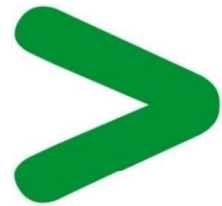


# Product Environmental Profile





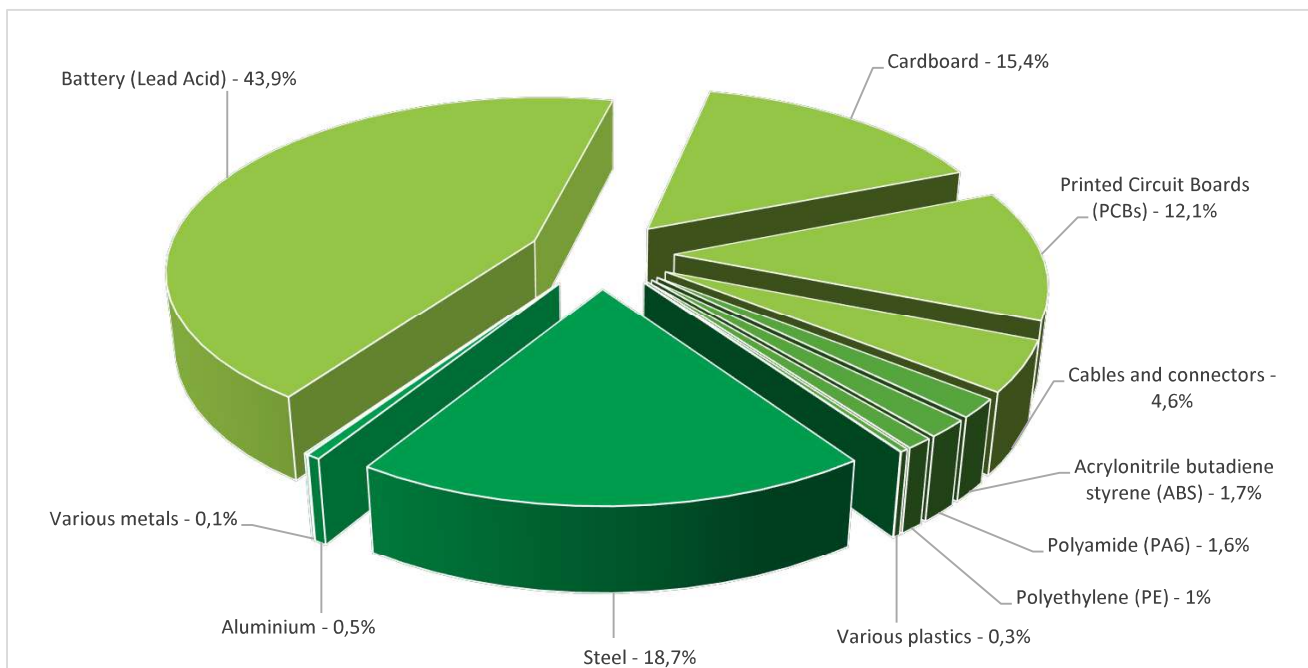
## General information

<b>Representative product</b>	Smart-UPS® ≥ 1500 VA - SMX3000HV
<b>Description of the product</b>	The Smart-UPS® Uninterruptible Power Supply (UPS) products provide, true double-conversion power protection for various applications.
<b>Description of the range</b>	The Smart-UPS products provides power protection for servers, voice / data networks, medical labs, and light industrial applications. 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.
<b>Functional unit</b>	Protection of a load of 2700 W, against input power failure by providing high density, true double-conversion on-line power protection during 8 years of operation and provide a backup time of 6 minutes in case of a power outage.



## Constituent materials

<b>Reference product mass</b>	42812 g including the product, its packaging and additional elements and accessories
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## 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.

The battery pack(s) within this product range are designed to conform with the requirements of the Battery and Accumulator Directive (European Directive 2006/66/EC of 26 September 2006) and do not contain, or only contain in authorized proportions, the regulated substances lead (Pb), mercury (Hg) and cadmium (Cd) as mentioned in the Directive. Additionally, the non-spillable, valve regulated lead acid batteries used in the battery pack(s) within this product range are certified by their manufacturers as capable of withstanding the IATA/ICAO Vibration and Pressure Differential Test and that at a temperature of 55 degrees Centigrade, there is no free electrolyte to flow from a ruptured or cracked case.

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

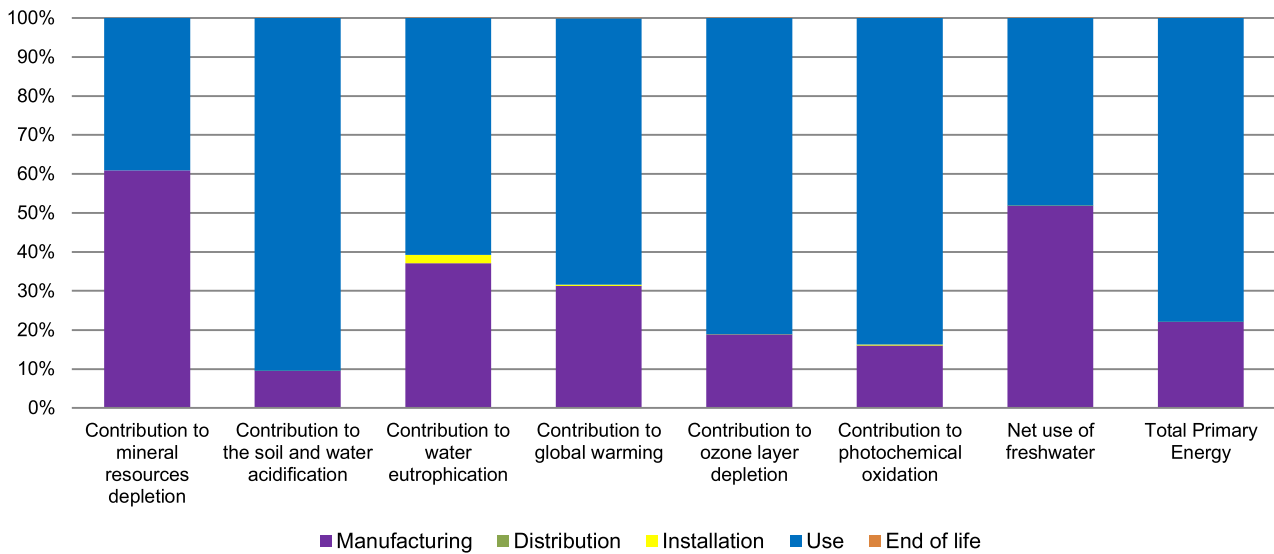
The Smart-UPS® ≥ 1500 VA presents the following relevant environmental aspects

<b>Design</b>	Smart-UPS® UPS products provide environmental benefits through patented green operating mode that achieves efficiencies over 97%. Smart-UPS® UPSs were the first network UPS to be Energy Star certified. Through intelligent battery management, pioneered by APC, battery performance and life is maximized through intelligent, precision temperature compensated charging. 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.
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 6905,4 g, consisting of cardboard (94%), PE film (4%) and paper (1%). Product distribution optimised by setting up local distribution centres
<b>Installation</b>	Smart-UPS® UPS products do not require any special installation materials or operations.
<b>Use</b>	The batteries 18800g, Fan assemblies 100g and PCB power (505)g need to be replaced once, after the first four years of use.
<b>End of life</b>	End of life optimized to decrease the amount of waste and allow recovery of product components and materials This product contains batteries (18800 g), printed circuit boards >10cm <sup>2</sup> (4697 g), external electrical cables (1975 g) and plastics with brominated flame retardants (404.69 g) 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 <a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</a> Recyclability potential: <b>58%</b> 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

<b>Reference life time</b>	8 years			
<b>Product category</b>	Active products			
<b>Installation elements</b>	Transport and disposal of packaging are accounted for during installation. No special installation components needed.			
<b>Use scenario</b>	Consumed power is 39 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.			
<b>Geographical representativeness</b>	Europe			
<b>Technological representativeness</b>	The means of material production, processing and transport modeled are representative of the technologies used in production.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Energy model used: Asia, EU and global	ELCD_Electricity_mix_<1kV_EU-27__ELCD-0089	ELCD_Electricity_mix_<1kV_EU-27__ELCD-0089	ELCD_Electricity_mix_<1kV_EU-27__ELCD-0089

Compulsory indicators		Smart-UPS® ≥ 1500 VA - SMX3000HV					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.14E-01	1.30E-01	0*	0*	8.35E-02	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	1.36E+01	1.30E+00	0*	0*	1.23E+01	0*
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	7.99E-01	2.96E-01	0*	1.76E-02	4.84E-01	5.38E-04
Contribution to global warming	kg CO <sub>2</sub> eq	2.45E+03	7.65E+02	0*	9.05E+00	1.67E+03	2.12E+00
Contribution to ozone layer depletion	kg CFC11 eq	5.01E-04	9.46E-05	0*	0*	4.06E-04	1.76E-07
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	6.98E-01	1.12E-01	0*	2.17E-03	5.84E-01	2.07E-04
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m <sup>3</sup>	1.01E+01	5.22E+00	0*	0*	4.83E+00	2.62E-03
Total Primary Energy	MJ	4.31E+04	9.51E+03	0*	0*	3.36E+04	1.35E+01



Optional indicators		Smart-UPS® ≥ 1500 VA - SMX3000HV					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	2.63E+04	8.65E+03	0*	0*	1.76E+04	1.05E+01
Contribution to air pollution	m <sup>3</sup>	2.40E+05	1.15E+05	0*	3.49E+01	1.25E+05	1.04E+02
Contribution to water pollution	m <sup>3</sup>	1.93E+05	9.19E+04	0*	4.81E+02	9.88E+04	2.16E+03
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	3.76E+00	3.76E+00	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	2.69E+03	3.46E+02	0*	0*	2.34E+03	0*
Total use of non-renewable primary energy resources	MJ	4.04E+04	9.17E+03	0*	0*	3.12E+04	1.35E+01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.53E+03	1.95E+02	0*	0*	2.34E+03	0*
Use of renewable primary energy resources used as raw material	MJ	1.51E+02	1.51E+02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.02E+04	9.00E+03	0*	0*	3.12E+04	1.35E+01
Use of non renewable primary energy resources used as raw material	MJ	2.11E+02	1.69E+02	0*	0*	4.25E+01	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	1.22E+02	1.04E+02	0*	0*	3.72E+00	1.39E+01
Non hazardous waste disposed	kg	6.41E+03	3.67E+02	0*	6.95E+00	6.03E+03	0*
Radioactive waste disposed	kg	5.00E+00	7.92E-02	0*	0*	4.92E+00	0*
<b>Other environmental information</b>	<b>Unit</b>	<b>Total</b>	<b>Manufacturing</b>	<b>Distribution</b>	<b>Installation</b>	<b>Use</b>	<b>End of Life</b>
Materials for recycling	kg	1.54E+00	0*	0*	0*	0*	1.54E+00
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*
Exported Energy	MJ	4.81E-02	0*	0*	4.81E-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 v5.5, 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, by life cycle phase, based on the ratio of the amount of a key parameter of the product, over the amount of that key parameter within the reference product. Proportionality rules are based on the following key parameters for impacts by lifecycle phase: Manufacturing phase impacts - mass of the electronic boards (with components) and mass of the product excluding packaging.\* Distribution phase impacts - total mass of product (including packaging). Installation phase impacts - mass of packaging. Use phase impacts - product lifetime energy consumption. End of Life impacts - the product mass (excluding packaging).

\*For all other phases the parameter ratio times the reference phase impact will generally yield the product phase impact. For the manufacturing phase the impact is to be multiplied by the average of the first and second parameter ratios.

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°	VH-08	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	01/2017	Supplemented by	PSR-0010-ed1.1-EN-2015 10 16
		Validity period	6 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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