Product Environmental Profile

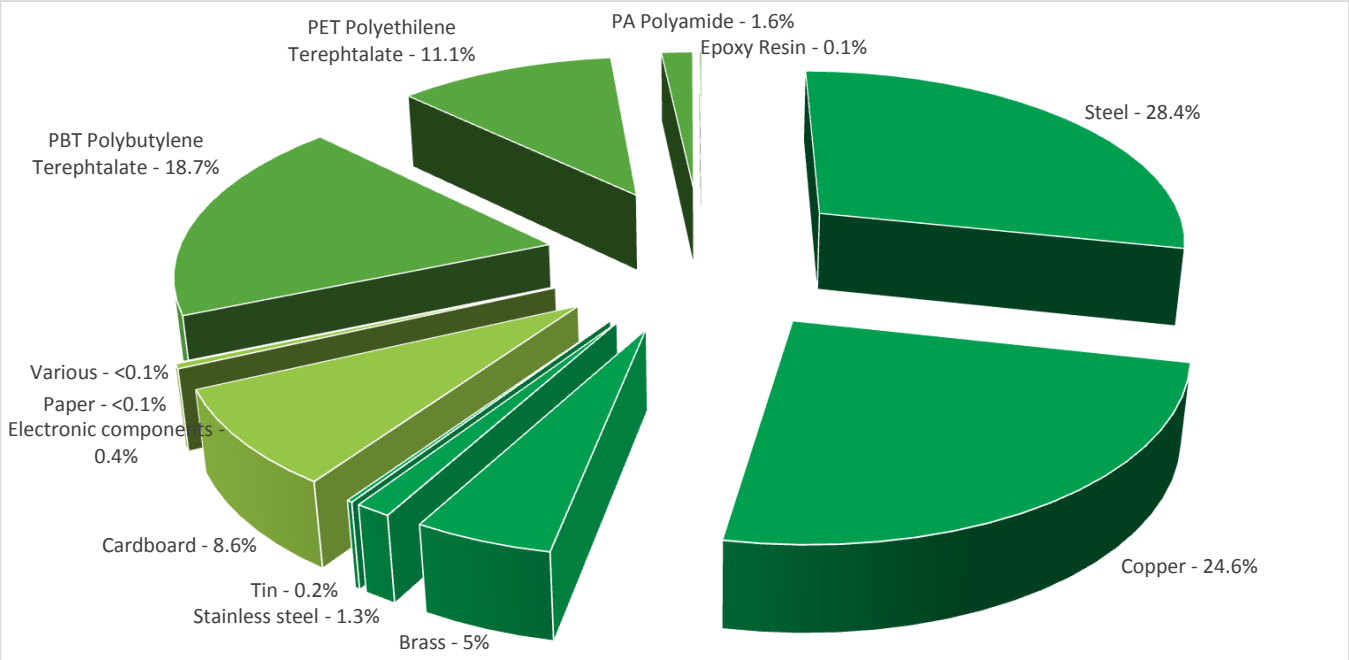
RPF2... Power Relay

General information

Representative product	Power Relay -RPF2AP7
Description of the product	The product is an electrically operated switch which enables current to flow through it on one circuit and can switch a current on and off on a second circuit.
Description of the range	This range consists of RPF2A and RPF2B series designed with DIN rail mounting and two holes for direct mounting. Input voltage range from 12 Vdc to 24 Vdc and 12 Vac to 240 Vac. The RPF2A series consist of double pole single throw with 2 NO contacts, and RPF2B series consist of double pole double throw with 2 NO and 2 NC contacts. 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	To control a circuit by a low-power signal with complete electrical isolation between control and controlled circuits, or where several circuits must be controlled by one signal during 20 years with a 30% use rate, in compliance with French standards.

Constituent materials

Reference product mass	88.25 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 RoHS directive (European Directive 2011/65/EU of 8 June 2011) 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

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 Relay presents the following relevent 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 7.7 g, consisting of cardboard (99.7%), paper (0.3%) Product distribution optimised by setting up local distribution centres
Installation	Ref RPF2AP7 does not require any installation 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 No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: **48%** 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).

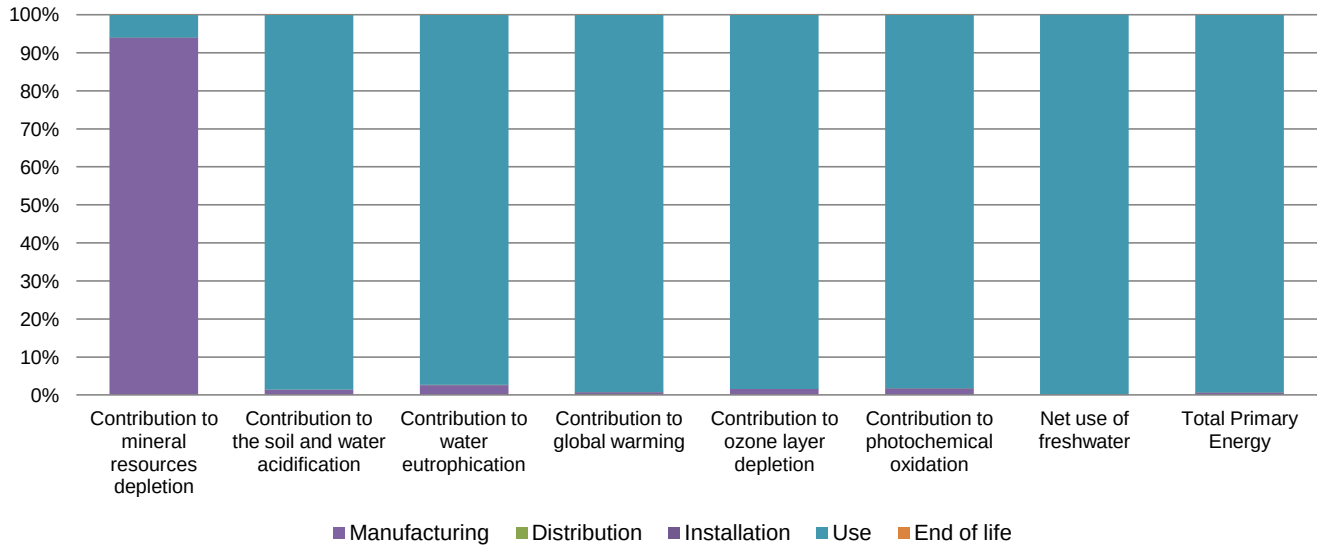
Environmental impacts

Reference life time	20 years			
Product category	Passive products - non-continuous operation			
Installation elements	No special components needed			
Use scenario	Product dissipation is 2.24 W full load, loading rate is 30% and service uptime percentage is 30% The product is in active mode 30% of the time with a power use of 2.24W and 70% of the time in OFF mode, for 20 years			
Geographical representativeness	World			
Technological representativeness	The product is an electrically operated switch which enables current to flow through it on one circuit and can switch a current on and off on a second circuit.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: China	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 Relay - RPF2AP7**					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	8,30E-05	7,80E-05	0*	0*	5,01E-06	0*
Contribution to the soil and water acidification	kg SO_2 eq	2,44E-01	3,34E-03	5,20E-05	0*	2,41E-01	2,45E-05
Contribution to water eutrophication	kg PO_4^{3-} eq	1,49E-02	3,84E-04	1,20E-05	0*	1,45E-02	6,62E-06
Contribution to global warming	kg CO_2 eq	5,82E+01	4,43E-01	1,14E-02	0*	5,77E+01	1,19E-02
Contribution to ozone layer depletion	kg CFC11 eq	3,82E-06	6,21E-08	0*	0*	3,76E-06	5,61E-10

Contribution to photochemical oxidation	kg C_2H_4 eq	1,35E-02	2,37E-04	3,71E-06	0*	1,32E-02	2,56E-06

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	2,09E+02	0*	0*	0*	2,09E+02	0*
Total Primary Energy	MJ	1,16E+03	7,59E+00	1,61E-01	0*	1,15E+03	1,20E-01



Optional indicators	Power Relay - RPF2AP7						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	6,61E+02	6,35E+00	1,60E-01	0*	6,55E+02	1,09E-01
Contribution to air pollution	m³	2,69E+03	2,06E+02	4,84E-01	0*	2,48E+03	8,62E-01
Contribution to water pollution	m³	2,41E+03	3,15E+01	1,87E+00	0*	2,38E+03	1,02E+00
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,61E-02	1,61E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1,47E+02	3,60E-01	0*	0*	1,47E+02	0*
Total use of non-renewable primary energy resources	MJ	1,01E+03	7,23E+00	1,61E-01	0*	1,01E+03	1,20E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1,47E+02	2,01E-01	0*	0*	1,47E+02	0*
Use of renewable primary energy resources used as raw material	MJ	1,59E-01	1,59E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,01E+03	6,76E+00	1,61E-01	0*	1,01E+03	1,20E-01
Use of non renewable primary energy resources used as raw material	MJ	4,69E-01	4,69E-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	5,93E+00	5,76E+00	0*	1,55E-02	3,01E-02	1,24E-01
Non hazardous waste disposed	kg	2,15E+02	2,58E-01	0*	0*	2,15E+02	0*
Radioactive waste disposed	kg	1,44E-01	2,79E-04	0*	0*	1,44E-01	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	4,52E-02	5,73E-03	0*	0*	0*	3,94E-02
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1,60E-03	2,04E-04	0*	0*	0*	1,40E-03
Exported Energy	MJ	0,00E+00	0*	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.

Depending on the impact analysis, the environmental indicators (without Contribution to mineral resources depletion) of other products in this family may be proportional extrapolated by energy consumption values. For Contribution to mineral resources depletion, impact may be proportional extrapolated by mass of the product.

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	02/2017	*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, in compliance with ISO 14025 : 2010

Internal X External

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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