

Product Environmental Profile

RZM●●● Protection Module





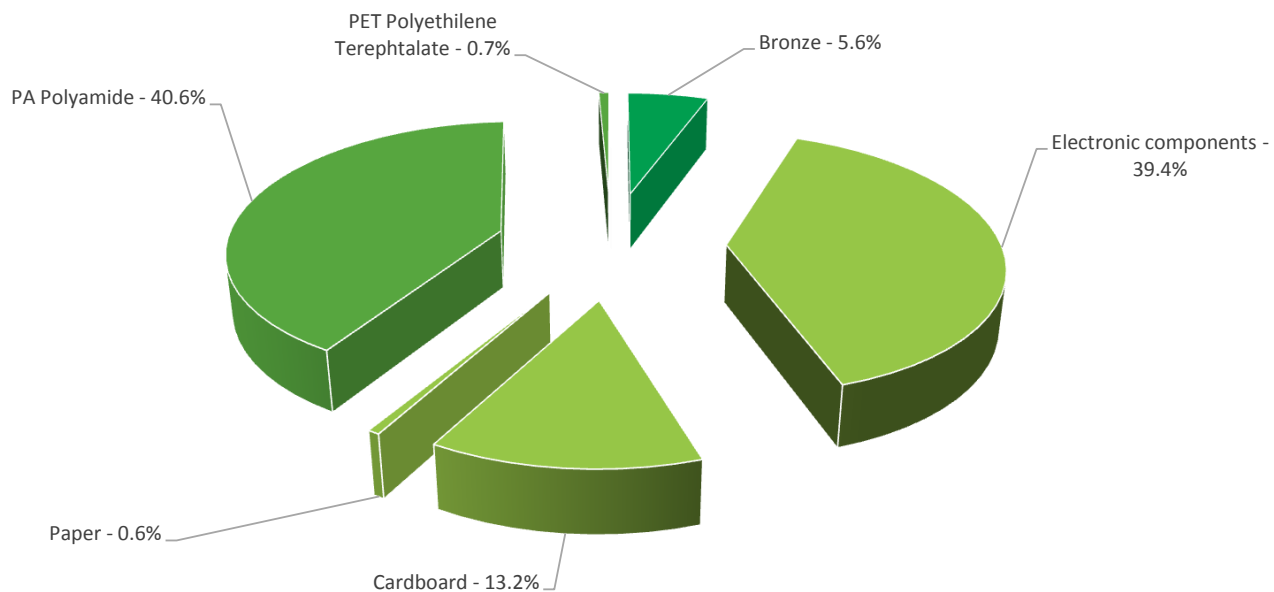
General information

Representative product	RZM Protection Module -RZM021FP
Description of the product	Protection module with Varistor and green LED, Control circuit voltage: 110~230 V AC/DC
Functional unit	Protect during 20 years against transient overvoltages electrical equipments connected to electrical networks with a rated operational voltage up to 1000 V AC or 1500 V DC



Constituent materials

Reference product mass	3.6 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 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 RZM Protection Module 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 0.5 g, consisting of Cardboard(95%), PET film(5%) Product distribution optimised by setting up local distribution centres
Installation	RZM021FP 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: 6% 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

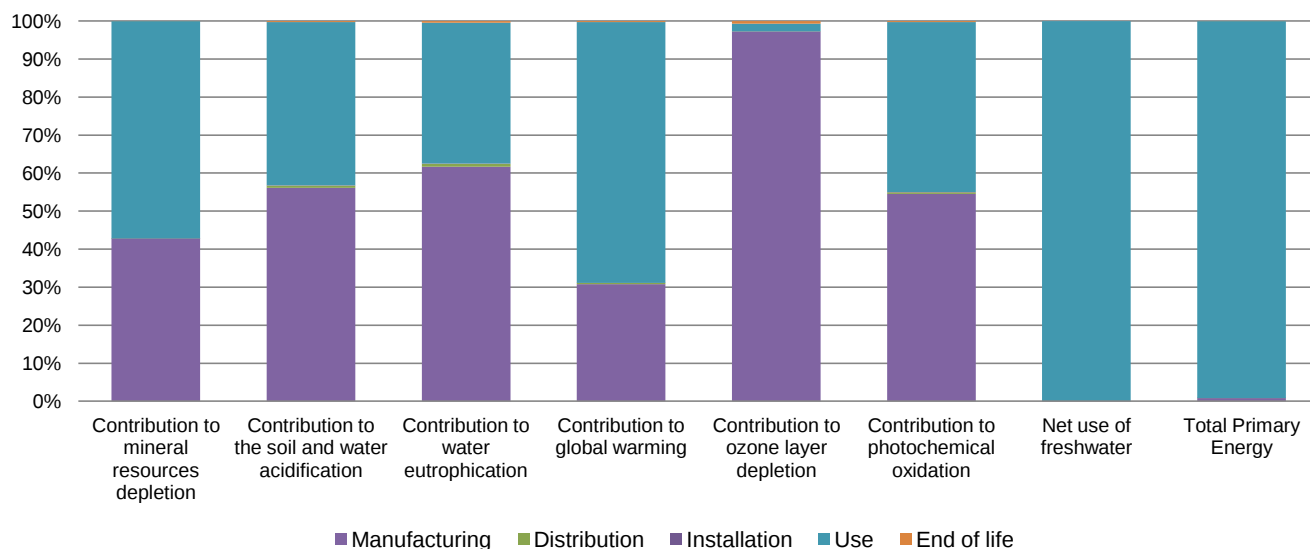
Reference life time	20 years			
Product category	Passive products - continuous operation			
Installation elements	No special components needed			
Use scenario	Product dissipation is 0.105 W full load, loading rate is 100% and service uptime percentage is 100%			
Geographical representativeness	Europe			
Technological representativeness	Protection module with Varistor and green LED, Control circuit voltage: 110~230 V AC/DC			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: China	Electricity from hydro power; AC; production mix, at power plant; 230V; RER	Electricity from hydro power; AC; production mix, at power plant; 230V; RER	Electricity from hydro power; AC; production mix, at power plant; 230V; RER

Compulsory indicators		RZM Protection Module - RZM021FP					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	8,27E-06	3,54E-06	0*	0*	4,72E-06	0*
Contribution to the soil and water acidification	kg SO ₂ eq	3,46E-04	1,94E-04	2,12E-06	1,48E-07	1,49E-04	9,46E-07

Contribution to water eutrophication	kg PO ₄ ³⁻ eq	6,11E-05	3,77E-05	4,88E-07	3,48E-08	2,26E-05	2,67E-07
Contribution to global warming	kg CO ₂ eq	1,60E-01	4,92E-02	4,64E-04	4,80E-05	1,09E-01	5,11E-04
Contribution to ozone layer depletion	kg CFC11 eq	3,53E-09	3,43E-09	9,41E-13	3,05E-12	7,16E-11	2,37E-11

Contribution to photochemical oxidation	kg C ₂ H ₄ eq	3,09E-05	1,68E-05	1,51E-07	1,60E-08	1,38E-05	9,70E-08
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Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	4,80E+02	0*	0*	0*	4,80E+02	0*
Total Primary Energy	MJ	7,92E+01	6,78E-01	0*	0*	7,85E+01	0*



Optional indicators		RZM Protection Module - RZM021FP					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1,21E+00	7,09E-01	6,53E-03	6,80E-04	4,91E-01	4,15E-03
Contribution to air pollution	m ³	9,13E+00	4,98E+00	1,98E-02	5,27E-03	4,10E+00	3,31E-02
Contribution to water pollution	m ³	8,70E+00	5,47E+00	7,64E-02	5,63E-03	3,11E+00	4,02E-02
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	4,49E-04	4,49E-04	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	7,80E+01	2,10E-02	0*	0*	7,80E+01	0*
Total use of non-renewable primary energy resources	MJ	1,21E+00	6,57E-01	6,56E-03	7,46E-04	5,37E-01	4,54E-03
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	7,80E+01	2,10E-02	0*	0*	7,80E+01	0*
Use of renewable primary energy resources used as raw material	MJ	0,00E+00	0*	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,14E+00	5,87E-01	6,56E-03	7,46E-04	5,37E-01	4,54E-03
Use of non renewable primary energy resources used as raw material	MJ	6,96E-02	6,96E-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	2,94E-02	4,11E-03	0*	5,38E-04	1,88E-02	5,96E-03
Non hazardous waste disposed	kg	1,12E+00	1,25E-02	0*	0*	1,11E+00	0*
Radioactive waste disposed	kg	2,75E-05	8,74E-06	1,18E-08	3,52E-09	1,88E-05	2,25E-08

Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	7,59E-04	9,38E-05	0*	4,95E-04	0*	1,70E-04
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	8,30E-05	1,05E-05	0*	0*	0*	7,25E-05
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 Modify manually the text to mention the equal impacting phases phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

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°	ENVPEP1705013_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	06/2017	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	Information and reference	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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