

Product Environmental Profile

Zelio control & analog relays





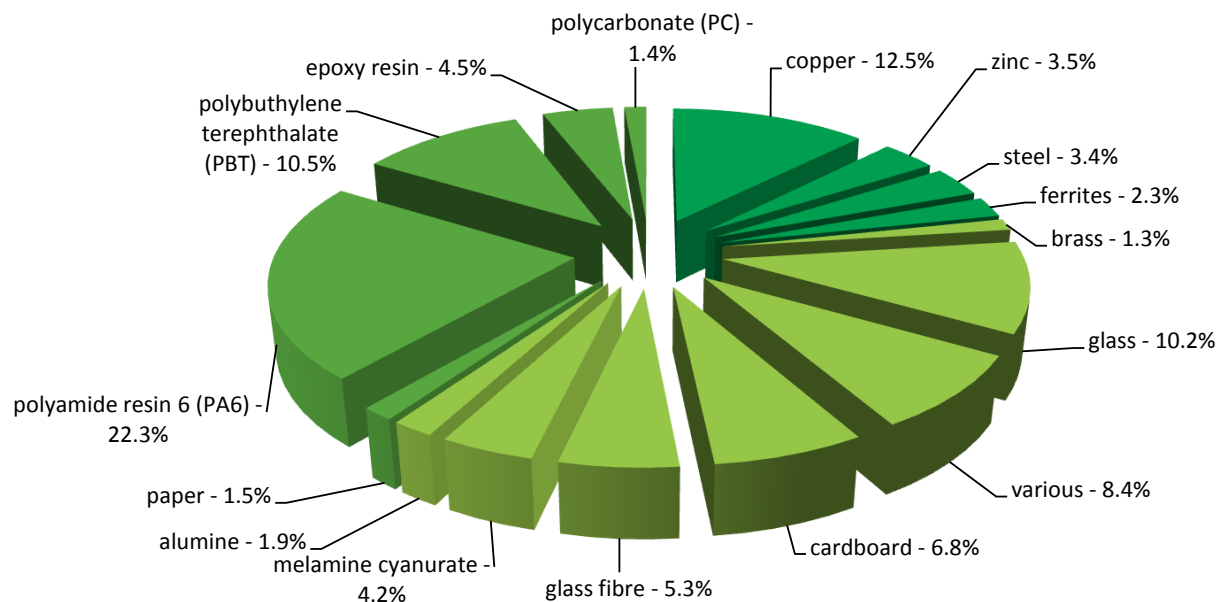
General information

| | |
|-----------------------------------|---|
| 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 |
|-------------------------------|--|



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

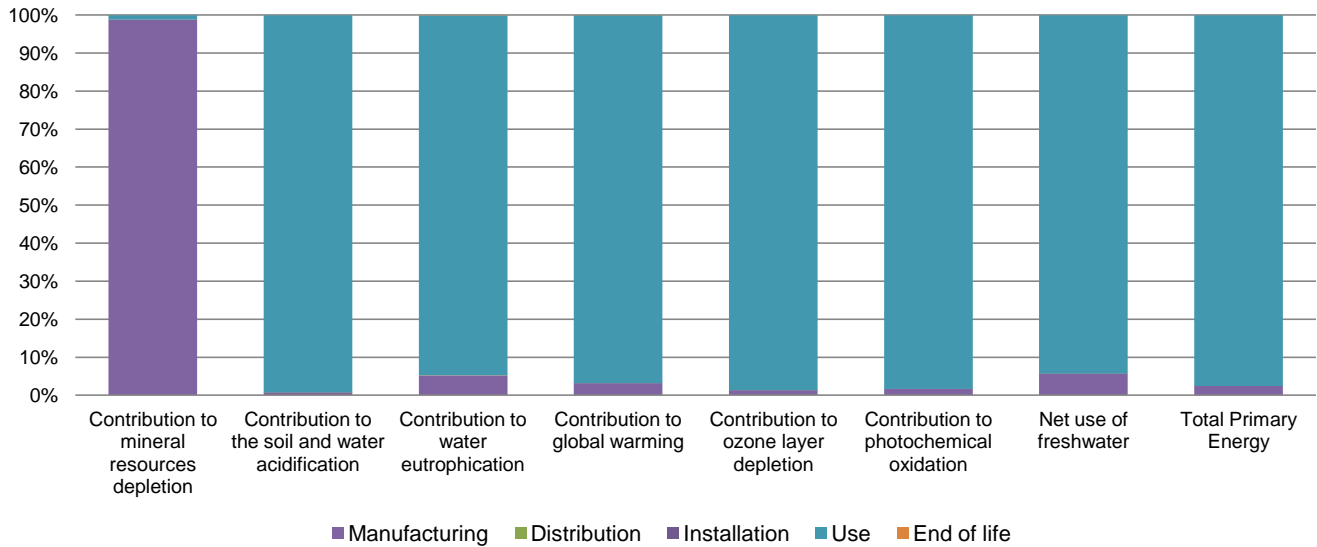
| The Zelio control & analog relays presents the following relevant environmental aspects | |
|---|--|
| Design | Product is not ecodesigned |
| Manufacturing | Manufactured at a Schneider Electric production site ISO14001 certified |
| Distribution | Weight and volume of the packaging optimized, based 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 » | | | |

Schneider Electric Industries SAS

Country Customer Care Center

<http://www2.schneider-electric.com/sites/corporate/en/support/operations/local-operations/local-operations.page>

35, rue Joseph Monier

CS 30323

F- 92506 Rueil Malmaison Cedex

RCS Nanterre 954 503 439

Capital social 896 313 776 €

www.schneider-electric.com

Published by Schneider Electric

ENVPEP1607005_V1

© 2016 - Schneider Electric – All rights reserved

09/2016