

Product Environmental Profile

Rack Automatic Transfer Switch

Provides power redundancy for single-corded IT equipment





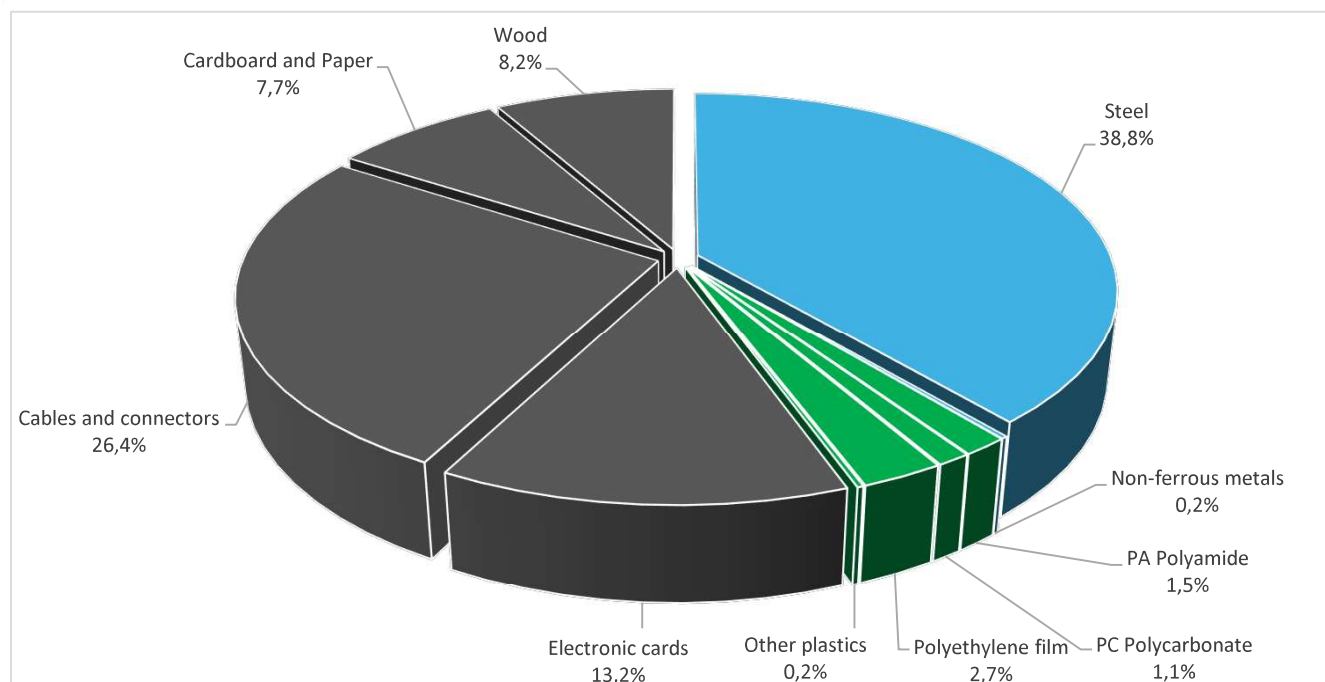
General information

Representative product	Rack Automatic Transfer Switch - AP4453
Description of the product	The Rack Automatic Transfer Switch (ATS) provides reliable, redundant power to single-corded equipment. The Rack ATS has dual input power cords supplying power to the connected load. If the primary source becomes unavailable, the Rack ATS will seamlessly source power from the secondary source without interrupting critical loads. Networked units have built-in network connectivity, which allows for remote management via Web, SNMP, or Telnet interfaces.
Description of the range	Provides power redundancy for single-corded IT equipment 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.
Products covered	AP44XX Series
Functional unit	Establishes, supports and switches for 10 years the rated currents in normal conditions of the circuit characterized by the current 30A, for the operating voltage 120V.



Constituent materials

Reference product mass 8820 g including the product, its packaging and additional elements and accessories



Plastics	5,5%
Metals	39,0%
Others	55,5%



Substance assessment

Products of this range are designed in conformity with the requirements of the European RoHS Directive 2011/65/EU (RoHS2) and EU Delegated Directive (EU) 2015/863 and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium, flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) or phthalates (Bis(2-ethylhexyl) phthalate - DEHP, Butyl benzyl phthalate (- BBP, Dibutyl phthalate -DBP, Diisobutyl phthalate - DIBP as mentioned in the Directive

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this 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 Rack Automatic Transfer Switch presents the following relevant environmental aspects

Manufacturing	Manufactured at a production site complying with the regulations
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 2248,4 g, consisting of wood (34%), cardboard (29%), steel (23%), LDPE (11%), paper (2%) and other plastics (1%) Product distribution optimised by setting up local distribution centres
Installation	The product does not require any special installation materials or operations. Installation is to be performed by qualified personnel.
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 This product contains lithium metal coin battery (3g), electronic cards >10cm ² (1192g), external electric cables (2162g) that should be separated from the stream of waste so as to optimize end-of-life treatment. The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page Recyclability potential: 55% 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).

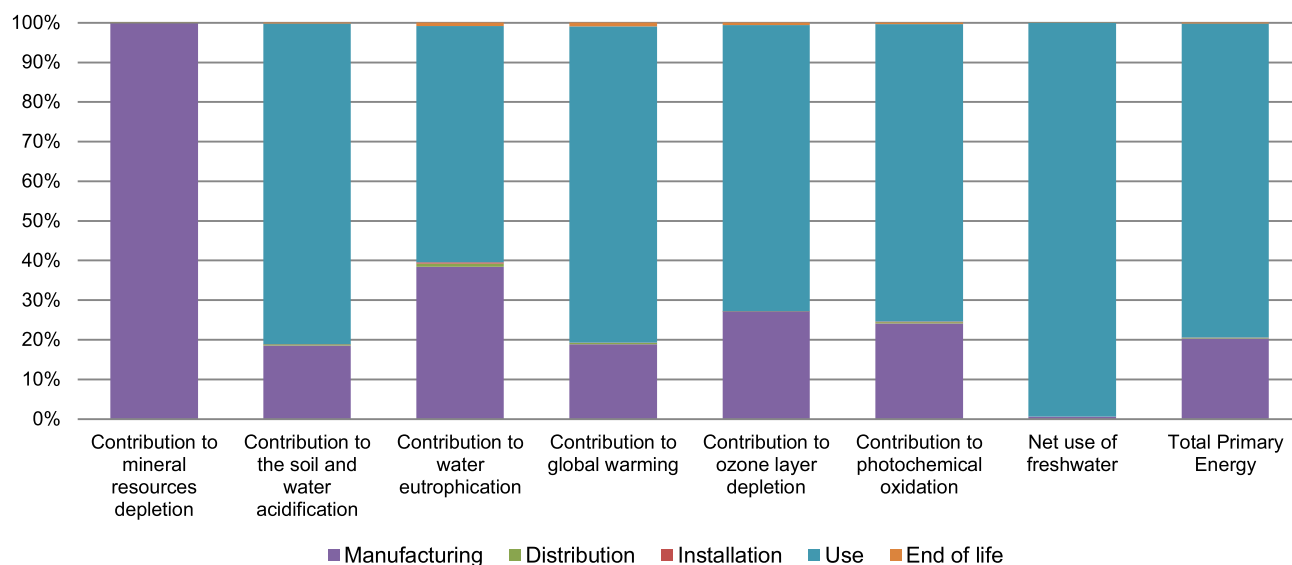


Environmental impacts

Reference life time	10 years			
Installation elements	Transportation and disposal of packaging are accounted for during installation. No special installation components needed.			
Use scenario	Weighted average loss = 8.7W, 100% of the time.			
Geographical representativeness	The product can be used in all regions, but the majority of the product is deployed in Europe			
Technological representativeness	The means of material production, processing and transport modeled are representative of the technologies used in production.			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: China, France and EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators		Rack Automatic Transfer Switch - AP4453					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2,57E-02	2,56E-02	0*	0*	3,24E-05	0*
Contribution to the soil and water acidification	kg SO ₂ eq	1,92E+00	3,58E-01	5,20E-03	8,07E-04	1,56E+00	3,56E-03
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1,58E-01	6,08E-02	1,20E-03	5,07E-04	9,40E-02	1,41E-03
Contribution to global warming	kg CO ₂ eq	4,68E+02	8,86E+01	1,14E+00	8,93E-01	3,73E+02	4,37E+00
Contribution to ozone layer depletion	kg CFC11 eq	3,37E-05	9,17E-06	0*	0*	2,43E-05	1,80E-07
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	1,14E-01	2,75E-02	3,71E-04	2,13E-04	8,56E-02	3,64E-04
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m ³	1,36E+03	8,76E+00	0*	0*	1,35E+03	0*
Total Primary Energy	MJ	9,41E+03	1,92E+03	1,61E+01	2,06E+00	7,46E+03	2,07E+01

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Optional indicators		Rack Automatic Transfer Switch - AP4453					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	5,46E+03	1,19E+03	1,60E+01	2,36E+00	4,24E+03	1,75E+01
Contribution to air pollution	m³	2,73E+04	1,10E+04	4,84E+01	2,48E+01	1,61E+04	1,32E+02
Contribution to water pollution	m³	2,67E+04	8,55E+03	1,87E+02	2,21E+01	1,54E+04	2,55E+03
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,42E+00	1,42E+00	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	9,85E+02	3,65E+01	0*	0*	9,48E+02	0*
Total use of non-renewable primary energy resources	MJ	8,43E+03	1,88E+03	1,61E+01	2,03E+00	6,51E+03	2,07E+01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	9,59E+02	1,10E+01	0*	0*	9,48E+02	0*
Use of renewable primary energy resources used as raw material	MJ	2,55E+01	2,55E+01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	8,35E+03	1,80E+03	1,61E+01	2,03E+00	6,51E+03	2,07E+01
Use of non renewable primary energy resources used as raw material	MJ	7,52E+01	7,52E+01	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	1,67E+02	1,54E+02	0*	0*	1,95E-01	1,34E+01
Non hazardous waste disposed	kg	1,43E+03	4,05E+01	0*	1,17E+00	1,39E+03	0*
Radioactive waste disposed	kg	9,43E-01	1,28E-02	0*	0*	9,30E-01	1,15E-04
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	5,45E+00	4,72E-01	0*	1,18E+00	0*	3,80E+00
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	5,24E-01	0*	0*	0*	0*	5,24E-01
Exported Energy	MJ	5,17E-01	4,86E-02	0*	4,68E-01	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.8.0, database version 2018-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

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The environmental indicators of other products in this family may be proportional extrapolated based on relationships between an amount of a key parameter of the product as compared to the amount of that key parameter within the reference product. Proportionality rules are based on the following key parameters: Manufacturing phase impacts - total mass of product (excluding packaging). Distribution phase impacts - total mass of product (including packaging). Installation phase impacts - mass of packaging. Use phase impacts - life time energy use. End of Life impacts - the product mass (excluding packaging).

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.

Verifier accreditation N°	VH08	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	04/2019	Supplemented by	PSR-0005-ed2-EN-2016 03 29
		Validity period	6 years
<i>Independent verification of the declaration and data, in compliance with ISO 14025 : 2010</i>			
Internal	X	External	
<p><i>The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)</i></p> <p><i>PEP are compliant with XP C08-100-1 :2014</i></p> <p><i>The elements of the present PEP cannot be compared with elements from another program.</i></p> <p><i>Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »</i></p>			

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