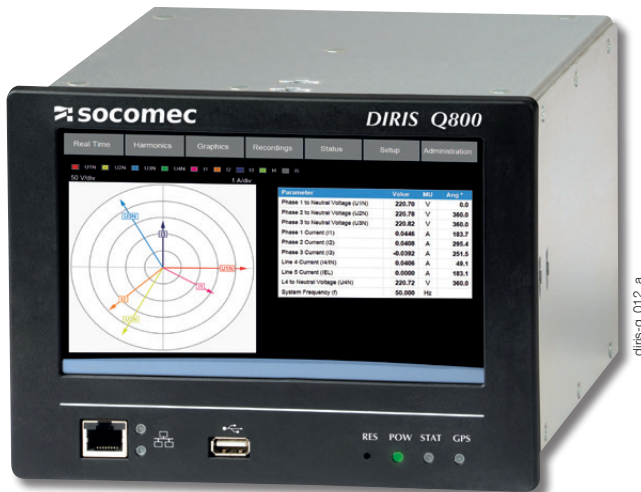


# DIRIS Q800

## Electrical network analyser

quality analysis of electrical energy and power grids



DIRIS Q800

### Function

The **DIRIS Q800** is a multifunction network analyser for all energy efficiency projects. It helps to actively ensure the electrical system runs continuously and at optimised rates.

As such, with this system you can:

- Improve the efficiency of your facility.
- Reduce production losses.
- Optimise running costs.
- Reduce maintenance costs.

### Advantages

#### Large colour touchscreen

The 192 x 144 mm color touchscreen is tactile, easy to operate and provides intuitive navigation.

#### Regulatory compliance

By its compliance with IEC 61000-4-30:2015 Ed.3 Class A for all electrical parameters and IEC 62586-2, you have the assurance of a certified and high quality product.

To achieve these objectives, the DIRIS Q800 does the following:

- Measures electrical parameters and status (via auxiliary contacts).
- Analyses the quality of energy according to class A IEC 61000-4-30:2015 Ed.3.
- Measures differential current.
- GPS synchronisation.
- Sends an email in the event of an alarm.

#### Multiple communication channels

With its multiple communication options, the DIRIS Q800 can be integrated into any type of communication infrastructure:

- 1 rear Ethernet port for permanent cable connection.
- 1 front Ethernet for local diagnostics.
- 1 Wifi port.
- 1 RS485 port.
- 1 USB port.
- GPS synchronisation.
- Built-in Webserver.
- Protocols: HTTP, HTTPS, FTP, NTP, MODBUS, PQDIF, SMTP.

### The solution for

- Industry
- Infrastructure
- Healthcare buildings
- Data centers



### Strong points

- Large colour touchscreen
- High performance and accuracy
- Regulatory compliance
- Multiple communication channels

### Compliance with standards

- IEC 61000-4-30 :2015 Ed.3 class A
- IEC 62586-1
- IEC 62586-2
- IEC 62053-22
- IEC 62053-24
- EN 50160



## Functions

### Measurements

- Measures across 4 quadrants
- Voltage by phase, current by phase, frequency.
- Neutral current, differential current.
- Neutral/earth voltage.
- Active, reactive and apparent power.
- Cos phi and power factor.
- THD and spectral analysis up to the 63<sup>rd</sup> for current and voltage.
- Flicker (Pst, Plt).
- Voltage and current unbalance.
- Remote control signals.
- Current and Power Demand: average and maximum (timestamped)

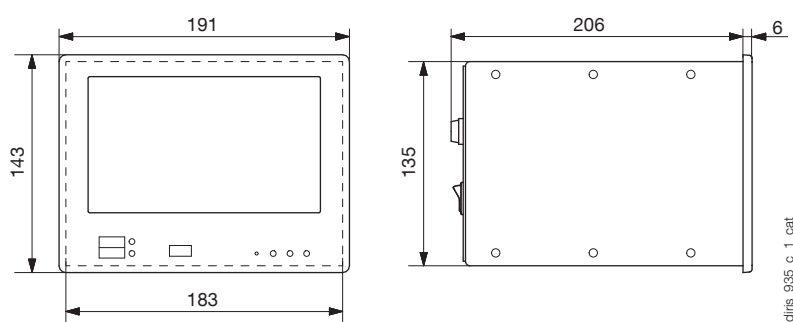
### Logging

- EN 50160 events ½ period (10 ms): voltage dips, voltage cutouts, voltage surges.
- Current events 1/2 period (10 ms): inrush
- Data exported automatically via FTP.
- EN 50160 reports with CBEMA / ITIC curves for PQ events.
- Transients (20 micro seconds).

### Inputs/outputs

- 4 digital inputs.
- 4 digital outputs.
- 4 analogue outputs.

## Dimensions (mm)



### Dimensions

Cutout	192 x 144 DIN / 186 x 138 mm
Front panel (W x H)	191 x 143 mm
Enclosures (W x H x D)	183 x 135 x 190 mm
Weight	1400 g

## Specifications

Auxiliary power supply	
Voltage range	100 ... 240 VAC / 65 ... 250 VDC
Frequency	50/60 Hz
Power consumption	Max. 15 VA
Backup battery	Li-ion 2500 mAh (>15 min autonomy)
Measurement inputs	
Direct voltage measurement input	P-N: max 580 V RMS CAT III L-L: max 1000 V RMS CAT III
U4 direct voltage measurement input	Max 580 V RMS CAT II
Voltage input crest factor	2
Current inputs	Max 7 A RMS
Current input consumption	0.04 VA
Current input crest factor	3
Voltage input impedance	> 6 MΩ
Frequency range	42.5 to 57.5 Hz/51 to 69 Hz
Voltage reference channel	U1N/U12
Sampling	51.2 kHz @50 Hz
Accuracy	
Three-phase voltage	± 0.1%
4 <sup>th</sup> voltage (neutral/earth)	± 0.2%
Currents	± 0.2%
Power	± 0.2%
Frequency	± 10 mHz
Harmonics	Class 1 IEC/EN 61000-4-7
Active energy	Class 0.2S IEC/EN 62053-22
Reactive energy	Class 1 IEC/EN 62053-24

Communication	
Ethernet ports	2 Auto MDIX RJ45 10/100 Base Ethernet
RS485 opto-insulated port (slave)	0.5 UL 4800 to 115200 bps
Passive WIFI antenna	RP-SMA female
Active GPS antenna	SMA female
Protocols	HTTP, HTTPS, FTP, SFTP, NTP, NMEA, Modbus RTU/TCP, SMTP
USB port	USB 2.0
Environmental conditions	
Operating temperature (max. range)	-25 ... +55°C
Storage temperature	-25 ... +75°C
Humidity	Max. 95 %
Max. altitude	2000 m
Standards and safety	
Product conformity	IEC/EN 62586-1, IEC/EN 62586-2
Safety	EN 61010-2-030
Degree of pollution	2 (EN 61010-1)
Degree of protection	IP40 front, IP20 rear
Directive	RED §3.1a Health EN 62311 :2008 RED § 3.1b EMC

## References

Designation	Reference
DIRIS Q800 100 ... 240 VAC / 65 ... 250 VDC	4826 0100 <sup>(1)</sup>

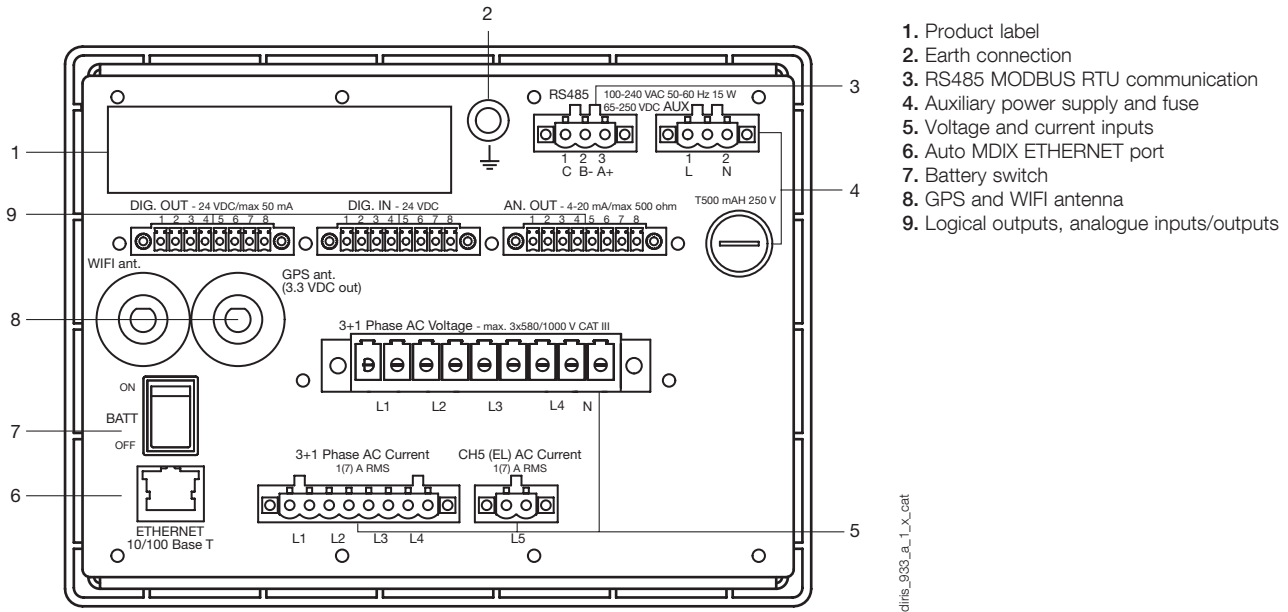
(1) Power supply 19 ... 60 VDC: please contact us.

# DIRIS Q800

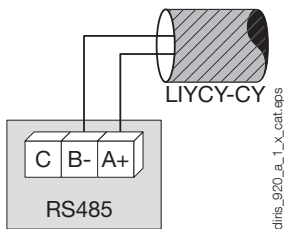
Electrical network analyser

quality analysis of electrical energy and power grids

## Terminals

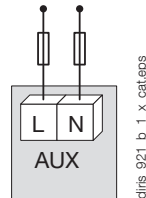


### Communication via RS485 link

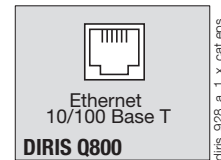


### AC and DC auxiliary power supply

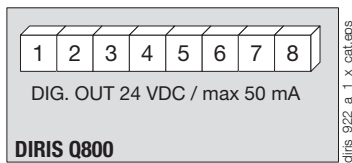
100-240 VAC  
65/250 VDC



### Ethernet communication

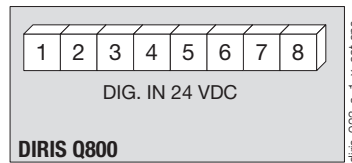


### Digital outputs



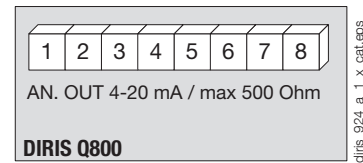
**DIRIS Q800**  
1-2: optocoupler output 1  
3-4: optocoupler output 2  
5-6: optocoupler output 3  
7-8: optocoupler output 4

### Digital inputs



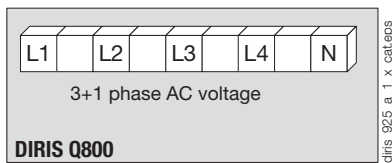
**DIRIS Q800**  
1-2: optocoupler input 1  
3-4: optocoupler input 2  
5-6: optocoupler input 3  
7-8: optocoupler input 4

### Analogue outputs

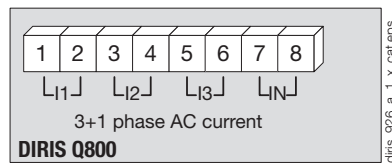


**DIRIS Q800**  
1-2: analogue output 1  
3-4: analogue output 2  
5-6: analogue output 3  
7-8: analogue output 4

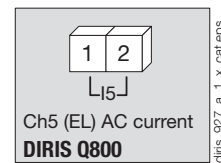
### Current and voltage inputs



**DIRIS Q800**  
L1, L2, L3, L4, N: voltage inputs



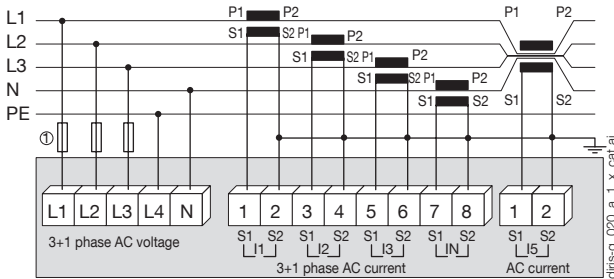
**DIRIS Q800**  
1-2: current input i1  
3-4: current input i2  
5-6: current input i3  
7-8: current input iN



**DIRIS Q800**  
1-2: differential core connections

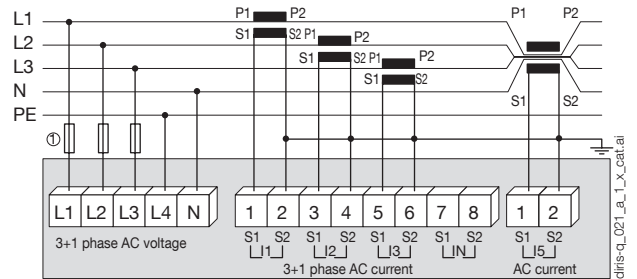
## Connections

### Three-phase + neutral, 4 CT + differential measurements (1/5 A)



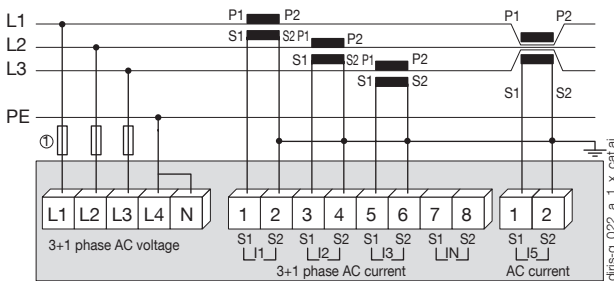
1. 0.5 A gG / 0.5 A class CC fuses.

### Three-phase + neutral, 3 CT + differential measurements (1/5 A)



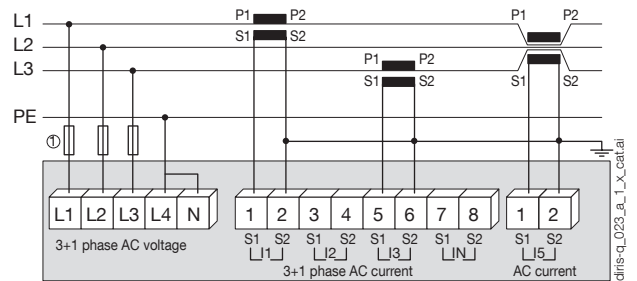
1. 0.5 A gG / 0.5 A class CC fuses.

### Three-phase, 3 CT + differential measurements (1/5 A)



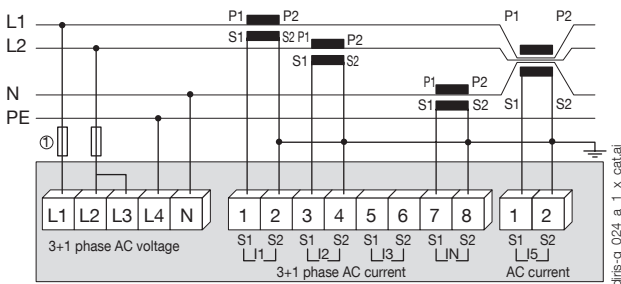
1. 0.5 A gG / 0.5 A class CC fuses.

### Three-phase, 2 CT + differential measurements (1/5 A)



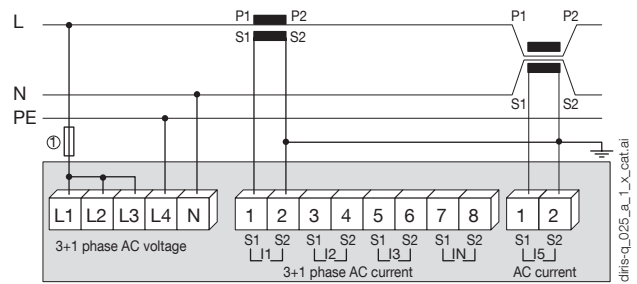
1. 0.5 A gG / 0.5 A class CC fuses.

### Two-phase + neutral, 3 CT + differential measurements (1/5 A)



1. 0.5 A gG / 0.5 A class CC fuses.

### Single-phase, 1 CT + differential measurements (1/5 A)



1. 0.5 A gG / 0.5 A class CC fuses.

## Expert Services

- > Study, definition, advice, implementation, maintenance and training... Our experts "Expert Services" offer complete support for the success of your project.

