Product Environmental Profile
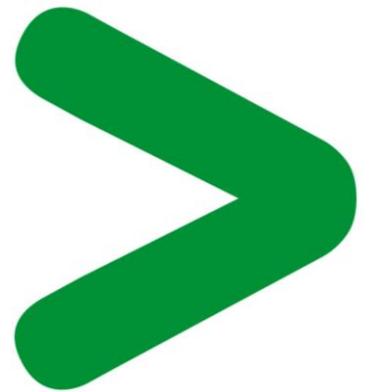
Actassi Equipped Shielded S-One DPM Patch Panel Sliding 19"

Product overview

The main purpose of the Actassi Equipped Shielded S-One DPM Patch Panel Sliding Evo 19 is to support copper cable terminations within a 19'' frame.

This range consists of Actassi S-One DPM panels including 24 RJ45 ports, 1U, shielded version. Offer splitted into Basic & Evolution versions, Evolution version completes basic version with 4 label holders and metal tray cable manager.
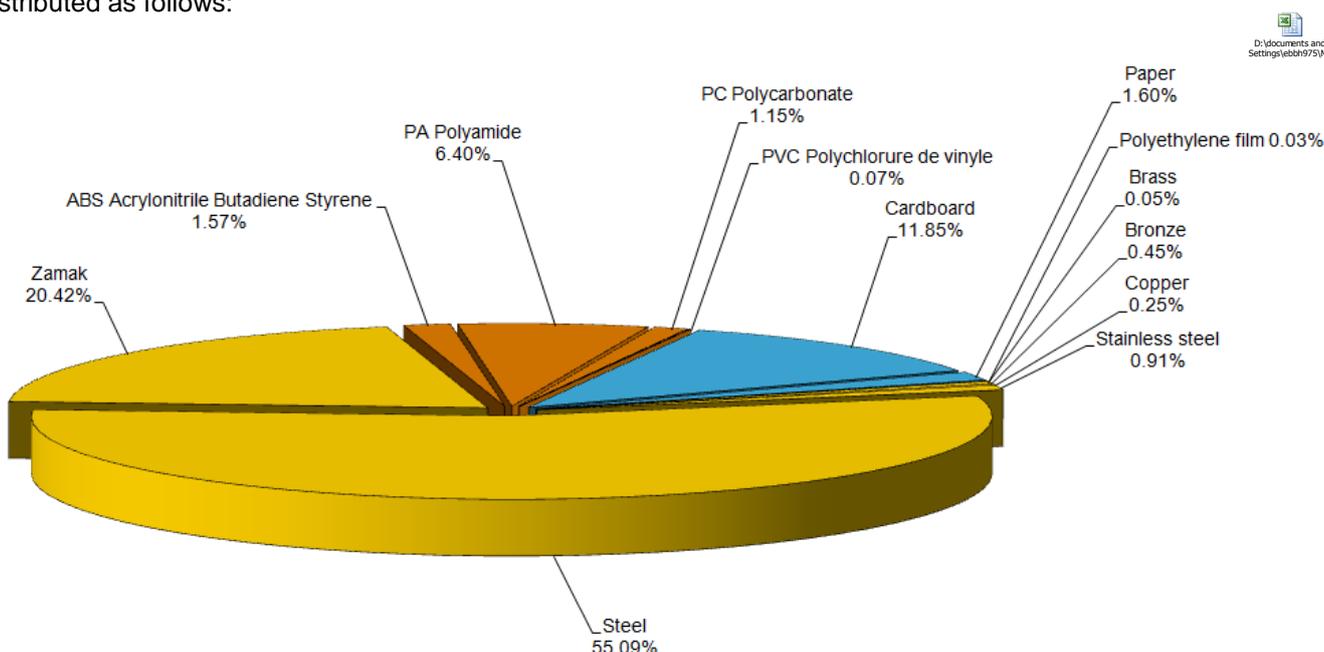
The representative product used for the analysis is **Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP Ref: VDIG111241BX0.**

The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.
The environmental analysis was performed in conformity with ISO 14040.

Constituent materials

The mass of the product range is from 2900 g and 3000 g including packaging. It is 2931g for the **Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP** Ref: **VDIG111241BX0**. The constituent materials are distributed as follows:

PC Polycarbonate 1.15%
PA Polyamide 6.40%
Paper 1.60%
Polyethylene film 0.03%
PVC Polychlorure de vinyle 0.07%
Brass 0.05%
ABS Acrylonitrile Butadiene Styrene 1.57%
Cardboard 11.85%
Bronze 0.45%
Copper 0.25%
Zamak 20.42%
Stainless steel 0.91%
Steel 55.09%

Substance assessment

Products of this range are designed in conformity with the requirements of the European RoHS Directive 2011/65/EU and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website . (http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page)

Product Environmental Profile – PEP

Manufacturing

The **Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP** Ref: **VDIG111241BX0** product range is manufactured at a Schneider Electric production site on which an ISO14001 certified environmental management system has been established.

Distribution

The weight and volume of the packaging have been optimized, based on the European Union's packaging directive.
The **Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP** packaging weight is *398.24 g*. It consists of cardboard (350 g), paper (47.24 g) and polyethylene film (1 g).

Use

The products of the **Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP** range do not generate environmental pollution (noise, emissions) requiring special precautionary measures in standard use.
The product is neither Energy consuming nor Energy passing.
The product range does not require special maintenance operations.

End of life

At end of life, the products in the **Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP** have been optimized to decrease the amount of waste and allow recovery of the product components and materials.
This product range doesn't need any special end-of-life treatment. According to countries' practices this product can enter the usual end-of-life treatment process.

The recyclability potential of the products has been evaluated using the "ECO DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).
According to this method, the potential recyclability ratio without packaging is: **86%**.
As described in the recyclability calculation method this ratio includes only metals and plastics which have proven industrial recycling processes.

Environmental impacts

Life cycle assessment has been performed on the following life cycle phases: Materials and Manufacturing (M), Distribution (D), Installation (I) Use (U), and End of life (E).
Modeling hypothesis and method:
- The calculation was performed on **Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP Ref: VDIG111241BX0**.
- Product packaging is included.
- Installation components: No special components included.
- Scenario for the Use phase: this product range is included in the **category 1: Energy passing** product. Assumed service lifetime is **20** years and use scenario is Product dissipation is 0 W 100% load and service uptime percentage is 100%.
- The geographical representative area for the assessment is **Europe** and the electrical power model used for calculation is **European** model.
- End of life impacts are based on a worst case transport distance to the recycling plant (**1000**km)

Product Environmental Profile – PEP

Presentation of the product environmental impacts

Environmental indicators	Unit	For 1 Actassi 19-C Patch Panel PAN EVO 19" 1U 24 RJ45 S-ONE CAT6A STP Ref : VDIG111241BX0					
		S = M + D + I + U + E	M	D	I	U	E
Air Acidification (AA)	kg H+ eq	3.25E-03	2.73E-03	9.53E-05	0.00E+00	0.00E+00	4.21E-04
Air toxicity (AT)	m³	4.80E+06	4.04E+06	1.42E+05	0.00E+00	0.00E+00	6.26E+05
Energy Depletion (ED)	MJ	2.60E+02	2.22E+02	7.14E+00	0.00E+00	0.00E+00	3.02E+01
Global Warming Potential (GWP)	kg CO_2 eq.	1.93E+01	1.66E+01	5.08E-01	0.00E+00	0.00E+00	2.14E+00
Hazardous Waste Production (HWP)	kg	7.95E-01	7.95E-01	6.27E-07	0.00E+00	0.00E+00	2.65E-06
Ozone Depletion Potential (ODP)	kg CFC-11 eq.	2.70E-07	2.65E-07	9.61E-10	0.00E+00	0.00E+00	4.06E-09
Photochemical Ozone Creation Potential (POCP)	kg C_2H_4 eq.	5.68E-03	5.01E-03	1.31E-04	0.00E+00	0.00E+00	5.34E-04
Raw Material Depletion (RMD)	Y-1	2.89E-15	2.84E-15	1.04E-17	0.00E+00	0.00E+00	4.38E-17
Water Depletion (WD)	dm3	1.70E+02	1.70E+02	5.26E-02	0.00E+00	0.00E+00	2.23E-01
Water Eutrophication (WE)	kg PO_4^{3-} eq.	1.33E-03	1.33E-03	9.42E-07	0.00E+00	0.00E+00	3.98E-06
Water Toxicity (WT)	m³	3.14E+00	2.00E+00	2.17E-01	0.00E+00	0.00E+00	9.16E-01

Life cycle assessment has been performed with the EIME software (Environmental Impact and Management Explorer), version 5 and with its database version 2013-02

The **Manufacturing (M)** phase is the life cycle phase which has the greatest impact on the majority of environmental indicators.

System approach

As the products of the range are designed in accordance with the European RoHS Directive 2011/65/EU, they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

Product Environmental Profile – PEP

Glossary

Air Acidification (AA)	The acid substances present in the atmosphere are carried by rain. A high level of acidity in the rain can cause damage to forests. The contribution of acidification is calculated using the acidification potentials of the substances concerned and is expressed in mode equivalent of H^+.
Air Toxicity (AT)	This indicator represents the air toxicity in a human environment. It takes into account the usually accepted concentrations for several gases in the air and the quantity of gas released over the life cycle. The indication given corresponds to the air volume needed to dilute these gases down to acceptable concentrations.
Energy Depletion (ED)	This indicator gives the quantity of energy consumed, whether it is from fossil, hydroelectric, nuclear or other sources. It takes into account the energy from the material produced during combustion. It is expressed in MJ.
Global Warming (GW)	The global warming of the planet is the result of the increase in the greenhouse effect due to the sunlight reflected by the earth's surface being absorbed by certain gases known as "greenhouse-effect" gases. The effect is quantified in gram equivalent of CO_2.
Hazardous Waste Production (HWP)	This indicator quantifies the quantity of specially treated waste created during all the life cycle phases (manufacturing, distribution and utilization). For example, special industrial waste in the manufacturing phase, waste associated with the production of electrical power, etc. It is expressed in kg.
Ozone Depletion (OD)	This indicator defines the contribution to the phenomenon of the disappearance of the stratospheric ozone layer due to the emission of certain specific gases. The effect is expressed in gram equivalent of CFC-11.
Photochemical Ozone Creation (POC)	This indicator quantifies the contribution to the "smog" phenomenon (the photochemical oxidation of certain gases which generates ozone) and is expressed in gram equivalent of ethylene (C_2H_4).
Raw Material Depletion (RMD)	This indicator quantifies the consumption of raw materials during the life cycle of the product. It is expressed as the fraction of natural resources that disappear each year, with respect to all the annual reserves of the material.
Water Depletion (WD)	This indicator calculates the volume of water consumed, including drinking water and water from industrial sources. It is expressed in dm^3.
Water Eutrophication (WE)	Eutrophication is a natural process defined as the enrichment in mineral salts of marine or lake waters or a process accelerated by human intervention, defined as the enrichment in nutritive elements (phosphorous compounds, nitrogen compounds and organic matter). This indicator represents the water eutrophication of lakes and marine waters by the release of specific substances in the effluents. It is expressed in grams equivalency of PO43-(phosphate).
Water Toxicity (WT)	This indicator represents the water toxicity. It takes into account the usually accepted concentrations for several substances in water and the quantity of substances released over the life cycle. The indication given corresponds to the water volume needed to dilute these substances down to acceptable concentrations.