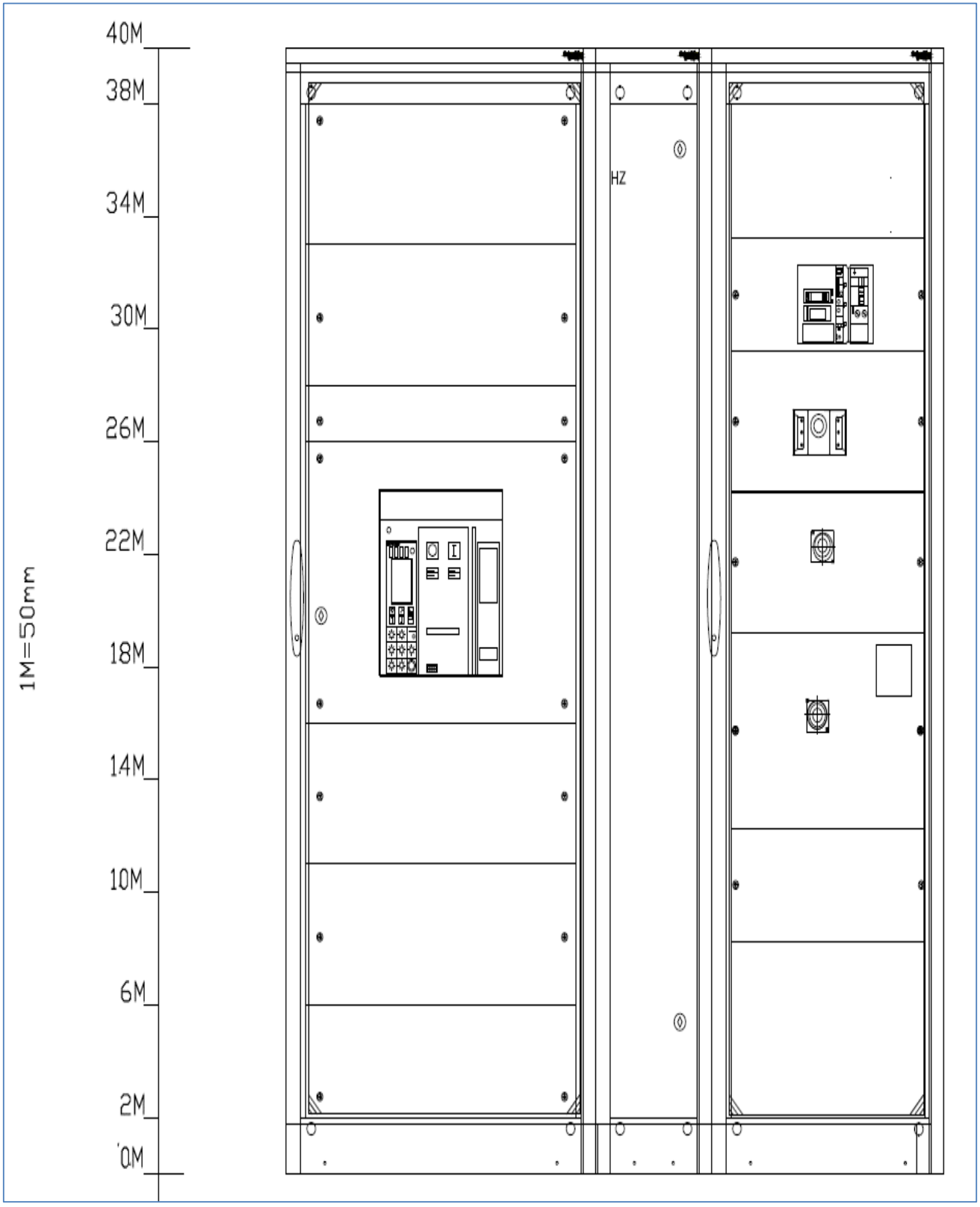
Product Environmental Profile

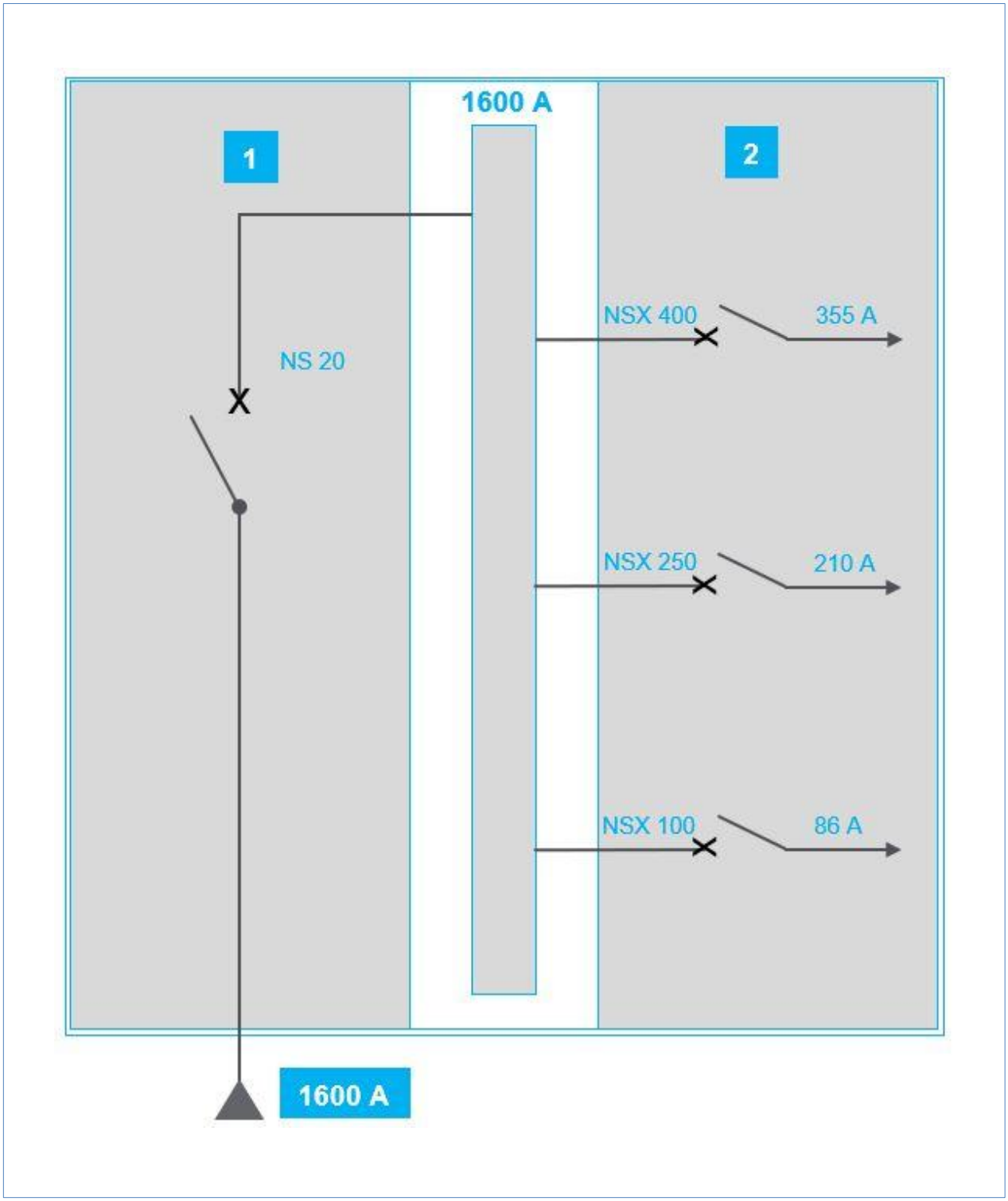
Prisma M Floor Standing Switchboards upto 4000A

General information

Representative product	Prisma M Floor Standing Switchboards upto 4000A - Prisma M Copper
Description of the product	The product used for the analysis is a Prisma M 1600A switchboard with components for the following functional units: • Incoming for: - 1600A fixed circuit breaker (typically Compact NS) • Outgoing for: - 400A horizontal circuit breakers (typically Compact NSX) - 250A horizontal circuit breakers (typically Compact NSX) - 100A vertical circuit breakers (typically 4 pieces Compact NSX) - Modular circuit breakers (typically 4 rows of Acti 9 devices). The main function of Prisma M Floor standing switchboards up to 4000A is: • Installing electrical devices (mounting plates and front plates) • Distribution of current (distribution blocks, busbars, etc) • Connection of switchboards on site (connections, terminal blocks, cable tie supports,etc)
Conclution on Components and Products	The various components or products which are installed inside Prisma M Copper panel have their own life expectancy and must follow their individual technical documents for maintenance or replacement. The environmental impacts have been calculated for elements of Prisma M Copper. Impacts of circuit breakers, contactors and relays to be assembled have not been integrated in the calculation.
Functional unit	It is an assembled enclosures with busbars for a maximum current value of up to 4000A. It is to protect the people against direct contact with live parts and allow monitoring, control and protection devices in multiples enclosures by ensuring the installation of electrical devices, distribute current and connect switchboards for 20 years. Continuous current pass through the busbars for the devices to be connected. It can withstand mechanical impacts (IK10 - IEC62262) and the penetration of solid objects and liquids (up to IP54 - IEC 60529). Use of the components ensures the creation of switchboards complying with standards IEC 61439-1 and 2, as well as local versions with the following electrical characteristics: • Rated insulation level of main busbars: 1000 V • Rated peak withstand current Ipk: 220 kÂ • Rated short-time withstand current Icw: 100 kA rms / 1 second • Frequency: 50/60 Hz.

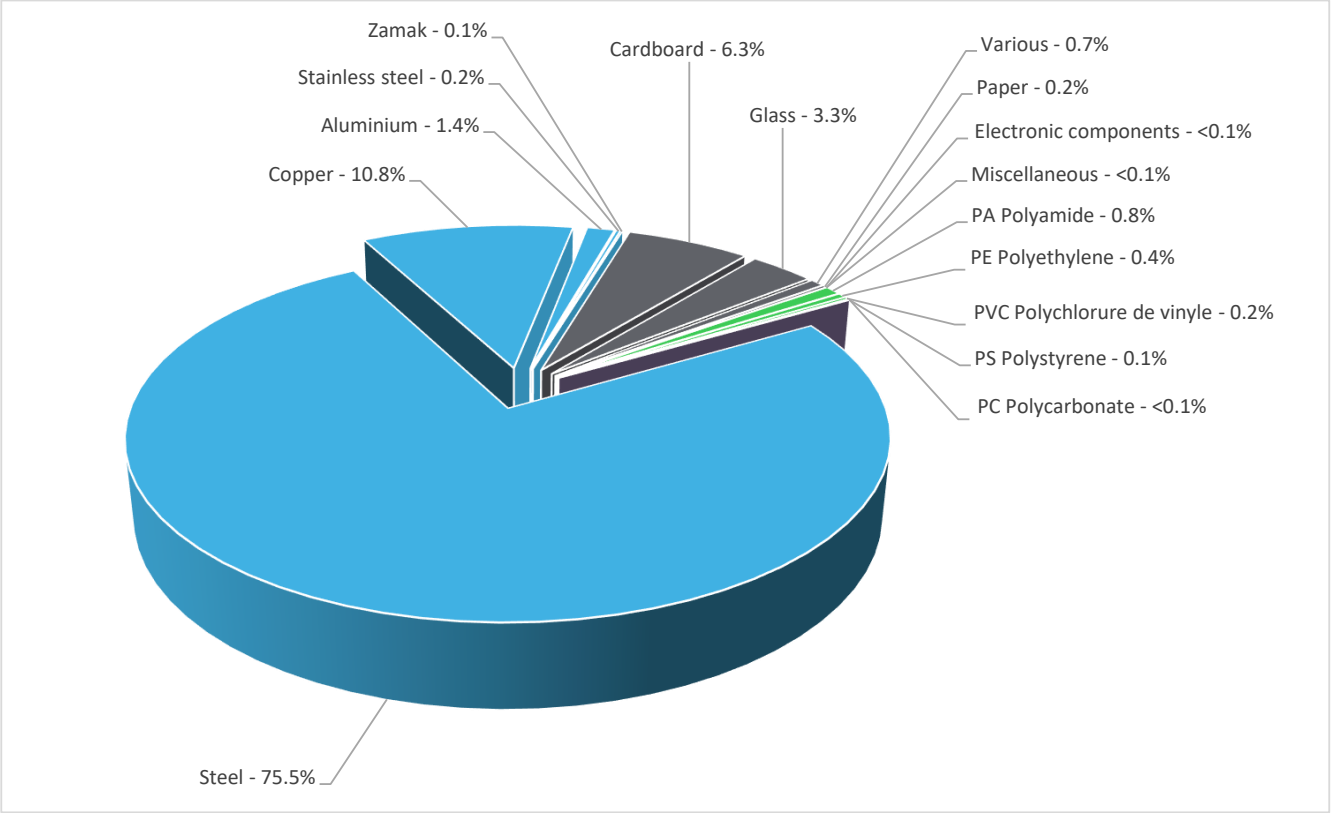

40M
38M
34M
30M
26M
22M
18M
14M
10M
6M
2M
0M
1M=50mm
HZ

Lists of functions included in the configuration:



Constituent materials

Reference product mass	311 kg	including the product, its packaging and additional elements and accessories



	Plastics	1.5%
	Metals	88.0%
	Others	10.5%

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/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), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate– BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) 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

Additional environmental information

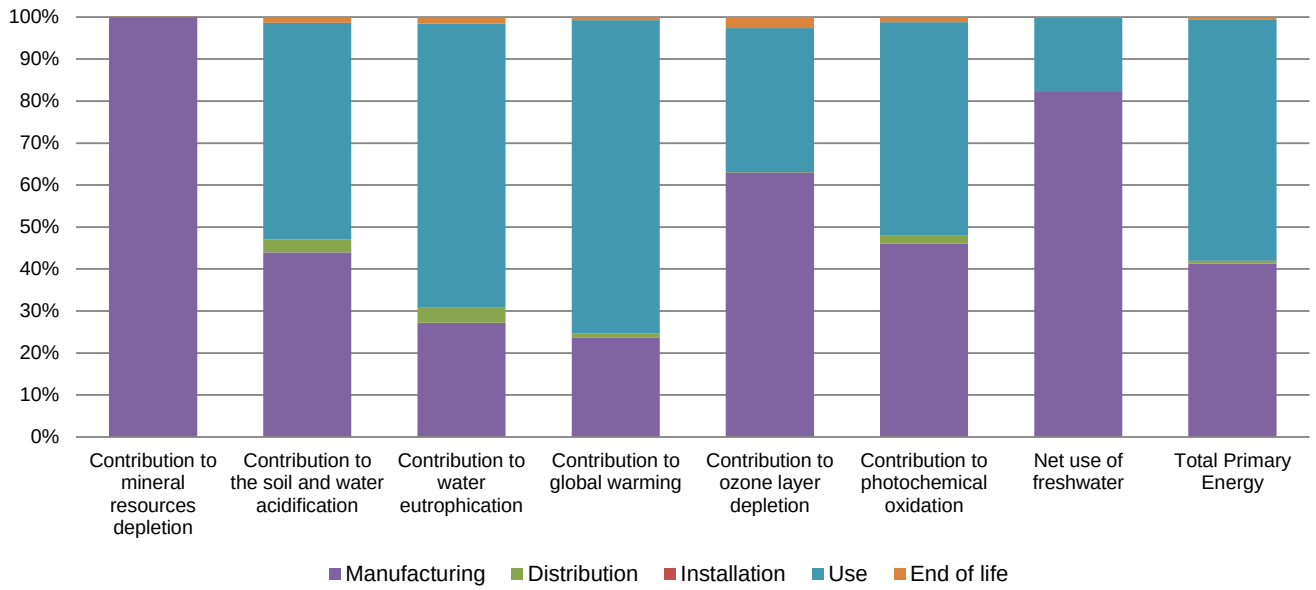
The Prisma M Floor Standing Switchboards upto 4000A presents the following relevent environmental aspects	
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 20679.3 g, consisting of Cardboard (91.4%), PE film (6.1%), Paper (2.5%) Product distribution optimised by setting up local distribution centres
Installation	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).
Use	The product does not require special maintenance operations.
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: **90%** Based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental impacts

Reference life time	20 years			
Product category	Other equipments - Passive product - continuous operation			
Installation elements	No special components needed			
Use scenario	Product dissipation is 175.4W at 100% Load rate and 15.786 W at load rate / rated current (In): 30 % of In & percentage of utilization time: 100%			
Geographical representativeness	China			
Technological representativeness	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Manufacturing Plant: SST (Suzhou), China	Electricity mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN

Compulsory indicators	Prisma M Floor Standing Switchboards upto 4000A - Prisma M Copper						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	4.98E-02	4.98E-02	0*	0*	1.24E-05	0*
Contribution to the soil and water acidification	kg SO_2 eq	5.92E+00	2.60E+00	1.83E-01	4.87E-03	3.05E+00	8.06E-02
Contribution to water eutrophication	kg PO_4^{3-} eq	1.19E+00	3.25E-01	4.22E-02	1.55E-03	8.05E-01	1.91E-02
Contribution to global warming	kg CO_2 eq	3.77E+03	8.92E+02	4.01E+01	1.18E+00	2.81E+03	2.67E+01
Contribution to ozone layer depletion	kg CFC11 eq	6.51E-05	4.10E-05	8.13E-08	0*	2.24E-05	1.69E-06
Contribution to photochemical oxidation	kg C_2H_4 eq	7.09E-01	3.26E-01	1.31E-02	3.65E-04	3.60E-01	8.71E-03

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.78E+01	1.46E+01	3.59E-03	0*	3.14E+00	3.21E-02
Total Primary Energy	MJ	8.01E+04	3.30E+04	5.67E+02	1.52E+01	4.60E+04	4.06E+02



Optional indicators	Prisma M Floor Standing Switchboards upto 4000A - Prisma M Copper						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	5.16E+04	8.21E+03	5.64E+02	1.49E+01	4.25E+04	3.26E+02
Contribution to air pollution	m³	5.85E+05	2.88E+05	1.71E+03	0*	2.92E+05	2.87E+03
Contribution to water pollution	m³	1.96E+05	4.57E+04	6.60E+03	1.75E+02	1.40E+05	3.16E+03
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	9.52E+01	9.52E+01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	2.70E+03	3.36E+02	7.56E-01	0*	2.36E+03	4.55E-01
Total use of non-renewable primary energy resources	MJ	7.74E+04	3.27E+04	5.66E+02	1.51E+01	4.37E+04	4.06E+02
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.31E+03	0*	7.56E-01	0*	2.36E+03	4.55E-01
Use of renewable primary energy resources used as raw material	MJ	3.84E+02	3.84E+02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.72E+04	3.25E+04	5.66E+02	1.51E+01	4.37E+04	4.06E+02
Use of non renewable primary energy resources used as raw material	MJ	1.96E+02	1.96E+02	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*
Waste categories	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	4.80E+03	4.40E+03	0*	0*	9.07E+01	3.08E+02
Non hazardous waste disposed	kg	1.51E+03	9.98E+02	1.43E+00	1.15E+00	5.10E+02	1.25E+00
Radioactive waste disposed	kg	1.42E-01	1.22E-01	1.02E-03	6.31E-05	1.68E-02	1.92E-03

Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	3.01E+02	2.83E+01	0*	1.97E+01	0*	2.53E+02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1.75E-01	0*	0*	0*	0*	1.75E-01
Exported Energy	MJ	6.14E-02	5.77E-03	0*	5.56E-02	0*	0*

** represents less than 0.01% of the total life cycle of the reference flow*

Life cycle assessment performed with EIME version EIME v5.8.1, database version 2016-11 in compliance with ISO14044.

The Manufacturing phase is impacting on Indicators of Abiotic depletion (ADPe) and Net use of freshwater (NUFW). The Manufacturing phase & Use phase are impacting equally on Indicators Acidification potential of soil and water (A), Ozone layer depletion (ODP), Photochemical oxidation (POCP) & Total Primary Energy (TPE). And the Use phase impacting rest of the Indicators (Eutrophication EP, Global warming GWP).

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.

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Date of issue	04/2020	*Supplemented by*	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	*Information and reference documents*	www.pep-ecopassport.org

Independent verification of the declaration and data

Internal X External

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »

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