

Product Environmental Profile

Zelio control & analog relays





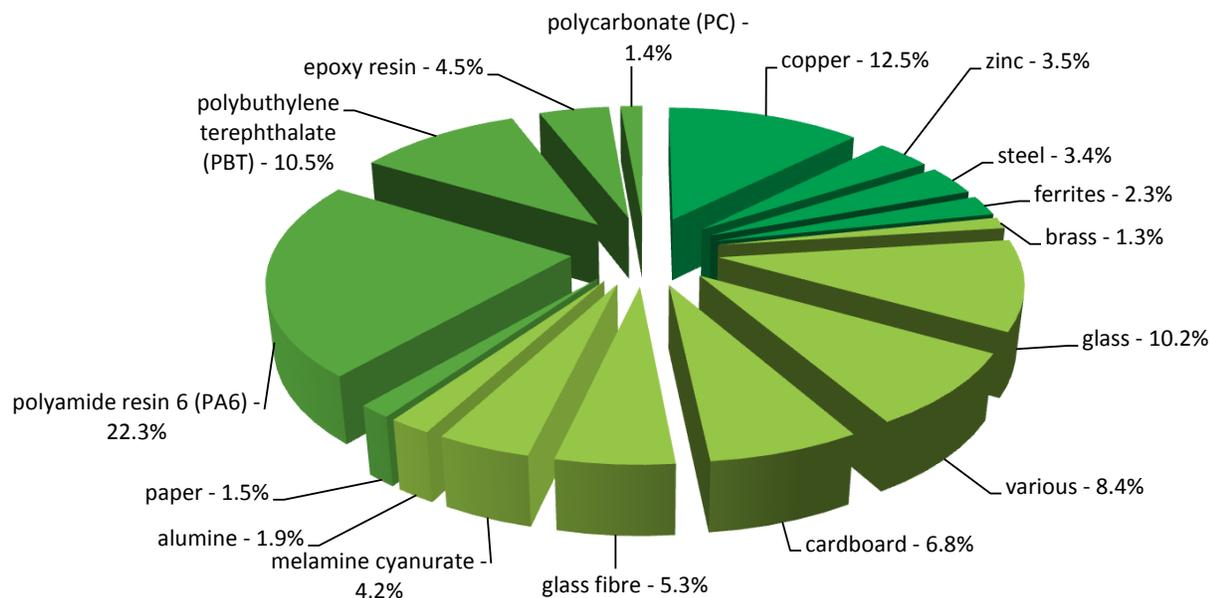
General information

Representative product	Zelio control & analog relays - RMCA61BD
Description of the product	The product is a converter which change voltage to current or verse versa and allow conversion of electrical power signals, both AC and DC. The main purpose of the product is to allows the adaptation of electrical values for control and monitoring in the industrial application.
Description of the range	This range consists of RMC, RMPT and RMT series designed for converting electrical signal to standard electrical signals which allows the adaptation of electrical values for control and monitoring application. 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 convert signals emitted by sensors or electrical measurement devices, into standard electrical signals that are compatible with automation platforms and controllers (thermal processes, speed, etc.) during 10 years with a 100% use rate, in compliance with French standard.



Constituent materials

Reference product mass	162,3 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 Zelio control & analog relays presents the following relevant environmental aspects	
Design	Product is not ecodesigned
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 13,2 g, consisting of cardboard (83.1%), paper (16.9%) Product distribution optimised by setting up local distribution centres
Installation	Ref RMCA61BD 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 This product contains electronic cards (48.5g) 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: 15% 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).

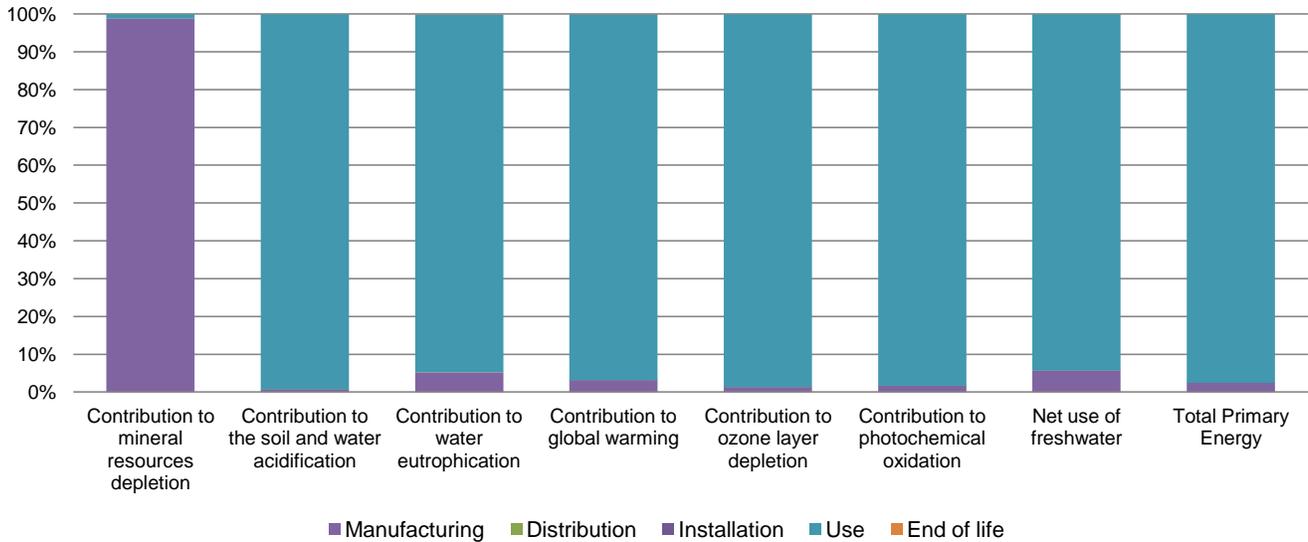
Environmental impacts

Reference life time	10 years			
Product category	Passive products - continuous operation			
Installation elements	No special components needed			
Use scenario	Product dissipation is 2,2 W full load, loading rate is 30% and service uptime percentage is 100% The product is in active mode 100% of the time with a power use of 2.2W, for 10 years			
Geographical representativeness	World			
Technological representativeness	The product is a converter which change voltage to current or verse versa and allow conversion of electrical power signals, both AC and DC. The main purpose of the product is to allows the adaptation of electrical values for control and monitoring in the industrial application.			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: Indonesia (Schneider Electric Batam)	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators		Zelio control & analog relays - RMCA61BD					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	4,23E-04	4,18E-04	0*	0*	5,18E-06	0*
Contribution to the soil and water acidification	kg SO ₂ eq	8,67E-01	6,23E-03	9,56E-05	0*	8,60E-01	0*

Contribution to water eutrophication	kg PO ₄ ³⁻ eq	3,41E-02	1,77E-03	2,20E-05	0*	3,23E-02	2,83E-05
Contribution to global warming	kg CO ₂ eq	1,18E+02	3,75E+00	2,09E-02	0*	1,14E+02	8,31E-02
Contribution to ozone layer depletion	kg CFC11 eq	2,80E-05	3,67E-07	0*	0*	2,76E-05	2,98E-09
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	4,14E-02	6,92E-04	6,82E-06	0*	4,07E-02	5,59E-06

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	3,15E-01	1,79E-02	0*	0*	2,97E-01	4,50E-05
Total Primary Energy	MJ	2,36E+03	5,80E+01	2,96E-01	0*	2,31E+03	3,12E-01



Optional indicators		Zelio control & analog relays - RMCA61BD					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1,22E+03	4,73E+01	2,94E-01	0*	1,17E+03	2,61E-01
Contribution to air pollution	m ³	5,33E+03	4,45E+02	8,91E-01	0*	4,88E+03	2,04E+00
Contribution to water pollution	m ³	5,12E+03	3,38E+02	3,44E+00	0*	4,77E+03	3,88E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	8,40E-03	8,40E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1,66E+02	1,28E+00	0*	0*	1,65E+02	0*
Total use of non-renewable primary energy resources	MJ	2,20E+03	5,68E+01	2,96E-01	0*	2,14E+03	3,12E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1,66E+02	1,06E+00	0*	0*	1,65E+02	0*
Use of renewable primary energy resources used as raw material	MJ	2,26E-01	2,26E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2,20E+03	5,43E+01	2,96E-01	0*	2,14E+03	3,12E-01
Use of non renewable primary energy resources used as raw material	MJ	2,47E+00	2,47E+00	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	3,27E+00	2,92E+00	0*	2,64E-02	0*	3,15E-01
Non hazardous waste disposed	kg	4,26E+02	5,43E-01	0*	0*	4,26E+02	0*
Radioactive waste disposed	kg	3,47E-01	2,99E-04	0*	0*	3,47E-01	0*

Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	2,46E-02	2,15E-03	0*	0*	0*	2,24E-02
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2,19E-02	4,59E-04	0*	0*	0*	2,15E-02
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 2015-04.

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.

Registration N°	ENVPEP1607005_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	09/2016	Supplemented by	PSR-0005-ed1-2012 12 11
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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<http://www2.schneider-electric.com/sites/corporate/en/support/operations/local-operations/local-operations.page>

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