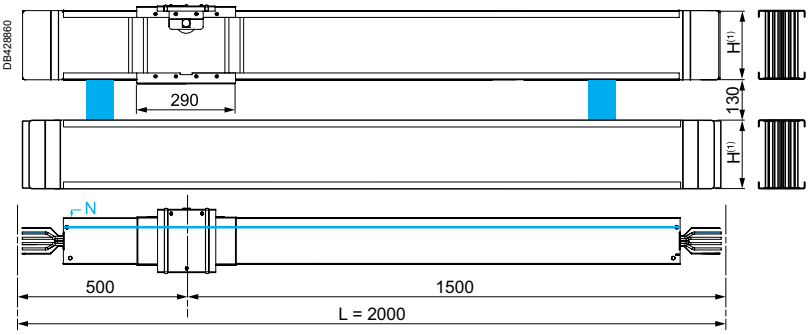


Type	Length "L" (mm)	Number of tap-offs	Cat. no.		
			3L + PE	3L + N + PE	3L + N + PER (1)
Fixed	2000	1	KTA5000EB320	KTA5000EB420	KTA5000EB520
	4000	2	KTA5000EB340	KTA5000EB440	KTA5000EB540

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000EB5●● by KTA5000EB7●●.

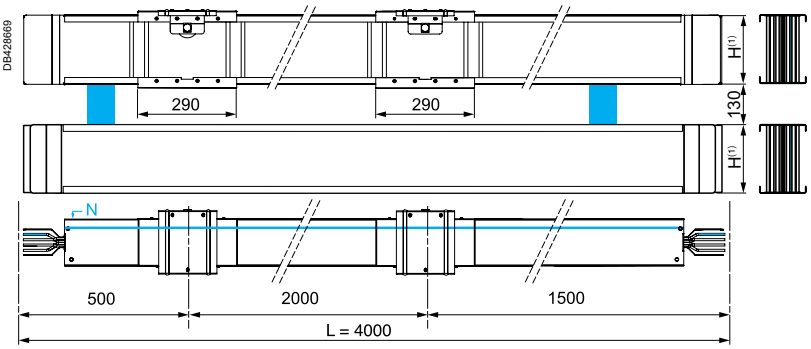
KTA5000EB●20

DB428860



KTA5000EB●40

DB428669



(1) See the "Trunking cross-section" table page 54.

Additional run components
IP55

Canalis KTA 800 to 4000

Ordering

Complete the catalogue number by replacing "●●●●" by the rating.

Important:

■ for the 800 A rating, add a "0" in the catalogue number : **KTA0800**

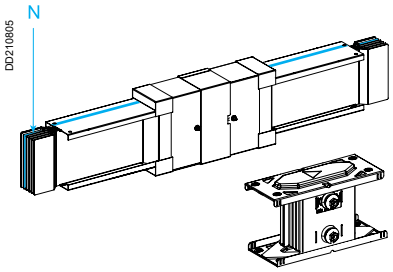
■ add the dimensions of the selected component as a technical comment.

Example: the catalogue number of a 1250 A neutral crossover length, 3L + N + PE, 1000 mm long, is:

KTA1250TN410

Rating

DB - Straight expansion unit



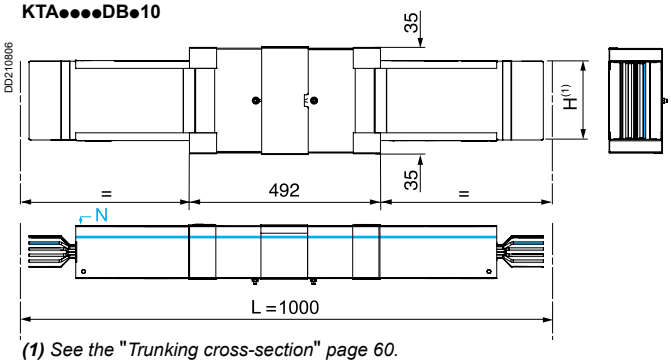
KTA●●●●DB●10

Type	Length "L" (mm)	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	1000	KTA●●●●DB310	KTA●●●●DB410	KTA●●●●DB510

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●DB510 by KTA●●●●DB710.

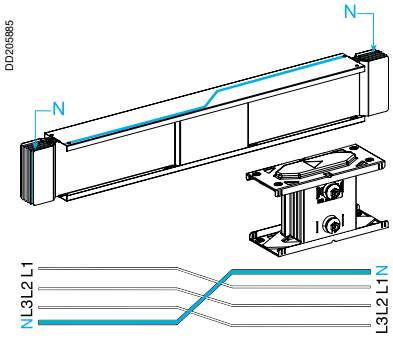
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500DB4●● by KTA2500DB6●● and KTA3200DB4●● by KTA3200DB6●●.

KTA●●●●DB●10



(1) See the "Trunking cross-section" page 60.

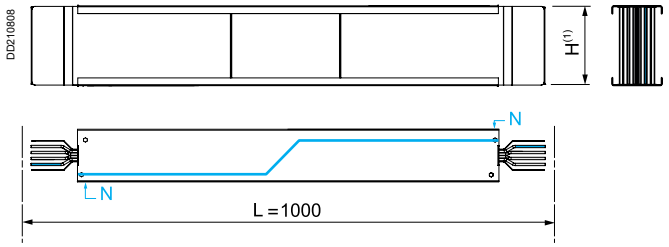
TN - Neutral crossover length



KTA●●●●TN●10

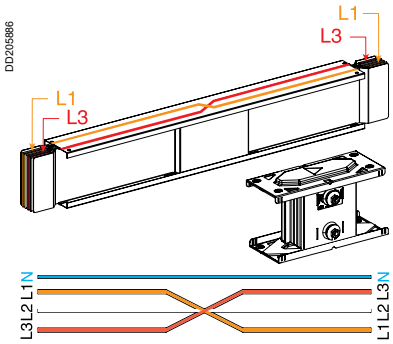
Type	Length "L" (mm)	Cat. no.
		3L + N + PE
Fixed	1000	KTA●●●●TN410
Fixed	1000	KTA●●●●TN610

KTA●●●●TN●10



(1) See the "Trunking cross-section" page 60.

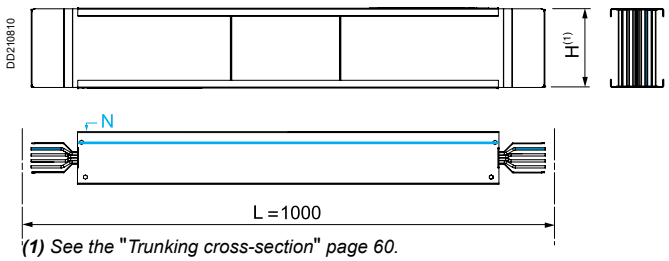
TP - Phase crossover length



KTA●●●●TP●10

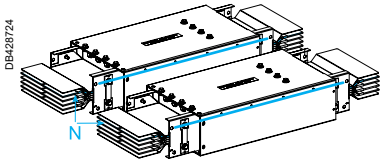
Type	Length "L" (mm)	Cat. no.
		3L + N + PE
Fixed	1000	KTA●●●●TP410
Fixed	1000	KTA●●●●TP610

KTA●●●●TP●10

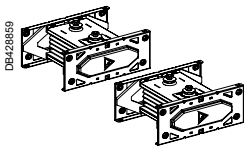


(1) See the "Trunking cross-section" page 60.

DB - Straight expansion unit

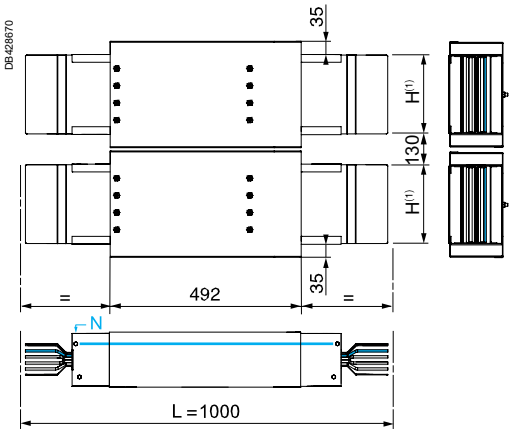


KTA5000DB●10



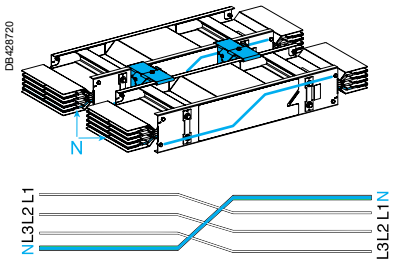
Type	Length "L" (mm)	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Fixed	1000	KTA5000DB310	KTA5000DB410	KTA5000DB510

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000DB510 by KTA5000DB710.

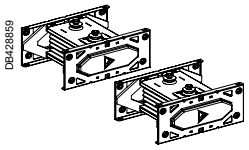


(1) See the "Trunking cross-section" page 60.

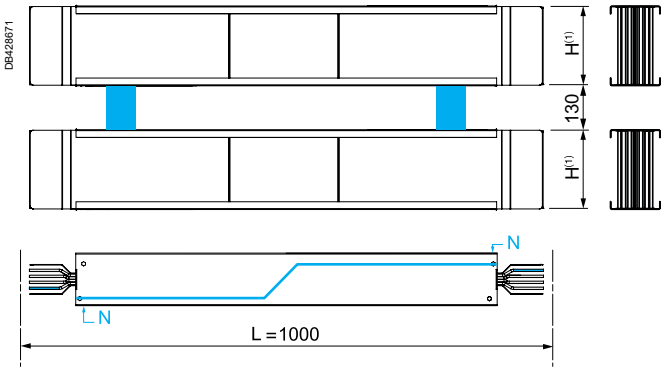
TN - Neutral crossover length



KTA5000TN410

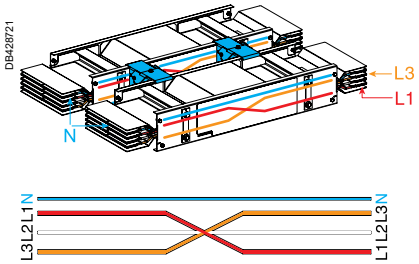


Type	Length "L" (mm)	Cat. no. (1)
		3L + N + PE
Fixed	1000	KTA5000TN410

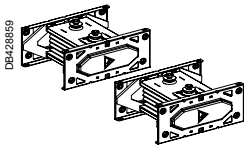


(1) See the "Trunking cross-section" page 60.

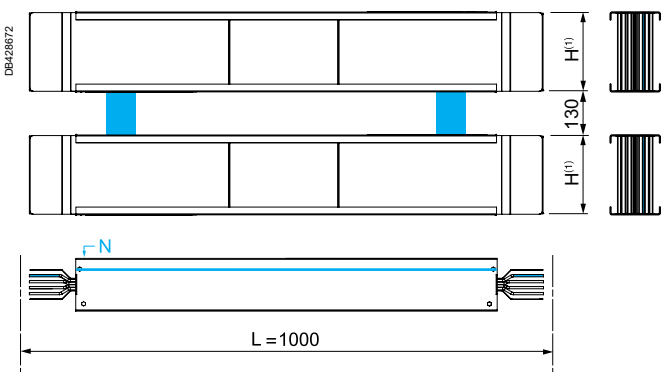
TP - Phase crossover length



KTA5000TP410



Type	Length "L" (mm)	Cat. no. (1)
		3L + N + PE
Fixed	1000	KTA5000TP410

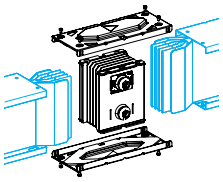


(1) See the "Trunking cross-section" page 60.

Additional run components
IP55

Canalis KTA 800 to 5000

YA - Additional jointing units

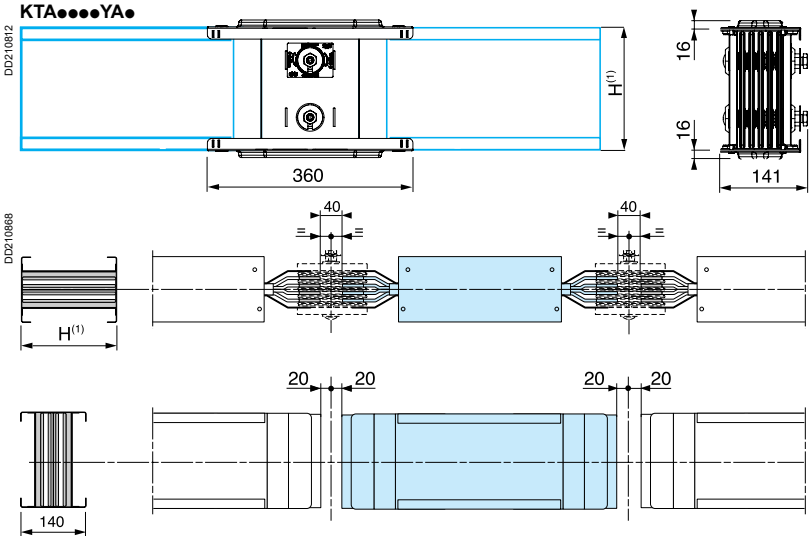


KTA●●●●YA●

Type	Cat. no. (2)			
	3L + PE	3L + N + PE	3L + N + PER	
Version code (1)	3	4 or 6	5	7
Jointing unit	KTA●●●●YA3	KTA●●●●YA●	KTA●●●●YA5	KTA●●●●YA7

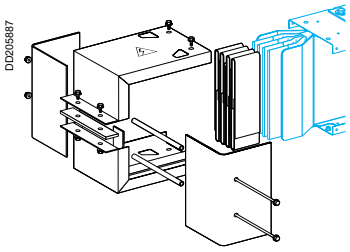
(1) See catalogue-number coding page 50.
(2) References KTA5000YA● are made of 2 references KTA2500YA●.

KTA●●●●YA●



(1) See the "Trunking cross-section" table below.

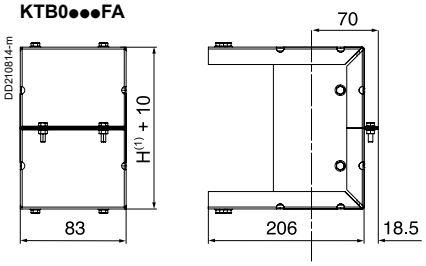
FA - End covers



KTB0●●●FA

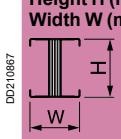
Type	Rating of the trunking (A)	Height H of the trunking (mm)	Cat. no.
End cover	800	74	**KTB0074FA**
	1000	104	**KTB0104FA**
	1250	124	**KTB0124FA**
	1600	164	**KTB0164FA**
	2000	204	**KTB0204FA**
	2500	244	**KTB0244FA**
	3200	324	**KTB0324FA**
	4000	404	**KTB0404FA**
	5000(1)(2)	622	**KTB0622FA**

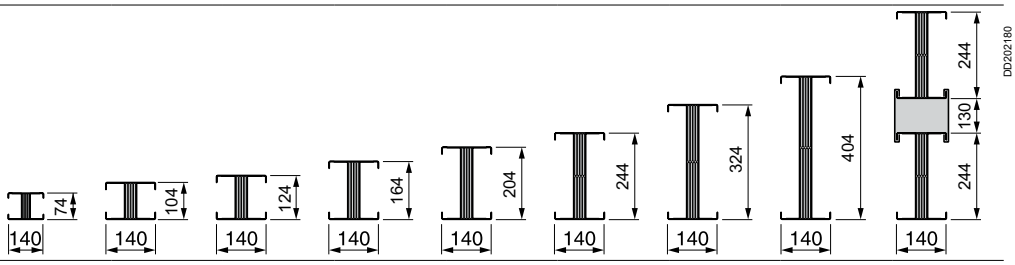
KTB0●●●FA



(1) See the "Trunking cross-section" table below.
(2) The reference KTB0622FA is made of 2 references KTB0244FA.

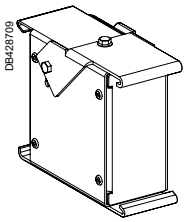
Trunking cross-section

Rating (A)		800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Weight (kg/m)	3L + PE	12	14	16	19	22	25	31	38	50
	3L + N + PE	13	16	18	22	26	30	37	45	60
	3L + N + PER	15	19	21	26	31	36	46	56	72
Height H (mm) Width W (mm)										



*(1) **Important**: for the 800 A rating, indicate **"KTA0800"**.*

GS - Guide support

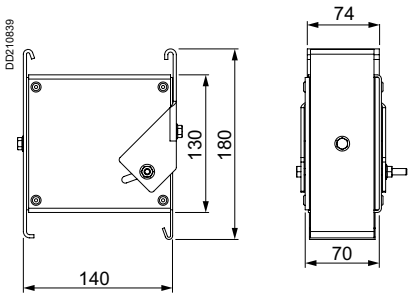


KTA5000GS1

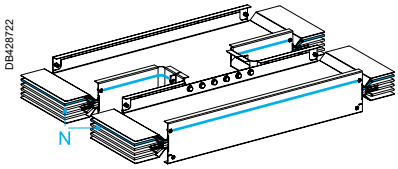
2 guide supports(1) are required to linked all KTA2500 elements together in order to create the KTA5000 run.

(1) *3 guide supports are required for 4 m straight length, 1 for straight end feed units ER1. These guide supports carry the label KTA5000A.*

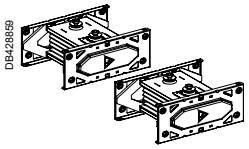
Description	Cat. no.	Weight (kg)
1 guide support	**KTA5000GS1**	0.6



HC - Edgewise H

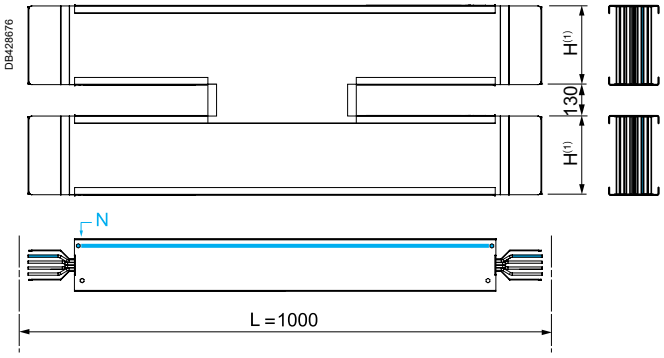


KTA5000HC●10



Type	Length "L" (mm)	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Fixed	1000	**KTA5000HC310**	**KTA5000HC410**	**KTA5000HC510**

(1) *To order the 3L+N+PER version with reinforced Isc, replace KTA5000HC510 by KTA5000HC710.*



(1) *See the "Trunking cross-section" page 60.*

Elbow components for changing direction
IP55

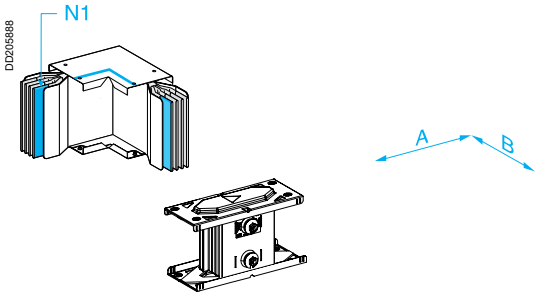
Ordering

Complete the catalogue number by replacing "●●●●" by the rating.
Important:
- for the 800 A rating, add a "0" in the catalogue number : **KTA0800**
- add the dimensions of the selected component as a technical comment.

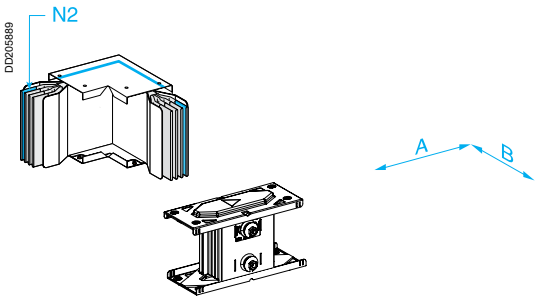
Example: the catalogue number of a 2000 A flat elbow, N1, 3L + N + PE with dimensions A = 300 mm and B = 650 mm is:
KTA2000LP4B1, A = 300, B = 650.

Rating

LP - Flat elbows



KTA●●●●LP●●1

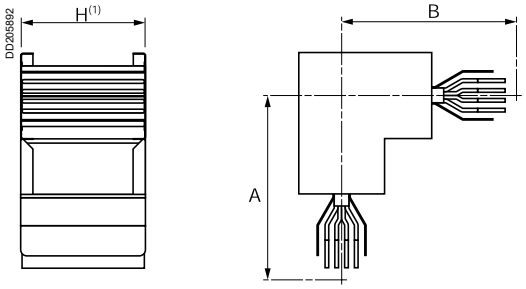


KTA●●●●LP●●2

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
2 fixed branches	N1	KTA●●●●LP3A1	KTA●●●●LP4A1	KTA●●●●LP5A1
	N2	KTA●●●●LP3A2	KTA●●●●LP4A2	KTA●●●●LP5A2
1 made to measure short branche	N1	KTA●●●●LP3B1	KTA●●●●LP4B1	KTA●●●●LP5B1
	N2	KTA●●●●LP3B2	KTA●●●●LP4B2	KTA●●●●LP5B2
1 made to measure long branche	N1	KTA●●●●LP3D1	KTA●●●●LP4D1	KTA●●●●LP5D1
	N2	KTA●●●●LP3D2	KTA●●●●LP4D2	KTA●●●●LP5D2
2 made to measure branches	N1	KTA●●●●LP3E1	KTA●●●●LP4E1	KTA●●●●LP5E1
	N2	KTA●●●●LP3E2	KTA●●●●LP4E2	KTA●●●●LP5E2

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●LP5●● by KTA●●●●LP7●●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500LP4●● by KTA2500LP6●● and KTA3200LP4●● by KTA3200LP6●●.

KTA●●●●LP●●●

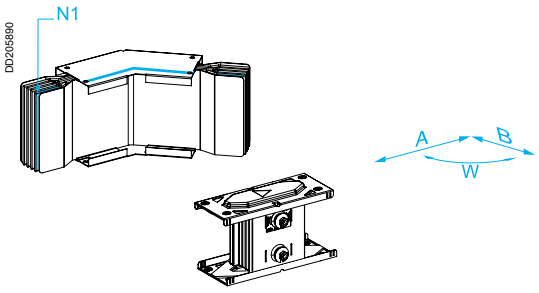


(1) See the "Trunking cross-section" table page 67.

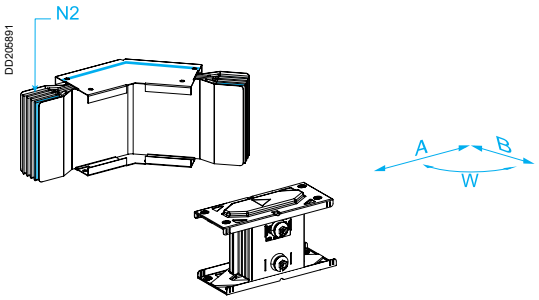
Dimensions

Type	Rating (A)	Dimensions (mm)	
		A	B
2 fixed branches	800, 1000, 1250 1600, 2000, 2500 3200, 4000	300	300
1 made to measure short branche	800, 1000, 1250 1600, 2000, 2500 3200, 4000	300	301 to 799
		301 to 799	300
1 made to measure long branche	800, 1000, 1250	300	800 to 1000
		800 to 1000	300
	1600, 2000, 2500	300	800 to 1100
		800 to 1100	300
	3200, 4000	300	800 to 1400
		800 to 1400	300
2 made to measure branches	800, 1000, 1250	301 to 600	301 to 1000
		301 to 1000	301 to 600
	1600, 2000, 2500	301 to 600	301 to 1100
		301 to 1100	301 to 600
	3200, 4000	301 to 600	301 to 1400
		301 to 1400	301 to 600
	5000	301 to 600	301 to 1100
		301 to 1100	301 to 600

LP•C - Flat elbows with made to measure angles



KTA••••LP•C1

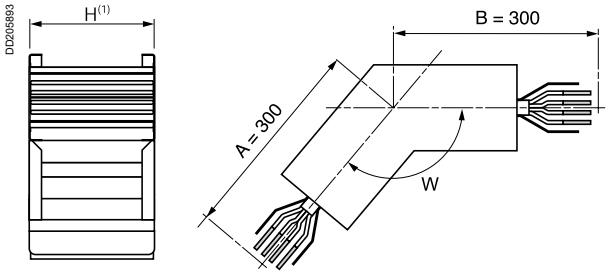


KTA••••LP•C2

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER(1)
Made to measure angle	N1	KTA••••LP3C1	KTA••••LP4C1	KTA••••LP5C1
	N2	KTA••••LP3C2	KTA••••LP4C2	KTA••••LP5C2

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA••••LP5C• by KTA••••LP7C•.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500LP4•• by KTA2500LP6•• and KTA3200LP4•• by KTA3200LP6••.

KTA••••LP•C•

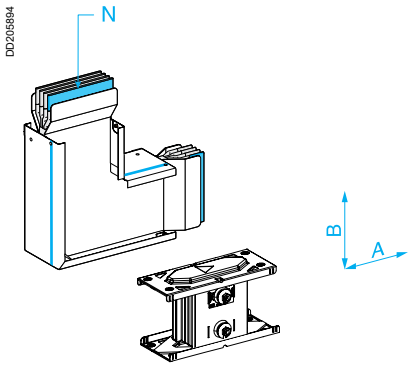


(1) See the "Trunking cross-section" table page 67.

Dimensions

Type	Rating (A)	Dimensions (mm)		
		A	B	W
Made to measure	All	300	300	91° to 179°

LC - Edgewise elbows

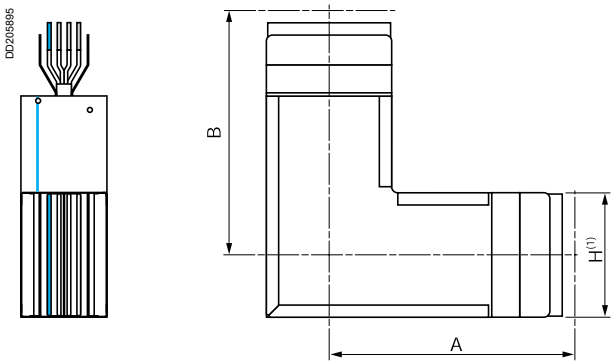


KTA••••LC••

Type	Cat. no.		
	3L + PE	3L + N + PE (2)	3L + N + PER (1)
2 fixed branches	KTA••••LC3A	KTA••••LC4A	KTA••••LC5A
1 made to measure short branche	KTA••••LC3B	KTA••••LC4B	KTA••••LC5B
1 made to measure long branche	KTA••••LC3D	KTA••••LC4D	KTA••••LC5D
2 made to measure branches	KTA••••LC3E	KTA••••LC4E	KTA••••LC5E

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA••••LC5• by KTA••••LC7•.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Icc, replace KTA2500LC4• by KTA2500LC6• and KTA3200LC4• by KTA3200LC6•.

KTA••••LC••

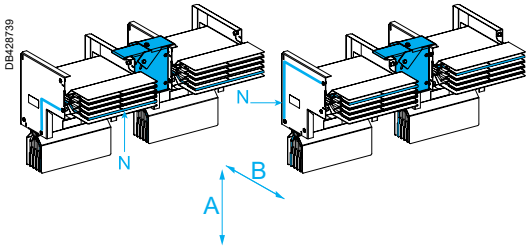


(1) See the "Trunking cross-section" table page 67 and dimensions page 66.

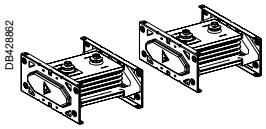
Elbow components for changing direction
IP55

Canalis KTA 5000

LP - Elbows



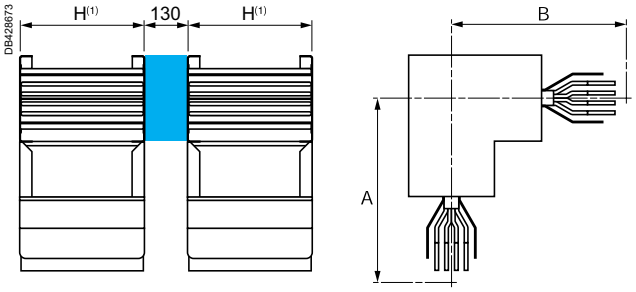
KTA5000LP●●1 KTA5000LP●●2



Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
2 fixed branches	N1	KTA5000LP3A1	KTA5000LP4A1	KTA5000LP5A1
	N2	KTA5000LP3A2	KTA5000LP4A2	KTA5000LP5A2
1 made to measure short branche	N1	KTA5000LP3B1	KTA5000LP4B1	KTA5000LP5B1
	N2	KTA5000LP3B2	KTA5000LP4B2	KTA5000LP5B2
1 made to measure long branche	N1	KTA5000LP3D1	KTA5000LP4D1	KTA5000LP5D1
	N2	KTA5000LP3D2	KTA5000LP4D2	KTA5000LP5D2
2 made to measure branches	N1	KTA5000LP3E1	KTA5000LP4E1	KTA5000LP5E1
	N2	KTA5000LP3E2	KTA5000LP4E2	KTA5000LP5E2

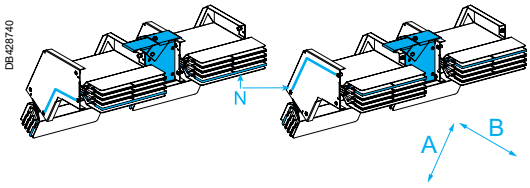
(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000LP5●● by KTA5000LP7●●.

2 x KTA2500LP●●●

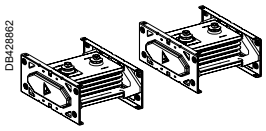


(1) See the "Trunking cross-section" table page 67 and dimensions page 62.

LP●C - Flat elbows with made to measure angles



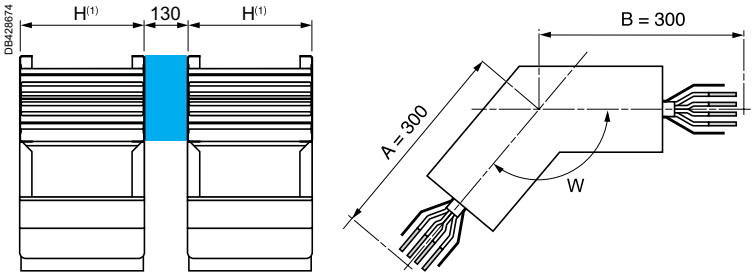
KTA5000LP●C1 KTA5000LP●C2



Type	Position of neutral	Cat. no. (2)		
		3L + PE	3L + N + PE	3L + N + PER (1)
Made to measure angle	N1	KTA5000LP3C1	KTA5000LP4C1	KTA5000LP5C1
	N2	KTA5000LP3C2	KTA5000LP4C2	KTA5000LP5C2

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000LP5C● by KTA5000LP7C●.

2 x KTA2500LP●●●



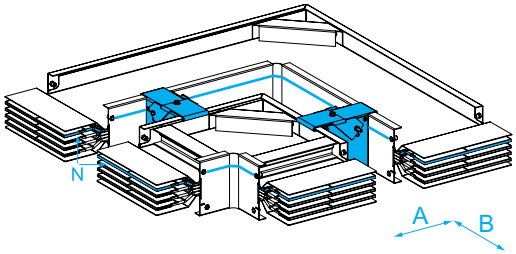
(1) See the "Trunking cross-section" table page 67.

Dimensions

Rating (A)	Dimensions (mm)		
	A	B	W
5000	300	300	91° to 179°

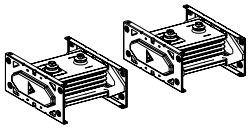
LC - Edgewise elbows

DB428741



KTA5000LC●●●

DB428862

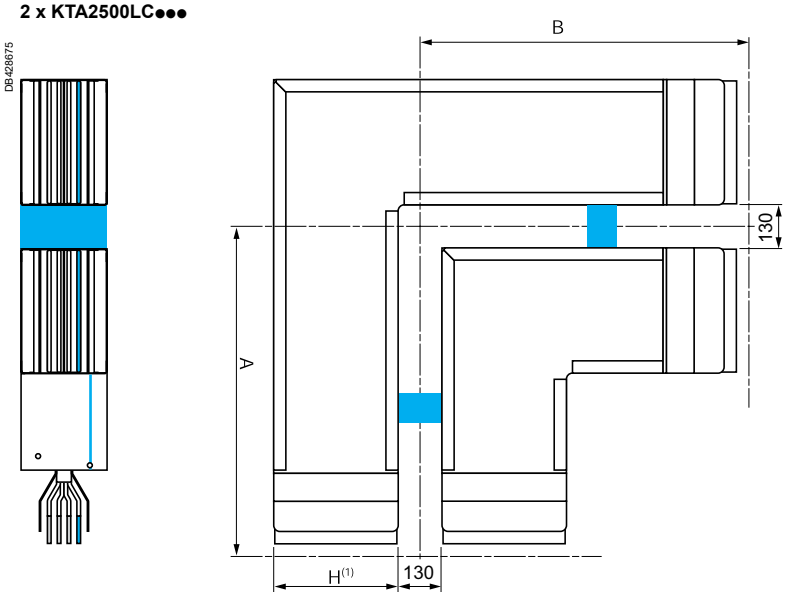


Type	Cat. no. (2)		
	3L + PE	3L + N + PE	3L + N + PER (1)
2 fixed branches	KTA5000LC3A	KTA5000LC4A	KTA5000LC5A
1 made to measure short branche	KTA5000LC3B	KTA5000LC4B	KTA5000LC5B

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000LC5● by KTA5000LC7●.

2 x KTA2500LC●●●

DB428675



(1) See the "Trunking cross-section" table page 67 and dimensions page 66.

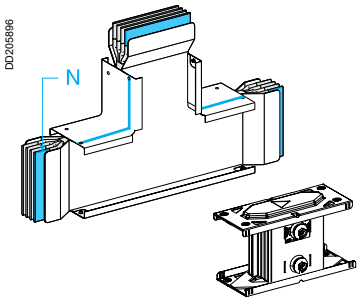
Elbow components for changing direction
IP55

Dimensions

Type	Rating (A)	Dimensions (mm)	
		A	B
2 fixed branches	800(1)	275	275
	1000	290	290
	1250	300	300
	1600	320	320
	2000	340	340
	2500	360	360
	3200	400	400
	4000	440	440
	5000	548	548
1 made to measure short branche	800(1)	275	276 to 774
		276 to 774	275
	1000	290	291 to 789
		291 to 789	290
	1250	300	301 to 799
		301 to 799	300
	1600	320	321 to 819
		321 to 819	320
	2000	340	341 to 839
		341 to 839	340
	2500	360	361 to 859
		361 to 859	360
	3200	400	401 to 899
		401 to 899	400
	4000	440	441 to 939
		441 to 939	440
	5000	548	549 to 1047
		549 to 1047	548
1 made to measure long branche	800(1)	275	775 to 1000
		775 to 1000	275
	1000	290	790 to 1000
		790 to 1000	290
	1250	300	800 to 1000
		800 to 1000	300
	1600	320	820 to 1100
		820 to 1100	320
	2000	340	840 to 1100
		840 to 1100	340
	2500	360	860 to 1100
		860 to 1100	360
	3200	400	900 to 1400
		900 to 1400	400
	4000	440	940 to 1400
		940 to 1400	440
2 made to measure branches	800(1)	276 to 745	276 to 1000
		276 to 1000	276 to 745
	1000	291 to 730	291 to 1000
		291 to 1000	291 to 730
	1250	301 to 720	301 to 1000
		301 to 1000	301 to 720
	1600	321 to 700	321 to 1100
		321 to 1100	321 to 700
	2000	341 to 680	341 to 1100
		341 to 1100	341 to 680
	2500	361 to 660	361 to 1100
		361 to 1100	361 to 660
	3200	401 to 620	401 to 1400
		401 to 1400	401 to 620
	4000	441 to 580	441 to 1400
		441 to 1400	441 to 580

***(1)** For the 800 A rating, indicate **"KTA0800"**.*

TC - Edgewise tee

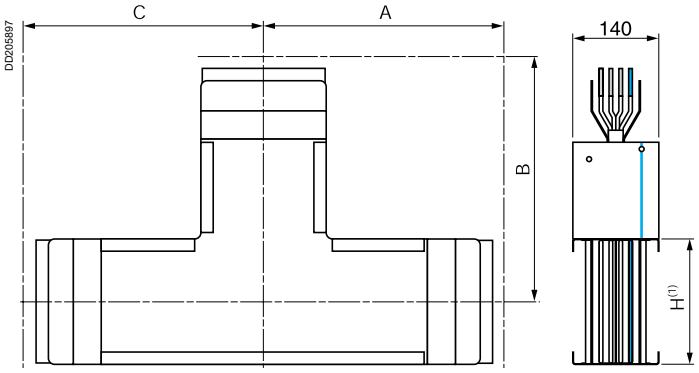


KTA●●●●TC●

Type	Cat. no. (3)		
	3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	KTA●●●●TC3	KTA●●●●TC4	KTA●●●●TC5

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●TC5 by KTA●●●●TC7.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500TC4 by KTA2500TC6 and KTA3200TC4 by KTA3200TC6.
(3) Not available for KTA5000.

KTA●●●●TC●



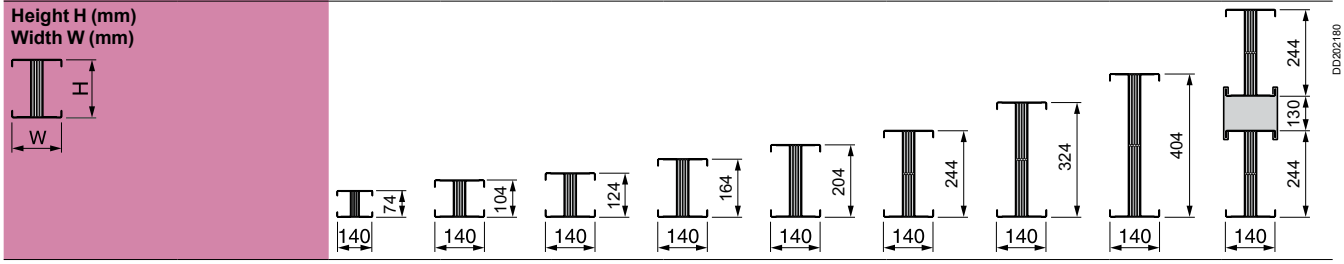
(1) See the "Trunking cross-section" table below.

Dimensions

Type	Rating (A)	Dimensions (mm)		
		A	B	C
Fixed	800(2)	275	275	275
	1000	290	290	290
	1250	300	300	300
	1600	320	320	320
	2000	340	340	340
	2500	360	360	360
	3200	400	400	400
	4000	440	440	440

*(2) For the 800 A rating, indicate "**KTA0800**".*

Trunking cross-section

Rating (A)		800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Weight (kg/m)	3L + PE	12	14	16	19	22	25	31	38	50
	3L + N + PE	13	16	18	22	26	30	37	45	60
	3L + N + PER	15	19	21	26	31	36	46	56	72
Height H (mm) Width W (mm)										

*(1) **Important**: for the 800 A rating, indicate **"KTA0800"**.*

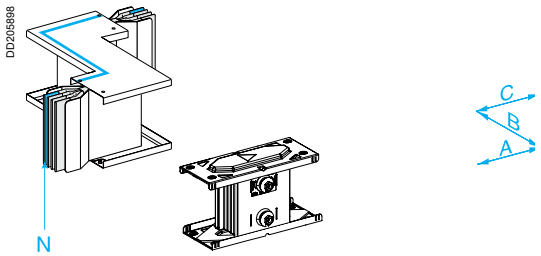
Zed components for changing direction
IP55

Ordering

Complete the catalogue number by replacing "●●●●" by the rating.
Important:
■ for the 800 A rating, add a "0" in the catalogue number : **KTA0800**
■ add the dimensions of the selected component as a technical comment.

Example: the catalogue number of a 1600 A edgewise zed unit, N2, 3L + N + PE with dimensions A = 300 mm, B = 450 mm, C = 300 mm is:
KTA1600ZC42, A = 300, B = 450, C = 300.
Rating

ZP - Flat zed units

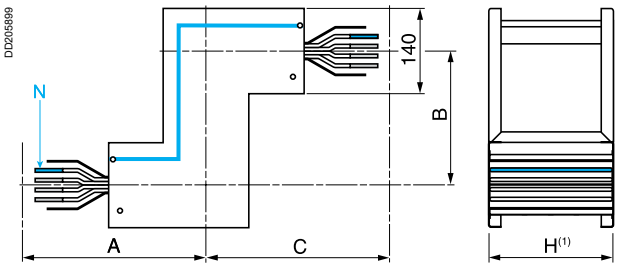


KTA●●●●ZP●

Type	Cat. no. (3)		
	3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	KTA●●●●ZP3	KTA●●●●ZP4	KTA●●●●ZP5

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ZP5 by KTA●●●●ZP7.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ZP4 by KTA2500ZP6 and KTA3200ZP4 by KTA3200ZP6.
(3) References KTA5000ZP● are made of 2 references KTA2500ZP●. See details page 69.

KTA●●●●ZP●

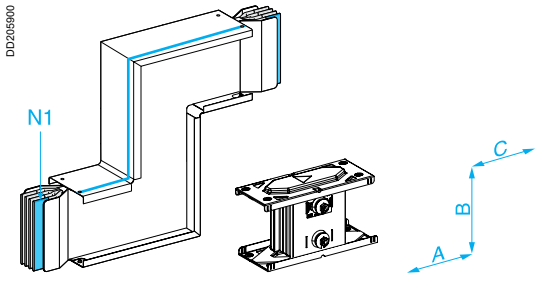


(1) See the "Trunking cross-section" page 70.

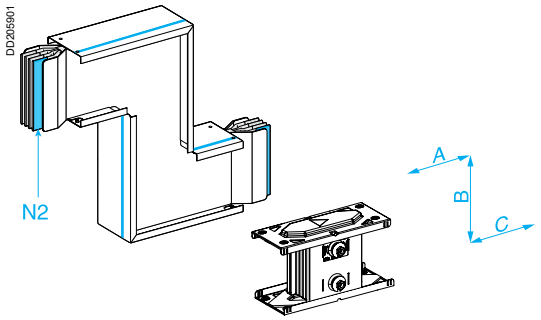
Dimensions

Rating (A)	Dimensions (mm)		
	A	B	C
All	300	130 to 599	300

ZC - Edgewise zed units



KTA●●●●ZC●1

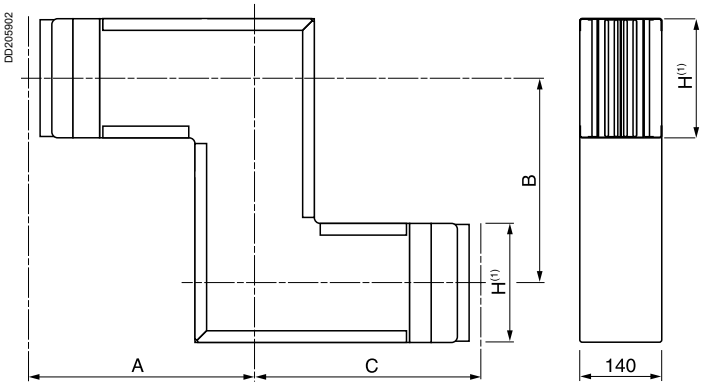


KTA●●●●ZC●2

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER(1)
Made to measure	N1	KTA●●●●ZC31	KTA●●●●ZC41	KTA●●●●ZC51
	N2	KTA●●●●ZC32	KTA●●●●ZC42	KTA●●●●ZC52

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ZC5● by KTA●●●●ZC7●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ZC4● by KTA2500ZC6● and KTA3200ZC4● by KTA3200ZC6●.

KTA●●●●ZC●●



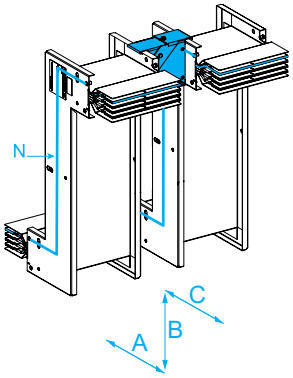
Dimensions

Rating (A)	Dimensions (mm)		
	A	B	C
800(2)	275	90 to 549	275
1000	290	90 to 579	290
1250	300	90 to 599	300
1600	320	90 to 639	320
2000	340	90 to 679	340
2500	360	90 to 719	360
3200	400	90 to 799	400
4000	440	90 to 879	440

(1) See the "Trunking cross-section" page 70.
*(2) For the 800 A rating, indicate **"KTA0800"**.*

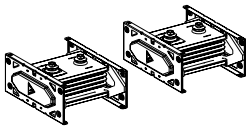
ZP - Flat zed units

DB428723



KTA5000ZP●

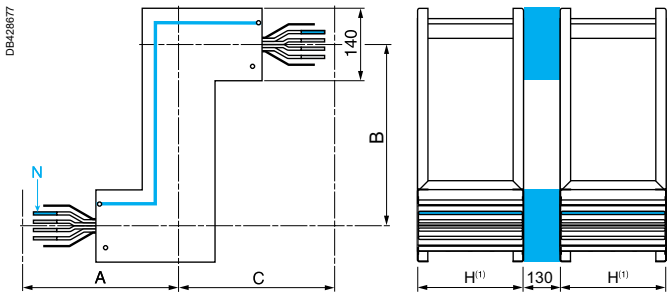
DB428862



Type	Cat. no.		
	3L + PE	3L + N + PE	3L + N + PER (1)
Made to measure	KTA5000ZP3	KTA5000ZP4	KTA5000ZP5

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000ZP5 by KTA5000ZP7.

DB428677



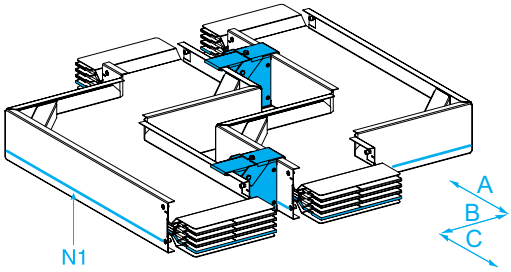
(1) See the "Trunking cross-section" page 70.

Dimensions

Rating (A)	Dimensions (mm)		
	A	B	C
5000	300	130 to 599	300

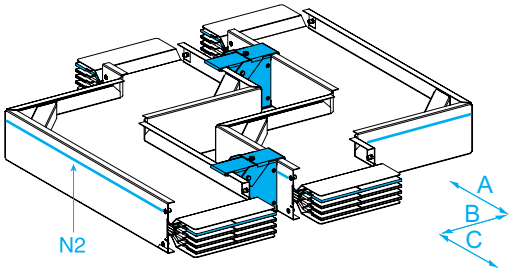
ZC - Edgewise zed units

DB428748



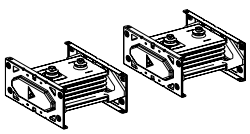
KTA5000ZC●1

DB428749



KTA5000ZC●2

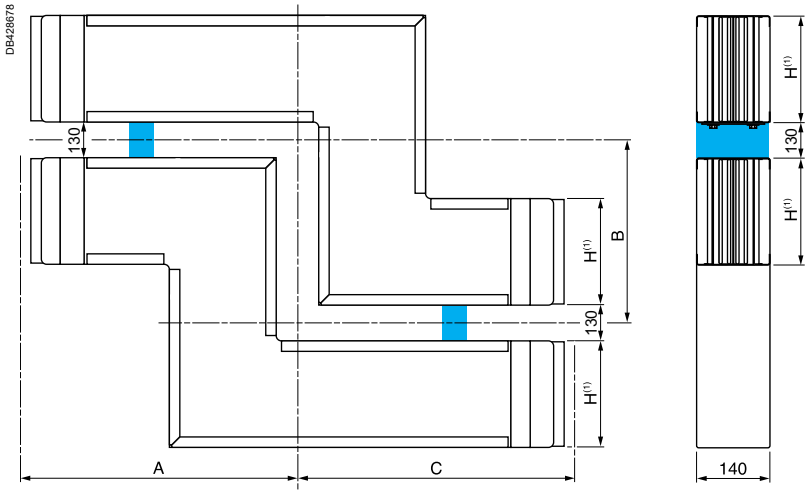
DB428862



Type	Position of neutral	Cat. no. (2)		
		3L + PE	3L + N + PE	3L + N + PER (1)
Made to measure	N1	KTA5000ZC31	KTA5000ZC41	KTA5000ZC51
	N2	KTA5000ZC32	KTA5000ZC42	KTA5000ZC52

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000ZC5● by KTA5000ZC7●.

DB428678



(1) See the "Trunking cross-section" page 70.

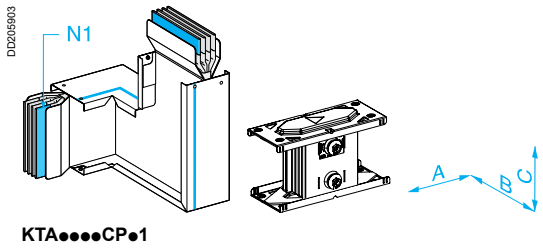
Dimensions

Rating (A)	Dimensions (mm)		
	A	B	C
5000	548	90 to 719	548

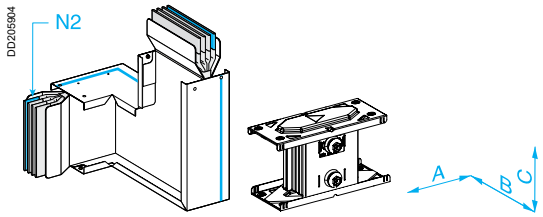
Zed components for changing direction
IP55

Canalis KTA 800 to 4000

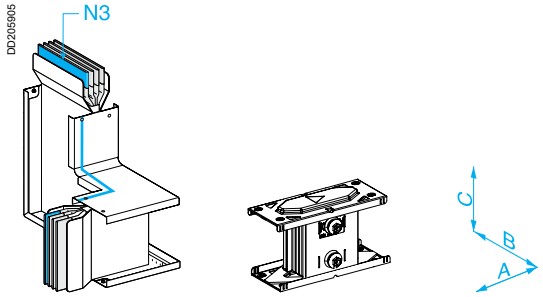
CP - Edgewise and flat zed units



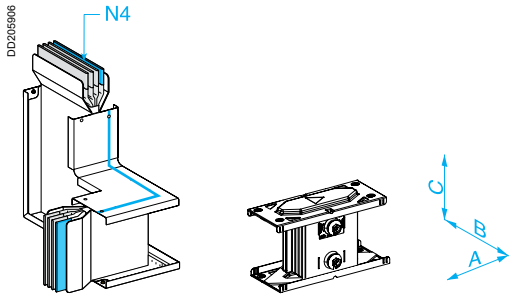
KTA●●●●CP●1



KTA●●●●CP●2



KTA●●●●CP●3

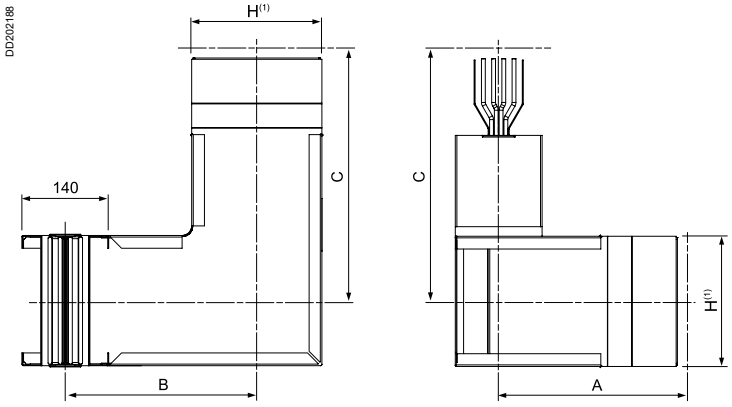


KTA●●●●CP●4

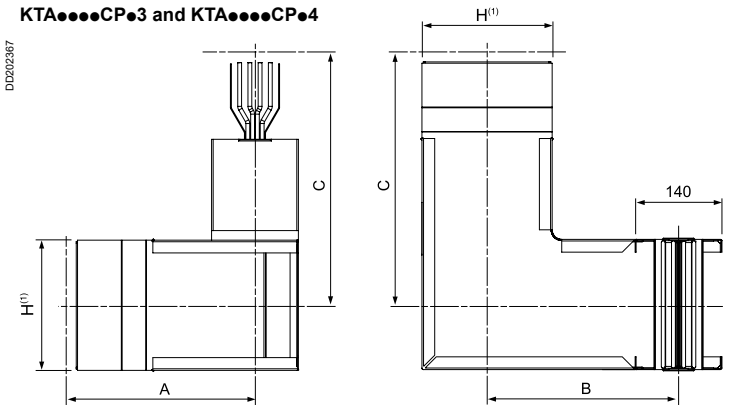
Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	N1	KTA●●●●CP31	KTA●●●●CP41	KTA●●●●CP51
	N2	KTA●●●●CP32	KTA●●●●CP42	KTA●●●●CP52
	N3	KTA●●●●CP33	KTA●●●●CP43	KTA●●●●CP53
	N4	KTA●●●●CP34	KTA●●●●CP44	KTA●●●●CP54

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●CP5● by KTA●●●●CP7●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500CP4● by KTA2500CP6● and KTA3200CP4● by KTA3200CP6●.

KTA●●●●CP●1 and KTA●●●●CP●2



KTA●●●●CP●3 and KTA●●●●CP●4



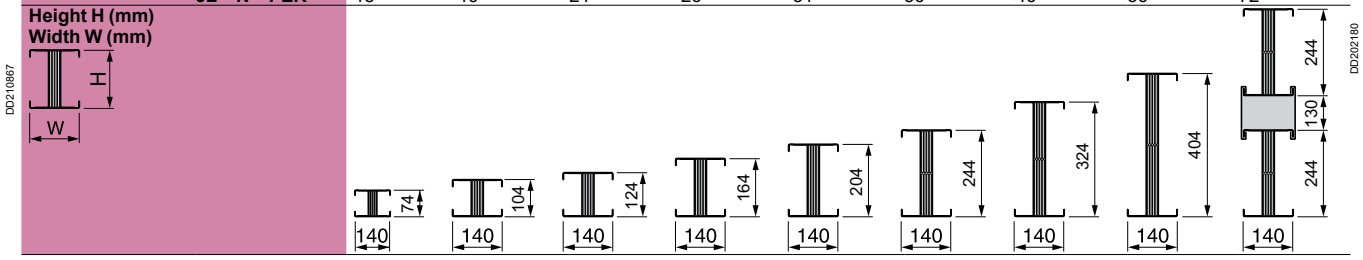
Dimensions

Rating (A)	Dimensions (mm)		
	A	B	C
800(2)	300	195 to 574	275
1000	300	210 to 589	290
1250	300	220 to 599	300
1600	300	240 to 619	320
2000	300	260 to 639	340
2500	300	280 to 659	360
3200	300	320 to 699	400
4000	300	360 to 739	440

(1) See the "Trunking cross-section" table below.
*(2) For the 800 A rating, indicate **"KTA0800"**.*

Trunking cross-section

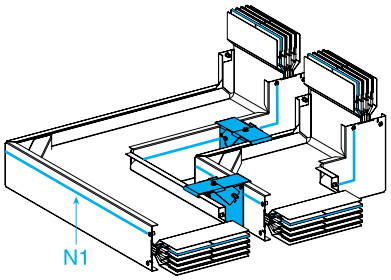
Rating (A)		800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Weight (kg/m)	3L + PE	12	14	16	19	22	25	31	38	50
	3L + N + PE	13	16	18	22	26	30	37	45	60
	3L + N + PER	15	19	21	26	31	36	46	56	72
Height H (mm) Width W (mm)										



*(1) **Important**: for the 800 A rating, indicate **"KTA0800"**.*

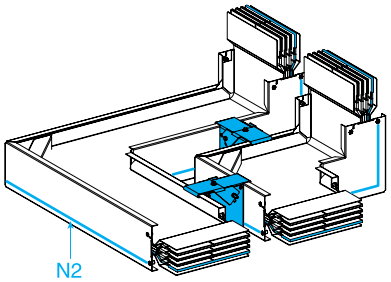
CP - Edgewise and flat zed units

DB428742



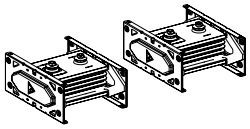
KTA5000CP●1

DB428743



KTA5000CP●2

DB428862



(1) See the "Trunking cross-section" page 70.

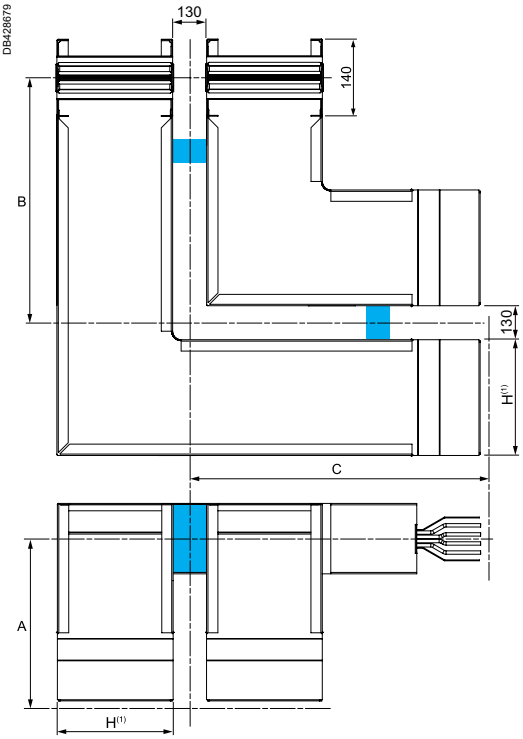
Dimensions

Rating (A)	Dimensions (mm)		
	A	B	C
5000	300	468 to 847	548

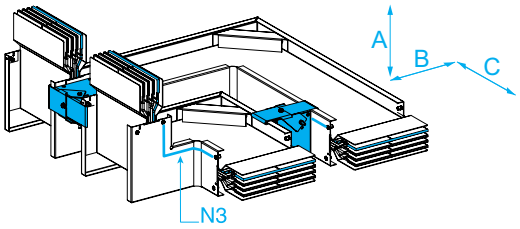
Type	Position of neutral	Cat. no. (2)		
		3L + PE	3L + N + PE	3L + N + PER (1)
Made to measure	N1	KTA5000CP31	KTA5000CP41	KTA5000CP51
	N2	KTA5000CP32	KTA5000CP42	KTA5000CP52
	N3	KTA5000CP33	KTA5000CP43	KTA5000CP53
	N4	KTA5000CP34	KTA5000CP44	KTA5000CP54

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000CP5● by KTA5000CP7●.

DB428679

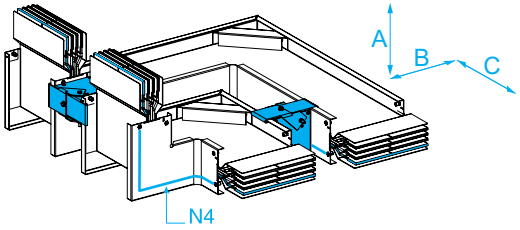


DB428744



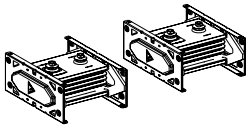
KTA5000CP●3

DB428745

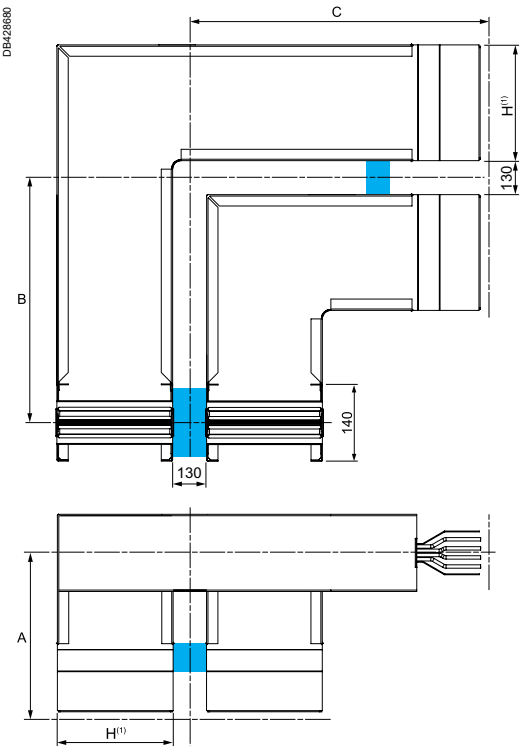


KTA5000CP●4

DB428862



DB428680



Fire rated straight feeder lengths

IP55

Compliant with the IEC 60331

Canalis KTA 800 to 4000

Ordering

Complete the catalogue number by replacing "●●●●" by the rating.

Important:

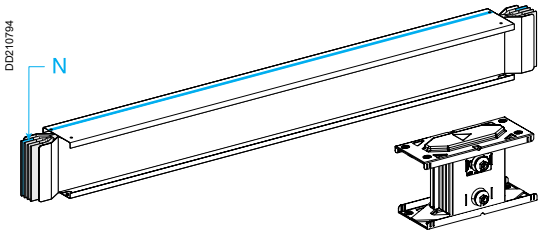
- for the 800 A rating, add a "0" in the catalogue number : **KTA0800**
- add the dimensions of the selected component as a technical comment.

Example: the catalogue number of an 800 A feeder length, 3L + N + PE, 2450 mm long, is:

KTA0800FT42C, L = 2450

Rating

FT - Fire rated straight feeder lengths



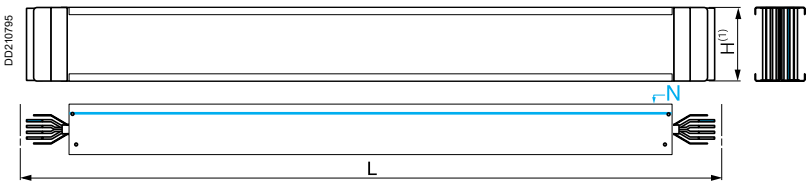
KTA●●●●FT●●●

Type	Length "L" (mm)	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	2000	KTA●●●●FT320	KTA●●●●FT420	KTA●●●●FT520
	4000	KTA●●●●FT340	KTA●●●●FT440	KTA●●●●FT540
Made to measure	500 to 1500	KTA●●●●FT31A	KTA●●●●FT41A	KTA●●●●FT51A
	1501 to 1999	KTA●●●●FT32B	KTA●●●●FT42B	KTA●●●●FT52B
	2001 to 2500	KTA●●●●FT32C	KTA●●●●FT42C	KTA●●●●FT52C
	2501 to 3000	KTA●●●●FT33D	KTA●●●●FT43D	KTA●●●●FT53D
	3001 to 3500	KTA●●●●FT33E	KTA●●●●FT43E	KTA●●●●FT53E
	3501 to 3999	KTA●●●●FT33F	KTA●●●●FT43F	KTA●●●●FT53F

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●FT5●● by KTA●●●●FT7●●.

(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500FT4●● by KTA2500FT6●● and KTA3200FT4●● by KTA3200FT6●●.

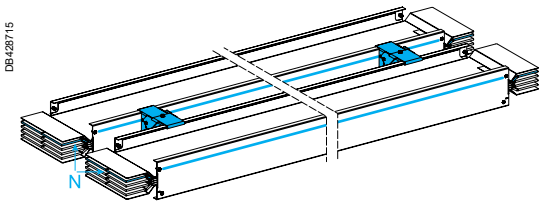
KTA●●●●FT●●●



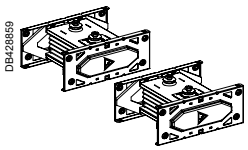
(1) See the "Trunking cross-section" table page 70.

Canalis KTA 5000

FT - Fire rated straight feeder lengths

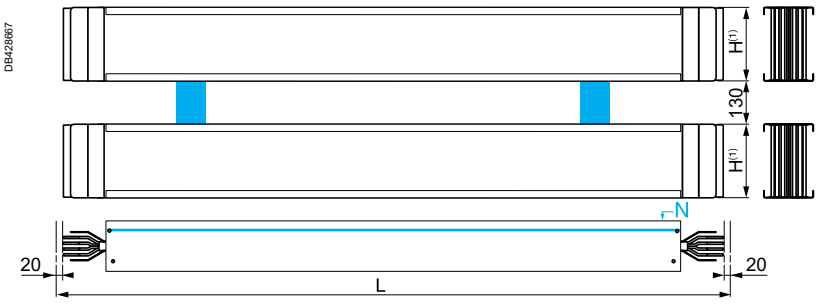


KTA5000FT●●●



Type	Length "L" (mm)	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Fixed	2000	KTA5000FT320	KTA5000FT420	KTA5000FT520
	4000	KTA5000FT340	KTA5000FT440	KTA5000FT540
Made to measure	500 to 1500	KTA5000FT31A	KTA5000FT41A	KTA5000FT51A
	1501 to 1999	KTA5000FT32B	KTA5000FT42B	KTA5000FT52B
	2001 to 2500	KTA5000FT32C	KTA5000FT42C	KTA5000FT52C
	2501 to 3000	KTA5000FT33D	KTA5000FT43D	KTA5000FT53D
	3001 to 3500	KTA5000FT33E	KTA5000FT43E	KTA5000FT53E
	3501 to 3999	KTA5000FT33F	KTA5000FT43F	KTA5000FT53F

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000FT5●● by KTA5000FT7●●.



(1) See the "Trunking cross-section" table page 70.

Fire rated flat elbows
IP55
Compliant with the IEC 60331

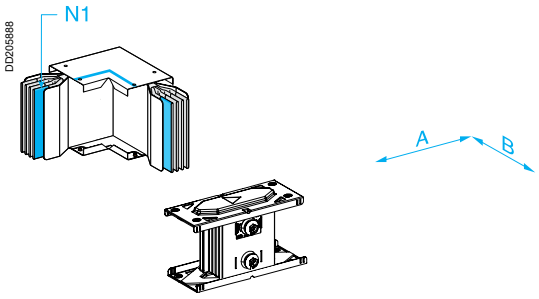
Canalis KTA 800 to 4000

Ordering

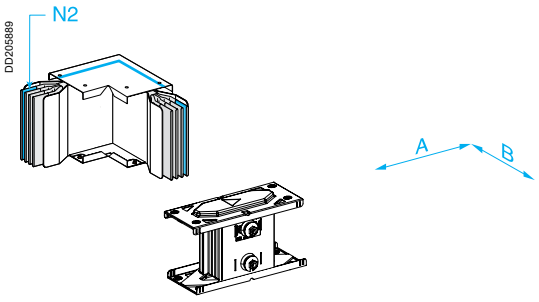
Complete the catalogue number by replacing "●●●●" by the rating.
Important:
- for the 800 A rating, add a "0" in the catalogue number : **KTA0800**
- add the dimensions of the selected component as a technical comment.

Example: the catalogue number of a 2000 A flat elbow, N1, 3L + N + PE with dimensions A = 300 mm and B = 650 mm is:
KTA2000FP4B1, A = 300, B = 650.
Rating

FP - Fire rated flat elbows



KTA●●●●FP●●1

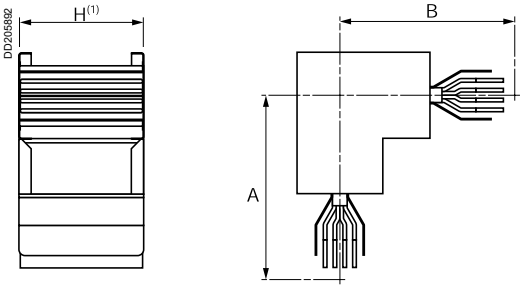


KTA●●●●FP●●2

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
2 fixed branches	N1	KTA●●●●FP3A1	KTA●●●●FP4A1	KTA●●●●FP5A1
	N2	KTA●●●●FP3A2	KTA●●●●FP4A2	KTA●●●●FP5A2
1 made to measure short branche	N1	KTA●●●●FP3B1	KTA●●●●FP4B1	KTA●●●●FP5B1
	N2	KTA●●●●FP3B2	KTA●●●●FP4B2	KTA●●●●FP5B2
1 made to measure long branche	N1	KTA●●●●FP3D1	KTA●●●●FP4D1	KTA●●●●FP5D1
	N2	KTA●●●●FP3D2	KTA●●●●FP4D2	KTA●●●●FP5D2
2 made to measure branches	N1	KTA●●●●FP3E1	KTA●●●●FP4E1	KTA●●●●FP5E1
	N2	KTA●●●●FP3E2	KTA●●●●FP4E2	KTA●●●●FP5E2

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●FP5●● by KTA●●●●FP7●●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500FP4●● by KTA2500FP6●● and KTA3200FP4●● by KTA3200FP6●●.

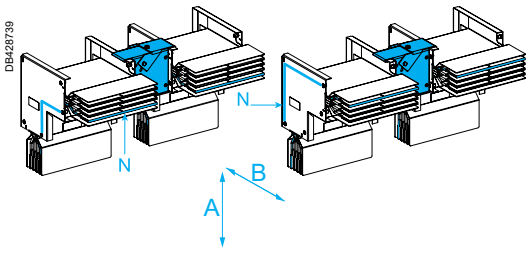
KTA●●●●FP●●●



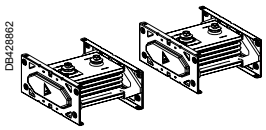
(1) See the "Trunking cross-section" table page 70 and dimensions page 66.

Canalis KTA 5000

FP - Fire rated flat elbows



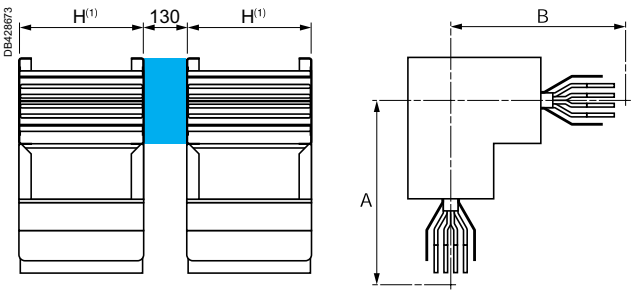
KTA5000FP●●1 **KTA5000FP●●2**



Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
2 fixed branches	N1	KTA5000FP3A1	KTA5000FP4A1	KTA5000FP5A1
	N2	KTA5000FP3A2	KTA5000FP4A2	KTA5000FP5A2
1 made to measure short branche	N1	KTA5000FP3B1	KTA5000FP4B1	KTA5000FP5B1
	N2	KTA5000FP3B2	KTA5000FP4B2	KTA5000FP5B2
1 made to measure long branche	N1	KTA5000FP3D1	KTA5000FP4D1	KTA5000FP5D1
	N2	KTA5000FP3D2	KTA5000FP4D2	KTA5000FP5D2
2 made to measure branches	N1	KTA5000FP3E1	KTA5000FP4E1	KTA5000FP5E1
	N2	KTA5000FP3E2	KTA5000FP4E2	KTA5000FP5E2

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000FP5●● by KTA5000FP7●●.

2 x KTA2500FP●●●

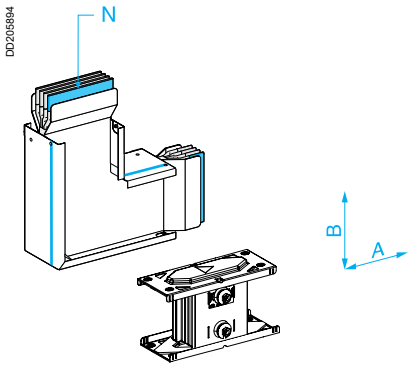


(1) See the "Trunking cross-section" table page 70 and dimensions page 66.

Fire rated edgewise elbows
IP55
Compliant with the IEC 60331

Canalis KTA 800 to 4000

FC - Fire rated edgewise elbows

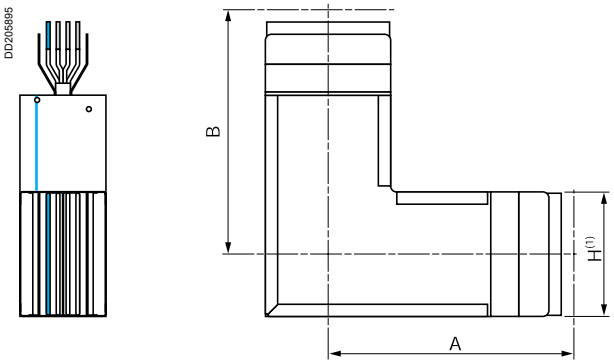


KTA●●●●FC●●

Type	Cat. no.		
	3L + PE	3L + N + PE (2)	3L + N + PER (1)
2 fixed branches	KTA●●●●FC3A	KTA●●●●FC4A	KTA●●●●FC5A
1 made to measure short branche	KTA●●●●FC3B	KTA●●●●FC4B	KTA●●●●FC5B
1 made to measure long branche	KTA●●●●FC3D	KTA●●●●FC4D	KTA●●●●FC5D
2 made to measure branches	KTA●●●●FC3E	KTA●●●●FC4E	KTA●●●●FC5E

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●FC5● by KTA●●●●FC7●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Icc, replace KTA2500FC4● by KTA2500FC6● and KTA3200FC4● by KTA3200FC6●.

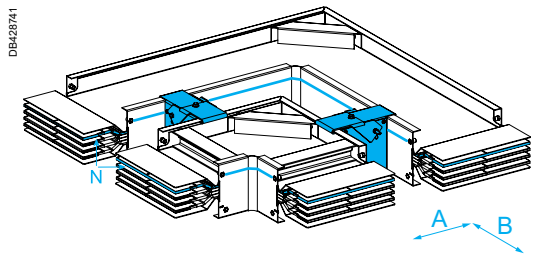
KTA●●●●FC●●



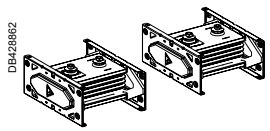
(1) See the "Trunking cross-section" table page 67 and dimensions page 66.

Canalis KTA 5000

FC - Fire rated edgewise elbows



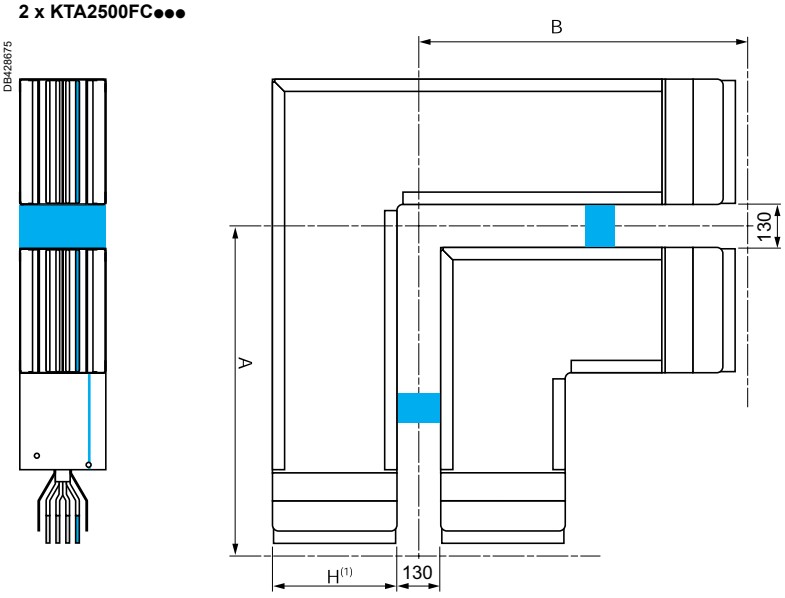
KTA5000FC●●●



Type	Cat. no. (2)		
	3L + PE	3L + N + PE	3L + N + PER (1)
2 fixed branches	KTA5000FC3A	KTA5000FC4A	KTA5000FC5A
1 made to measure short branche	KTA5000FC3B	KTA5000FC4B	KTA5000FC5B

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000FC5● by KTA5000FC7●.

2 x KTA2500FC●●●



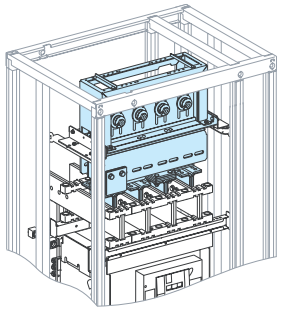
(1) See the "Trunking cross-section" table page 67 and dimensions page 66.

Canalis interfaces for Prisma P LV switchboard

Canalis KTA 800 to 4000

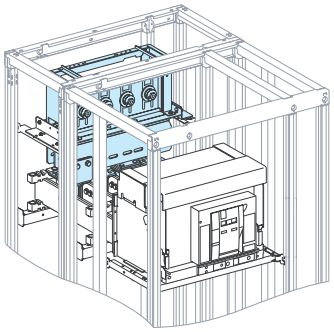
Interfaces for Masterpact NW circuit breakers

DD202304



Top direct connection

DD202305



Rear connection

Interfaces can be ordered by 2 channels:
- as a Canalis KT product, in this case use the reference in this catalogue eg. **KTB04715**
- as a Prisma or Okken product, in this case remove the radical **KTB** to find the correct reference eg.**04715**.

All accessories are only available as Prisma or Okken references.

All mounting instruction or other documents will be found by using the reference without **KTB** radical.

Circuit breaker	Type of circuit breaker	Canalis polarity	No. of poles of circuit breaker	Connection		Cat. no.
				Top direct	Rear	
NW08/16	Fixed or drawout	3L+PE	3P	■	■	**KTB04715**
		3L+N+PE	4P	■	■	**KTB04716**
		3L+N+PER	4P	■	■	**KTB04716+KTB0164PE1**
NW20/25	Fixed or drawout	3L+PE	3P	■	■	**KTB04725**
		3L+N+PE	4P	■	■	**KTB04726**
		3L+N+PER	4P	■	■	**KTB04726+KTB0244PE1**
NW32	Fixed or drawout	3L+PE	3P	■	■	**KTB04735**
		3L+N+PE	4P	■	■	**KTB04736**
		3L+N+PER	4P	■	■	**KTB04736+KTB0404PE1**
NW40	Fixed or drawout	3L+PE	3P		■	**KTB04737**
		3L+N+PE	4P		■	**KTB04738**
		3L+N+PER	4P		■	**KTB04738+KTB0404PE1**

For the position in the switchboard, see the "Installation guide".

Number of modules required in the switchboard

Circuit breaker	Connection	Type of circuit breaker	Number of vertical modules(1)
NW08/16	Top direct	Fixed or drawout	27
	Rear	Fixed	16
		Drawout	17
NW20/32	Top direct	Fixed or drawout	28
	Rear	Fixed	16
		Drawout	17
NW40	Rear	Fixed or drawout	36

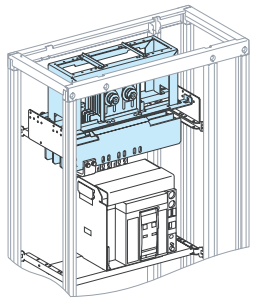
(1) *1 module = 50 mm.*

Canalis interfaces for Prisma P LV switchboard

Canalis KTA 800 to 4000

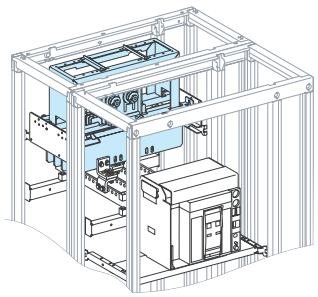
Interfaces for Masterpact NT and Compact NS circuit breakers

DD202306



Top direct connection

DD202307



Rear connection

Masterpact NT

Circuit breaker	Type of circuit breaker	Canalis polarity	No. of poles of circuit breaker	Connection		Cat. no.
				Top direct	Rear	
NT06/12	Fixed or drawout	3L+PE	3P	■	■	**KTB04703**
		3L+N+PE	4P	■	■	**KTB04704**
		3L+N+PER	4P	■	■	**KTB04704+KTB0164PE1**
NT16	Fixed or drawout	3L+PE	3P		■	**KTB04703**
		3L+N+PE	4P		■	**KTB04704**
		3L+N+PER	4P		■	**KTB04704+KTB0164PE1**

For the position in the switchboard, see the "Installation guide".

Compact NS

Circuit breaker	Type of circuit breaker	Canalis polarity	No. of poles of circuit breaker	Connection		Cat. no.
				Top direct	Rear	
NS630b/ 1250	Fixed or drawout	3L+PE	3P	■	■	**KTB04703**
		3L+N+PE	4P	■	■	**KTB04704**
		3L+N+PER	4P	■	■	**KTB04704+KTB0164PE1**
NS1600	Fixed or drawout	3L+PE	3P		■	**KTB04703**
		3L+N+PE	4P		■	**KTB04704**
		3L+N+PER	4P		■	**KTB04704+KTB0164PE1**

For the position in the switchboard, see the "Installation guide".

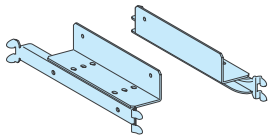
Number of modules required in the switchboard

Circuit breaker	Connection	Type of circuit breaker	Number of vertical modules(1)
NT06/12 NS630b/1250	Top direct	Fixed	17
		Drawout	18
	Rear	Fixed or drawout	16
NT16 NS1600	Rear	Fixed or drawout	16

(1) *1 module = 50 mm.*

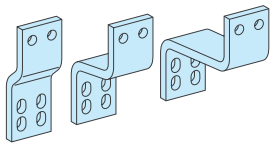
Interface supports and protection covers

DD202308



03561

DD202309



04711
04712
04713
04714

Masterpact NW

Circuit breaker	Type of circuit breaker	Connection	Supports	Terminal extension bar supports	Cover
NW08/32	Fixed or drawout	Top direct	**03561**	**3 x 04694**	**04871 + 04861**
		Rear	**03561**	**2 x 04694**	**04871 + 04863**
NW40	Fixed or drawout	Top direct	**03561**	**-**	**04871 + 04861**
		Rear	**03561**	**-**	**04871 + 04863**

Masterpact NT

Circuit breaker	Type of circuit breaker	Canalis polarity	Connection	Supports	Canalis/ circuit breaker connection	Cover
NT06/12	Fixed or drawout	3P	Top direct	**03561**	**04712**	**04871 + 04852**
			Rear	**03561**	**04713**	**04871 + 04853**
		4P	Top direct	**03561**	**04712**	**04871 + 04852**
			Rear	**03561**	**04714**	**04871 + 04853**
NT16	Fixed or drawout	3P	Rear	**03561**	**04713**	**04871 + 04854**
		4P	Rear	**03561**	**04714**	**04871 + 04854**

Compact NS

Circuit breaker	Type of circuit breaker	Canalis polarity	Connection	Supports	Canalis/ circuit breaker connection	Cover
NS630b/ 1250	Fixed	3P	Top direct	**03561**	**04712**	**04871 + 04851**
			Rear	**03561**	**04713**	**04871 + 04853**
		4P	Top direct	**03561**	**04712**	**04871 + 04851**
			Rear	**03561**	**04714**	**04871 + 04853**
	Drawout	3P	Top direct	**03561**	**04711**	**04871 + 04852**
			Rear	**03561**	**04713**	**04871 + 04854**
		4P	Top direct	**03561**	**04712**	**04871 + 04852**
			Rear	**03561**	**04714**	**04871 + 04854**
NS1600	Fixed	3P	Rear	**03561**	**04713**	**04871 + 04853**
		4P	Rear	**03561**	**04714**	**04871 + 04853**
	Drawout	3P	Rear	**03561**	**04713**	**04871 + 04854**
		4P	Rear	**03561**	**04714**	**04871 + 04854**

Arc-chute covers

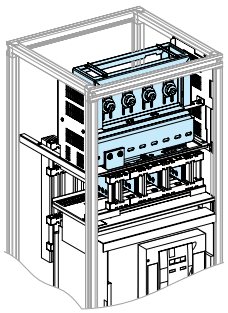
Circuit breaker	Type of circuit breaker	Canalis polarity	Cat. no.
Masterpact NT	Fixed	3P	**47335**
		4P	**47336**
Compact NS	Fixed	3P	**33596**
		4P	**33597**

Canalis interfaces for Okken LV switchboard

Canalis KTA 800 to 4000

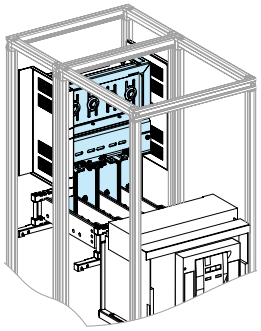
Interfaces for Masterpact NW circuit breakers

DD202310



Top direct connection (RDH)

DD202311



Rear connection (RAR)

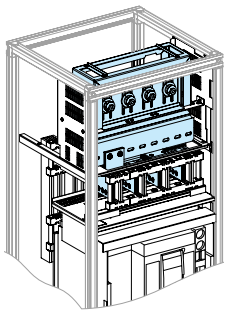
Fitting the interface does not change switchboard modularity as fixed by the devices.

Circuit breaker	Type of circuit breaker	Canalis polarity	No. of poles of circuit breaker	Connection		Cat. no.
				Top direct	Rear	
NW08/16	Drawout	3L+PE	3P	■		**KTB87811**
					■	**KTB87821**
		3L+N+PE	4P	■		**KTB87812**
					■	**KTB87822**
		3L+N+PER	4P	■		**KTB87812+KTB0164PE1**
					■	**KTB87822+KTB0164PE1**
NW20/25	Drawout	3L+PE	3P	■		**KTB87813**
					■	**KTB87823**
		3L+N+PE	4P	■		**KTB87814**
					■	**KTB87824**
		3L+N+PER	4P	■		**KTB87814+KTB0244PE1**
					■	**KTB87824+KTB0244PE1**
NW32	Drawout	3L+PE	3P	■		**KTB87815**
					■	**KTB87825**
		3L+N+PE	4P	■		**KTB87816**
					■	**KTB87826**
		3L+N+PER	4P	■		**KTB87816+KTB0404PE1**
					■	**KTB87826+KTB0404PE1**
NW40	Drawout	3L+PE	3P	■		**KTB87817**
					■	**KTB87827**
		3L+N+PE	4P	■		**KTB87818**
					■	**KTB87828**
		3L+N+PER	4P	■		**KTB87818+KTB0404PE1**
					■	**KTB87828+KTB0404PE1**

For the position in the switchboard, see the "Installation guide".

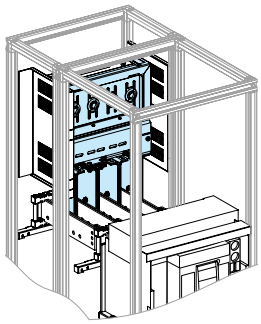
Interfaces for Masterpact NT circuit breakers

DD202312



Top direct connection (RDH)

DD202313



Rear connection (RAR)

Fitting the interface does not change switchboard modularity as fixed by the devices.

Circuit breaker	Type of circuit breaker	Canalis polarity	No. of poles of circuit breaker	Connection		Cat. no.
				Top direct	Rear	
NT08/16	Drawout	3L+PE	3P	■		**KTB87811**
					■	**KTB87821**
		3L+N+PE	4P	■		**KTB87812**
					■	**KTB87822**
		3L+N+PER	4P	■		**KTB87812+KTB0164PE1**
					■	**KTB87822+KTB0164PE1**

For the position in the switchboard, see the "Installation guide".

Interface supports

Circuit breaker	Type of circuit breaker	Connection	Cat. no.
NW08/40 **NT08/16**	Drawout	Top direct	**87800**
NW08/32[1] **NT08/16**	Drawout	Rear	**87801**

(1) *For rear connection of the interface to a Masterpact NW40 circuit breaker, the supports are supplied with the interface.*

Designation	Cat. no.
Special tightening wrench bit	**87808**

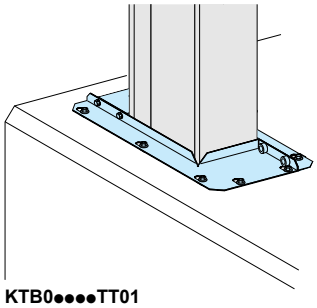
■ For 2 superimposed 120x10 bars.
■ This tool is essential to tighten the conversion modules on the junction block's spreaders. It is fitted on a torque wrench.

Sealing kits
IP55

Canalis KTA 800 to 4000

TT - Sealing kits for switchboard and Trihal transformer roofs with interface

DD202314

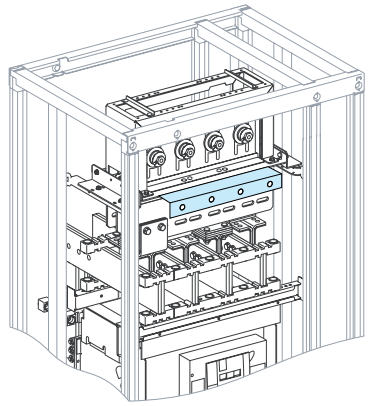


KTB0●●●●TT01

Type	Rating of the trunking (A)	Height H of the trunking (mm)	Cat. no.
Sealing kit	800	74	**KTB0074TT01**
	1000	104	**KTB0104TT01**
	1250	124	**KTB0124TT01**
	1600	164	**KTB0164TT01**
	2000	204	**KTB0204TT01**
	2500	244	**KTB0244TT01**
	3200	324	**KTB0324TT01**
	4000	404	**KTB0404TT01**

PE - Reinforced protective earth (PER) for Prisma P and Okken interfaces

DD230215

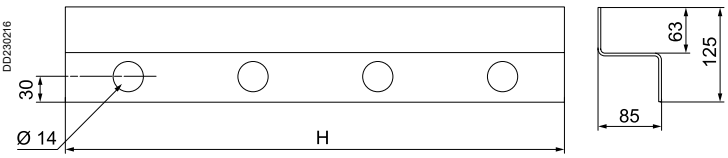


KTB0●●●PE1

Height "H" (mm)	Number of holes	Cat.no.
160	2	**KTB0164PE1**
240	3	**KTB0244PE1**
400	4	**KTB0404PE1**

KTB0●●●PE1

DD230216

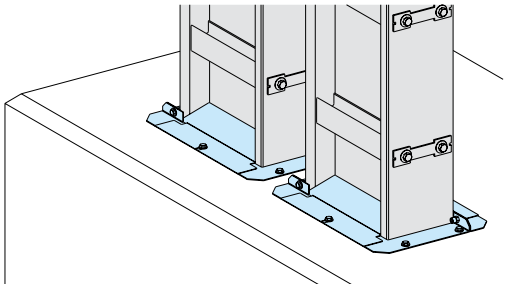


Thickness: 3 mm.

Canalis KTA 5000

TT - Sealing kits for switchboard and Trihal transformer roofs with interface

DB410936

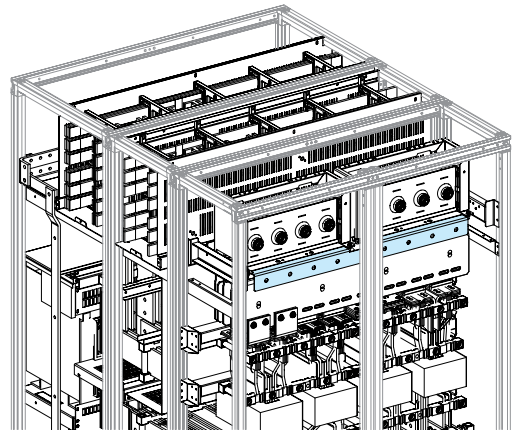


KTB0622TT01

Type	Rating of the trunking (A)	Height H of the trunking (mm)	Cat. no.
Sealing kit	5000	622	**KTB0622TT01**

PE - Reinforced protective earth (PER) for Prisma P and Okken interfaces

DB410937

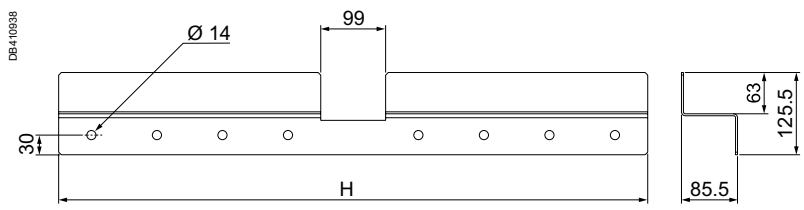


KTB0622PE1

Height "H" (mm)	Number of holes	Cat.no.
622	8	**KTB0622PE1**

KTB0622PE1

DB410938



Thickness: 3 mm.

Feed units for switchboards and oil immersed transformers
IP55

Canalis KTA 800 to 4000

Ordering

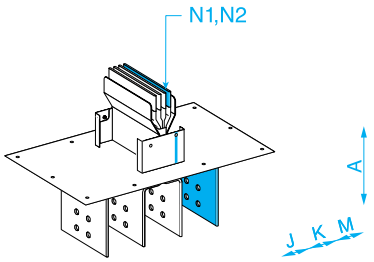
Complete the catalogue number by replacing "●●●●" by the rating.
Important:
- in the catalogue number for the 800 A rating, add a "0": **KTA0800**
- add the dimensions of the selected unit as a technical comment.

Example: the catalogue number of a 1250 A made to measure end feed unit, N2, 3L + N + PE, 235 mm long and with between centres J, K and M = 170 mm, is:
KTA1250ER42, A = 235, J = 170, K = 170 and M = 170.

Rating

ER●1, ER●2 - Straight feed units

DD205907



KTA●●●●ER●1
KTA●●●●ER●2

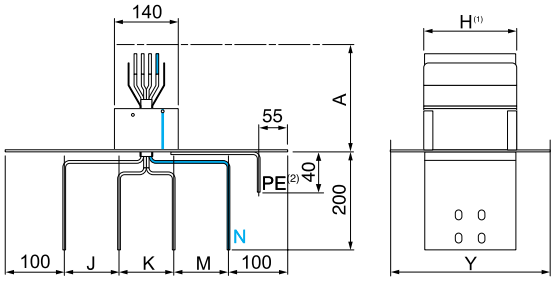
Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Fixed	N1	**KTA●●●●ER31**	**KTA●●●●ER41**	**KTA●●●●ER51**
Made to measure	N2	**KTA●●●●ER32**	**KTA●●●●ER42**	**KTA●●●●ER52**

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ER5● by KTA●●●●ER7●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ER4● by KTA2500ER6● and KTA3200ER4● by KTA3200ER6●.

These end feed units are supplied with a connection kit to create a PEN if needed.

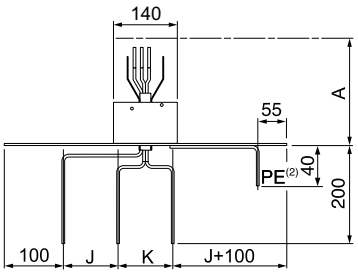
KTA●●●●ER●1, KTA●●●●ER●2
3L + N + PE or PER

DD210832



3L + PE

DB429068



(1) See the "Trunking cross-section" table in the following page.
(2) PE drilled diameter = 14 mm pour cables with crimped lugs.

Table of dimensions

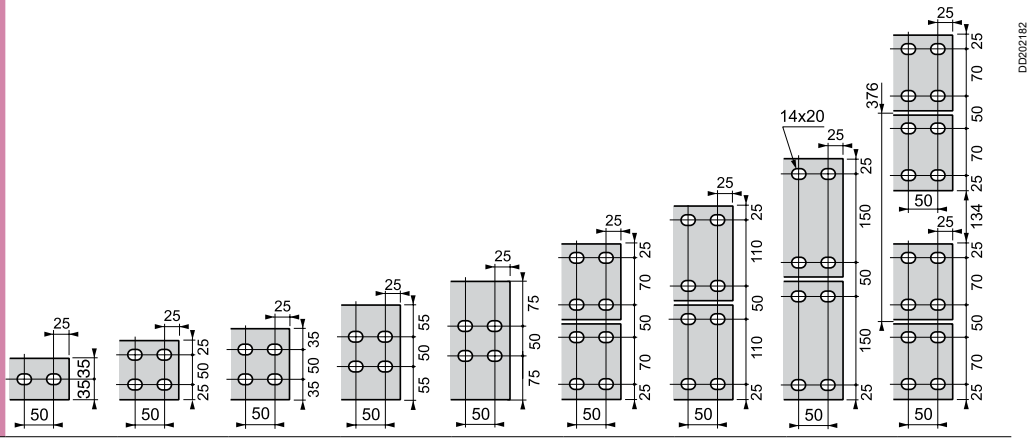
Rating (A)	Neutral	Dimensions (mm)		
		A	J, K, M	Y
800(3) to 1250	N1	235	115	230
	N2	235 to 734	80 to 250	230
1600 to 2500	N1	235	115	350
	N2	235 to 734	80 to 250	350
3200 to 4000	N1	235	115	510
	N2	235 to 734	80 to 250	510

*(3) For the 800 A rating, indicate **"KTA0800"**.*

Dimensions of connection pads

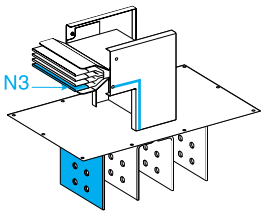
Rating (A)	800	1000	1250	1600	2000	2500	3200	4000	5000
Drilling for connection (mm) Thickness of conductor = 6 mm.									

DD202182



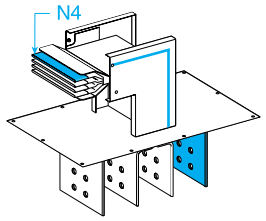
ER●3, ER●4 - Flat elbow feed units

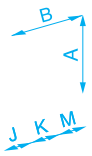
DD205909



KTA●●●●ER●3

DD205910





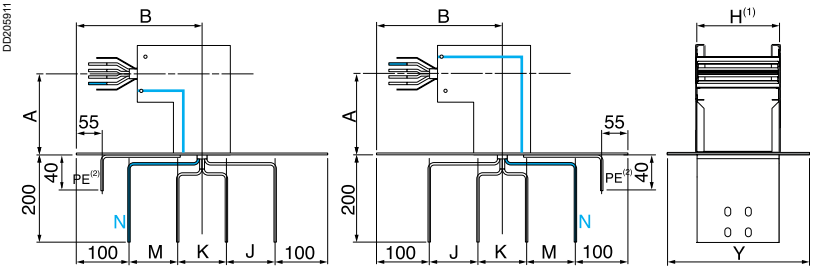
KTA●●●●ER●4

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	N3	KTA●●●●ER33	KTA●●●●ER43	KTA●●●●ER53
	N4	KTA●●●●ER34	KTA●●●●ER44	KTA●●●●ER54

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ER5● by KTA●●●●ER7●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ER4● by KTA2500ER6● and KTA3200ER4● by KTA3200ER6●.

KTA●●●●ER●3(3), 3L + N + PE or PER **KTA●●●●ER●4(3), 3L + N + PE or PER**

DD205911



(1) See the "Trunking cross-section" table below.
(2) PE drilled diameter = 14 mm pour cables with crimped lugs.
(3) 3L + PE version, see page 80.

These end feed units are supplied with a connection kit to create a PEN if needed.

Tableau of dimensions

Rating (A)	Neutral	Dimensions (mm)			
		A	B	J, K, M	Y
800(4) to 1250	N3, N4	200 to 534	300	80 to 250	230
1600 to 2500	N3, N4	200 to 534	300	80 to 250	350
3200 to 4000	N3, N4	200 to 534	300	80 to 250	510

*(4) For the 800 A rating, indicate **"KTA0800"**.*

Cut-out drawing for feed units placed directly on the device roof

Table of dimensions

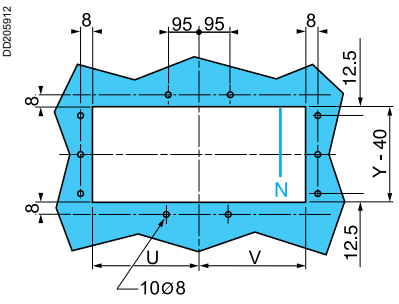
Rating (A)	Dimensions (mm)		
	Y	U	V
800(1) to 1250	230	K/2 + J + 80	K/2 + M + 80
1600 to 2500	350	K/2 + J + 80	K/2 + M + 80
3200 to 4000	510	K/2 + J + 80	K/2 + M + 80
5000	350	K/2 + J + 80	K/2 + M + 80

*(1) For the 800 A rating, indicate **"KTA0800"**.*

For the 3L + PE version, consider M = J to calculate the Y quotation.

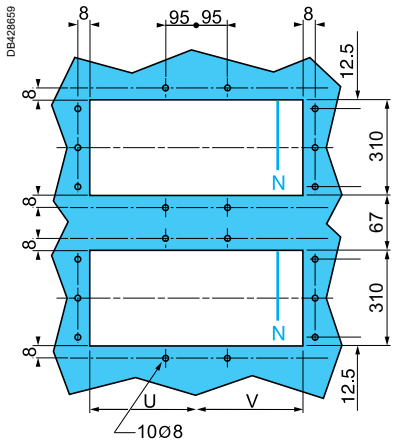
800 to 4000 A

DD205912



5000 A

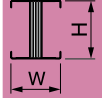
DB428659



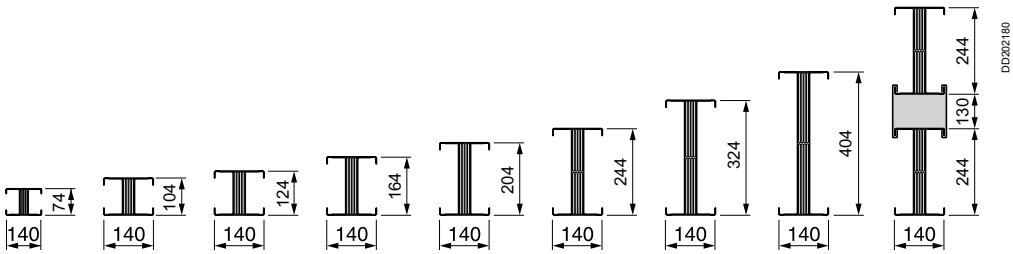
Trunking cross-section

Rating (A)		800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Weight (kg/m)	3L + PE	12	14	16	19	22	25	31	38	50
	3L + N + PE	13	16	18	22	26	30	37	45	60
	3L + N + PER	15	19	21	26	31	36	46	56	72
Height H (mm) Width W (mm)										

DD210867



DD202180

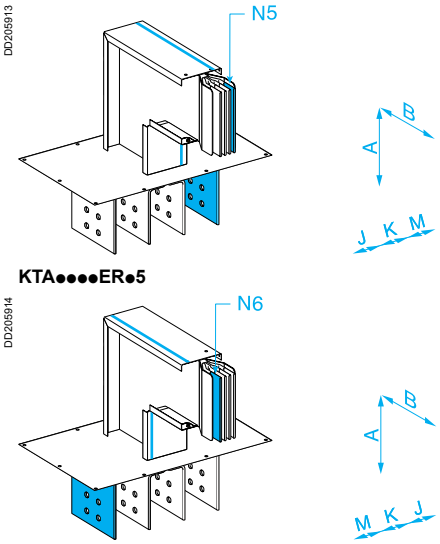


*(1) **Important**: for the 800 A rating, indicate **"KTA0800"**.*

Feed units for switchboards and oil immersed transformers
IP55

Canalis KTA 800 to 4000

ER●5, ER●6 - Edgewise elbow feed units



Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	N5	KTA●●●●ER35	KTA●●●●ER45	KTA●●●●ER55
	N6	KTA●●●●ER36	KTA●●●●ER46	KTA●●●●ER56

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ER5● by KTA●●●●ER7●.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ER4● by KTA2500ER6● and KTA3200ER4● by KTA3200ER6●.

KTA●●●●ER●5(3), 3L + N + PE or PER **KTA●●●●ER●6(3), 3L + N + PE or PER**

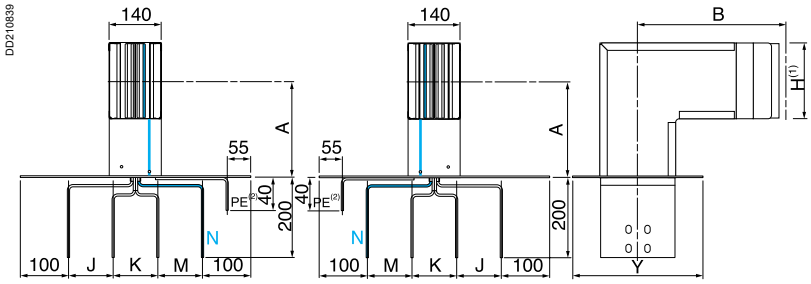


Table of dimensions

Rating (A)	Neutral	Dimensions (mm)			
		A	B	J, K, M	Y
800(4)	N5, N6	175 to 509	275	80 to 250	230
1000	N5, N6	190 to 524	290	80 to 250	230
1250	N5, N6	200 to 534	300	80 to 250	230
1600	N5, N6	220 to 554	320	80 to 250	350
2000	N5, N6	240 to 574	340	80 to 250	350
2500	N5, N6	260 to 594	360	80 to 250	350
3200	N5, N6	300 to 634	400	80 to 250	510
4000	N5, N6	340 to 674	440	80 to 250	510

(1) See the "Trunking cross-section" table opposite.
(2) PE drilled diameter = 14 mm pour cables with crimped lugs.
(3) 3L + PE version, see page 80.
*(4) For the 800 A rating, indicate **"KTA0800"**.*

Cut-out drawing for feed units placed directly on the device

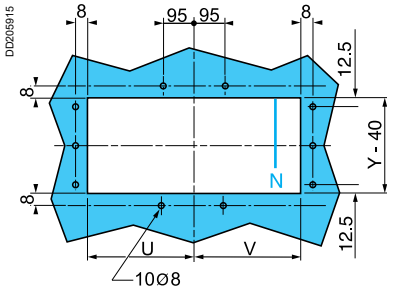
Table of dimensions

Rating (A)	Dimensions (mm)		
	Y	U	V
800(1) to 1250	230	K/2 + J + 80	K/2 + M + 80
1600 to 2500	350	K/2 + J + 80	K/2 + M + 80
3200 to 4000	510	K/2 + J + 80	K/2 + M + 80
5000	350	K/2 + J + 80	K/2 + M + 80

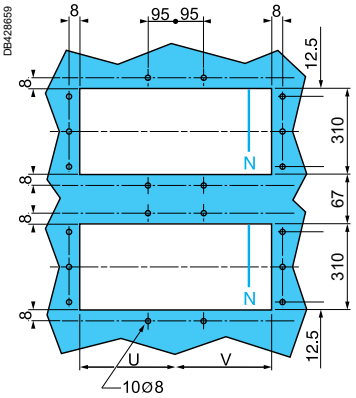
*(1) For the 800 A rating, indicate **"KTA0800"**.*

For the 3L + PE version, consider M = J to calculate the Y quotation.

800 to 4000 A

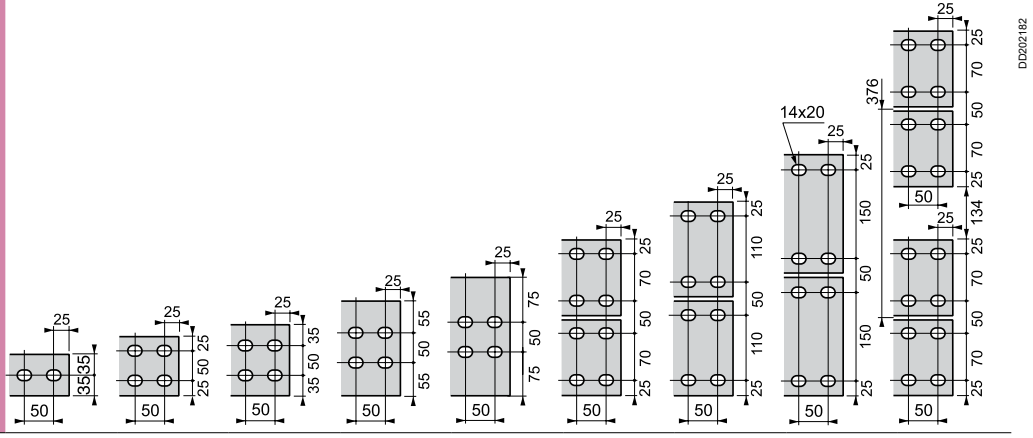


5000 A



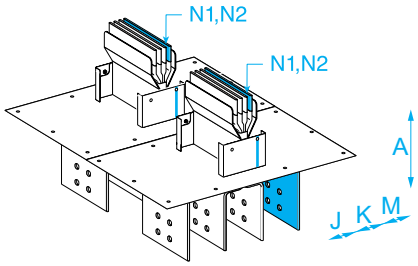
Dimensions of connection pads

Rating (A)	800	1000	1250	1600	2000	2500	3200	4000	5000
Drilling for connection (mm) Thickness of conductor = 6 mm.									



ER●1, ER●2 - Straight feed units

DB428681



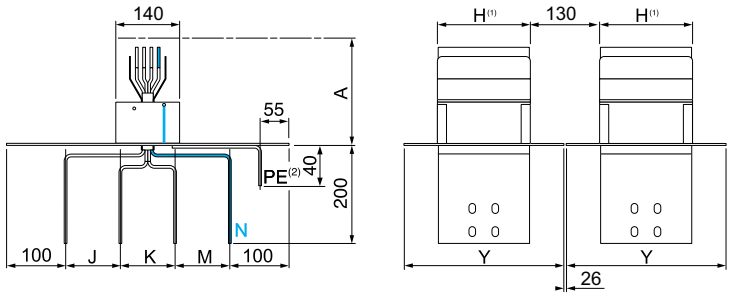
KTA5000ER●1
KTA5000ER●2

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Fixed	N1	**KTA5000ER31**	**KTA5000ER41**	**KTA5000ER51**
Made to measure	N2	**KTA5000ER32**	**KTA5000ER42**	**KTA5000ER52**

(1) To order the 3L+N+PER version with reinforced Icc, replace KTA5000ER5● by KTA5000ER7●.

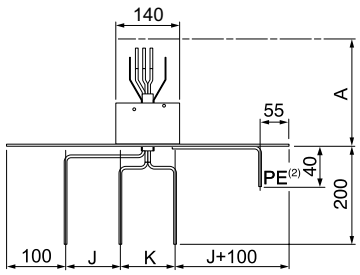
KTA5000ER●1, KTA5000ER●2
3L + N + PE or PER

DB428775



3L + PE

DB429068



(1) See the "Trunking cross-section" table page 86.
(2) PE drilled diameter = 14 mm pour cables with crimped lugs.

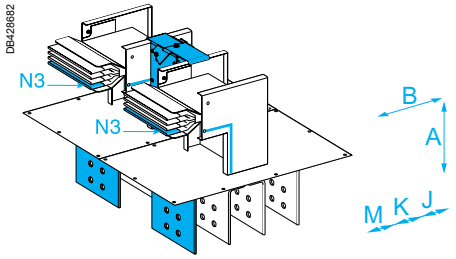
Table of dimensions

Rating (A)	Neutral	Dimensions (mm)		
		A	J, K, M	Y
5000	N1	235	115	350
	N2	235 to 734	80 to 250	350

Feed units for switchboards and oil immersed transformers
IP55

Canalis KTA 5000

ER●3, ER●4 - Flat elbow feed units

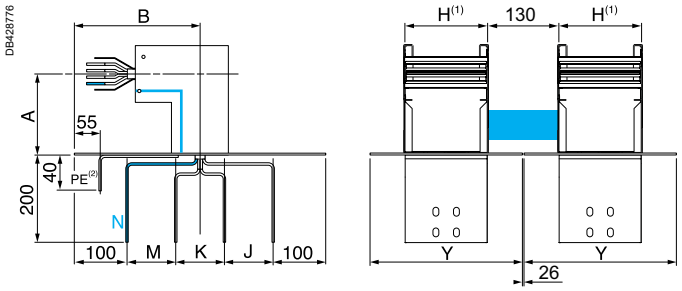


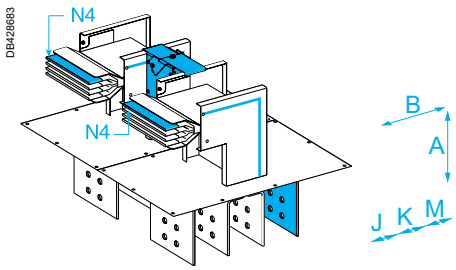
KTA5000ER●3

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Made to measure	N3	KTA5000ER33	KTA5000ER43	KTA5000ER53
	N4	KTA5000ER34	KTA5000ER44	KTA5000ER54

(1) To order the 3L+N+PER version with reinforced Icc, replace KTA5000ER5● by KTA5000ER7●.

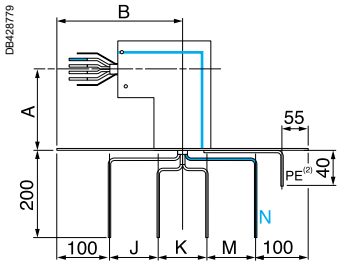
KTA5000ER●3 (3), 3L + N + PE or PER





KTA5000ER●4

KTA5000ER●4 (3), 3L + N + PE or PER



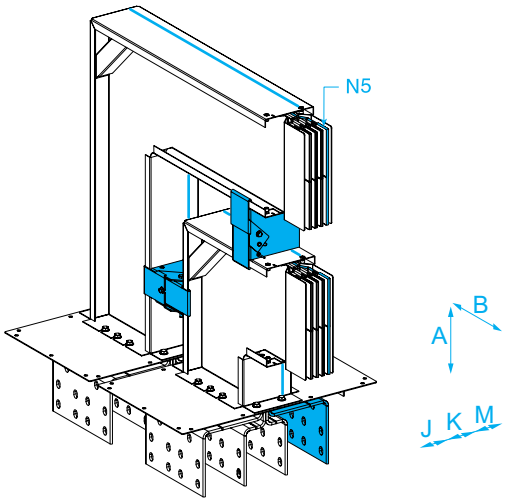
(1) See the "Trunking cross-section" table page 86.
(2) PE drilled diameter = 14 mm pour cables with crimped lugs.
(3) 3L + PE version, see page 80.

Tableau of dimensions

Rating (A)	Neutral	Dimensions (mm)			
		A	B	J, K, M	Y
5000	N3, N4	200 to 534	300	80 to 250	350

ER●5, ER●6 - Edgewise elbow feed units

DB428684



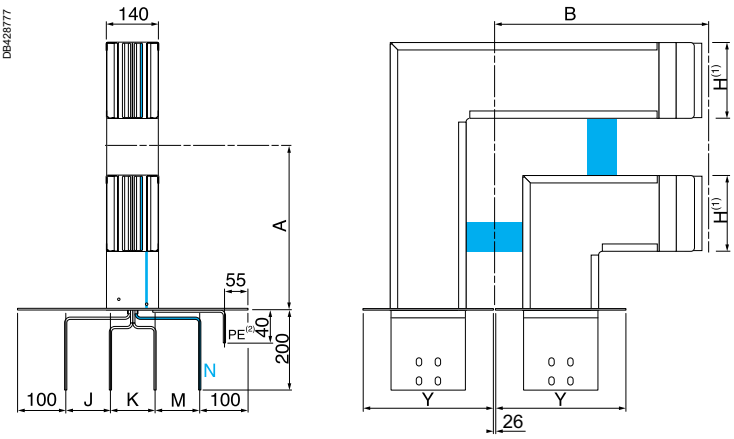
KTA5000ER●5

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Made to measure	N5	KTA5000ER35	KTA5000ER45	KTA5000ER55
	N6	KTA5000ER36	KTA5000ER46	KTA5000ER56

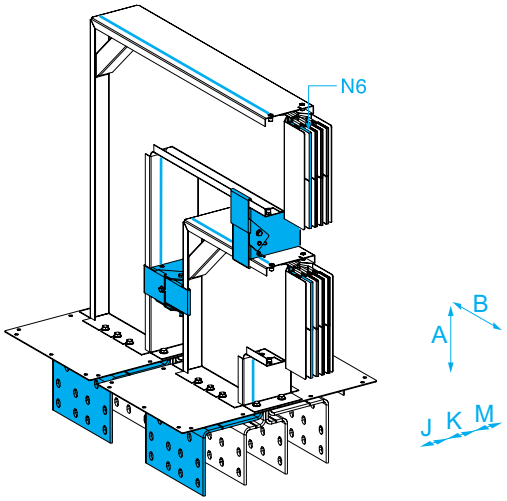
(1) To order the 3L+N+PER version with reinforced Icc, replace KTA5000ER5● by KTA5000ER7●.

KTA5000ER●5 (3), 3L + N + PE or PER

DB428777



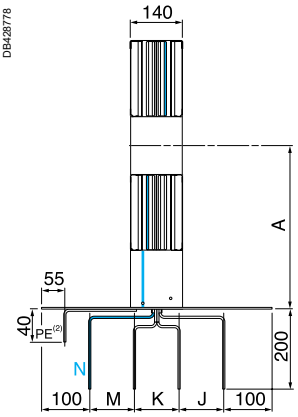
DB428685



KTA5000ER●6

KTA5000ER●6 (3), 3L + N + PE or PER

DB428778



(1) See the "Trunking cross-section" table page 86.
(2) PE drilled diameter = 14 mm pour cables with crimped lugs.
(3) 3L + PE version, see page 80.

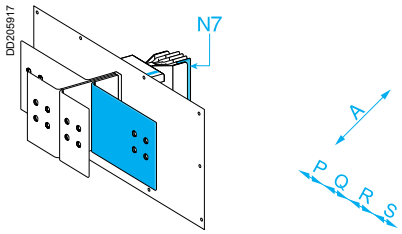
Table of dimensions

Rating (A)	Neutral	Dimensions (mm)			
		A	B	J, K, M	Y
5000	N3, N4	448 to 782	548	80 to 250	350

Feed units for switchboards and oil immersed transformers
IP55

Canalis KTA 800 to 4000

ER●7 - Bar feed units, flat outlets



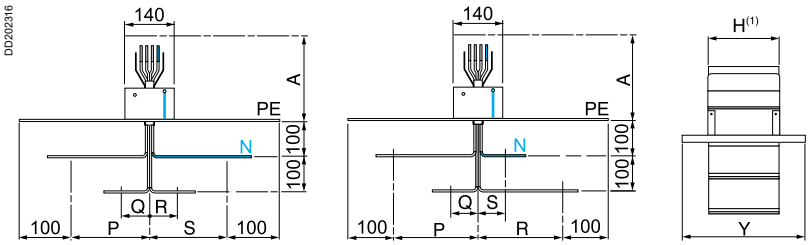
KTA●●●●ER●7

Type	Cat. no. (3)		
	3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	KTA●●●●ER37	KTA●●●●ER47	KTA●●●●ER57

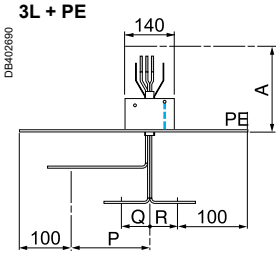
(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●ER57 by KTA●●●●ER77.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500ER4● by KTA2500ER6● and KTA3200ER4● by KTA3200ER6●.
(3) Not available for KTA5000.

Connection pad dimensions are identical to those of the feed units.

KTA●●●●ER●7
3L + N + PE or PER



3L + PE



(1) See the "Trunking cross-section" table below.

Table of dimensions

Rating (A)	Dimensions (mm)				
	A	P - Q	S - R or R - S	Q, R, S minimum	Y
800(2) to 1250	235 to 734	160 to 600	160 to 600	80	230
1600 to 2500	235 to 734	160 to 600	160 to 600	80	350
3200 to 4000	235 to 734	160 to 600	160 to 600	80	510

*(2) For the 800 A rating, indicate **"KTA0800"**.*

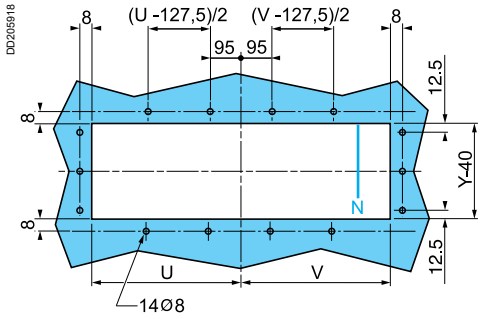
Cut-out drawing for straight feed units connected directly to the device

Table of dimensions

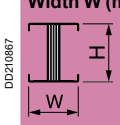
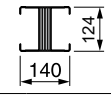
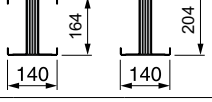
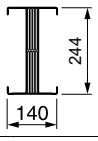
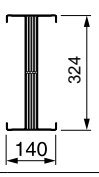
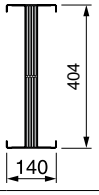
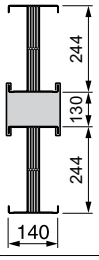
Rating (A)	Dimensions (mm)		
	Y	U	V
800(1) to 1250	230	U = P + 80	if S > R, V = S + 80 if R > S, V = R + 80
1600 to 2500	350		
3200 to 4000	510		

*(1) For the 800 A rating, indicate **"KTA0800"**.*

For the 3L + PE version,
consider S = 0 to calculate the V quotation.



Trunking cross-section

Rating (A)		800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Weight (kg/m)	3L + PE	12	14	16	19	22	25	31	38	50
	3L + N + PE	13	16	18	22	26	30	37	45	60
	3L + N + PER	15	19	21	26	31	36	46	56	72
Height H (mm) Width W (mm)										

*(1) **Important**: for the 800 A rating, indicate **"KTA0800"**.*

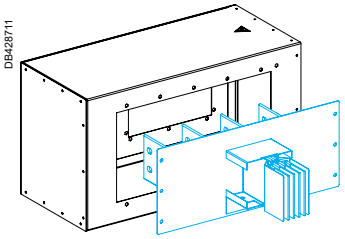
Rigid protective covers
IP55

Canalis KTA 800 to 5000

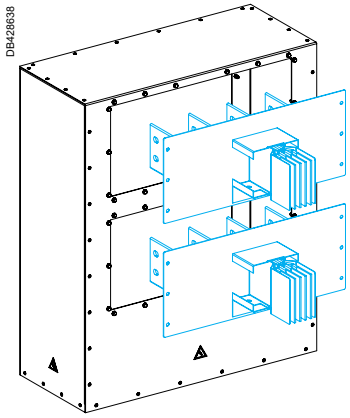
Ordering
To order a protective cover onto which a feed connector is fitted, the parameters D, G and Z, which depend on the feed connector, must be given.

Example: the catalogue number of a rigid vertical protective cover with dimension Y = 350 mm intended for a feed unit with different between centre dimensions D, G and Z (in mm) is:
KTB0350CR2, D = 330, G = 450 and Z = 500.

CR1 - Rigid horizontal protective covers for feed units ER N1 to N7



KTB●●●●CR1

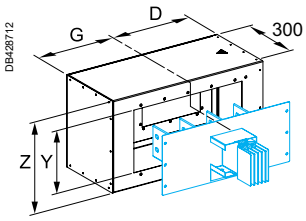


KTB0726CR1

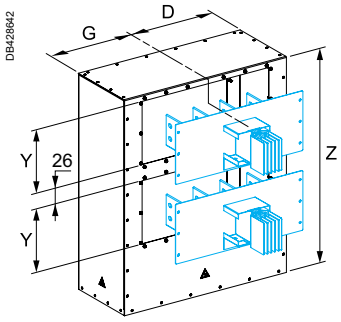
Important : when ordering a horizontal cover, make sure you indicate dimensions "D, G and Z" with the catalogue number.

Rating (A)	Dimensions "Y" (mm)	Cat. no.	Weight (kg)
800 to 1250	230	**KTB0230CR1**	12.00
1600 to 2500	350	**KTB0350CR1**	12.00
3200 to 4000	510	**KTB0510CR1**	12.00
5000	350	**KTB0726CR1**	60.00

KTB●●●●CR1



KTB0726CR1



Protective cover for ER N1 to N6 straight end feed connectors
Dimensions **D** and **G** are determined by the between centres dimensions (J, K and M) of the end feed connector bars to be protected.
The position of the neutral on the feed connector also determines the rule to be used for calculating parameters **D** and **G**.

If the feed connector comes into the cover with the neutral on the right:
D = **K**/2 + **M** + 100
G = **K**/2 + **J** + 100

If the feed connector comes into the cover with the neutral on the left:
D = **K**/2 + **J** + 100
G = **K**/2 + **M** + 100

For the 3L + PE version, consider M = J to calculate the D and G quotations.

Table of dimensions

Rating (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	220 to 475	220 to 475	310 to 800
1600 to 2500	350	220 to 475	220 to 475	430 to 800
3200 to 4000	510	220 to 475	220 to 475	590 to 800
5000	726	220 to 475	220 to 475	790 to 1200

Protective cover for ER N7 straight end feed connectors
Dimensions **D** and **G** are determined by the between centres dimensions (P, Q, R and S) of the end feed connector bars to be protected.
Position of the neutral on the feed connector also determines the rule to be used for calculating parameters **D** and **G**.

If the feed connector comes into the cover with the neutral on the right:
D = **max(R ; S)** + 100
G = **max(P ; Q)** + 100

If the feed connector comes into the cover with the neutral on the left:
D = **max(P ; Q)** + 100
G = **max(R ; S)**+ 100

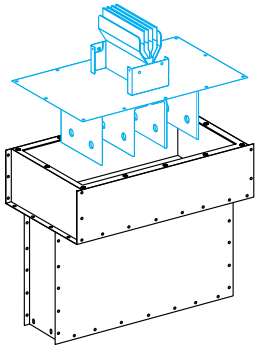
For the 3L + PE version, consider S = 0 to calculate the D and G quotations.

Table of dimensions

Rating (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	340 to 1000	340 to 1000	310 to 800
1600 to 2500	350	340 to 1000	340 to 1000	430 to 800
3200 to 4000	510	340 to 1000	340 to 1000	590 to 800

CR2, CR3 - Rigid vertical protective covers for feed units ER N1 to N7

DD202321



KTB●●●●CR2

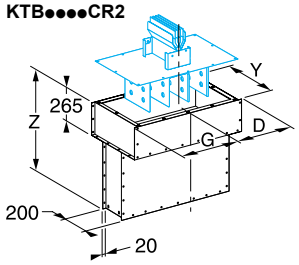
Important: when ordering a vertical cover, make sure you indicate dimensions "D, G and Z" with the catalogue number.

400 to 800 mm high covers

Rating (A)	Dimensions "Y" (mm)	Cat. no.	Weight (kg)
800 to 1250	230	**KTB0230CR2**	40.00
1600 to 2500	350	**KTB0350CR2**	40.00
3200 to 4000	510	**KTB0510CR2**	40.00

KTB●●●●CR2

DD202322

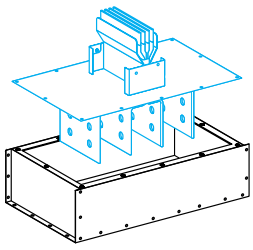


Dimensions **D** and **G** are determined by the between centres dimensions (J, K and M) of the end feed connector bars to be protected.
D = **K**/2 + **J** + 100
G = **K**/2 + **M** + 100
For the 3L + PE version, consider M = J to calculate the D and G quotations.

Table of dimensions for ER N1 to N6 straight feed units

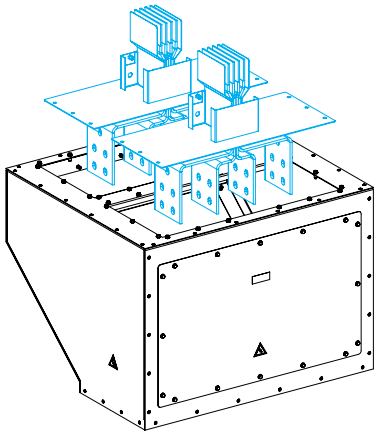
Rating (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	220 to 475	220 to 475	400 to 800
1600 to 2500	350	220 to 475	220 to 475	400 to 800
3200 to 4000	510	220 to 475	220 to 475	400 to 800

DD202323



KTB●●●●CR3

DB428638



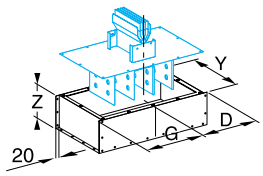
KTB0726CR3

100 to 400 mm high covers

Rating (A)	Dimensions "Y" (mm)	Cat. no.	Weight (kg)
800 to 1250	230	**KTB0230CR3**	17.00
1600 to 2500	350	**KTB0350CR3**	17.00
3200 to 4000	510	**KTB0510CR3**	17.00
5000	350	**KTB0726CR3**	60.00

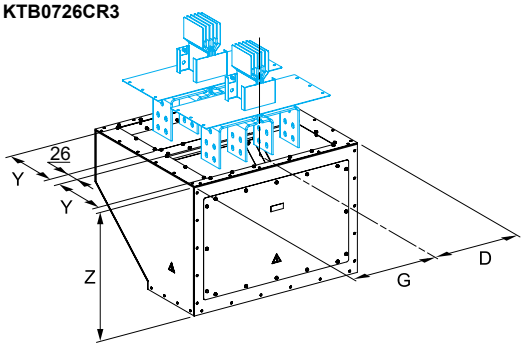
KTB●●●●CR3

DD202324



KTB0726CR3

DB428643



Dimensions **D** and **G** are determined by the between centres dimensions of the end feed connector bars to be protected.

Table of dimensions for ER N1 to N6 straight feed units

Rating (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	220 to 475	220 to 475	100 to 400
1600 to 2500	350	220 to 475	220 to 475	100 to 400
3200 to 4000	510	220 to 475	220 to 475	100 to 400
5000	350	220 to 475	220 to 475	591 to 800

D = **K**/2 + **J** + 100
G = **K**/2 + **M** + 100
For the 3L + PE version, consider M = J to calculate the D and G quotations.

Table of dimensions for ER N7 straight feed units

Rating (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	220 to 475	220 to 475	100 to 400
1600 to 2500	350	220 to 475	220 to 475	100 to 400
3200 to 4000	510	220 to 475	220 to 475	100 to 400

D = **max (P ; Q)** + 100
G = **max (R ; S)** + 100
For the 3L + PE version, consider S = 0 to calculate the D and G quotations.

Adjustable protective covers for Minera immersed transformers
IP55

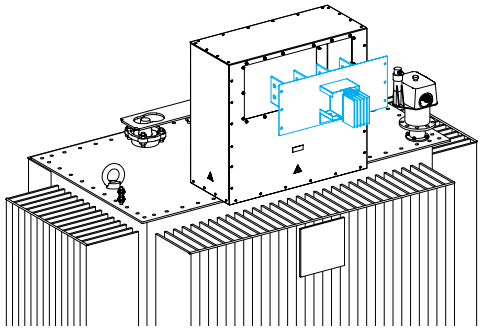
Canalis KTA 800 to 5000

CR7 - Protective covers for horizontal incomers

These covers are used to connect Canalis KT to Minera transformers.
Dimensions are predefined to match with transformer ratings.
Refer to the selection guide, see page 248.

Cat. no.	Y (mm)	Z (mm)	X (mm)	A (mm)	B (mm)	C (mm)	Weight (kg)
KTB0230CR71	230	450	320	780	650	256	30
KTB0350CR71	350	510	320	780	650	256	30
KTB0350CR72	350	540	350	780	650	256	30
KTB0350CR73	350	590	400	855	710	276	30
KTB0350CR74	350	590	400	855	710	359	30
KTB0510CR71	510	705	435	855	710	276	30
KTB0510CR72	510	740	470	855	710	359	30
KTB0510CR73	510	780	510	855	710	359	30
KTB0726CR71	350	1025	469	855	710	359	30

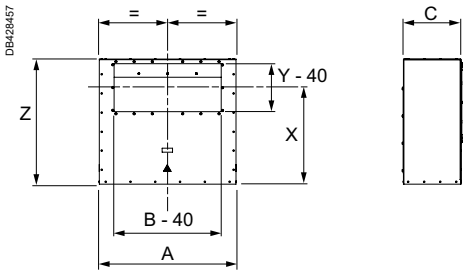
DB428456



KTB●●●●CR7●

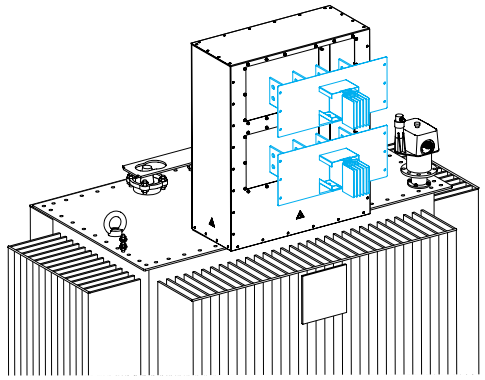
KTB●●●●CR7●

DB428457



KTB0726CR71

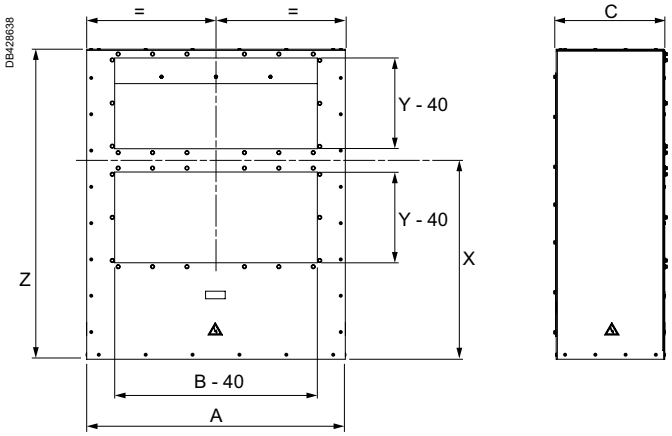
DB428638



KTB0726CR71

KTB0726CR71

DB428638



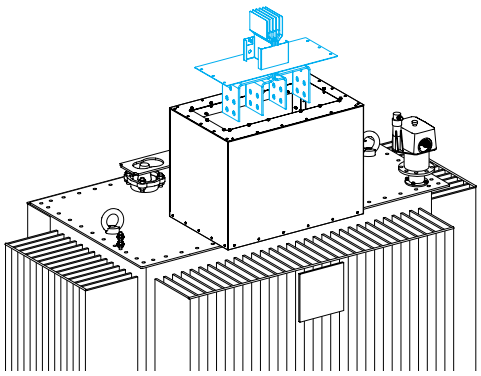
Interfaces selection guide, see page 248 and page 249

CR8 - Protective covers for vertical incomers

These covers are used to connect Canalis KT to Minera transformers.
Dimensions are predefined to match with transformer ratings.
Refer to the selection guide, page 250.

Cat. no.	Y (mm)	Z (mm)	A (mm)	B (mm)	C (mm)	Weight (kg)
KTB0230CR81	230	480	780	650	251	30
KTB0350CR81	350	580	780	650	380	30
KTB0350CR82	350	600	855	710	380	30
KTB0350CR83	350	520	855	710	380	30
KTB0510CR81	510	600	855	710	540	30
KTB0510CR82	510	615	855	710	540	30
KTB0726CR81	350	591	775	710	770	30

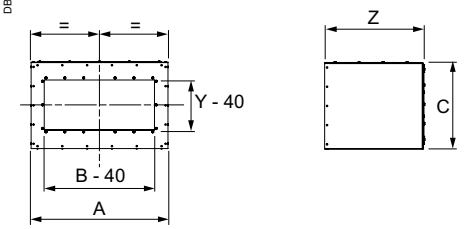
DB428458



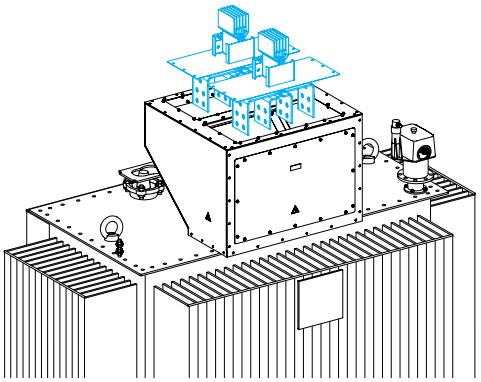
KTB●●●●CR8●

KTB●●●●CR8●

DB428459



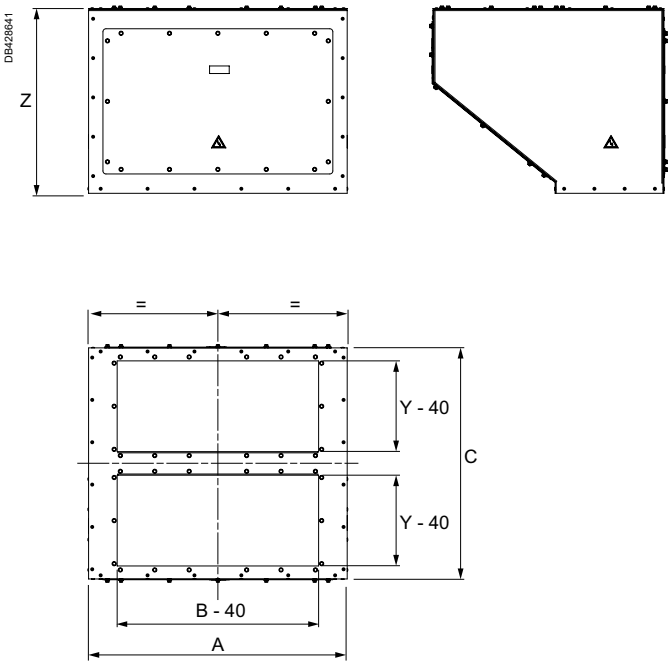
DB428640



KTB0726CR81

KTB0726CR81

DB428641



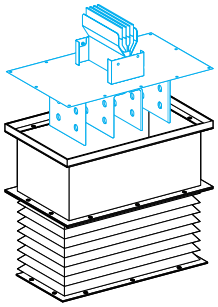
Interfaces selection guide, page 250 and page 251.

Flexible protective covers
Cable boxes
IP55

Canalis KTA 800 to 4000

CS - Flexible vertical protective covers for straight feed units

DD202318



KTB●●●●CS0

Covers for ER N1 to N7 straight feed units with **between centre dimensions = 115 mm.**

Rating (A)	Dimensions "Y" (mm)	Cat. no.	Weight (kg)
800 to 1250	230	**KTB0230CS0**	15.00
1600 to 2500	350	**KTB0350CS0**	17.00
3200 to 4000	510	**KTB0510CS0**	19.00

It is recommended to use insulating sheaths KTB0000YF1 with connection braids KTB0000YT1.

KTB●●●●CS0

DD202319

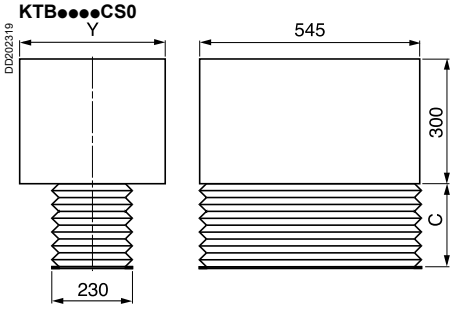
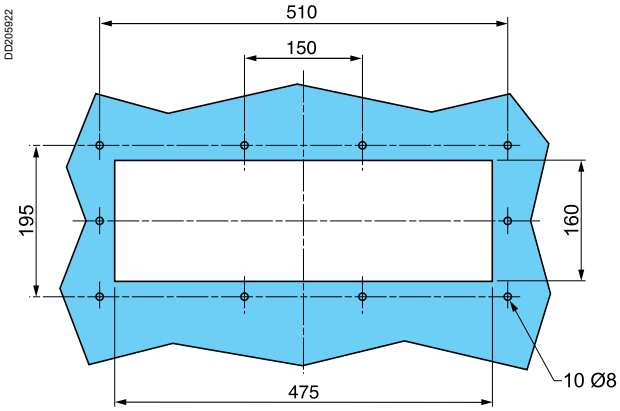


Table of dimensions

Rating (A)	Dimensions (mm)	
	Y	C
800 to 1250	230	200 to 650
1600 to 2500	350	200 to 650
3200 to 4000	510	200 to 650

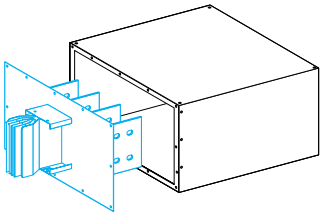
Cut-out drawing for fixing the flexible vertical protective cover

DD205922



BC - Cable boxes

DD205923



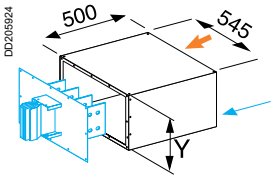
KTB●●●●BC01

Rating (A)	Dimensions "Y" (mm)	Cat. no.	Weight (kg)
800 to 1250	230	**KTB0230BC01**	15.00
1600 to 2500	350	**KTB0350BC01**	17.00
3200 to 4000	510	**KTB0510BC01**	19.00

*Cable boxes are only to be used on ER N1 to N6 straight feed units with standard **between centre distances = 115 mm**.*

KTB●●●●BC01

DD205924



Cable entry.
Aluminium plate to be drilled.

Table of dimensions

Rating (A)	Dimensions (mm)
	Y
800 to 1250	230
1600 to 2500	350
3200 to 4000	510

See table page 86 for connection pad dimensions.

Feed units for dry-type transformers
IP55

Canalis KTA 800 to 4000

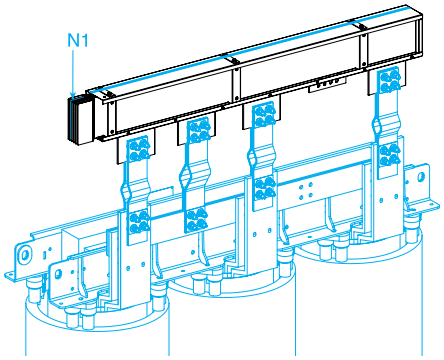
Ordering

Complete the catalogue number by replacing "●●●●" by the rating.
Important:
- in the catalogue number for the 800 A rating, add a "0": **KTA0800**
- add the dimensions of the selected unit as a technical comment.

Example: the catalogue number of a 3200 A end feed unit, N2, 3L + N + PER, with a between centre distance E = 550 mm, length N = 310 mm and phase order T = 3N21 is:
KTA3200EL72, E = 550 mm, N = 310 mm and T = 3.
Rating

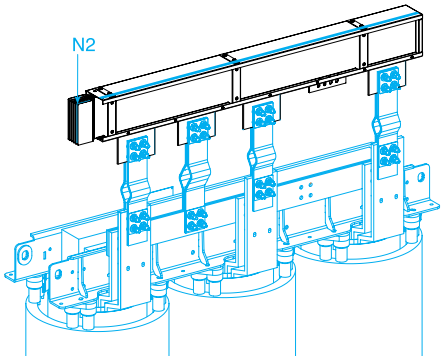
EL●1, EL●2 - N1 and N2 feed units for dry-type transformers

DD202329



KTA●●●●EL●1

DD202331



KTA●●●●EL●2

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	N1	KTA●●●●EL31	KTA●●●●EL41	KTA●●●●EL51
	N2	KTA●●●●EL32	KTA●●●●EL42	KTA●●●●EL52

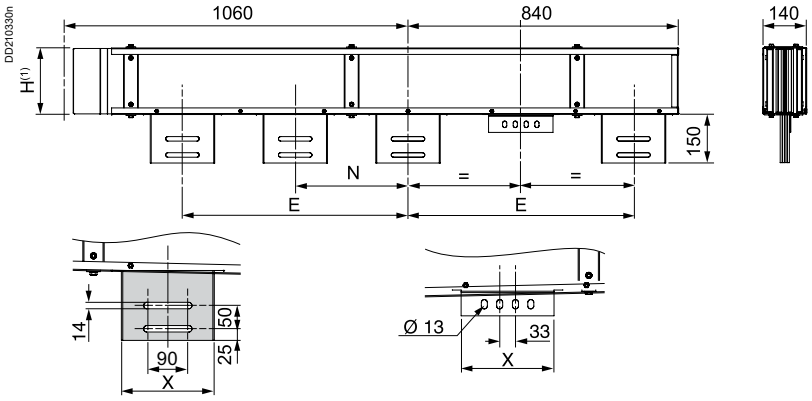
(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●EL5● by KTA●●●●EL7●.

(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500EL4● by KTA2500EL6● and KTA3200EL4● by KTA3200EL6●.

For an installation with flat mounted busbar trunking, add angle brackets between the transformer and the feed unit, see page 98.
For fixing supports, see KTB●●●●ZA4 page 110.
These end feed units are supplied with PEN connection kit.

KTA●●●●EL●1, KTA●●●●EL●2

DD210330n



(1) See the "Trunking cross-section" table page 101.

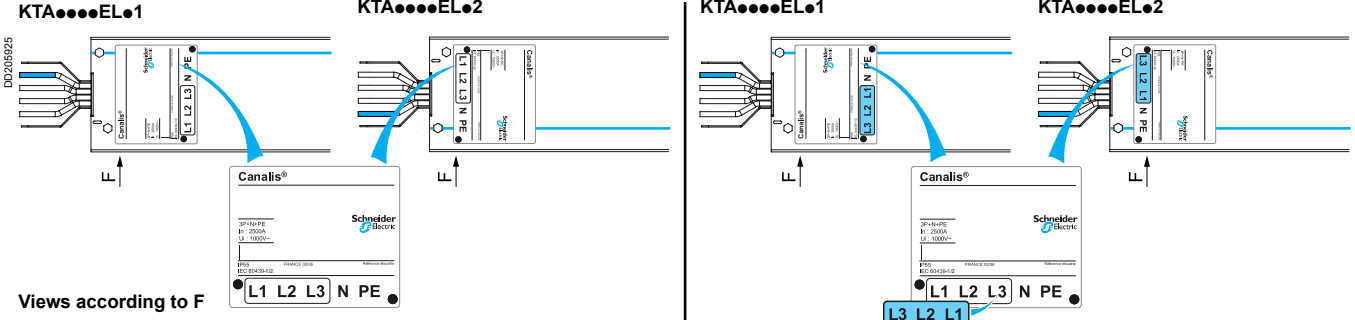
Table of dimensions

Rating (A)	Neutral	Dimensions (mm)		
		E	N	X
800 to 1250	N1, N2	390 to 700	195 to E - 195	160
1600 to 4000	N1, N2	470 to 700	235 to E - 235	200

Selecting phase order T

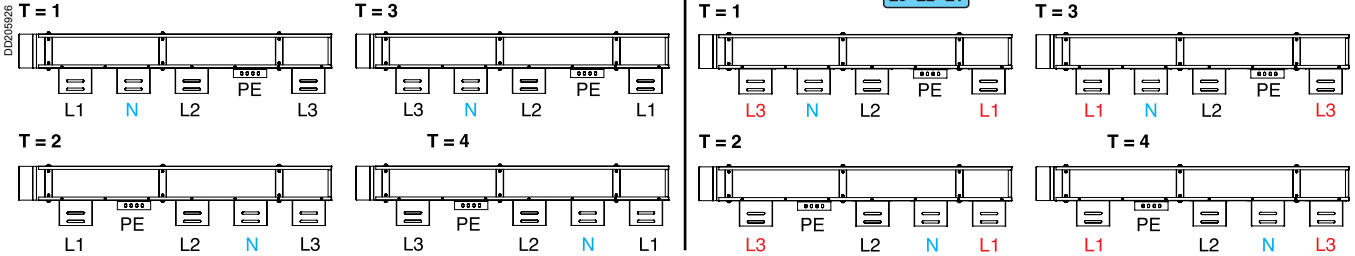
Top views

DD205925



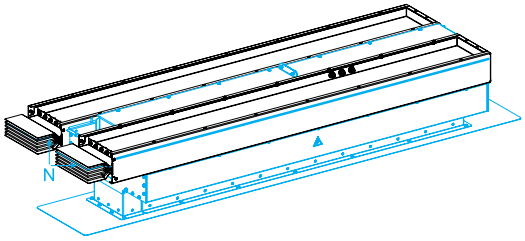
Views according to F

DD205926



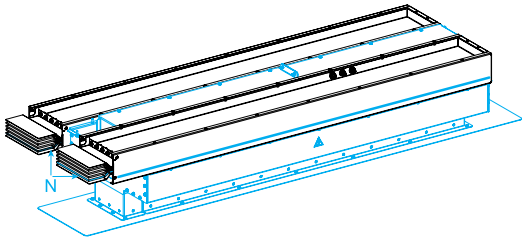
EL●1, EL●2 - Feed units for dry-type transformers

DB428750



KTA5000EL●1

DB428751



KTA5000EL●2

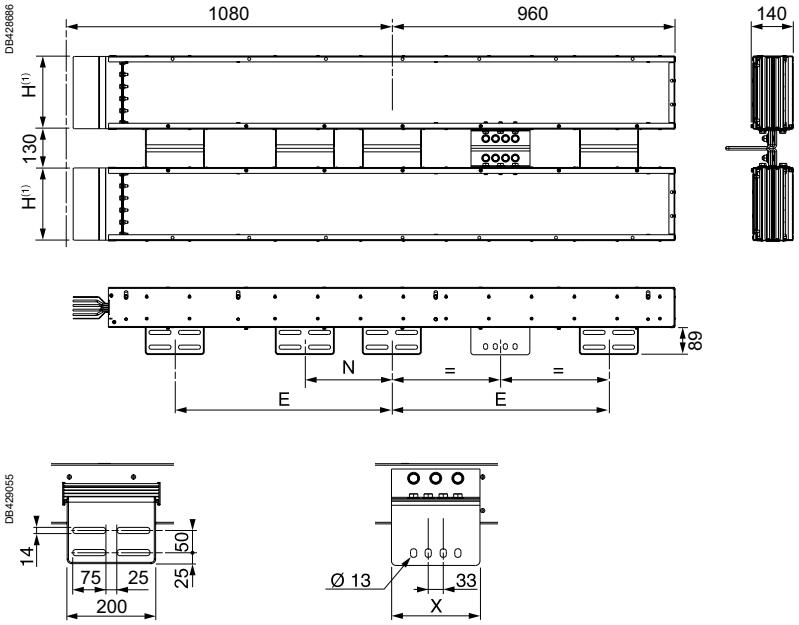
Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE	3L + N + PER (1)
Made to measure	N1	KTA5000EL31	KTA5000EL41	KTA5000EL51
	N2	KTA5000EL32	KTA5000EL42	KTA5000EL52

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA5000EL5● by KTA5000EL7●.

For an installation with flat mounted busbar trunking, add angle brackets between the transformer and the feed unit, see page 98.
For fixing supports, see KTB●●●●ZA4 page 110.

KTA5000EL●1, KTA5000EL●2

DB428866



DB429055

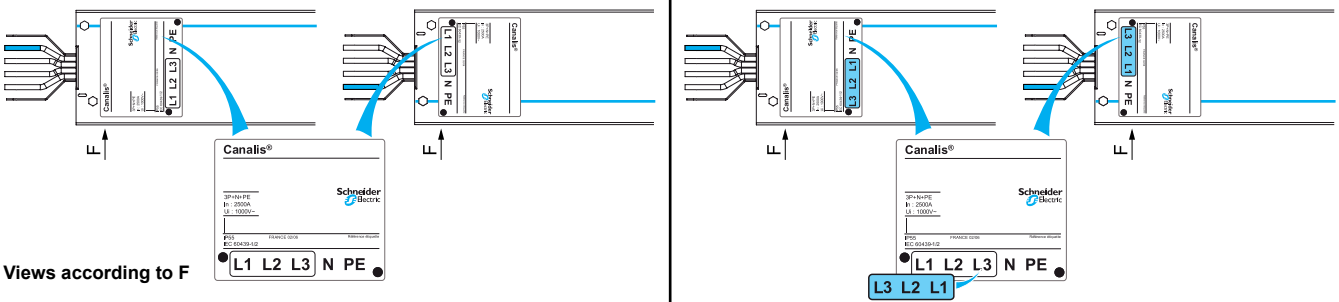
(1) See the "Trunking cross-section" table page 101.

Table of dimensions

Rating (A)	Neutral	Dimensions (mm)		
		E	N	X
5000	N1, N2	470 to 736	235 to E - 235	200

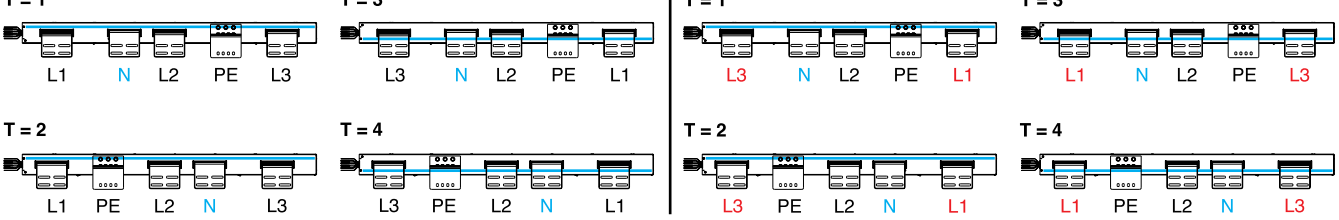
Selecting phase order T

DD230220



Views according to F

DD230219

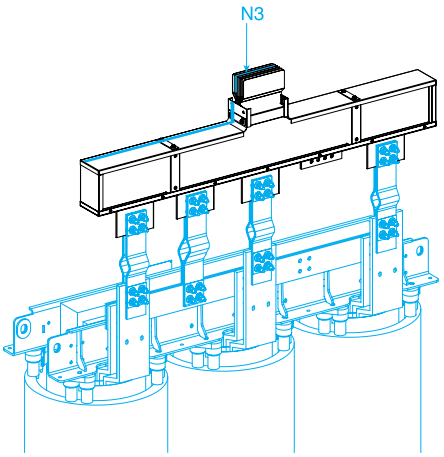


Feed units for dry-type transformers
IP55

Canalis KTA 800 to 4000

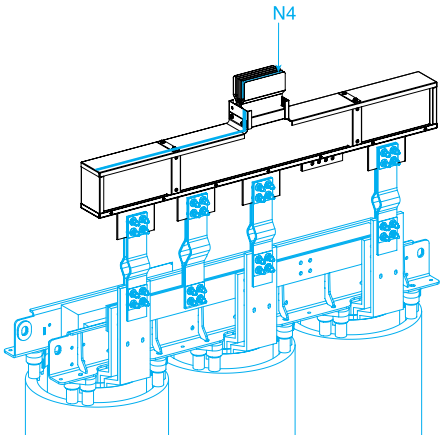
EL●3, EL●4 - N3 and N4 feed units for dry-type transformers

DD202333



KTA●●●●EL●3

DD202334



KTA●●●●EL●4

Type	Position of neutral	Cat. no.		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	N3	KTA●●●●EL33	KTA●●●●EL43	KTA●●●●EL53
	N4	KTA●●●●EL34	KTA●●●●EL44	KTA●●●●EL54

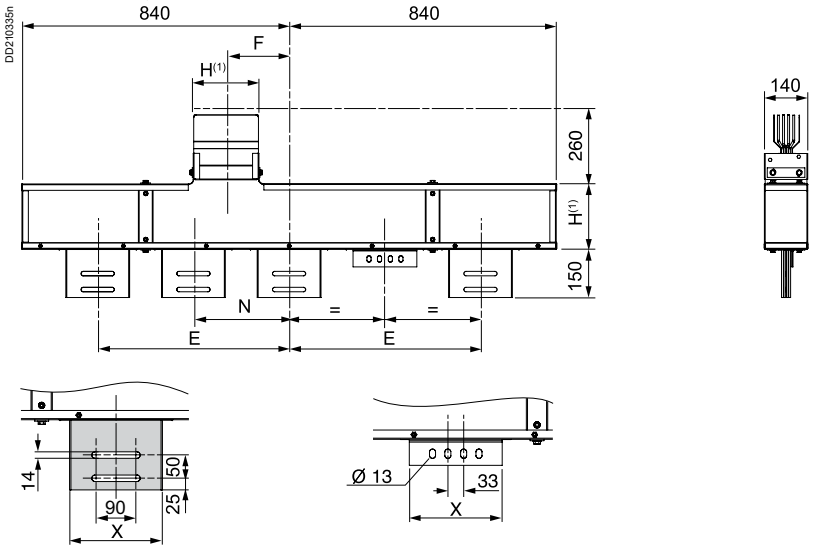
(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●EL5● by KTA●●●●EL7●.

(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500EL4● by KTA2500EL6● and KTA3200EL4● by KTA3200EL6●.

For an installation with flat mounted busbar trunking, add angle brackets between the transformer and the feed unit, see page 98.
For fixing supports, see KTB●●●●ZA4 page 110.
These end feed units are supplied with PEN connection kit.

KTA●●●●EL●3, KTA●●●●EL●4

DD210335n



(1) See the "Trunking cross-section" table page 101.

Table of dimensions

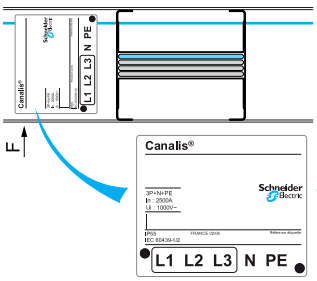
Rating (A)	Neutral	Dimensions (mm)			
		E	N	F	X
800 to 1250	N3, N4	390 to 700	195 to E - 195	0 to 200	160
1600 to 4000	N3, N4	470 to 700	235 to E - 235	0 to 200	200

Selecting phase order T

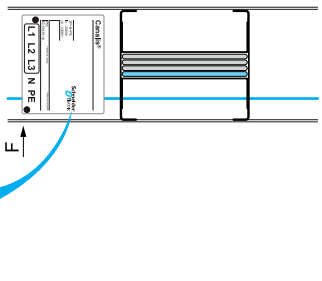
Top views

KTA●●●●EL●3

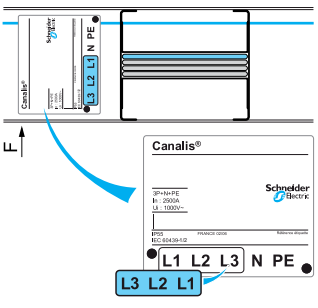
DD205927



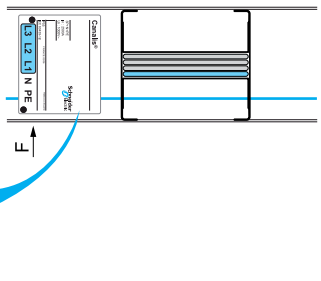
KTA●●●●EL●4



KTA●●●●EL●3



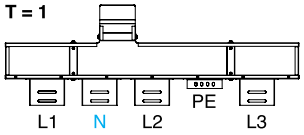
KTA●●●●EL●4



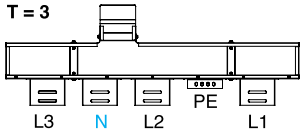
DD205928

Views according to F

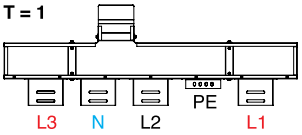
T = 1



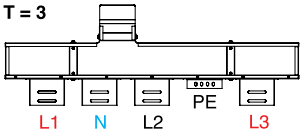
T = 3



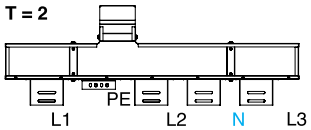
T = 1



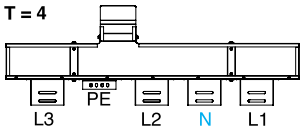
T = 3



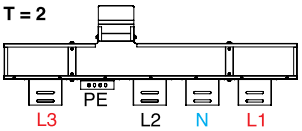
T = 2



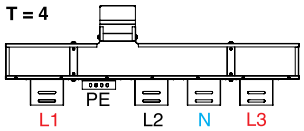
T = 4



T = 2

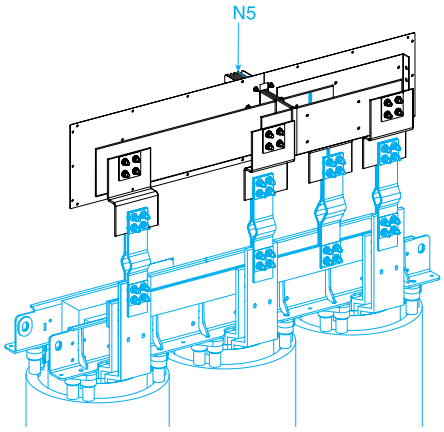


T = 4



EL●5 - Feed units for dry-type transformers

DD202337



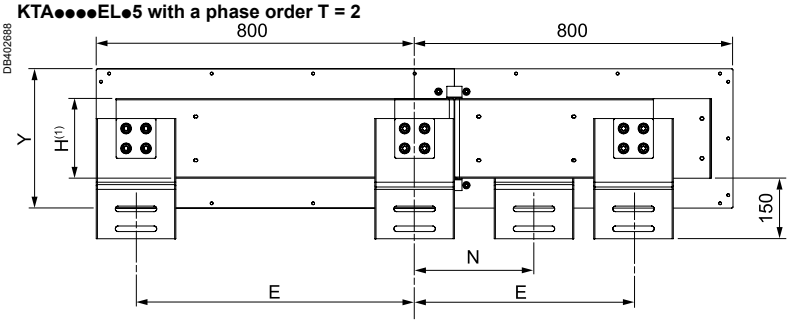
KTA●●●●EL●5

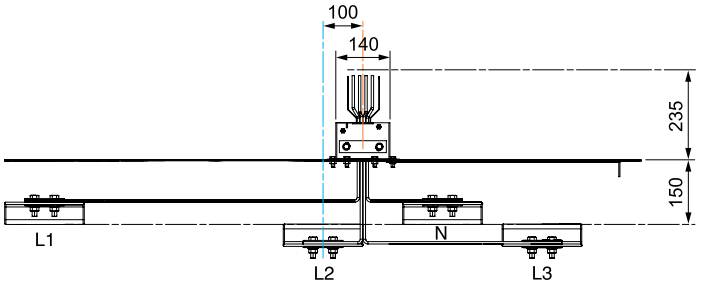
Type	Position of neutral	Cat. no. (3)		
		3L + PE	3L + N + PE (2)	3L + N + PER (1)
Made to measure	N5	KTA●●●●EL35	KTA●●●●EL45	KTA●●●●EL55

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●EL55 by KTA●●●●EL75.
(2) To order the 3L+N+PE 2500 A and 3200 A version with reinforced Isc, replace KTA2500EL4● by KTA2500EL6● and KTA3200EL4● by KTA3200EL6●.
(3) References KTA5000EL●5 are made of 2 references KTA2500EL●5.
For an installation with flat mounted busbar trunking, add angle brackets between the transformer and the feed unit, see page 98.
These end feed units are supplied with PEN connection kit.

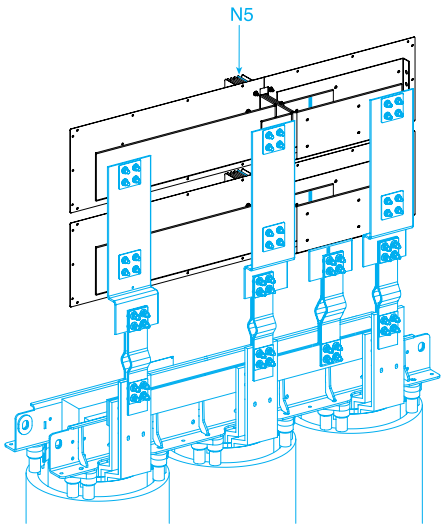
KTA●●●●EL●5 with a phase order T = 2

DB402688





DB429066

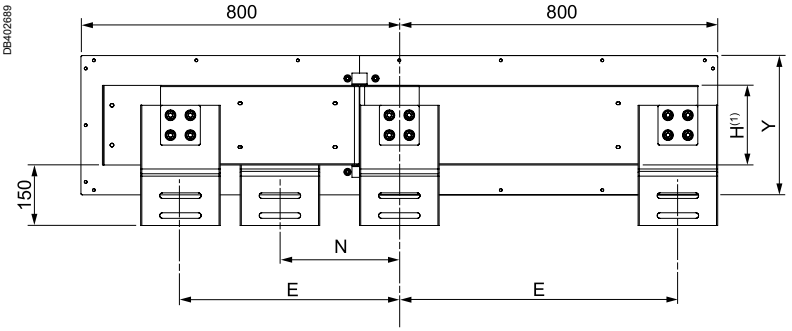


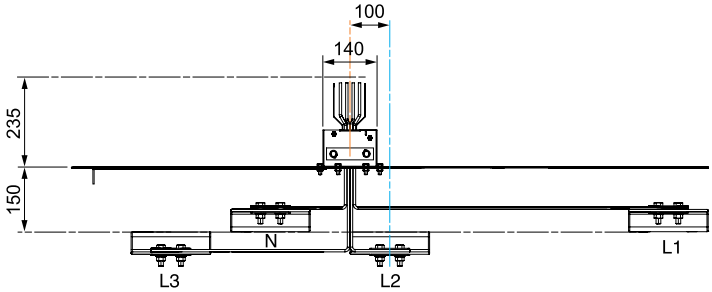
KTA5000EL●5 + YP23

For YP23 see page 108.

KTA●●●●EL●5 with a phase order T = 3

DB402689





DD210873n

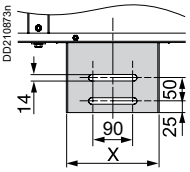


Table of dimensions

Rating (A)	Neutral	Dimensions (mm)			
		Y	E	N	X
800 to 1250	N1, N2	230	390 to 700	195 to E - 195	160
1600 to 2500	N1, N2	350	470 to 700	235 to E - 235	200
3200 to 4000	N1, N2	510	470 to 700	235 to E - 235	200

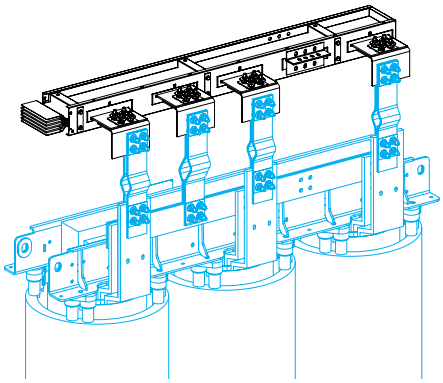
(1) See the "Trunking cross-section" table page 101.
Important : the above designs and markings correspond to a phase order of N321, joint block side. If the phase order on the joint block side is N123, inverse markings L1 and L3 on the transformer side.

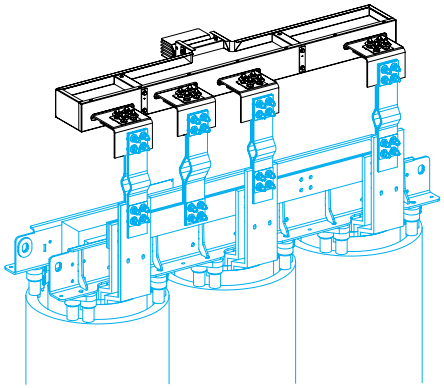
Feed units for dry-type transformers
IP55

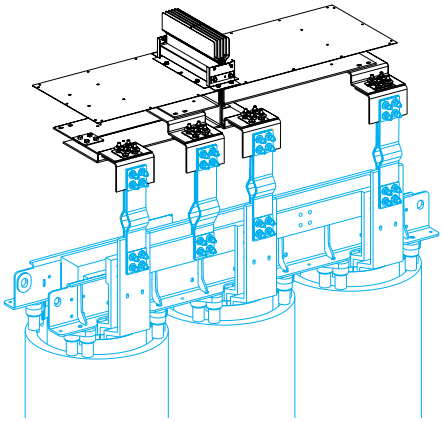
Canalis KTA 800 to 4000

YE - Angle brackets for installing N1 to N5 feed units flat

DD202340





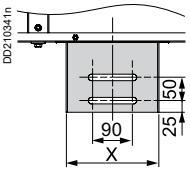


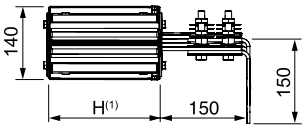
KTB0000YE1, KTB0000YE2

Description	Rating (A)	Phase width "X" (mm)	Cat. no.
4 angle brackets + screws	800 to 1250	160	**KTB0000YE1**
	1600 to 4000	200	**KTB0000YE2**

KTB0000YE1, KTB0000YE2

DD210341n





Protective covers for dry-type transformers
IP55

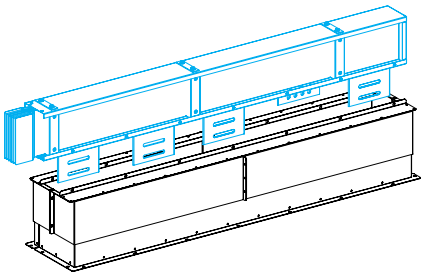
Canalis KTA 800 to 4000

Ordering

There is no need to add technical comments to the catalogue number ordered.

CR4 - Adjustable vertical protective covers for EL, N1 to N4 feed units, edgewise mounting

DD202342



KTB0000CR4

Type	Position of neutral	Cat. no.	Weight (kg)
Vertical cover	N1, N2, N3 and N4	**KTB0000CR4**	24.00

KTB0000CR4

DD202344

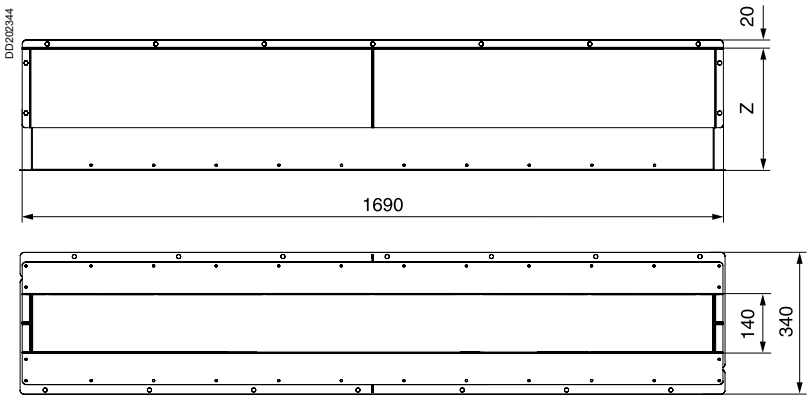
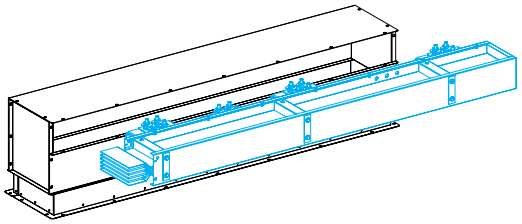


Table of dimensions

Rating (A)	Dimensions (mm)	
	Z	
	Minimum	Maximum
800 to 1250	200	350
1600 to 2500	200	350
3200 to 4000	200	350

CR5 - Adjustable horizontal protective covers for EL, N1 to N4 feed units, flat mounting

DD202343



KTB0000CR5

Type	Position of neutral	Cat. no.	Weight (kg)
Horizontal cover	N1, N2, N3 and N4	**KTB0000CR5**	32.00

KTB0000CR5

DD202345

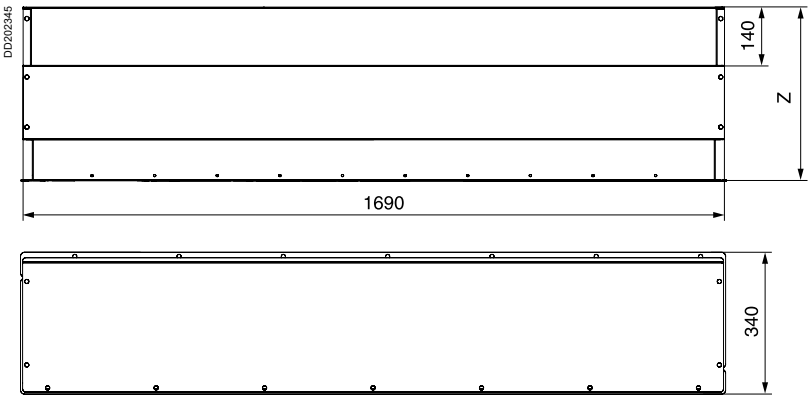


Table of dimensions

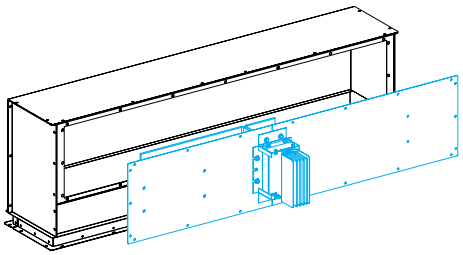
Rating (A)	Dimensions (mm)	
	Z	
	Minimum	Maximum
800 to 1250	330	480
1600 to 2500	330	480
3200 to 4000	330	480

Protective covers for dry-type transformers
IP55

Canalis KTA 800 to 4000

CR6 - Horizontal protective covers for dry-type transformer N5 feed units

DD202346



KTB●●●●CR6

Type	Position of neutral	Dimension "Y" (mm)	Cat. no.	Weight (kg)
Horizontal covers	N5	230	**KTB0230CR6**	38.00
		350	**KTB0350CR6**	40.00
		510	**KTB0510CR6**	47.00

KTB●●●●CR6

DD202347

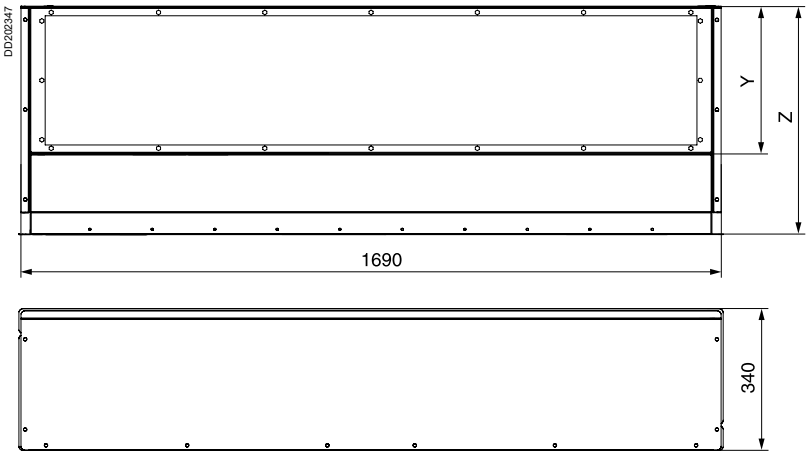
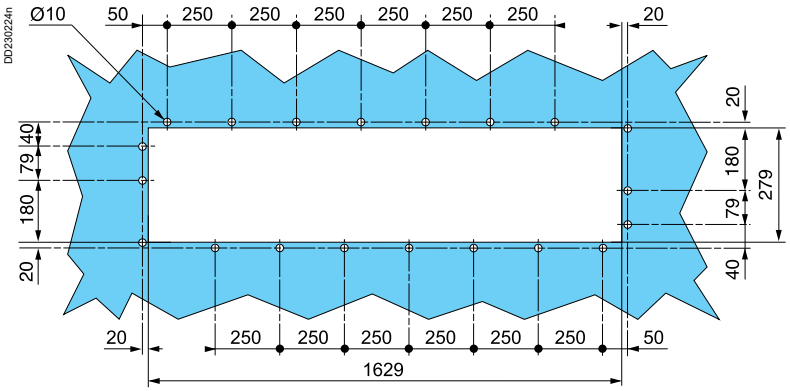


Table of dimensions

Rating (A)	Dimensions (mm)		
	Y	Z	
		Minimum	Maximum
800 to 1250	230	380	530
1600 to 2500	350	500	650
3200 to 4000	510	660	810

Cut-out drawing for dry-type transformer feed units

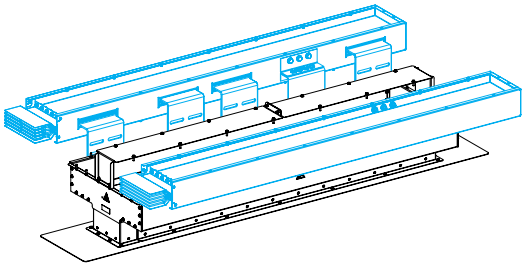
DD230224n



View from the top of the transformer.

CR5 - Adjustable horizontal protective covers for EL, N1 and N2 feed units, flat mounting

DB428688



KTB0001CR5

Type	Position of neutral	Cat. no.	Weight (kg)
Horizontal cover	N1, N2	**KTB0001CR5**	60.00

DB428756

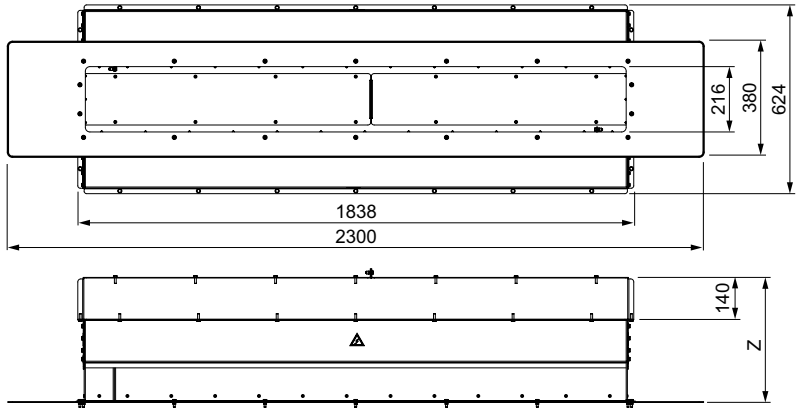


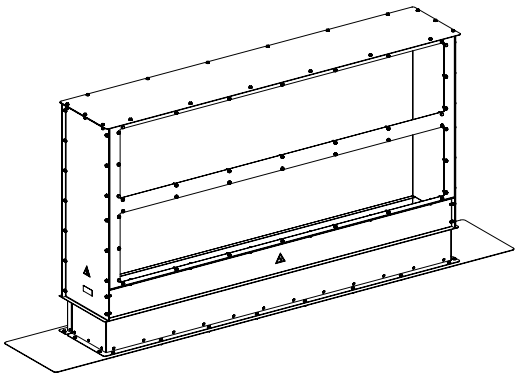
Table of dimensions

Rating (A)	Dimensions Z (mm)	
	Minimum	Maximum
5000	330	480

See "Connection to Trihal cast resin transformers", page 239.

CR6 - Adjustable horizontal protective covers for EL, N5 feed units, flat mounting

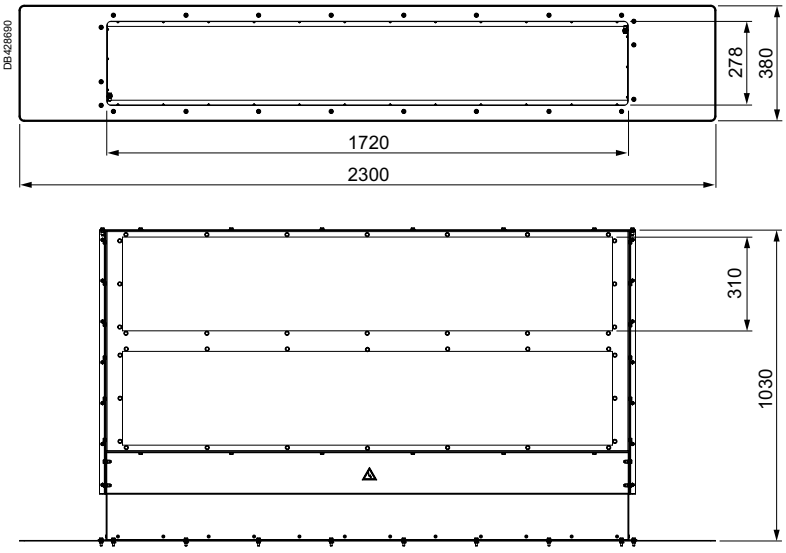
DB428765



KTB0001CR6

Type	Cat. no.	Weight (kg)
Horizontal cover	**KTB0001CR6**	60.00

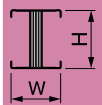
DB428690



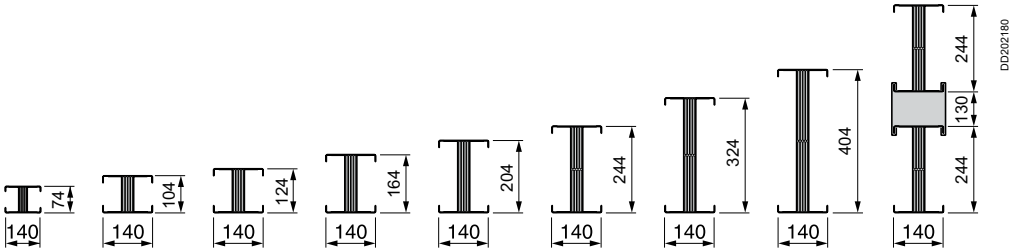
Trunking cross-section

Rating (A)		800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Weight (kg/m)	3L + PE	12	14	16	19	22	25	31	38	50
	3L + N + PE	13	16	18	22	26	30	37	45	60
	3L + N + PER	15	19	21	26	31	36	46	56	72
Height H (mm) Width W (mm)										

DD210867



DD202180



***(1) Important**: for the 800 A rating, indicate **"KTA0800"**.*

Connection accessories

Canalis KTA 800 to 5000

Ordering

To order YC1 or YC3 flexibles with customized drilled holes at the bottom.
Example: total length = 565 mm with a pattern of 4 centred holes 50x50 at 25 mm of the bottom.
KTB0100YC305B, L=565, A=50, B=25, C=25, D=50, E=2, F=2, Y=25.

To order flexibles without drilled holes at the bottom.
Example: total length = 435 mm.
KTB0100YC305B, L=435, E=0, F=0, Y=25.

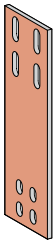
In all cases E, F and Y need to be filled.

YC1 - Connection plates

Type	Surface treatment	"Width (mm) W"	"Depth (mm) T"	"Length (mm) L"	Cross-section (mm^2)	Cat. no.	Weight (kg)
Made to measure	Bi-metal aluminium copper	100	7	300 to 600	700(1)	**KTB0100YC107A**	1.6
		120	7	300 to 600	840(1)	**KTB0120YC107A**	1.9
	Bare copper	100	5	300 to 600	500(2)	**KTB0100YC105B**	2.7
		120	5	300 to 600	600(2)	**KTB0120YC105B**	3.2

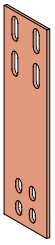
(1) *Made of 5 sheets of 1.4 mm (16 % CU, 84 % AL).*
(2) *Made of 5 sheets 1 mm (100 % CU).*

DB428616



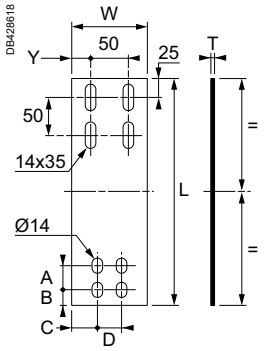
KTB01●0YC107A
Bi-metal aluminium copper

DB428617



KTB01●0YC105B
Bare copper

DB428618



Dimensions

Dimensions (mm)
L
A
B
C
D
E
F
Y

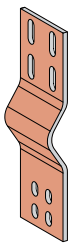
- E = number of vertical holes (bottom pattern)
- F = number of horizontal holes (bottom pattern)

YC3 - Connection flexible links with onde

Type	Surface treatment	"Width (mm) W"	"Depth (mm) T"	"Length (mm) L"	Cross-section (mm^2)	Cat. no.	Weight (kg)
Made to measure	Bi-metal aluminium copper	100	7	300 to 600	700(1)	**KTB0100YC307A**	1.6
		120	7	300 to 600	840(1)	**KTB0120YC307A**	1.9
	Bare copper	100	5	300 to 600	500(2)	**KTB0100YC305B**	2.7
		120	5	300 to 600	600(2)	**KTB0120YC305B**	3.2

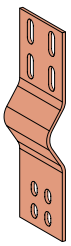
(1) *Made of 5 sheets of 1.4 mm (16 % CU, 84 % AL).*
(2) *Made of 5 sheets 1 mm (100 % CU).*

DB428620



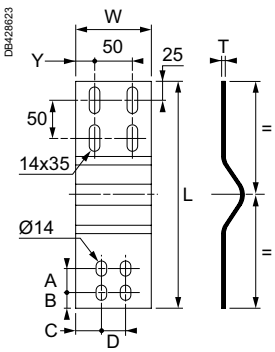
KTB01●0YC307A
Bi-metal aluminium copper

DB428621



KTB01●0YC305B
Bare copper

DB428623



Dimensions

Dimensions (mm)
L
A
B
C
D
E
F
Y

- E = number of vertical holes (bottom pattern)
- F = number of horizontal holes (bottom pattern)

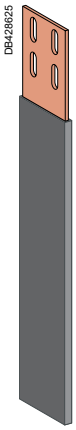
Connection selection guide, see page 248 and page 250

YC5 - Connection insulated

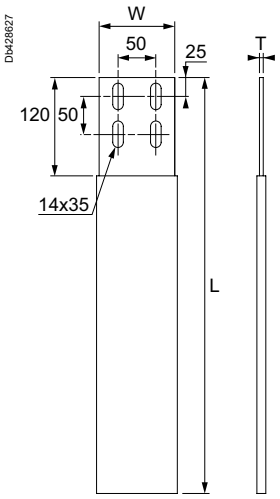
Type	Surface treatment	"Width (mm) W"	"Depth (mm) T"	"Length (mm) L"	Cross-section (mm^2)	Cat. no.	Weight (kg)
Fixed, insulated	Bi-metal aluminium copper	100	7	1000	700(1)	**KTB0100YC50710A**	2.6
		100	7	600	700(1)	**KTB0100YC50706A**	1.6
	Bare copper	100	5	1000	500(2)	**KTB0100YC50510B**	4.5
		100	5	600	500(2)	**KTB0100YC50506B**	2.7

(1) *Made of 5 sheets of 1.4 mm (16 % CU, 84 % AL).*
(2) *Made of 5 sheets 1 mm (100 % CU).*

KTB0100YC507●●A
Insulated, bi-metal aluminium copper

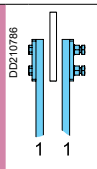
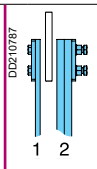
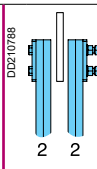
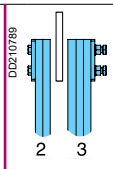
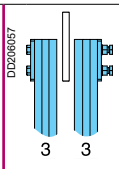


KTB0100YC505●●B
Insulated, bare copper



Determining the number of connection plates required

Busbar trunking rating (A)	Bare copper connection plates per phase	
	Number (2)	Section (mm^2)
1000	2 (100 x 5)	1000
1250	2 (100 x 5)	1000
1600	2 (100 x 5)	1000
2000	3 (100 x 5)	1500
2500	3 (100 x 5)	1500
3200	4 (100 x 5)	2000
4000	5 (100 x 5)	2500
5000	6 (120 x 5)	3600

Connection plates					
	DD210786 1 1	DD210787 1 2	DD210788 2 2	DD210789 2 3	DD206057 3 3
Busbar trunking rating (A)	1000 to 1600	2000 to 2500	3200	4000	5000

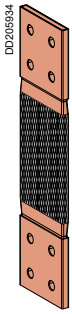
(2) *The number of bi-metal alumunium copper connections per phase is the same as bare copper ones.*
Note*: 2 (100 x 5) bare copper can be replaced by 2 (100 x 7) bi-metal aluminium copper.*

Connection selection guide, see page 248 and page 250

Connection accessories

Canalis KTA 800 to 5000

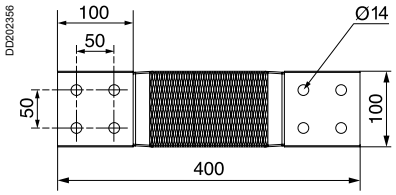
YT - Braids



KTB0000YT1

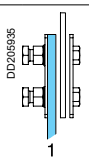
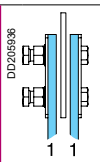
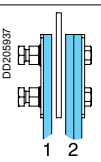
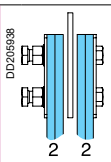
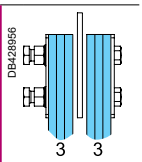
Description	Cat. no.	Weight (kg)
Connection braid	KTB0000YT1	2.80

KTB0000YT1



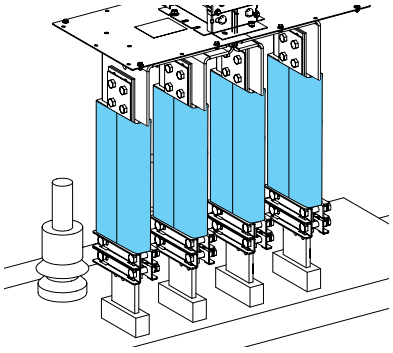
Determining the number of braids required

Busbar trunking rating (A)	Braids per phase	
	Number	Cross-section (mm²)
1000	1	600
1250	2	1200
1600	2	1200
2000	2	1200
2500	3	1800
3200	3	1800
4000	4	2400
5000	6	3600

Braids					
	DD205935 1	DD205936 1 1	DD205937 1 2	DD205938 2 2	DB428956 3 3
Busbar trunking rating (A)	1000	1250 to 2000	2500 to 3200	4000	5000

YF - Insulating sheaths

DD205939



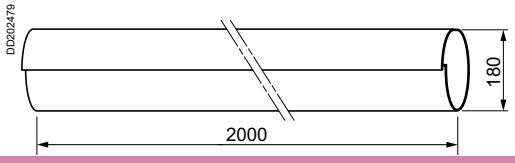
KTB0000YF1

The YF conduit allows the various conductors of a connection performed with braids or with bare copper foils to be insulated.
Installation is performed after complete assembly of the connection, with scratch fastening for easier setup.
The insulating conduit is formed of a 2-metre plastic duct that can be cut to length as needed.

Désignation	Cat. no.	Weight (kg)
Insulating sheath	**KTB0000YF1**	1.00

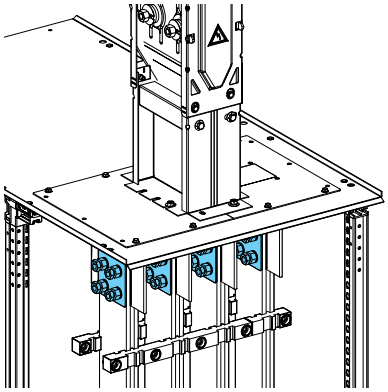
KTB0000YF1

DD202479



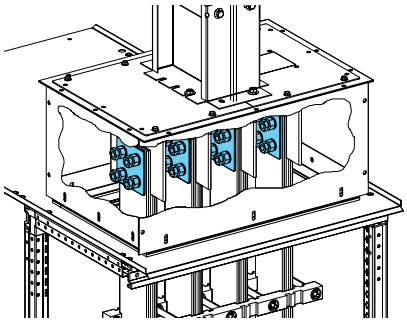
YB - Spacers and bolts

DD202363



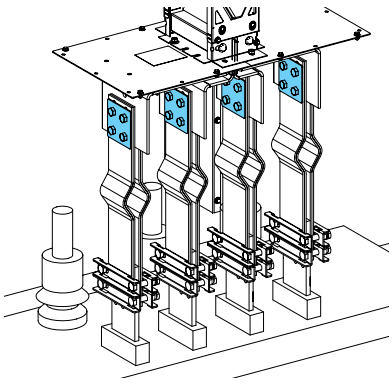
KTB0000YB2

DD230233



KTB0000YB3

DD202364



KTB0000YB4

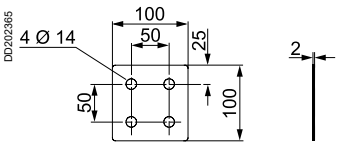
DB428842

KTB0000YB5

Description		Cat. no.	Weight (kg)
Connection torque nut kit	1 torque nut + 2 flat washers (Ø 60) + 1 elastic washer (Ø 55)	**KTB0000YB1**	-
Spacers for direct connection	8 x 3 mm galvanized steel spacers + 8 x 2 mm copper spacers + 16 x M12 x 60 bolts + washers and nuts	**KTB0000YB2**	5.50
Spacer plates for connector plate connections	8 x 3 mm galvanized steel plates + 16 x M12 x 60 bolts + washers and nuts	**KTB0000YB3**	4.00
	8 x 3 mm galvanized steel plates + 16 x M12 X 80 bolts + washers and nuts	**KTB0000YB4**	4.00
Set of bolts	16 x M10 x 60 bolts + washers and nuts	**KTB0000YB5**	2.00

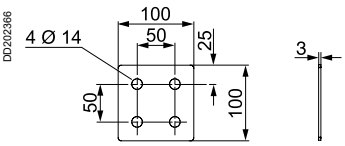
Copper spacer

DD202365



Galvanized steel spacer plates

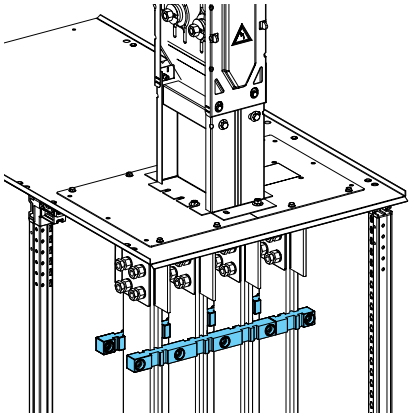
DD202366



Connection accessories

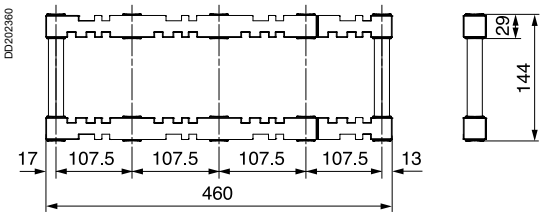
Canalis KTA 800 to 5000

YS - Bar supports



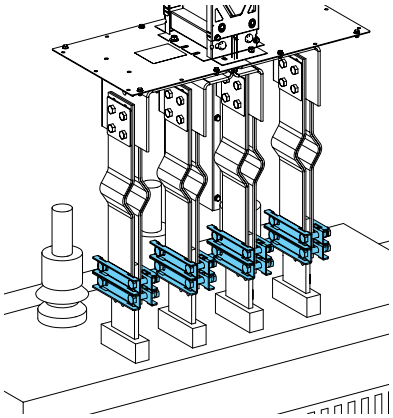
Description	Cat. no.	Weight (kg)
Bar support, 115 mm between centres for bar of 2x5 or 10 mm	**KTB0000YS1**	2.40

KTB0000YS1



KTB0000YS1

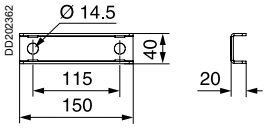
YS - Bar clamps



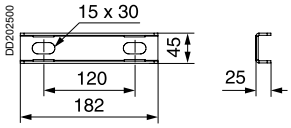
Description	Dimensions of transformer connection terminals (mm)	Cat. no.	Weight (kg)
8 bar clamps	100	**KTB0000YS2**	6.40
	120	**KTB0000YS3**	6.40

Each bar clamp includes 2 cross members and associated fixings.

KTB0000YS2

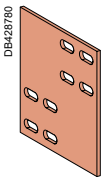


KTB0000YS3



KTB0000YS●

YP1 - Connection plate for oil immersed Minera transformer

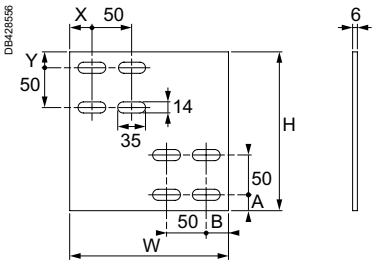


KTB0000YP1●

Type YP1

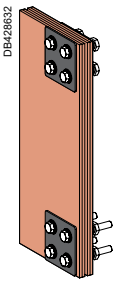
Plates for Minera oil transformer, connection from the top.
The product reference is for one phase.
Bolts at the equipments level are not included in the reference.
See selection table page 251.

A (mm)	B (mm)	H (mm)	W (mm)	X (mm)	Y (mm)	Cat. no.	Weight (kg)
20	28	200	200	28	20	**KTB0000YP11**	2.1
20	38	200	200	38	20	**KTB0000YP12**	2.1
20	28	200	260	28	20	**KTB0000YP13**	2.8
25	25	200	200	25	21	**KTB0000YP14**	2.1



Connection selection guide, see page 248 and page 250

YP2 - Connection plates for KTA5000 end feed units

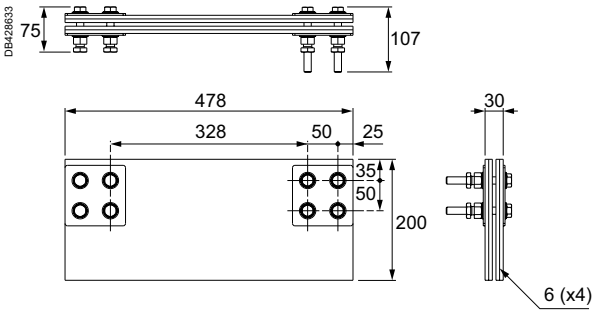


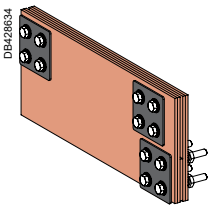
KTB0000YP21

Type YP21 for ER1 to ER6 horizontal incomer

Plates to link connection pads of 2 end feed units KTA2500 (ER1 to ER6) in order to create a KTA5000.
Link to transformer or switchboard has to be connected at the lowest 4 bolts system.
The product reference is for one phase and includes screws, nuts and washers at the busbar trunking side.
Bolts at the transformer or switchboard level are not included in the reference.

	Cat. no.	Weight (kg)
1 set of plates and bolts for 1 phase	**KTB0000YP21**	21



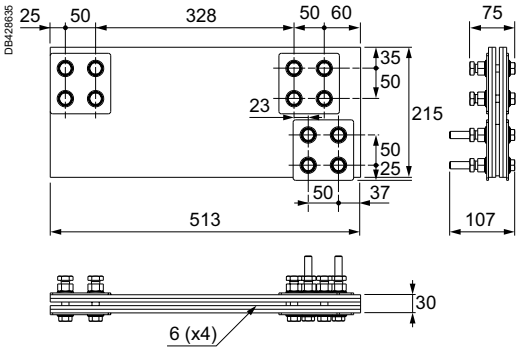


KTB0000YP22

Type YP22 for ER1 to ER6 vertical incomer

Plates to link connection pads of 2 end feed units KTA2500 (ER1 to ER6) in order to create a KTA5000.
The product reference is for one phase and includes screws, nuts and washers at the busbar trunking side.
Bolts at the transformer or switchboard level are not included in the reference.

	Cat. no.	Weight (kg)
1 set of plates and bolts for 1 phase	**KTB0000YP22**	24.5

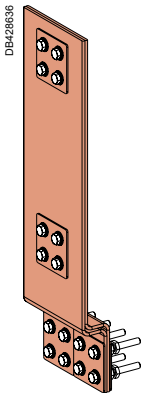


Connection selection guide, see page 248 and page 250

Connection accessories

Canalis KTA 5000

YP2 - Plates for KTA5000 end feed units

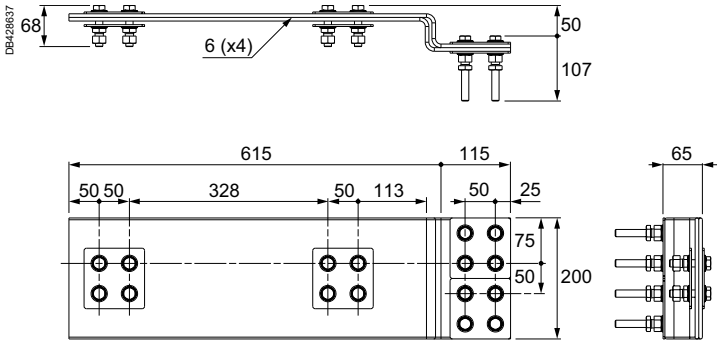


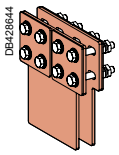
KTB0000YP23

Type YP23 for EL5 horizontal incomer

Plates to link connection pads of 2 end feed units KTA2500 EL5 in order to create a KTA5000.
The product reference is for one phase and includes screws, nuts and washers at the busbar trunking side.
Bolts at the transformer or switchboard level are not included in the reference.

	Cat. no.	Weight (kg)
1 set of plates and bolts for 1 phase	**KTB0000YP23**	35





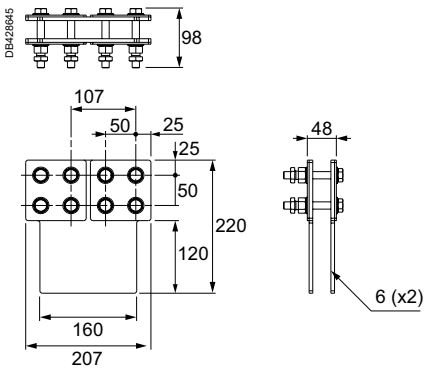
KTB0000YP24

Type YP24 for EL1 and EL2 dry transformer flexible links

Plates to link bottom sides of 2 sets of flexibles in order to a create a single plate at transformer side.
The product reference is for one phase and includes screws, nuts and washers at the busbar trunking side.

Drillings and bolts at the dry transformer level are not included in the reference.

	Cat. no.	Weight (kg)
1 set of plates and bolts for 1 phase	**KTB0000YP24**	5

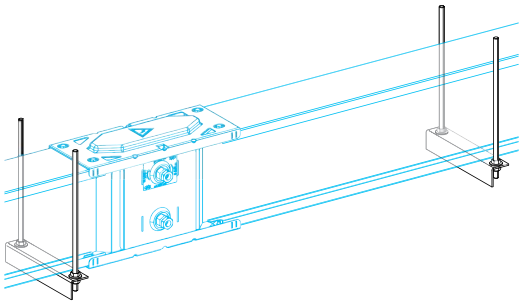


Connection selection guide, see page 238.

Canalis KTA

ZA1, ZA4 - Supports for edge wise horizontal installation

DD202372m

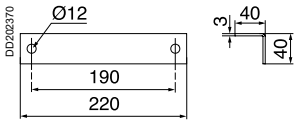


KTB0000ZA1

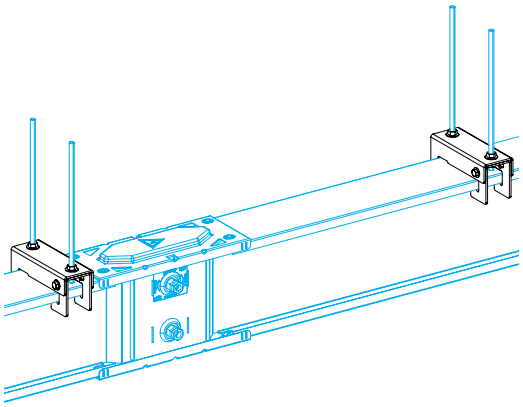
Description	Rating (A)	Busbar trunking height (mm)	Cat. no.	Weight (kg)
1 support from the bottom (threaded rods **supplied**)(1)	-	-	**KTB0000ZA1**	2.80
Set of 2 supports from the top (threaded rods **not supplied**)	800	74	**KTB0074ZA4**	3.20
	1000 to 4000	104 to 404	**KTB0404ZA4**	3.80

KTB0000ZA1

DD202370



DD202368m



KTB●●●●ZA4

DD202371

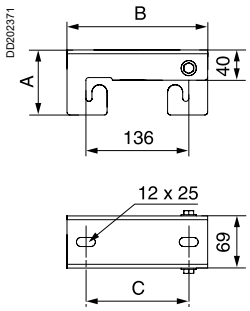


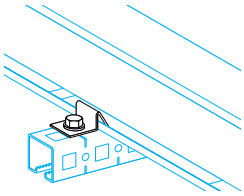
Table of dimensions

Height "H" (mm)	Dimensions (mm)		
	A	B	C
74	74	160	110
104 to 404	86	186	136

(1) *Threaded rods, length = 2 metres, are supplied with the support.*

ZA3 - Hooks for edge wise horizontal installation

DD202369m



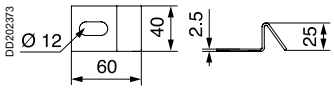
KTB0000ZA3

2 fixing grips are needed for each fixing point.

Description	Cat. no.	Weight (kg)
1 set of 8 hooks	**KTB0000ZA3**	0.60

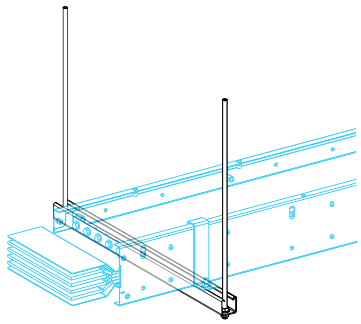
KTB000ZA3

DD202373



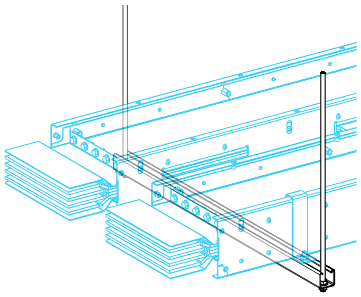
ZA7 - Supports for flat wise horizontal installation (41 x 41)

DB428770



KTB●●●●ZA7

DB428771

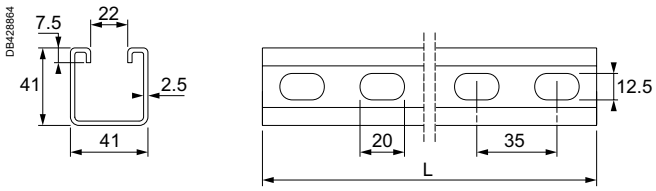


KTB0622ZA7

Busbar trunking rating (A)	Busbar trunking height "H" (mm)	Length L (mm)	Cat. no.	Weight (kg)
800 to 1600 (1)	74, 104, 124	280	**KTB0124ZA7**	0.6
2000 (1)	164, 204	350	**KTB0204ZA7**	0.7
2500 (1)	244	420	**KTB0244ZA7**	0.9
3200 (1)	324	490	**KTB0324ZA7**	1
4000 (1)	404	560	**KTB0404ZA7**	1.2
5000 (1)	622	770	**KTB0622ZA7**	1.6
To be customized (2)	All	3000	**KTB0000ZA7**	6.5

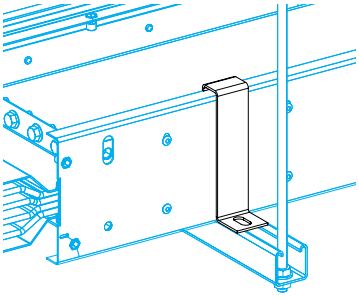
(1) Threaded rods, length = 2 meters, are supplied with the support.
(2) Threaded rods not supplied.

DB428864



ZA8 - Bracket for flat wise horizontal installation

DB428772



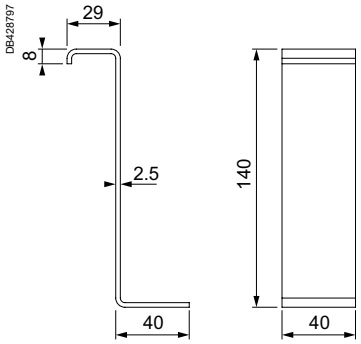
KTB0000ZA8

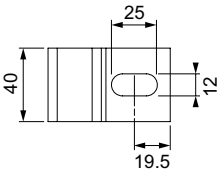
2 brackets are needed for each fixing point.

Description	Cat. no.	Weight (kg)
1 set of 8 brackets	**KTB0000ZA8**	0.14

Supplied with a spacer for fixation of KT●●●●ED●●●●.
T-bolts are not supplied with this reference.

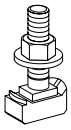
DB428797



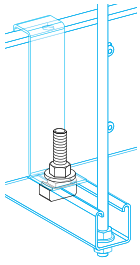


YB6 - T-Bolts

DB428911



KTB0000YB6



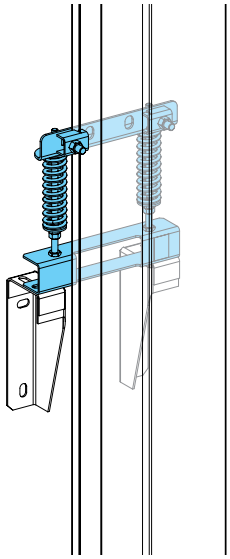
Description	Cat. no.	Weight (kg)
1 box of 50 bolts M10 x 35 for rails 41 x 41	**KTB0000YB6**	6.0

Includes T-screws, nuts and washers.

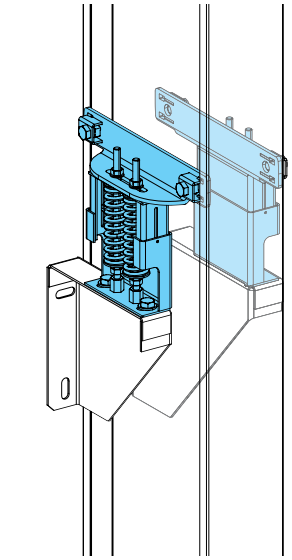
Canalis KTA

ZA5 - Vertical supports

DB428646



Vertical support
KTB0164ZA51



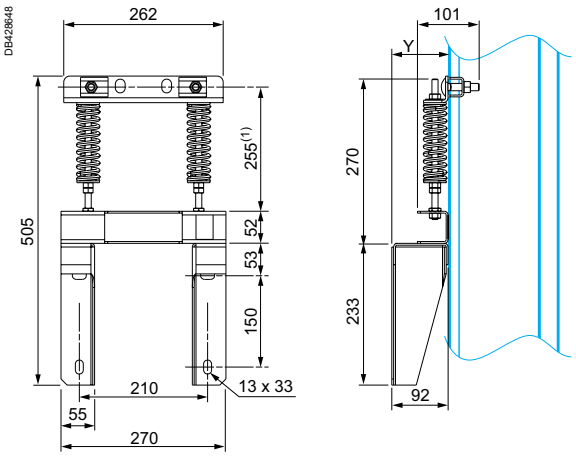
Vertical support
KTB0204ZA51
to
KTB0404ZA51

Description	Rating (A)	Busbar trunking height (mm)	Vertical support		Wall bracket	
			Cat. no.	Weight (kg)	Cat. no.	Weight (kg)
Fixings	800 to 1600	74 to 164	KTB0164ZA51	2.1	KTB0164ZA52	2
	2000	204	KTB0204ZA51	6.9	KTB0204ZA52	3.2
	2500	244	KTB0244ZA51	7.1	KTB0244ZA52	3.5
	3200	324	KTB0324ZA51	7.6	KTB0324ZA52	4.2
	4000	404	KTB0404ZA51	8.4	KTB0404ZA52	4.2

For further details, see page 212.

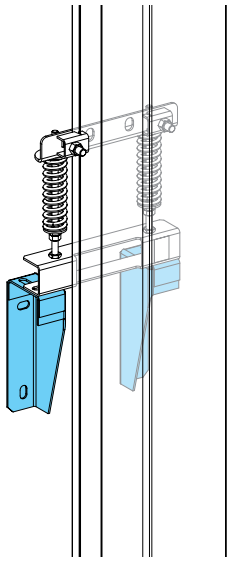
KTB0164ZA5●

DB428648

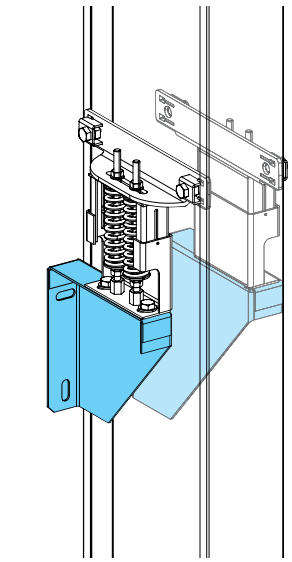


***(1)** Dimensions with free springs.*

DB428647



Wall bracket
KTB0164ZA52



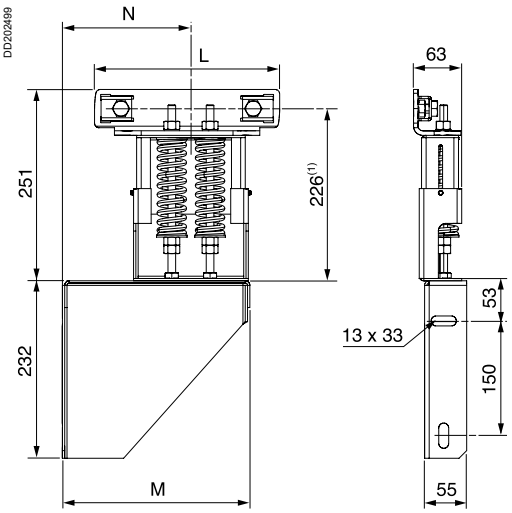
Wall bracket
KTB0204ZA52
to
KTB0404ZA52

Table of dimensions

Rating (A)	Dimensions "Y" (mm)
All	50 < Y < 100

KTB0204ZA5● to KTB0404ZA5●

DD202499



***(1)** Dimensions with free springs.*

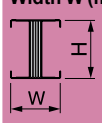
Table of dimensions

Rating (A)	Dimensions (mm)		
	L	M	N
2000	202	205	152 to 202
2500	240	245	172 to 222
3200	322	325	212 to 262
4000	402	325	252 to 302

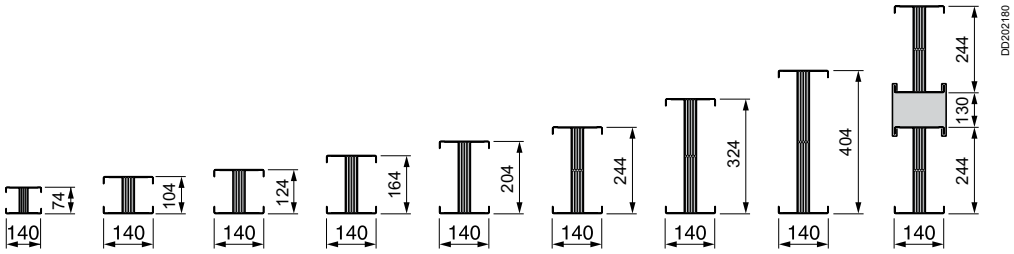
Trunking cross-section

Rating (A)	800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Height H (mm) Width W (mm)	74	104	124	164	204	244	324	404	244 / 130 / 244
	140	140	140	140	140	140	140	140	140

DD210867



DD202180

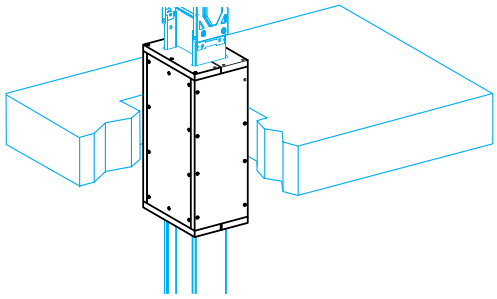


***(1) Important**: for the 800 A rating, indicate **"KTA0800"**.*

Canalis KTA 800 to 5000

CF - Fire-barrier

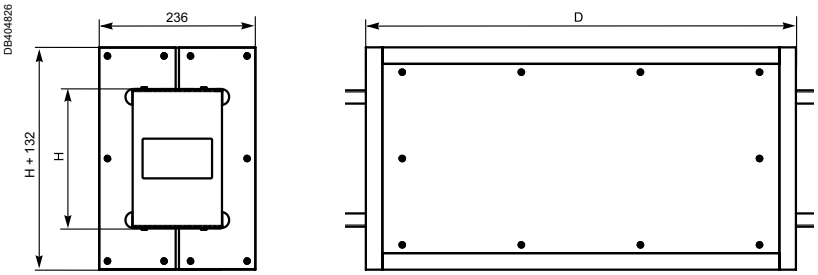
DB428863



Type	Busbar trunking rating (A)	Busbar trunking height "H" (mm)	Fire barrier length	Cat. no.
Fire-barrier kit	800	74	650	**KTB0074CF6**
	1000	104	650	**KTB0104CF6**
	1250	124	650	**KTB0124CF6**
	1600	164	650	**KTB0164CF6**
	2000	204	650	**KTB0204CF6**
	2500	244	650	**KTB0244CF6**
	3200	324	650	**KTB0324CF6**
	4000	404	650	**KTB0404CF6**
	5000	622	750	**KTB0622CF7** (1)

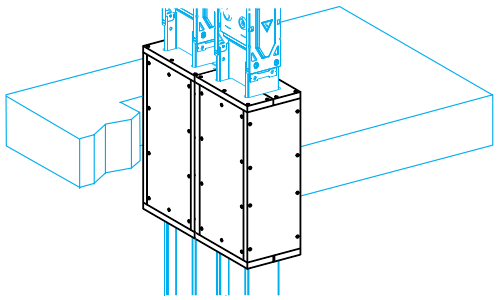
The filler material around the busbar trunking must meet the requirements currently in force to guarantee that the wall and ceiling fire-resistance class (for example DIN 1045 and DIN 1053-1) is maintained.
Filler material not supplied.
(1) *This reference includes a sealant cartridge KTB0000SC1.*

DB404826



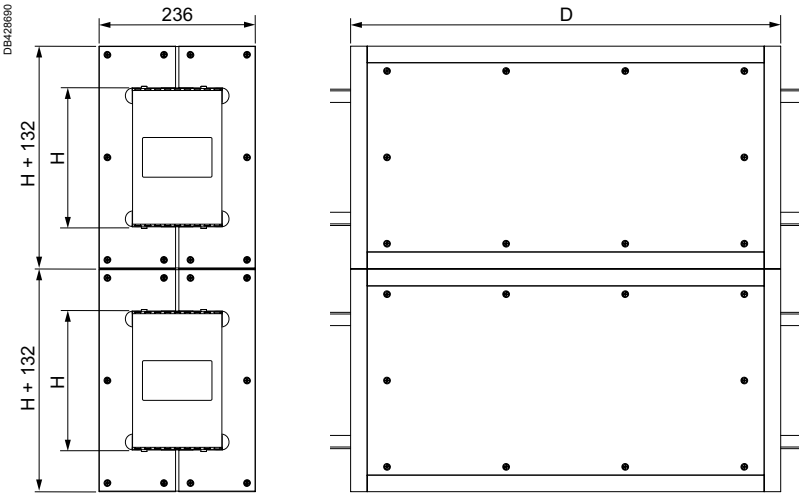
The fire barrier kit can also be made up on site by the installer according to Schneider Electric's drawings and specifications.
For further information, consult your sales office.

DB428689



KTB0622CF7

DB428690



SC - Fire-barrier sealant cartridge

DB429006

KTB0000SC1

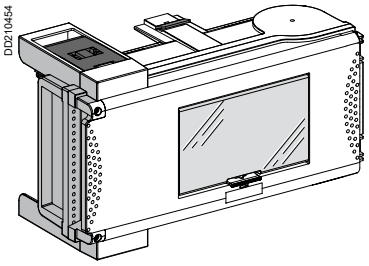
Type	Cat. no.
Fire-barrier sealant cartridge	**KTB0000SC1**

63 to 100 A tap-off units from Canalis KS range for modular devices

IP55

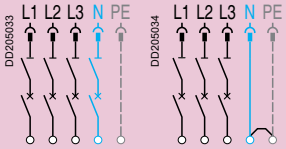
Tap-off units with isolator, not equipped

Disconnection by opening the tap-off unit cover



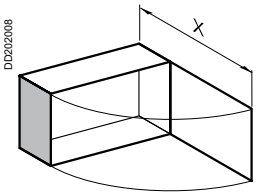
KSB63SM●8, KSB100SM●12

Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised.

System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1) TNC	
	Tap-off unit	TT-TNS-TNS-IT(1) TNC	
Tap-off polarity		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. circuit breaker protection)			

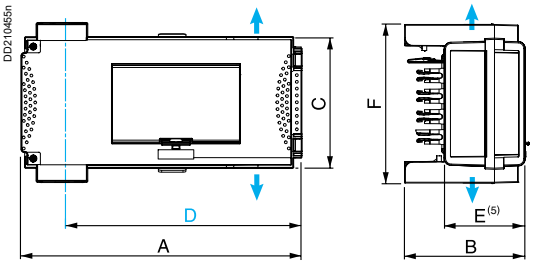
Rating (A)	Number of 18 mm modules(3)	Connection	Max. size (mm²) Flexible	Rigid	Cable gland (not supplied)	Cat. no.	Cat. no.	Weight (kg)
63	8	On devices	16	16	ISO 50 max.	**KSB63SM48**	**KSB63SM58**	2.40
100	12	On devices	35	35	ISO 63 max.	**KSB100SM412**	**KSB100SM512**	5.00

(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Supplied with blanking plates:1x5 divisible (8 modules) or 2x5 divisible (12 modules).*
(4) *Maximum diameter for a multipolar cable.*



X = 432.5 (KSB63SM●8)
X = 545.5 (KSB100SM●12)

KSB63SM●8, KSB100SM●12



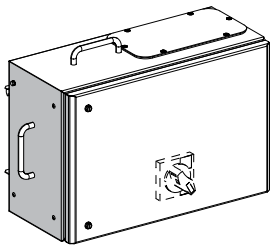
Cable exit
Centre line of tap-off outlets
(5) *Protruding*

Dimensions	Rating (A)	
	63	**100**
A	357	444
B	158	183
C	167	202
D	309	397
E	108	133
F	202	220

125 to 160 A tap-off units from Canalis KS range for modular devices
IP55

Tap-off units for NG modular devices, not equipped

DD202154



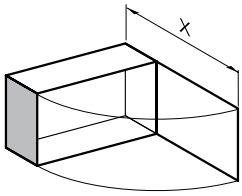
KSB160SM●13

The cover of the tap-off unit may be opened or closed only when the circuit breaker is in the Off position.

System earthing arrangement		Busbar trunking	TT-TNS-TNC-IT(1) TNC	
		Tap-off unit	TT-TNS-TNS-IT(1) TNC	
Tap-off polarity			3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. circuit breaker protection)			DD210452 L1 L2 L3 N PE	DD210452 L1 L2 L3 N PE

Rating (A)	Type of circuit-breaker	Connection	Max. size (mm²) Flexible	Rigid	Cable gland(3) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
160	NG125 Rotary handle 19088 (4) NG160 Rotary handle 28060 (4)	Terminals	50	70	ISO 25 max.	**KSB160SM413**	**KSB160SM513**	8.50

DD202008

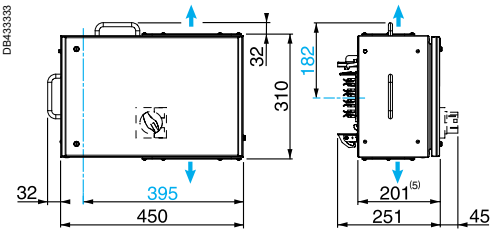


X = 625.5

(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Maximum diameter by unipolar cable.*
(4) *Not supplied.*

KSB160SM●13

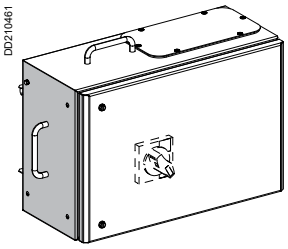
DB433333



Cable exit
Centre line of tap-off outlets
(5) *Protruding*

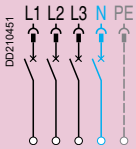
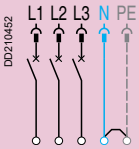
100 to 400 A tap-off units from Canalis KS range for Compact NSX circuit breakers
IP55

Tap-off units for Compact NSX, fixed, front-connected circuit breakers, not equipped



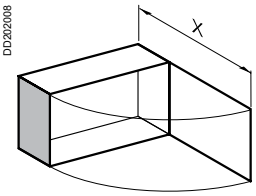
KSB●●●DC●

The cover of the tap-off unit may be opened or closed only when the circuit breaker is in the Off position.

System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1)	TNC
	Tap-off unit	TT-TNS-TNS-IT(1)	TNC
Tap-off polarity		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. circuit breaker protection)			

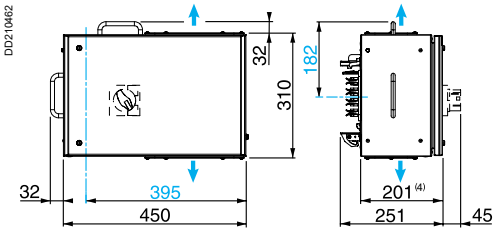
Rating (A)	Type of circuit breaker	Connection	Max. size (mm²) Flexible	Max. size (mm²) Rigid	Cable gland(3) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
160	NSX100 or NSX160 Rotary handle 29338	Terminals	50	70	ISO 25 max.	**KSB160DC4**	**KSB160DC5**	9.00
250	NSX250 Rotary handle 29338	Terminals	70	150	ISO 32 max.	**KSB250DC4**	**KSB250DC5**	12.50
400	NSX400 Rotary handle 32598	Terminals	150	240	ISO 40 max.	**KSB400DC4**	**KSB400DC5**	18.00

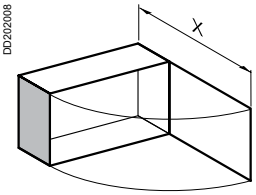
(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Maximum diameter by unipolar cable.*



X = 625.5

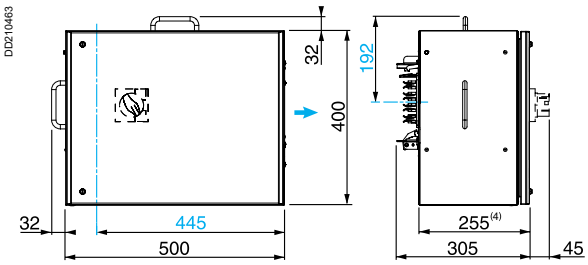
KSB160DC●

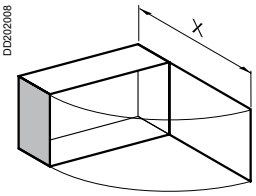




X = 726.5

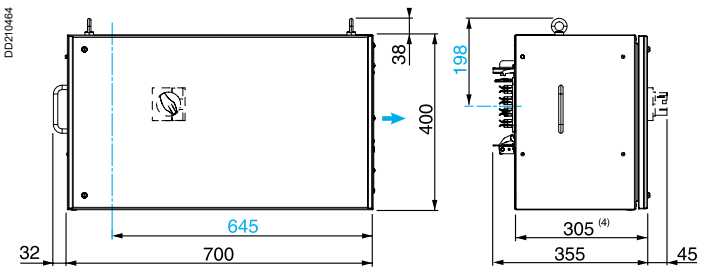
KSB250DC●





X = 976.5

KSB400DC●

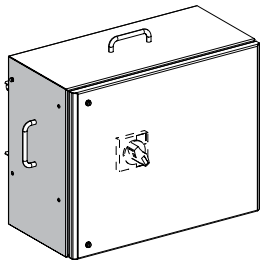


Cable exit
Centre line of tap-off outlets
(4) *Protruding*

250 to 400 A tap-off units from Canalis KS range for Compact NSX circuit breakers
IP55

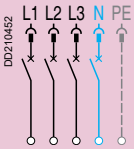
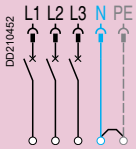
Tap-off units for measurements and metering, not eqquiped

DD210465



KSB●●●DC●TRE

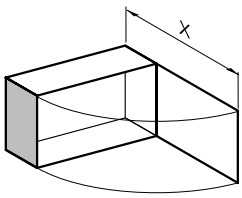
The cover of the tap-off unit may be opened or closed only when the circuit breaker is in the Off position.

System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1)	TNC
	Tap-off unit	TT-TNS-TNS-IT(1)	TNC
Tap-off outlets		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. circuit breaker protection)		DD210452 	DD210452 

Rating (A)	Type of circuit breaker	Connection	Max. size (mm^2) Flexible	Max. size (mm^2) Rigid	Cable gland(3) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
250	NSX250 Rotary handle 29338	Terminals	70	150	ISO 32 max.	**KSB250DC4TRE**	**KSB250DC5TRE**	13.50
400	NSX400 Rotary handle 32598	Terminals	150	240	ISO 40 max.	**KSB400DC4TRE**	**KSB400DC5TRE**	19.50

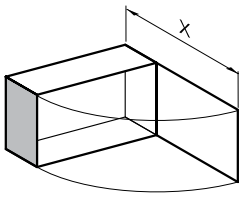
(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Maximum diameter by unipolar cable.*

DD202008



X = 726.5

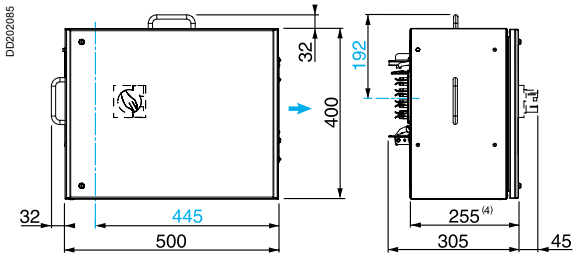
DD202008



X = 976.5

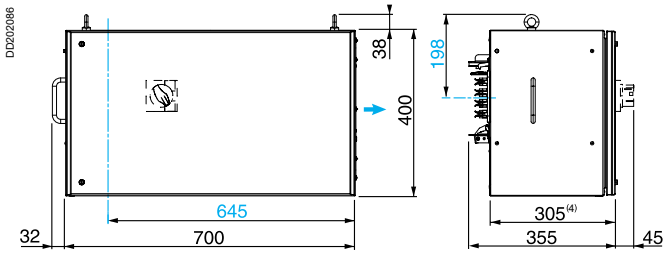
KSB250DC●TRE

DD202085



KSB400DC●TRE

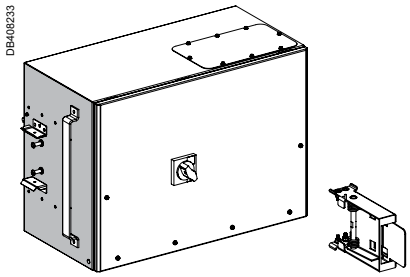
DD202086



Cable exit
Centre line of tap-off outlets
(4) *Protruding*

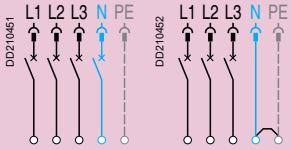
630 A tap-off units from Canalis KT range for Compact NSX circuit breakers
IP55

DC - Tap-off units for Compact NSX, fixed, front-connected circuit breakers, not equipped



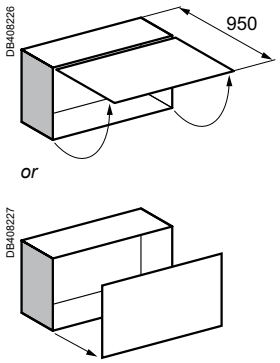
KTB0630DC●

Tap-off units to be installed on 2 meters elements, only on central outlet.
The cover of the tap-off unit may be opened or closed only when the circuit breaker is in the Off position.

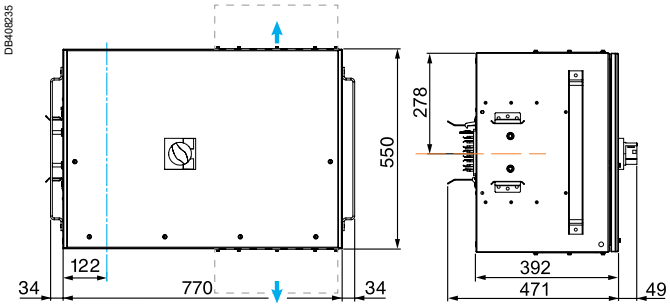
System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1)	TNC
	Tap-off unit	TT-TNS-TNS-IT(1)	TNC
Tap-off polarity		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. circuit breaker protection)			

Rating (A)	Type of circuit breaker	Connection	Max. size (mm²) L or N / PE	Cable gland(3) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
630(4)(6)	NSX630 Rotary handle 32598	Terminals	2 x 300 / 1 x 150	ISO 70 max.	**KTB0630DC4**		45
		Terminals	2 x 300 / 1 x 150	ISO 70 max.		**KTB0630DC5**	46

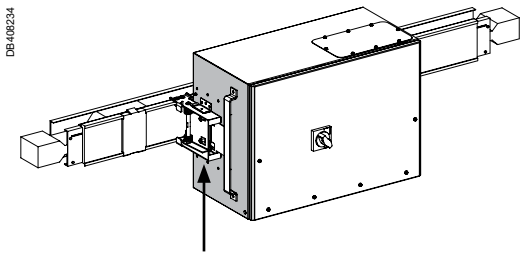
(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Maximum diameter by unipolar cable.*
(4) *De-rating cœfficient to apply: 0.9.*
(5) *The auto clamping system is included in the reference and delivered in the box.*
(6) *To be installed on KT ED type distribution length only.*
For an installation on Canalis KT delivered before 2016 contact our help desk.



KTB0630DC●

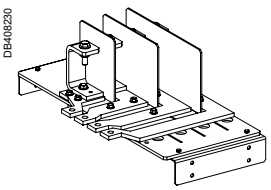


Cable exit
Center line of tap-off outlets
Axis of Canalis KT
Connection box to be fitted above or below

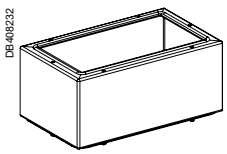


The auto clamping system has to be installed on the KT ED distribution units (5)

Option accessories	Cat. no.
Kit of connection bars	**KTB0630ZA01**
Connecting box	**KTB0630ZA04**



KTB0630ZA01

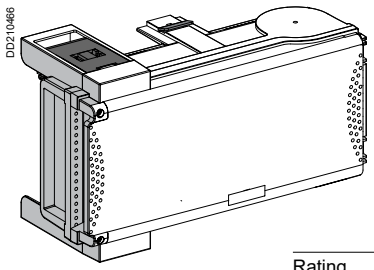


KTB0630ZA04

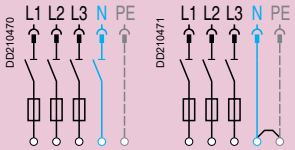
50 to 100 A tap-off units from Canalis KS range for NF fuses
IP55

Tap-off units with isolator for cylindrical fuses
Disconnection by opening the tap-off unit cover

Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised.

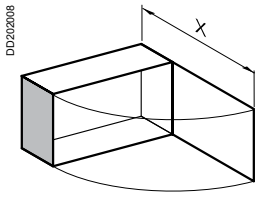


KSB●●●SF●

System earthing arrangement		Busbar trunking	TT-TNS-TNC-IT(1)	TNC
		Tap-off unit	TT-TNS-TNS-IT(1)	TNC
Tap-off polarity			3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. fuse protection)				

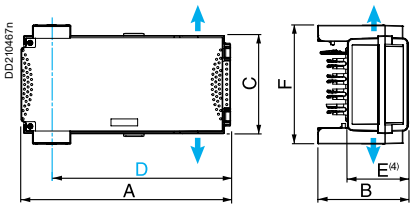
Rating (A)	For fuses (not supplied)	Connection	Max. size (mm²) Flexible	Rigid	Cable gland(3) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
50	NF 14 x 51 Type gG : 50 A max. Type aM : 50 A max.	Terminals	25	25	ISO 50 max.	**KSB50SF4**	**KSB50SF5**	2.40
100	NF 22 x 58 Type gG : 100 A max. Type aM : 100 A max.	Terminals	50	50	ISO 63 max.	**KSB100SF4**	**KSB100SF5**	5.00

(1) *The neutral must be not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible only if N not distributed).*
(3) *Maximum diameter for a multipolar cable.*



X = 432.5 (KSB50SF●)
X = 545.5 (KSB100SF●)

KSB50SF●, KSB100SF●



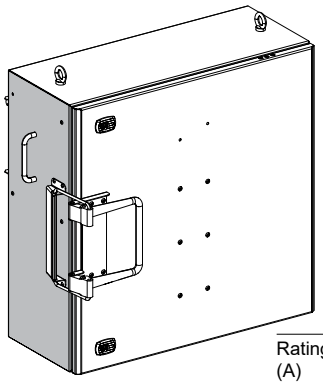
Cable exit
Centre line of tap-off outlets
(4) *Protruding*

Dimensions	Rating (A)	
	50	**100**
A	356	444
B	153	178
C	167	202
D	309	397
E	103	128
F	202	220

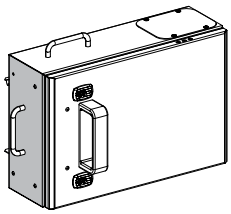
100 to 400 A tap-off units from Canalis KS range for NF fuses
IP55

Canalis KTA

Tap-off units with isolator for blade-type fuses
Disconnection by opening the tap-off unit cover

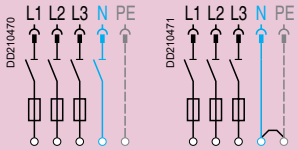


KSB400SE●



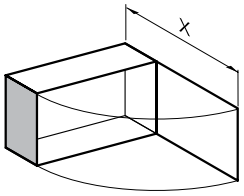
KSB160SE●
KSB250SE●

Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised. It is possible to install an OF contact triggered by cover opening (see the "Accessories" section, page 126).

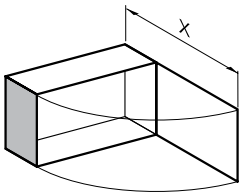
System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1)	TNC
	Tap-off unit	TT-TNS-TNS-IT(1)	TNC
Tap-off polarity		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. fuse protection)			

Rating (A)	For blade-type fuses (not supplied)	Connection	Max. size (mm²) Flexible	Max. size (mm²) Rigid	Cable gland (not supplied)	Cat. no.	Cat. no.	Weight (kg)
100	Size 00 Type gG : 100 A max. Type aM : 100 A max.	Terminals	50	50	ISO 63(3) max.	**KSB100SE4(5)**	**KSB100SE5(5)**	5.00
160	Size 00 Type gG : 160 A max. Type aM : 160 A max.	Terminals	35	50	ISO 20(4) max.	**KSB160SE4**	**KSB160SE5**	11.00
	Size 0 Type gG : 160 A max. Type aM : 160 A max.	Terminals	35	50	ISO 20(4) max.	**KSB160SF4**	**KSB160SF5**	11.00
250	Size 1 Type gG : 250 A max. Type aM : 250 A max.	Terminals	150	150	ISO 32(4) max.	**KSB250SE4**	**KSB250SE5**	20.00
400	Size 2 Type gG : 400 A max. Type aM : 400 A max.	Terminals	240	240	ISO 40(4) max.	**KSB400SE4**	**KSB400SE5**	29.20

(1) *The neutral must be not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible only if N not distributed).*
(3) *Maximum diameter for a unipolar cable.*
(4) *Cable gland for multipolar cable only.*
(5) *For 100A dimensions, see "Tap-off units with insulators for cylindrical fuses", page 119 cat. no. KSB100SF●.*

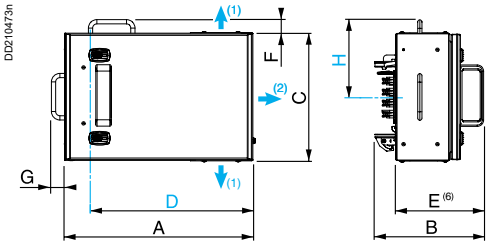


X = 577.5 (KSB160SE●)
X = 777 (KSB250SE●)



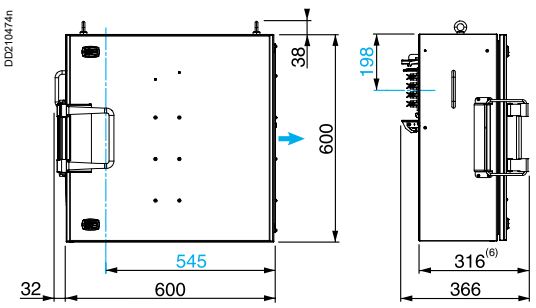
X = 855

KSB160SE●, KSB250SE●



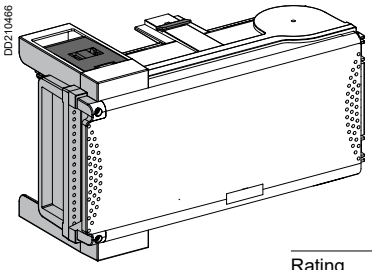
Dimensions	Rating (A) 160	250
A	450	600
B	257	308
C	300	400
D	395	548
E	207	258
F	32	32
G	32	32
H	182	192

KSB400SE●



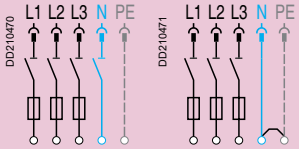
Cable exit: (1) exit of KSB160S●●, (2) exit of KSB250SE●
Centre line of tap-off outlets
(6) *Protruding*

Tap-off units with isolator for screw-type fuses
Disconnection by opening the tap-off unit covert



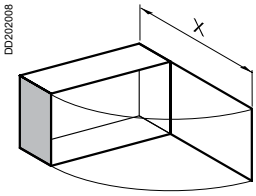
KSB●●S●●

Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised.

System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1)	TNC
	Tap-off unit	TT-TNS-TNS-IT(1)	TNC
Tap-off polarity		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. fuse protection)			

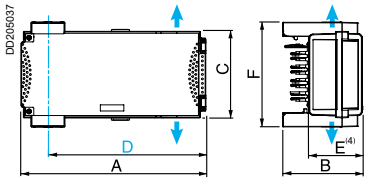
Rating (A)	For fuses (not supplied)	Connection	Max. size (mm²) Flexible	Rigid	Cable gland(3) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
25	Diazed E27	Terminals	25	25	ISO 50 max	**KSB25SD4**	**KSB25SD5**	2.40
50	Néozed E18	Terminals	25	25	ISO 50 max.	**KSB50SN4**	**KSB50SN5**	2.40
63	Diazed E33	Terminals	25	25	ISO 63 max.	**KSB63SD4**	**KSB63SD5**	2.40

(1) *The neutral must be not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible only if N not distributed).*
(3) *Maximum diameter for a multipolar cable.*



X = 432.5 (KSB25SD●, KSB50SN●)
X = 545.5 (KSB63SD●)

KSB●●S●●



→ *Cable exit*
Centre line of tap-off outlets
(4) *Protruding*

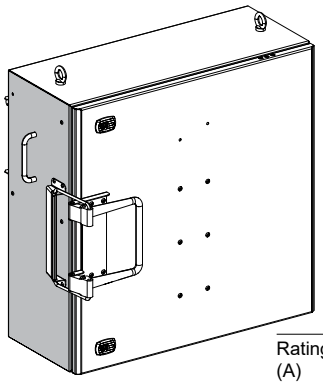
Dimensions	Rating (A)	
	25 and 50	**63**
A	356	444
B	153	178
C	167	202
D	309	397
E	103	198
F	202	220

100 to 400 A tap-off units from Canalis KS range for DIN fuses
IP55

Canalis KTA

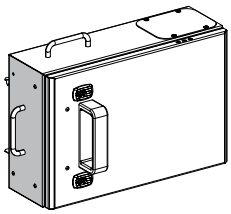
Tap-off units with isolator for blade-type fuses
Disconnection by opening the tap-off unit cover

DD202012



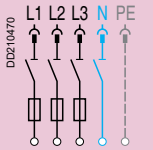
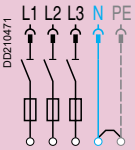
KSB400SE●

DD210472



KSB160SE●
KSB250SE●

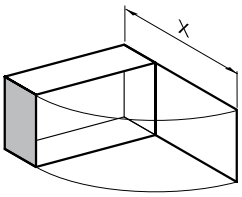
Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised. It is possible to install an OF contact triggered by cover opening (see the "Accessories" section, page 126).

System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1)	TNC
	Tap-off unit	TT-TNS-TNS-IT(1)	TNC
Tap-off polarity		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. fuse protection)		DD210470 	DD210471 

Rating (A)	For blade-type fuses (not supplied)	Connection	Max. size (mm²) Flexible	Max. size (mm²) Rigid	Cable gland (not supplied)	Cat. no.	Cat. no.	Weight (kg)
100	Size 00 Type gG : 100 A max. Type aM : 100 A max.	Terminals	50	50	ISO 63(3) max.	**KSB100SE4(5)**	**KSB100SE5(5)**	5.00
160	Size 00 Type gG : 160 A max. Type aM : 160 A max.	Terminals	35	50	ISO 20(4) max.	**KSB160SE4**	**KSB160SE5**	11.00
250	Size 1 Type gG : 250 A max. Type aM : 250 A max.	Terminals	150	150	ISO 32(4) max.	**KSB250SE4**	**KSB250SE5**	20.00
400	Size 2 Type gG : 400 A max. Type aM : 400 A max.	Terminals	240	240	ISO 40(4) max.	**KSB400SE4**	**KSB400SE5**	29.20

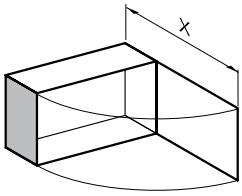
(1) *The neutral must be not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible only if N not distributed).*
(3) *Maximum diameter for a unipolar cable.*
(4) *Cable gland for multipolar cable only.*
(5) *For 100 A dimensions, see "Tap-off units with insulators for cylindrical fuses", page 119 cat. no. KSB100SF●.*

DD202008



X = 577.5 (KSB160SE●)
X = 777 (KSB250SE●)

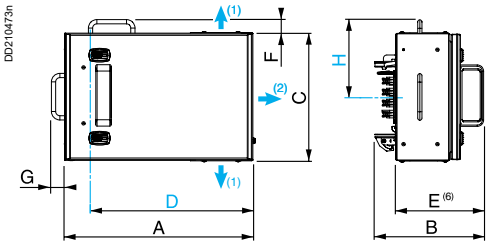
DD202008



X = 855

KSB160SE●, KSB250SE●

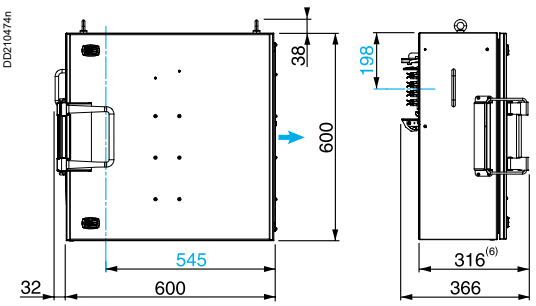
DD210473n



Dimensions	Rating (A) 160	250
A	450	600
B	257	308
C	300	400
D	395	548
E	207	258
F	32	32
G	32	32
H	182	192

KSB400SE●

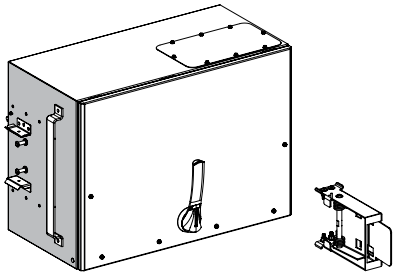
DD210474n



Cable exit : (1) exit of KSB160S●●, (2) exit of KSB250SE●
Centre line of tap-off outlets
(6) *Protruding*

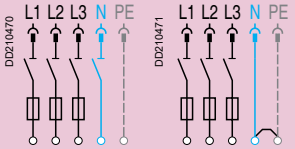
630 A tap-off units from Canalis KT range with switch-disconnector for DIN fuses
IP55

SD - Tap-off units with switch-disconnector



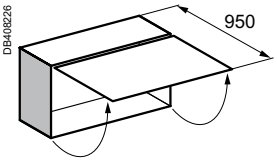
KTB0630SD●

Tap-off units to be installed on 2 meters elements, only on central outlet.
The cover of the tap-off unit may be opened or closed only when the switch-disconnector is in the Off position.

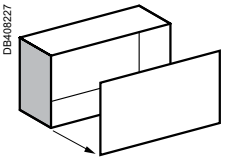
System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1) TNC	
	Tap-off unit	TT-TNS-TNS-IT(1) TNC	
Tap-off polarity		3L + N + PE(2)	3L + PEN
Tap-off diagram (e.g. fuse protection)			

Rating (A)	Type of fuses	Connection	Max. size (mm²) L or N / PE	Cable gland(3) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
630(4)(6)	DIN size 3	Terminals	2 x 300 / 1 x 150	ISO 70 max.	**KTB0630SD4**		64
		Terminals	2 x 300 / 1 x 150	ISO 70 max.		**KTB0630SD5**	68

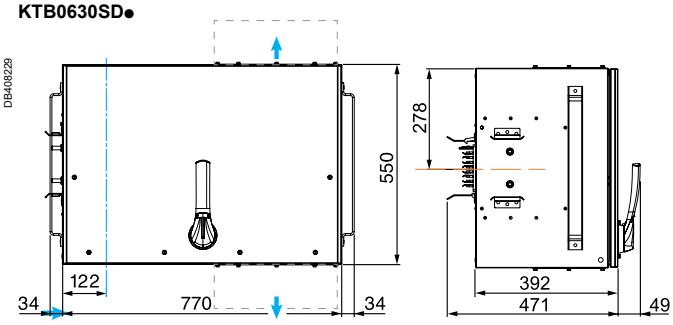
(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Maximum diameter by unipolar cable.*
(4) *De-rating cœfficient to apply: 0.87.*
(5) *The auto clamping system is included in the reference and delivered in the box.*
(6) *To be installed on KT ED type distribution length only.*
For an installation on Canalis KT delivered before 2016 contact our help desk.



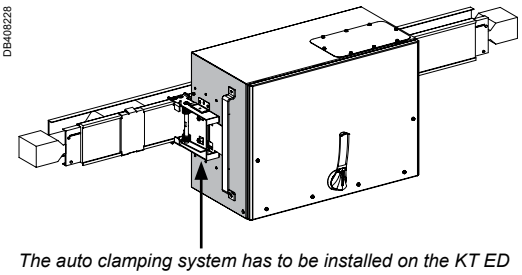
or



KTB0630SD●

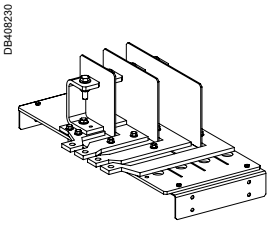


Cable exit
Center line of tap-off outlets
Axis of Canalis KT
Connection box to be fitted above or below

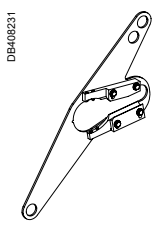


The auto clamping system has to be installed on the KT ED distribution units (5)

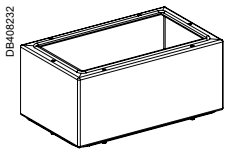
Option accessories	Cat. no.
Kit of connection bars	**KTB0630ZA02**
Extension rotary handle	**KTB0630ZA03**
Connecting box	**KTB0630ZA04**



KTB0630ZA02



KTB0630ZA03

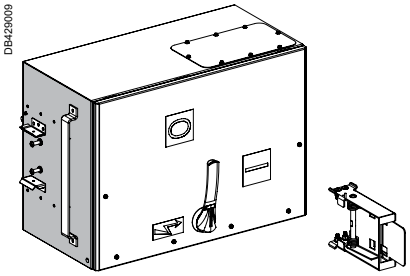


KTB0630ZA04

630 A tap-off units from Canalis KT range with switch-disconnector for DIN fuses

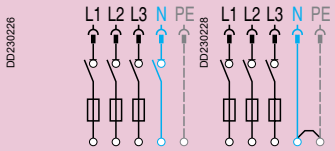
IP55

SE - Tap-off units with switch-disconnector internal arc tested IEC 61-641



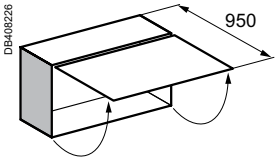
KTB0630SE●

Tap-off units to be installed on 2 meters elements, only on central outlet.
The cover of the tap-off unit may be opened or closed only when the switch-disconnector is in the Off position.
To be installed on KT ED type distribution length only.

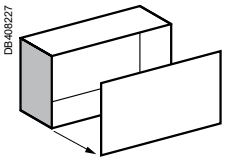
System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT[1] TNC	
	Tap-off unit	TT-TNS-TNS-IT[1] TNC	
Tap-off polarity		3L + N + PE[2]	3L + PEN
Tap-off diagram (e.g. fuse protection)			

Rating (A)	Type of fuses	Connection	Max. size (mm²) L or N / PE (kg)	Cable gland[3] (not supplied)	Cable exit side	Cat. no.	Cat. no.	Weight (kg)
630[4]	DIN size 3	Terminals	2 x 300 / 1 x 150	ISO 70 max.	Right	**KTB0630SE4R**		72
					Left	**KTB0630SE4L**		72
					Right		**KTB0630SE5R**	78
					Left		**KTB0630SE5L**	78

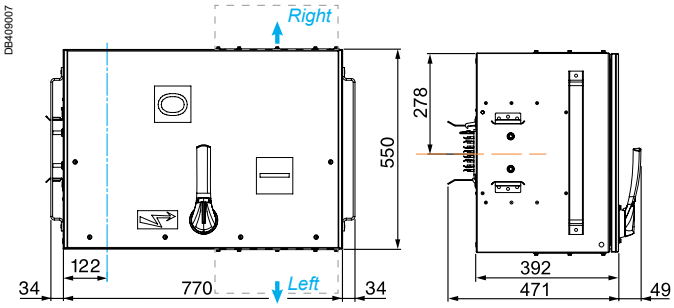
(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Maximum diameter by unipolar cable.*
(4) *De-rating coefficient to apply: 0.87.*
(5) *The auto clamping system and the kit of connection bars are included in the reference and delivered in the box.*
For an installation on Canalis KT delivered before 2016 contact our help desk.



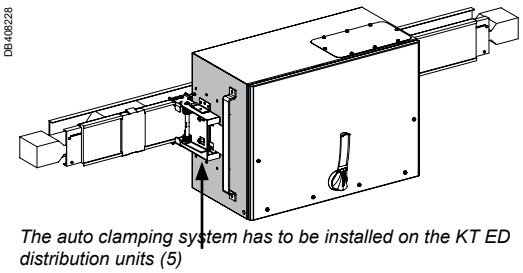
or



KTB0630SE●

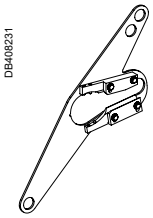


Cable exit
Center line of tap-off outlets
Axis of Canalis KT
Connection box to be fitted above or below

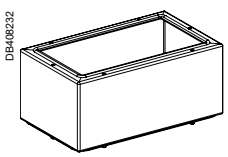


The auto clamping system has to be installed on the KT ED distribution units (5)

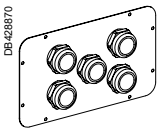
Option accessories	Cat. no.
Extension rotary handle	**KTB0630ZA03**
Connecting box	**KTB0630ZA04**
Plate with 5 cable glands 24 to 40 mm	**KTB0000GP01**
Plate with 1 cable clamp 30 to 70 mm	**KTB0000GP02**
Plate with 2 cable clamps 30 to 70 mm	**KTB0000GP03**



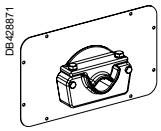
KTB0630ZA03



KTB0630ZA04



KTB0000GP01



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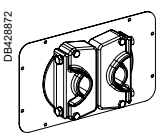
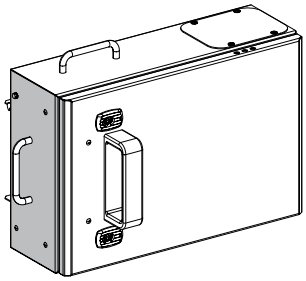


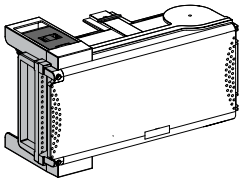
KTB0000GP03

32 to 160 A tap-off units from Canalis KS range for BS fuses
IP55

Tap-off units for screw-mounted fuses
Disconnection by unplugging the tap-off unit

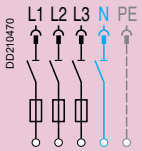


KSB160SG4



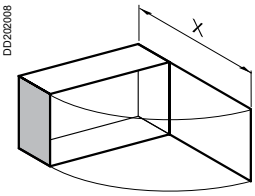
KSB●●SG4

Tap-off units to be installed on 2 meters elements, only on central outlet.
Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised.

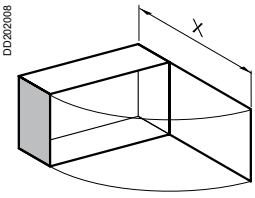
System earthing arrangement	Busbar trunking	TT-TNS-TNC-IT(1)
	Tap-off unit	TT-TNS-TNS-IT(1)
Tap-off polarity		3L + N + PE(2)
Tap-off diagram (e.g. fuse protection)		

Rating (A)	For fuses (not supplied)	Connection	Max. size (mm²) Cable gland (not supplied)			Cat. no.	Weight (kg)
			Flexible	Rigid			
32	BS88 A1	Terminals	25	25	ISO 50(3) max	**KSB32SG4**	2.40
80	BS88 A1 or A3	Terminals	35	50	ISO 63(3) max or ISO 20(4) max	**KSB80SG4**	5.00
160	BS88 B1 or B2	Terminals	35	50	ISO 20(4) max	**KSB160SG4**	11.00

(1) *The neutral must be not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed).*
(3) *Maximum diameter for a multipolar cable.*
(4) *Maximum diameter for a unipolar cable.*

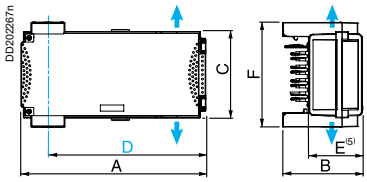


X = 432.5 (KSB32SG4)
X = 545.5 (KSB80SG4)



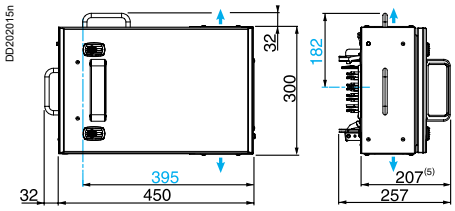
X = 577.5

KSB32SG4, KSB80SG4



Dimensions	Rating (A)	
	32	80
A	356	444
B	153	178
C	167	202
D	309	397
E	103	128
F	202	220

KSB160SG4



Cable exit
Centre line of tap-off outlets
(5) *Protruding*

Accessories for tap-off units from Canalis KS range
IP55

Canalis KTA

Accessories for all tap-off units for modular devices

Designation	Description	Cat. no.	Weight (kg)
Modular blanking plate	Divisible set of 10 x 5	**13940**	0.08
Adhesive label(1)	Set of 12 label-holders (H = 24 mm, W = 180 mm)	**08905**	-
	Set of 12 labels (H = 24 mm, W = 432 mm)	**08903**	-
	Set of 12 divisible labels (H = 24 mm, W = 650 mm)	**08907**	-

(1) *Self-adhesive support complete with transparent cover and paper label.*

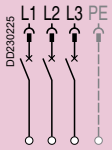
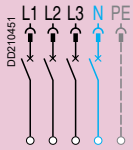
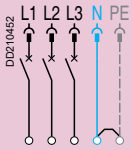
Accessories for all sheet-metal tap-off units

Designation	For tap-off unit	Order in multiples of	Cat. no.	Weight (kg)
Cover contact (break before opening)	KSB100S● to KSB400S●	1	**KSB400ZC1**	0.03

Bolted tap-off units from Canalis KT for Compact NSX/NS 400 to 1250 A circuit breakers

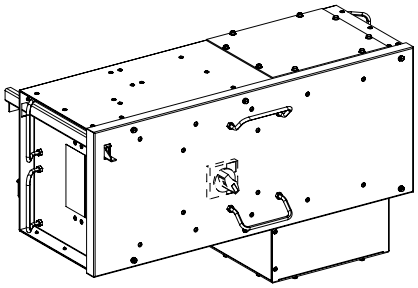
IP54

CB - Bolted tap-off units for Compact NSX/NS with front connections[1]

		Tap-off polarity		3L + PE	3L + N + PE 3L + N + PER	3L + PEN	
		Tap-off diagram (e.g. circuit breaker protection)					
Rating (A)	Type of circuit breaker[2]	Max. connection capacity (mm²)		Cat. no.			Weight (kg)
		Phases and neutral	PE				
400 to 630	NSX400 or NSX630[3] Rotary handle 32598	3 x 300	150	KTB0630CB3	KTB0630CB4	KTB0630CB5	35.00
800 to 1000	NS800 or NS1000[4] Rotary handle 33878	4 x 300	200	KTB1000CB3	KTB1000CB4	KTB1000CB5	45.00
1250[5]	NS1250 Rotary handle 33878	4 x 300	240	KTB1250CB3	KTB1250CB4	KTB1250CB5	50.00

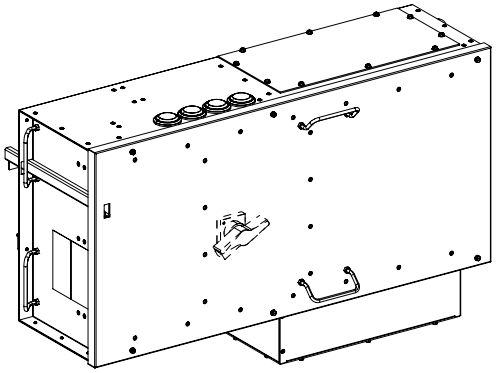
(1) Installation KTA●●●●EB●●● bolted section only.
(2) Circuit breaker and rotary handle not supplied.
(3) De-rating cœfficient to apply on NSX630A : 0,94.
*(4) It is recommended a derating factor of 0.93 be applied when using a Compact NS1000 **type L** circuit breaker.*
(5) IP31 only.

DD202451



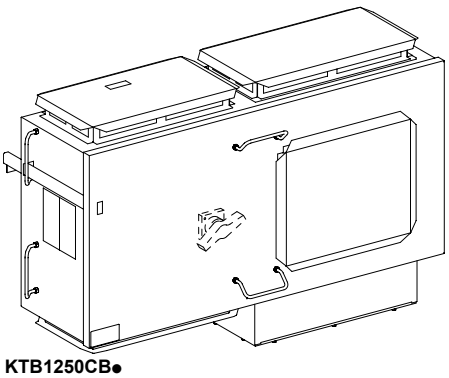
KTB0630CB●

DD202497



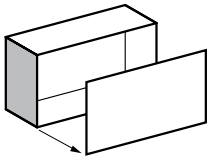
KTB1000CB●

DD230206

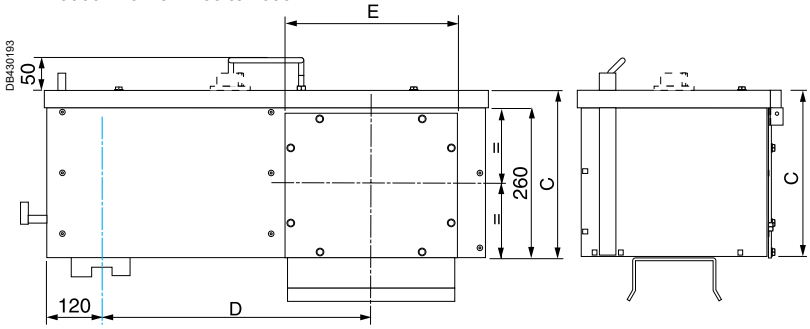


KTB1250CB●

DD210880



KTB●●●●CB● from 400 to 1000 A



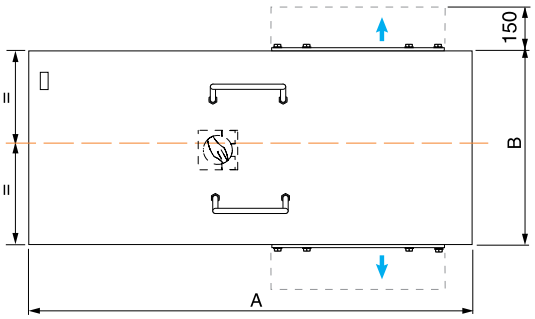
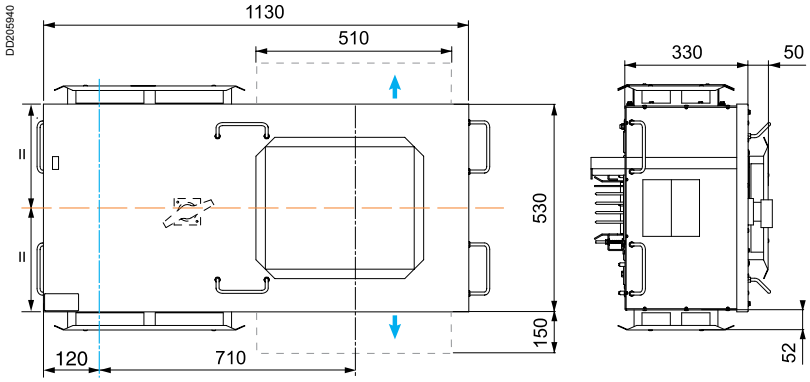


Table of dimensions

Dim.	Rating (A)	
	400 to 630	800 to 1000
A	860	1130
B	350	550
C	300	330
D	547	710
E	315	510

From 1250 A

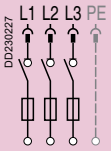
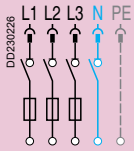
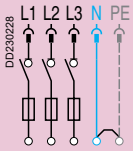


Cable exit
Center line of tap-off outlets
Axis of Canalis KT
Connection box to be fitted above or below

630 and 1000 A bolted tap-off units with switch-disconnectors for DIN fuses

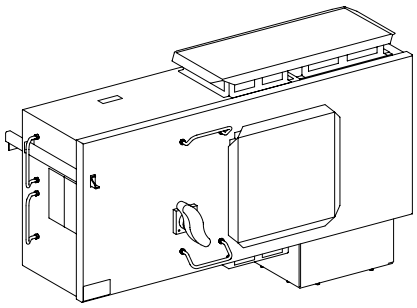
IP31

HF - Bolted tap-off units with switch-disconnectors(1)

		Tap-off polarity		3L + PE	3L + N + PE 3L + N + PER	3L + PEN	
		Tap-off diagram (e.g. circuit breaker protection)					
Rating (A)	DIN fuse size (not supplied)(2)	Max. connection capacity (mm^2)		Cat. no.			Weight (kg)
		Phases and neutral	PE				
630(3)	T3	3 x 300	150	**KTB0630HF3**	**KTB0630HF4**	**KTB0630HF5**	54.00
1000(3)(4)	T4	4 x 300	200	**KTB1000HF3**	**KTB1000HF4**	**KTB1000HF5**	96.00

(1) *Installation KTA●●●●EB●●● bolted section only.*
(2) *Switch-disconnectors and rotary handle* ***supplied****.*
(3) *Derating coefficient to apply:0.8.*
(4) *KTB1000HF● cannot be installed on EB straight lengths.*

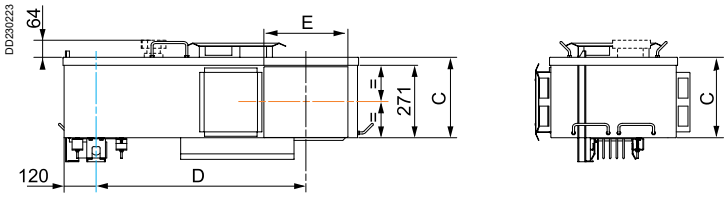
DD230200



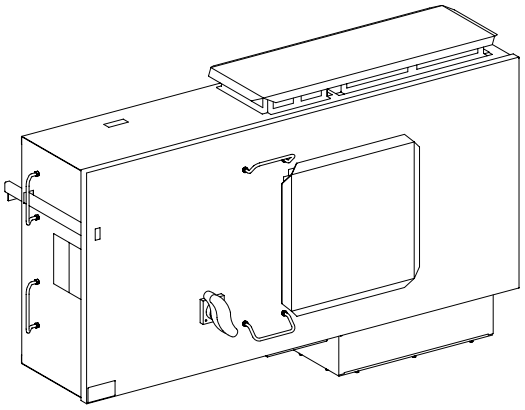
KTB0630HF●

KTB●●●●HF●

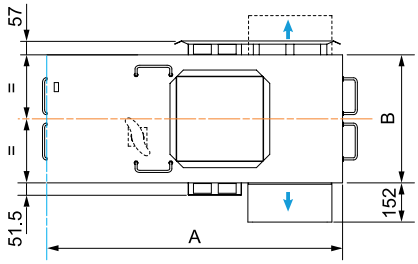
DD230223



DD230203



KTB1000HF●



DD210880

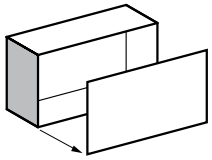


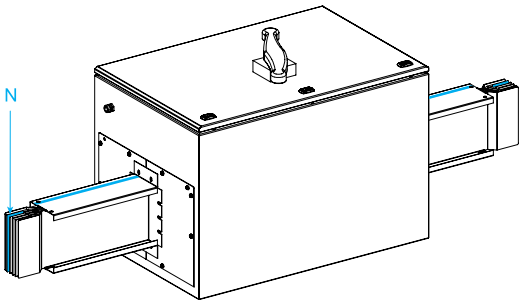
Table of dimensions

Dim.	Rating (A)	
	630	**1000**
A	1108	1438
B	480	690
C	300	330
D	786.5	1010
E	315	510

Cable exit
Center line of tap-off outlets
Axis of Canalis KT
Connection box to be fitted above or below

Coupling isolators from 1000 to 2500 A
IP55

SL - Compact NS type NA coupling isolators

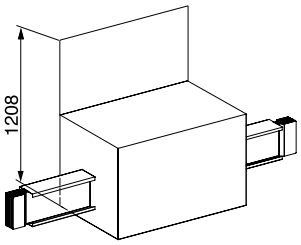


Fits equally on ducting in a flat position, on the edge (door accessible from above or below) or vertically.
Tap-off unit door locking is achieved using a door key lock.

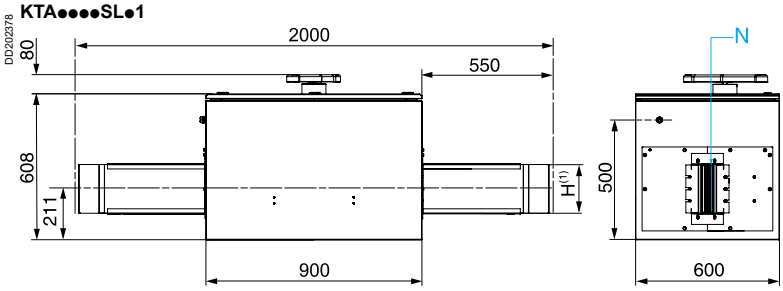
Rating (A)	Type of isolator (supplied)	Cat. no.			Weight (kg)
		3L + PE	3L + N + PE	3L + N + PER(1)	
1000	NS1000 NA	**KTA1000SL31**	**KTA1000SL41**	**KTA1000SL51**	135.00
1250	NS1250 NA	**KTA1250SL31**	**KTA1250SL41**	**KTA1250SL51**	140.00
1600	NS1600 NA	**KTA1600SL31**	**KTA1600SL41**	**KTA1600SL51**	150.00

(1) To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●SL51 by KTA●●●●SL71.

KTA●●●●SL●1

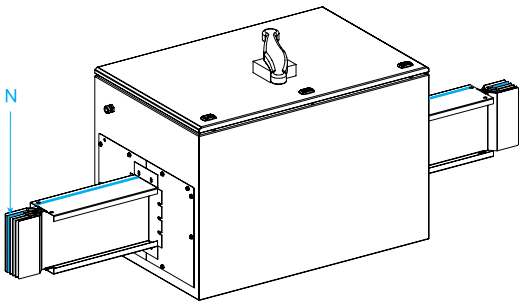


KTA●●●●SL●1



(1) See the "Trunking cross-section" table below.

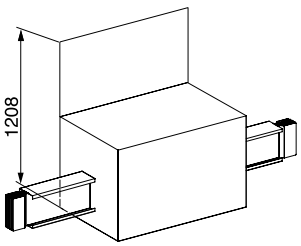
SL - Interpact INV coupling isolators



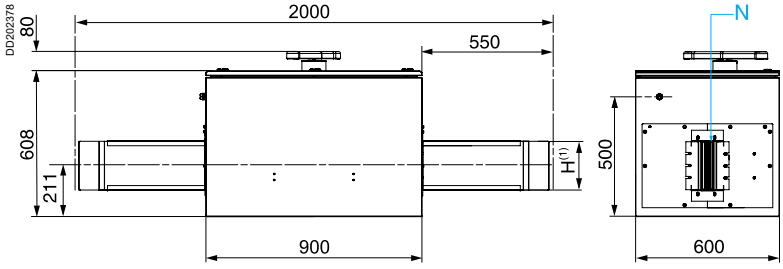
Fits equally on ducting in a flat position, on the edge or vertically.
Tap-off unit door locking is achieved using a door key lock.

Rating (A)	Type of isolator (supplied)	Cat. no.			Weight (kg)
		3L + PE	3L + N + PE	3L + N + PER	
2000	INV2000	**KTA2000SL31**	**KTA2000SL41**	**KTA2000SL51**	170.00
2500	INV2500	**KTA2500SL31**	**KTA2500SL41**	**KTA2500SL51**	180.00

KTA●●●●SL●1



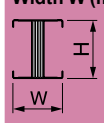
KTA●●●●SL●1

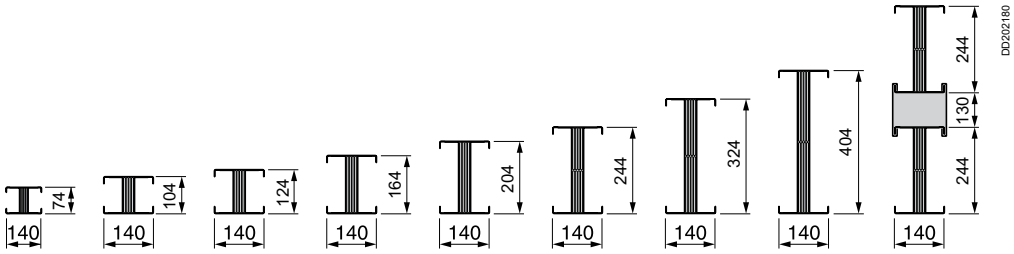


(1) See the "Trunking cross-section" table below.

Trunking cross-section

Rating (A)	800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Height H (mm) Width W (mm)	74	104	124	164	204	244	324	404	244 130 244
	140	140	140	140	140	140	140	140	140





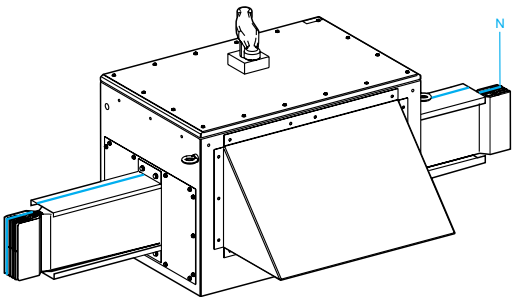
***(1) Important**: for the 800 A rating, indicate **"KTA0800"**.*

2500 A internal arcing resistant coupling isolator
IP55

Canalis KTA

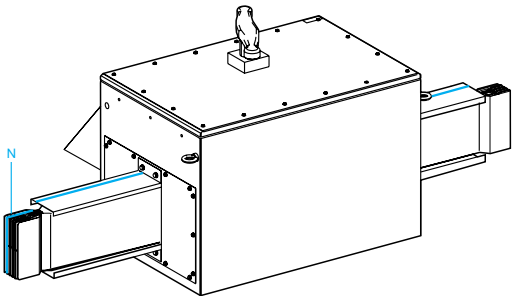
RL - Coupling isolator with Interpact INV

DB402026



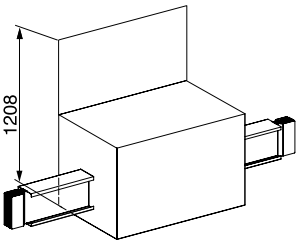
KTA2500RL61, KTA2500RL71

DB401409



KTA2500RL62, KTA2500RL72

DD202381

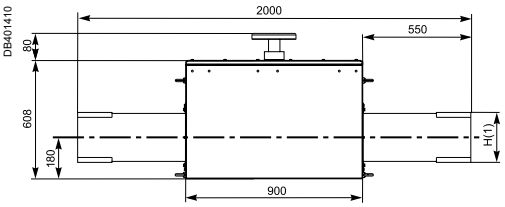


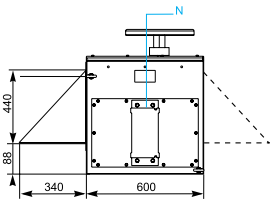
To be installed edgeways on busbar trunking, door accessible from above or below.
The enclosure door is fitted with a key lock.

Rating (A)	Type of switch (supplied)	Cat. no.		Weight (kg)
		3L + N + PE	3L + N + PER	
2500	INV 2500 right	**KTA2500RL61**	**KTA2500RL71**	300.00
2500	INV 2500 left	**KTA2500RL62**	**KTA2500RL72**	300.00

This unit has a short circuit withstand Icw = 110 kA 0.1 s and an internal arcing withstand for 110 kA 0.3 s.
The coupling device can support only one closure at 80 kA.
Switchdisconnector inside: Interpact INV ref: 31368 for 3P+PEN, ref:31369 for 3P+N+PER

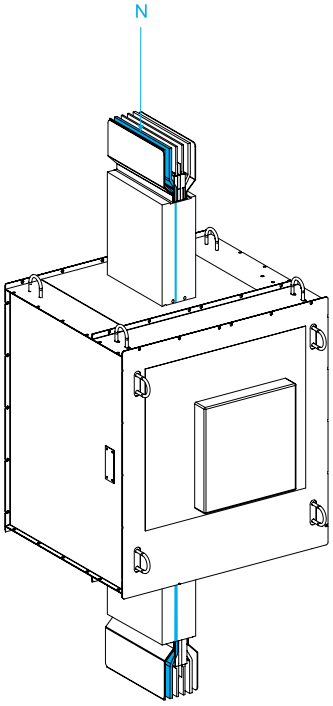
DB401410





SL - Masterpact NW coupling isolators

DD205941



KTA3200SL●1

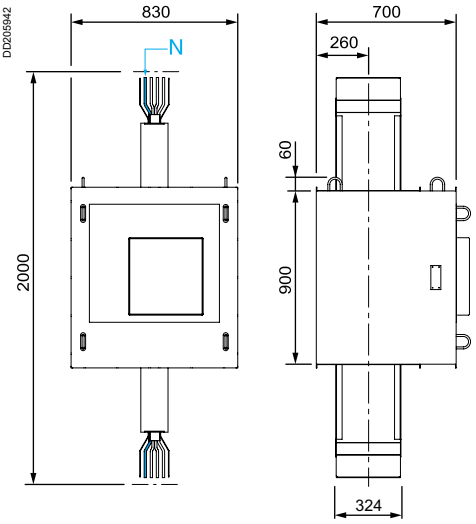
Notice: If the coupling isolator is installed on a **horizontal** busbar trunking the device must be only used as a disconnector and without any accessories (MX, XF, Motor MCH...).

Rating (A)	Type of isolator (supplied)	Cat. no.			Weight (kg)
		3L + PE	3L + N + PE	3L + N + PER[1]	
3000[2]	NW3200 HA	**KTA3200SL31**	**KTA3200SL41**	**KTA3200SL51**	320.00

(1) *To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●SL51 by KTA●●●●SL71.*
(2) *The use of this coupling isolator requires derating the busway run to 3000 A.*

KTA3200SL●1

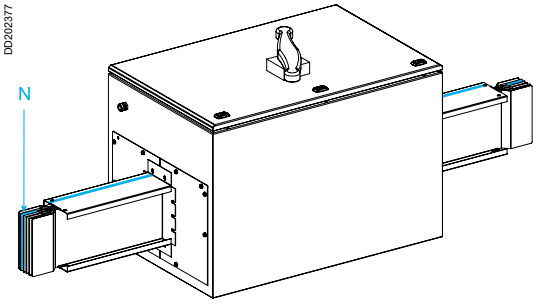
DD205942



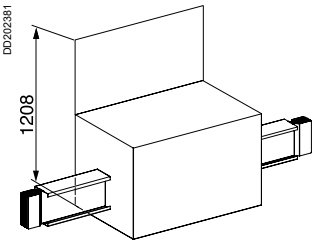
Protection of the run using Compact NS circuit breakers from 1000 à 1600 A

IP55

PL - Protection of the run using Compact NS circuit breakers



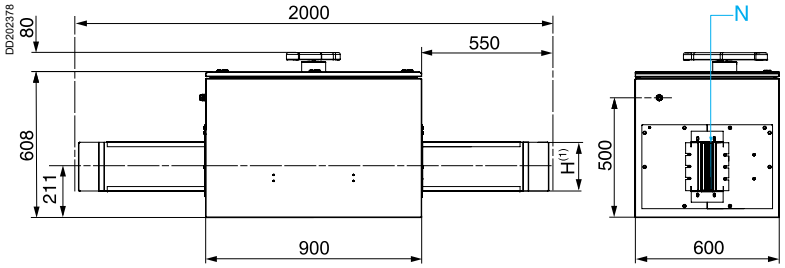
KTA●●●●PL●1



Fits equally on ducting in a flat position, on the edge or vertically.
Tap-off unit door locking is achieved using a door key lock.

Rating (A)	Type of isolator [2] (supplied)	Cat. no.			Weight (kg)
		3L + PE	3L + N + PE	3L + N + PER[3]	
1000	NS1000 N	**KTA1000PL31**	**KTA1000PL41**	**KTA1000PL51**	135.00
1250	NS1250 N	**KTA1250PL31**	**KTA1250PL41**	**KTA1250PL51**	140.00
1600	NS1600 N	**KTA1600PL31**	**KTA1600PL41**	**KTA1600PL51**	150.00

KTA●●●●PL●1



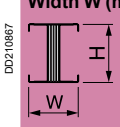
(1) *See the "Trunking cross-section" table below.*
(2) *Manual fixed compact NS circuit breakers type N equipped with a Micrologic 2.0 control unit.*
(3) *To order the 3L+N+PER version with reinforced Isc, replace KTA●●●●PL51 by KTA●●●●PL71.*

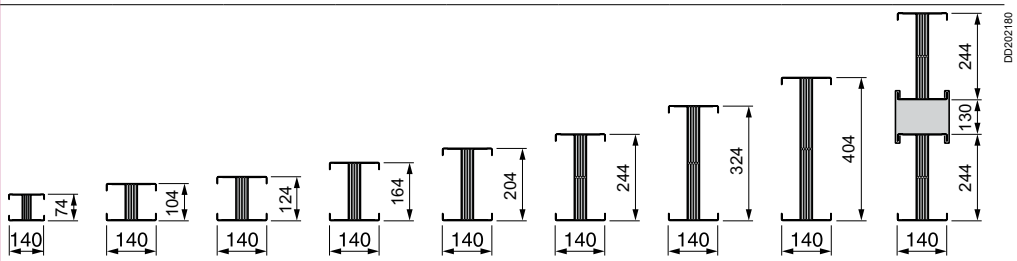
Protection of a run > 1600 A

To install protection of a run > 1600 A, consult your sales office.

Trunking cross-section

Rating (A)	800[1]	1000	1250	1600	2000	2500	3200	4000	5000
Height H (mm) Width W (mm)	74	104	124	164	204	244	324	404	244 / 130 / 244
	140	140	140	140	140	140	140	140	140





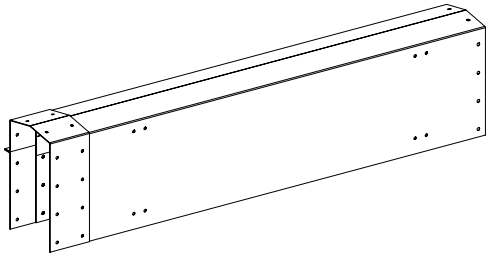
(1) ***Important****: for the 800 A rating, indicate* ***"KTA0800"****.*

Special products

For further information about the use and the dimensions, consult your sales office.

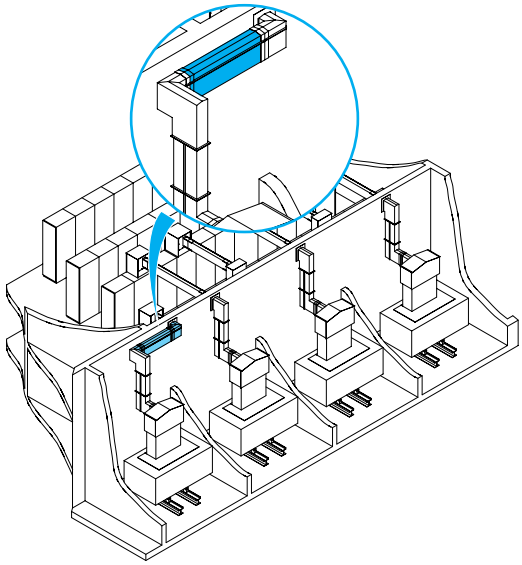
Double skin aluminium enclosure

DD210884



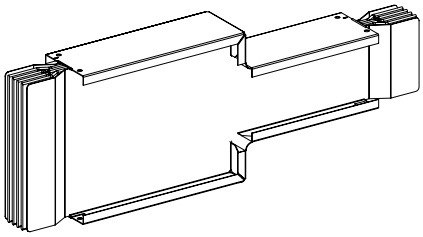
For outdoor applications.

DD205943



Reduction sections

DD210883



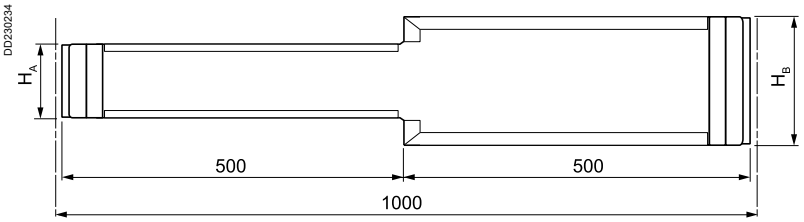
For reducing busbar trunking ratings.
NOTE: must be used in conjunction with appropriate protection.

Table of sizes

H_A	H_B							
	74	104	124	164	204	244	324	404
74								
104								
124								
164								
204								
244								
324								
404								

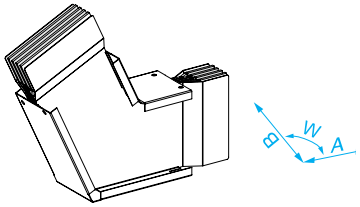
Available.

DD230234



Edgewise elbow with made to measure angles

DD205944

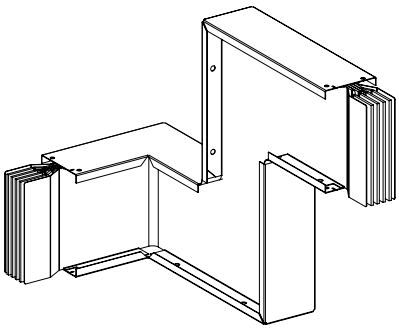


Special products

Canalis KTA

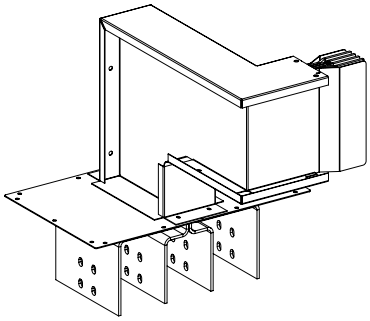
4-limb zed unit

DD210885



Edgewise/flat elbow feed unit

DD210881



On demand

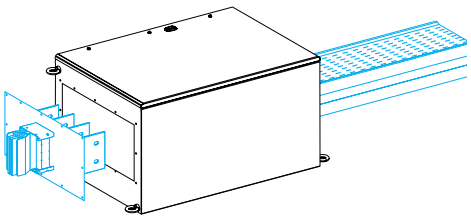
- Surface treatment on conductors for corrosive atmospheres.
- Special colours.
- Seaworthy packaging.
- etc.

Canalis KH substitution by Canalis KT

KTA/KHF connection elements

Canalis KTA or KHF

HT - Connection elements



KTB0●●●HT0●

Ratings (A)	Cat. no.			
	3L + PE	3L + N + PE	3L + N + PER	Weight (kg)
See the table below	KTB0350HT01	KTB0350HT01	KTB0350HT01	63.00
	KTB0350HT02	KTB0350HT02	KTB0350HT02	80.00
	-	-	KTB0350HT12	80.00
	KTB0510HT01	KTB0510HT01	KTB0510HT01	88.00
	KTB0510HT02	KTB0510HT02	KTB0510HT02	127.00
	KTB0510HT03	KTB0510HT03	KTB0510HT03	137.00
	-	-	KTB0510HT11	88.00

End feed units (J, K, M = 115) are not included in the reference and must be ordered separately

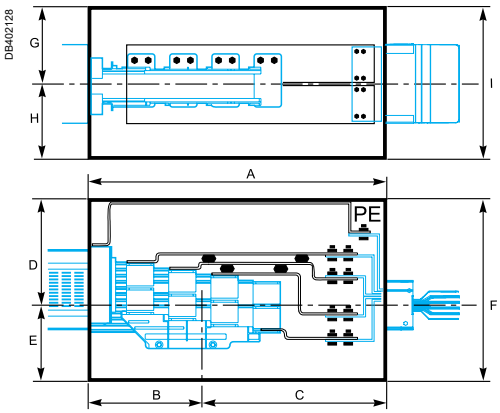
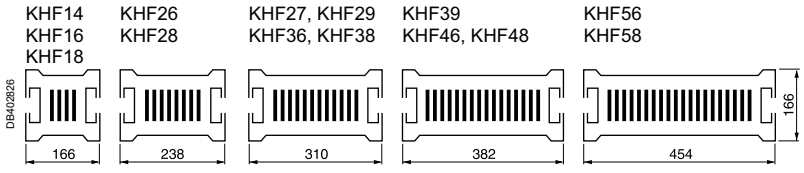


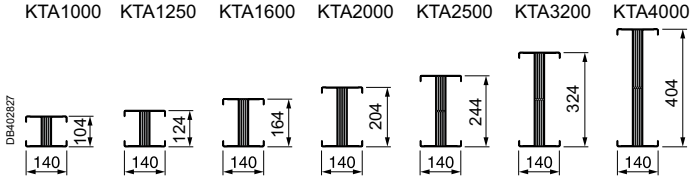
Table of dimensions

	A	B	C	D	E	F	G	H	I
KTB0350HT01	850	331.5	518.5	300	300	600	258	208	466
KTB0350HT02	850	331.5	518.5	300	300	600	258	208	466
KTB0350HT12	850	331.5	518.5	300	300	600	258	208	466
KTB0510HT01	890	310	580	300	300	600	329	306	635
KTB0510HT02	890	310	580	300	300	600	329	306	635
KTB0510HT03	890	310	580	300	300	600	329	306	635
KTB0510HT11	890	310	580	300	300	600	329	306	635

KHF type	Rating	L busway	KT type	Rating	H busway	H flange	Connection ref.
KHF14	1000	166	**KTA1000**	1000	104	230	
KHF16	1200	166	**KTA1250**	1250	124	230	**KTB0350HT01**
KHF18	1450	166	**KTA1600**	1600	164	350	
KHF26	2200	238	**KTA2500**	2500	244	350	**KTB0350HT02**
KHF28	2500	238	**KTA2500**	2500	244	350	
KHF27	2200	310	**KTA2500**	2500	244	350	**KTB0350HT12**
KHF29	2500	310	**KTA2500**	2500	244	350	
KHF36	3000	310	**KTA3200**	3200	324	510	**KTB0510HT01**
KHF38	3500	310	**KTA4000**	4000	404	510	
KHF39	3500	382	**KTA4000**	4000	404	510	**KTB0510HT11**
KHF46	4000	382	**KTA4000**	4000	404	510	**KTB0510HT02**
KHF48	4500	382	**KTC5000** (1)	5000	404	510	
KHF56	5000	454	**KTC5000** (1)	5000	404	510	**KTB0510HT03**
KHF58	5500	454	Line extension with KT is not possible				

***(1)** See the KTC catalogue for details of the product range.*





KHF Polarity	KTA Polarity
3L+PE	3L+PE
3L+1/2N+PE	3L+N+PE
3L+N+PE	3L+N+PE
3L+N+PER (2)	3L+N+PER

***(2)** Version with 120 mm² Cu conductor or entire conductor.*

Canalis KH substitution by Canalis KT

Preserved KH tap-off units and substitution table

Plug-in tap-off units

Protection type	Polarity	Rating	Catalogue number	Status	Substitued by
Isolator and fuse carriers	3L+PE	160	KH016SD13	Removed	KH025SD15
		250	KH025SD13	Removed	KH025SD15
		400	KH040SD13	Removed	KH063SD15
		630	KH063SD13	Removed	KH063SD15
	3L+N+PE	160	KH016SD14	Removed	KH025SD14
		250	KH025SD14	**Preserved**	-
		400	KH040SD14	Removed	KH063SD14
		630	KH063SD14	**Preserved**	-
	3L+PEN	160	KH016SD15	Removed	KH025SD15
		250	KH025SD15	**Preserved**	-
		400	KH040SD15	Removed	KH063SD15
		630	KH063SD15	**Preserved**	-
			KH063SD1530758	Removed	KH063SD15
	3L+NP+PE	160	KH016SD24	Removed	No
		250	KH025SD24	Removed	No
		400	KH040SD24	Removed	No
		630	KH063SD24	Removed	No
Switch and fuse carriers	3L+PE	200	KH020SD33	Removed	KH025SE351
		315	KH031SD33	Removed	KH040SE351
		500	KH050SD33	Removed	KH063SE351
	3L+N+PE	50	KH005SD34	Removed	KH025SE341
		100	KH010SD34	Removed	KH025SE341
		200	KH020SD34	Removed	KH025SE341
		250	KH025SE341	**Preserved**	-
		315	KH031SD34	Removed	KH040SE341
		400	KH040SE341	**Preserved**	-
		500	KH050SD34	Removed	KH063SE341
		630	KH063SE341	**Preserved**	-
	3L+PEN	50	KH005SD35	Removed	KH025SE351
		100	KH010SD35	Removed	KH025SE351
		200	KH020SD35	Removed	KH025SE351
		250	KH025SE351	**Preserved**	-
		315	KH031SD35	Removed	KH040SE351
		400	KH040SE351	**Preserved**	-
		500	KH050SD35	Removed	KH063SE351
		630	KH063SE351	**Preserved**	-
	3L+NP+PE	200	KH020SD44	Removed	No
		315	KH031SD44	Removed	No
		500	KH050SD44	Removed	No
Circuit breaker manuel	3L+N+PE	160	KH016SD541	Removed	KH025SD541
		250	KH025SD541	**Preserved**	-
		400	KH040SD541	Removed	KH063SD541
		630	KH063SD541	**Preserved**	-
	3L+PEN	160	KH016SD551	Removed	KH025SD551
		250	KH025SD551	**Preserved**	-
		400	KH040SD551	Removed	KH063SD551
		630	KH063SD551	**Preserved**	-
Circuit breaker electrical control	3L+N+PE	160	KH016SD542	Removed	KH025SD542
		250	KH025SD542	**Preserved**	-
		400	KH040SD542	Removed	KH063SD542
		630	KH063SD542	**Preserved**	-
	3L+PEN	160	KH016SD552	Removed	KH025SD552
		250	KH025SD552	**Preserved**	-
		400	KH040SD552	Removed	KH063SD552
		630	KH063SD552	**Preserved**	-
Muller Isolator	3L+N+PE	630	KH063SD841	Removed	No
	3L+PEN	100	KH010SD85	**Preserved**	-
		250	KH025SD85	**Preserved**	-
		400	KH040SD85	**Preserved**	-
		630	KH063SD85	**Preserved**	-
			KH063SD8502	Removed	KH063SD85
Muller Isolator + Pelha	3L+PEN	400	KH040SD9502	**Preserved**	-
		630	KH063SD9502	**Preserved**	-
Dumeco switch	-	-	KH0SD108919802	Removed	No
			KH0SD108919803	Removed	No
			KH0SD108920002	Removed	No
			KH0SD108922201	Removed	No
			KH0SD108922202	Removed	No
Other	3L+N+PE	100	KH0SD107080401	Removed	No
		60	KH0SD107076901	Removed	No
	3L+PEN	100	KH0SD107080402	Removed	No
	-	60	KH0SD107076902	Removed	No
		400	KH0SD1530710	Removed	No

Bolted tap-off units

Protection	Polarity	Rating	Catalogue number	Status	Substitued by
Isolator and fuse carriers	3L+PE	160	KH016SB131	Removed	KH025SB131
			KH016SB132	Removed	KH025SB132
		250	KH025SB131	**Preserved**	-
			KH025SB132	**Preserved**	-
		400	KH040SB131	Removed	KH063SB131
			KH040SB132	Removed	KH063SB132
		630	KH063SB131	**Preserved**	-
			KH063SB132	**Preserved**	-
		1000	KH086SB131	**Preserved**	-
			KH086SB132	**Preserved**	-
			KH0SB331132	Removed	KH086SB132
	3L+N+PE	160	KH016SB141	Removed	KH025SB141
			KH016SB142	Removed	KH025SB142
		250	KH025SB141	**Preserved**	-
			KH025SB142	**Preserved**	-
		400	KH040SB141	Removed	KH063SB141
			KH040SB142	Removed	KH063SB142
		630	KH063SB141	**Preserved**	-
			KH063SB142	**Preserved**	-
		1000	KH086SB141	**Preserved**	-
			KH086SB142	**Preserved**	-
	3L+PEN	160	KH016SB151	Removed	No
			KH016SB152	Removed	No
		250	KH025SB151	Removed	No
			KH025SB152	Removed	No
		400	KH040SB151	Removed	No
			KH040SB152	Removed	No
		630	KH063SB151	Removed	No
			KH063SB152	Removed	No
		1000	KH086SB151	Removed	No
			KH086SB152	Removed	No
	3L+NP+PE	160	KH016SB241	Removed	No
			KH016SB242	Removed	No
		250	KH025SB241	Removed	No
			KH025SB242	Removed	No
		400	KH040SB241	Removed	No
			KH040SB242	Removed	No
		630	KH063SB241	Removed	No
			KH063SB242	Removed	No
		1000	KH086SB241	Removed	No
			KH086SB242	Removed	No
Switch and fuse carriers	3L+PE	1000	KH086SB331	Removed	No
			KH086SB332	Removed	No
	3P+PE	250	KH025SB331	Removed	No
			KH025SB332	Removed	No
		400	KH040SB331	Removed	No
			KH040SB332	Removed	No
		630	KH063SB331	Removed	No
			KH063SB332	Removed	No
	3P+PEN	1000	KH086SB351	Removed	No
			KH086SB352	Removed	No
	3L+N+PE	250	KH025SB341	Removed	No
			KH025SB342	Removed	No
			KH025SB441	Removed	No
			KH025SB442	Removed	No
		400	KH040SB341	Removed	No
			KH040SB342	Removed	No
			KH040SB441	Removed	No
			KH040SB442	Removed	No
		630	KH063SB341	Removed	No
			KH063SB342	Removed	No
			KH063SB441	Removed	No
			KH063SB442	Removed	No
		1000	KH086SB341	Removed	No
			KH086SB342	Removed	No

Canalis KH substitution by Canalis KT

Preserved KH tap-off units and substitution table

Bolted tap-off units

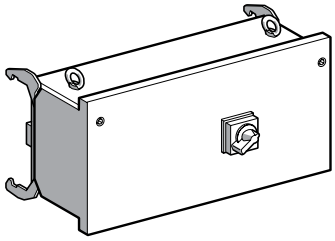
Protection	Polarity	Rating	Catalogue number	Status	Substitued by
Switch and fuse carriers (con't)	3L+PEN	250	KH025SB351	Removed	No
			KH025SB352	Removed	No
		400	KH040SB351	Removed	No
			KH040SB352	Removed	No
		630	KH063SB351	Removed	No
			KH063SB352	Removed	No
Circuit breaker manuel	3L+PE	1000	KH086SB5311	**Preserved**	-
			KH086SB5312	**Preserved**	-
	3L+N+PE	250	KH025SB5411	Removed	KH086SB5411
			KH025SB5412	Removed	KH086SB5412
		400	KH040SB5411	Removed	KH086SB5411
			KH040SB5412	Removed	KH086SB5412
		630	KH063SB5411	Removed	KH086SB5411
			KH063SB5412	Removed	KH086SB5412
		1000	KH086SB5411	**Preserved**	-
			KH086SB5412	**Preserved**	-
	3L+PEN	250	KH025SB5511	Removed	No
			KH025SB5512	Removed	No
		400	KH040SB5511	Removed	No
			KH040SB5512	Removed	No
		630	KH063SB5511	Removed	No
			KH063SB5512	Removed	No
		1000	KH086SB5511	Removed	No
			KH086SB5512	Removed	No
Circuit breaker electrical controle	3P+PEN	250	KH025SB5521	Removed	No
		400	KH040SB5521	Removed	No
		630	KH063SB5521	Removed	No
	3L+N+PE	250	KH025SB5421	Removed	No
			KH025SB5422	Removed	No
		400	KH040SB5421	Removed	No
			KH040SB5422	Removed	No
		630	KH063SB5421	Removed	No
			KH063SB5422	Removed	No
	3L+PEN	250	KH025SB5522	Removed	No
		400	KH040SB5522	Removed	No
		630	KH063SB5522	Removed	No
Circuit breaker plug-out	3L+PEN	1000	KH040DD411	Removed	No
			KH0SB1393108	Removed	No
			KH0SB1393132	Removed	No
Others	-	1000	KH0SA345794	Removed	No
			KH0SB1041086	Removed	No
		1500	KH0SA1088568	Removed	No
		2000	KH0SA1088123	Removed	No

250 and 630 A tap-off units from Canalis KH range for Compact NSX circuit breakers

IP31

Tap-off units for Compact NSX, fixed, front-connected circuit breakers, not equipped

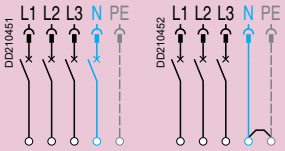
DB402027



KH0●●SD5●●

The cover of the tap-off unit may be opened or closed only when the circuit breaker is in the Off position.

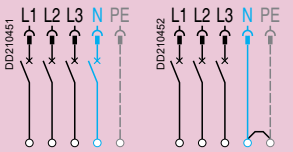
Plug-in tap-off units for extended rotary

System earthing arrangement (1)	Busbar trunking	TT-TNS-TNC-IT	TNC
	Tap-off unit	TT-TNS-TNS-IT	TNC
Tap-off polarity		3L + N + PE	3L + PEN
Tap-off diagram (e.g. circuit breaker protection)			

Rating (A)	Type of circuit breaker	Cable capacity (mm²)	Cable clamp on (mm)	Cat. no.		Weight (kg)
250	NSX250 N/H/L	1 x 150	30...70	**KH025SD541**	**KH025SD551**	32.00
630	NSX630 N/H/L	2 x 300	2 x 30...70	**KH063SD541**	**KH063SD551**	45.00

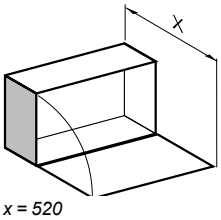
(1) These units can be fitted either on Canalis KTA or KHF.

Plug-in tap-off units for motor mechanisme control 220 V - 50 Hz (not supplied)

System earthing arrangement (1)	Busbar trunking	TT-TNS-TNC-IT	TNC
	Tap-off unit	TT-TNS-TNS-IT	TNC
Tap-off polarity		3L + N + PE	3L + PEN
Tap-off diagram (e.g. circuit breaker protection)			

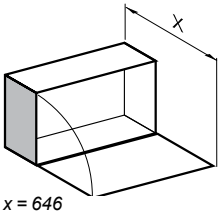
Rating (A)	Type of circuit breaker	Cable capacity (mm²)	Cable clamp on (mm)	Cat. no.		Weight (kg)
250	NSX250 N/H/L control 31541			**KH025SD542**	**KH025SD552**	32.00
630	NSX630 N/H/L control 32841			**KH063SD542**	**KH063SD552**	45.00

DB401483



x = 520

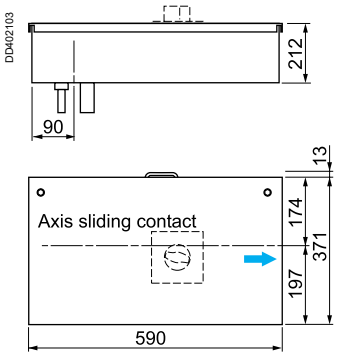
DB401483



x = 646

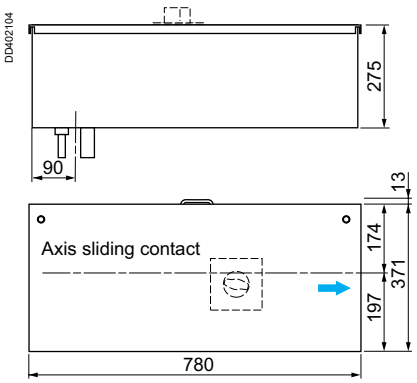
KH025SD●●●

DD402103



KH063SD●●●

DD402104

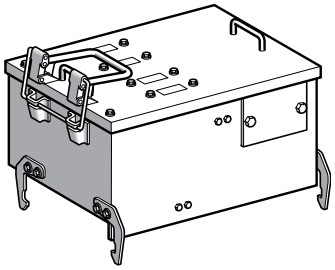


250 and 630 A tap-off units from Canalis KH range for NF fuses
IP31

Canalis KTA

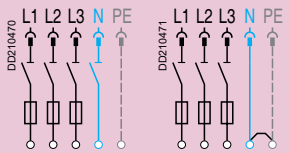
Tap-off units with isolator for blade-type fuses

DB402028



KH0●●SD1●

Tap-off disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised.

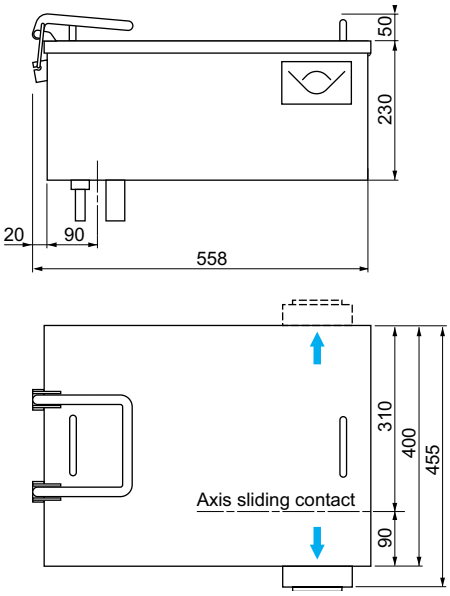
System earthing arrangement (1)	Busbar trunking	TT-TNS-TNC-IT	TNC
	Tap-off unit	TT-TNS-TNS-IT	TNC
Tap-off polarity		3L + N + PE	3L + PEN
Tap-off diagram (e.g. fuse protection)			

Rating (A)	Fuse size	Cable capacity (mm²)	Cable clamp on (mm)	Cat. no.		Weight (kg)
250	1	1 x 95	1 x 30-70	**KH025SD14**	**KH025SD15**	37.00
630	3	2 x 185	2 x 30-70	**KH063SD14**	**KH063SD15**	56.00

(1) *These units can be fitted either on Canalis KTA or KHF.*

KH025SD●●

DD402107



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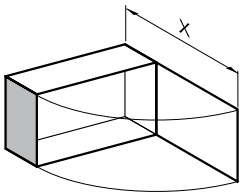
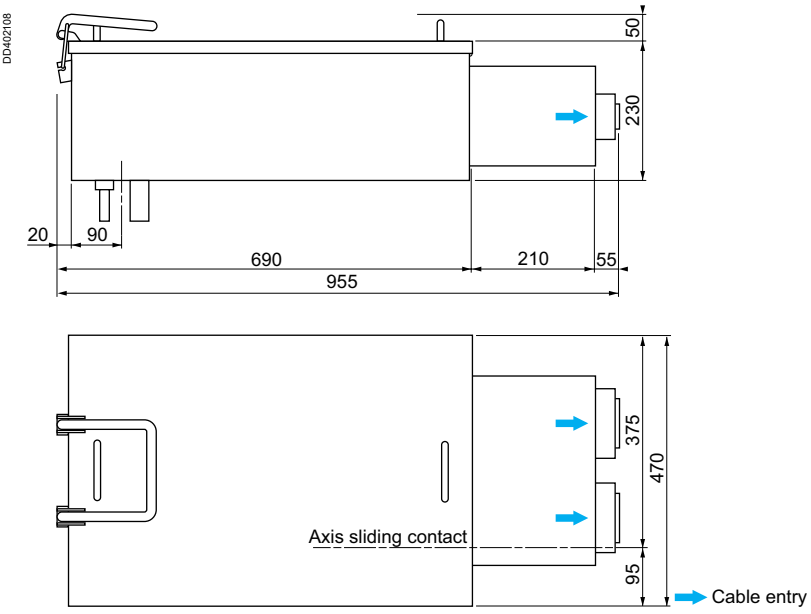


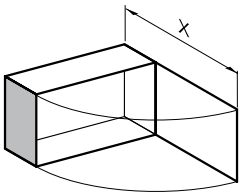
x = 790

KH063SD●●

DD402108



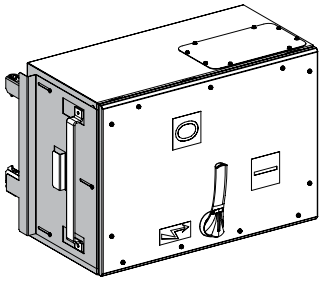
DD202008



x = 920

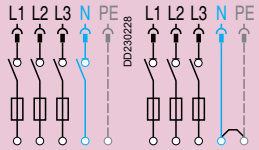
630 A tap-off units from Canalis KH range with switch-disconnector for DIN fuses
IP55

SE - Tap-off units with switch-disconnector internal arc tested IEC 61-641

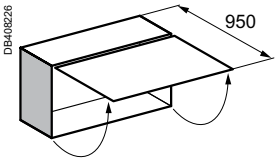


KHB0630SE●

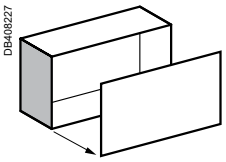
The cover of the tap-off unit may be opened or closed only when the switch-disconnector is in the Off position.
To be installed on KT EH type or on former KHF or KGF distribution length.

System earthing arrangement	Busbar trunking				TT-TNS-TNC-IT(1) TNC			
	Tap-off unit				TT-TNS-TNS-IT(1) TNC			
Tap-off polarity					3L + N + PE(2)		3L + PEN	
Tap-off diagram (e.g. fuse protection)					DD230226 		DD230228	
Rating (A)	Type of fuses	Connection	Max. size (mm²) L or N / PE (kg)	Cable gland(3) (not supplied)	Cable exit side	Cat. no.	Cat. no.	Weight (kg)
630(4)	DIN size 3	Terminals	2 x 300 / 1 x 150	ISO 70 max.	Right	**KHB0630SE4R**		72
					Left	**KHB0630SE4L**		72
					Right		**KHB0630SE5R**	78
					Left		**KHB0630SE5L**	78

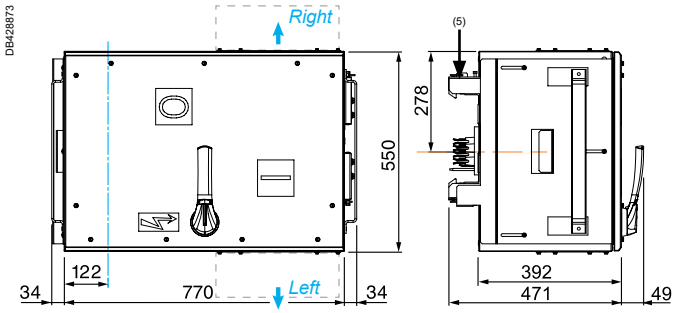
(1) *The neutral must be protected or not distributed (3L+PE) for the IT system.*
(2) *Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).*
(3) *Maximum diameter by unipolar cable.*
(4) *De-rating coefficient to apply: 0.87.*
(5) *The tap-off unit is delivered with automatic clamps, the kit of connection bars is included in the reference and delivered in the box.*



or

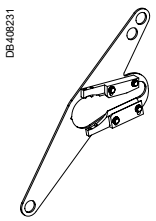


KHB0630SE●

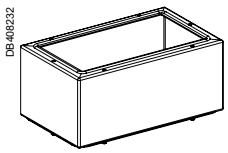


Cable exit
Center line of tap-off outlets
Axis of Canalis KT
Connection box to be fitted above or below

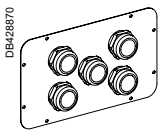
Option accessories	Cat. no.
Extension rotary handle	**KTB0630ZA03**
Connecting box	**KTB0630ZA04**
Plate with 5 cable glands 24 to 40 mm	**KTB0000GP01**
Plate with 1 cable clamp 30 to 70 mm	**KTB0000GP02**
Plate with 2 cable clamps 30 to 70 mm	**KTB0000GP03**



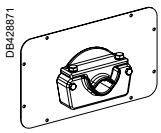
KTB0630ZA03



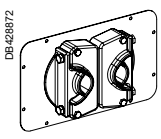
KTB0630ZA04



KTB0000GP01



KTB0000GP02

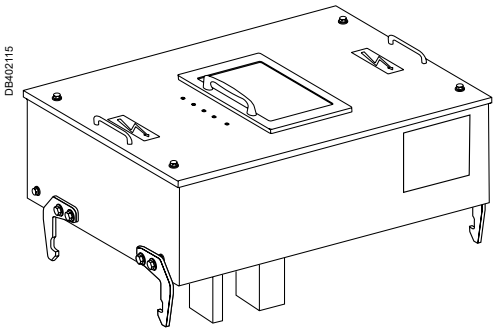


KTB0000GP03

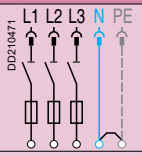
100 to 630 A tap-off units from Canalis KH with disconnector Jean Muller

IP43

Tap-off units with disconnector Jean Muller

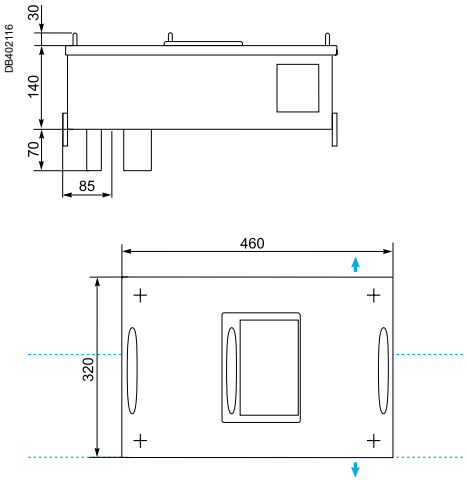


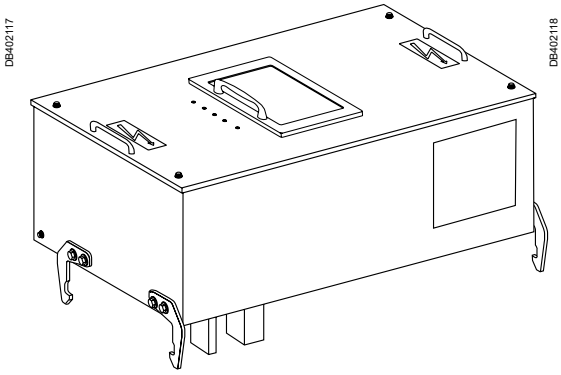
KH010SD85

System earthing arrangement (1)			**Busbar trunking**	**TNC**	
			Tap-off unit	**TNC**	
Tap-off polarity				**3L + PEN**	
Tap-off diagram (e.g. fuse protection)					
Ith (A)		**Fuse size**	**Cable capacity (mm²)**	**Cat. no.**	**Weight (kg)**
100	With MULLER disconnector	00	1 x 50	**KH010SD85**	12.50
250	With MULLER disconnector	1	1 x 95	**KH025SD85**	37.00
400	With MULLER disconnector	2	1 x 185	**KH040SD85**	39.00
630	With MULLER disconnector	3	2 x 185	**KH063SD85**	46.00

(1) These units can be fitted either on Canalis KTA or KHF.

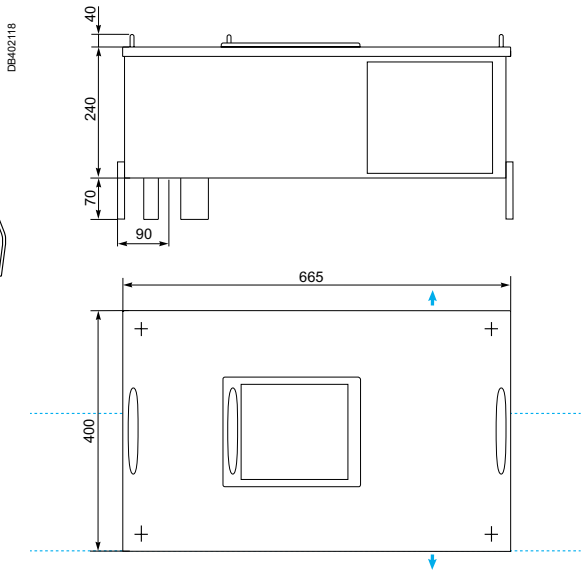
KH010SD85





KH040SD85

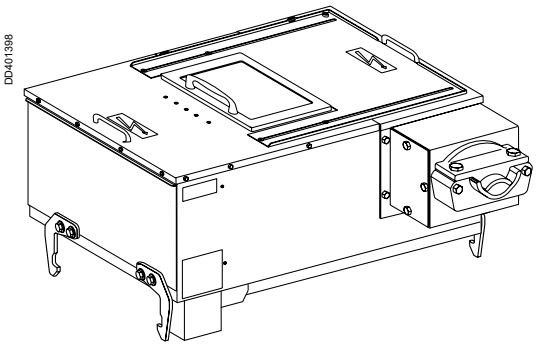
KH025SD85 - KH040SD85 - KH063SD85



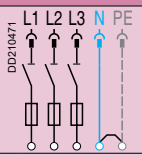
400 and 630 A tap-off units from Canalis KH with disconnector Jean Muller

IP43

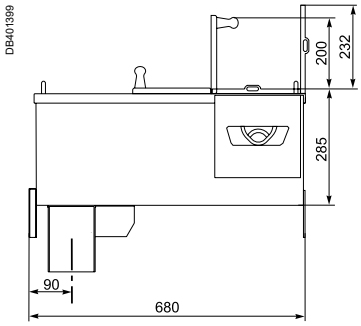
Tap-off units with disconnector internal arc tested IEC 61-641

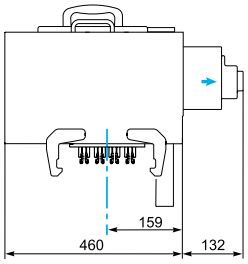


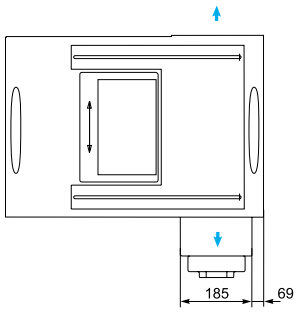
KH040SD9502

System earthing arrangement (1)			Busbar trunking	TNC
			Tap-off unit	TNC
Tap-off polarity				3L + PEN
Tap-off diagram (e.g. fuse protection)				
Ith (A)		Fuse size	Cable capacity (mm²)	Cat. no.	Weight (kg)
400	With MULLER disconnector	2	1 x 185	**KH040SD9502**	39.00
630	With MULLER disconnector	3	2 x 185	**KH063SD9502**	46.00

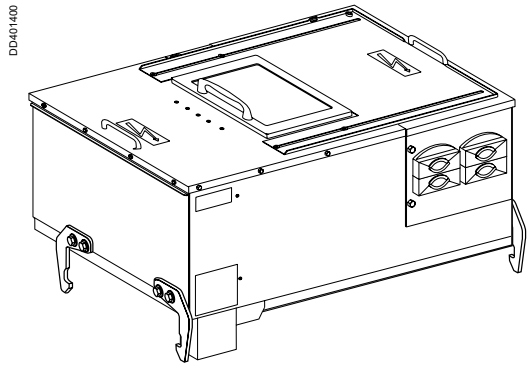
(1) *These units can be fitted either on Canalis KTA or KHF.*



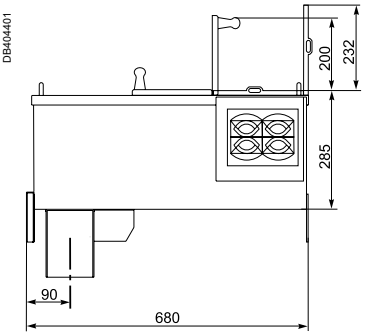


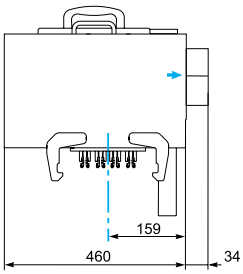


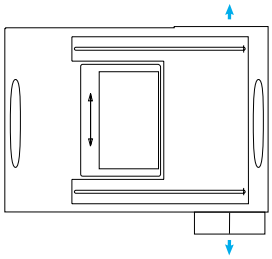
Connecting box is equipped with a 30 to 70 mm aluminium cable clamp.



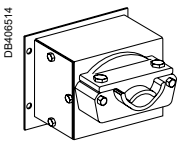
KH063SD9502



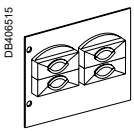




Connecting plate is equipped with 4 plastic cable clamps.



KH040ZA07



KH063ZA07

If 2 cables exit are needed, stand alone connecting box can be ordered.

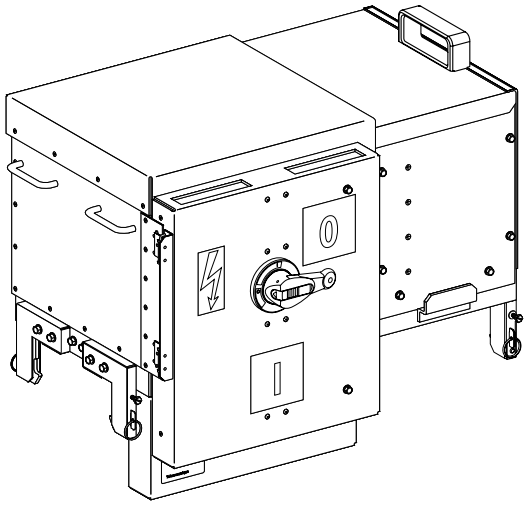
Designation	Cat. no.
Connecting box for KH040SD9502 with a 30 to 70 mm aluminium cable clamp	**KH040ZA07**
Connecting plate for KH063SD9502 with 4 plastic clamps	**KH063ZA07**

250 to 630 A tap-off units from Canalis KH range with Fupact INF fuse switch

IP43

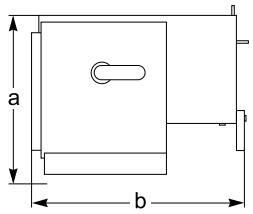
Tap-off units from Canalis KH range with Fupact INF fuse switch

DB401471

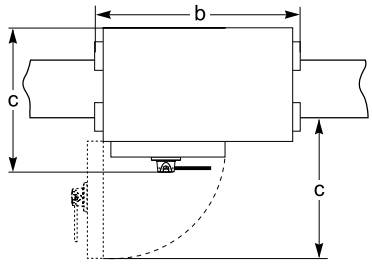


KH0●●SE3●1

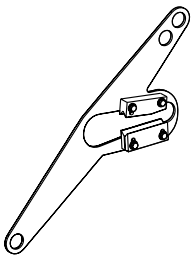
DB401476



DB401480

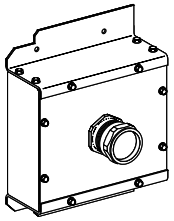


DB401475



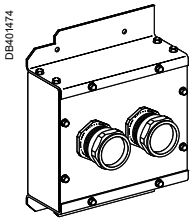
Extension handle.

DB401473



Cable box with 1 hole + cable gland.

DB401474

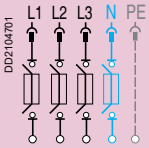
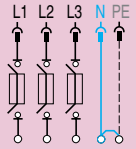


Cable box with 2 hole + cable glands.

Tap-off unit installed under voltage, unloaded, for KTA2500, KTA3200, KTA4000.

Functionalities

- Insulation and protection of the outlet by Fupact fuse-switch Schneider Electric (supplied).
- To be used only above or below the busbar trunking.

System earthing arrangement (1)		Busbar trunking	TT-TNS-TNC-IT	TNC
		Tap-off unit	TT-TNS-TNS-IT	TNC
Tap-off polarity			3L + N + PE	3L+ PEN
Tap-off diagram (e.g. fuse protection)			DD2104701 	DB401472 
Rating (A)	**Ith (A)**	**Fuse size (DIN 43653)**	**Cat. no.**	
250	250	1	**KH025SE341**	**KH025SE351**
400	350	2	**KH040SE341**	**KH040SE351**
630	500	3	**KH063SE341**	**KH063SE351**

(1) *These units can be fitted either on Canalis KTA or KHF.*

Dimensions KHO●●SE3●1

Dimensions (mm)	KH025SE●1	KH040SE●1	KH063SE●1
a	569	569	665
b	700	760	765
c	590	590	620
d	165	165	165
e	255	255	285
f	550	550	650

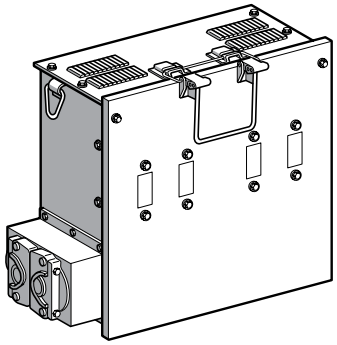
Optional accessories

Accessories	Cat. no.
Extension handle (for KH0●●SE3●1)	**KH063ZA03**
Cable box with 1 hole (for for KH025SE3●1) (cable gland not supplied, to be ordered separately)	**KH025ZA05**
Cable box with 1 hole (for for KH040SE3●1) (cable gland not supplied, to be ordered separately)	**KH040ZA05**
Cable box with 1 hole (for for KH063SE3●1) (cable gland not supplied, to be ordered separately)	**KH063ZA05**
Cable box with 2 hole (for for KH040SE3●1) (cable gland not supplied, to be ordered separately)	**KH040ZA06**
Cable box with 2 hole (for for KH063SE3●1) (cable gland not supplied, to be ordered separately)	**KH063ZA06**
Cable gland (185 - 240 mm^2) for cable boxes KH0●●ZA05 and KH0●●ZA06	**KH063ZA10**

250 to 1000 A fixed tap-off units for Canalis KHF range, with isolator and fuse carriers
IP31

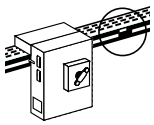
Tap-off units with isolator for blade-type fuses

DB401455



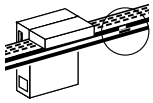
KH0●●SB1●●

DB401486



In front of yellow label.

DB401487



Opposite of yellow label.

The cover of the tap-off unit may be opened or closed only when the load is switched Off.

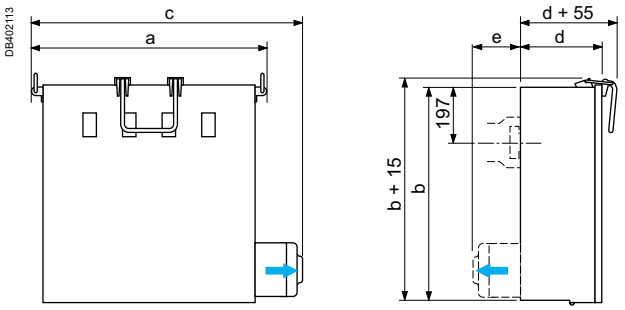
System earthing arrangement (1)	Busbar trunking	IT-TT-TNS	TT-TNS-TNC-IT (3)
	Tap-off unit	IT-TT-TNS	TT-TNS-TNS-IT (3)
Tap-off polarity		3L + PE	3L + N + PE
Tap-off diagram (e.g. fuse protection)		DD230227 L1 L2 L3 PE	DD230226 L1 L2 L3 N PE

Rating (A)	Fuse size	Cable capacity (mm^2)	Cable clamp on (mm)	Cat. no. (4)	Weight (kg)	Cat. no. (4)	Weight (kg)
250	1	1 x 150	1 x 30-70	**KH025SB13●**	46.00	**KH025SB14●**	48.00
630	3	2 x 300	2 x 30-70	**KH063SB13●**	71.00	**KH063SB14●**	75.00
1000	4	4 x 185	-	**KH086SB13●**	86.00	**KH086SB14●**	90.00

(1) *To be installed only on Canalis KHF junction, do not use on Canalis KT.*
(3) *Also suitable for tap-off unit 3L + PE (N not distributed).*
(4) *The reference number ends with 1 if the tap-off unit is mounted on the identification label side. The reference number ends with 2 if the tap-off unit is mounted on the opposite side to the label.*

KH0●●SB●●●

DB402113



Rating (A)	a	b	c	d	e
160/250	540	500	630	265	-
400/630	640	600	750	290	-
1000	650	485	-	300	120

Connexion equipment for type SB (2) tap-off units

Note*: this equipment sould be ordered at the same time as the SB tap-off unit.*

Type of busbar trunking	SB tap-off unit (except 1000 A)	SB tap-off unit 1000 A only
KHF 14/16	**KH016CB**	**KH016CB311571**
KHF 18	**KH018CB**	**KH018CB311571**
KHF 26/28	**KH026CB**	**KH026CB311571**
KHF 36/38	**KH036CB**	**KH036CB311571**
KHF 46/48	**KH046CB**	**KH046CB311571**
KHF 56/58	**KH056CB**	**KH056CB311571**

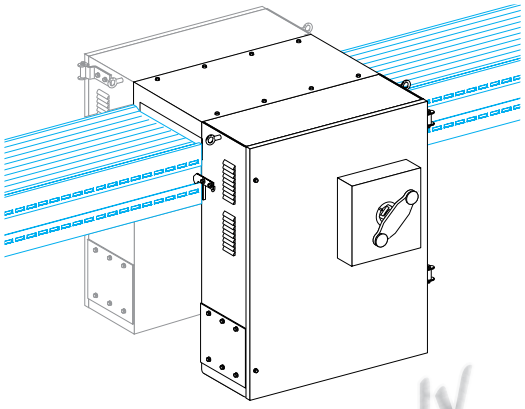
(2) *The neutral must be not distributed (3L + PE) for the IT system.*

Fixed tap-off units for Canalis KHF range, for circuit breaker NS630b, NS800, NS1000

IP31

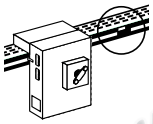
Fixed tap-off units for Canalis KHF range

DB401485



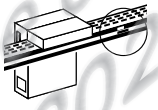
KH086SB5●1●

DB401486



In front of yellow label.

DB401487



Opposite of yellow label.

- Tap-off units are installed in the joint of 2 elements (1).
- The link between tap-off unit and busbar trunking is realised by a set connecting links (see below the complementary kit catalogue numbers).
- Connection of 3 cables maxi per phase (holes Ø 14).
- Protection indice: IP31.
- Type of circuit breaker:
  - ☐ extended rotary handle ref. 33878
  - ☐ fixed device with Front connection.

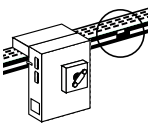
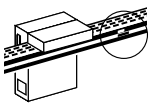
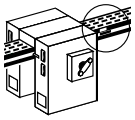
System earthing arrangement (1)		Busbar trunking	IT-TT-TNS	TT-TNS-TNC-IT	
		Tap-off unit	IT-TT-TNS	TT-TNS-TNS-IT	
Tap-off polarity			3L + PE	3L + N + PE	
Tap-off diagram (e.g. circuit breaker protection)			DD230225 L1 L2 L3 PE	DD210452 L1 L2 L3 N PE	
Rated current In 35°C (2)	**Control**	**Type of circuit breakers**	**Side**	**Cat. no. (3)**	**Weight (kg)**
1000 A	Manual	N, H, L MG NS630b, NS800, NS1000 (2)	In front of yellow label	**KH086SB5311**	**KH086SB5411** 88.00
			Opposite of yellow label	**KH086SB5312**	**KH086SB5412** 88.00

(1) *To be installed only on Canalis KHF junction, do not use on Canalis KT.*
(2) *The circuit breaker more than 1000 A, with the same dimension, cannot be used on these tap-off units.*
(3) *The reference number ends with 1 if the tap-off unit is mounted on the identification label side. The reference number ends with 2 if the tap-off unit is mounted on the opposite side to the label.*

Connexion equipment for type SB5 tap-off units

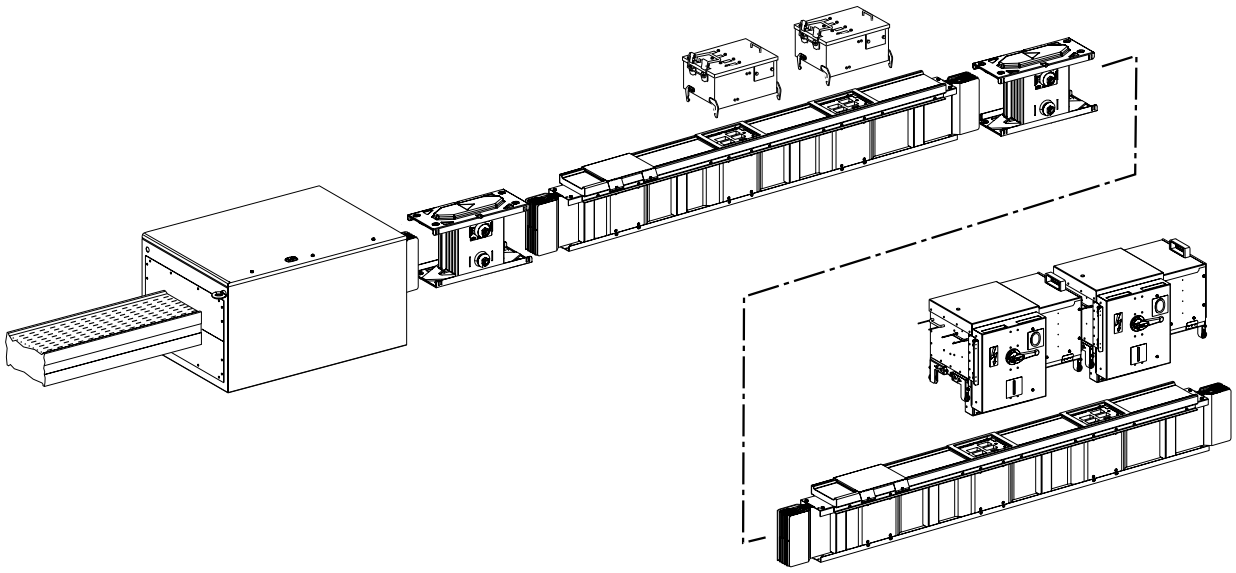
Complementary kit

Note: *this equipment should be ordered at the same time as the SB tap-off unit.*

Type of busbar trunking	Cat. no.	Mounting position
KHF 14/16/18	**KH018CB86NS**	 
KHF 26/28	**KH028CB86NS**	
KHF 36/38	**KH038CB86NS**	or
KHF 46/48	**KH048CB86NS**	 
KHF 56/58	**KH058CB86NS**	

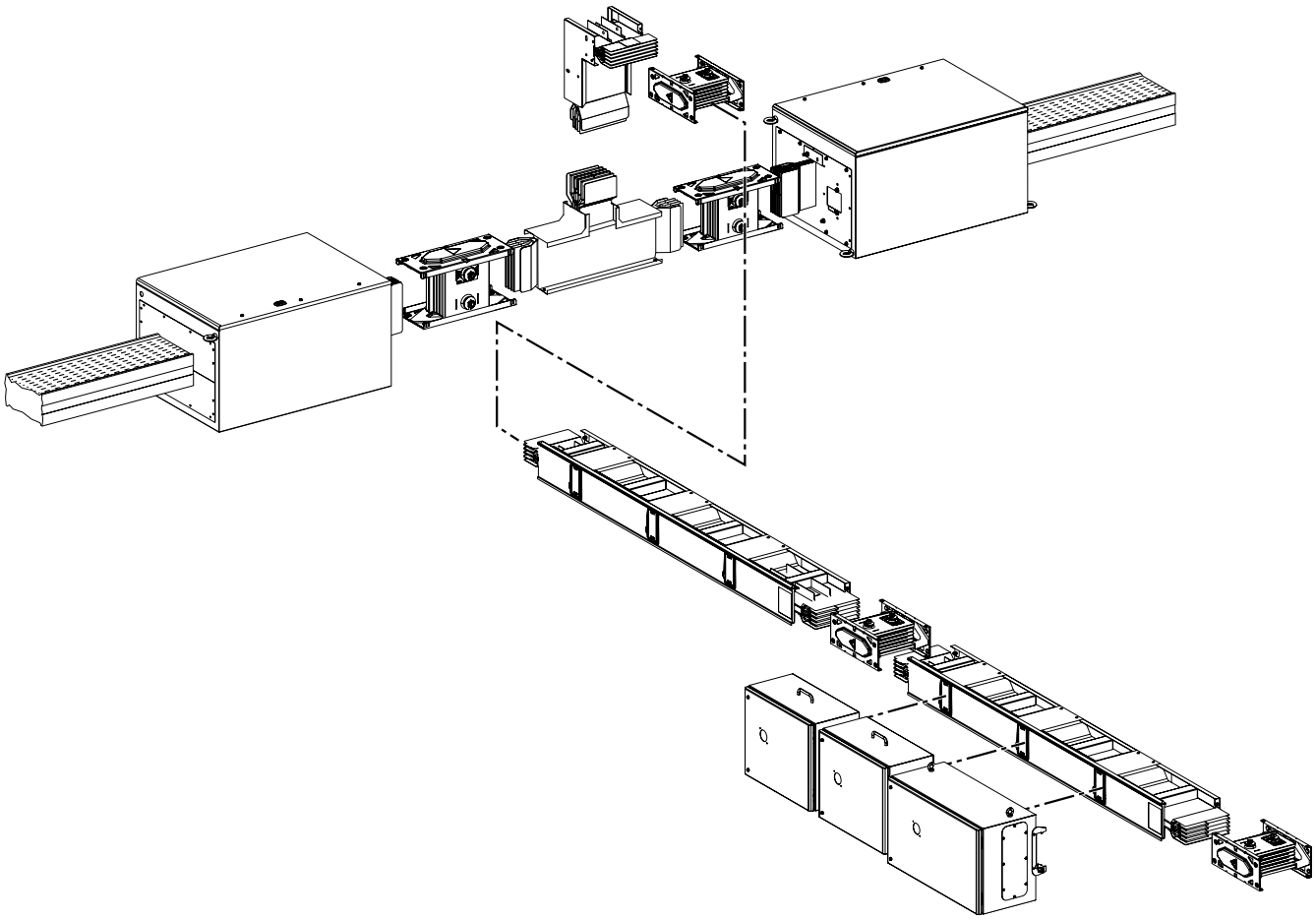
Expansion of a Canalis KH line by means of Canalis KT

DB401535



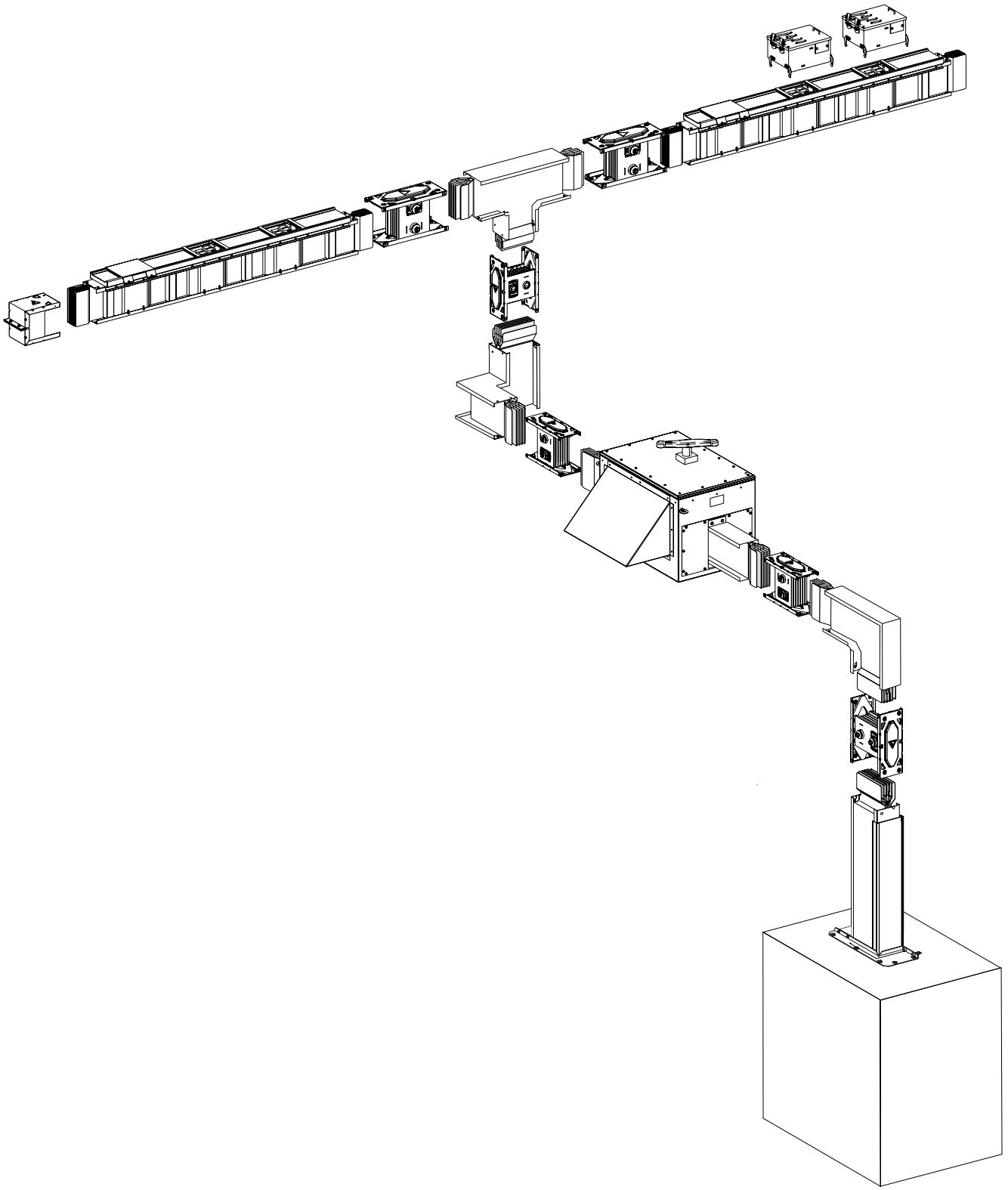
Expansion of a Canalis KH line by means of Canalis KT with a T-piece tap-off unit

DB401534



Mid KT line power supply with KH tap-off units installed

DB401497



Contents

Design guide

Characteristics
Canalis KTA 3L + PE

Canalis KTA

Characteristics of run sections

General characteristics

	Symbol	Unit	Busbar trunking rating (A)								
			800	1000	1250	1600	2000	2500	3200	4000	5000
Compliance with standards			IEC/EN 61439-6								
Protection degree	IP		55 Any installation (indoors only) is possible for the busbar truncking: edgewise, flat or vertical. See test condition, page 176.								
Shock resistance	IK		08								
Nominal rated current at an ambient temperature of 35°C	Inc	A	800	1000	1250	1600	2000	2500	3200	4000	5000
Rated insulation voltage	Ui	V	1000								
Rated operating voltage	Ue	V	1000								
Operating frequency	f	Hz	50 / 60 (for 60 to 400 Hz AC or for DC, consult us)								

Short-circuit current withstand

Standard version 3L + PE

Allowable rated short-time withstand current (t = 1 s)	Icw	kA	31	50	50	65	110	113	86	90	120
Allowable rated peak current	Ipk	kA	64	110	110	143	242	248	189	198	264
Maximum thermal stress I^2t (t = 1 s)	I^2t	$A^2s\ 10^6$	961	2500	2500	4225	12100	12769	7396	8100	14400

Ratings 2000 and 2500 A are equipped in standard version with side reinforcements.

Conductor characteristics

Phase conductors

Average resistance at an ambient temperature of 20°C	R_{20}	mΩ/m	0.079	0.057	0.046	0.035	0.028	0.023	0.017	0.014	0.0115
Average resistance at Inc and at 35°C	R_1	mΩ/m	0.096	0.069	0.056	0.042	0.034	0.028	0.021	0.017	0.014
Average reactance at Inc and at 35°C and at 50 Hz	X_1	mΩ/m	0.018	0.016	0.015	0.013	0.011	0.008	0.007	0.007	0.004
Average impedance at Inc and at 35°C and at 50 Hz	Z_1	mΩ/m	0.097	0.071	0.058	0.044	0.035	0.029	0.022	0.018	0.0145

PE = casing

Average resistance at an ambient temperature of 20°C		mΩ/m	0.203	0.178	0.164	0.143	0.126	0.113	0.093	0.080	0.0565
Casing (equivalent copper cross-section)		mm^2	120	130	140	155	165	180	190	200	360

Fault loop characteristics

Symmetrical components method	Ph/PE at 20°C	Average resistance		$R_{0\ ph/PE}$	mΩ/m	0.809	0.676	0.587	0.490	0.420	0.370	0.303	0.256	0.185
		Average reactance		$X_{0\ ph/PE}$	mΩ/m	0.762	0.586	0.478	0.364	0.286	0.231	0.170	0.131	0.116
		Average impedance		$Z_{0\ ph/PE}$	mΩ/m	1.111	0.895	0.757	0.610	0.508	0.436	0.347	0.288	0.218
Impedance method	At 20°C	Average resistance	Ph/Ph	$R_{b0\ ph/ph}$	mΩ/m	0.160	0.115	0.097	0.073	0.059	0.051	0.038	0.031	0.026
			Ph/PE	$R_{b0\ ph/PE}$	mΩ/m	0.531	0.440	0.353	0.281	0.231	0.197	0.154	0.125	0.099
	At Inc and at 35°C	Average resistance	Ph/Ph	$R_{b1\ ph/ph}$	mΩ/m	0.193	0.140	0.120	0.091	0.075	0.066	0.049	0.039	0.033
			Ph/PE	$R_{b1\ ph/PE}$	mΩ/m	0.641	0.535	0.438	0.348	0.292	0.252	0.197	0.160	0.126
	At Inc and at 35°C and at 50 Hz	Average reactance	Ph/Ph	$X_{b\ ph/ph}$	mΩ/m	0.040	0.029	0.024	0.019	0.015	0.013	0.010	0.008	0.007
			Ph/PE	$X_{b\ ph/PE}$	mΩ/m	0.426	0.329	0.275	0.212	0.170	0.141	0.106	0.084	0.071

Other characteristics

Voltage drop

Line-to-line voltage drop, in volts (V) per 100 metres and per amp (A) at 50 Hz with load spread over the run. For the case of loads concentrated at the end of a run, the voltage drops are double those shown in this table.
This calculation table applies to three-phase loads. For single-phase loads, the voltage drop given in the table is divided by 1.732.

For a cosine φ of	1	V/100 m/A	0.0083	0.0060	0.0049	0.0037	0.0029	0.0024	0.0018	0.0015	0.0012
	0.9	V/100 m/A	0.0081	0.0060	0.0050	0.0038	0.0030	0.0025	0.0019	0.0016	0.00125
	0.8	V/100 m/A	0.0076	0.0056	0.0047	0.0036	0.0029	0.0024	0.0018	0.0015	0.0012
	0.7	V/100 m/A	0.0069	0.0052	0.0043	0.0034	0.0027	0.0022	0.0017	0.0015	0.0011

Average weight

3L + PE		kg/m	12	14	16	19	22	25	31	38	50

Fire load value

		kWh/m	2.1	2.9	3.2	3.9	5.7	6.2	8.9	11.2	12.4

Radiated magnetic field

Radiated magnetic field strength 1 metre from the trunking	B	μT	0.4	0.5	0.75	0.9	1.3	1.6	2.1	3.0	3.8

Characteristics of run sections

	Symbol	Unit	Busbar trunking rating (A)								
General characteristics			**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3200**	**4000**	**5000**
Compliance with standards			IEC/EN 61439-6								
Protection degree	IP		55 Any installation (indoors only) is possible for the busbar truncking: edgewise, flat or vertical. See test condition, page 176.								
Shock resistance	IK		08								
Nominal rated current at an ambient temperature of 35°C	Inc	A	800	1000	1250	1600	2000	2500	3200	4000	5000
Rated insulation voltage	Ui	V	1000								
Rated operating voltage	Ue	V	1000								
Operating frequency	f	Hz	50 / 60 (for 60 to 400 Hz AC or for DC, consult us)								
Short-circuit current withstand											
Standard version 3L + N + PE											
Allowable rated short-time withstand current (t = 1 s)	Icw	kA	31	50	50	65	70	80	86	90	120
Allowable rated peak current	Ipk	kA	64	110	110	143	154	176	189	198	264
Maximum thermal stress I^2t (t = 1 s)	I^2t	$A^2s\ 10^6$	961	2500	2500	4225	4900	6400	7396	8100	14400
Reinforced version 3L + N + PE for 2500 A and 3200 A only											
Allowable rated short-time withstand current (t = 1 s)	Icw	kA	-	-	-	-	-	113	113	-	-
Allowable rated peak current	Ipk	kA	-	-	-	-	-	248	248	-	-
Maximum thermal stress	I^2t	$A^2s\ 10^6$	-	-	-	-	-	12769	12769	-	-
Conductor characteristics											
Phase conductors											
Average resistance at an ambient temperature of 20°C	R_{20}	mΩ/m	0.079	0.057	0.046	0.035	0.028	0.023	0.017	0.014	0.0115
Average resistance at Inc and at 35°C	R_1	mΩ/m	0.096	0.069	0.056	0.042	0.034	0.028	0.021	0.017	0.014
Average reactance at Inc and at 35°C and at 50 Hz	X_1	mΩ/m	0.018	0.016	0.015	0.013	0.011	0.008	0.007	0.007	0.004
Average impedance at Inc and at 35°C and at 50 Hz	Z_1	mΩ/m	0.097	0.071	0.058	0.044	0.035	0.029	0.022	0.018	0.0145
PE = casing											
Average resistance at an ambient temperature of 20°C		mΩ/m	0.203	0.178	0.164	0.143	0.126	0.113	0.093	0.080	0.0565
Casing (equivalent copper cross-section)		mm^2	120	130	140	155	165	180	190	200	360
Fault loop characteristics											
Symmetrical components method — Ph/N at 20°C — Average resistance	$R_{0\ ph/N}$	mΩ/m	0.345	0.248	0.209	0.159	0.128	0.111	0.083	0.066	0.056
Ph/N at 20°C — Average reactance	$X_{0\ ph/N}$	mΩ/m	0.143	0.103	0.087	0.067	0.054	0.046	0.035	0.028	0.023
Ph/N at 20°C — Average impedance	$Z_{0\ ph/N}$	mΩ/m	0.373	0.269	0.226	0.172	0.139	0.120	0.090	0.072	0.060
Ph/PE at 20°C — Average resistance	$R_{0\ ph/PE}$	mΩ/m	0.809	0.676	0.587	0.490	0.420	0.370	0.303	0.256	0.185
Ph/PE at 20°C — Average reactance	$X_{0\ ph/PE}$	mΩ/m	0.762	0.586	0.478	0.364	0.286	0.231	0.170	0.131	0.116
Ph/PE at 20°C — Average impedance	$Z_{0\ ph/PE}$	mΩ/m	1.111	0.895	0.757	0.610	0.508	0.436	0.347	0.288	0.218
Impedance method — At 20°C — Average resistance — Ph/Ph	$R_{b0\ ph/ph}$	mΩ/m	0.160	0.115	0.097	0.073	0.059	0.051	0.038	0.031	0.026
Ph/N	$R_{b0\ ph/N}$	mΩ/m	0.161	0.115	0.097	0.074	0.059	0.052	0.039	0.031	0.026
Ph/PE	$R_{b0\ ph/PE}$	mΩ/m	0.531	0.440	0.353	0.281	0.231	0.197	0.154	0.125	0.099
At Inc and at 35°C — Average resistance — Ph/Ph	$R_{b1\ ph/ph}$	mΩ/m	0.193	0.140	0.120	0.091	0.075	0.066	0.049	0.039	0.033
Ph/N	$R_{b1\ ph/N}$	mΩ/m	0.194	0.140	0.120	0.092	0.075	0.066	0.049	0.039	0.033
Ph/PE	$R_{b1\ ph/PE}$	mΩ/m	0.641	0.535	0.438	0.348	0.292	0.252	0.197	0.160	0.126
At Inc and at 35°C and at 50 Hz — Average reactance — Ph/Ph	$X_{b\ ph/ph}$	mΩ/m	0.040	0.029	0.024	0.019	0.015	0.013	0.010	0.008	0.007
Ph/N	$X_{b\ ph/N}$	mΩ/m	0.064	0.047	0.040	0.030	0.024	0.021	0.016	0.013	0.011
Ph/PE	$X_{b\ ph/PE}$	mΩ/m	0.426	0.329	0.275	0.212	0.170	0.141	0.106	0.084	0.071

Other characteristics

Voltage drop

Line-to-line voltage drop, in volts (V) per 100 metres and per amp (A) at 50 Hz with load spread over the run. For the case of loads concentrated at the end of a run, the voltage drops are double those shown in this table.
This calculation table applies to three-phase loads. For single-phase loads, the voltage drop given in the table is divided by 1.732.

For a cosine φ of	1	V/100 m/A	0.0083	0.0060	0.0049	0.0037	0.0029	0.0024	0.0018	0.0015	0.0012
	0.9	V/100 m/A	0.0081	0.0060	0.0050	0.0038	0.0030	0.0025	0.0019	0.0016	0.00125
	0.8	V/100 m/A	0.0076	0.0056	0.0047	0.0036	0.0029	0.0024	0.0018	0.0015	0.0012
	0.7	V/100 m/A	0.0069	0.0052	0.0043	0.0034	0.0027	0.0022	0.0017	0.0015	0.0011

Average weight

3L + N + PE		kg/m	13	16	18	22	26	30	37	45	60

Fire load value

		kWh/m	2.5	3.6	4.1	5.9	7.3	8.0	11.5	14.4	16

Radiated magnetic field

Radiated magnetic field strength 1 metre from the trunking	B	µT	0.4	0.5	0.75	0.9	1.3	1.6	2.1	3.0	3.8

Characteristics
Canalis KTA 3L + N + PER
With an internal aluminium PE conductor

Canalis KTA

Characteristics of run sections

			Busbar trunking rating (A)								
General characteristics	Symbol	Unit	800	1000	1250	1600	2000	2500	3200	4000	5000
Compliance with standards			IEC/EN 61439-6								
Protection degree	IP		55 Any installation (indoors only) is possible for the busbar truncking: edgewise, flat or vertical. See test condition, page 176.								
Shock resistance	IK		08								
Nominal rated current at an ambient temperature of 35°C	Inc	A	800	1000	1250	1600	2000	2500	3200	4000	5000
Rated insulation voltage	Ui	V	1000								
Rated operating voltage	Ue	V	1000								
Operating frequency	f	Hz	50 / 60 (for 60 to 400 Hz AC or for DC, consult us)								
Short-circuit current withstand											
Allowable rated short-time withstand current (t = 1 s)	Icw	kA	31	50	50	65	70	80	86	90	120
Allowable rated peak current	Ipk	kA	64	110	110	143	154	176	189	198	264
Maximum thermal stress I^2t (t = 1 s)	I^2t	$A^2s\ 10^6$	961	2500	2500	4225	4900	6400	7396	8100	14400
Conductor characteristics											
Phase conductors											
Average resistance at an ambient temperature of 20°C	R_{20}	mΩ/m	0.079	0.057	0.046	0.035	0.028	0.023	0.017	0.014	0.0115
Average resistance at Inc and at 35°C	R_1	mΩ/m	0.096	0.069	0.056	0.042	0.034	0.028	0.021	0.017	0.014
Average reactance at Inc and at 35°C and at 50 Hz	X_1	mΩ/m	0.018	0.016	0.015	0.013	0.011	0.008	0.007	0.007	0.004
Average impedance at Inc and at 35°C and at 50 Hz	Z_1	mΩ/m	0.097	0.071	0.058	0.044	0.035	0.029	0.022	0.018	0.0145
PE = internal aluminium protective conductor											
Average resistance at an ambient temperature of 20°C		mΩ/m	0.065	0.052	0.046	0.037	0.031	0.028	0.022	0.018	0.014
Aluminium cross-section		mm²	210	300	360	480	600	720	960	1200	1440
Fault loop characteristics											
Symmetrical components method — Ph/N at 20°C — Average resistance	$R_{0\ ph/N}$	mΩ/m	0.345	0.248	0.209	0.159	0.128	0.111	0.083	0.066	0.056
Ph/N at 20°C — Average reactance	$X_{0\ ph/N}$	mΩ/m	0.143	0.103	0.087	0.067	0.054	0.046	0.035	0.028	0.023
Ph/N at 20°C — Average impedance	$Z_{0\ ph/N}$	mΩ/m	0.373	0.269	0.226	0.172	0.139	0.120	0.090	0.072	0.060
Ph/PE at 20°C — Average resistance	$R_{0\ ph/PE}$	mΩ/m	0.479	0.342	0.287	0.218	0.175	0.153	0.114	0.091	0.077
Ph/PE at 20°C — Average reactance	$X_{0\ ph/PE}$	mΩ/m	0.236	0.168	0.142	0.108	0.087	0.075	0.057	0.045	0.038
Ph/PE at 20°C — Average impedance	$Z_{0\ ph/PE}$	mΩ/m	0.534	0.381	0.321	0.243	0.196	0.171	0.127	0.102	0.086
Impedance method — At 20°C — Average resistance — Ph/Ph	$R_{b0\ ph/ph}$	mΩ/m	0.160	0.115	0.097	0.073	0.059	0.051	0.038	0.031	0.026
Ph/N	$R_{b0\ ph/N}$	mΩ/m	0.161	0.115	0.097	0.074	0.059	0.052	0.039	0.031	0.026
Ph/PE	$R_{b0\ ph/PE}$	mΩ/m	0.177	0.128	0.108	0.082	0.066	0.058	0.043	0.034	0.029
At Inc and at 35°C — Average resistance — Ph/Ph	$R_{b1\ ph/ph}$	mΩ/m	0.193	0.140	0.120	0.091	0.075	0.066	0.049	0.039	0.033
Ph/N	$R_{b1\ ph/N}$	mΩ/m	0.194	0.140	0.120	0.092	0.075	0.066	0.049	0.039	0.033
Ph/PE	$R_{b1\ ph/PE}$	mΩ/m	0.214	0.155	0.133	0.102	0.084	0.075	0.056	0.036	0.038
At Inc and at 35°C and at 50 Hz — Average reactance — Ph/Ph	$X_{b\ ph/ph}$	mΩ/m	0.040	0.029	0.024	0.019	0.015	0.013	0.010	0.008	0.007
Ph/N	$X_{b\ ph/N}$	mΩ/m	0.064	0.047	0.040	0.030	0.024	0.021	0.016	0.013	0.011
Ph/PE	$X_{b\ ph/PE}$	mΩ/m	0.095	0.069	0.058	0.044	0.036	0.031	0.023	0.019	0.016

Other characteristics

Voltage drop

Line-to-line voltage drop, in volts (V) per 100 metres and per amp (A) at 50 Hz with load spread over the run. For the case of loads concentrated at the end of a run, the voltage drops are double those shown in this table.
This calculation table applies to three-phase loads. For single-phase loads, the voltage drop given in the table is divided by 1.732.

For a cosine φ of	1	V/100 m/A	0.0083	0.0060	0.0049	0.0037	0.0029	0.0024	0.0018	0.0015	0.0012
	0.9	V/100 m/A	0.0081	0.0060	0.0050	0.0038	0.0030	0.0025	0.0019	0.0016	0.00125
	0.8	V/100 m/A	0.0076	0.0056	0.0047	0.0036	0.0029	0.0024	0.0018	0.0015	0.0012
	0.7	V/100 m/A	0.0069	0.0052	0.0043	0.0034	0.0027	0.0022	0.0017	0.0015	0.0011

Average weight

3L + N + PER		kg/m	15	19	21	26	31	36	46	56	72

Fire load value

		kWh/m	2.5	3.6	4.1	5.9	7.3	8.0	11.5	14.4	16

Radiated magnetic field

Radiated magnetic field strength 1 metre from the trunking	B	µT	0.4	0.5	0.75	0.9	1.3	1.6	2.1	3.0	3.8

Characteristics of run sections

				Symbol	Unit	Busbar trunking rating (A)								
General characteristics						**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3200**	**4000**	**5000**
Compliance with standards						IEC/EN 61439-6								
Protection degree				IP		55 Any installation (indoors only) is possible for the busbar truncking: edgewise, flat or vertical. See test condition, page 176.								
Shock resistance				IK		08								
Nominal rated current at an ambient temperature of 35°C				Inc	A	800	1000	1250	1600	2000	2500	3200	4000	5000
Rated insulation voltage				Ui	V	1000								
Rated operating voltage				Ue	V	1000								
Operating frequency				f	Hz	50 / 60 (for 60 to 400 Hz AC or for DC, consult us)								
Short-circuit current withstand														
Allowable rated short-time withstand current (t = 1 s)				Icw	kA	35	65	65	85	110	113	113	120	120
Allowable rated peak current				Ipk	kA	73	143	143	187	242	248	248	264	264
Maximum thermal stress				I^2t	$A^2s.10^6$	1225	4225	4225	7225	12100	12769	12769	14400	14400
Conductor characteristics														
Phase conductors														
Average resistance at an ambient temperature of 20°C				R_{20}	mΩ/m	0.079	0.057	0.046	0.035	0.028	0.023	0.017	0.014	0.0115
Average resistance at Inc and at 35°C				R_1	mΩ/m	0.096	0.069	0.056	0.042	0.034	0.028	0.021	0.017	0.014
Average reactance at Inc and at 35°C and at 50 Hz				X_1	mΩ/m	0.018	0.016	0.015	0.013	0.011	0.008	0.007	0.007	0.004
Average impedance at Inc and at 35°C and at 50 Hz				Z_1	mΩ/m	0.097	0.071	0.058	0.044	0.035	0.029	0.022	0.018	0.0145
PE = internal copper protective conductor														
Average resistance at an ambient temperature of 20°C					mΩ/m	0.050	0.039	0.034	0.026	0.022	0.019	0.014	0.012	0.0095
Copper cross-section					mm²	210	300	360	480	600	720	960	1200	1440
Fault loop characteristics														
Symmetrical components method	Ph/N at 20°C	Average resistance		$R_{0\,ph/N}$	mΩ/m	0.345	0.248	0.209	0.159	0.128	0.111	0.083	0.066	0.056
		Average reactance		$X_{0\,ph/N}$	mΩ/m	0.143	0.103	0.087	0.067	0.054	0.046	0.035	0.028	0.023
		Average impedance		$Z_{0\,ph/N}$	mΩ/m	0.373	0.269	0.226	0.172	0.139	0.120	0.090	0.072	0.060
	Ph/PE at 20°C	Average resistance		$R_{0\,ph/PE}$	mΩ/m	0.247	0.186	0.160	0.125	0.102	0.087	0.067	0.054	0.044
		Average reactance		$X_{0\,ph/PE}$	mΩ/m	0.111	0.087	0.077	0.062	0.017	0.045	0.035	0.029	0.023
		Average impedance		$Z_{0\,ph/PE}$	mΩ/m	0.270	0.205	0.177	0.139	0.104	0.098	0.075	0.061	0.049
Impedance method	At 20°C	Average resistance	Ph/Ph	$R_{b0\,ph/ph}$	mΩ/m	0.160	0.115	0.097	0.073	0.059	0.051	0.038	0.031	0.026
			Ph/N	$R_{b0\,ph/N}$	mΩ/m	0.161	0.115	0.097	0.074	0.059	0.052	0.039	0.031	0.026
			Ph/PE	$R_{b0\,ph/PE}$	mΩ/m	0.135	0.099	0.084	0.064	0.052	0.044	0.032	0.027	0.022
	At Inc and at 35°C	Average resistance	Ph/Ph	$R_{b1\,ph/ph}$	mΩ/m	0.193	0.140	0.120	0.091	0.075	0.066	0.049	0.039	0.033
			Ph/N	$R_{b1\,ph/N}$	mΩ/m	0.194	0.140	0.120	0.092	0.075	0.066	0.049	0.039	0.033
			Ph/PE	$R_{b1\,ph/PE}$	mΩ/m	0.162	0.120	0.102	0.078	0.065	0.055	0.041	0.035	0.028
	At Inc and at 35°C and at 50 Hz	Average reactance	Ph/Ph	$X_{b\,ph/ph}$	mΩ/m	0.040	0.029	0.024	0.019	0.015	0.013	0.010	0.008	0.007
			Ph/N	$X_{b\,ph/N}$	mΩ/m	0.064	0.047	0.040	0.030	0.024	0.021	0.016	0.013	0.011
			Ph/PE	$X_{b\,ph/PE}$	mΩ/m	0.047	0.037	0.032	0.026	0.022	0.019	0.014	0.012	0.010

Other characteristics

Voltage drop

Line-to-line voltage drop, in volts (V) per 100 metres and per amp (A) at 50 Hz with load spread over the run. For the case of loads concentrated at the end of a run, the voltage drops are double those shown in this table.
This calculation table applies to three-phase loads. For single-phase loads, the voltage drop given in the table is divided by 1.732.

For a cosine φ of	1	V/100 m/A	0.0083	0.0060	0.0049	0.0037	0.0029	0.0024	0.0018	0.0015	0.0012
	0.9	V/100 m/A	0.0081	0.0060	0.0050	0.0038	0.0030	0.0025	0.0019	0.0016	0.00125
	0.8	V/100 m/A	0.0076	0.0056	0.0047	0.0036	0.0029	0.0024	0.0018	0.0015	0.0012
	0.7	V/100 m/A	0.0069	0.0052	0.0043	0.0034	0.0027	0.0022	0.0017	0.0015	0.0011

Average weight

3L + N + PER		kg/m	15	19	21	26	31	36	46	56	72

Fire load value

		kWh/m	2.5	3.6	4.1	5.9	7.3	8.0	11.5	14.4	16

Radiated magnetic field

Radiated magnetic field strength 1 metre from the trunking	B	µT	0.4	0.5	0.75	0.9	1.3	1.6	2.1	3.0	4.5

Other characteristics

Canalis KTA

Characteristics of run sections

Other characteristics

Choice of products when harmonics are present (see "harmonic currents" for more details).

THD ≤ 15 %	15 % < THD ≤ 33 %	THD > 33 %	Busbar trunking	Rating (A)
800	630	500	KTA	800
1000	800	630	KTA	1000
1200	1000	800	KTA	1250
1600	1250	1000	KTA	1600
2000	1600	1250	KTA	2000
2500	2000	1600	KTA	2500
3200	2500	2000	KTA	3200
4000	3200	2500	KTA	4000
5000	4000	3200	KTA	5000

Example. For a total rms current of 2356 A (estimation based on power drawn by loads, including harmonics), the operational current is 2500 A.
THD is estimated at 30 %. The appropriate trunking is KTA 3200 A.

Allowable current as a function of ambient temperature
Canalis busbar trunking is sized to operate at an ambient air which does not exceed +40°C and its average over a period of 24 h does not exceed +35°C. Above this value, the busbar trunking must be derated.

Where k1 = ambient temperature derating coefficient.

	Symbol	Unit	Ambiant temperature 24 hours average				
		°C	35	40	45	50	55
Busbar trunking installed indoors	k1	%	k1=1	k1=0.97	k1=0.93	k1=0.90	k1=0.86
Busbar trunking installed outside under an aluminium roof	k1	%	See "Busbar trunking installed outside under an aluminium roof" on page 159.				
Busbar trunking installed in a fire duct	k1	%	Please, see your sales office.				

Through-wall fire barrier
Tests performed in accordance with the requirements of NF EN 1363-1 and those specific to EN 1366-3.

	Performance criteria	
	Fire integrity	Thermal insulation
Without external fire barrier	120 mn	30 mn
With external fire barrier	120 mn	120 mn

Tap-off unit characteristics

General characteristics	Symbol	Unit	
Protection degree	IP		55
Shock resistance	IK		08
Rated insulation voltage	Ui	V	400 or 500 depending on protection device
Rated operating voltage	Ue	V	
Operating frequency	f	Hz	50/60

Derating to apply to the KTA5000

Installation type	Utilisation	
	Transport	Distribution
Edgewise installation	0.96	0.9
Flatwise installation	0.85	0.85

Determining the rating
Providing power distribution using Canalis

Canalis KTA

Apart from extreme atmospheres, Canalis can be installed anywhere!
The order described below is only aimed at presenting the different stages for a simple installation.
For a detailed design, it is necessary to use appropriate tools, approved by control bodies, in compliance with local installation standards.
The ***Ecodial*** software, edited by Schneider Electric, meets this requirement perfectly.

Design order:
1 – Define run layouts.
2 – Identify external influences.
3 – Determine the current rating (Ib).
4 – Calculate the nominal current (In) taking into account derating coefficients.
5 – Choose the busbar trunking rating.
6 – Check the rating with respect to allowable voltage drop.
7 – Check busbar trunking overloads.
8 – Check the rating with respect to short-circuit withstand current.
9 – Choose the source and feeder circuit breakers.

1 - Canalis busbar trunking layout

The layout of the distribution runs depends on the position of the loads and where the source is located.
Load protection is placed in the tap-off boxes, at the point of use.

A single and same Canalis busbar trunking supplies a group of loads of different ratings.

Schneider Electric has tools you can use to help you choose the architecture best suited to your application:
■ the **Idpro software** to simulate the organisation of your electrical networks
■ **application orientated technical guides** (car industry, data centers, shopping centres, etc).

2 - Identification of external influences

DDS0514S

Protection degree
Canalis KT busbar trunking is IP55 and IPxxD by construction.
This protection degree protects the busbar trunking against:
■ dust
■ penetration by a 1mm diameter wire
■ water projections from all directions.

It can be installed in almost all premises; for more details see the "Determining the protection degree" "Degree of protection IP", page 176.

Wherever the busbar trunking must pass outside the building, an aluminium roof can be supplied; consult your Schneider Electric distributor for information concerning this option.

Corrosive atmosphere
The busbar trunking has been qualified for industrial atmospheres.
For sulphurous atmospheres such as sulphur dioxide (SO_2) and hydrogen sulphide (H_2S), there is a suitable Canalis KT solution; consult your Schneider Electric distributor for more information on this option.
Example: paper mills, water treatment works, etc.

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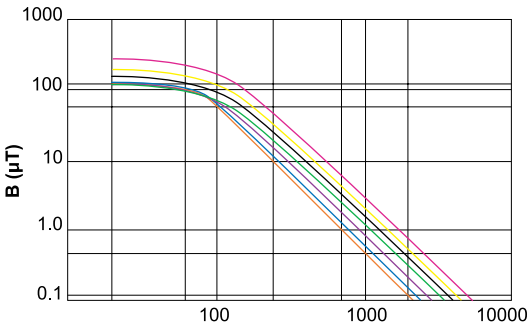

distance from the center of the Busbar (mm)

KTA10 (1000 A)
KTA12 (1250 A)
KTA16 (1600 A)
KTA20 (2000 A)
KTA25 (2500 A)
KTA32 (3200 A)
KTA40 (4000 A)

Radiated electromagnetic fields

According to the WHO (World Health Organisation), exposure to radiated electromagnetic fields above 0.2 micro Tesla can be dangerous causing a risk of cancer over the long term. Some countries have standardised the limit:
Sweden = 0.2 µT, at a distance of 1 metre.
All electrical conductors generate a magnetic field, the strength of which is proportional to the distance between them. The Canalis busbar trunking concept (metal casing and conductors near together) helps to considerably reduce radiated electromagnetic fields.
In specific cases where particularly low values are required (computer rooms, hospitals, some offices), it is important to keep in mind the following:
■ the induction generated around 3-phase distribution. This is proportional to the current and the distance between the conductors, and inversely proportional to the square of the distance with respect to the busbar trunking and the screening effect of the case
■ the induction generated around busbar trunking. This is less than the induction generated around an equivalent cable distribution
■ Canalis' steel casing. This attenuates the induction more than an equivalent aluminium casing of the same thickness (screening effect)
■ the induction generated around busbar trunking with sandwiched bars. This is particularly low because of the short distance between the bars and the additional attenuation provided by the steel casing.

3 - Determining the current rating (Ib)

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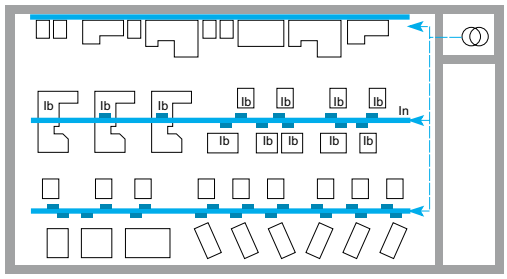


Calculation of the total current (Ib) absorbed by a run is equal to the sum of the currents absorbed by all of the loads.
The loads do not all operate at the same time and, as they are not continuously at full load, a stacking or simultaneity factor Ks has to be taken into account:
Ib = Σ Ib load x Ks

Stacking factor Ks depending on the number of loads according to IEC 61439- 1

Application	Number of loads	Ks coefficient
Lighting, heating	-	1
Distribution (mechanic workshop)	2...3	0.9
	4...5	0.8
	6...9	0.7
	10...40	0.6
	40 and over	0.5

Caution: *for industrial installations, remember to take into account future increases in the number of machines. A 20 % reserve is recommended.*

4 - Calculating nominal current (In) by applying a derating coefficient

Ambient temperature
Canalis busbar trunking is sized to operate at an average ambient temperature of +35°C. Above this value, the busbar trunking must be derated.

Example: Canalis KTA1250 A installed inside with an ambient temperature of 45°C:
In = 1250 x 0.93 = 1162 A.

In ⩾ Ib x k1 = Iz

Where k1 = ambient temperature derating coefficient.

Type of installation	Canalis KT	Ambient temperature 24 hours average (°C)				
		35	40	45	50	55
Busbar trunking installed inside	All	1	0.97	0.93	0.90	0.86
Busbar trunking installed outside under an aluminium roof	All	0.86	0.83	0.80	0.77	0.74
Busbar trunking installed in a fire duct		Please, see your sales office.				

Sizing the busbar trunking

Canalis KTA

5 - Choosing the busbar trunking rating according to the nominal current In

Nominal current In (A)	Busbar trunking
0 to 800	KTA0800
801 to 1000	KTA1000
1001 to 1250	KTA1250
1251 to 1600	KTA1600
1601 to 2000	KTA2000
2001 to 2500	KTA2500
2501 to 3200	KTA3200
3201 to 4000	KTA4000
4001 to 5000	KTA5000

6 - Checking the rating with respect to allowable voltage drop

The voltage drop between the start and all points of use must not be greater than the values in the table below:

Installation supplied by:	Lighting	Other use
Low voltage public distribution network	3 %	5 %
High voltage distribution network	6 %	8 %

The allowable voltage drop is that which is compatible with correct load operation (refer to manufacturers' guides).
■ Read voltage drop in V / 100 m / A for the busbar trunking chosen in accordance with temperature rise.
■ Determine the voltage drop for the worst case loads, i.e. those furthest from the source and for the highest current.
If the voltage drop exceeds allowable limits, choose the next rating up.
Re-check the voltage drop for the new rating.

Voltage drop, in volts per 100 metres and per amp for 3-phase 50 Hz current with load spread over the run. For loads concentrated at the end of a run (transport), the voltage drops are double those shown in the table below:

Delta U for evenly distributed loads (V/100m/A)									
	KTA08	KTA10	KTA12	KTA16	KTA20	KTA25	KTA32	KTA40	KTA50
Cosine φ = 1	0.0083	0.0060	0.0049	0.0037	0.0029	0.0024	0.0018	0.0015	0.0012
Cosine φ = 0.9	0.0081	0.0060	0.0050	0.0038	0.0030	0.0025	0.0019	0.0016	0.00125
Cosine φ = 0.8	0.0076	0.0056	0.0047	0.0036	0.0029	0.0024	0.0018	0.0015	0.0012
Cosine φ = 0.7	0.0069	0.0052	0.0043	0.0034	0.0027	0.0022	0.0017	0.0015	0.0011

Example: for the KTA1600 A busbar trunking:
Ib = 1530 A
In = 1600 A
Length L = 87 m
Cosine φ = 0.8.
According to the above table, the voltage drop coefficient for 100 metres and per amp is equal to 0.0036 V / 100 m / A.

0.0036 x 0.87 x 1530 = 4.79 V
For a voltage = 400 V, in percentages:
4.79 / 400 = 0.0119 that is to say 1.2 %.

7 - Protecting against busbar trunking overloads

To allow for extensions, the busbar trunking is generally protected at its nominal current Inc (or its allowable current Iz if the ambient temperature coefficient k1 is applied).
■ Circuit breaker protection:
□ adjust Ir of the circuit breaker such that:
Iz = Ib x k1 ⩽ Ir ⩽ Inc

Circuit breaker protection allows the Canalis busbar trunking to be used at full capacity because the standardised nominal current In of the circuit breaker is In ⩽ Inc / K2 where K2 = 1.

■ Protection using gG (gI) fuse:
□ determine the standardised nominal current In of the fuse such that: In ⩽ Inc / K2 where K2 = 1.1.
□ choose the standardised rating In that is equal to or just lower.
Check the following condition: In ⩾ Ib x k1 = Iz.
If this condition is not met, choose the busbar trunking with the next rating up.

Note: using gI fuses for protection means reducing the busbar trunking's allowable current.

8 - Checking the rating and choice of circuit breaker with respect to short-circuit withstand current

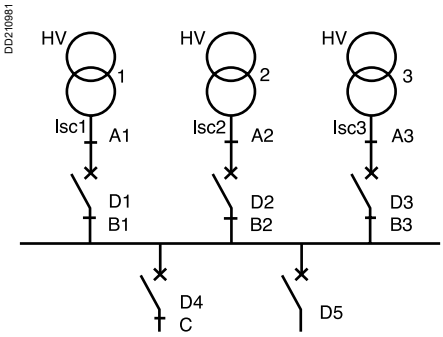
Short-circuit current withstand is shown in the table below.
This value must be greater than the prospective short-circuit current, at all points of the installation.
■ Calculate the short-circuit current value at the worst case points.
■ Check the chosen rating allows the busbar trunking to cope with this short-circuit current.
■ If this is not the case, there are 2 possible solutions:
■ choose a higher rating busbar trunking and re-check
■ provide a peak current limiting protection system upstream of the busbar trunking.
Warning: regarding the TNS or TNC earthing system, based on the value of L-PE fault loop impedance and the level of L-PE short-circuit, choose the correct coordination between the protection and the busbar trunking.

Canalis KT is more than sized to cope with short-circuit currents.
Some specific cases require checks to be carried out: transformers in parallel, low rating Canalis installed close to a transformer, etc.

Protection of circuits supplied by several paralleled transformers

9 - Choosing source and feeder circuit breakers according to the number and rating of the supply transformers

The choice of a circuit breaker to protect a circuit depends mainly on the following 2 criteria:
■ the nominal current of the source or the loads, which determines the appropriate rating of the device
■ the maximum short-circuit current at the point in question, which determines the minimum breaking capacity of the device.

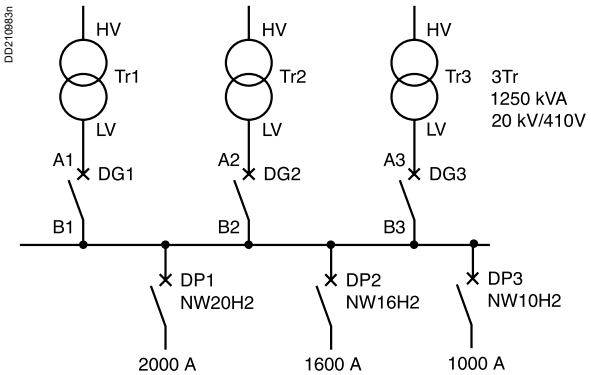


For the case of several parallel transformers(1):
■ the source circuit breaker D1 must have a breaking capacity greater than the largest of the 2 following values:
□ either Isc1 (short-circuit at B1)
□ or Isc2 + Isc3 (short-circuit at A1)
■ the feeder circuit breaker D4 must have a breaking capacity greater than Isc1 + Isc2 + Isc3.

The table allows the following to be determined:
■ the source circuit breaker, according to the number and rating of the supply transformers (in the case of a single transformer, the table recommends a fixed circuit breaker; in the case of several transformers, the table shows a drawout circuit breaker and a fixed circuit breaker)
■ the feeder circuit breaker, according to the sources and the nominal current rating of the feeder (the circuit breakers shown in the table can be replaced by limiter circuit breakers if the cascading technique is to be used with other circuit breakers downstream of the feeder).

(1) To couple several transformers in parallel, the transformers must have the same Usc, the same transformation ratio, the same coupling and the ratio of the power rating of the 2 transformers must be less than or equal to 2.

Example:
3 incoming 1250 kVA transformers 20 kV/410 V (In = 1760 A).
Feeders: including one 2000 A feeder, one 1600 A feeder and one 1000 A feeder.
What circuit breakers should be fitted at the incomer and for the feeders?
■ Incomer circuit breakers:
either the Drawout Masterpact NW20N1 or the Drawout NS2000N circuit breakers can be chosen. The choice will depend on the options required.
■ Feeder circuit breakers:
the NW20H2 for the 2000 A feeder, the NW16H2 for the 1600 A feeder and the NW10H2 for the 1000 A feeder are to be chosen.
These circuit breakers have the advantage of providing discrimination (full discrimination) with the NW12H1 or NS1250N circuit breakers.



Calculation assumption:

- the **upstream network short-circuit power is not defined**
- the transformers are 20 kV / 410 V
- between each transformer and corresponding circuit breaker there is 5 metres of KT busbar trunking
- between a source circuit breaker and a feeder circuit breaker there is 1 metre of bars
- the equipment is installed into a switchboard with an ambient temperature of 40°C.

Transformer				Source	Source circuit breaker	Feeder	Feeder circuit breaker				
P (kVA)	In (A)	Usc (%)	Isc (kA)	min. break. cap. (kA)		min. break. cap. (kA)	⩽ 100 A	160 A	250 A	400 A	630 A
1 transformer											
50	70	4	2	2	NSX100N TM-D / STR22SE	2	NSX100N				
100	141	4	4	4	NSX160N TM-D / STR22SE	4	NSX100N	NSX160N			
160	225	4	6	6	NSX250N TM-D / STR22SE	6	NSX100N	NSX160N	NSX250N		
250	352	4	9	9	NSX400N STR23SE / 53UE	9	NSX100N	NSX160N	NSX250N	NSX400N	
400	563	4	14	14	NSX630N STR23SE / 53UE	14	NSX100N	NSX160N	NSX250N	NSX400N	NSX630N
630	887	4	22	22	NS1000N NT10H1 NW10N1 Micrologic	22	NSX100N	NSX160N	NSX250N	NSX400N	NSX630N
800	1127	6	19	19	NS1250N NT12H1 NW12N1 Micrologic	19	NSX100N	NSX160N	NSX250N	NSX400N	NSX630N
1000	1408	6	23	23	NS1600N NT16H1 NW16N1 Micrologic	23	NSX100N	NSX160N	NSX250N	NSX400N	NSX630N
1250	1760	6	29	29	NW20N1 Micrologic	29	NSX100H	NSX160N	NSX250N	NSX400N	NSX630N
1600	2253	6	38	38	NW25H1 Micrologic	38	NSX100H	NSX160H	NSX250H	NSX400N	NSX630N
2000	2816	6	47	47	NW32H1 Micrologic	47	NSX100H	NSX160H	NSX250H	NSX400H	NSX630H
2500	3521	6	59	59	NW40H1 Micrologic	59	NSX100H	NSX160H	NSX250H	NSX400H	NSX630H
2 transformers											
50	70	4	2	2	NSX100N TM-D / STR22SE	4	NSX100N	NSX160N			
100	141	4	4	4	NSX160N TM-D / STR22SE	7	NSX100N	NSX160N	NSX250N		
160	225	4	6	6	NSX250N TM-D / STR22SE	11	NSX100N	NSX160N	NSX250N	NSX400N	
250	352	4	9	9	NSX400N STR23SE / 53UE	18	NSX100N	NSX160N	NSX250N	NSX400N	NSX630N
400	563	4	14	14	NSX630N STR23SE / 53UE	28	NSX100H	NSX160N	NSX250N	NSX400N	NSX630N
630	887	4	22	22	NS1000N NT10H1 NW10N1 Micrologic	44	NSX100H	NSX160H	NSX250H	NSX400N	NSX630N
800	1127	6	19	19	NS1250N NT12H1 NW12N1 Micrologic	38	NSX100H	NSX160H	NSX250H	NSX400N	NSX630N
1000	1408	6	23	23	NS1600N NT16H1 NW16N1 Micrologic	47	NSX100H	NSX160H	NSX250H	NSX400H	NSX630H
1250	1760	6	29	29	NW20N1 Micrologic	59	NSX100H	NSX160H	NSX250H	NSX400H	NSX630H
1600	2253	6	38	38	NW25H1 Micrologic	75	NSX100L	NSX160L	NSX250L	NSX400L	NSX630L
2000	2816	6	47	47	NW32H1 Micrologic	94	NSX100L	NSX160L	NSX250L	NSX400L	NSX630L
2500	3521	6	59	59	NW40H1 Micrologic	117	NSX100L	NSX160L	NSX250L	NSX400L	NSX630L
3 transformers											
50	70	4	2	4	NSX100N TM-D / STR22SE	5	NSX100N	NSX160N	NSX250N		
100	141	4	4	7	NSX160N TM-D / STR22SE	11	NSX100N	NSX160N	NSX250N	NSX400N	
160	225	4	6	11	NSX250N TM-D / STR22SE	17	NSX100N	NSX160N	NSX250N	NSX400N	NSX630N
250	352	4	9	18	NSX400N STR23SE / 53UE	26	NSX100H	NSX160N	NSX250N	NSX400N	NSX630N
400	563	4	14	28	NSX630N STR23SE / 53UE	42	NSX100H	NSX160H	NSX250H	NSX400N	NSX630N
630	887	4	22	44	NS1000N NT10L1 NW10H1 Micrologic	67	NSX100H	NSX160H	NSX250H	NSX400H	NSX630H
800	1127	6	19	38	NS1250N NT12H1 NW12N1 Micrologic	56	NSX100H	NSX160H	NSX250H	NSX400H	NSX630H
1000	1408	6	23	47	NS1600N NW16H1 Micrologic	70	NSX100H	NSX160H	NSX250H	NSX400H	NSX630H
1250	1760	6	29	59	NS2000N NW20N1 Micrologic	88	NSX100L	NSX160L	NSX250L	NSX400L	NSX630L
1600	2253	6	38	75	NS2500N NW25H2 Micrologic	113	NSX100L	NSX160L	NSX250L	NSX400L	NSX630L
2000	2816	6	47	94	NS3200N NW32H2 Micrologic	141	NSX100L	NSX160L	NSX250L	NSX400L	NSX630L

Usc values as defined in HD 428.

Coordination
Protection of busbar trunking against overloads

Canalis KTA

Introduction

System performance is guaranteed by coordination between the Schneider Electric circuit breaker protection and the distribution spread over the Canalis busbar trunking.

Fully coordinated distributed electrical distribution perfectly meets the requirements of safety, service continuity, system changes and simplicity.

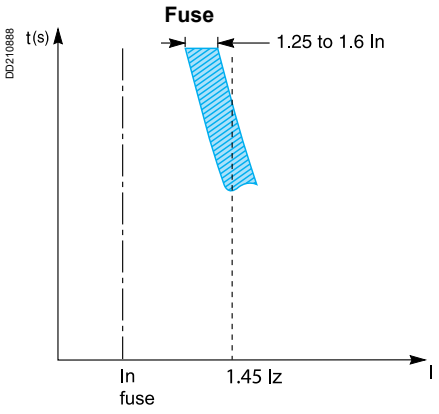
In the following pages, we will explain the advantages of the Schneider Electric system and Schneider Electric circuit breaker protection, as well as the selection guide tables for coordination between the Schneider Electric circuit breakers and the Canalis busbar trunking.

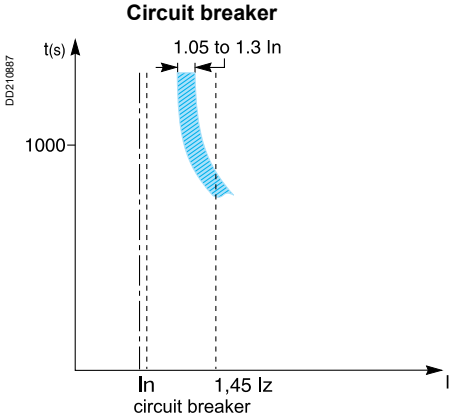
The use of Schneider Electric circuit breakers provides:
- ■ protection against overloads and short-circuits;
- ■ coordination between the protective devices and the Canalis busbar trunking:
  - □ full discrimination from 1 to 6300 A between all the circuit breakers of the Schneider Electric ranges
  - □ cascading:
    - reinforcement of the small and medium power busbar trunking short-circuit protective devices. This enables all short-circuit levels to be covered
    - protection of tap-offs using standard circuit breakers: this is achieved whatever the position of the tap-off unit on the Canalis busbar trunking
- ■ the use of standard circuit breakers makes for simpler design whilst respecting a high level of dependability
- ■ fault location is quick and easy
- ■ resetting is easy once the fault has been cleared by the site operator.

Adequacy between circuit breaker ratings and busbar trunking

In order to take into consideration thermal overload protection of busbar trunking, the different technologies of the protection switchgear and the maximum overload operating currents must be considered.

By design, the thermal adjustment of a circuit breaker is more accurate.





- ■ Iz = Ib x k1 x k2
  - □ Ib : current rating
  - □ Iz : allowable busbar trunking current
  - □ k1 : temperature derating coefficient
  - □ k2 : derating coefficient linked to the type of switchgear:
    - fuse k2 = 1.1
    - circuit breaker k2 = 1.
- ■ Iz = Ib x k1.
- ■ In = I standardised fuse or circuit breaker.

Example:
For a current rating Ib = 1900 A in an ambient temperature of 35°C:
- ■ fuse protection:
  Iz = Ib x k1 x k2 = 1900 x 1 x 1.1 = 2090 A
  The correct choice of busbar trunking is the KTA25 (Iz = 2500 A)
- ■ circuit breaker protection:
  Iz = Ib x k1 x k2 = 1900 x 1 x 1 = 1900 A
  The correct choice of busbar trunking is the KTA20 (Iz = 2000 A),

A difference of 20 % in the measurement of operating currents results in an over-rating of the busbar trunking of 10 % if it is protected by fuses.

Explanations
- ■ Calibration of thermal asymptotes:
  - □ the distribution fuse is calibrated to operate for overloads of between 1.25 and 1.6 times its nominal current (In fuse)
  - □ the circuit breaker is calibrated to operate for overloads of between 1.05 and 1.3 times (1.2 for circuit breakers with electronic protection) its setting current (Ir which is a function of circuit breaker In).
- ■ Maximum operating current:
  - □ the maximum limit for this current is set by installation standards (IEC 364, NFC 15-100, etc) at 1.45 times the allowable current of the busbar trunking.

Thermal setting accuracy

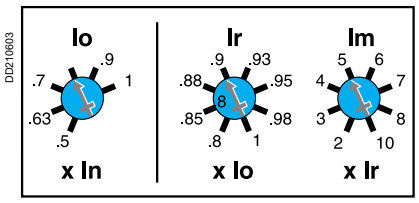
■ A fuse is for a fixed rating, a change in the current to be protected requires a change of fuse.
The spacing between 2 fuse ratings is around 25 %.
The typical ratings are conform to the numbers of the "Renard" series.
Example: 40 - 50 - 63 - 80 - 100 - 125 - 160 - 200 - etc.
■ The circuit breaker provides the possibility of fine adjustment:
□ 5 % for circuit breakers fitted with standard thermal-magnetic trip units
□ 3 % for circuit breakers fitted with electronic trip units.
A circuit breaker with a nominal rating of 100 A can be easily set to the following values:
Ir = 100 A, 95 A, 90 A, 85 A, 80 A.

Example:
A circuit breaker with a nominal rating of 1600 A set at 1440 A would be used to protect a KTA1600 (Inc = 1440 A) busbar trunking used in an ambient temperature of 50°C (k1 = 0.9).

Setting range of circuit breakers fitted with electronic trip units

Circuit breakers fitted with electronic trip units have the following setting ranges:
■ thermal protection Ir adjustable from 0.4 In to In
■ short-circuit protection adjustable from 2 Ir to 10 Ir

Example:
A 250 A circuit breaker (NS250N fitted with an STR22SE) can easily have the following settings:
■ thermal protection from 100 to 250 A
■ short-circuit protection from 200 to 2500 A.



Example of setting possibilities.

Avdantages
This provides great flexibility for:
■ modifications (flexibility), extensions (installation changes): the protective devices easily adapt to the load to be protected and to the earthing system (protection of personnel and equipment)
■ maintenance, the use of this type of device considerably reduces the stocks of maintenance components.

Coordination
Protection against short-circuits

Canalis KTA

Busbar trunking characteristics

The busbar trunking must meet all of the rules detailed in IEC 61439-1 and IEC 61439-6.
The sizing of busbar trunking for short-circuits is determined by the following characteristics:
■ the allowable rated peak current Ipk (kÂ).
This characteristic represents the busbar trunking's instantaneous electrodynamic withstand limits. The peak current value is often the most restrictive instantaneous characteristic for the protective device
■ the maximum short-time withstand rms current Icw (kArms/s).
This characteristic represents the allowable temperature rise limit of the conductors during a given time period (0.1 to 1s)
■ the thermal stress in A^2s.
This characteristic represents the instantaneous thermal stress withstand of the busbar trunking. In general, if the short-circuit generates fault conditions compatible with the first two characteristics, this constraint is "automatically satisfied".

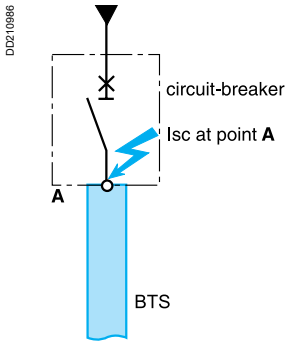
Circuit breaker characteristics

The circuit breaker must satisfy the requirements of product construction standards (IEC 60947-2, etc) and installation standards (IEC 60364 or those in force in the country concerned), i.e. have a breaking capacity Icu(1) greater than the prospective short-circuit current Isc at the point where it is installed.

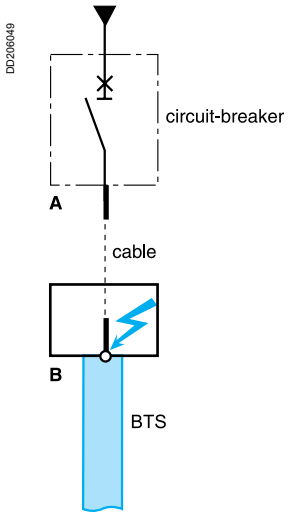
(1) Installation standard IEC 60364 and construction standards specify the breaking capacity of a circuit breaker as being:
- the ultimate breaking capacity, Icu, if it is not coordinated with an upstream protective device,
- the reinforced breaking capacity (cascading) if there is coordination with the upstream protective device.

Circuit breaker / busbar trunking system characteristics

When the busbar trunking is directly protected, the circuit breaker must be chosen as follows:
■ Icu of the circuit breaker ≥ prospective Isc at point A
■ I peak of the busbar trunking ≥ prospective asymmetrical or limited Isc at point A
■ busbar trunking thermal withstand Icw ≥ thermal stress through the busbar trunking.

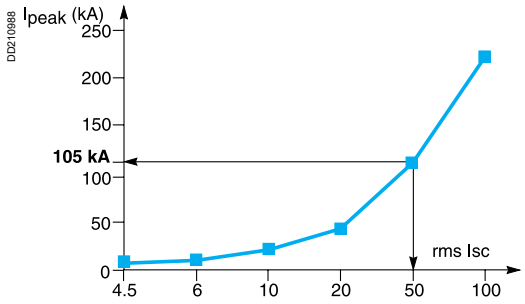


When the busbar trunking is protected downstream of a cable, the circuit breaker must be chosen as follows:
■ Icu of the circuit breaker ≥ prospective Isc at point A
■ I peak of the busbar trunking ≥ prospective asymmetrical or limited Isc at point B
■ busbar trunking thermal withstand Icw ≥ thermal stress through the busbar trunking.

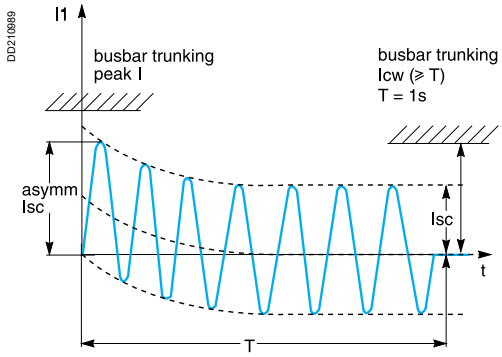


Circuit breaker / busbar trunking coordination

Non-limiting or time-delayed circuit breaker



Current value of the 1st peak as a function of Isc rms.



Transient and established conditions of a short duration short-circuit.

This is applicable for non-limiting circuit breakers (instantaneous or time-delayed) and time-delayed limiting circuit breakers.
These are mainly air circuit breakers (⩾ 800 A).

This type of circuit breaker is used for time discrimination and is therefore often associated with KT type busbar trunking.

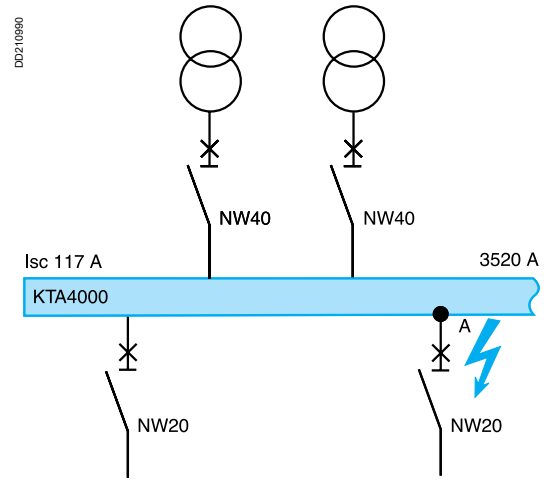
It must be checked that the busbar trunking can handle the peak fault current to which it may be subjected and the thermal withstand during any time delay.
The allowable peak current (I peak) of the busbar trunking must be greater than the peak current value of the prospective asymmetrical short-circuit current (Isc asym) at A.
The asymmetrical short-circuit current value is obtained by multiplying the symmetrical short-circuit current value (Isc) by a standardised asymmetrical coefficient (k).
It is the first value of the 1st transient asymmetrical peak of the short-circuit which is taken into account.

Standardised table for calculating asymmetrical short-circuit values

Isc: prospective symmetrical short-circuit value	**Asymmetrical coefficient**
kA (rms value)	**k**
4,5 ⩽ I ⩽ 6	1.5
6 < I ⩽ 10	1.7
10 < I ⩽ 20	2.0
20 < I ⩽ 50	2.1
50 < I	2.2

Example:
For a circuit with a prospective short-circuit current of 50 kA rms, the 1st peak reaches 105 kÂ (50 kA x 2.1), see figure opposite.

The short-time withstand value (Icw) of the busbar trunking must be greater than the current flowing through the installation during the duration of the short-circuit (Isc) (duration T - total breaking time - including any time delay).



At point A, the prospective short-circuit current is 117 kArms.
To meet this constraint, a reinforced KTA4000 is needed because:
Icw KTA4000 > Isc prospective at point A.

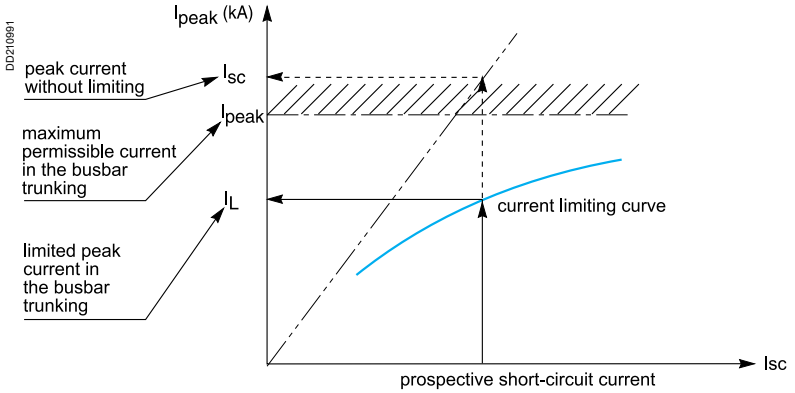
The Icw or Ipk values of standard or reinforced KTA trunking allow the easy construction of circuits with time discrimination, even with high short-circuit values.

Circuit breaker / busbar trunking coordination

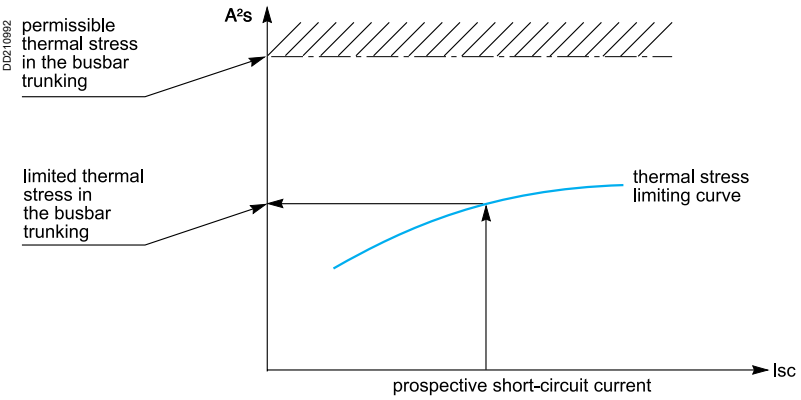
Limiter circuit breaker

This is mainly applicable to the protection of busbar trunking using moulded case circuit breakers (≤ 1600 A).
This type of circuit breaker is used for energy discrimination and is therefore often associated with Canalis KTA.

Here, it has to be checked that the busbar trunking can cope with the peak current (Ipk) limited by the protective device and the corresponding thermal stress (A²s):
■ the peak current (I peak), once limited by the circuit breaker, must be less than the allowable peak current value of the busbar trunking
■ the thermal stress, once limited by the circuit breaker, must be less than the allowable thermal stress of the busbar trunking.



Checking peak I withstand of the busbar trunking.



Checking A²s withstand of the busbar trunking.

Protecting busbar trunking with a Compact NS circuit breaker

Limiting capacity

Compact NS circuit breakers are high current limiting circuit breakers.
The limiting capacity of a circuit breaker is its capacity to only allow a limited current (IL) to flow in the event of a short-circuit. This limited current being less than the prospective asymmetrical peak short-circuit current (Isc).
This greatly reduces the electrodynamic and thermal constraints on the installation to be protected.

Applying limiting capacity to busbar trunking protection

Even if this combination is less frequent than for KS busbar trunking, some KT ratings can benefit from the association with a limiter circuit breaker.

High power installation
If the circuit breaker's limiting capacity is not taken into account:
- the prospective short-circuit current value (Isc) at point A would be 121 kÂ
- KTA1600 would be the appropriate choice of busbar trunking.

If the limiting capacity of the Compact NS1000L is taken into account, the limited Ipk is 50 kÂ < 110 kÂ of the KTA1000 busbar trunking.

Because of the high limiting capacity of the Compact NS1000L, a KTA1000 busbar trunking can be installed into a prospective short-circuit current at point A of 150 kA rms or 300 kÂ.

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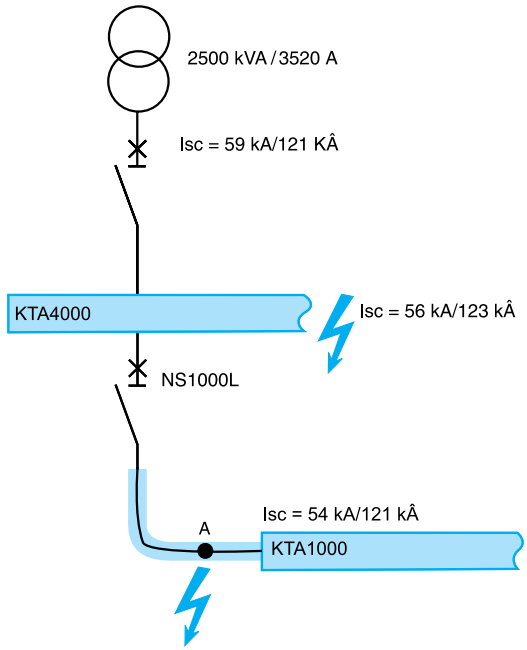


Selection guide

Canalis KTA

The selection guide below will, according to the prospective short-circuit current of the installation, allow you to determine the type of circuit breaker needed to fully protect the busbar trunking.

Example: for an installation with a prospective Isc of 150 kA, the circuit breaker needed to protect a KTA1250 A busbar trunking is a **NS100L** or **NT10L1** (the rating depends on the circuit's nominal current).

For a voltage of 380 / 415 V

Type of Canalis busbar trunking		**KTA0800**					
Isc max kArms		**30 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NSX	NSX630F (≥ 36 kA)	NSX630N/H/S/L	NSX630H/S/L	NSX630S/L	NSX630S/L	NSX630L
	Compact NS	NS630bN **NS800N** NS1000N			NS630bL **NS800L** NS1000L		NS630bLB **NS800LB**
	Masterpact MTZ1	MTZ1 06 H1/H2/H3/L1 **MTZ1 08 H1/H2/H3/L1** MTZ1 10 H1/H2/H3/L1	MTZ1 06 L1 **MTZ1 08 L1** MTZ1 10 L1				
	Masterpact MTZ2	**MTZ2 08 N1/H1/H2/L1** MTZ2 10 N1/H1/H2/L1					
	Masterpact NT	NT06 H1 **NT08 H1** NT10 H1			NT06 L1 **NT08 L1** NT10 L1		
	Masterpact NW	**NW08H1** NW10H1					
Type of Canalis busbar trunking		**KTA0800 Reinforced short-circuit level**					
Isc max kArms		**30 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NSX	NSX630F (≥ 36 kA)	NSX630N/H/S/L	NSX630H/S/L	NSX630S/L	NSX630S/L	NSX630L
	Compact NS	NS630bN **NS800N** NS1000N				NS630bL **NS800L** NS1000L	NS630bLB **NS800LB**
	Masterpact MTZ1	MTZ1 06 H1/H2/H3/L1 **MTZ1 08 H1/H2/H3/L1** MTZ1 10 H1/H2/H3/L1	MTZ1 06 L1 **MTZ1 08 L1** MTZ1 10 L1				
	Masterpact MTZ2	**MTZ2 08 N1/H1/H2/L1** MTZ2 10 N1/H1/H2/L1					
	Masterpact NT	NT06 H1 **NT08 H1** NT10 H1				NT06 L1 **NT08 L1** NT10 L1	
	Masterpact NW	**NW08H1** NW10H1					
Type of Canalis busbar trunking		**KTA1000**					
Isc max kArms		**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NS		NS800N **NS1000N** NS1250N				NS800L **NS1000L**
	Masterpact MTZ1	MTZ1 08 H1/H2/H3/L1 **MTZ1 10 H1/H2/H3/L1** MTZ1 12 H1/H2/H3	MTZ1 08 H2/H3/L1 **MTZ1 10 H2/H3/L1** MTZ1 12 H2/H3	MTZ1 08 L1 **MTZ1 10 L1**			
	Masterpact MTZ2	MTZ2 08 N1/H1/H2/L1 **MTZ2 10 N1/H1/H2/L1** MTZ2 12 N1/H1/H2/L1	MTZ2 08 H1/H2/L1 **MTZ2 10 H1/H2/L1** MTZ2 12 H1/H2/L1				
	Masterpact NT	NT08H1 **NT10H1** NT12H1	NT08H2 **NT10H2** NT12H2				NT08L1 **NT10L1**
	Masterpact NW	NW08N1 **NW10N1** NW12N1	NW08H1 **NW10H1** NW12H1				
Type of Canalis busbar trunking		**KTA1000 Reinforced short-circuit level**					
Isc max kArms		**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NS		NS800N **NS1000N**	NS800H **NS1000H** NS1250H			NS800L **NS1000L**
	Masterpact MTZ1	MTZ1 08 H1/H2/H3/L1 **MTZ1 10 H1/H2/H3/L1** MTZ1 12 H1/H2/H3	MTZ1 08 H2/H3/L1 **MTZ1 10 H2/H3/L1** MTZ1 12 H2/H3	MTZ1 08 H3/L1 **MTZ1 10 H3/L1** MTZ1 12 H3	MTZ1 08 L1 **MTZ1 10 L1**		
	Masterpact MTZ2	MTZ2 08 N1/H1/H2/L1 **MTZ2 10 N1/H1/H2/L1** MTZ2 12 N1/H1/H2/L1	MTZ2 08 H1/H2/L1 **MTZ2 10 H1/H2/L1** MTZ2 12 H1/H2/L1		MTZ2 08 L1 **MTZ2 10 L1** MTZ2 12 L1		
	Masterpact NT	NT08H1 **NT10H1** NT12H1	NT08H2 **NT10H2** NT12H2				NT08L1 **NT10L1**
	Masterpact NW	NW08N1 **NW10N1** NW12N1		NW08H1 **NW10H1** NW12H1	NW08L1 **NW10L1** NW12L1		

Type of Canalis busbar trunking		KTA1250					
	Isc max kArms	42 kA	50 kA	65 kA	85 kA	100 kA	150 kA
Type of circuit breaker	Compact NS		NS1000N **NS1250N** **NS1600N**				**NS1000L**
	Masterpact MTZ1	MTZ1 10 H1/H2/H3/L1 **MTZ1 12 H1/H2/H3** MTZ1 16 H1/H2/H3	MTZ1 10 H2/H3/L1 **MTZ1 12 H2/H3** MTZ1 16 H2/H3	MTZ1 10 L1			
	Masterpact MTZ2	MTZ2 10 N1/H1/H2/L1 MTZ2 12 N1/H1/H2/L1 MTZ2 16 N1/H1/H2/L1	MTZ2 10 H1/H2/L1 MTZ2 12 H1/H2/L1 MTZ2 16 H1/H2/L1				
	Masterpact NT	NT10H1 **NT12H1** **NT16H1**	NT10H2 **NT12H2** **NT16H2**				**NT10L1**
	Masterpact NW	NW10N1 **NW12N1** **NW16N1**	NW10H1 **NW12H1** **NW16H1**				
Type of Canalis busbar trunking		**KTA1250 Reinforced short-circuit level**					
	Isc max kArms	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NS		NS1000N **NS1250N** **NS1600N**	NS1000H **NS1250H** **NS1600H**			NS1000L
	Masterpact MTZ1	MTZ1 10 H1/H2/H3/L1 **MTZ1 12 H1/H2/H3** MTZ1 16 H1/H2/H3	MTZ1 10 H2/H3/L1 **MTZ1 12 H2/H3** MTZ1 16 H2/H3	MTZ1 10 H3/L1 **MTZ1 12 H3** MTZ1 16 H3	MTZ1 10 L1		
	Masterpact MTZ2	MTZ2 10 N1/H1/H2/L1 MTZ2 12 N1/H1/H2/L1 MTZ2 16 N1/H1/H2/L1	MTZ2 10 H1/H2/L1 MTZ2 12 H1/H2/L1 MTZ2 16 H1/H2/L1		MTZ2 10 L1 **MTZ2 12 L1** **MTZ2 16 L1**		
	Masterpact NT	NT10H1 NT12H1 NT16H1	NT10H2 NT12H2 NT16H2				NT10L1
	Masterpact NW	NW10N1 **NW12N1** **NW16N1**		NW10H1 **NW12H1** **NW16H1**	NW10L1 **NW12L1** **NW16L1**		
Type of Canalis busbar trunking		**KTA1600**					
	Isc max kArms	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NS		NS1250N **NS1600N**	NS1250H **NS1600H** **NS1600bN** NS2000N			
	Masterpact MTZ1	**MTZ1 12 H1/H2/H3** MTZ1 16 H1/H2/H3	**MTZ1 12 H2/H3** MTZ1 16 H2/H3	**MTZ1 12 H3** MTZ1 16 H3			
	Masterpact MTZ2	MTZ2 12 N1/H1/H2/L1 MTZ2 16 N1/H1/H2/L1 MTZ2 20 N1/H1/H2/H3/L1	MTZ2 12 H1/H2/L1 MTZ2 16 H1/H2/L1 MTZ2 20 H1/H2/H3/L1		MTZ2 12 L1 **MTZ2 16 L1** MTZ2 20 L1		
	Masterpact NT	**NT12H1** NT16H1	**NT12H2** NT16H2				
	Masterpact NW	NW12N1 **NW16N1** NW20H1		NW12H1 **NW16H1** NW20H1		NW12L1 **NW16L1** NW20L1	
Type of Canalis busbar trunking		**KTA1600 PER Reinforced short-circuit level**					
	Isc max kArms	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NS		NS1250N	NS1250H NS1600H **NS1600bN** NS2000N	**NS1600bH** NS2000H		
	Masterpact MTZ1	**MTZ1 12 H1/H2/H3** MTZ1 16 H1/H2/H3	**MTZ1 12 H2/H3** MTZ1 16 H2/H3	**MTZ1 12 H3** MTZ1 16 H3			
	Masterpact MTZ2	MTZ2 12 N1/H1/H2/L1 MTZ2 16 N1/H1/H2/L1 MTZ2 20 N1/H1/H2/H3/L1	MTZ2 12 H1/H2/L1 MTZ2 16 H1/H2/L1 MTZ2 20 H1/H2/H3/L1		MTZ2 12 H2/L1 MTZ2 16 H2/L1 MTZ2 20 H2/H3/L1	MTZ2 12 L1 **MTZ2 16 L1** MTZ2 20 L1	
	Masterpact NT	NT12H1 **NT16H1**	NT12H2 **NT16H2**				
	Masterpact NW	NW12N1 **NW16N1**		NW12H1 **NW16H1** NW20H1	NW12H2 **NW16H2** NW20H2		NW12L1 **NW16L1** NW20L1
Type of Canalis busbar trunking		**KTA2000**					
	Isc max kArms	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**	**150 kA**
Type of circuit breaker	Compact NS			NS1600bN **NS2000N**			
	Masterpact MTZ1	MTZ1 16 H1/H2/H3	MTZ1 16 H2/H3	MTZ1 16 H3			
	Masterpact MTZ2	MTZ2 16 N1/H1/H2/L1 MTZ2 20 N1/H1/H2/H3/L1 MTZ2 25 H1/H2/H3	MTZ2 16 H1/H2/L1 MTZ2 20 H1/H2/H3/L1		MTZ2 16 L1 **MTZ2 20 L1**		
	Masterpact NT	NT16H1	NT16H2				
	Masterpact NW	NW16N1 **NW20H1** NW25H1		NW16H1 **NW20H1** NW25H1		NW 16 L1 **NW20L1**	

Selection guide

Canalis KTA

Type of Canalis busbar trunking		KTA2000 Reinforced short-circuit level					
Isc max kArms		42 kA	50 kA	65 kA	85 kA	100 kA	150 kA
Type of circuit breaker	Compact NS			NS1600bN **NS2000N**	NS1600bH **NS2000H**		
	Masterpact MTZ1	MTZ1 16 H1/H2/H3	MTZ1 16 H2/H3	MTZ1 16 H3			
	Masterpact MTZ2	MTZ2 16 N1/H1/H2/L1 **MTZ2 20 N1/H1/H2/H3/L1** MTZ2 25 H1/H2/H3	MTZ2 16 H1/H2/L1 **MTZ2 20 H1/H2/H3/L1**		MTZ2 16 H2/L1 **MTZ2 20 H2/H3/L1** MTZ2 25 H2/H3		MTZ2 16 L1 **MTZ2 20 L1**
	Masterpact NT	NT16H1	NT16H2				
	Masterpact NW	NW16N1 **NW20H1** NW25H1		NW16H1 **NW20H1** NW25H1		NW16H2 **NW20H2** NW25H2	NW16L1 **NW20L1**

Type of Canalis busbar trunking		KTA2500					
Isc max kArms		42 kA	50 kA	65 kA	80 kA	100 kA	150 kA
Type of circuit breaker	Masterpact MTZ2	MTZ2 20 H1/H2/H3/L1 **MTZ2 25 H1/H2/H3** MTZ2 32 H1/H2/H3			MTZ2 20 H2/H3/L1 **MTZ2 25 H2/H3** MTZ2 32 H2/H3	MTZ2 20 L1	MTZ2 20 L1
	Masterpact NW			NW20H1 **NW25H1** NW32H1	NW20H2 **NW25H2** NW32H2	NW20L1	NW20L1

Type of Canalis busbar trunking		KTA2500 Reinforced short-circuit level					
Isc max kArms		42 kA	50 kA	65 kA	80 kA	100 kA	110 kA
Type of circuit breaker	Masterpact MTZ2	MTZ2 20 H1/H2/H3/L1 **MTZ2 25 H1/H2/H3** MTZ2 32 H1/H2/H3			MTZ2 20 H2/H3/L1 **MTZ2 25 H2/H3** MTZ2 32 H2/H3		MTZ2 20 H3/L1[1] **MTZ2 25 H3** MTZ2 32 H3
	Masterpact NW			NW20H1 **NW25H1** NW32H1		NW20H2 **NW25H2** NW32H2	NW20L1 (150 kA) **NW25H3** NW32H3

Type of Canalis busbar trunking		KTA3200					
Isc max kArms		42 kA	50 kA	65 kA	85 kA	100 kA	110 kA
Type of circuit breaker	Masterpact MTZ2	MTZ2 25 H1/H2/H3 **MTZ2 32 H1/H2/H3** MTZ2 40 H1/H2/H3			MTZ2 25 H2/H3 **MTZ2 32 H2/H3** MTZ2 40 H2/H3		
	Masterpact MTZ3	MTZ3 40 H1/H2					
	Masterpact NW			NW25H1 **NW32H1** NW40H1	NW25H2 **NW32H2** NW40H2 NW40bH1		

Type of Canalis busbar trunking		KTA3200 Reinforced short-circuit level					
Isc max kArms		42 kA	50 kA	65 kA	85 kA	100 kA	110 kA
Type of circuit breaker	Masterpact MTZ2	MTZ2 25 H1/H2/H3 **MTZ2 32 H1/H2/H3** MTZ2 40 H1/H2/H3			MTZ2 25 H2/H3 **MTZ2 32 H2/H3** MTZ2 40 H2/H3		MTZ2 25 H3 **MTZ2 32 H3** MTZ2 40 H3
	Masterpact MTZ3	MTZ3 40 H1/H2					MTZ3 40 H2
	Masterpact NW			NW25H1 **NW32H1** NW40H1		NW25H2 **NW32H2** NW40H2 NW40bH1	 **NW32H3** NW40H3 NW40bH2

Type of Canalis busbar trunking		KTA4000					
Isc max kArms		42 kA	50 kA	65 kA	90 kA	100 kA	110 kA
Type of circuit breaker	Masterpact MTZ2	MTZ2 32 H1/H2/H3 **MTZ2 40 H1/H2/H3**			MTZ2 32 H2/H3 **MTZ2 40 H2/H3**		
	Masterpact MTZ3	MTZ3 40 H1/H2 MTZ3 50 H1/H2					
	Masterpact NW			NW32H1 **NW40H1** NW40bH1 NW50H1	NW32H2 **NW40H2** NW40bH1 NW50H1		

Type of Canalis busbar trunking		KTA4000 Reinforced short-circuit level					
Isc max kArms		42 kA	50 kA	65 kA	90 kA	100 kA	120 kA
Type of circuit breaker	Masterpact MTZ2	MTZ2 32 H1/H2/H3 **MTZ2 40 H1/H2/H3**			MTZ2 32 H2/H3 **MTZ2 40 H2/H3**		MTZ2 32 H3 **MTZ2 40 H3**
	Masterpact MTZ3	MTZ3 40 H1/H2 MTZ3 50 H1/H2					MTZ3 40 H2 MTZ3 50 H2
	Masterpact NW			NW32H1 **NW40H1** NW40bH1 NW50H1		NW32H2 **NW40H2** NW40bH1 NW50H1	NW32H3 **NW40H3** NW40bH2 NW50H2

Type of Canalis busbar trunking		KTA5000 / KTA 5000 Reinforced short-circuit level					
Isc max kArms		42 kA	50 kA	65 kA	90 kA	100 kA	120 kA
Type of circuit breaker	Masterpact MTZ2		MTZ2 32 H1/H2/H3 MTZ2 40 H1/H2/H3		MTZ2 32 H2/H3 MTZ2 40 H2/H3		MTZ2 32 H3 MTZ2 40 H3
	Masterpact MTZ3		MTZ3 40 H1/H2 **MTZ3 50 H1/H2** MTZ3 63 H1/H2				MTZ3 40 H2 **MTZ3 50 H2** MTZ3 63 H2

(1) L1 up to 150 kA.

For a voltage of 660 / 690 V

Type of Canalis busbar trunking		KTA1000						
	Isc max kArms	25 kA	30 kA	42 kA	50 kA	65 kA	75 kA	100 kA
Type of circuit breaker	Compact NS		NS800N **NS1000N** NS1250N	NS800H **NS1000H** NS1250H			NS800LB	
	Masterpact MTZ1	MTZ1 08 H1/H2/L1 **MTZ1 10 H1/H2/L1** MTZ1 12 H1/H2	MTZ1 08 H1/H2 **MTZ1 10 H1/H2**					
	Masterpact MTZ2	MTZ2 08 N1/H1/H2/L1 **MTZ2 10 N1/H1/H2/L1** MTZ2 12 N1/H1/H2/L1			MTZ2 08 H1/H2/L1 **MTZ2 10 H1/H2/L1** MTZ2 12 H1/H2/L1			
	Masterpact NT			NT08H1/H2 **NT10H1/H2** NT12H1/H2				
	Masterpact NW			NW08N1 **NW10N1** NW12N1	NW08H1 **NW10H1** NW12H1			

Type of Canalis busbar trunking		KTA1000 Reinforced short-circuit level						
	Isc max kArms	25 kA	30 kA	42 kA	50 kA	65 kA	75 kA	100 kA
Type of circuit breaker	Compact NS		NS800N **NS1000N** NS1250N	NS800H **NS1000H** NS1250H			NS800LB	
	Masterpact MTZ1	MTZ1 08 H1/H2/L1 **MTZ1 10H1/H2/L1** MTZ1 12 H1/H2	MTZ1 08 H1/H2 **MTZ1 10H1/H2**					
	Masterpact MTZ2	MTZ2 8 N1/H1/H2/L1 **MTZ2 10 N1/H1/H2/L1** MTZ2 12 N1/H1/H2/L1			MTZ2 8 H1/H2/L1 **MTZ2 10 H1/H2/L1** MTZ2 12 H1/H2/L1	MTZ2 8 H/L1 **MTZ2 10 L1** MTZ2 12 L1		
	Masterpact NT			NT08H1/H2 NT10H1/H2 NT12H1/H2				
	Masterpact NW			NW08N1 **NW10N1** NW12N1		NW08H1 **NW10H1** NW12H1		

Type of Canalis busbar trunking		KTA1250						
	Isc max kArms	25 kA	30 kA	42 kA	50 kA	65 kA	75 kA	100 kA
Type of circuit breaker	Compact NS		NS1000N NS1250N NS1600N	NS1000H NS1250H NS1600H				
					NS1600bN			
	Masterpact MTZ1	MTZ1 08 H1/H2/L1 MTZ1 12 H1/H2 MTZ1 16 H1/H2	MTZ1 08 H1/H2					
	Masterpact MTZ2	MTZ2 10 N1/H1/H2/L1 MTZ2 12 N1/H1/H2/L1 MTZ2 16 N1/H1/H2/L1			MTZ2 10 H1/H2/L1 MTZ2 12 H1/H2/L1 MTZ2 16 H1/H2/L1			
	Masterpact NT			NT10H1/H2 NT12H1/H2 NT16H1/H2				
	Masterpact NW			NW10N1 NW12N1 NW16N1	NW10H1 NW12H1 NW16H1			

Type of Canalis busbar trunking		KTA1250 Reinforced short-circuit level						
	Isc max kArms	25 kA	30 kA	42 kA	50 kA	65 kA	75 kA	100 kA
Type of circuit breaker	Compact NS		NS1000N NS1250N NS1600N	NS1000H NS1250H NS1600H				
					NS1600bN	NS1600bN		
	Masterpact MTZ1	MTZ1 08 H1/H2/L1 **MTZ1 12 H1/H2** MTZ1 16 H1/H2	MTZ1 08 H1/H2					
	Masterpact MTZ2	MTZ2 10 N1/H1/H2/L1 **MTZ2 12 N1/H1/H2/L1** MTZ2 16 N1/H1/H2/L1			MTZ2 10 H1/H2/L1 **MTZ2 12 H1/H2/L1** MTZ2 16 H1/H2/L1		MTZ2 10 L1 **MTZ2 12 L1** MTZ2 16 L1	
	Masterpact NT			NT10H1/H2 NT12H1/H2 NT16H1/H2				
	Masterpact NW			NW10N1 NW12N1 NW16N1	NW10H1 NW12H1 NW16H1	NW10H1 NW12H1 NW16H1	NW10L1 NW12L1 NW16L1	

Selection guide

Canalis KTA

Type of Canalis busbar trunking		KTA1600						
Isc max kArms		25 kA	30 kA	42 kA	50 kA	65 kA	85 kA	100 kA
Type of circuit breaker	Compact NS		NS1250N NS1600N	NS1250H NS1600H				
						NS1600bN NS2000N		
	Masterpact MTZ1	MTZ1 12 H1/H2 MTZ1 16 H1/H2						
	Masterpact MTZ2	MTZ2 12 N1/H1/H2/L1 **MTZ2 16 N1/H1/H2/L1** MTZ2 20 N1/H1/H2/H3/L1			MTZ2 12 H1/H2/L1 **MTZ2 16 H1/H2/L1** MTZ2 20 H1/H2/H3/L1		MTZ2 12 L1 **MTZ2 16 L1** MTZ2 20 L1	
	Masterpact NT			NT12H1/H2 **NT16H1/H2**				
	Masterpact NW			NW12N1 **NW16N1**		NW12H1 **NW16H1** NW20H1	NW12L1 (≤ 75 kA) **NW16L1 (≤ 75 kA)** NW20 L1 (≤ 75 kA)	

Type of Canalis busbar trunking		KTA1600 Reinforced short-circuit level						
Isc max kArms		25 kA	30 kA	42 kA	50 kA	65 kA	85 kA	100 kA
Type of circuit breaker	Compact NS		NS1250N NS1600N	NS1250H NS1600H				
						NS1600bN NS2000N		
	Masterpact MTZ1	MTZ1 12 H1/H2 MTZ1 16 H1/H2						
	Masterpact MTZ2	MTZ2 12 N1/H1/H2/L1 **MTZ2 16 N1/H1/H2/L1** MTZ2 20 N1/H1/H2/H3/L1			MTZ2 12 H1/H2/L1 **MTZ2 16 H1/H2/L1** MTZ2 20 H1/H2/H3/L1		MTZ2 12 H2/L1 MTZ2 16 H2/L1 MTZ2 20 H2/H3/L1	MTZ2 12 L1 **MTZ2 16 L1** MTZ2 20 L1
	Masterpact NT			NT12H1/H2 **NT16H1/H2**				
	Masterpact NW			NW12N1 **NW16N1**		NW12H1 **NW16H1** NW20H1	NW12H2 (≤ 75 kA) **NW16H2 (≤ 75 kA)** NW20H2 (≤ 75 kA)	NW12L1 **NW16L1** NW20L1

Type of Canalis busbar trunking		KTA2000						
Isc max kArms		25 kA	30 kA	42 kA	50 kA	65 kA	85 kA	100 kA
Type of circuit breaker	Compact NS		NS1600N	NS1600H				
						NS1600bN NS2000N NS2500N		
	Masterpact MTZ1	MTZ1 16 H1/H2						
	Masterpact MTZ2	MTZ2 16 N1/H1/H2/L1 **MTZ2 20 N1/H1/H2/H3/L1**			MTZ2 16 H1/H2/L1 **MTZ2 20 H1/H2/H3/L1**		MTZ2 16 L1 **MTZ2 20 L1**	
		MTZ2 25 H1/H2/H3						
	Masterpact NT			NT16H1/H2				
	Masterpact NW			NW16N1		NW16H1 **NW20H1** NW25H1		NW16L1 **NW20L1**

Type of Canalis busbar trunking		KTA2000 Reinforced short-circuit level						
Isc max kArms		25 kA	30 kA	42 kA	50 kA	65 kA	85 kA	100 kA
Type of circuit breaker	Compact NS		NS1600N	NS1600H				
						NS1600bN NS2000N NS2500N		
	Masterpact MTZ1	MTZ1 16 H1/H2						
	Masterpact MTZ2	MTZ2 16 N1/H1/H2/L1 **MTZ2 20 N1/H1/H2/H3/L1**			MTZ2 16 H1/H2/L1 **MTZ2 20 H1/H2/H3/L1**		MTZ2 16 L1 **MTZ2 20 H2/H3/L1** MTZ2 25 H2/H3	MTZ2 16 L1 **MTZ2 20 H3/L1** MTZ2 25 H3
		MTZ2 25 H1/H2/H3						
	Masterpact NT			NT16H1/H2				
	Masterpact NW			NW16N1		NW16H1 **NW20H1** NW25H1	NW16H2 (≤ 75 kA) **NW20H2 (≤ 75 kA)** NW25H2 (≤ 75 kA)	NW16L1 **NW20H3** NW25H3

Type of Canalis busbar trunking		KTA2500						
Isc max kArms		25 kA	30 kA	42 kA	50 kA	65 kA	80 kA	100 kA
Type of circuit breaker	Compact NS					NS2000N NS2500N NS3200N		
	Masterpact MTZ1	MTZ1 16 H1/H2						
	Masterpact MTZ2	MTZ2 20 N1/H1/H2/H3/L1			MTZ2 20 H1/H2/H3/L1		MTZ2 20 H2/H3/L1	MTZ2 20 L1
		MTZ2 25 H1/H2/H3					MTZ2 25 H2/H3	
		MTZ2 32 H1/H2/H3					MTZ2 32 H2/H3	
	Masterpact NT			NT16H1/H2				
	Masterpact NW					NW20H1 **NW25H1** NW32H1	NW20H2 **NW25H2** NW32H2	NW20L1

Type of Canalis busbar trunking		KTA2500 Reinforced short-circuit level						
	Isc max kArms	25 kA	30 kA	42 kA	50 kA	65 kA	85 kA	100 kA
Type of circuit breaker	Compact NS					NS2000N NS2500N NS3200N		
	Masterpact MTZ1	MTZ1 16 H1/H2						
	Masterpact MTZ2	MTZ2 20 N1/H1/H2/H3/L1			MTZ2 20 H1/H2/H3/L1		MTZ2 20 H2/H3/L1	MTZ2 20 H3/L1
		MTZ2 25 H1/H2/H3 MTZ2 32 H1/H2/H3					MTZ2 25 H2/H3 MTZ2 32 H2/H3	MTZ2 25 H3 MTZ2 32 H3
	Masterpact NT			NT16H1/H2				
	Masterpact NW					NW20H1 **NW25H1** NW32H1	NW20H2 (≤ 80 kA) **NW25H2 (≤ 80 kA)** NW32H2 (≤ 80 kA)	NW20H3 **NW25H3** NW32H3
Type of Canalis busbar trunking		**KTA3200**						
	Isc max kArms	**25 kA**	**30 kA**	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**
Type of circuit breaker	Compact NS					NS2500N NS3200N		
	Masterpact MTZ2	**MTZ2 32 H1/H2/H3** MTZ2 40 H1/H2/H3					**MTZ2 32 H2/H3** MTZ2 40 H2/H3	
	Masterpact MTZ3	MTZ3 40 H1/H2						
	Masterpact NW					NW25H1 **NW32H1** NW40H1	NW25H2 **NW32H2** NW40H2 NW40b H1/H2	
Type of Canalis busbar trunking		**KTA3200 Reinforced short-circuit level**						
	Isc max kArms	**25 kA**	**30 kA**	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**
Type of circuit breaker	Compact NS					NS2500N NS3200N		
	Masterpact MTZ2	**MTZ2 32 H1/H2/H3** MTZ2 40 H1/H2/H3					**MTZ2 32 H2/H3** MTZ2 40 H2/H3	**MTZ2 32 H3** MTZ2 40 H3
	Masterpact MTZ3	MTZ3 40 H1/H2						
	Masterpact NW					NW25H1 **NW32H1** NW40H1	NW25H2 **NW32H2** NW40H2	NW25H3 **NW32H3** NW40H3 NW40bH1/2
Type of Canalis busbar trunking		**KTA4000**						
	Isc max kArms	**25 kA**	**30 kA**	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**
Type of circuit breaker	Compact NS					NS3200N		
	Masterpact MTZ2	MTZ2 32 H1/H2/H3 MTZ2 40 H1/H2/H3					MTZ2 32 H2/H3 MTZ2 40 H2/H3	
	Masterpact MTZ3	**MTZ3 40 H1/H2** MTZ3 50 H1/H2						
	Masterpact NW					NW32H1 **NW40H1**	NW32H2 **NW40H2** **NW40bH1/H2** NW50 H1/H2	
Type of Canalis busbar trunking		**KTA4000 Reinforced short-circuit level**						
	Isc max kArms	**25 kA**	**30 kA**	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**
Type of circuit breaker	Compact NS					NS3200N		
	Masterpact MTZ2	MTZ2 32 H1/H2/H3 MTZ2 40 H1/H2/H3					MTZ2 32 H2/H3 MTZ2 40 H2/H3	MTZ2 32 H3 MTZ2 40 H3
	Masterpact MTZ3	**MTZ3 40 H1/H2** MTZ3 50 H1/H2 MTZ3 63 H1/H2						
	Masterpact NW					NW32H1 **NW40H1**	NW32H2 **NW40H2**	NW32H3 **NW40H3** **NW40bH1/H2** NW50H1/H2
Type of Canalis busbar trunking		**KTA5000**						
	Isc max kArms	**25 kA**	**30 kA**	**42 kA**	**50 kA**	**65 kA**	**85 kA**	**100 kA**
Type of circuit breaker	Masterpact MTZ2					MTZ2 32 H1/H2/H3 MTZ2 40 H1/H2/H3	MTZ2 32 H2/H3 MTZ2 40 H2/H3	MTZ2 32 H3 MTZ2 40 H3
	Masterpact MTZ3					MTZ3 40 H1/H2 **MTZ3 50 H1/H2** MTZ3 63 H1/H2		

Degree of protection

Canalis KTA

Standard IEC 60364-5-51 categorises a large number of external influences to which electrical installations can be subjected, for instance the presence of water, solid objects, shocks, vibrations and corrosive substances.
The importance of these influences depends on the installation conditions. For example, the presence of water can vary from a few drops to total immersion.

Degree of protection IP

Standard IEC 60529 (February 2001) indicates the degree of protection provided by electrical equipment enclosures against accidental direct contact with live parts and against the ingress of solid foreign objects or water.

This standard does not apply to protection against the risk of explosion or conditions such as humidity, corrosive gases, fungi or vermin.

The IP code comprises 2 characteristic numerals and may include an additional letter when the actual protection of persons against direct contact with live parts is better than that indicated by the first numeral.

The first numeral characterises the protection of the equipment against penetration of solid objects and the protection of people.
The second numeral characterises the protection of the equipment against penetration of water with harmful effects.

Remarks concerning the degree of protection IP

The degree of protection IP must always be read and understood numeral by numeral and not as a whole.
For example, an IP31 enclosure is suitable for an environment that requires a minimum degree of protection IP21. However an IP30 wall-mount enclosure is not suitable.

The degrees of protection indicated in this catalogue are valid for the enclosures as presented. However, the indicated degree of protection is guaranteed only when the installation and device mounting are carried out in accordance with professional standard practice.

Additional letter

Protection of persons against direct contact with live parts.

The additional letter is used only if the actual protection of persons is higher than that indicated by the first characteristic numeral of the IP code.
If only the protection of persons is of interest, the two characteristic numerals are replaced by the letter "X", e.g. IPxxB.

Degree of protection IK

Standard IEC 62-262 defines a coding system (IK code) indicating the degree of protection provided by electrical equipment enclosures against external mechanical impact.

Installation standard IEC 60-364 provides a cross-reference between the various degrees of protection and the environmental conditions classification, relating to the selection of equipment according to external factors.

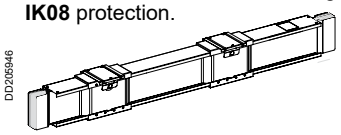
IK code●●

The IK code comprises 2 characteristic numerals (e.g. IK05).

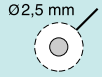
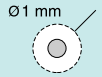
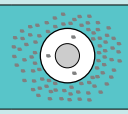
Practical guide UTE C 15-103 shows, in the form of tables, the characteristics required for electrical equipment (including minimum degrees of protection), according to the locations in which they are installed.

Meaning of the numerals and letters representing the degree of protection IP.

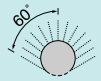
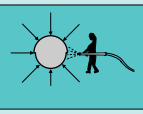
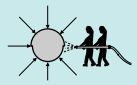
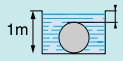
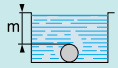
The Canalis KTA busbar trunking products are designed to provide **IP55D and IK08** protection.



1st characteristic numeral: corresponds to protection of equipment against penetration of solid objects and protection of persons against direct contact with live parts.

Protection of equipment	Protection of persons		
Non-protected.	Non-protected.	**0**	
Protected against the penetration of solid objects having a diameter greater than or equal to 50 mm.	Protected against direct contact with the back of the hand (accidental contact).	**1**	
Protected against the penetration of solid objects having a diameter greater than or equal to 12.5 mm.	Protected against direct finger contact.	**2**	
Protected against the penetration of solid objects having a diameter greater than or equal to 2.5 mm.	Protected against direct contact with a 2.5 mm diameter tool.	**3**	
Protected against the penetration of solid objects having a diameter greater than 1 mm.	Protected against direct contact with a 1 mm diameter wire.	**4**	
Dust protected (no harmful deposits).	Protected against direct contact with a 1 mm diameter wire.	**5**	
Dust tight.	Protected against direct contact with a 1 mm diameter wire.	**6**	

2nd characteristic numeral: corresponds to protection of equipment against penetration of water with harmful effects.

Protection of equipment		
Non-protected.	**0**	
Protected against vertical dripping water (condensation).	**1**	
Protected against dripping water at an angle of up to 15°.	**2**	
Protected against rain at an angle of up to 60°.	**3**	
Protected against splashing water in all directions.	**4**	
Protected against water jets in all directions. Test duration: 1 mn/m² casing	**5**	
Protected against powerful jets of water and waves.	**6**	
Protected against the effects of temporary immersion.	**7**	
Protected against the effects of prolonged immersion under specified conditions.	**8**	

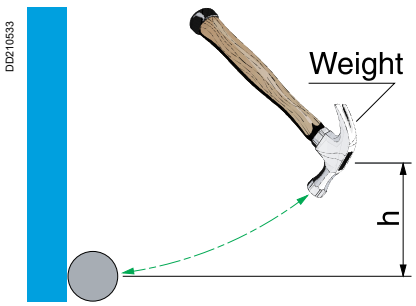
Additional letter

Corresponds to protection of persons against direct contact with live parts.

A	With the back of the hand.
B	With the finger.
C	With a 2.5 mm diameter tool
D	With a 1 mm diameter tool

Degrees of protection IK against mechanical impact

The IK code comprises 2 characteristic numerals corresponding to a value of impact energy, in joules.



	Weight (kg)	Height (cm)	Energy (J)
00	Non-protected		
01	0.20	7.50	0.15
02		10	0.20
03		17.50	0.35
04		25	0.50
05		35	0.70
06	0.50	20	1
07		40	2
08	1.70	30	5
09	5	20	10
10		40	20

Harmonic currents

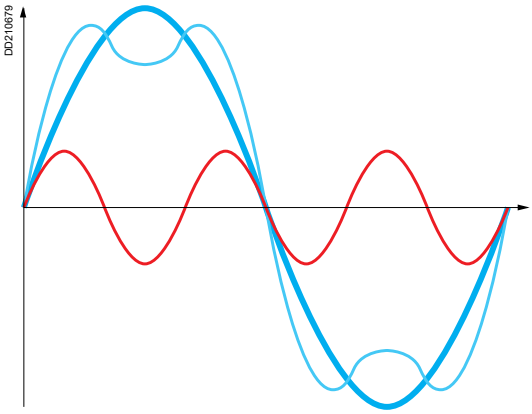
Canalis KTA

Origin of harmonic currents

Harmonic currents are caused by non-linear loads connected to distribution systems, i.e. by loads that draw current with a waveform different that that of the voltage that supplies them.

The most common non-linear loads are equipment including rectifiers, fluorescent lighting and computer hardware.

In installations with a distributed neutral, non-linear loads may cause significant overloads in the neutral conductor due to the presence of third-order harmonics.



Harmonic order
The order is the ratio between the harmonic frequency fn and the fundamental frequency (generally the power frequency, 50 or 60 Hz):
n = fn/f1

By definition, the fundamental f1 is order 1 (H1).

Third-order harmonics (H3) have a frequency of 150 Hz (when f1 = 50 Hz).

Estimating THD (total harmonic distortion)

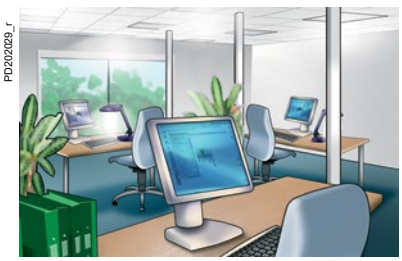
The presence of third-order harmonics depends on the applications involved.
It is necessary to carry out an in-depth study on each non-linear load to determine the level of H3:
ih3 (%) = 100 x i3/i1
- i3 = rms current of H3
- i1 = rms current of the fundamental

Assuming that H3 is preponderant among harmonics, the THD is close to the value of H3 (ih3(%)).

There are two decisive factors:
- the types of connected devices:
  - disturbing loads: fluorescent lighting, computer hardware, rectifiers, arc furnaces, etc.
  - non-disturbing loads: heating, motors, pumps, etc.
- the ratio between the two types of disturbing loads.

Workshops
Mix of disturbing loads (computers, UPSs, fluorescent lighting) and non-disturbing loads (motors, pumps, heating).

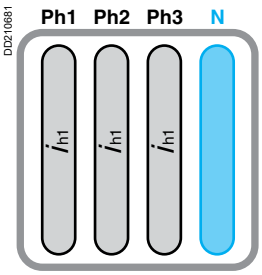
Low probability of harmonics
THD ≤ 15 %.



Offices
Numerous disturbing loads (computers, UPSs, fluorescent lighting).

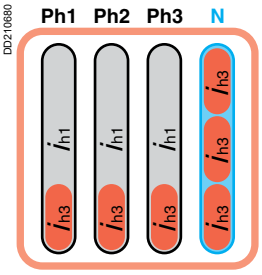
High probability of harmonics
15 % < THD ≤ 33 %.

Effects of harmonics on Canalis busbar trunking



Fundamental frequency: ih1 (50 Hz)

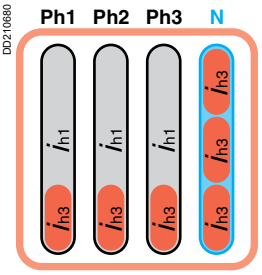
No current in the neutral.
The conductors are correctly sized.



Fundamental frequency: ih1 (50 Hz) and 33 % of H3

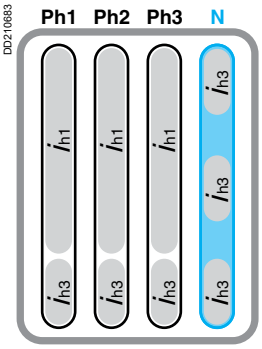
Abnormal temperature rise in the conductors caused by current at a higher frequency in the phases (skin effect) and current in the neutral caused by summing of the H3 harmonics.

The only effective solution



Fundamental frequency: ih1 (50 Hz) and 33 % H3

Reduce the current density in ALL conductors by using appropriately sized trunking.



Busbar-trunking selection

THD ≤ 15 %	15 % < THD ≤ 33 %	THD > 33 %	Busbar trunking	Rating (A)
800	630	500	KTA	800
1000	800	630	KTA	1000
1250	1000	800	KTA	1250
1600	1250	1000	KTA	1600
2000	1600	1250	KTA	2000
2500	2000	1600	KTA	2500
3200	**2500**	2000	KTA	3200
4000	3200	2500	KTA	4000

Example. For a total rms current of 2356 A (estimation based on power drawn by loads, including harmonics), the operational current is 2500 A.
THD is estimated at 30 %. The appropriate trunking is KTA 3200 A.

For more information on harmonics

See the Cahier Technique publications on the Schneider Electric web site: www.se.com

Canalis KTA

Determining the DC current value

Thermal effect

Rule

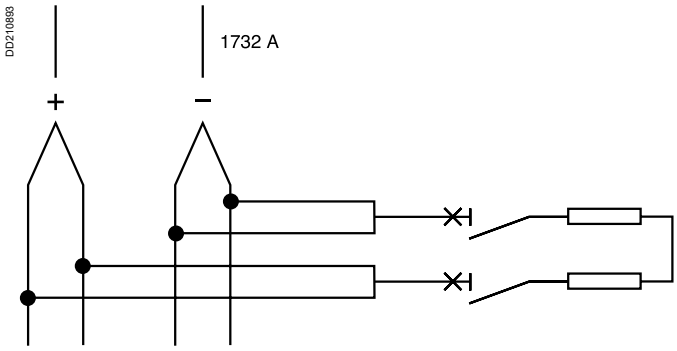
The total power dissipated as heat must remain constant in the duct:
Pac = Pdc

Where:
- the power dissipated as heat: **Pac** = 3 x R x Iac² where:
  - R= resistance of a conductor
  - Iac = conductor rms current
- the dissipated power for 4 conductors: **Pdc** = 4 x R x Idc² where:
  - Idc = direct current.

Selection table

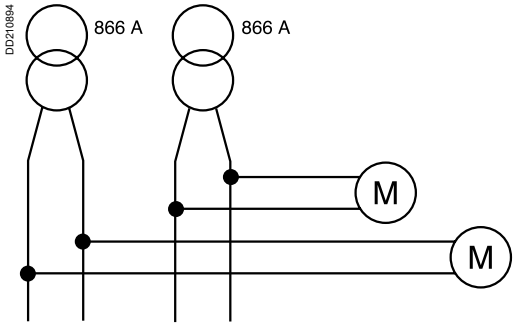
- 1 source

Case of 2 conductors in parallel for the + and 2 conductor in parallel for the **–** (only 1 circuit in the busbar trunking):



- 2 sources

Case of 1 conductor for the + and 1 conductor for the **–** (2 circuits possible in the same busbar trunking):



Busbar trunking rating (A)	1 source	2 sources
800	1386	693
1000	1732	866
1250	2165	1083
1600	2771	1385
2000	3464	1732
2500	4330	2165
3200	5542	2771
4000	6928	3464
5000	8660	4330

Protection

With DC, there is no zero crossing point of the voltage and current to facilitate arc extinction in the protective device.
The arcing time is longer and the energy that has to be absorbed is higher than for AC.
The voltage of the DC arc must rise to the source voltage very quickly in order to "put out" the short-circuit current.
"Shortened" electrical equation: Unetwork = R x Isc + Uarc where:

- Isc = (Unetwork - Uarc) / R
- Isc = 0 when Uarc = Unetwork.

Use with specific switchgear

A quick rise in arcing voltage can be achieved by using series fuses, one fuse on the **+** and one fuse on the **–** of each circuit.
For some current rating and fuse characteristics, the placing of two fuses in series on each polarity may be specified (highly inductive circuit).
In some cases, two fuses must be placed in parallel for each polarity.

Saline environment

For use in a saline environment, storage and installation precautions must be followed.
Please contact your sales office.

Frequencies
400 Hz

Canalis KTA

KT busbar trunking derating at 400Hz

Values at 35 °C.
Application of a derating coefficient at 400 Hz combined with that for temperature derating.

Busbar trunking derating								
	KTA08	KTA10	KTA12	KTA16	KTA20	KTA25	KTA32	KTA40
In (A)	688	851	1014	1327	1635	2024	2394	3162
Coefficient K at 400 Hz	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.79

Voltage drop

3-phase voltage drop, in millivolts per metre and per amp 400 Hz with load spread over the run.
For a concentration of load at the end of a run (transport), the voltage drops are double those shown in the table below.

ΔU evenly spread (mV. A. m)								
	KTA08	KTA10	KTA12	KTA16	KTA20	KTA25	KTA32	KTA40
Cos Φ = 1.0	0.079	0.068	0.057	0.044	0.038	0.033	0.025	0.020
Cos Φ = 0.9	0.12	0.109	0.096	0.079	0.067	0.054	0.045	0.039
Cos Φ = 0.8	0.13	0.121	0.108	0.089	0.076	0.060	0.051	0.045

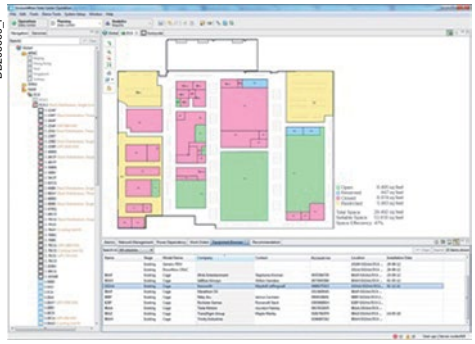
Conductor characteristics

Conductor impedance								
	KTA08	KTA10	KTA12	KTA16	KTA20	KTA25	KTA32	KTA40
Average ohmic resistance of phase and neutral conductors at In[(1)] Rb1ph (mΩ/m)	0.092	0.079	0.066	0.051	0.044	0.039	0.029	0.023
Average resistance at In and rated F(Hz) [(1)] Xph (mΩ/m)	0.14	0.128	0.120	0.104	0.088	0.064	0.059	0.056

(1) *In line with the CENELEC RO.64.013 document.*

The StruxureWare platform

DD205669_r



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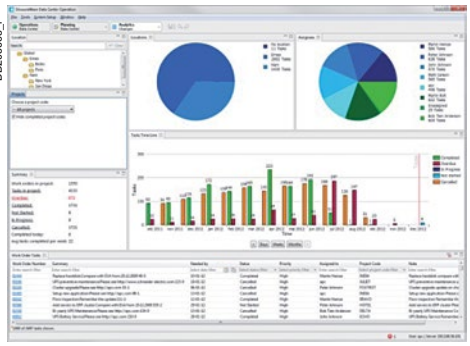
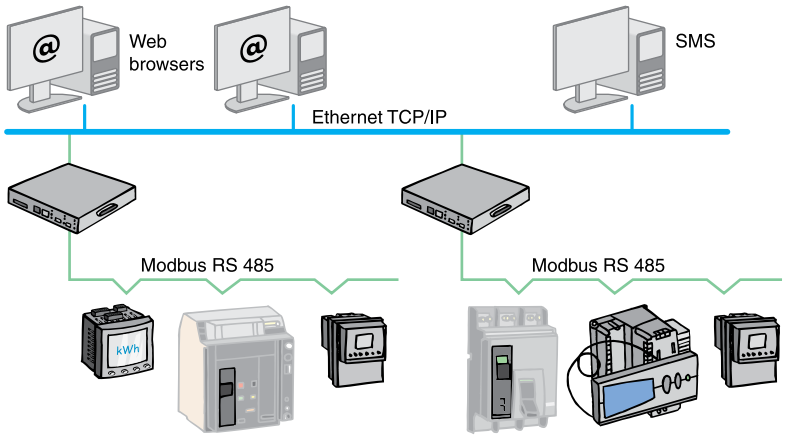


Canalis associated to Schneider Electric measurement and communication devices provides a simple solution to access information (status, measurements, etc.) available from your electrical distribution equipment (transformers, switchboards, busbar trunking).

This information can be accessed from any PC connected to your Ethernet network.

The supervision can make your company more competitive by:
- reducing operating costs
- optimising equipment performance
- improving the reliability of the electrical power supply.

DD205666



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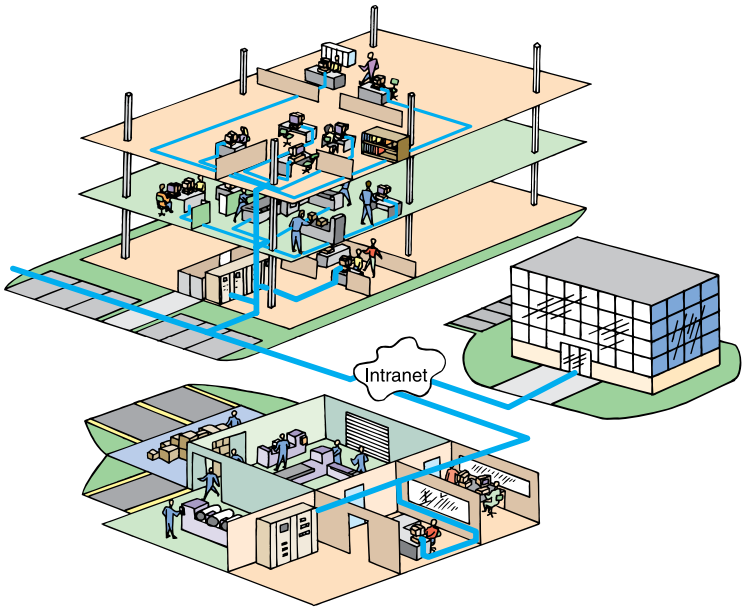


Customer needs for measurements and metering

In all non-residential buildings, the need for sub-metering exists and is growing underthe combined effects of:
- national and supra-national energy regulations
- the need to reduce overheads and production costs
- the allocation of energy expenditures to cost centres
- the outsourcing of operations tasks to specialists.

Operators must therefore have access to reliable pre-processed information in order to:
- identify areas for potential savings
- model building energy flows and anticipate evolving needs
- optimise energy supply and consumption.

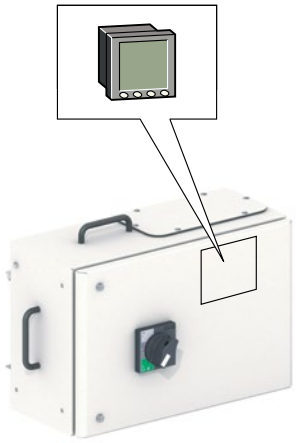
Canalis KTA

Loads monitored by a power meter in tap-off units

Canalis offers measurement and metering units that can be mounted on both Canalis KS and KT trunking ranges, available in two ratings (250 A and 400 A). They are equipped with mounting plates designed to receive a PowerLogic PM810 Power Meter, a Compact NS circuit breaker and the associated current transformers.

Data are collected by a Modbus serial communication bus and converted in Ethernet TCP/IP through an EGX gateway. Provided informations can easily be used in a supervision system.

DD205664



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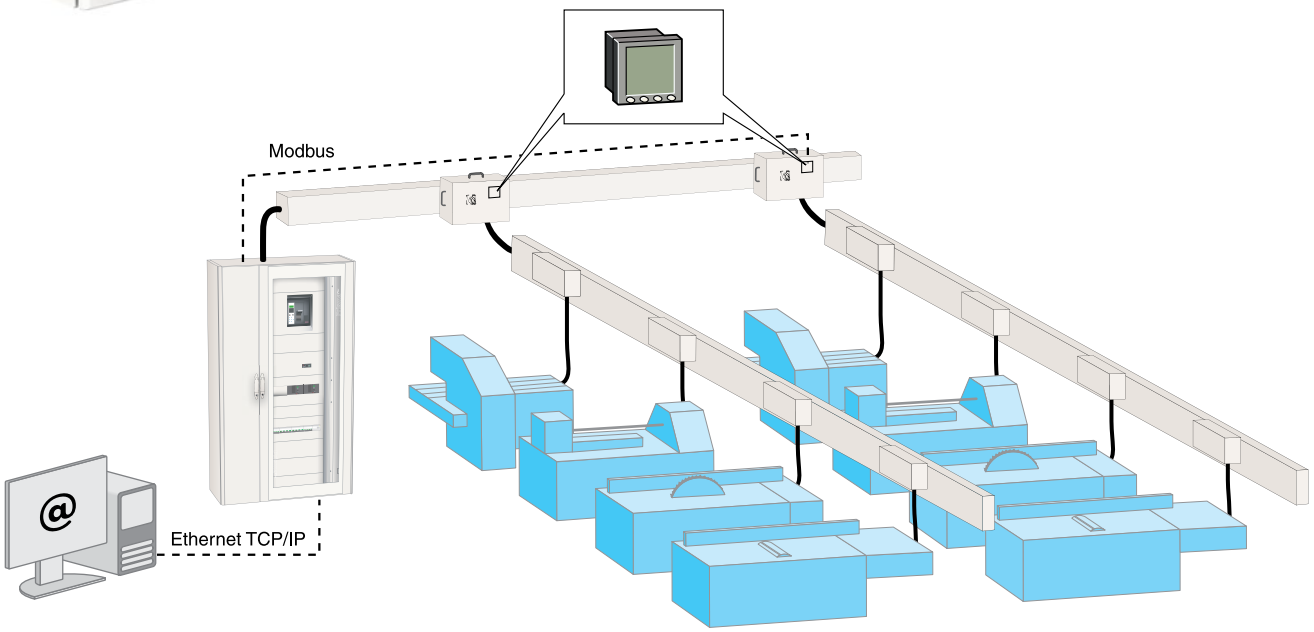
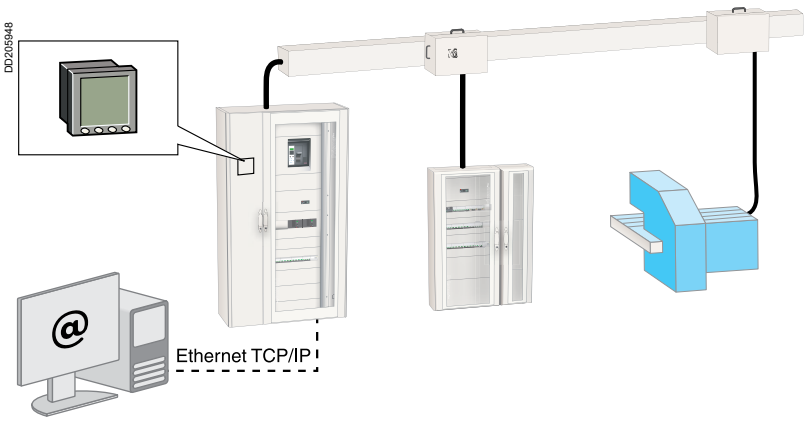


Data acquisition in distributed architectures

When busbar trunking is located upstream of a secondary trunking line, the measurement devices should be installed in the tap-off units.

DD205948



Fire resistance

Canalis KTA

As required by standards, Canalis KT busbar trunking complies with:
1 - material resistance to abnormal temperatures,
2 - flame propagation resistance,
3 - fire barrier function when going through a partition wall,
4 - conservation of all circuits for 1h30 in an insulating sheath.

Definition of tests

1 - Insulating material resistance test to abnormal temperatures

Objective
To check a material will not be suspected as being the origin of a secondary fire outbreak.

As defined in standards § 8.1.3 IEC 61439-1 and IEC 60695-2-10 and 2-13.

Method
Application of an incandescent wire for 30 seconds on the insulating materials in contact with live parts.

Result criteria
The specimen is considered to have passed the incandescent wire test if:
■ if there is no visible flame and no sustained incandescence
■ the specimen's flames and incandescence go out within 30 seconds of the incandescent wire being removed.

2 - Flame propagation resistance test

Objective
To check a busbar trunking will not create secondary fire outbreaks.

As defined in standards § 10.101 IEC 61439-6 and IEC 60332 part 3.

Method
■ Application of a flame for 40 minutes on a straight length of busbar trunking whose centre is located 2.5 metres from the edge of the burner.

Result criteria
The specimen is considered to have passed the test if:
■ combustion does not occur
■ the maximum extent of the burned part (external and internal) of the busbar trunking does not go beyond 2.5 metres above the lower edge of the burner.

3 - Fire barrier test through a partition wall

Objective
To check a busbar trunking will not propagate a fire from one room to another by crossing a fire barrier wall for 60, 120, 180, or 240 minutes.

As defined in standard EN 1366-3; EN 1363-1; ISO 834; DIN 4102 part 9.

Method
The fire barrier busbar trunking section to be tested is placed in an oven which executes a standardised temperature-time curve.

Result criteria
The specimen is considered to have passed the test if:
- there are no flames behind the fire barrier
- there is no smoke or gas behind the fire barrier (not requested by the standard; can appear as a remark in the test report)
- the temperature rise of the casing behind the fire barrier does not exceed 180°C.

4 - Conservation of all circuits in fire conditions test

Objective
To check all the busbar trunking's electrical circuits are preserved in fire conditions.

As defined in standard DIN 4102 part 12.

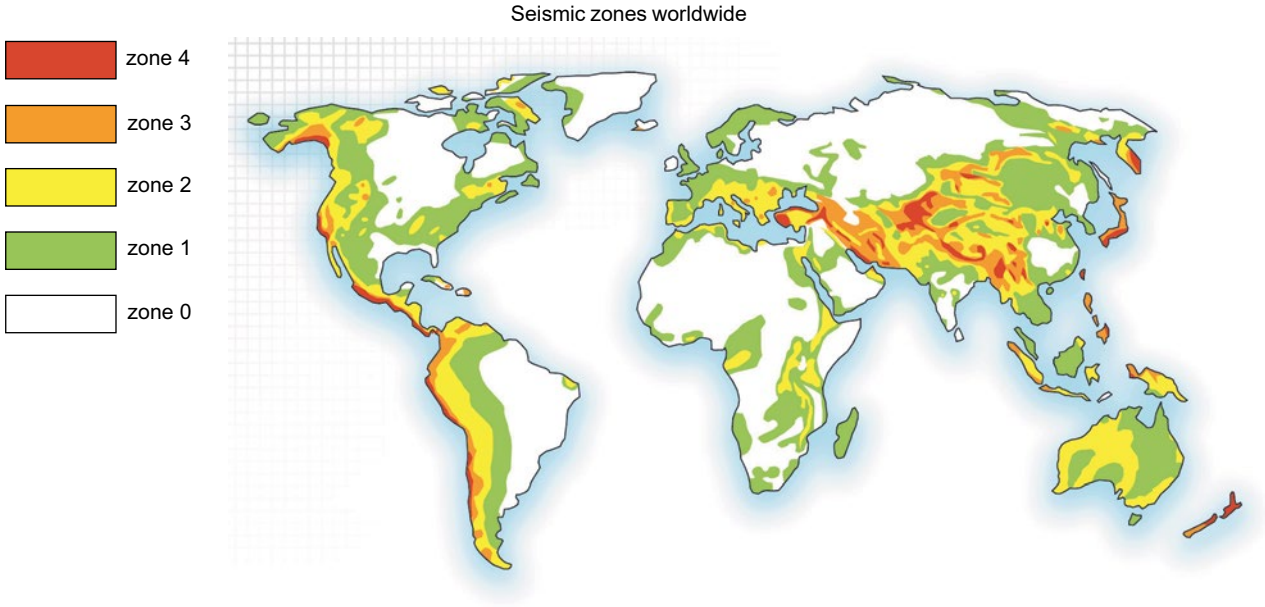
Method
Its entire length inserted, the busbar trunking is taken as a specimen in an insulating sheath.

Result criteria
The specimen is considered to have passed the test if:
- conductor continuity is preserved
- there is no short-circuit between conductors.

Seismic resistance

Canalis KTA

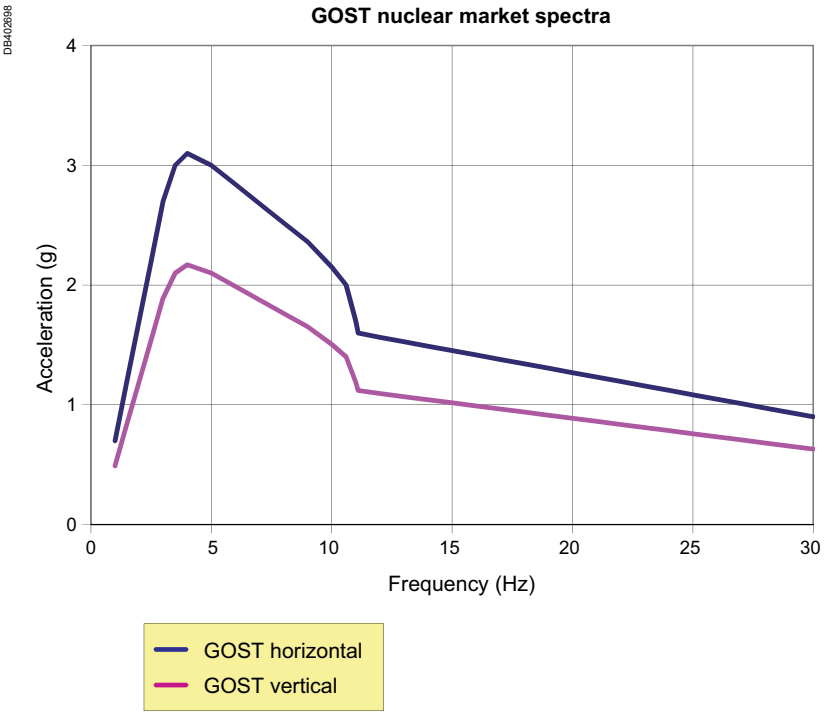
DD405612



Canalis KT is seismic certified in accordance with the protocol described in IEC 60980 and a seismic level equivalent to >7 on the Richter scale and severity 9 on the international MSK- 64 scale.
The spectrum used for testing is the one specified for civil engineering and nuclear applications in GOST 17516.1-90.

Spectrum according to GOST

DB402698

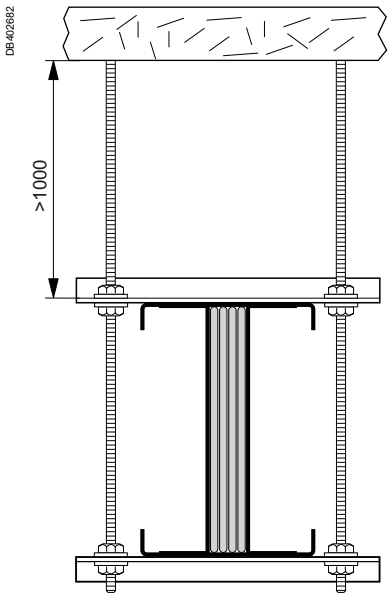


Installation and support

Supports for conventional applications can be used for seismic applications by following the recommendations below:

■ For flexible support

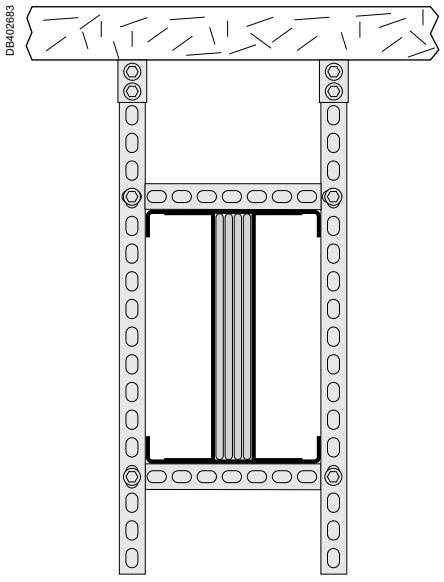
Use supports and rods, with a minimum length of 1000 mm and additional clamping as per the following diagram.



Safety limit: 250 mm round the busbar trunking (amplitude noted during testing).

■ For rigid support

Use of conventional mechanically welded consoles with rigid busbar trunking fastening.



For both cases:

■ its conventional fixing centre distances are maintained (3 m edgewise, 2 m flat)

■ the levels achieved are applicable for horizontal, edgewise or flat or vertical installations.

Testing and commissioning procedure

All the operations described below are given for indication only. Under no circumstances can they be used to substitute the installation company's own procedures and engage Schneider Electric's responsibility.

Scope

High power busbar trunking, transformer-switchboard links.

Required tools

- Multimeter.
- 500 V megger.
- Roto-phase.

Prerequisites

- If need be, the old equipment has been removed from the premises.
- The new equipment has been manoeuvred into the premises where it is to be installed by the installation contractor.
- The equipment has been installed by the installation contractor in accordance with manufacturer's recommendations.
- The equipment's installation diagram, connection diagram and assembly results sheet are available for the commissioning engineer.

De-energising the installation and making it safe

The works manager is responsible for worksite safety and must ensure the installation is de-energised and made safe in accordance with safety rules before any inspection or measurement is performed.

Equipment checking, positioning and identification

After the installation contractor has positioned, assembled and connected the busbar trunking in accordance with the supplied installation, assembly and connection diagrams, and using the recommended tools and handling equipment, the following characteristics must:

- be noted,
- be checked for compliance with respect to the details shown on the drawing.

Brand	-	Busbar trunking rating:	-
Equipment type:	-	Serial number:	-
Reference:	-	Date of manufacture:	-
Transformer power:	-	Source circuit breaker (busbar trunking protection):	-

General visual inspection

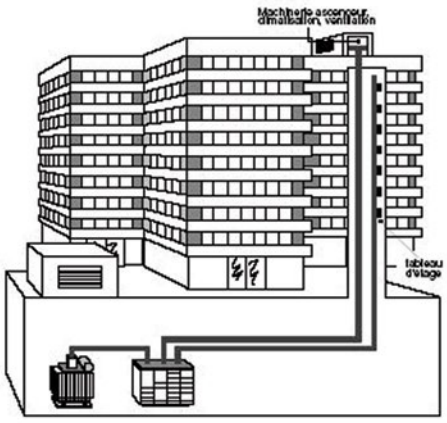
The equipment has been chosen according to its electrical environment (rating and protection adapted to operating conditions).
The following points do not require checking.

Points concerning reception, storage and handling

No signs of:

- shock (which may deteriorate internal insulation: conductor insulation on straight lengths or at the tap-off points or joint blocks)
- humidity or oxidation (equipment stored outside should have been covered with a plastic sheet, sheltered from humidity, dirt and dust)
- firm's label defining the product's characteristics.

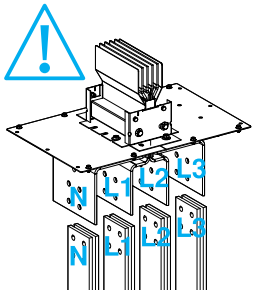
DD206098



Points concerning installation and fittings
Assembly compliance with the specifications of the installation drawing, service instructions and the catalogue:
- no busbar trunking twisting
- positioning and distance of the busbar trunking with respect to the building
- fixings, compliance of the between centres distance of the equipment for flat or edgewise, horizontal or vertical distribution
- clamps, not fully blocked to allow movement due to longitudinal forces
- presence of expansion sections if necessary.

Checking power connections

DD205950



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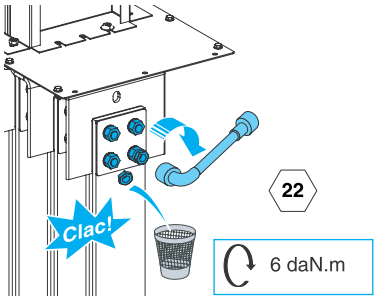


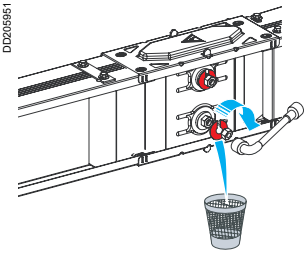
General visual inspection

Check the number of connection parts and their cross-sections for each conductor (see "Installation guide").

Check insulation distances between 2 conductors and between conductors and metal panels.

Check the tightening torque of bolts not fitted with torque nuts. For bolts fitted with torque nuts, check the head has broken-off.

DD205951



Check the bolt length exceeding the nut ; some bolts may have been removed and then put back, but left untightened.

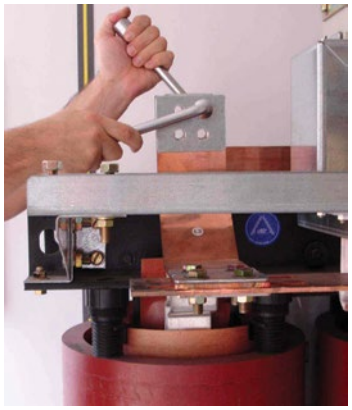
Mark each tightened nut using indelible varnish. As well as a means of self-inspection to ensure correct tightening torque, it also allows any untightening to be identified.

Class 8-8 nuts and bolts (M8 on LV switchboard side, see "Commissioning Guide for Schneider Electric LV Switchboards").

Bolt	Tightening torque
HM16	16 daN.m
HM14	12 daN.m
HM12	7 daN.m
HM10	5 daN.m

The results of all these checks must be noted on the results sheet by the installation contractor.

PB104861



Checking insulation between live conductors

These measurements and checks can only be performed if:
- each link is disconnected by an isolating device,
- each link is disconnected from the upstream transformer, with the main circuit breaker upstream of the LV switchboard unplugged and in the open position.

Test means: 500 V DC megger (DC to avoid capacitive currents)
Measurements: 6 measurements between live conductors (between phases and then between each phase and neutral).
LV circuit insulation value, according to IEC 60364-6 (and 61.3.3) standard:
- rated voltage < 500 V U test DC = 500 V Ri ≥ 1 MΩ
- rated voltage > 500 V U test DC = 1000 V Ri ≥ 1 MΩ.

Testing and commissioning procedure

Checking the earth network and locks

Earth network

General visual inspection

Check:

- the galvanised steel casing sides are earthed (note: this depends on the earthing system)
- connection quality
- cable cross-section
- there are no loose metal parts (washers, screws) in the tap-off units.

Note: the results of these checks must have already been noted on the results sheet by the installation contractor.

Checking insulation between live conductors and earth

Following this check, each link must be reconnected to the upstream transformer (use the 2nd available 6 daN.m torque bolt heads).

Test means: 500 V DC megger (DC to avoid capacitive currents)
Measurements: between each phase or neutral(1) and earth (the casing if it is connected to earth).
LV circuit insulation value, according to IEC 60364-6 (and 61.3.3) standard:

- rated voltage < 500 V U test DC = 500 V Ri ⩾ 1 MΩ
- rated voltage > 500 V U test DC = 1000 V Ri ⩾ 1 MΩ.

(1) No neutral insulation if the earthing system is such that the neutral is connected to or used as the earth.
***Caution**: in this case, once the transformer has been reconnected (star secondary), the phase-earth measurement is the winding resistance.*

PB104862

PE protective circuit equipotential

Reference: IEC 61439-1:
Check PE protective circuit continuity by visual inspection and random continuity testing.
The previously performed "phases-PE" insulation test must have been compliant.
Test means: ohmmeter.

Locks

To protect personnel by not allowing access to live parts through the use of locks.
Only concerns key operated safety locks.

Checking connections and auxiliary testing

Check not relevant to busbar trunking.

De-energised equipment operating tests

Checking source circuit breaker protection settings

Compliance check in accordance with the installation drawing specifications:
- Imax thermal
- In magnetic.

Note: this check is only to be performed if the busbar trunking is commissioned at the same time as the transformer: the source circuit breaker protection setting checks are related to transformer commissioning.
Check not relevant if the transformer has already been commissioned.

If this check is successful, the busbar trunking can be commissioned and the energised operating tests performed with the appropriate protective equipment

Commissioning and energised equipment operating tests

NOTE: commissioning can only be carried out by personnel with appropriate authorisations.

Preliminary operation: energising the off-load transformer.
Closing the source circuit breaker.

Checking phase order

Objective: to detect, in order to correct, an inversion of the phases or neutral amongst the busbar trunking's 4 incoming and outgoing connections with respect to the transformer output.

Test means: roto-phase or 3-phase harmonic analyser.

If busbar trunking energising is successful, a progressive start-up of the factory must be requested to definitively validate commissioning.

If unsuccessful, the previous checks must be carried out again to try and locate the fault. Before undertaking this, the equipment must once again be made safe.

Final putting into service test

This test is performed once the busbar trunking has been energised. The progressive start-up of loads will highlight any undesirable phenomena due to the increased average load.

Real life operating test
Once the high power busbar trunking has been energised, the other busbar trunking must be gradually put into service starting with those furthest from the load, then each load itself, those with high pull-in currents, then the lighting, contactors, heating, motors, etc.

There must not be excessive vibration, and no sparkovers should be observed.

The test simply consists of checking correct busbar trunking operation according to:
- the average number of machines in operation
- the load variation of each individual load
- the simultaneous operation of machines (superimposing of peaks).

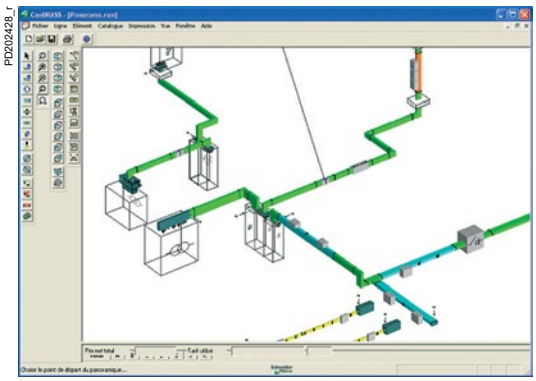
If everything is in order, the busbar trunking is declared "in-service".
Testing is completed.

Installation guide

Layout advice
Run optimisation

Canalis KTA

PowerSet Canalis Design software



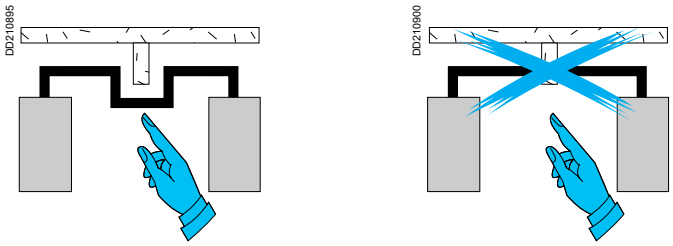
PowerSet Canalis Design software can be used to design the busbar trunking line.
The easy-to-use program creates a graphic model of the line, determines the length and draws up the list of Canalis KT parts to order.

The Canalis KT line is easy to specify simply by indicating the required dimensions. However, it is strongly advised to use the shortest and simplest path possible between the transformer and the switchboard.
It is important to carefully plan the layout of the transformer and switchboard in order to use:
- the maximum number of standard components rather than made-to-measure components
- the minimum number of components for changing direction
- straight made-to-measure components rather than made-to-measure components for changing direction.

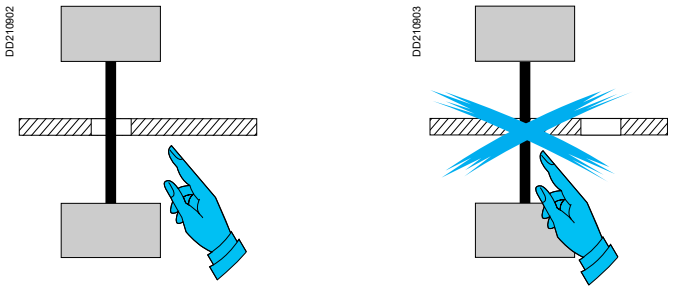
Advice

Before defining your busbar trunking run, it is recommended you pay particular attention to the various parameters which could be detrimental to the installation.

Obstacles that obstruct the busbar trunking such as beams, pipes, etc.



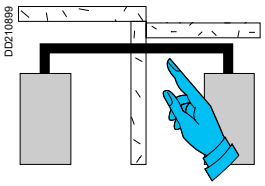
Badly positioned places for going through walls and floors.

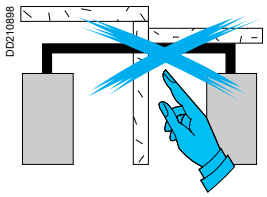


Joint positions in the middle of a partition wall.

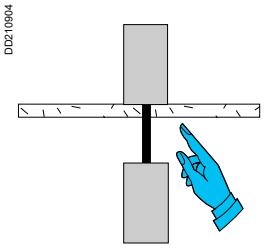
Insufficient ceiling height.

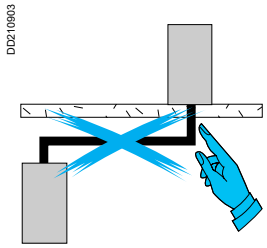
If the busbar trunking must be installed edgewise between a transformer and switchboard, ensure the ceiling height is sufficient for fitting the joint blocks from the top.
Reserve a space between the busbar trunking and the ceiling equal to 100 mm (variable depending on the rating, see "Catalogue numbers and dimensions").



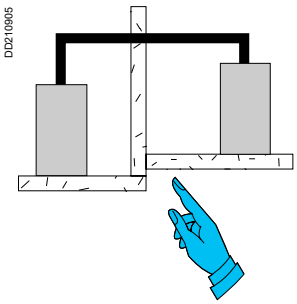


Going through a floor to bottom feed a switchboard on the next floor.





Difference in floor levels of 2 rooms.



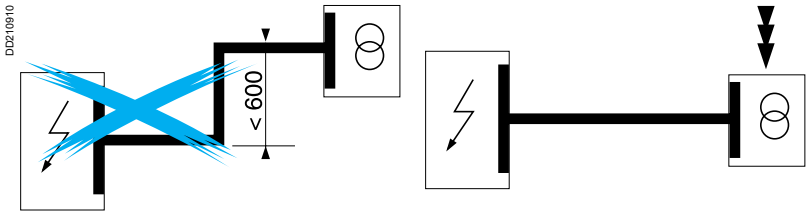
Also make sure that as the work progresses other tradesmen do not carry out installations that could hinder your initial layout.

Layout advice
Run optimisation

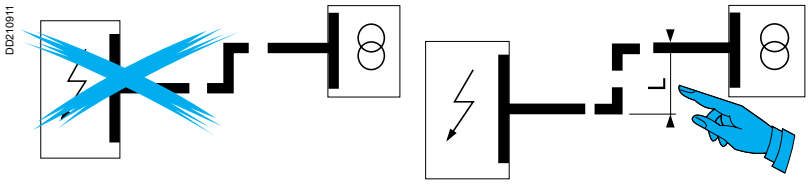
Canalis KTA

Examples of link optimisation

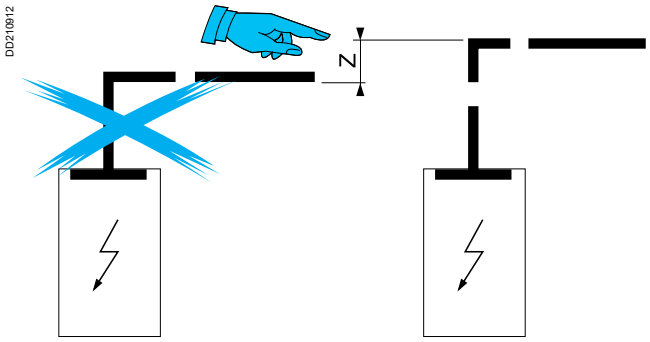
Example 1
Reducing the number of changes of direction by modifying the switchboard or transformer layout.



Example 2
Use of 2 standard elbows in place of a made to measure zed by increasing dimension "L".

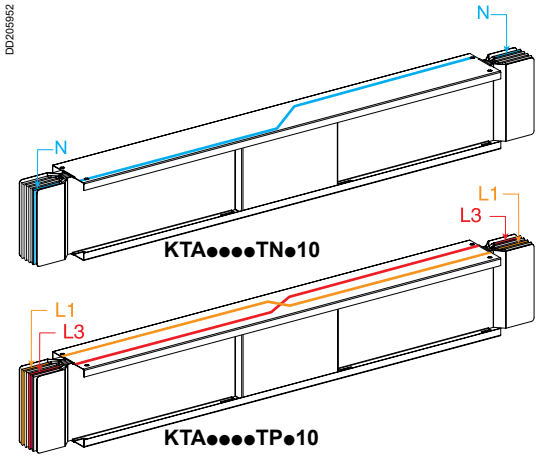


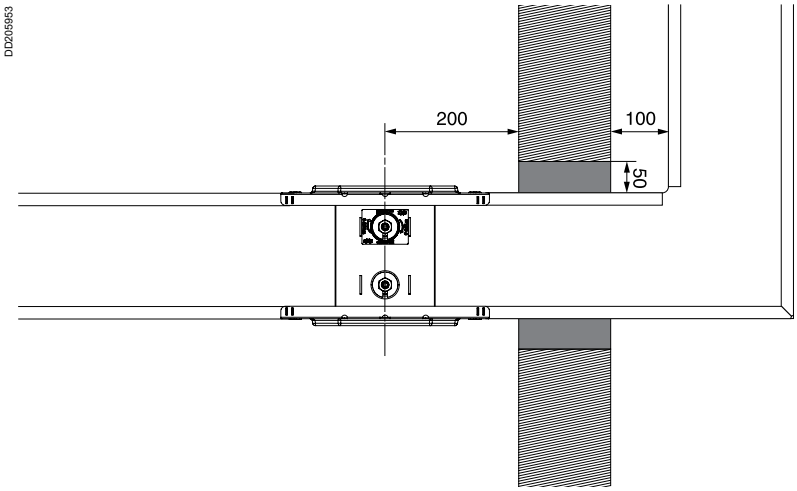
Modification of the busbar trunking height
By slightly increasing dimension "Z", replace a made to measure elbow feed connector with a standard feed connector and standard elbow section.



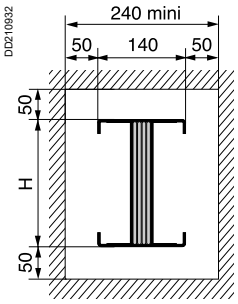
Neutral position

When choosing the layout of the electrical installation, it is important care is taken when positioning the neutral between the transformer and the switchboard.
If the neutral position is different to that planned, it is recommended the transformer is moved, if possible, to align the neutral with respect to the switchboard's neutral.
When it is not possible to move the transformer, it is recommended the phase order in the switchboard is inversed.
If this cannot be done, use the phase and neutral transposition section.

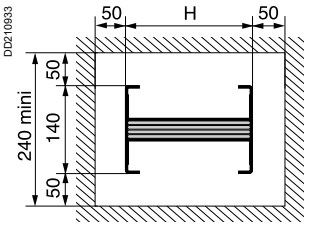




Edgewise passage through partition wall

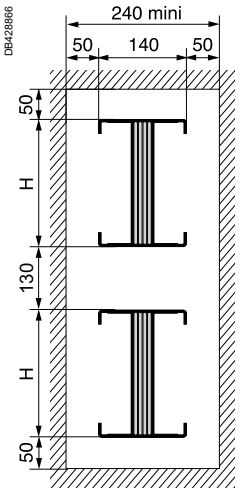


Flat passage through partition wall

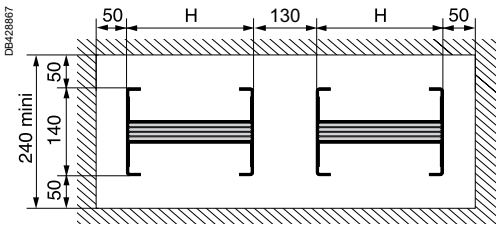


Rating (A)	800	1000	1250	1600	2000	2500	3200	4000	5000
Height H (mm)	74	104	124	164	204	244	324	404	2 x 244 + 130

Edgewise passage through partition wall for 5000



Flat passage through partition wall for 5000



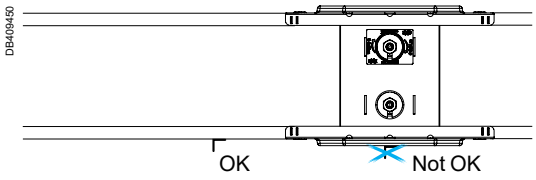
Layout advice
Positioning and supports

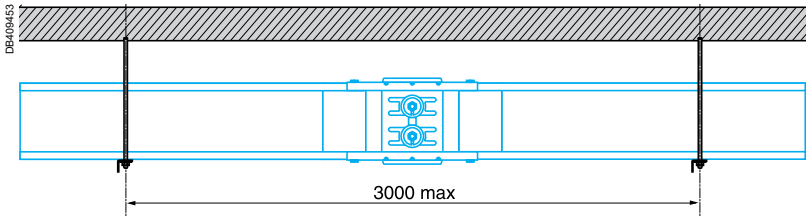
Canalis KTA

A support point as close as possible to the connections is needed because transformers, generator sets and switchboards must not support the weight of the busbar trunking.
In some industries, for service continuity reasons, transformers may be replaced quickly. The busbar trunking must be able to support itself.

Edgewise horizontal installation

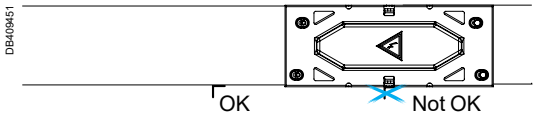
The maximum recommended distance between supports is 3 metres.
In all cases, provide for 2 supports for 4 metre sections.
For clamping busbar trunking to support brackets, see page 210.

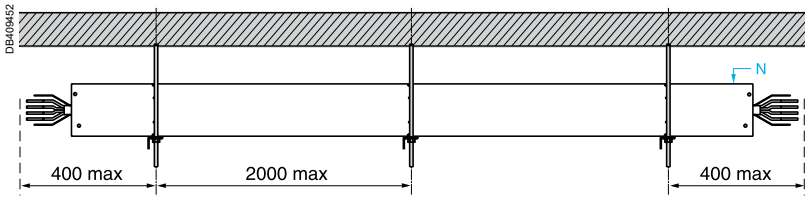




Flat horizontal installation

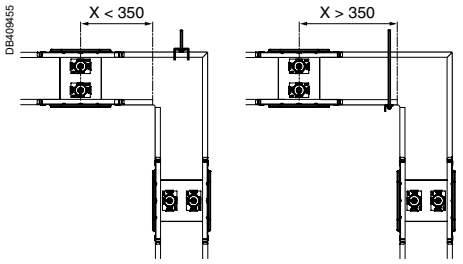
The recommended distance between supports is 2 metres. In addition, a support must be placed at 400 mm maximum from the joint block axis.
For clamping busbar trunking to support brackets, see page 210.



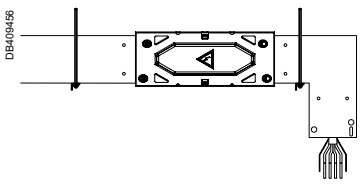


Example of spreading out supports

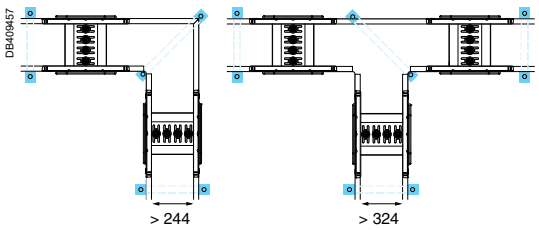
Supporting of LC elbow with a vertical branch

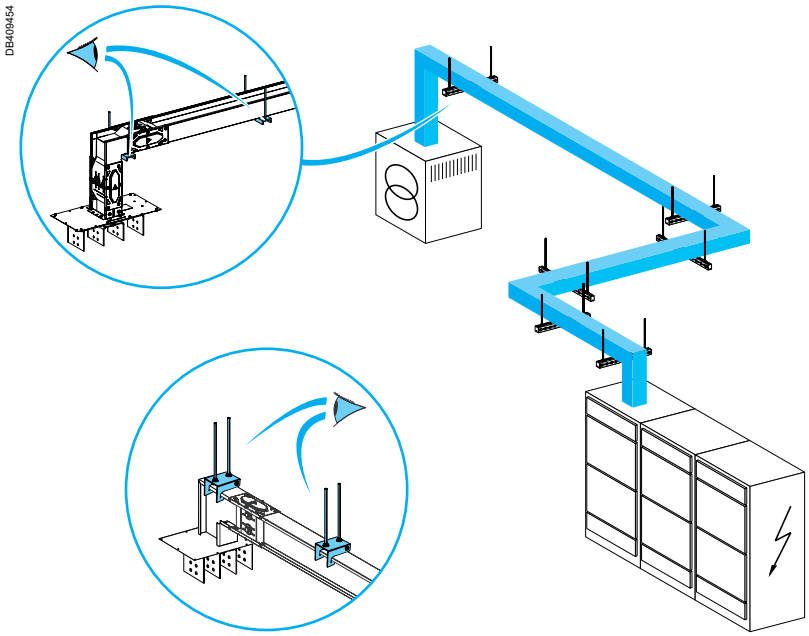


Supporting of LP elbow with a vertical branch



Supporting of LC elbows and TC tees
(top view)



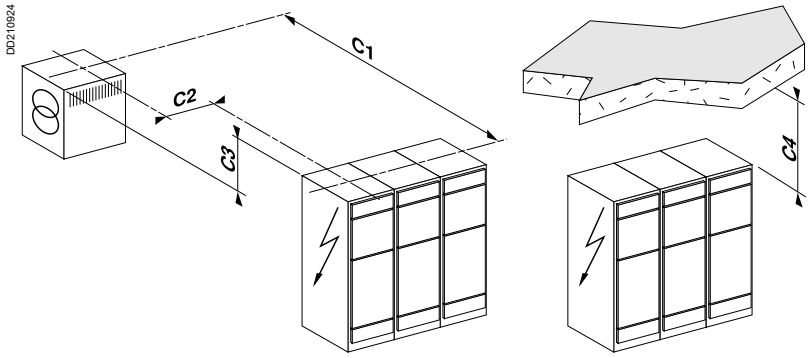


Rules to follow

- An element must never be left unsupported.
- For easier leveling, always use two supports for each element wherever possible.
- A bracket must never coincide with a junction block.
- The capacity of fixing brackets in terms of supporting is at least the weight of the busbar trunking system plus 90 kg, in accordance with IEC 61439-6.
- Terminals must be fixed by its own brackets not be supported by transformers or switchboards.
- Vertical branches must be always supported the closer as possible to the elbow angle.
- Elbows and zeds must be supported individually.
- Supports must be installed close to junctions.

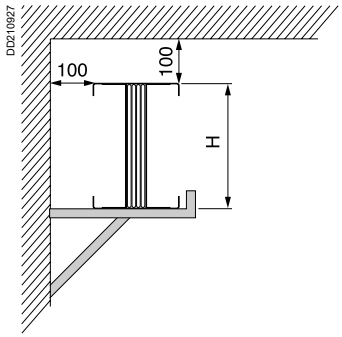
Defining the layout, dimensions to be provided

The position of the joint block with respect to the transformer axes and switchboard edges (defined in the "Installation guide").

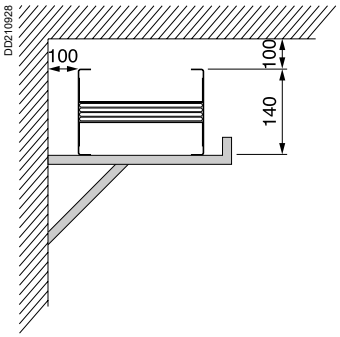


Distance of the busbar trunking from the wall

Edgewise installation



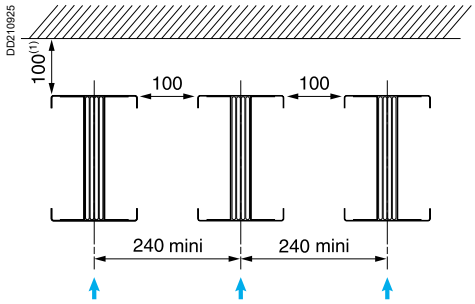
Flat installation



Rating (A)	800	1000	1250	1600	2000	2500	3200	4000	5000
Height H (mm)	74	104	124	164	204	244	324	404	2 x 244 + 130

Distance between busbar trunking (without tap-off units)

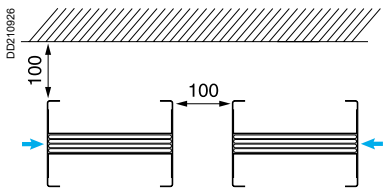
Edgewise installation



(1) Provide 2 times the height if the joint block must be fitted from the top.

➔ Direction of fitting joint blocks.

Flat installation



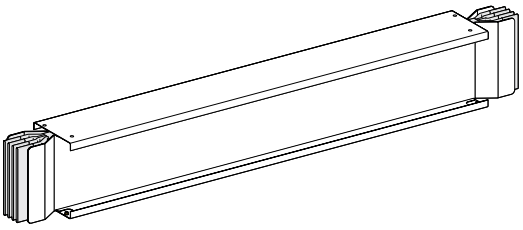
➔ Direction of fitting joint blocks.

Layout advice
Anticipate unexpected worksite problems

Canalis KTA

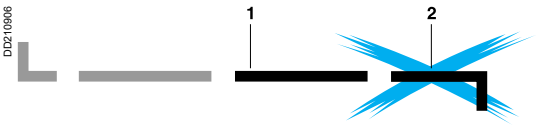
Undecided section

DD205956



This section will be ordered after the gap to be filled has been measured at the end of the job. To optimise its delivery to site, prefer a straight section with a length of less than 2 metres rather than made to measure elbows.

DD210906



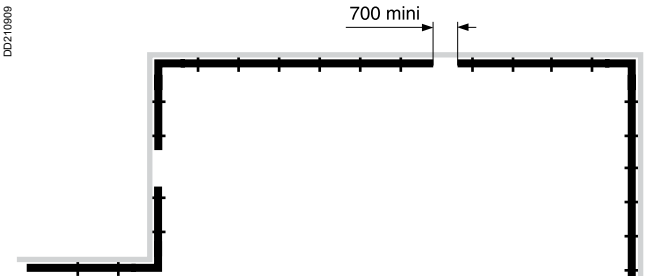
1: Standard straight section.
2: Made to measure elbow.

DD210907

3: Made to measure straight section.
4: Standard elbow.

On the drawing, provide a minimum dimension of 700 mm to guarantee an adjustment of ±200 mm on-site. The minimum length of straight sections being equal to 500 mm.

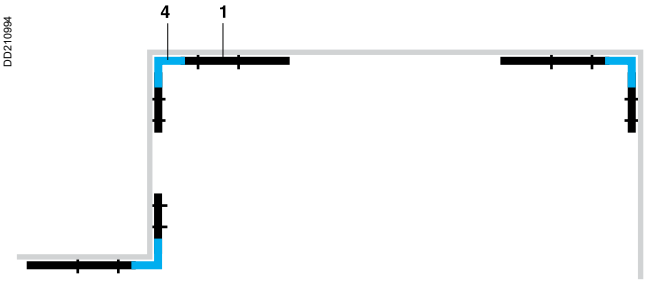
DD210909



Layout recommendations for adjustable or undecided sections

In order to provide for the place needed for undecided section, install the elbows and the sections attached to the elbows in each angle (support each assembly using 2 supports on each straight section).

DD210994

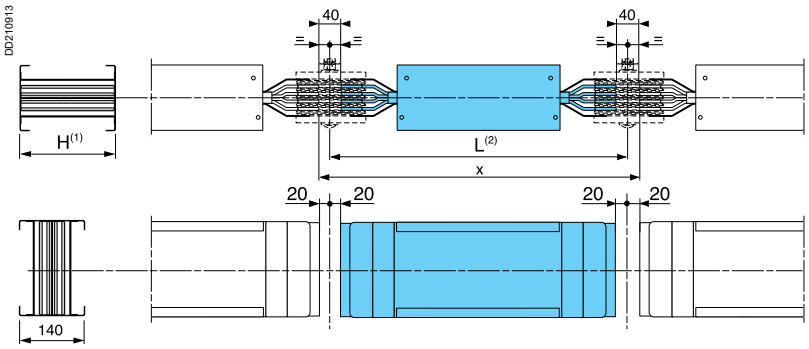


And then complete the layout with standard and made to measure straight sections.

Tips for determining dimensions at the worksite

Straight section

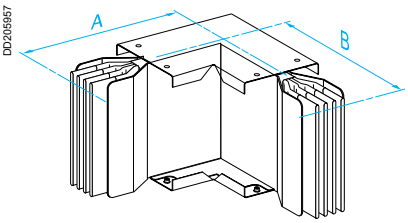
The nominal length "**L**" of a straight section is measured from the axis of the joint block to the other axis of the joint block, in millimetres (the joint block axis is located 20 mm from the end of the bars).
Dimension **L** of the standard or made to measure section = **x** - 40 mm.



(1) *For the different busbar trunking heights, see page 201.*
(2) *See "Run sections" in "Catalogue numbers and Dimensions".*
x : measured dimension.

Example: **x** = 1860 mm hence L = 1860 - 40 = 1820 mm.

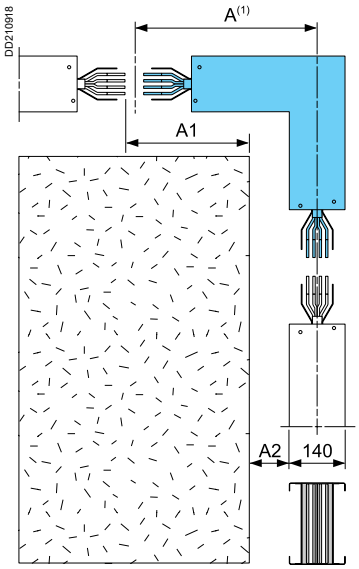
Change-of-directions



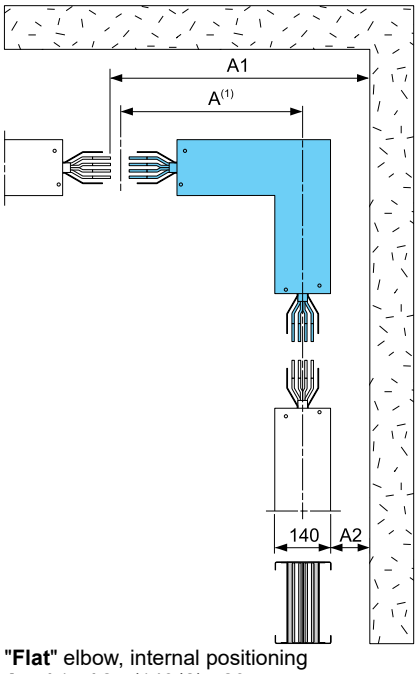
A and B: see "Changes of direction" in "Catalogue numbers and Dimensions".

Flat elbows

The nominal length of each branch is measured from the axis of the joint block to the axis of the other branch, in millimetres. The joint block axis is located 20 mm from the end of the bars.



"**Flat**" elbow, external positioning
A = A1 + A2 + (140/2) - 20



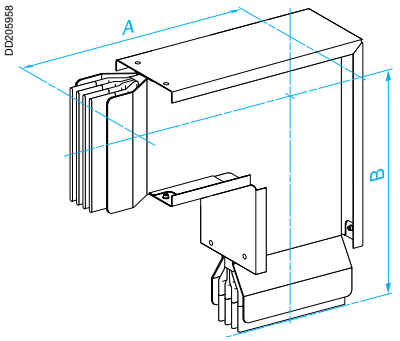
"**Flat**" elbow, internal positioning
A = A1 - A2 - (140/2) - 20

(1) *See "Changes of direction" in "Catalogue numbers and Dimensions".*

Layout advice

Tips for determining dimensions at the worksite

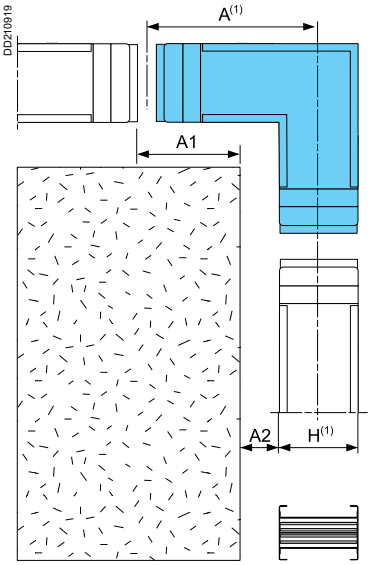
Canalis KTA



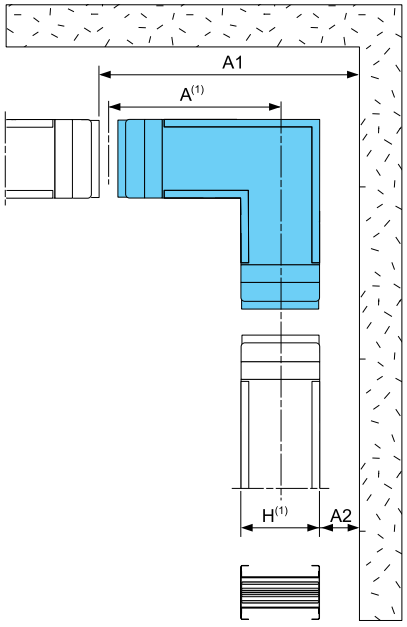
A and B: see "Changes of direction" in "Catalogue numbers and Dimensions".

Edgewise elbows

The nominal length of each branch is measured from the axis of the joint block to the axis of the other branch, in millimetres. The joint block axis is located 20 mm from the end of the bars.

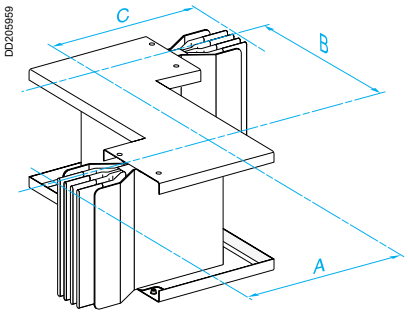


"**Edgewise**" elbow, external positioning
A = A1 + A2 + (H/2) - 20



"**Edgewise**" elbow, internal positioning
A = A1 - A2 - (H/2) - 20

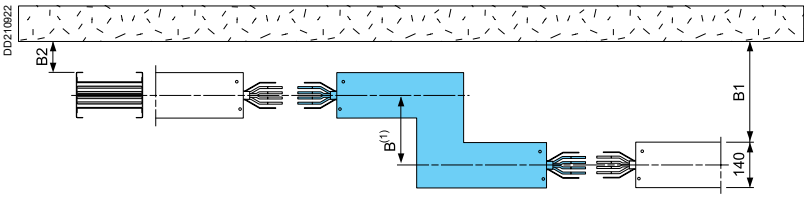
(1) *See "Changes of direction" in "Catalogue numbers and Dimensions".*



A, B and C: see "Changes of direction" in "Catalogue numbers and Dimensions".

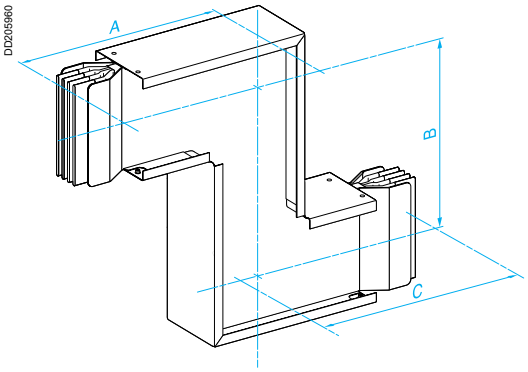
Flat Zed

The nominal length of each branch is measured from the axis of the joint block to the axis of the other branch, in millimetres. The joint block axis is located 20 mm from the end of the bars.
The nominal length of the intermediary branch(es) is measured from the axis of one branch to the axis of another.



B = B1 - B2

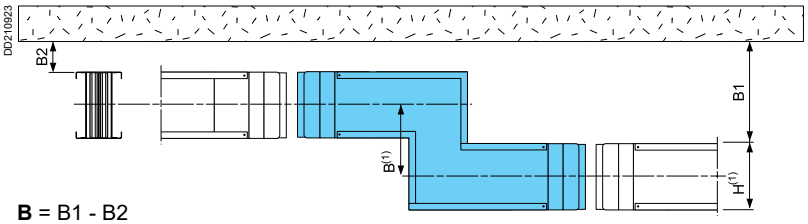
(1) *See "Changes of direction" in "Catalogue numbers and Dimensions".*



A, **B** and **C**: see "Changes of direction" in "Catalogue numbers and Dimensions".

Edgewise Zed

The nominal length of each branch is measured from the axis of the joint block to the axis of the other branch, in millimetres. The joint block axis is located 20 mm from the end of the bars.
The nominal length of the intermediary branch(es) is measured from the axis of one branch to the axis of another.



B = B1 - B2

(1) *See "Changes of direction" in "Catalogue numbers and Dimensions".*

Definition of final section parameters

Reminder: the final section should preferably be a straight section.
Take into account the neutral position when choosing the section.

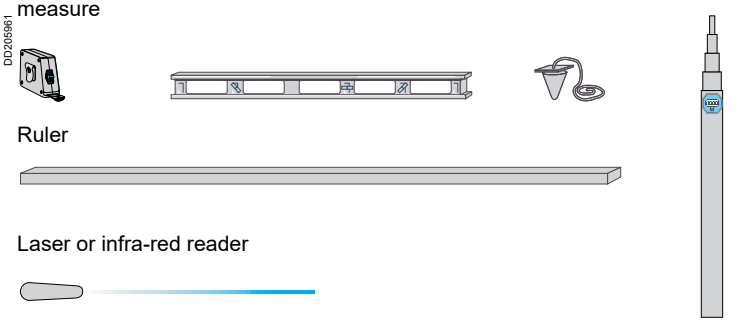
Tools

Tape measure

Spirit level

Lead line

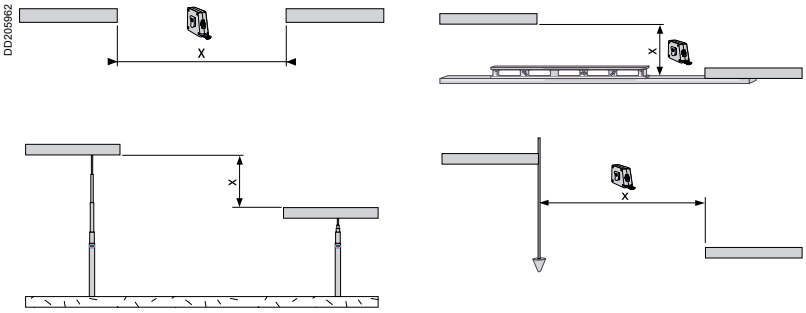
Stick



Ruler

Laser or infra-red reader

Their use



Horizontal distribution
Positioning the tap-off units

Canalis KTA

It is possible to combine the following in the same installation:
■ straight transport sections with straight sections containing fixed or plug-on tap-off points
■ straight sections of different lengths
■ straight sections with different numbers of fixed or plug-on tap-off points
■ …

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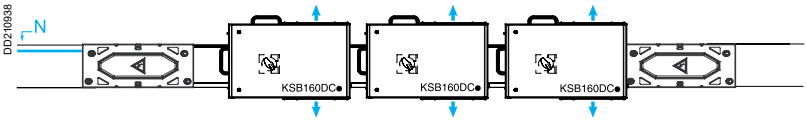
Positioning the tap-off units on the busbar trunking

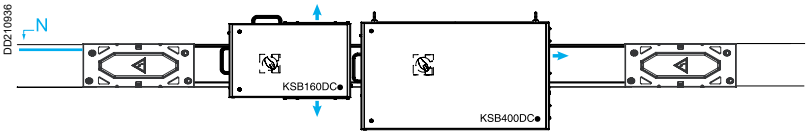
Several configurations are possible.
Some examples:
■ on a 2000 mm straight section with plug-on tap-off points (KTA●●●●ED●20):
□ 3 x 160 A circuit breaker tap-off units:

DD210938



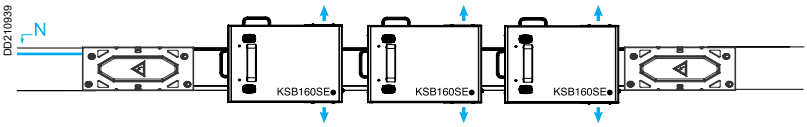
□ 1 x 400 A circuit breaker tap-off unit and 1 x 160 A circuit breaker tap-off unit,

DD210936



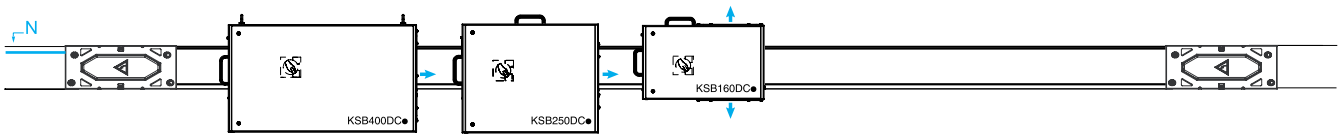
□ 3 x 160 A fuse tap-off units:

DD210939



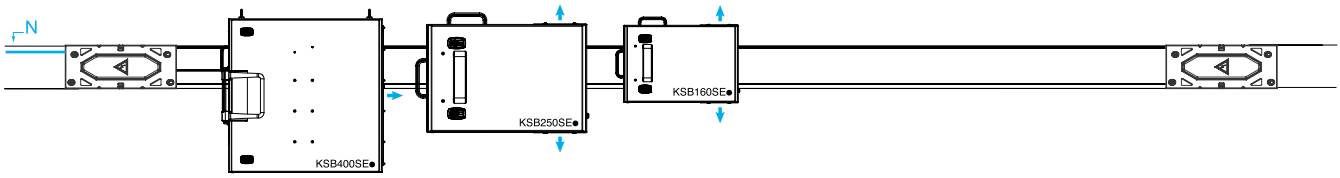
■ on a 4000 mm straight section with plug-on tap-off points (KTA●●●●ED●40):
□ 1 x 400 A circuit breaker tap-off unit, 1 x 250 A circuit breaker tap-off unit and 1 x 160 A circuit breaker tap-off unit:

DD210995



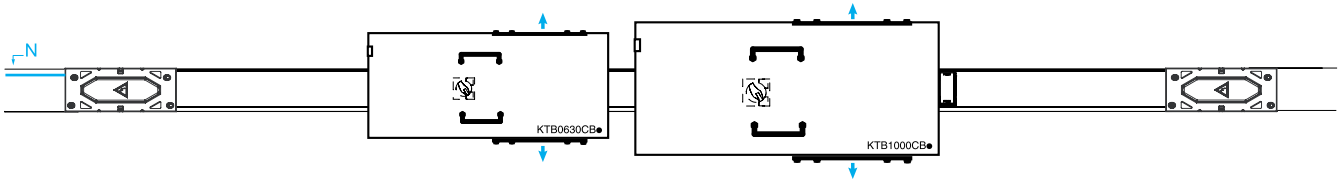
□ 1 x 400 A fuse tap-off unit, 1 x 250 A fuse tap-off unit and 1 x160 A fuse tap-off unit:

DD210996



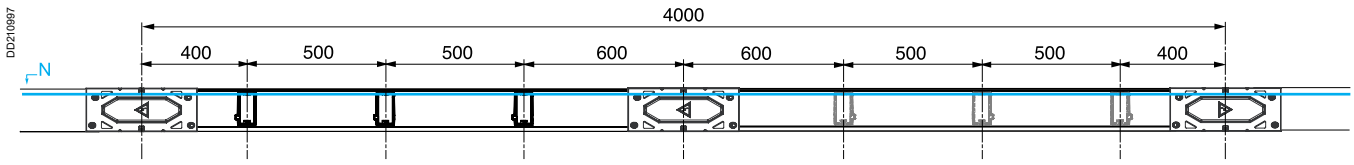
■ on a 4000 mm straight section with fixed tap-off points (KTA●●●●EB●40):
□ 1 x 400 to 630 A fixed tap-off unit and 1 x 800 to 1000 A fixed tap-off unit:

DD210937



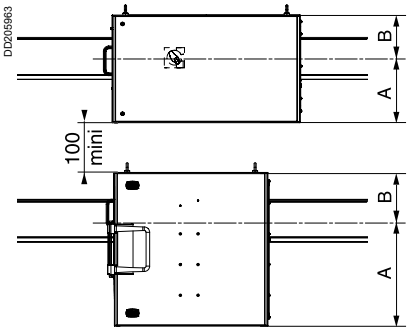
→ *Cable exit.*

When the tap-off units have to be distributed along the length of the busbar trunking, use 2 metre sections and alternate the tap-off point positions.



Recommendations for installing 2 parallel busbar trunking runs

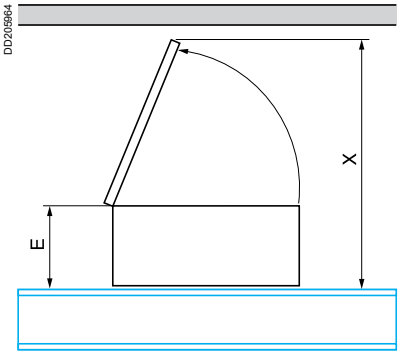
For an installation with tap-off units, provide for a between centres distance that takes into account the minimum dimension of 100 mm and the dimensions A and B of the tap-off units.



Type	Cat. no.	Dimensions (mm)	
		A	B
Circuit breaker tap-off units	KSB160DC●	160	150
	KSB250DC●	240	160
	KSB400DC●	240	160
	KTB0630CB●	175	175
	KTB1000CB●	275	275
Fuse tap-off units	KSB160SE●	150	150
	KSB250SE●	250	160
	KSB400SE●	440	160

Tap-off unit door opening

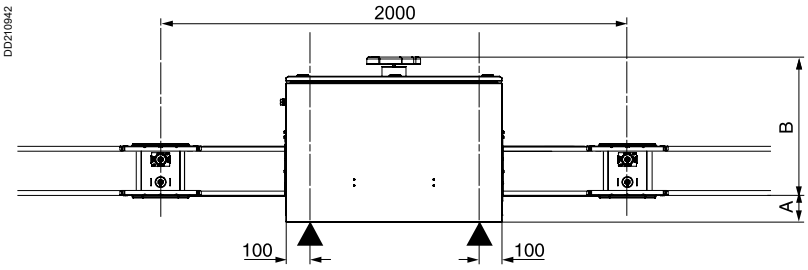
Provide for a minimum distance of 1000 mm between the busbar trunking and the ceiling to allow for the opening of tap-off unit doors.



Type	Cat. no.	Dimensions (mm)	
		X	E(1)
Circuit breaker tap-off units	KSB160DC●	625.5	246
	KSB250DC●	726.5	300
	KSB400DC●	976,5	350
Fuse tap-off units	KSB160SE●	577,5	207
	KSB250SE●	777	258
	KSB400SE●	855	316

(1) *With the handle.*

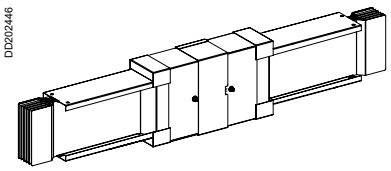
Installing an isolator or run protective device



Rating (A)	Dimensions (mm)	
	A	B
1000	159	529
1250	149	539
1600	129	559
2000	109	579
2500	89	599
3200	98	662

Horizontal distribution
Checking and compensating for expansion

Canalis KTA



Expansion poses a problem when:
- the runs are made up of long straight sections
- when the busbar trunking passes through an expansion joint between two buildings.

Long part runs

Electrical busbar trunking can be subjected to a multitude of load variations during its service life (e.g. day/night, summer/winter) which cause temperature rise differences and thus variable expansions.
To absorb expansion in a Canalis KT busbar trunking, a specific section must be used: **the expansion section**.

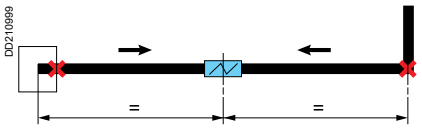
Horizontal runs without tap-off units

If the busbar trunking length is greater than 30 metres, provide for expansion sections and appropriate blocking means. The ends and, in some cases, the centre of part runs must be blocked in order to direct the extensions towards the expansion sections.

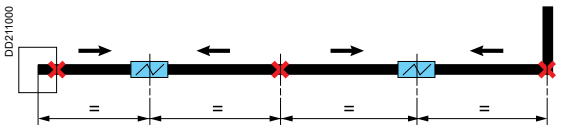
Layout of expansion sections and blocking means for the following busbar trunking lengths:

- 0 to 30 metres:

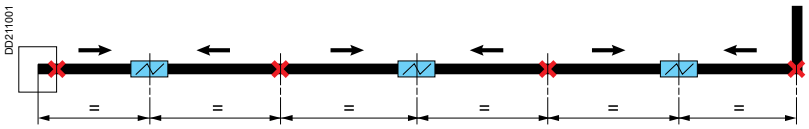
- 31 to 60 metres:



- 61 to 90 metres:



91 to 120 metres:

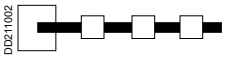


Blocked fixing supports,
Expansion section,
Direction of expansion.

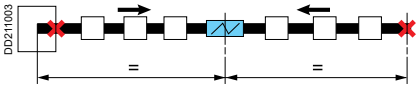
Horizontal runs with tap-off units

Layout of expansion sections and blocking means for the following busbar trunking lengths:

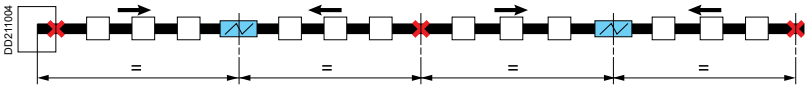
■ 0 to 30 metres:



■ 31 to 60 metres:

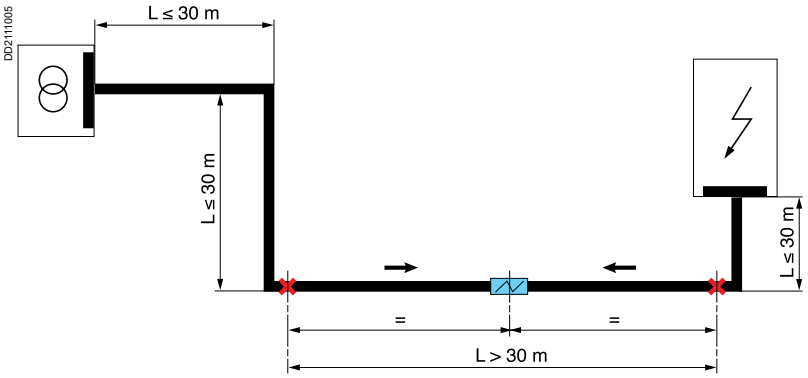


■ 61 to 120 metres:



Blocked fixing supports,
Expansion section,
Direction of expansion,
Tap-off unit.

Transformer/switchboard links



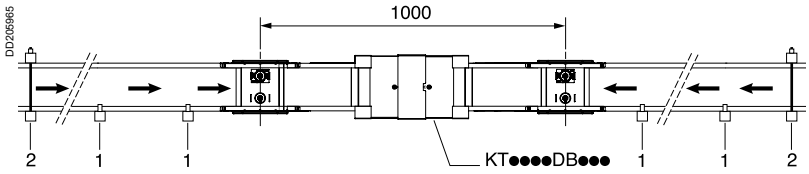
Blocked fixing supports,
Expansion section,
Direction of expansion.

Horizontal distribution
Checking and compensating for expansion

Canalis KTA

Rules for fixing busbar trunking to the supports

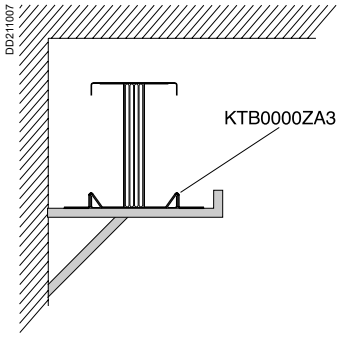
For correct system operation, the expansion of the part run in question must be directed towards the expansion section.
This implies:
- the busbar trunking must be free from all longitudinal movement on its supports
- the expansion section must be blocked on the opposite side to that by which it is pushed.



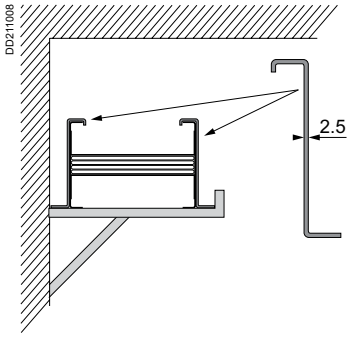
1 *Free fixings.*
2 *Blocked fixings.*
→ *Direction of expansion.*

Installation of free fixings

Edgewise assembly

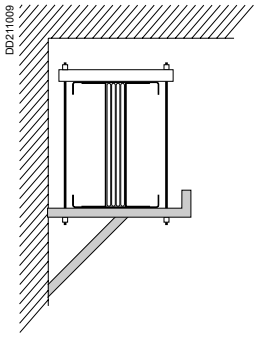


Flat assembly

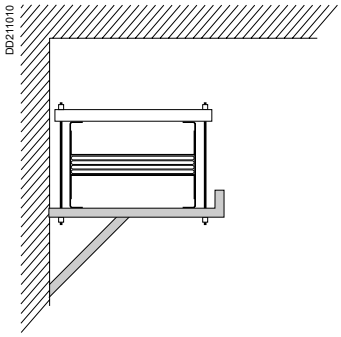


Installation of blocked fixings

Edgewise assembly

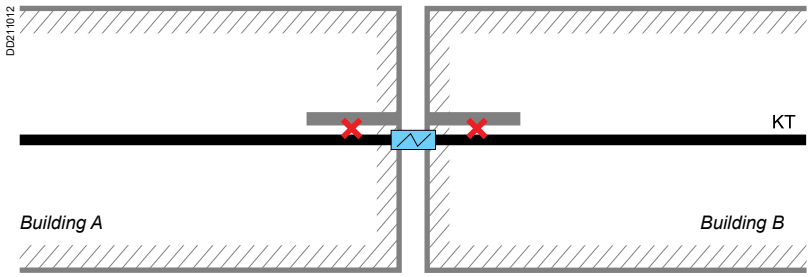


Flat assembly

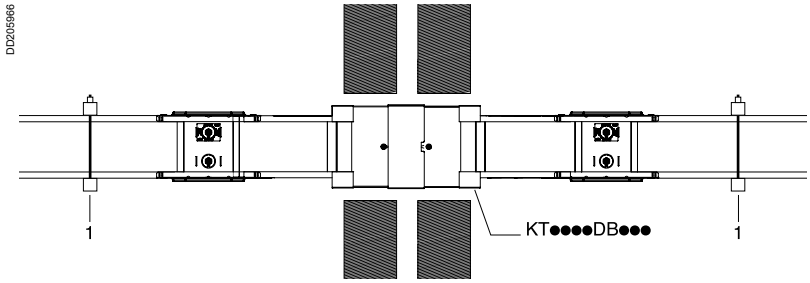


Passing through a joint between 2 buildings

Here, the expansion section allows the busbar trunking to absorb the forces due to the relative movement between the 2 buildings.



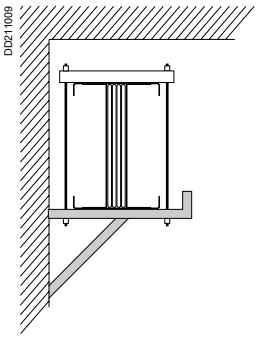
✖ *Blocked fixing supports.*



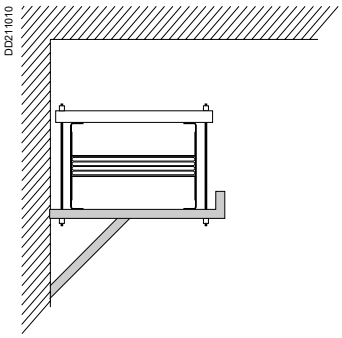
1 *Blocked fixings.*

Installation of blocked fixings

Edgewise assembly



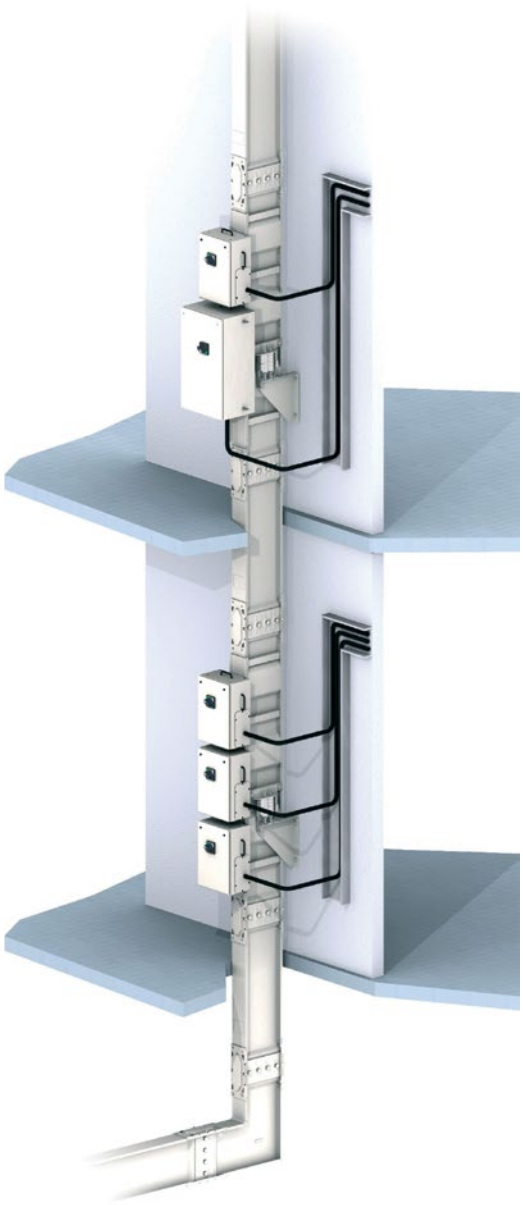
Flat assembly



Rising mains
General

Canalis KTA

PD202319_r



Canalis KT enables power distribution to each floor of multi-storey buildings (office buildings, hotels, hospitals, etc).
In this application, Canalis KT retains all its construction principles:

Vertically mounted, the protection degree of the KT busbar trunking is IP55 as standard.

Installing a rising main

1 Installation principle

Installation at each floor of:
- a 2 metre distribution section
- a made to measure transport section to go through the floor slab
- a busbar trunking support
- up to 3 x 160 A tap-off units or a 250 or 400 A tap-off unit and a 160 A tap-off unit.

2 Installation feed

The installation feed is achieved using either a cable box or by direct connection to an electrical distribution switchboard.

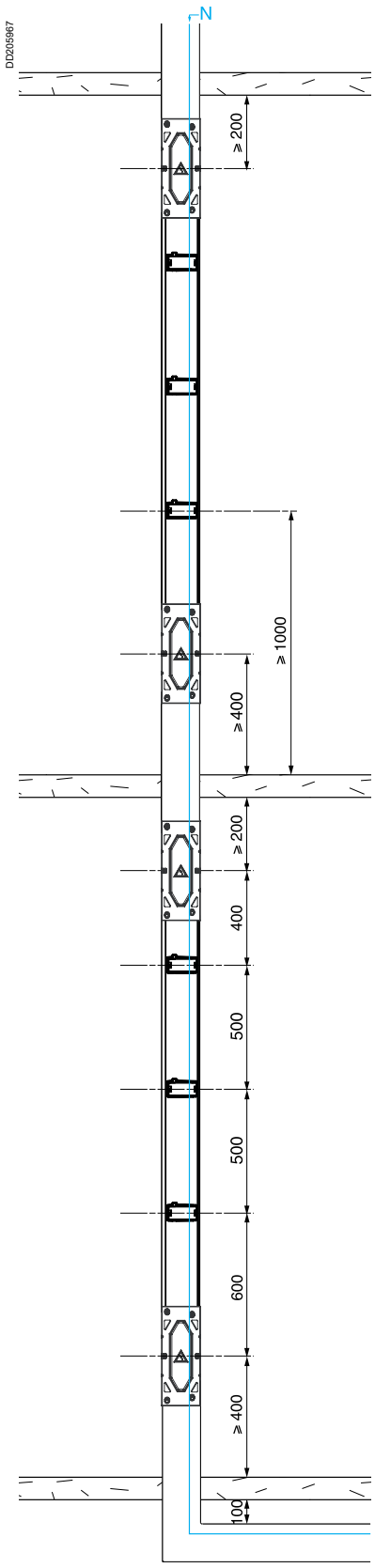
3 Busbar trunking supports

The supports fix the vertical run section to the building structure. a floor slab support. It can be fixed to either the wall, to a wall bracket or directly to the floor, This type of fixing support has the following advantages:
- fitting to either the wall, to a wall bracket or directly to the floor
- height adjustment to make up for positioning errors
- depth adjustment from 50 to100 mm
- spring adjustment to ensure distribution of the load at each floor
- absorption of building stresses with respect to the busbar trunking (expansion, vibration, etc) thanks to the springs.

4 Tap-off units

All Canalis KS tap-off units can be mounted vertically on the Canalis KT without the risk of interference with the supports.

Positioning the busbar trunking without external fire barrier



Positioning the neutral

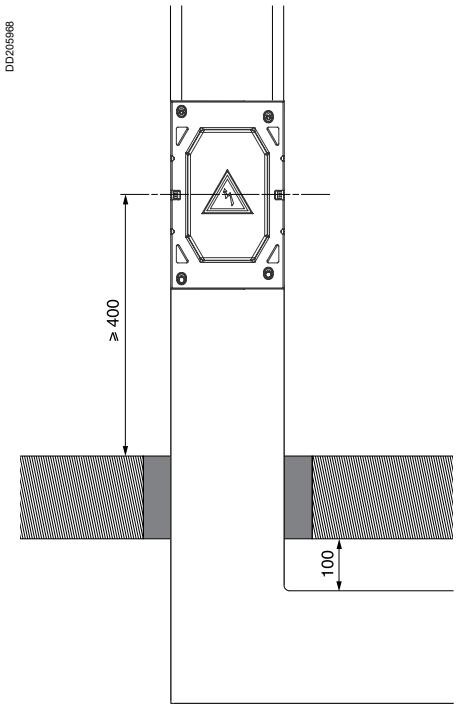
The busbar trunking must be positioned with the neutral on the right.

Positioning the joint block

It is important the joint block is not positioned in the floor slab.

We recommend you provide for a distance of:

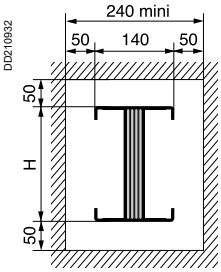
- 400 mm between the floor slab and the joint block axis to be able to install a support to the wall or wall bracket to facilitate the re-filling of the hole and to cope with possible building faults (e.g. screed not indicated on the drawings). Provide 500 mm for a floor fixing
- 200 mm between the upper joint block and the ceiling to allow the busbar trunking to be boxed-in when filling-in the hole with plaster or concrete.



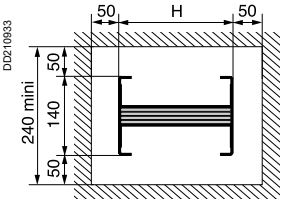
Positioning the tap-offs

The run sections are fitted with 3 tap-off points. Spaced at 500 mm intervals, they provide a high density of tap-offs per floor.

Edgewise passage through partition wall



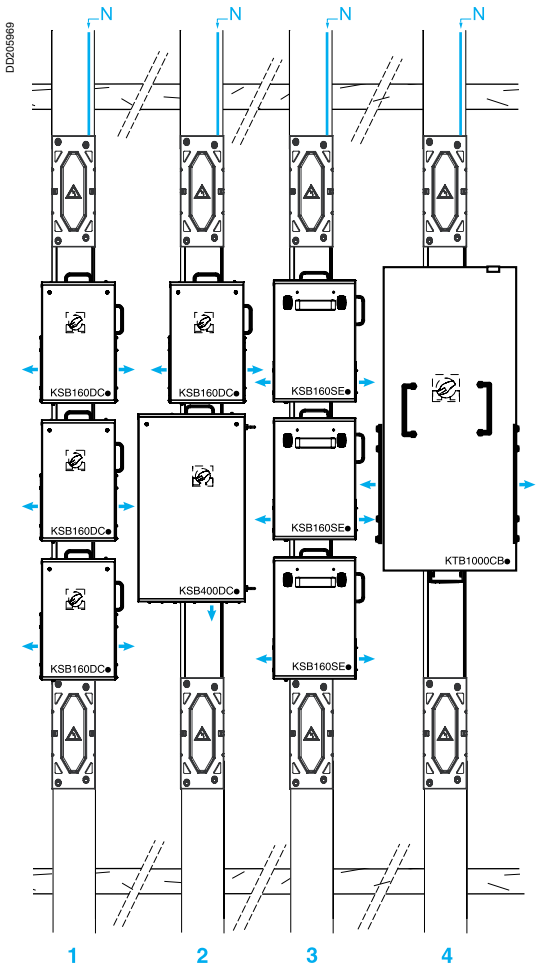
Flat passage through partition wall



Rating (A)	800	1000	1250	1600	2000	2500	3200	4000
Height H (mm)	74	104	124	164	204	244	324	404

Rising mains
Positioning the tap-off units

Canalis KTA



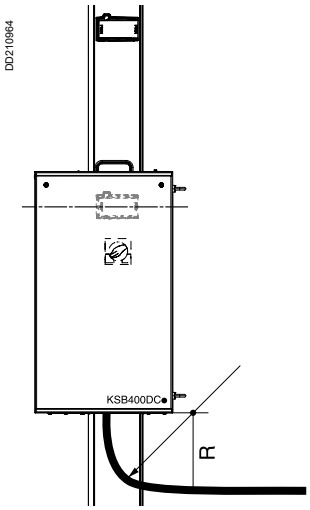
➜ *Cable exit.*

Positioning the tap-off units on the busbar trunking

Several configurations are possible.
Some examples:
1 - 3 x 160 A circuit breaker tap-off units
2 - 1 x 400 A circuit breaker tap-off unit and 1 x 160 A circuit breaker tap-off unit
3 - 3 x 160 A fuse tap-off units
4 - 1 x 800 to 1000 A bolted tap-off unit

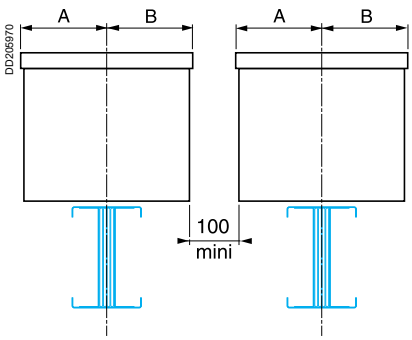
Cable exit

R = 12 x Ø of cable



Recommendations for installing 2 rising mains in parallel

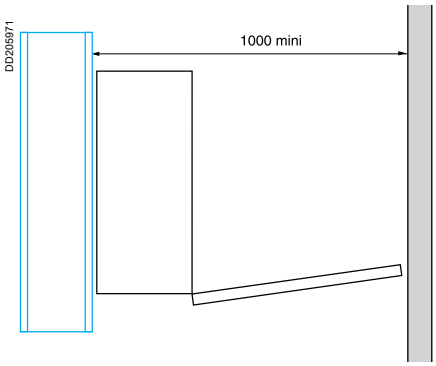
For an installation with tap-off units, provide for a between centres distance that takes into account the minimum dimension of 100 mm and the dimensions A and B of the tap-off units.



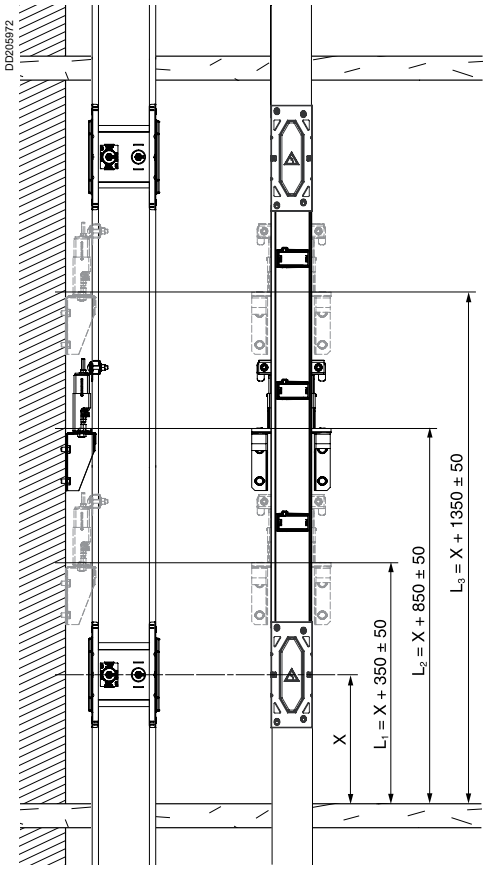
Type	Cat. no	Dimensions (mm)	
		A	B
Circuit breaker tap-off units	KSB160DC●	160	150
	KSB250DC●	240	160
	KSB400DC●	240	160
	KTB0630CB●	175	175
	KTB1000CB●	275	275
	KTB0630DC●	275	275
Fuse tap-off units	KSB160SE●	150	150
	KSB250SE●	250	160
	KSB400SE●	440	160
	KTB0630SD●	275	275

Tap-off unit door opening

If installed in a technical room, provide for a minimum distance of 1000 mm between the busbar trunking and the wall in order to be able to open the doors of the tap-off units.



Positioning of supports

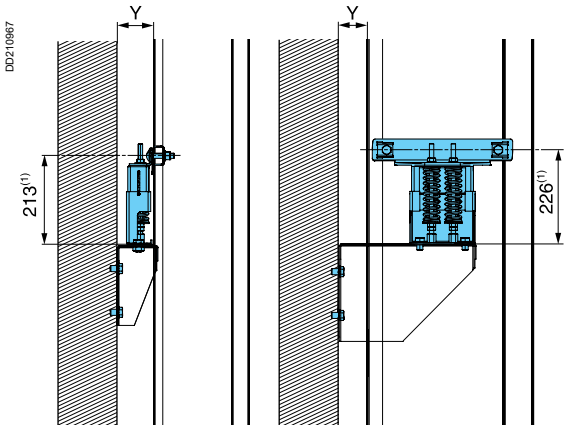


X ≥ 400.

Spring hangers vertical supports KTB●●●●ZA5● are designed for buildings with an average gap between floors of 3 to 4 meters between each floor.
- If these distance is punctually reduced or increased (Max 5 meters with no more than 1 element without support in between) additional supports should then be added to fit a good column consistency. The average distance between supports should stay between 3 to 4 meters.
- Also, a distribution element with high rating tap offs (630 A and more) should have a spring hanger on its length.

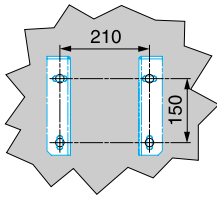
2 fixing systems are available:
- a rear wall fixing system for 800 A to 1600 A busbar trunking
- a side wall fixing system for 2000 A to 4000 A busbar trunking.

Wall support



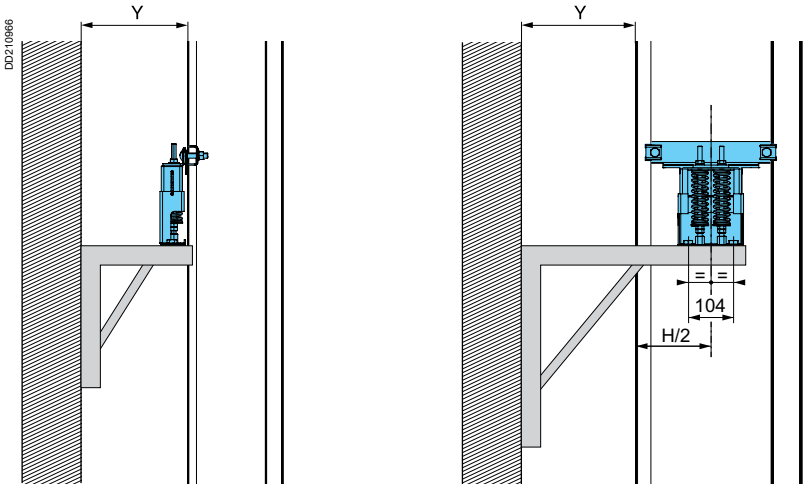
800 to 1600 A. *2000 to 4000 A.*

Wall drilling drawing to fix the support.



***(1)** Dimensions with free springs.*
Y : 50 mm minimum to 100 mm maximum

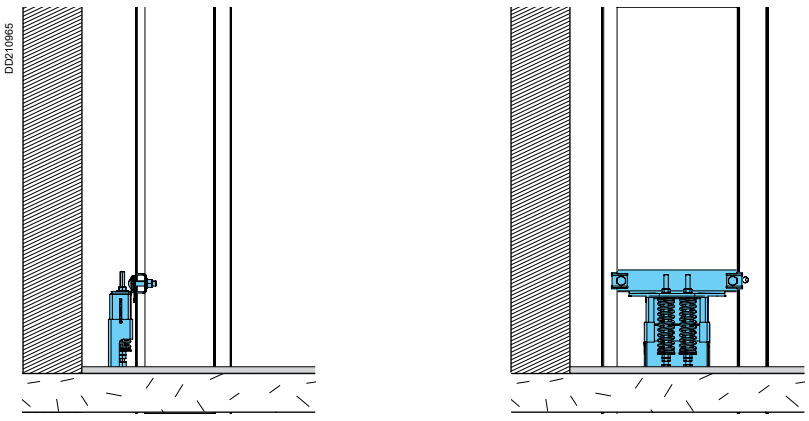
Wall bracket support (if Y > 100 mm)



800 to 1600 A. *2000 to 4000 A.*

Rating (A)	2500	3200	4000	5000
Height H (mm)	204	244	324	404

Floor support



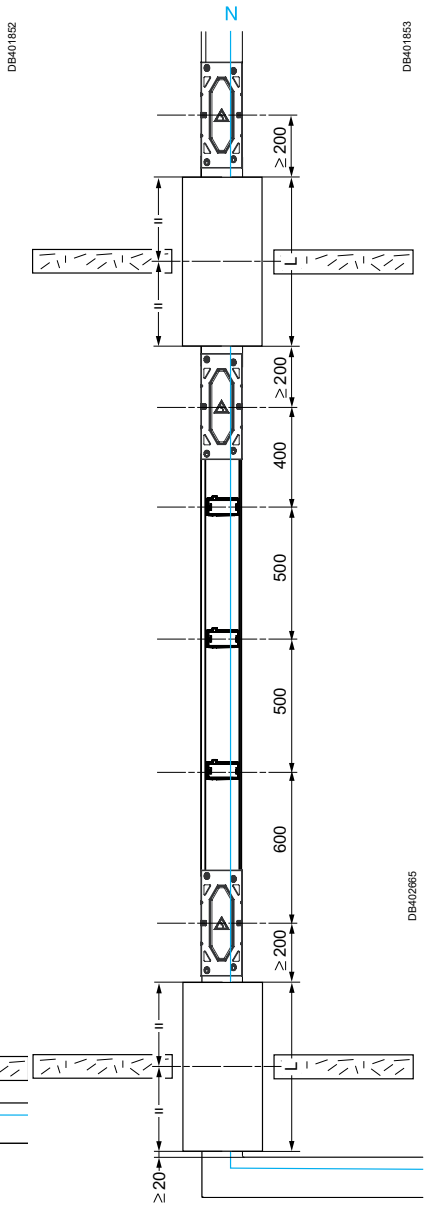
800 to 1600 A. *2000 to 4000 A.*

Rising mains
Positioning the external fire barriers

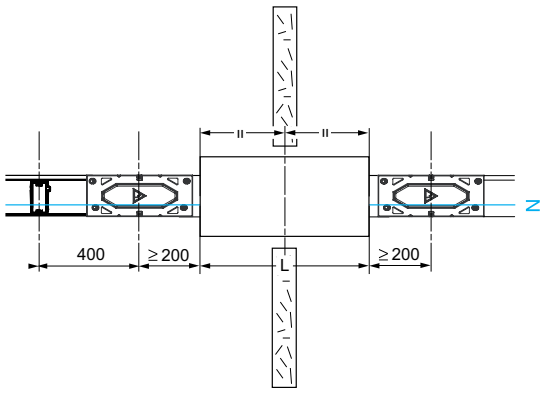
Canalis KTA

The filler material around the busbar trunking must meet the requirements currently in force to guarantee that the wall and ceiling fire-resistance class (for example DIN 1045 and DIN 1053-1) is maintained. Filler material not supplied.

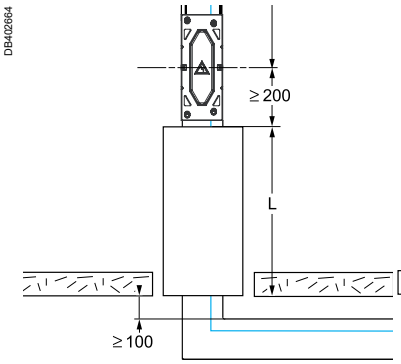
Vertical mounting

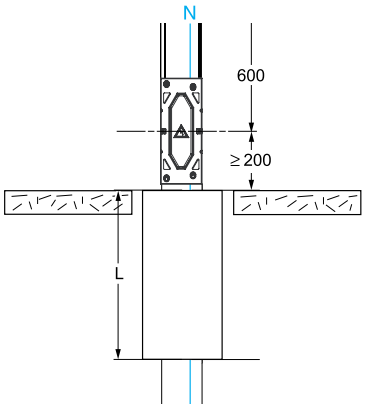


Horizontal mounting

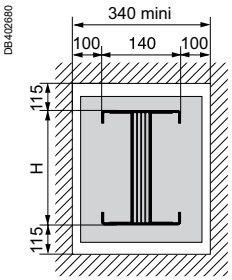


Rating	L
KTA0800	650
KTA1000	650
KTA1250	650
KTA1600	650
KTA2000	650
KTA2500	650
KTA3200	650
KTA4000	650
KTA5000	650

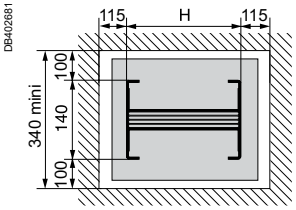




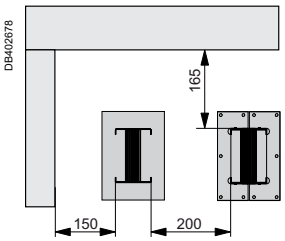
Edgewise passage through partition wall

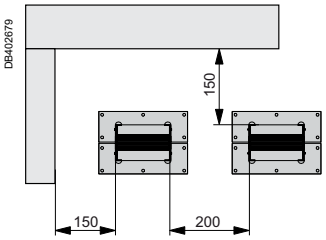


Flat passage through partition wall



Distances to comply

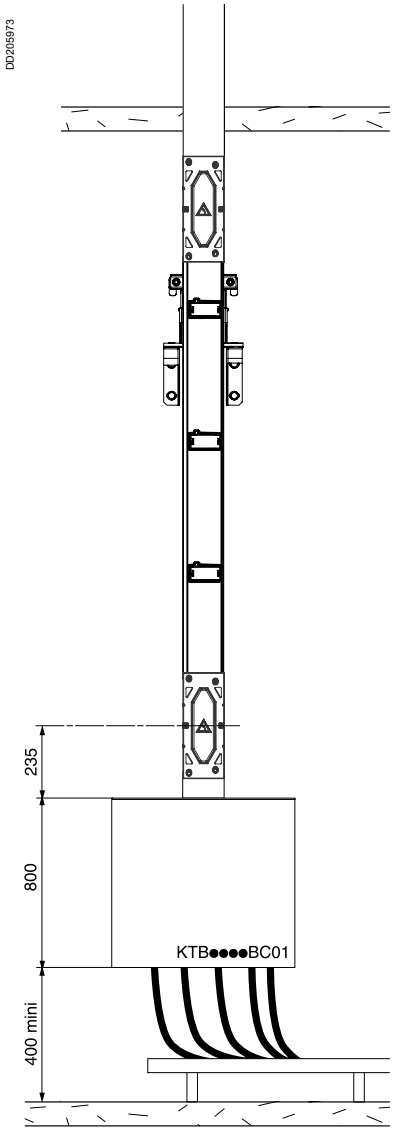




Installation with feed via a cable box or direct onto the switchboard

2 possibilities:
- installation with feed direct to the switchboard
- installation with feed via a cable box.

Installation with feed via a cable box.

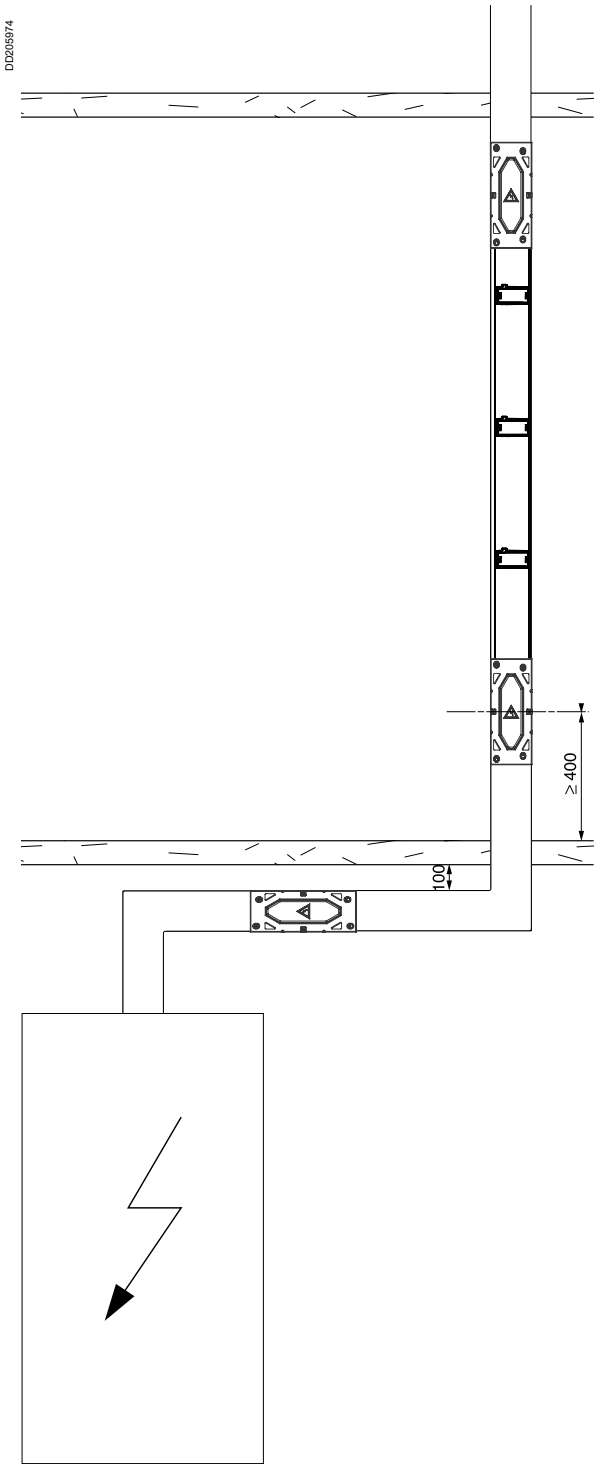


Rising mains

Installation with feed via a cable box or direct onto the switchboard

Canalis KTA

Installation with feed direct to the switchboard



Panorama of connection solutions

Canalis KTA

The Schneider Electric system

The comprehensive Schneider Electric system makes it simple to design a complete transformer/Canalis KT/switchboard installation.
Using dedicated interfaces, the trunking connects directly to the dry-type transformer and the switchboard for:
- tested and standardised connections
- fast and flexible installation
- shorter lead times.

Advantages
- No design work for the connections.
- Simplified layout design:
  - pre-defined position of the jointing unit
  - simplified routing (only three dimensions required)
  - smaller size (no additional covers required).
- Transformer and switchboard supplied with connections already mounted.
- Short lead times and fewer catalogue numbers for connections.
- Adaptable on the worksite:
  - transformer end: ±15 mm adjustments along all three axes
  - switchboard end: phases can be inverted.
- Continuity of service:
  - transformer can be replaced in less than one hour
  - transformer, trunking and switchboard designed to be used together.
- Safety:
  - trunking fully tested in compliance with IEC 61439-1 and 61439-6
  - compliance with standards and installation rules
  - excellent fire-withstand capability.
- Comfort:
  - low level of electromagnetic radiation
  - no noise.

Compatibility between Trihal transformers / Canalis KT / Prisma P or Okken switchboards

Trihal transformers					Prisma P or Okken switchboards							
Rating	Naturally ventilated (AN) dry-type transformers le max.	Forced ventilated (AF) dry-type transformers, 25% overload accepted le max.	Interfaces		NS / NT / NW circuit breakers				NS / NW circuit breakers			NW circuit breakers
					800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A
					08 / 16				20 / 25		32	40
				Junctions	H164				H244		H404	H404
630 kVA	887 A	1109 A	n°1	H124	KTA1000, KTA1250	KTA1000, KTA1250	KTA1000, KTA1250	KTA1000, KTA1250	-	-	-	-
800 kVA	1126 A	1408 A	n°2	H164	KTA1250, KTA1600	KTA1250, KTA1600	KTA1250, KTA1600	KTA1250, KTA1600	KTA1600	KTA1600	-	-
1000 kVA	1408 A	1760 A	n°3	H204	KTA1600	KTA1600	KTA1600	KTA1600	KTA1600, KTA2000	KTA1600, KTA2000	-	-
1250 kVA	1760 A	2200 A	n°4	H244	-	-	-	-	KTA2000, KTA2500	KTA2000, KTA2500	-	-
1600 kVA	2253 A	2816 A	n°5	H324					KTA2500	KTA2500	KTA3200	KTA3200
2000 kVA	2813 A	3516 A	n°6	H404	-	-	-	-	-	-	KTA3200, KTA4000	KTA3200, KTA4000
2500 kVA	3520 A	4400 A	n°7	H404	-	-	-	-	-	-	KTA4000	KTA4000

(1) The compatibilities indicated correspond to the electrical connection possibilities; in all cases, coordination between circuit breaker and electrical busbar trunking must be checked.

Universal connection to a dry-type transformer, see page 242.

Connection to an LV switchboard using a dedicated interface, see page 224.

PD202301_r

Universal connection to an oil-filled transformer, see page 252.

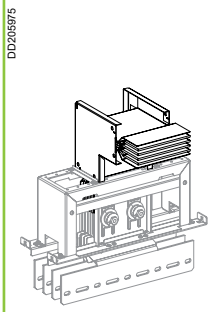
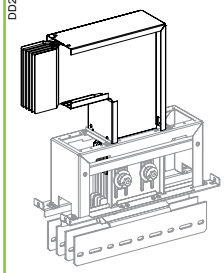
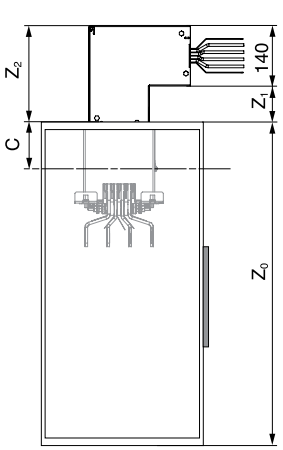
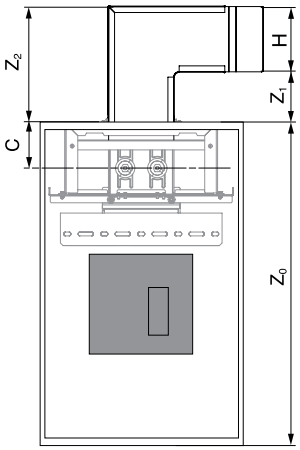
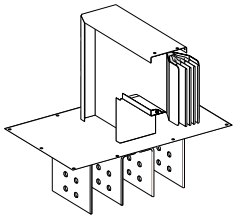
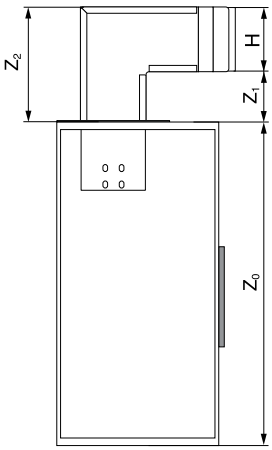
Universal connection to an LV switchboard, see page 230.

DB411147

Connection to LV switchboards
Selection guide

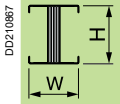
Canalis KTA

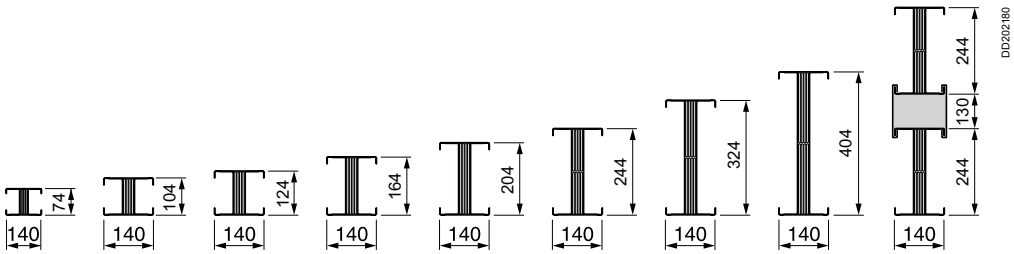
This guide may be used to:
- select the connection best suited to your installation (incoming direction, trunking installed flat or edgewise, different phase order)
- check the total height of the connection with respect to the ceiling, i.e. dimension Z0 + Z2 (100 mm minimum clearance required between top of connection and ceiling)
- optimise the connection by ensuring that $(Z0 + Z1)_{switchboard} = (Z0 + Z1)_{transformer}$ to avoid having to use elbows and zed units
- position the fixing devices used to support the trunking.

Type of connection	Connection with an interface		Direct connection
			Without protective covers
	SB1	SB2	SB3
	 DB411148	 DD205975	 DD205976
			 DD205977
			
Z_0	see page 224	see page 224	As per manufacturing drawings
Z_1 minimum	74	82	138
maximum	-	-	472
Z_2	Z_1 + 140	Z_1 + H	Z_1 + H
Phase order can be changed	■	■	
Mounting in workshop	■	■	
Exit through front or rear	■		■
Exit through left or right side		■	
Edgewise installation		■	■
Flat installation	■		

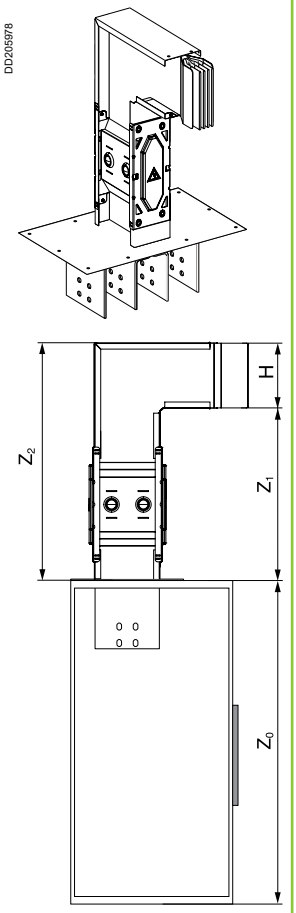
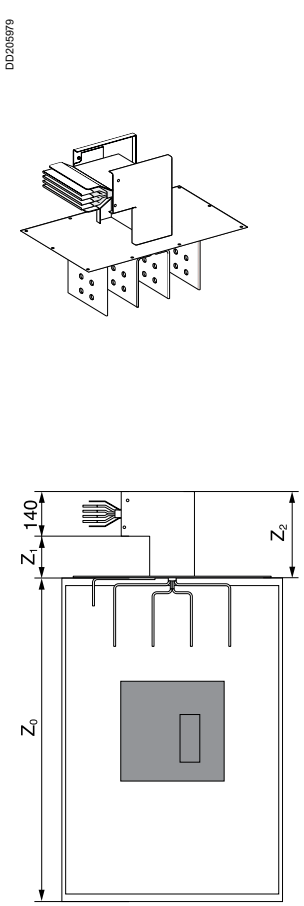
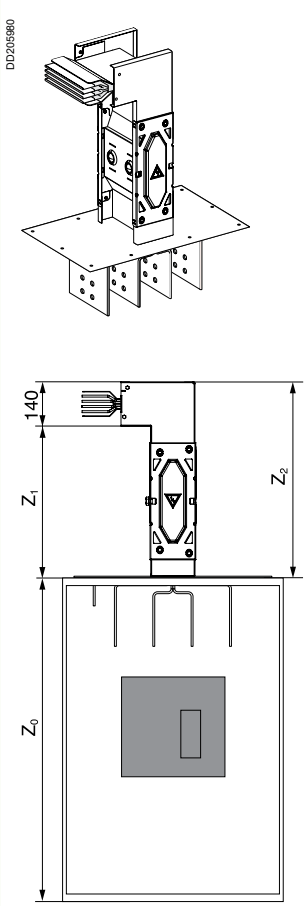
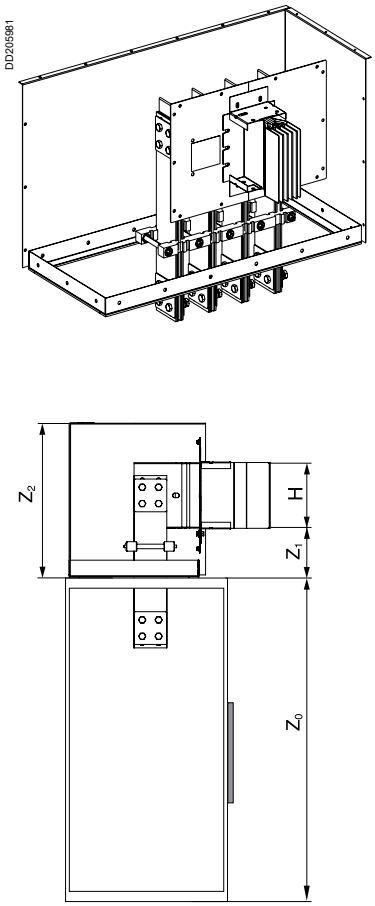
Trunking cross-section

Rating (A)	800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Height H (mm) Width W (mm)	74	104	124	164	204	244	324	404	244 + 130 + 244
	140	140	140	140	140	140	140	140	140





(1) ***Important****: for the 800 A rating, indicate* ***"KTA0800"****.*

				With protective covers
	SB4	**SB5**	**SB6**	**SB7**
				
	As per manufacturing drawings	As per manufacturing drawings	As per manufacturing drawings	As per manufacturing drawings
	473	130	465	H = 74 to 124 mm: 195 - H/2 H = 164 to 244 mm: 255 - H/2 H = 324 to 404 mm: 355 - H/2
	-	464	-	-
	Z_1 + H	Z_1 + 140	Z_1 + 140	H = 74 or 104 or 124 mm: Z_1 + H/2 + 115 H = 164 or 204 or 244 mm: Z_1 + H/2 + 175 H = 324 or 404 mm: Z_1 + H/2 + 255
	■		■	
	■			■
		■	■	
	■			■
		■	■	

Connection to LV switchboards
By Canalis interface

Canalis KTA

PD202328_r

Switchboards can be equipped with connections for Canalis KT. Jointing with the switchboard is via a standard run component (straight length, elbow, etc.) and a jointing unit (identical to those used between line components). The trunking enters the switchboard via the top (roof).

Switchboard connections are available from 800 to 4000 A.

Type of switchboard	Rating of trunking (A)	Type of circuit breaker	Type of connection
Prisma P	800 to 1600	Compact NS	Top direct and rear
		Masterpact NT	Top direct and rear
	800 to 3200	Masterpact NW	Top direct and rear
	4000	Masterpact NW	Rear
Okken	800 to 4000	Masterpact NW	Top direct and rear

Connections are tested and qualified under normal operating conditions in terms of temperature rise (Δθ) and short-circuit currents (Isc).

The panel builder receives and connects the Canalis KT interface in the workshop. The phase order at the interface output can be adapted if necessary (this information must be forwarded to the panel builder).
The switchboard is then delivered to the site and the trunking can be rapidly connected using a simple jointing unit with torque nuts to ensure the correct tightening torque.

Compatibility between Canalis KT and the interface in the switchboard(1)(2)

Canalis KT				Circuit breakers in Okken and Prisma P switchboards						
				NS/NT/NW			NS/NW			NW
Cat. no.	Rating (A)	Height (mm)	Sealing kit	800 and 1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A
				Interface 08/16			Interface 20/25		Interface 32	Interface 40
				H164(3)			H244(3)		H404(3)	H404(3)
KTA1000	1000	104	KTB0104TT01							
KTA1250	1250	124	KTB0124TT01							
KTA1600	1600	164	KTB0164TT01							
KTA2000	2000	204	KTB0204TT01							
KTA2500	2500	244	KTB0244TT01							
KTA3200	3200	324	KTB0324TT01							
KTA4000	4000	404	KTB0404TT01							

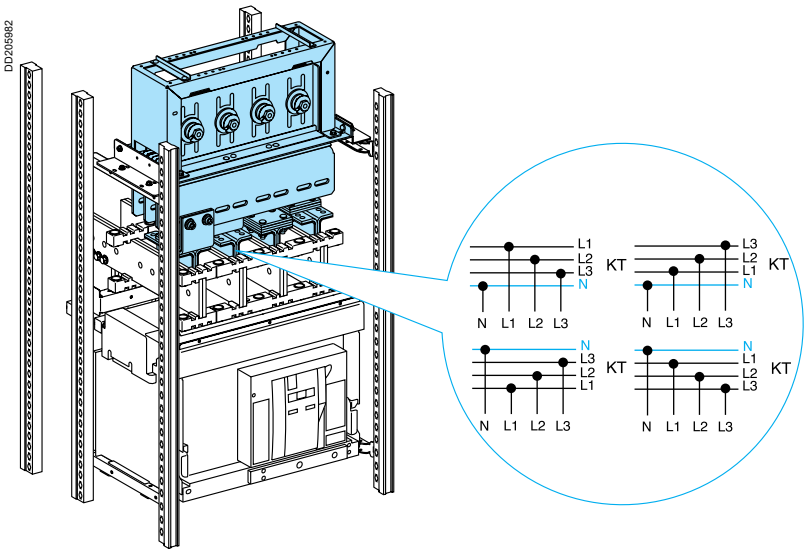
(1) The compatibilities indicated correspond to the electrical connection possibilities; in all cases, coordination between circuit breaker and electrical busbar trunking must be checked.
(2) Coordination with a dry-type transformer, see the "Transformer" section, page 239.
(3) Height of the jointing unit in millimetres.

The prefabricated connections installed in the switchboard are designed to operate without derating and can therefore operate at the rated circuit breaker current.

Phase order

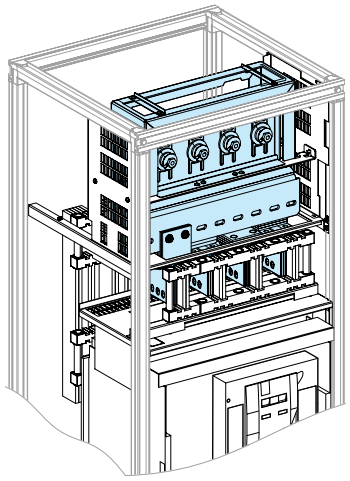
Using the dedicated interface, it is possible to change the phase order if it is different between the trunking and the switchboard.

DD2205982



Top direct connection (TDC)

DD202310



To 800 to 4000 A Masterpact NW circuit breakers

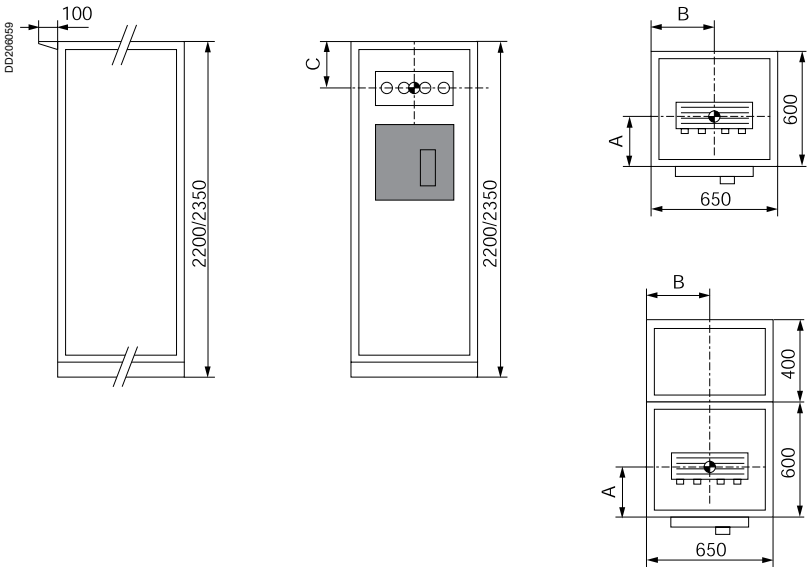
■ Enclosure 600 or 1000 mm deep, access through the front.

Position of the jointing unit

Circuit breaker		Dimensions (mm)		
		A	B	C
Drawout, 3P/4P[1]	NW08/16	175	325	156
	NW20/25	175	325	156
	NW32	175	325	156
	NW40	175	325	156

(1) To order, see "Catalogue numbers", page 78.

DD206059

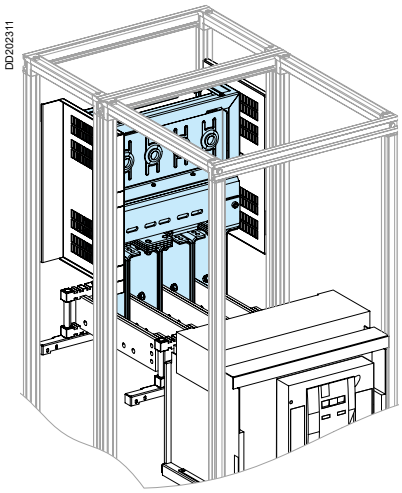


Reference point

Connection to LV switchboards
By Canalis interface
Connection to Okken switchboards

Canalis KTA

Rear connection (RC)

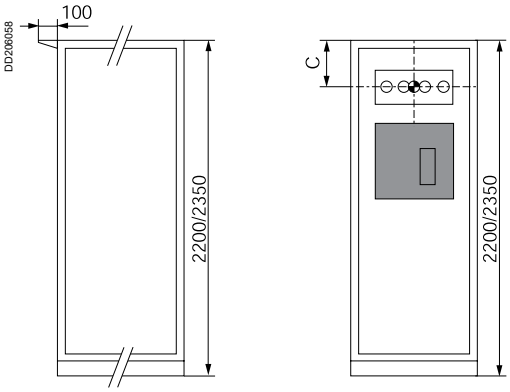


To 800 to 4000 A Masterpact NW circuit breakers
■ Enclosure 1000, 1200 or 1400 mm deep, access through the rear.

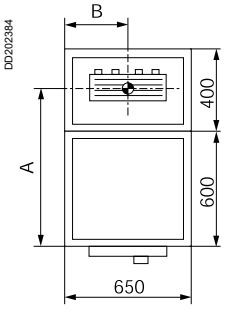
Position of the jointing unit

Circuit breaker		Dimensions (mm)				
		A			B	C
		Depth (mm)				
		1000	1200	1400		
Drawout, 3P/4P(1), top position	NW08/16	825	-	-	363	317
	NW20/25	825	-	-	363	317
	NW32	825	-	-	363	317
	NW40	-	953	-	363	156
Drawout, 3P/4P(1), medium position	NW08/16	825		-	363	942
	NW20/25	825		-	363	942
	NW32	825		-	363	942
	NW40	-	953	-	363	881
Drawout, 3P/4P(1), bottom position	NW08/16	-	-	1225	363	1417
	NW20/25	-	-	1225	363	1417
	NW32	-	-	1225	363	1417

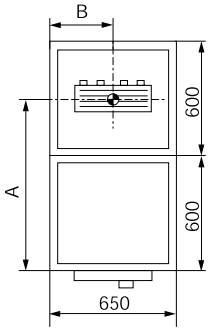
(1) To order, see "Catalogue numbers", page 78.



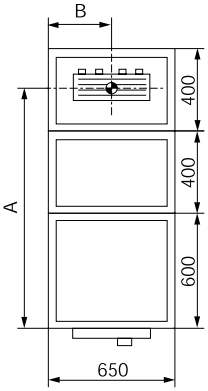
Top views
Depth: 1000 mm



Depth: 1200 mm



Depth: 1400 mm



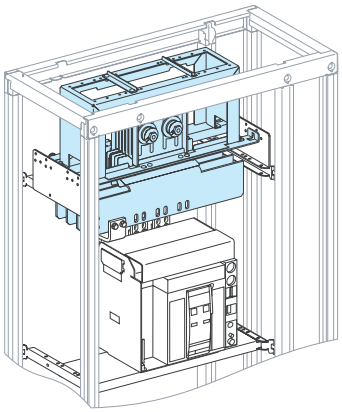
Reference point

Bottom connection

For installations with connections through the bottom, please consult us.

Top direct connection (TDC)

DD202306



To a Compact NS1250 or Masterpact NT1200 circuit breaker

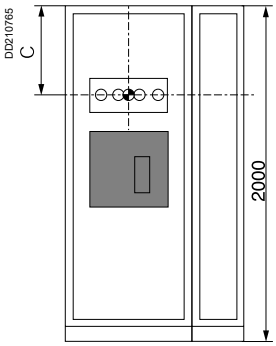
■ Enclosure 400 mm deep, access through the front.

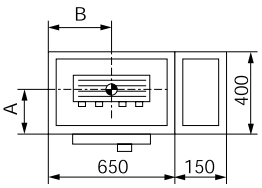
Position of the jointing unit

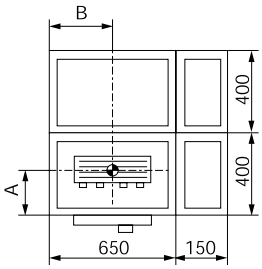
Circuit breaker		Dimensions(1) (mm)		
		A	B	C
Fixed, 3P/4P(2)	NS800/1250	236	325	160
	NT08/12	260	325	160
Drawout, 3P/4P(2)	NS800/1250 or 08/NT12	260	325	170

(1) *Dimensions measured from switchboard framework.*
(2) *To order, see "Catalogue numbers", page 76.*

DD210765

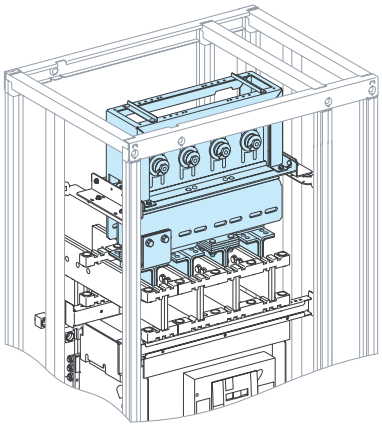






Reference point

DD202304



To 800 to 3200 A Masterpact NW circuit breakers

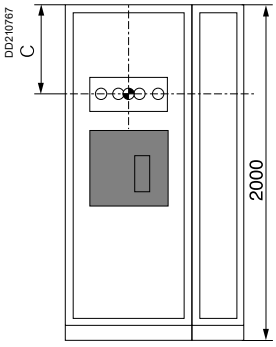
■ Enclosure 600 mm deep, access through the front.

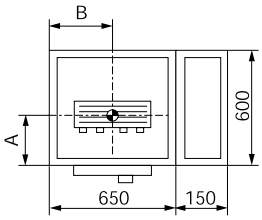
Position of the jointing unit

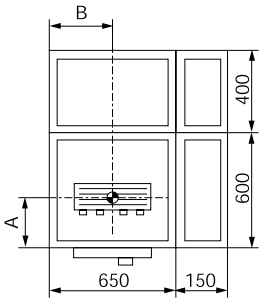
Circuit breaker		Dimensions(1) (mm)		
		A	B	C
Fixed, 3P/4P(2)	NW08/16	185	325	264
	NW20/25	185	325	289
	NW32	185	325	264
Drawout, 3P/4P(2)	NW08/16	185	344	164
	NW20/25	185	344	214
	NW32	185	344	214

(1) *Dimensions measured from switchboard framework.*
(2) *To order, see "Catalogue numbers", page 75.*

DD210767







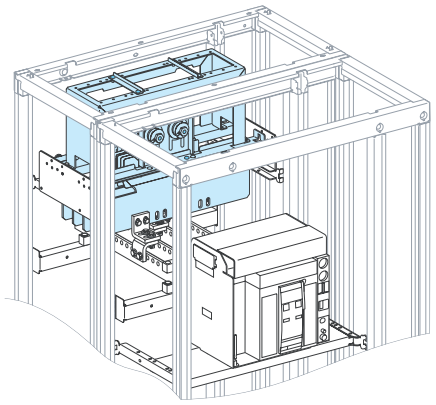
Reference point

Connection to LV switchboards
By Canalis interface
Connection to Prisma P switchboards

Canalis KTA

Rear connection (RC)

DD202307



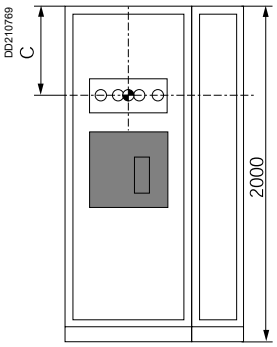
To a Compact NS1600 or Masterpact NT1600 circuit breaker
- ■ Two enclosures combined:
- □ 1 enclosure, 400 mm deep, for the circuit breaker
- □ 1 enclosure, 400 mm deep, for the Canalis KT/switchboard interface.

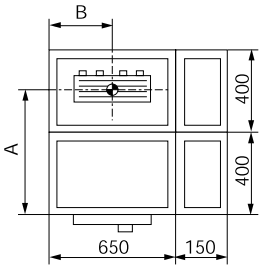
Position of the jointing unit

Circuit breaker		Dimensions(1) (mm)		
		A	B	C
Fixed, 3P/4P(2)	NS800/1600 or NT08/16	638	325	160
Drawout, 3P/4P(2)	NS800/1600 or NT08/16	638	325	170

(1) Dimensions measured from switchboard framework.
(2) To order, see "Catalogue numbers", page 76.

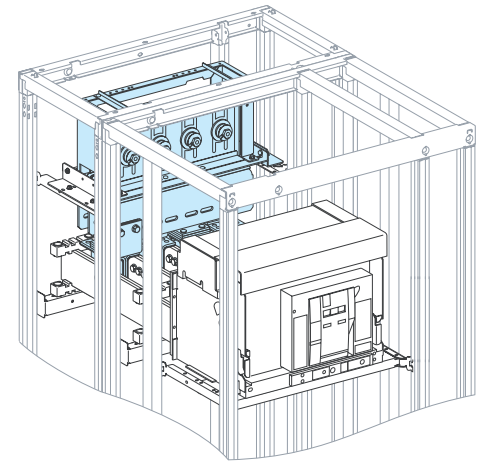
DD210769





Reference point

DD202305



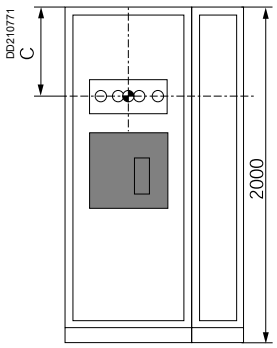
To 800 to 4000 A Masterpact NW circuit breakers
- ■ Two enclosures combined:
- □ 1 enclosure, 600 mm deep, for the circuit breaker
- □ 1 enclosure, 400 mm deep, for the Canalis KT/switchboard interface.

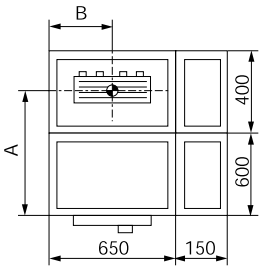
Position of the jointing unit

Disjoncteur		Dimensions(1) (en mm)		
		A	B	C
Fixed, 3P/4P(2)	NW08/16	815	325	264
	NW20/25	757	325	414
	NW32	774	325	414
	NW40	790	325	414
Drawout, 3P/4P(2)	NW08/16	815	317	414
	NW20/25	815	342	414
	NW32	815	317	439
	NW40	790	325	414

(1) Dimensions measured from switchboard framework.
(2) To order, see "Catalogue numbers", page 75.

DD210771



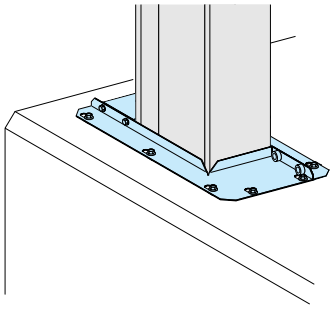


Reference point

Sealing kit

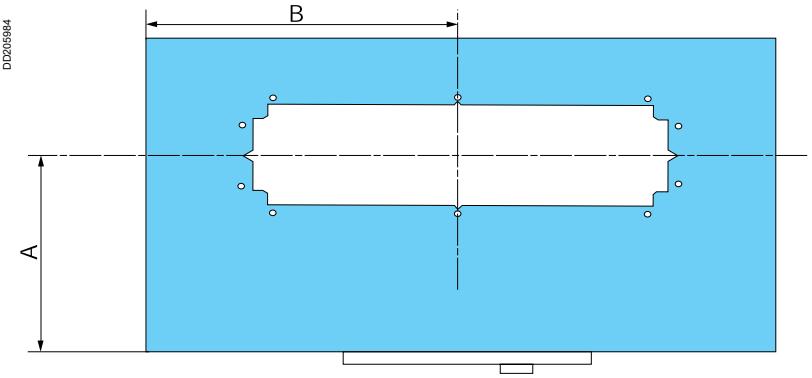
The sealing kit must be ordered with the KT trunking. The size of the trunking determines that of the sealing kit. For the different types of kit, see the "Catalogue numbers and dimensions" pages.
The kit includes a drilling and cut-out drawing for the switchboard roof.

DD202314

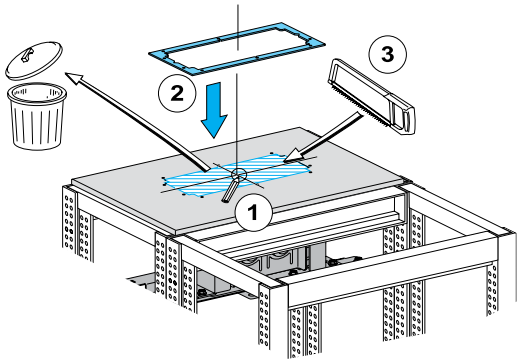


KTB0●●●●TT01

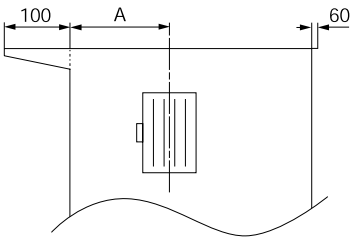
DD205984



DD205983



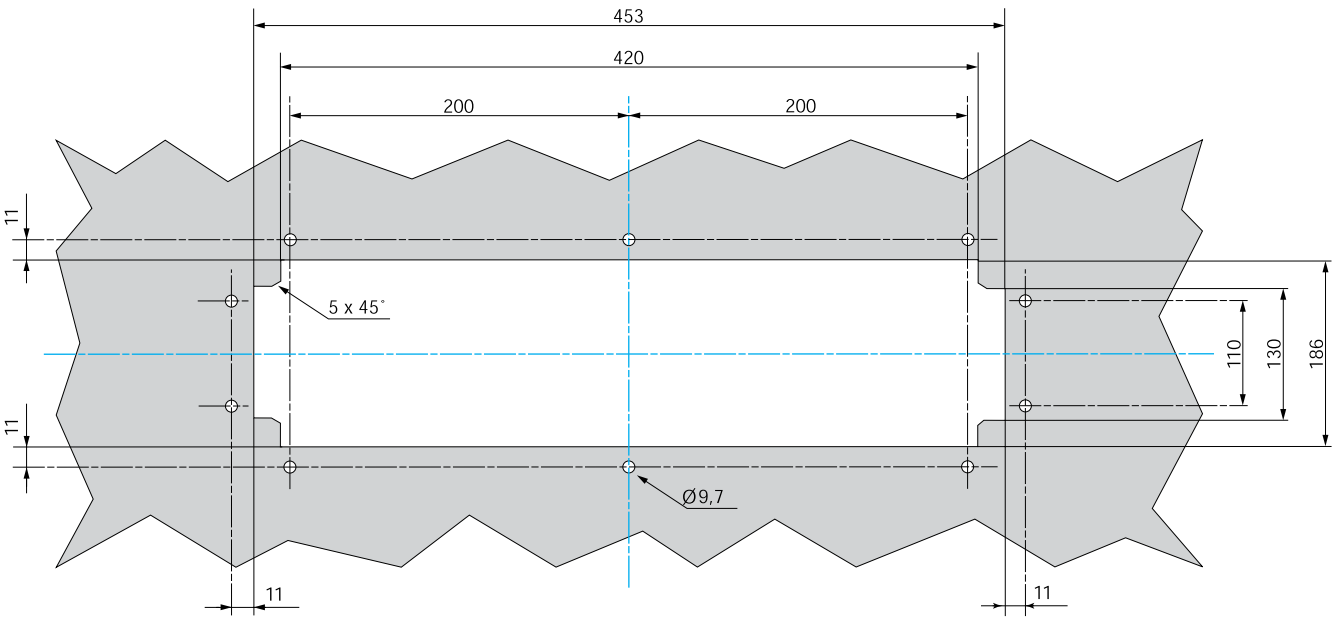
Okken



Cut-out drawing (for all the ratings)

It is advised to cut out the switchboard roof in the workshop.
Important : the dimensions are measured from switchboard framework.

DD205985



Centre lines.

Connection to LV switchboards
By universal feed unit

Canalis KTA

PD202329_r

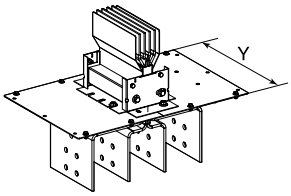
Canalis KT can be connected to switchboards via a universal connector. To simplify the work, it is advised to fit the switchboard busbars with a **distance between centres of 115 mm**.
Jointing with the switchboard is via a straight or elbow universal feed unit with a straight or flat outlet.
Connections are made using torque nuts offering both ease of use and the possibility of a visual check before energising.

Enclosure depth depending on the rating of the trunking

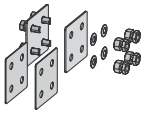
Rating of trunking (A)	Depth Y of universal feed unit plate (mm)	Minimum depth X of switchboard (mm)
1000 to 1250	230	400
1600 to 2500	350	400
3200 to 4000	510	600

Busbars in switchboard (recommended distance between centres = 115 mm)

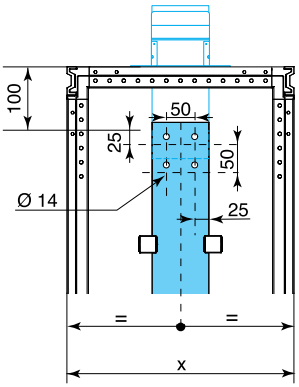
DD205986



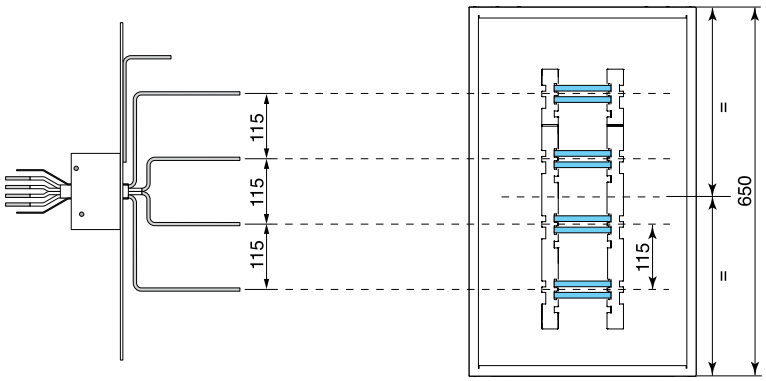
KTA●●●●ER●●



KTA0000YB2

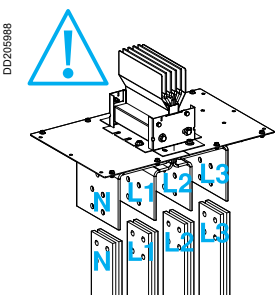


DD205987



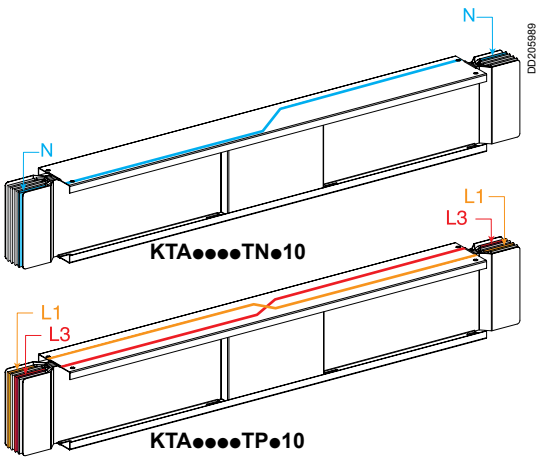
Phase order

DD205988



If the order of the phases in the trunking and the switchboard is different, it is advised to invert the phases in the switchboard. If that is not possible, use the phase and neutral crossover components. For more information, see the "Description" section, page 35 and "Catalogue numbers and dimensions" section, page 58.

DD205989

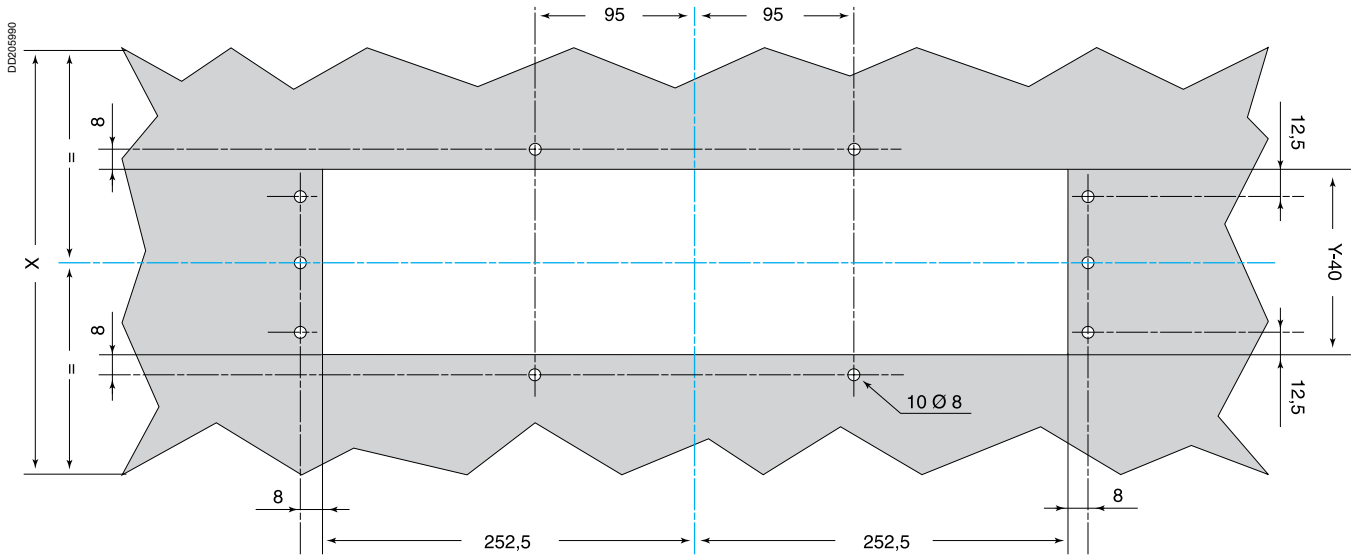


Cut-out drawing

It is advised to cut out the switchboard roof in the workshop.

Cut-out for universal feeder unit, with distance between centres = 115 mm

Rating of trunking (A)	Depth Y of universal feed unit plate (mm)
1000 à 1250	230
1600 à 2500	350
3200 à 4000	510

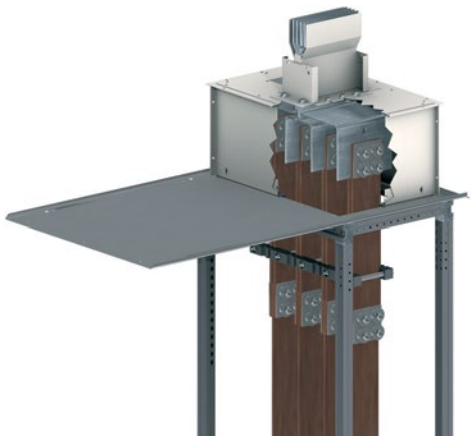


Centre lines.

Connection to LV switchboards
By feed and connection plates

Canalis KTA

PD202331_r



Connection plates are flexible copper bars, insulated or not, and drilled at one or both ends. They are supplied with bolts, washers and torque nuts for connection to straight or elbow universal feed units.
To simplify the work, it is advised to universal feed units with a **distance between centres of 115 mm**.

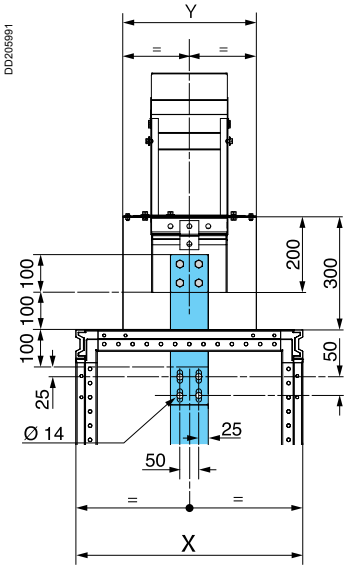
Enclosure depth depending on the rating of the trunking

Rating of trunking (A)	Depth Y of universal feed unit plate (mm)	Minimum depth X of switchboard (mm)
1000 to 1250	230	400
1600 to 2500	350	400
3200 to 4000	510	600

Universal feed unit (recommended distance between centres = 115 mm)

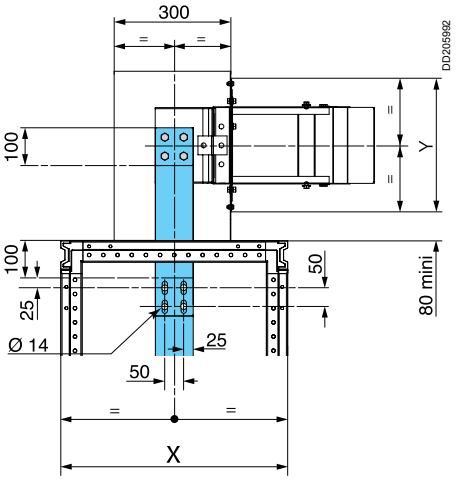
Vertical incomer

DD205991

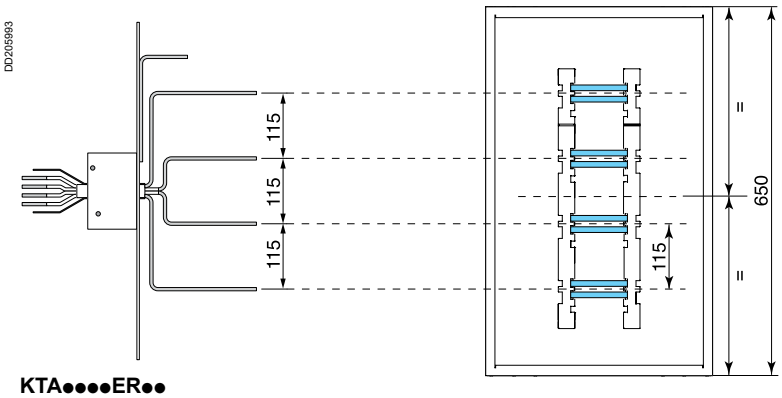


Horizontal incomer

DD205992

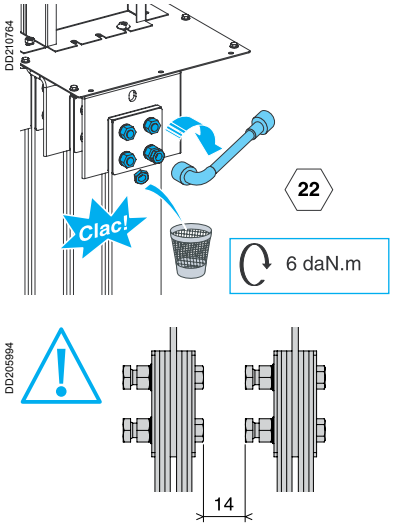


DD205993



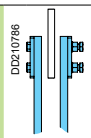
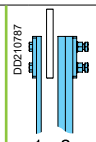
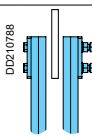
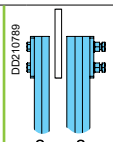
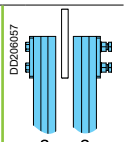
KTA●●●●ER●●

Selection of connection plates



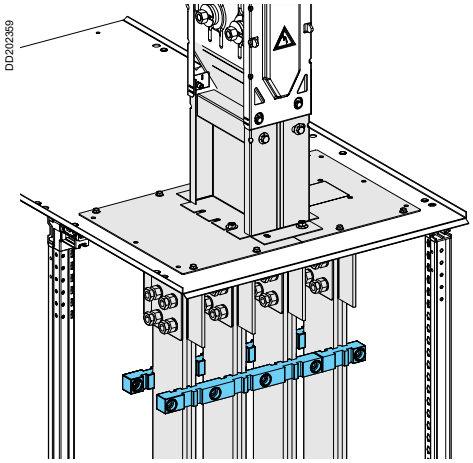
The required number of connection plates is indicated in the table below.

Busbar trunking rating (A)	Bare copper connection plates per phase	
	Number (1)	Section (mm²)
1000	2 (100 x 5)	1000
1250	2 (100 x 5)	1000
1600	2 (100 x 5)	1000
2000	3 (100 x 5)	1500
2500	3 (100 x 5)	1500
3200	4 (100 x 5)	2000
4000	5 (100 x 5)	2500
5000	6 (120 x 5)	3600

Connection plates					
	DD210786 1 1	DD210787 1 2	DD210788 2 2	DD210789 2 3	DD206057 3 3
Busbar trunking rating (A)	1000 to 1600	2000 to 2500	3200	4000	5000

(1) The number of bimetal aluminium copper connections per phase is the same as bare copper ones.
***Note**: 2 (100 x 5) bare copper can be replaced by 2 (100 x 7) bimetal aluminium copper.*

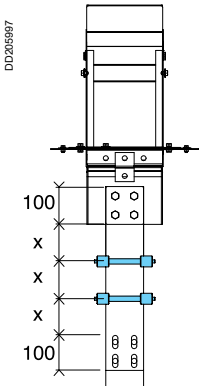
Short-circuit withstand



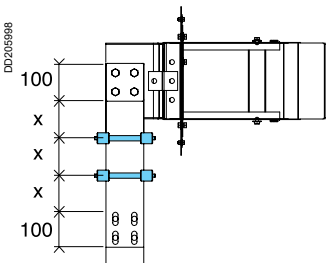
Short-circuit withstand table

Short-time withstand current (Icw)	Maximum distance between support centres X (mm)
≤ 43 kA	400
43 kA ≤ Icw ≤ 50 kA	225
50 kA ≤ Icw ≤ 100 kA	150

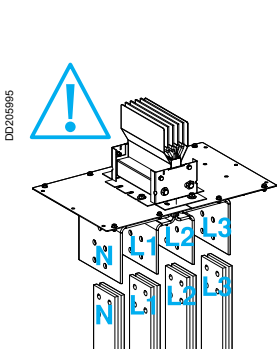
Vertical incomer

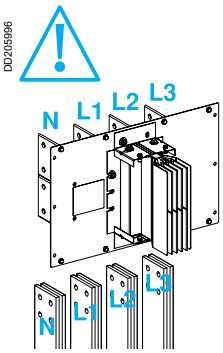


Horizontal incomer

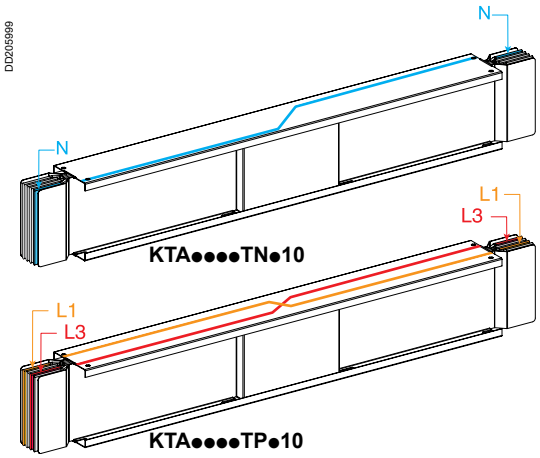


Phase order





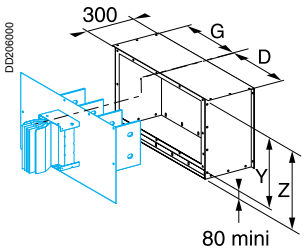
If the order of the phases in the trunking and the switchboard is different, it is advised to invert the phases in the switchboard. If that is not possible, use the phase and neutral crossover components.
For more information, see the "Description" section, page 35 and "Catalogue numbers and dimensions" section, page 58.



Connection to LV switchboards
By feed and connection plates

Canalis KTA

Dimensions of protective covers



KTB●●●●CR1

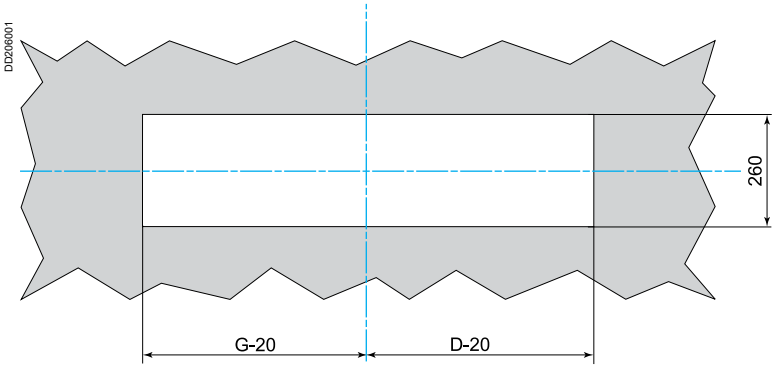
Horizontal incomer

Rigid horizontal cover KTB●●●●CR1 for ER straight outlet feed connectors type N1 to N6

Rating (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	220 to 475	220 to 475	310 to 800
1600 to 2500	350	220 to 475	220 to 475	430 to 800
3200 to 4000	510	220 to 475	220 to 475	590 to 800

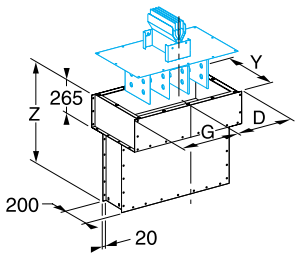
Cut-out drawing

It is advised to cut out the switchboard roof in the workshop..



Centre lines.

DD202322



KTB●●●●CR2

Vertical incomer

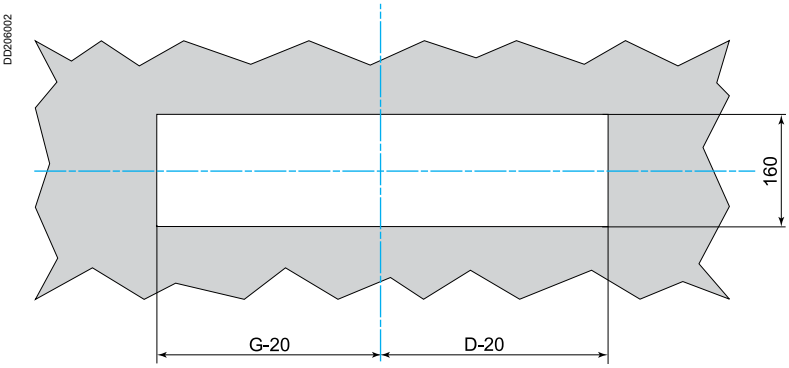
Rigid vertical cover KTB●●●●CR2 (400 to 800 mm height) for ER straight outlet feed connectors type N1 to N6

Rating (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	220 to 475	220 to 475	400 to 800
1600 to 2500	350	220 to 475	220 to 475	400 to 800
3200 to 4000	510	220 to 475	220 to 475	400 to 800

Cut-out drawing

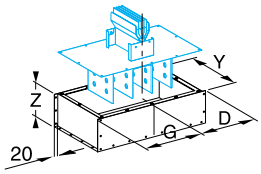
It is advised to cut out the switchboard roof in the workshop.

DD206002



Centre lines.

DD202324



KTB●●●●CR3

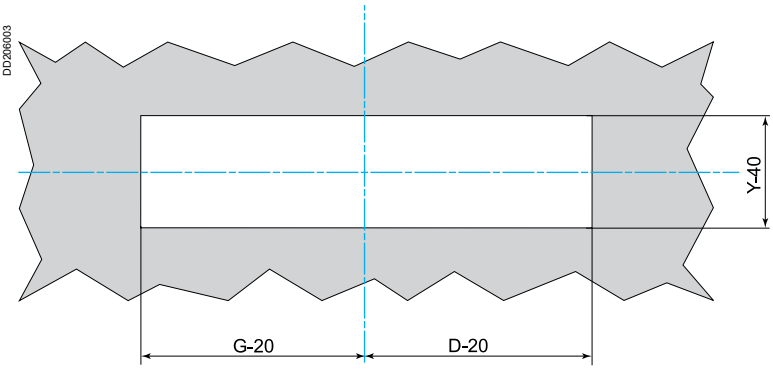
Rigid vertical cover KTB●●●●CR3 (100 to 400 mm height) for ER straight outlet feed connectors type N1 to N6

Calibre (A)	Dimensions (mm)			
	Y	D	G	Z
800 to 1250	230	220 to 475	220 to 475	400 to 800
1600 to 2500	350	220 to 475	220 to 475	400 to 800
3200 to 4000	510	220 to 475	220 to 475	400 to 800

Cut-out drawing

It is advised to cut out the switchboard roof in the workshop.

DD206003

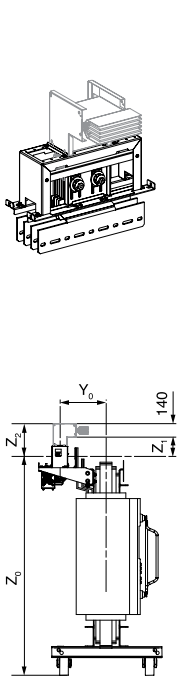
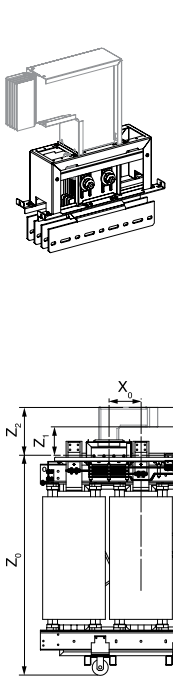
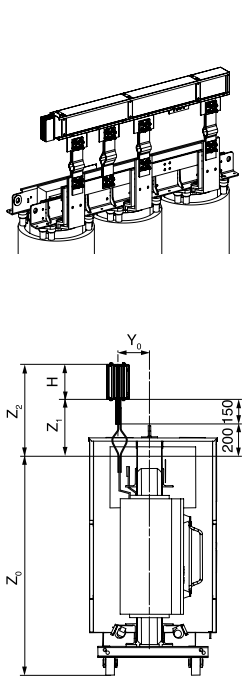


Centre lines.

Connection to cast resin transformers
Selection guide

Canalis KTA

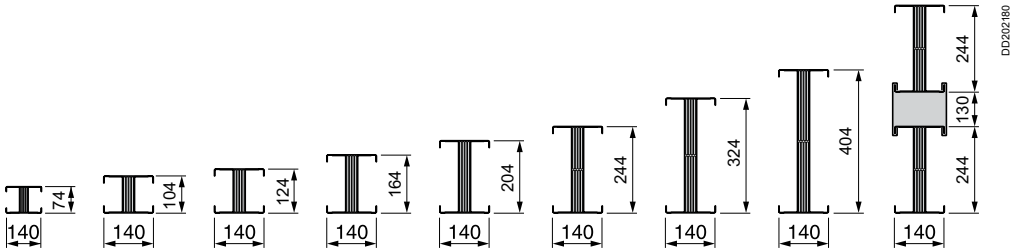
This guide will allow you to:
- choose the connection best suited to your layout (incoming direction, flat or edgewise busbar trunking, possibility of adjusting phase order)
- check the total height of the link with respect to the premises' ceiling height, dimension Z0 + Z2 (plan for 100 mm minimum between the upper point of the link and the ceiling)
- optimise your link whilst respecting the following rule:
$(Z_0 + Z_1)_{switchboard} = (Z_0 + Z_1)_{transformer}$ to avoid multiple elbows to change levels
- position the sections for the busbar trunking supports.

Type of connection	Connection with interface to Trihal transformers		Universal connection
	TS1	TS2	TS3
			
Z_0	See page 239	See page 239	According to manufacturer's drawing
Z_1 **minimum**	230	238	350
maximum	-	-	350
Z_2	Z_1 + 140	Z_1 + H	Z_1 + H
Selecting phase order	Fixed	Fixed	At time of order
Front or rear exit	■		
Right or left exit		■	■
Edgewise layout		■	■
Flat layout	■		

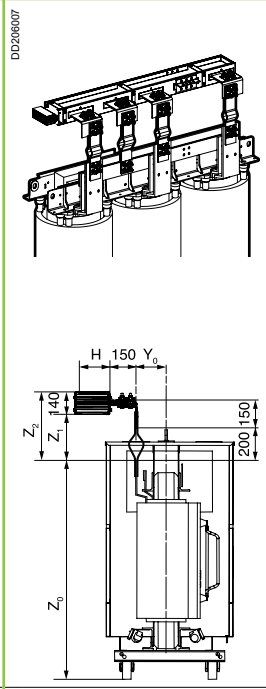
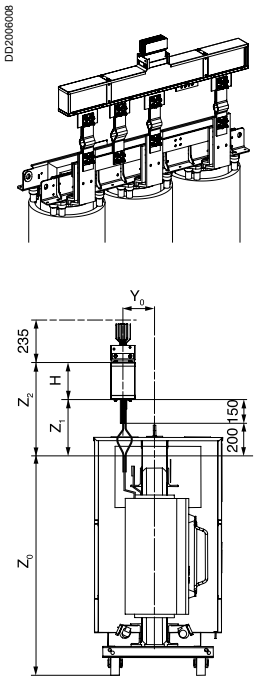
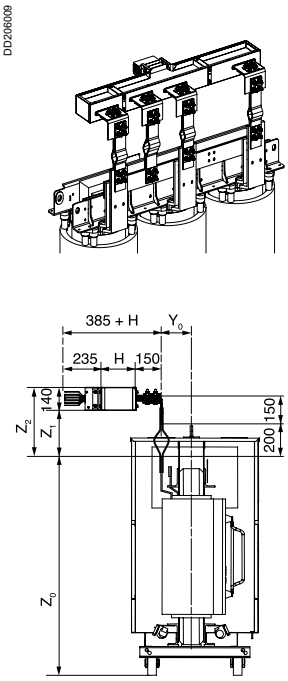
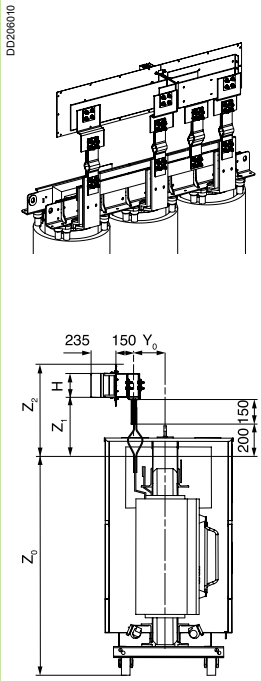
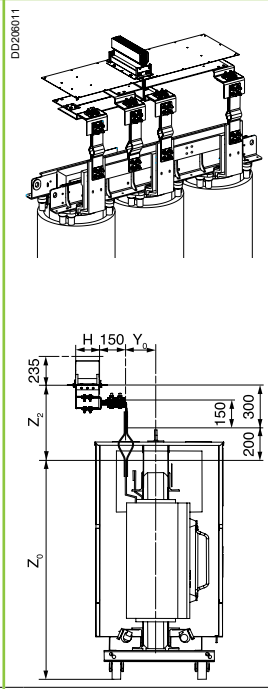
(1) *To use standard connection plates L = 406 mm in accordance with our recommendations.*

Trunking cross-section

Rating (A)	800(1)	1000	1250	1600	2000	2500	3200	4000	5000
Height H (mm) Width W (mm)	74	104	124	164	204	244	324	404	244 / 130 / 244
	140	140	140	140	140	140	140	140	140



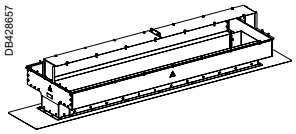
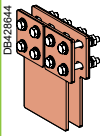
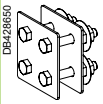
(1) ***Important****: for the 800 A rating, indicate* ***"KTA0800"****.*

	TS4	TS5	TS6	TS7	TS8
					
	According to manufacturer's drawing	According to manufacturer's drawing	According to manufacturer's drawing	According to manufacturer's drawing	According to manufacturer's drawing
	280	350	280	350	-
	280(1)	350(1)	280(1)	350(1)	-
	420(1)	Z_1 + H	420(1)	H = 74 or 104 or 124 mm: Z_1 + H/2 + 115 H = 164 or 204 or 244 mm: Z_1 + H/2 + 175 H = 324 or 404 mm: Z_1 + H/2 + 255	500(1)
	At time of order	At time of order	At time of order	At time of order	At time of order
	■		■	■	
			■		
	■			■	

Connection to Trihal Dry type transformers
Selection guide

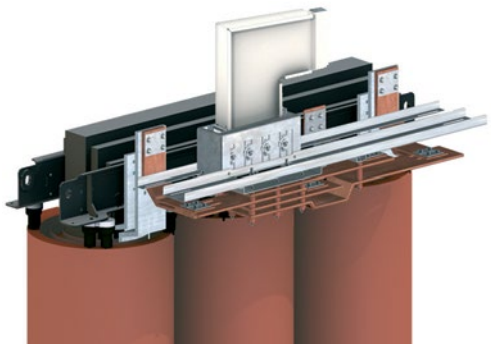
Canalis KTA 5000

KTA Trihal Dry type Transfomer connection

Box		Flexible links reference and quantity	Connection plates reference and quantity	Bolts sets reference and quantity
				
Catalogue number	**Polarity**	**KTB0100YC50510B**	**KTB0000YP24**	**KTB0000YB4**
KTB0001CR5	3P	12	3	6
	4P	16	4	8

Connection to Trihal cast resin transformers
By Canalis interface

PD202434_r



The Trihal dry-type transformers are supplied with a specific interface tested to receive the Canalis KT busbar trunking. Jointing with the switchboard is achieved using a standard run section (straight, elbow section, etc) and a joint block identical to that for connecting run elements.

The Canalis KT/dry type transformer interface, which is fitted to the transformer, is designed to accept the transformer's 25 % overload in the case of forced ventilation.

The connections are tested and qualified in normal operating conditions with respect to temperature rise ($\Delta\theta$) and short-circuits (Isc).

The busbar trunking is quickly connected to the dry-type transformer using a simple joint block with torque nuts, guaranteeing tightening torque.

Table of compatibility between Canalis KT and the connection interface for naturally ventilated (AN) dry-type transformers.

Dry-type transformer					Canalis KT	
Rating (kVA)	I nominal(1) (A)	Interface			Cross-section	Type
		Type	Junction	Rating (A)		
630	887	1	H124	1250	140 x 104	KTA1000
800	1126	2	H164	1600	140 x 124	KTA1250
1000	1408	3	H204	2000	140 x 164	KTA1600
1250	1760	4	H244	2500	140 x 204	KTA2000
1600	2253	5	H324	3200	140 x 244	KTA2500
2000	2816	6	H404	4000	140 x 324	KTA3200
2500	3520	7	H404	5000	140 x 404	KTA4000

(1) I is given as an indication only and is calculated with U - 410 V.

Table of compatibility between Canalis KT and the connection interface for forced ventilated (AF) dry-type transformers.

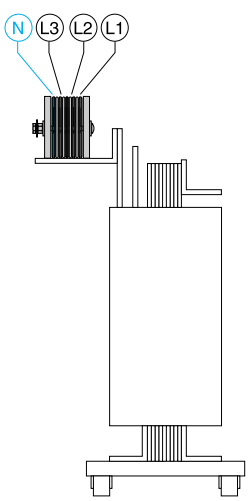
Dry-type transformer					Canalis KT	
Rating (kVA)	I nominal(1) (A)	Interface			Cross-section	Type
		Type	Junction	Rating (A)		
630	1108	1	H124	1250	140 x 124	1250
800	1407	2	H164	1600	140 x 164	1600
1000	1760	3	H204	2000	140 x 204	2000
1250	2253	4	H244	2500	140 x 244	2500
1600	2816	5	H324	3200	140 x 324	3200
2000	3520	6	H404	4000	140 x 404	4000

(1) I is given as an indication only and is calculated with U - 410 V.

If, for reasons of busbar trunking operating conditions or performance requirements, you have to use a rating other than those defined in the above tables, consult us.

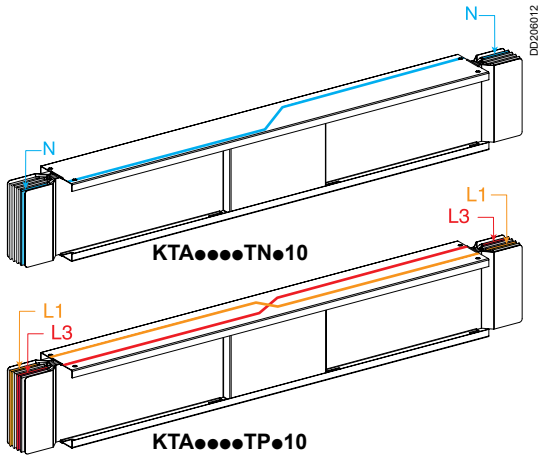
Phase order

DD210945



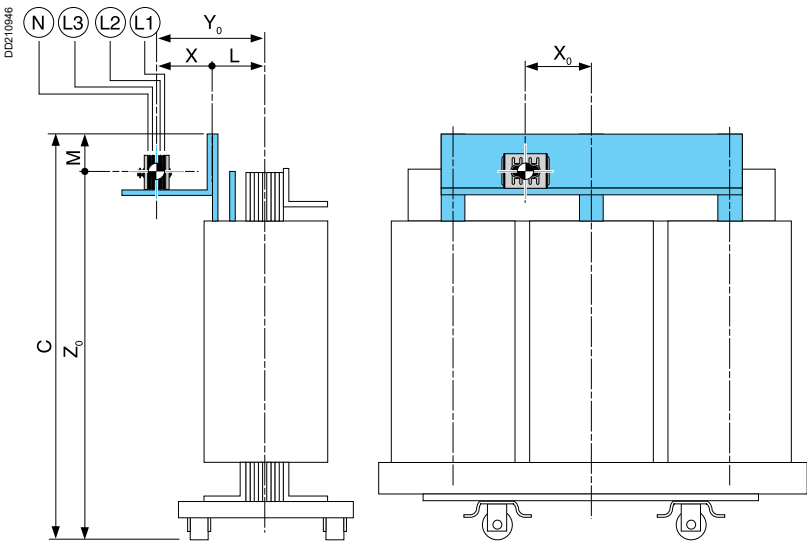
If the phase order of the busbar trunking is different to that of the switchboard's busbars, it is recommended a phase inversion is carried out in the switchboard. If this cannot be done, use the phase and neutral transposition section. For more information, see the "Description" section, page 35 and "Catalogue numbers and dimensions" section, page 58.

DD206012



Connection to Trihal cast resin transformers
By Canalis interface

Canalis KTA



Reference point

Dimensions

Dimensions X, M and X_0

Dimensions (mm)	Transformer power (kVA)						
	630	800	1000	1250	1600	2000	2500
X	147	150	170	147	150	170	153
M	100	100	108	93	124	144	149
X_0	233	215	265	245	300	300	322.5
Interface type	1	2	3	4	5	6	7

Dimensions Y_0 and Z_0
$Y_0 = X + L$
$Z_0 = C - M$

Dimensions **C** and **L** are different according to country standards.

French standard
FT no.235627 rev. 3 - Primary voltage: 20 kV - Insulation voltage: 24 kV -Secondary voltage: 410 V

Dimensions (mm)	Transformer power (kVA)						
	630	800	1000	1250	1600	2000	2500
C	1614	1744	1749	1929	2089	2209	2297
L	220	225	240	240	240	257	275

German standard
FT no.235763 rev. 0 - Primary voltage: 20 kV - Insulation voltage: 24 kV - Secondary voltage: 400 V

Dimensions (mm)	Transformer power (kVA)						
	630	800	1000	1250	1600	2000	2500
C	1734	1744	1749	2019	1979	2199	2279
L	210	220	225	245	255	255	265

Spanish standard
FT no.235515 rev. 3 - Primary voltage: 20 kV - Insulation voltage: 24 kV - Secondary voltage: 420 V

Dimensions (mm)	Transformer power (kVA)					
	630	800	1000	1250	1600	2000
C	1614	1744	1879	1929	1979	2194
L	220	225	215	245	250	245

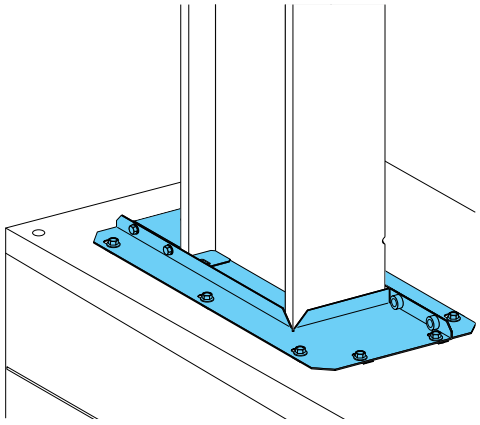
Belgian standard
FT no.235820 rev. 0 - Primary voltage: 15 kV - Insulation voltage: 17.5 kV - Secondary voltage: 400 V

Dimensions (mm)	Transformer power (kVA)						
	630	800	1000	1250	1600	2000	2500
C	1484	1564	1694	1844	2054	2149	2164
L	215	210	215	225	230	255	235

Sealing kit

The sealing kit must be ordered with the KT busbar trunking. The busbar trunking size defines the sealing kit size. For the different types of kit, see «Catalogue numbers / Dimensions».
The kit includes a drilling and cut-out template for the dry-type transformer panels.

DD206013

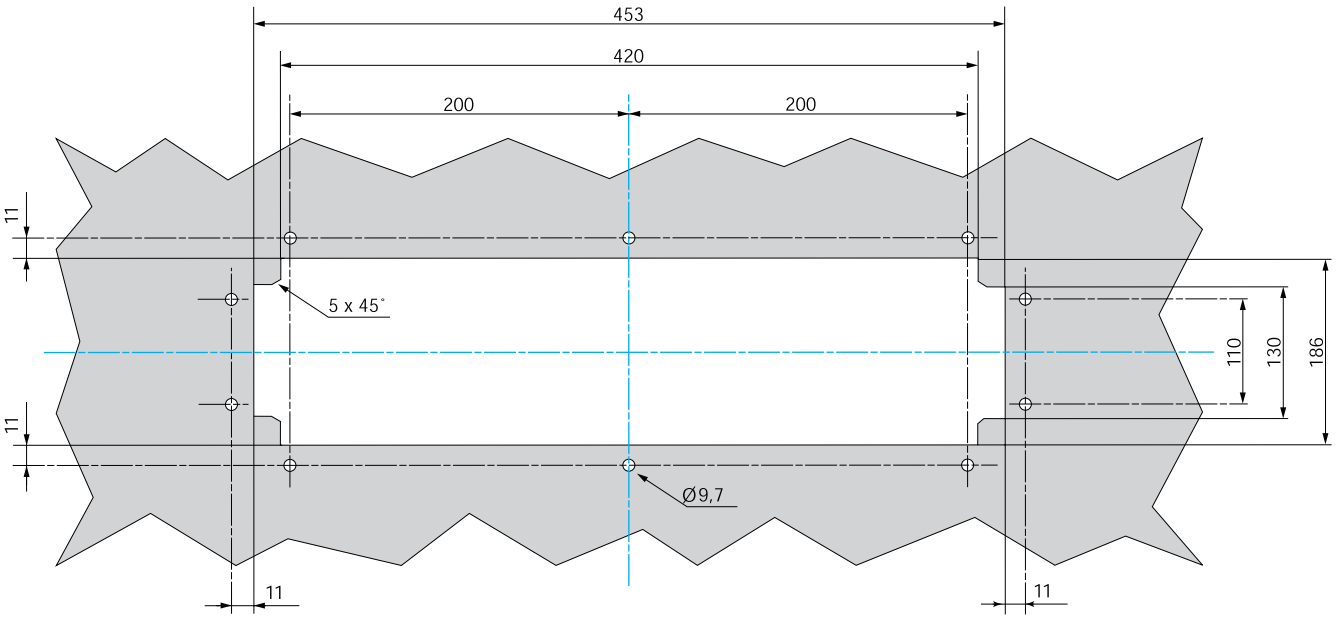


KTB0●●●●TT01

Cut-out drawing

It is recommended that the cutting-out of the transformer panels is done in the workshop.

DD206014



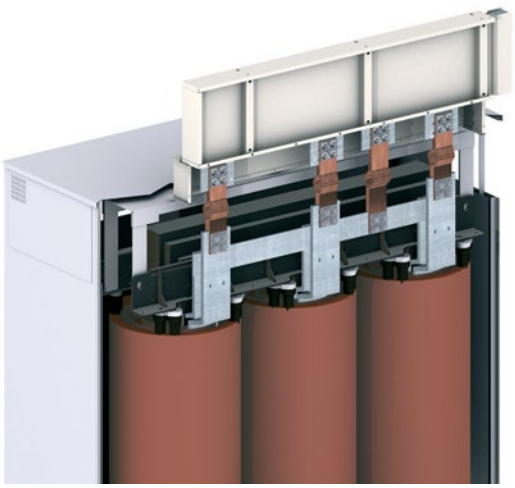
Junction axis.

Connection to cast resin transformers

By universal feed and connection plates

Canalis KTA

PD202330_r



Canalis KT can be connected to cast resin transformers using a universal feed. The connection is made using a flexible busbar (connection plates or braids) to avoid transmitting vibrations and expansions. The connection plates are made up of either insulated or non-insulated flexible copper bars, drilled at one or both ends. A nut and bolt kit allows connection to the feed.
The connections use torque-head bolts which provide both ease of installation and visual inspection of correct tightening before energising.

If the transformer is supplied with panels, provide for an additional cover to maintain the protection degree.

Choice of Canalis KT busbar trunking rating according to transformer power.

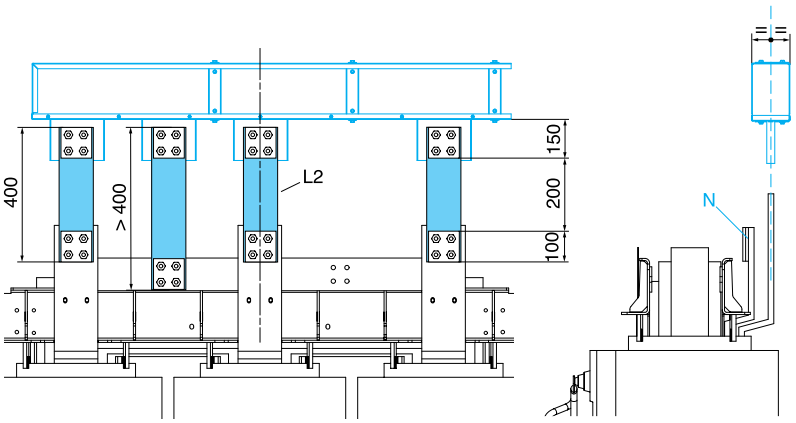
Transformer		KTA rating at nominal power(2) (A)
Power (kVA)	I nominal(1) (A)	
630	887	1000
800	1126	1250
1000	1408	1600
1250	1760	2000
1600	2253	2500
2000	2816	3200
2500	3520	4000

(1) ***I*** *is given as an indication only and is calculated with U = 410 V and at transformer nominal setting, without forced ventilation.*
(2) *The busbar trunking rating is defined for normal operating conditions.*

Recommended configurations for short-circuit withstand (connection plate L = 400 mm)

TS3 and TS5 universal connection, edgewise mounting

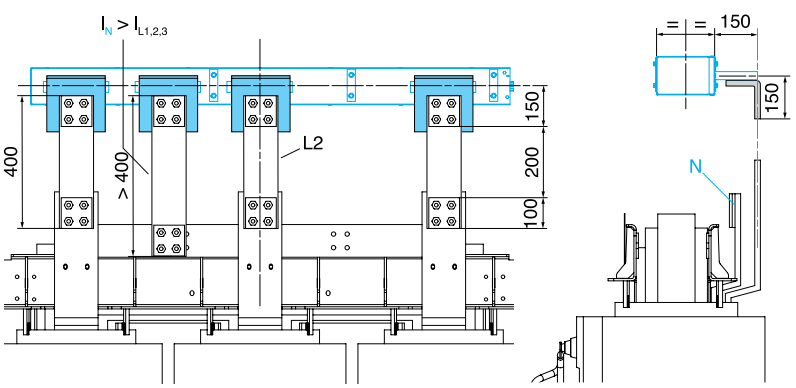
DD206015



KTA●●●●EL●1 or **KTA●●●●EL●2** or **KTA●●●●EL●3** or **KTA●●●●EL●4**

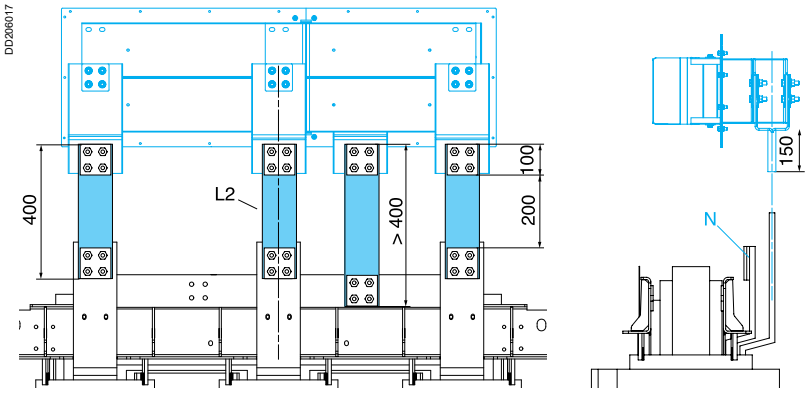
TS4 and TS6 universal connection, flat mounting (using angle brackets)

DD206016



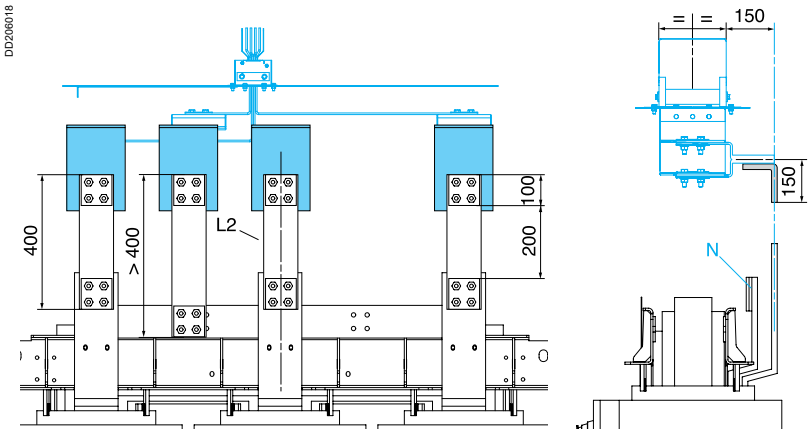
KTA●●●●EL●1 or **KTA●●●●EL●2** or **KTA●●●●EL●3** or **KTA●●●●EL●4** with angle bracket **KTB0000YE1**

TS7 universal connection, edgewise mounting



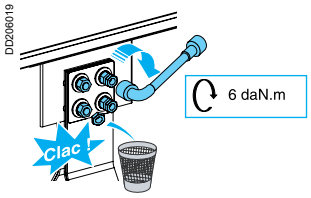
KTA●●●●EL●5

TS7 universal connection, flat mounting (using angle brackets)



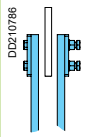
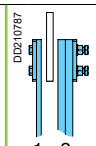
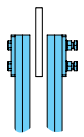
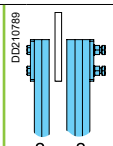
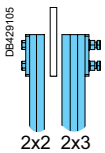
KTA●●●●EL●5 with angle bracket **KTB0000YE**

Definition of connection plates



The number of connection plates is defined in the table below:

Busbar trunking rating (A)	Bare copper connection plates per phase	
	Number (1)	Cross-section (mm²)
1000	2 (100 x 5)	1000
1250	2 (100 x 5)	1000
1600	2 (100 x 5)	1000
2000	3 (100 x 5)	1500
2500	3 (100 x 5)	1500
3200	4 (100 x 5)	2000
4000	5 (100 x 5)	2500
5000	10 (YC5 - 100 x 5)	5000

Connection plates					
	DD210786 1 1	DD210787 1 2	DD210788 2 2	DD210789 2 3	DB429105 2x2 2x3
Busbar trunking rating (A)	1000 to 1600	2000 to 2500	3200	4000	5000

(1) *The number of bimetal aluminium copper connections per phase is the same as bare copper ones.*
Note*: 2 (100 x 5) bare copper can be replaced by 2 (100 x 7) bimetal aluminium copper.*

Connection to cast resin transformers

By universal feed and connection plates

Canalis KTA

Phase order

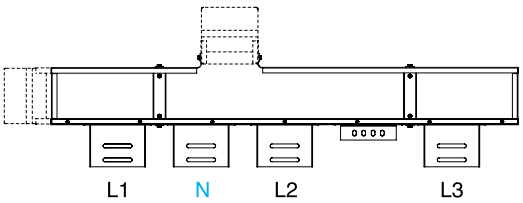
Phase selection is made when the feed is ordered.
Phase L2 is fixed and can therefore be used as a reference for installing the feed on the transformer.

The different phase selection possibilities (T)

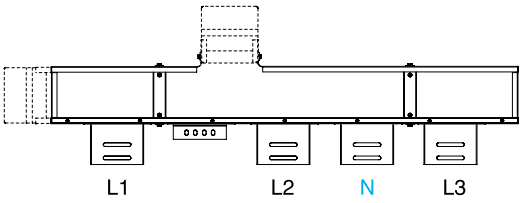
■ Dedicated feeds N1 to N4,

T1

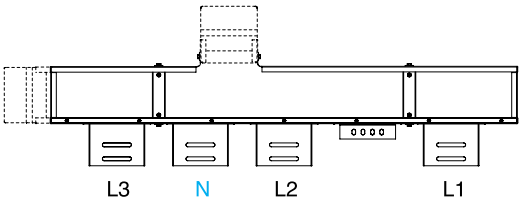
DD206024



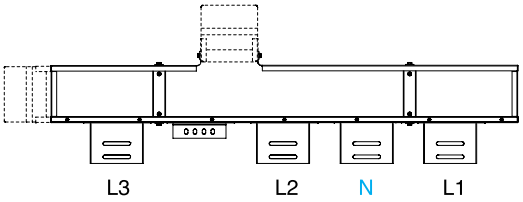
T2



T3



T4

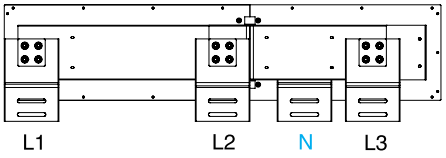


Important: the drawings and references above correspond to a phase order of N321, joint block side. If the phase order on the joint block side is N123, inverse T=1 with T=3 and T=2 with T=4.

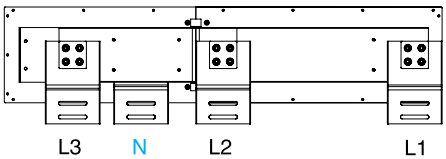
■ Feed with flat bars N5.

T = 2

DD206025



T = 3



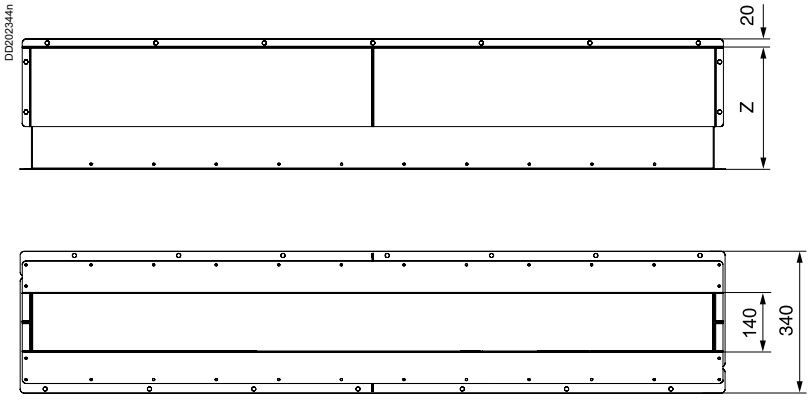
Important: the drawings and references above correspond to a phase order of N321, joint block side. If the phase order on the joint block side is N123, inverse L1 and L3 on the transformer side marking.

Dimensions of protective covers

Vertical protection covers for dry-type transformer feeds N1, N2, N3 and N4

Rating (A)	Dimensions (mm)		
	Y	Z	
		Minimum	Maximum
800 to 1250	230	200	350
1600 to 2500	350	200	350
3200 to 4000	510	200	350

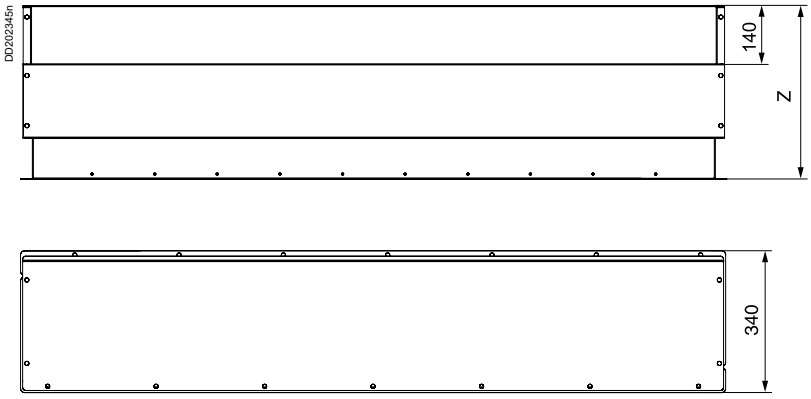
KTB0000CR4



Horizontal protection covers for dry-type transformer feeds N1, N2, N3 and N4

Rating (A)	Dimensions (mm)		
	Y	Z	
		Minimum	Maximum
800 to 1250	230	330	480
1600 to 2500	350	330	480
3200 to 4000	510	330	480

KTB0000CR5



Connection to cast resin transformers

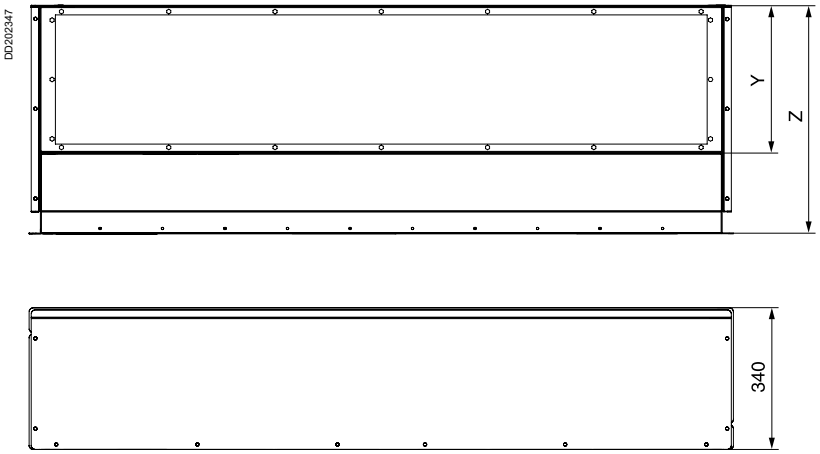
By universal feed and connection plates

Canalis KTA

Horizontal protection cover for dry-type transformer feed N5

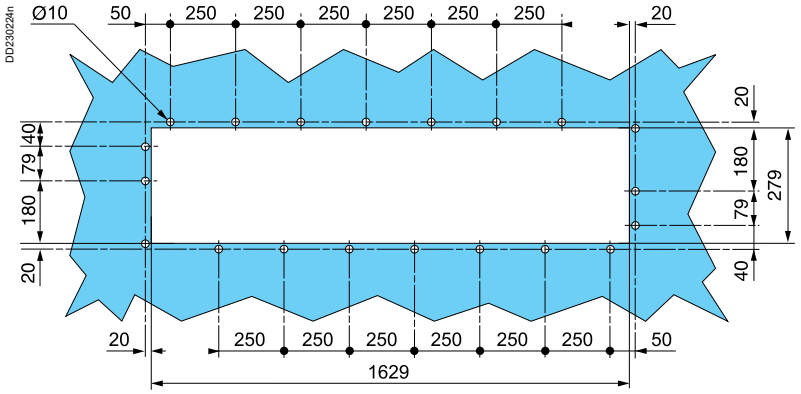
Rating (A)	Dimensions (mm)		
	Y	Z	
		Minimum	Maximum
800 to 1250	230	380	530
1600 to 2500	350	500	650
3200 to 4000	510	660	810

KTB●●●●CR6



Cut-out drawing for dry-type transformer panels

It is recommended that the cutting-out of the transformer panels is done in the workshop.

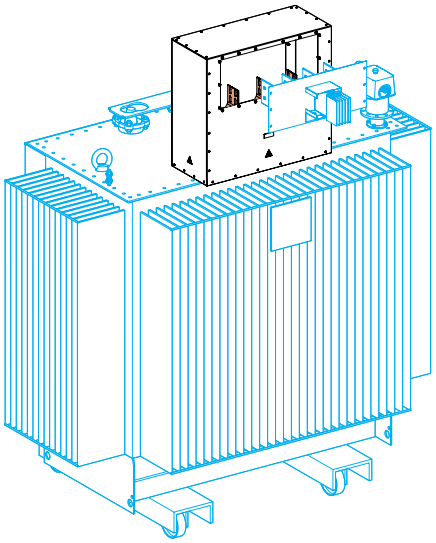


View from the top of the transformer.

Connection to Minera immersed transformers
Horizontal selection guide

Canalis KTA

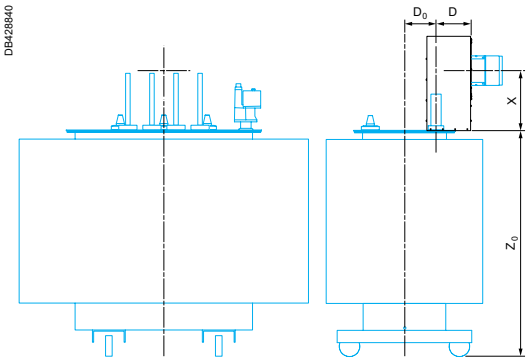
DB428652



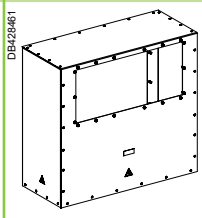
Canalis KT is easily connectable to Minera transformers.
A pre-designed interface including cover, flexible links and bolts is installed in place of the cable box delivered (or not) with the transformer.
This solution that connects end feed units ER1 to ER6, make the design simple and fast.
- Position of the flange is given by the table 1.
- Products that compose the interface are given in the table 2.

The dimensions D and X are given by the Table 1.
D_0 and Z_0 must be taken from the transformer documentation.
The interface is always centered in the middle of the transformer indifferently for the 3P or 4P versions.

DB428840

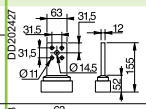
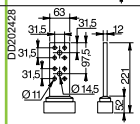
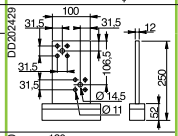
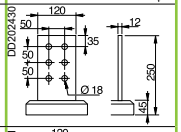
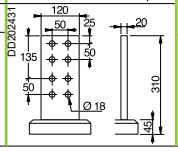


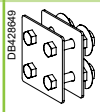
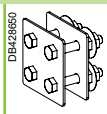
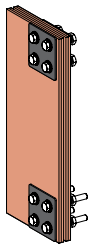
KTA Minera interfaces composition - horizontal incomer

	Protective covers			Flexible links reference and quantity						
	 DB428461			 DB428621						
Type	**Catalogue number**	**D (mm)**	**Z (mm)**	**Polarity**	**KTB0100YC307A** (dimensions in mm) L = 320 A = 32 B = 60 C = 34 D = 32 E = 2 F = 2 Y = 25	L = 320 A = 32 B = 30 C = 34 D = 32 E = 2 F = 2 Y = 25	L = 350 A = 32 B = 31 C = 15 D = 32 E = 2 F = 2 Y = 25	L = 350 A = 32 B = 31 C = 53 D = 32 E = 2 F = 2 Y = 25	L = 320 A = 32 B = 40 C = 15 D = 32 E = 2 F = 2 Y = 25	L = 320 A = 32 B = 40 C = 53 D = 32 E = 2 F = 2 Y = 25
KTA H1	**KTB0230CR71**	150	320	3P	6					
				4P	8					
KTA H2	**KTB0350CR71**	150	320	3P	6					
				4P	8					
KTA H3	**KTB0350CR72**	150	350	3P		6				
				4P		8				
KTA H4	**KTB0350CR72**	150	350	3P		9				
				4P		12				
KTA H5	**KTB0350CR73**	150	400	3P			6	3		
				4P			7	5		
KTA H6	**KTB0510CR71**	150	435	3P					6	6
				4P					8	8
KTA H7	**KTB0510CR72**	180	470	3P						
				4P						
KTA H8	**KTB0510CR72**	180	470	3P						
				4P						
KTA H9	**KTB0510CR73**	180	510	3P						
				4P						
KTA H10	**KTB0726CR71**	180	469	3P						
				4P						

Interface details, see page 90.

Horizontal incomer interface

Minera transformer			Canalis KT feed unit ER1, ER2, ER3, ER4, ER5, ER6								
Rating (kVA)	I nominal (A)	Bar bushing dimensions (mm)	Between centres J, K and M (mm)	KTA1000	KTA1250	KTA1600	KTA2000	KTA2500	KTA3200	KTA4000	KTA5000
630	887		150	Type KTA H1	Type KTA H1						
800	1126				Type KTA H1	Type KTA H2					
1000	1408					Type KTA H3	Type KTA H4				
1250	1760		170				Type KTA H5	Type KTA H5			
1600	2253							Type KTA H5	Type KTA H6		
2000	2816								Type KTA H7	Type KTA H8	
2500	3520									Type KTA H9	Type KTA H10
3150	4435										Type KTA H10

							Bolts sets reference and quantity			Connection plates
										
	KTB0120YC307A (dimensions in mm)						KTB0000YB3	KTB0000YB4	KTB0000YB5	KTB0000YP21
	L = 370 A = 50 B = 24 C = 20 D = 50 E = 2 F = 2 Y = 50	L = 370 A = 50 B = 24 C = 50 D = 50 E = 2 F = 2 Y = 20	L = 400 A = 50 B = 41 C = 20 D = 50 E = 2 F = 2 Y = 50	L = 400 A = 50 B = 41 C = 50 D = 50 E = 2 F = 2 Y = 20	L = 350 A = 50 B = 24 C = 20 D = 50 E = 2 F = 2 Y = 50	L = 350 A = 50 B = 24 C = 50 D = 50 E = 2 F = 2 Y = 20				
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
							1		1	
	6	6						2		
	8	8						2		
	9	6						2		
	12	8						2		
			9	6				2		
			12	8				2		
					9	9		1		3
					12	12		1		4

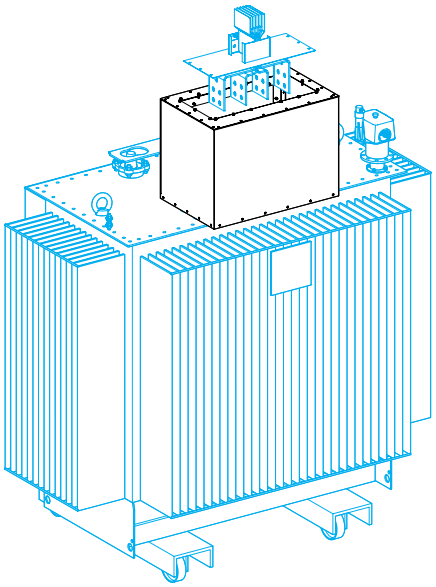
Set of bolts details, see page 105.

Connection to Minera immersed transformers

Vertical selection guide

Canalis KTA

DB428653

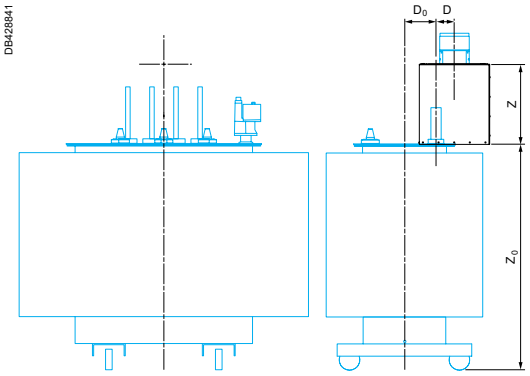


Canalis KT is easily connectable to Minera transformers.
A pre-designed interface including cover, flexible links and bolts is installed in place of the cable box delivered (or not) with the transformer.
This solution that connects end feed units ER1 to ER6, make the design simple and fast.

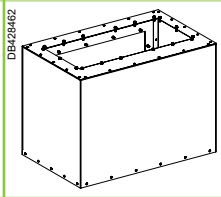
- Position of the flange is given by the table 1
- Products that compose the interface are given in the table 2.

The dimensions D and Z are given by the Table 1.
D_0 and Z_0 must be taken from the transformer documentation.
The interface is always centered in the middle of the transformer indifferently for the 3P or 4P versions.

DB428841

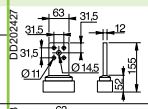
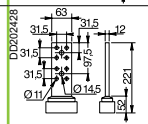
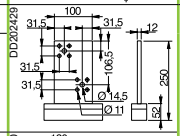
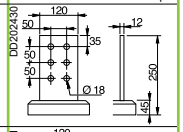
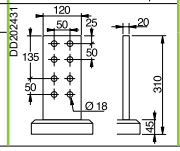


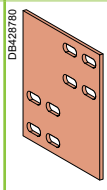
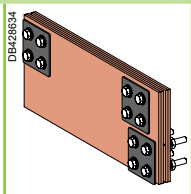
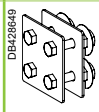
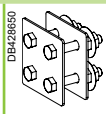
KTA Minera interfaces composition - vertical incomer

	Protective covers			Flexible links reference and quantity								
	DB428462 				DB428621 							
Type	**Catalogue number**	**D (mm)**	**Z (mm)**	**Polarity**	**KTB0100YC307A** (dimensions in mm)					**KTB0120YC307A** (dimensions in mm)		
					L = 320 A = 32 B = 50 C = 15 D = 32 E = 2 F = 2 Y = 31	L = 320 A = 32 B = 50 C = 53 D = 32 E = 2 F = 2 Y = 19	L = 320 A = 32 B = 60 C = 34 D = 32 E = 2 F = 2 Y = 25	L = 320 A = 32 B = 60 C = 15 D = 32 E = 2 F = 2 Y = 25	L = 320 A = 32 B = 60 C = 53 D = 32 E = 2 F = 2 Y = 25	L = 320 A = 50 B = 32 C = 35 D = 50 E = 2 F = 2 Y = 35	L = 340 A = 50 B = 20 C = 35 D = 50 E = 2 F = 2 Y = 35
KTA V1	**KTB0230CR81**	106	480	3P	3	3					
				4P	4	4					
KTA V2	**KTB0350CR81**	106	580	3P			6				
				4P			8				
KTA V3	**KTB0350CR81**	106	580	3P			9				
				4P			12				
KTA V4	**KTB0350CR82**	126	600	3P				6	3		
				4P				7	5		
KTA V5	**KTB0510CR81**	126	600	3P				6	6		
				4P				8	8		
KTA V6	**KTB0510CR82**	179	615	3P						12	
				4P						16	
KTA V7	**KTB0510CR82**	179	615	3P						15	
				4P						20	
KTA V8	**KTB0510CR82**	179	615	3P							15
				4P							20
KTA V9	**KTB0726CR81**	179	591	3P							21
				4P							28

Interface details, see page 91.

Vertical incomer interface

Minera transformer			Canalis KT feed unit ER1, ER2, ER3, ER4, ER5, ER6								
Rating (kVA)	I nominal (A)	Bar bushing dimensions (mm)	Between centres J, K and M (mm)	KTA1000	KTA1250	KTA1600	KTA2000	KTA2500	KTA3200	KTA4000	KTA5000
630	887		150	Type KTA V1	Type KTA V1						
800	1126				Type KTA V1	Type KTA V2					
1000	1408					Type KTA V2	Type KTA V3				
1250	1760		170				Type KTA V4	Type KTA V4			
1600	2253							Type KTA V4	Type KTA V5		
2000	2816								Type KTA V6	Type KTA V7	
2500	3520									Type KTA V8	Type KTA V9
3150	4435										Type KTA V9

Connection plates reference and quantity					Bolts sets reference and quantity		
							
KTB0000YP11	KTB0000YP12	KTB0000YP13	KTB0000YP14	KTB0000YP22	KTB0000YB3	KTB0000YB4	KTB0000YB5
					1		1
					1		1
3					2		1
4					2		1
3					2		1
4					2		1
	3				2		1
	4				2		1
		3			2		1
		4			2		1
			3		1	2	
			4		1	2	
			3		1	2	
			4		1	2	
			3		1	2	
			4		1	2	
				3		1	
				4		1	

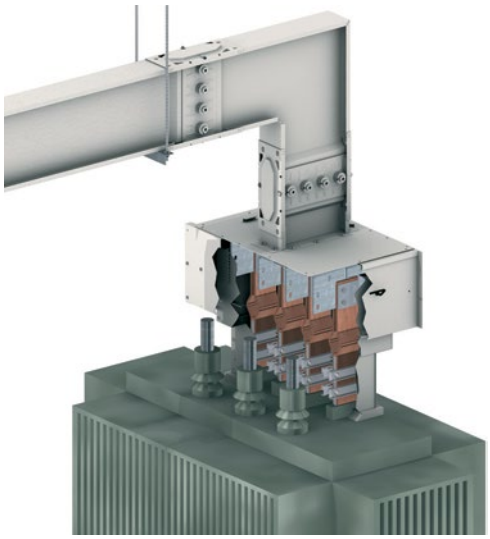
Set of bolts details, see page 105

Connection to oil immersed transformers

By feed and connection plates or braids

Canalis KTA

PD202300_r



Connection to an oil immersed transformer is made using flexible bars (connection plates) to avoid transmitting transformer vibrations to the busbar trunking and to limit the stress on connection terminals.

Choice of busbar trunking

Dry-type transformer		Canalis KT aluminium busbar trunking	
Rating (kVA)	**I nominal(1) (A)**	**Rating (A)**	**Cross-section**
500	704	800	140 x 74
630	887	1000	140 x 104
800	1126	1250	140 x 124
1000	1408	1600	140 x 164
1250	1760	2000	140 x 204
1600	2253	2500	140 x 244
2000	2816	3200	140 x 324
2500	3520	4000	140 x 404

***(1) I** is given as an indication only and is calculated with U - 410 V.*

***Note:** if, for reasons of busbar trunking operating conditions or performance requirements, you have to use a rating other than those defined in the above tables, consult us.*

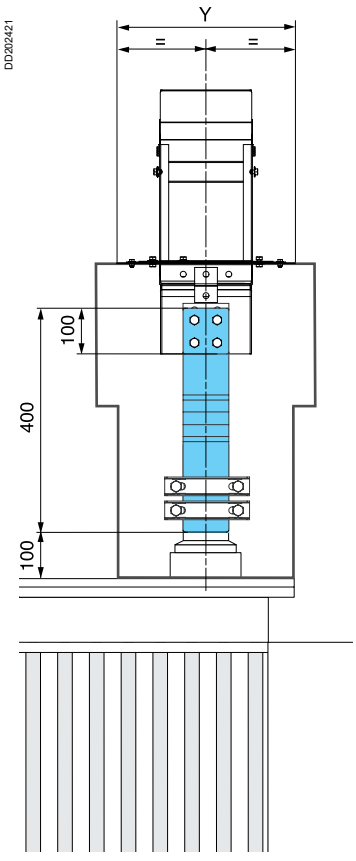
Protective cover width

Busbar trunking rating (A)	Dimensions "Y" of the feed
1000 to 1250	230
1600 to 2500	350
3000 to 4000	510

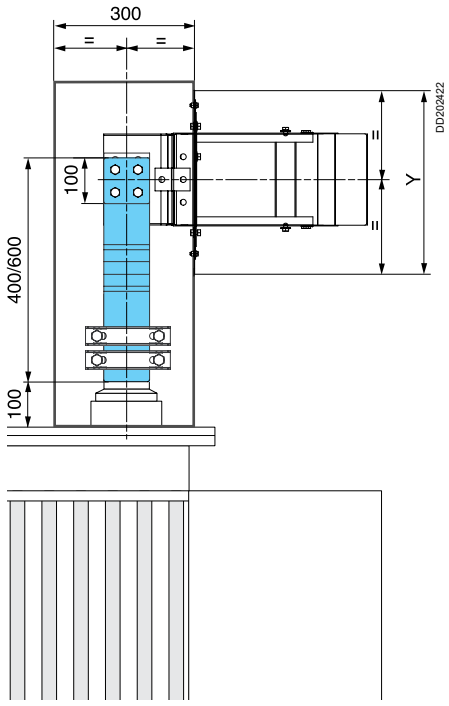
Recommended configurations for short-circuit withstand (connection plate L = 400 mm)

Vertical incomer

DD202421

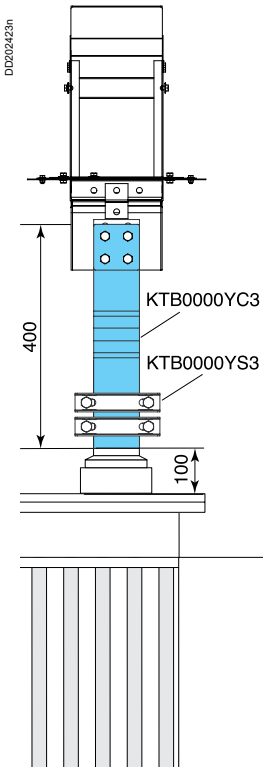


Horizontal incomer

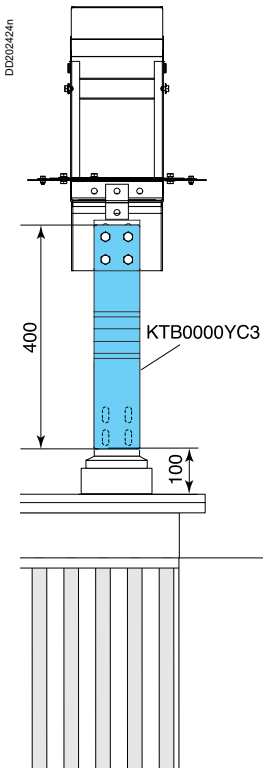


Several connection possibilities

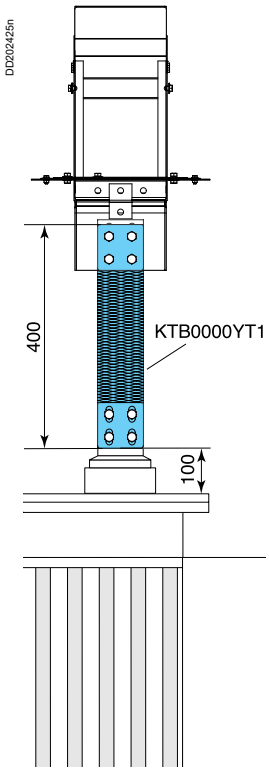
With connection plates with kink and bar clamp



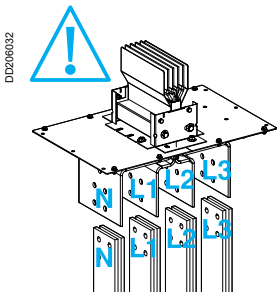
With connection plates with kink to be drilled

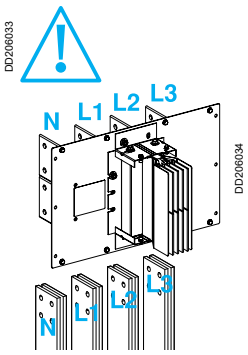


With drilled connection plates (KTB0000YC4) or braids

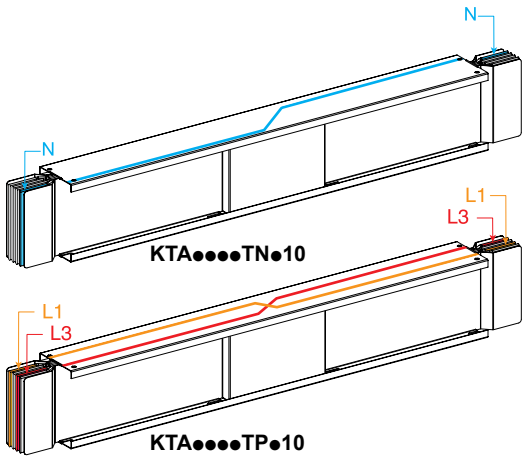


Phase order





If the phase order of the busbar trunking is different to that of the switchboard's busbars, it is recommended a phase inversion is carried out in the switchboard. If this cannot be done, use the phase and neutral transposition section.
For more information, see the "Description" section, page 35 and "Catalogue numbers and dimensions" section, page 58.

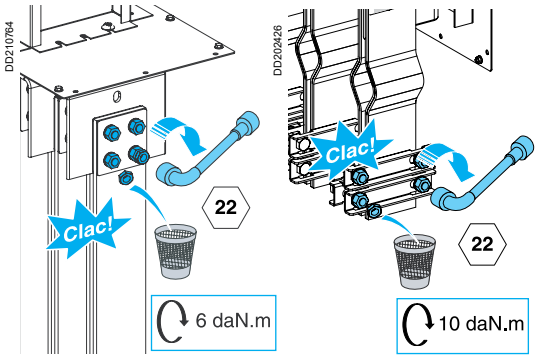


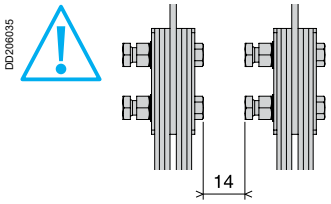
Connection to oil immersed transformers

By feed and connection plates or braids

Canalis KTA

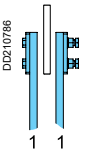
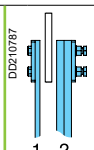
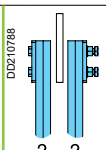
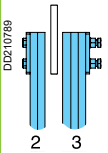
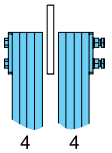
Definition of connection plates





The number of connection plates is defined in the table below:

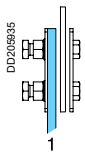
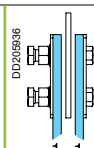
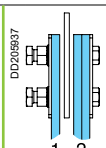
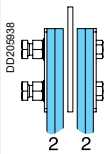
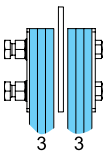
Busbar trunking rating (A)	Bare copper connection plates per phase	
	Number	Section (mm²)
1000	2 (100 x 5)	1000
1250	2 (100 x 5)	1000
1600	2 (100 x 5)	1000
2000	3 (100 x 5)	1500
2500	3 (100 x 5)	1500
3200	4 (100 x 5)	2000
4000	5 (100 x 5)	2500
5000	8 (120 x 5)	4800

Connection plates					
	DD210786 1 1	DD210787 1 2	DD210788 2 2	DD210789 2 3	DB428865 4 4
Busbar trunking rating (A)	1000 to 1600	2000 to 2500	3200	4000	5000

Definition of braids

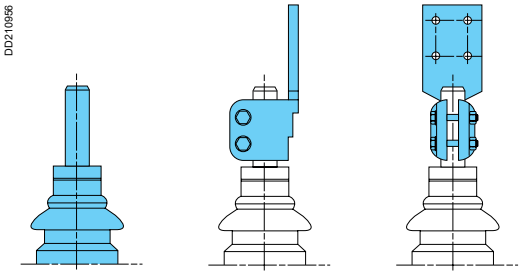
The number of braids is defined in the table below:

Busbar trunking rating (A)	Braids per phase	
	Number	Cross-section (mm²)
1000	1	600
1250	2	1200
1600	2	1200
2000	2	1200
2500	3	1800
3200	3	1800
4000	4	2400
5000	6	3000

Braids					
	DD205935 1	DD205936 1 1	DD205937 1 2	DD205938 2 2	DB428866 3 3
Busbar trunking rating (A)	1000	1250 to 2000	2500 to 3200	4000	5000

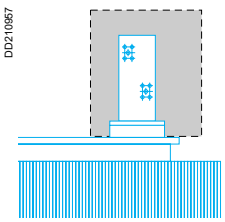
Connection to porcelain bushings

Connection terminals of the type defined below must be used. These are available in the transformer manufacturers' catalogues.



Cover

The transformers can be supplied with or without a low voltage cover. This cover is not used in our solutions.



Recommendations

Reception, handling and storage

Canalis KTA

This document contains practical information, lays out the general recommendations (as a complement to the installation regulations) and specifies the basic instructions that must be respected when handling and storing Schneider Electric Canalis busbar trunking system.

The purchaser's engineering, installation and operating staff must become acquainted with this document and become familiar with the appearance and characteristics of each of the Canalis busbar trunking system's components. Appropriate planning and coordination between the different job functions is indispensable for ensuring an efficient installation of the equipment.

Each Canalis busbar trunking system is carefully inspected and packaged at the assembly plant.
The entire system is checked both structurally and electrically.
At the end of inspection, the busbar trunking system is prepared for shipping.
Each section is packed to guarantee easy handling before its installation.
The catalogue number is written on each shipping unit.

Warning

RISK OF ELECTRIC SHOCK, BURNS OR EXPLOSION

- Protect the equipment against all contact with water, salt, concrete and other corrosive surroundings both before and during installation.
- Outdoor equipment is not resistant to bad weather until after it has been fully and correctly installed.
- Do not sit or walk on the equipment.

If these instructions are not respected, the equipment may deteriorate leading to a risk of serious or mortal injury.

Reception

Upon reception, check the information on the shipping note corresponds to the equipment received to ensure all of the order has been received and shipped. Complaints concerning missing components or other errors must be sent in writing to Schneider Electric SAS within 30 days from the date the shipping item was received. If no complaint has been received within 30 days from the date the shipping item was received, Schneider Electric SAS will no longer be responsible for repairs or replacements that may be required.

Upon reception, check the various units of the busbar trunking system immediately to identify any damage that has occurred during transport.
If there is observed or suspected damage, file a claim immediately with the carrier and inform the nearest Schneider Electric office.

Handling

Handle Canalis products with the greatest of care to avoid damaging the internal components of the system and to avoid changing the external appearance of the various parts, as well as the bar ends (connection terminals).

The busbar trunking must be constantly supported by independent means, in such a way its weight is not resting on the top of the transformers or distribution switchboards.
The distance between these support means must not exceed 3 metres.

Avoid exposing the busbar trunking to twisting, embossing or impacts, and all other actions likely to causing damage.

Ensure the handling equipment available at the site of installation is suitable for handling busbar trunking. In particular, check the lifting capacity of the crane or the other lifting equipment to be used.

Take great care when unpacking the equipment:
■ use a nail-head puller when unpacking wooden crates
■ if hauling the busbar trunking with a crane, use Nylon slings to spread the weight of the unit being lifted
■ if using cables, insert a spacing means to avoid damaging the busbar trunking
■ if using a forklift truck, position the busbar trunking on the forks in such a way the weight is evenly distributed.

1 - Cut the strapping holding the packaging case using suitable cutting tools.

2 - Use suitable tools to remove the strengthened steel packaging at each end of the busbar trunking.
Take care not to damage the steel box so as not to damage the busbar trunking.
Avoid the use of objects with sharp edges when lifting the busbar trunking.

3 - Dispose of all used packaging in an appropriate way.

Never drag the busbar trunking along the floor. Do not use the end bars to lift sections of the busbar trunking.

Protection against humidity during storage

If the busbar trunking is not installed and commissioned immediately, leave it in the original Canalis packaging and store it in a clean and dry place at a uniform temperature.

The busbar trunking must not be stored outside. However, if outside storage is necessary, cover the busbar trunking in such a way as to protect it from bad weather and to avoid contact with the elements.

Temporary electrical heating must be provided for underneath the covering means to prevent condensation.
The supplied heat must be of suitable temperature and uniformly distributed underneath the covering means.

Outdoor busbar trunking is not resistant to bad weather until after it has been fully and correctly installed.
During installation, take particular care to protect rising mains from humidity arising from unfinished roofs, walls and other similar elements.

Deserts can provide at least 2 specific situations for KT storage from standard other locations:
- sand pollution.
- significant thermal variations nights/days that can create condensation due to the colder busduct KT compared from atmosphere when it is humid (this risk should be evaluated from local context).
About sand: When the products are not installed but in their standard transport packings, we can’t completely guaranty the protection against sand/wind to not reach the products.
As it’s important to keep all electrical contacts clean from any foreign body and abrasion, our products must be protected from sand during storage period before and during installation.
The optionnal sea-packaging with wood boxes is including a waterproof system, it allows to keep the products protected against the 2 above risks.

Maintenance
Run sections

Canalis KTA

Recommended periodical maintenance procedures

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel.
No responsibility is assumed by Schneider Electric for any arising out of the use of this material.
A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

The frequency and the level of the maintenance depend of the criticality of the application and the environmental conditions.
These recommendations regard the busbar trunking system. For all devices fitted in tap-off units, the manufacturer's recommendations must be complied with.

A basic maintenance must be performed for any type of applications, under any conditions

Every year inspect the external appearance of busbar trunking lengths, accessories and supports.

Check if there is no:
- deformation, damage or dirt
- dislocation, bending, misalignment and other abnormality of the connecting covers, hangers and plug-in units
- junction blocks or terminals discoloured, corroded or pitted, or show signs it has been exposed to high temperatures
- change in the environment that can affect the busway operation such as water, moisture, high temperature, corrosive gas, immoderate vibration, dust, air circulation, new hot air source.

Every year inspect the external appearance of tap-off units.

- Remove dust, water and oil deposits, and all other conductive bodies from the sensitive zones.

The contact between busbar trunking and tap-off boxes does not need specific maintenance: Busbar trunking contacts consist of sprung silver plated contact jaws to ensure optimum contact quality.

In event of electrical default, fire, water leakage, earthquake or any important change an immediate inspection must be carried out.

A more specific maintenance must be performed when the busbar trunking system feeds critical applications or in case of unfavourable environmental conditions

Critical applications means: needs of high level of continuity of service such as hospital secured power distribution, data centre IT or cooling power supply or with a high load factor.
Unfavourable conditions are: high ambient temperature, high level of humidity, environment with a lot of dust, vibrations or similar.

Every year achieve a basic maintenance as described in the above chapter.

Every year check is there is no abnormal temperature.

- If the busbar trunking is accessible, carry out infrared temperature measurements on all the electrical connections (junction blocks, terminal connections, tap-off units).
- If the busbar trunking is not accessible, install a thermal monitoring system which will communicate temperatures to a remote supervision.

These operations are relevant only if the busbar trunking has reached a stabilized temperature and if the measure of current has been done.

DB409492

Notice
A periodic thermal monitoring allows tracking and detecting abnormal drifts.
In case of abnormal results, check with a torque wrench, all the connections.

Type	Torque (N.m)
Junction block bolts	60 ± 10%

If these values decrease significantly over time, consult Schneider Electric for a deeper analysis.

If needed concerned material must be replaced with new factory mounted products. Consult your local Schneider Electric office for all replacements.

Before re-energising the busbar trunking, carry out an insulation resistance test in compliance with the instructions given in the "Testing and commissioning procedure" section.

After having performed all the necessary inspections and repairs mentioned above, it may be desirable to carry out infrared temperature measurements on all the electrical connections.

Recycling

Recycling busbar trunking

DD205673_r

Example:
1 kg of PVC generates 1 kg of waste.

Canalis busbar trunking can be reused. Canalis busbar trunking is designed for a long service life and can easily be dismantled, cleaned and reused.

All packaging materials can be recycled (cardboard or recyclable polyethylene film).

All Canalis products are designed for safe end-of-life recycling. PVC, on the other hand, requires neutralisation of the hydrochloric acid produced using lime and generates dioxins that are extremely toxic.

Canalis helps conserve natural resources

The depletion of raw materials (copper, plastics, etc.) is one of our ongoing concerns.
For this reason, we have optimised the used of all materials used to make our busbar trunking.

- Reduction of dangerous or polluting materials. We design our products to meet future European directives.
- Reduction in the weight of insulating materials.
- Reduction in the use of plastics for improved fire performance: less energy released during combustion, thereby limiting propagation and facilitating extinction (lower calorific value).

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