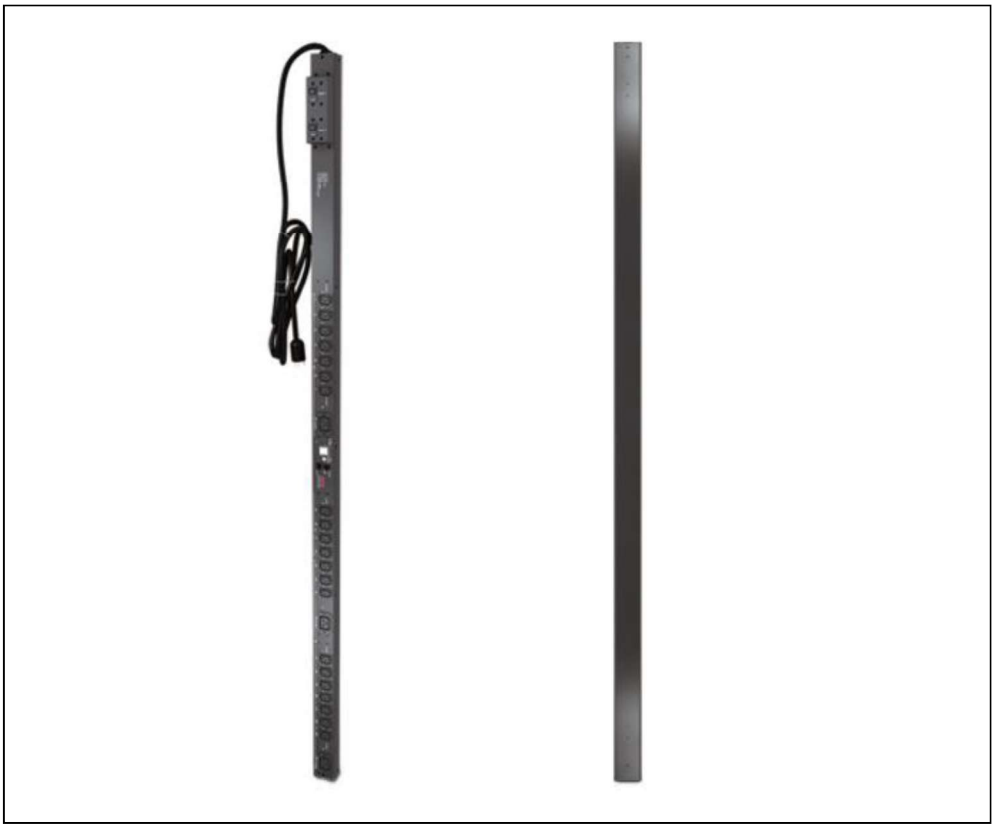
Product Environmental Profile

Power Distribution Units: Switched

Switched Power Distribution Units (PDUs) prevent electric surges from affecting data center electronic equipment and provide remote on/off control of individual outlets.

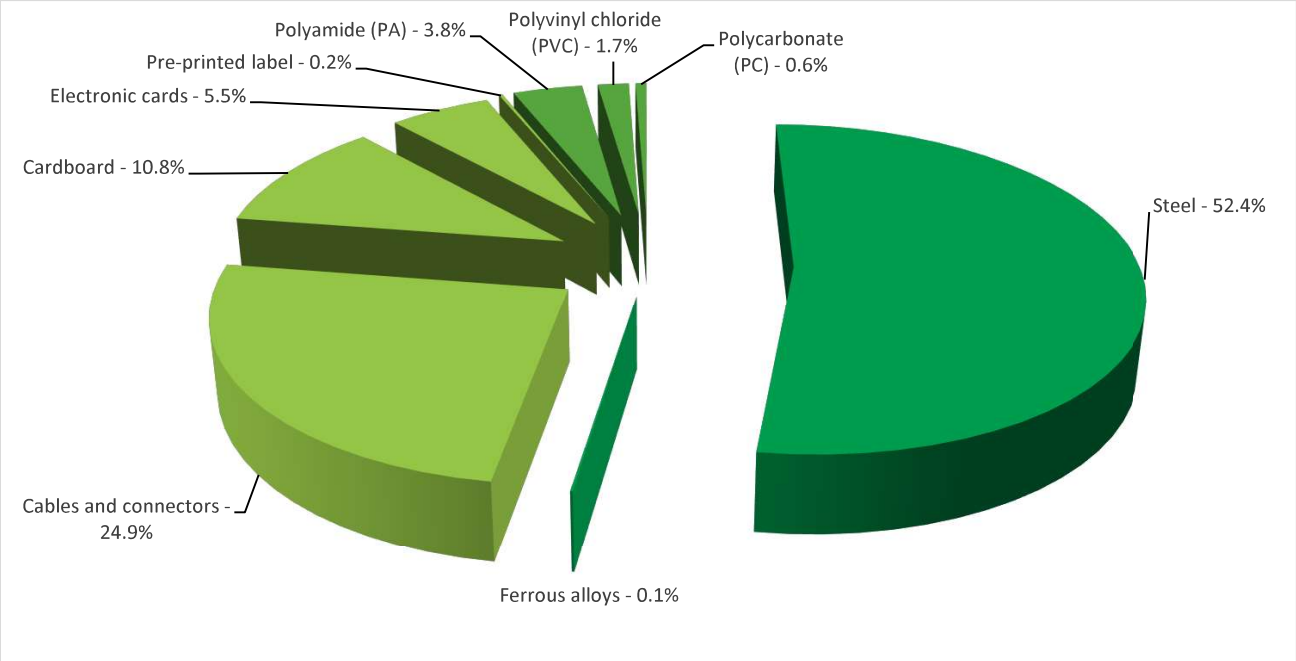


General information

Representative product	Power Distribution Units: Switched -AP7941
Description of the product	The AP7941 PDU provides advanced load monitoring and remote on/off switching control of individual outlets, while distributing power and providing surge protection for multiple power outlets within data centers or related applications.
Description of the range	Switched Power Distribution Units (PDUs) prevent electric surges from affecting data center electronic equipment and provide remote on/off control of individual outlets. 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.
Functional unit	Provision of 200V 15A power for up to 24 power loads with surge protection and outlet control for a duration of 10 years.

Constituent materials

Reference product mass	8300 g including the product, its packaging and additional elements and accessories



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 Power Distribution Units: Switched presents the following relevent environmental aspects	
Design	Switched Rack PDUs provide advanced load monitoring combined with remote on/off switching control of individual outlets for power cycling, delayed power sequencing, and outlet use management. This allows data center operators to actively manage equipment and reduce overall energy consumption within the datacenter (as compared to use of the basic rack PDU). Designed at a Schneider Electric Design Center that utilizes a design process that conforms to the requirements of the IEC 62430 "Environmentally Conscious Design for Electrical and Electronic Products" standard.
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging are optimized, based on the European Union's packaging directive Packaging weight is 924.6 g, consisting of Cardboard (98%) Paper (2%) Product distribution is optimised by setting up local distribution centres
Installation	AP7941 PDU does not require any special installation materials or operations.
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 external electrical cables (1785 g), printed circuit boards >10cm2 (462 g), plastics with brominated flame retardants (425 g) and Lithium (coin) batteries (2.5g). 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: **71%** 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).

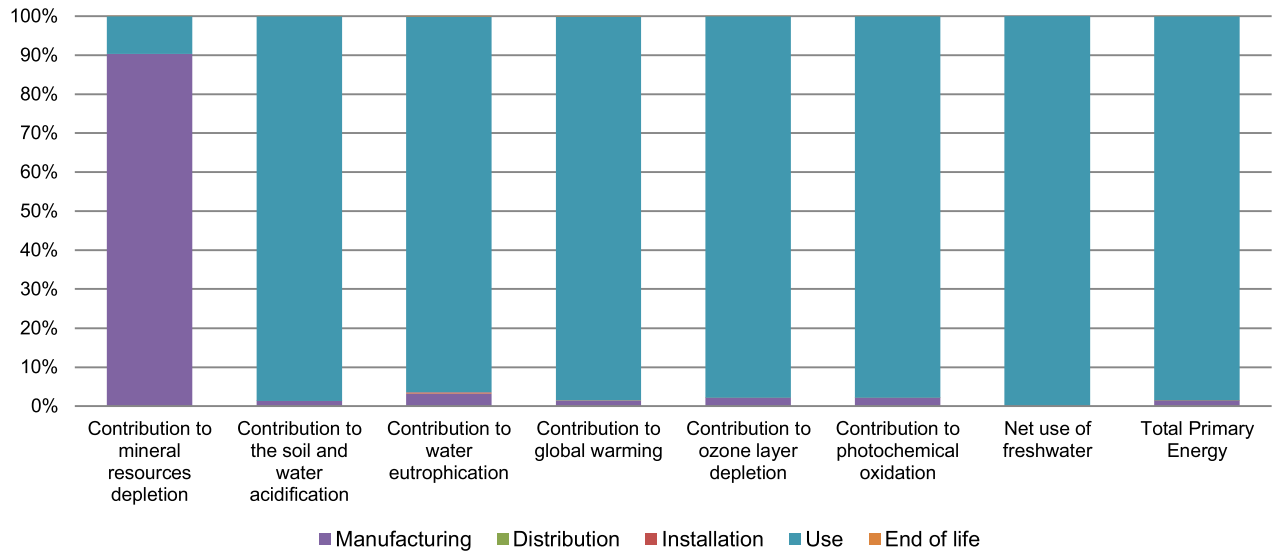
Environmental impacts

Reference life time	10 years			
Product category	Active products			
Installation elements	Transport and disposal of packaging are accounted for during installation. No special installation components needed.			
Use scenario	Consumed power is 76.23 W 100 % of the time in Active mode, W 0 % of the time in Standby mode, W 0 % of the time in Sleep mode and W 0 % of the time in Off mode.			
Geographical representativeness	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: Asia, EU and global	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		Power Distribution Units: Switched - AP7941					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.92E-03	2.63E-03	0*	0*	2.84E-04	0*
Contribution to the soil and water acidification	kg SO_2 eq	1.38E+01	1.83E-01	0*	0*	1.36E+01	3.29E-03

Contribution to water eutrophication	kg PO_4^{3-} eq	8.55E-01	2.71E-02	2.13E-04	2.48E-03	8.24E-01	1.12E-03
Contribution to global warming	kg CO_2 eq	3.32E+03	4.61E+01	0*	1.30E+00	3.27E+03	3.18E+00
Contribution to ozone layer depletion	kg CFC11 eq	2.18E-04	4.62E-06	0*	0*	2.13E-04	1.41E-07
Contribution to photochemical oxidation	kg C_2H_4 eq	7.67E-01	1.60E-02	0*	3.14E-04	7.50E-01	3.53E-04

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.19E+04	0*	0*	0*	1.19E+04	0*
Total Primary Energy	MJ	6.64E+04	1.03E+03	0*	0*	6.53E+04	1.95E+01



Optional indicators	Power Distribution Units: Switched - AP7941						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	3.77E+04	5.83E+02	0*	0*	3.71E+04	1.65E+01
Contribution to air pollution	m³	1.47E+05	6.38E+03	0*	0*	1.41E+05	1.25E+02
Contribution to water pollution	m³	1.43E+05	6.03E+03	3.40E+01	7.44E+01	1.35E+05	2.25E+03
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.77E+00	1.77E+00	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	8.32E+03	1.13E+01	0*	0*	8.31E+03	0*
Total use of non-renewable primary energy resources	MJ	5.81E+04	1.02E+03	0*	0*	5.70E+04	1.95E+01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	8.30E+03	0*	0*	0*	8.31E+03	0*
Use of renewable primary energy resources used as raw material	MJ	1.88E+01	1.88E+01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	5.80E+04	9.57E+02	0*	0*	5.70E+04	1.95E+01
Use of non renewable primary energy resources used as raw material	MJ	6.06E+01	6.06E+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	2.25E+01	8.59E+00	0*	0*	1.71E+00	1.22E+01
Non hazardous waste disposed	kg	1.22E+04	3.36E+01	0*	0*	1.22E+04	0*

Radioactive waste disposed	kg	8.15E+00	6.71E-03	0*	0*	8.15E+00	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	5.95E+00	6.44E-01	0*	0*	0*	5.31E+00
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.10E-01	0*	0*	0*	0*	2.10E-01
Exported Energy	MJ	7.56E-02	7.56E-02	0*	0*	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.5, database version 2016-11.

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.

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 - mass of the electronic boards (with components). Distribution phase impacts - total mass of product (including packaging). Installation phase impacts - mass of packaging. Use phase impacts - product wattage. 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.

Registration N°		*Drafting rules*	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH-08	*Supplemented by*	PSR-0005-ed2-EN-2016 03 29
Date of issue	12/2016	*Information and reference documents*	
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025 : 2010

Internal X External

The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)

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

Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »

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