Product Environmental Profile

Zelio Time - Timing Relay

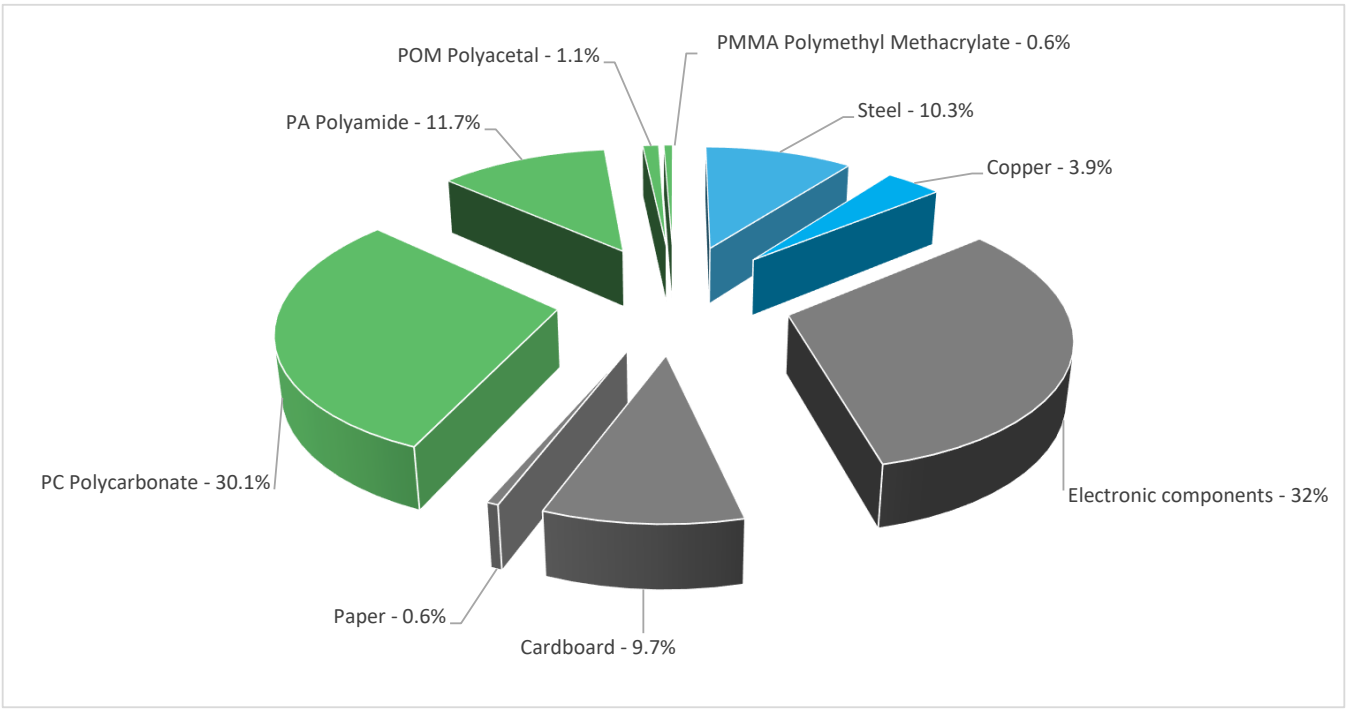
Schneider Electric

General information

Representative product	Timing Relay - RE22R2MMW
Description of the product	The product is a control relay with a time delay built in. The main purpose of the product is to time events in industrial automation system by closing or opening contacts before, during or after a set timing period.
Description of the range	The Zelio Time RE22R relays are provided with 2CO contact, timing range 0.1s to 100h, supply voltage 12V to 240Vacdc and rated current 8A. This range consists of RE22R, RE88865 and RENF22R series of timing relays designed for mounting on DIN rails. Input voltage range from 24 to 440 volts, output is either single or multi-timing from 50 ms to 999 hrs. Type of output is 1 or 2CO contact and rated current range 0.7 to 8A. 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 an event based on time. The contacts switch ON or OFF before or after some period of time to control automation industrial system. during 10 years with a 100% use rate, in compliance with French standard.

Constituent materials

Reference product mass	105.2 g	including the product, its packaging and additional elements and accessories



	Plastics	43.5%
	Metals	14.2%
	Others	42.3%

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

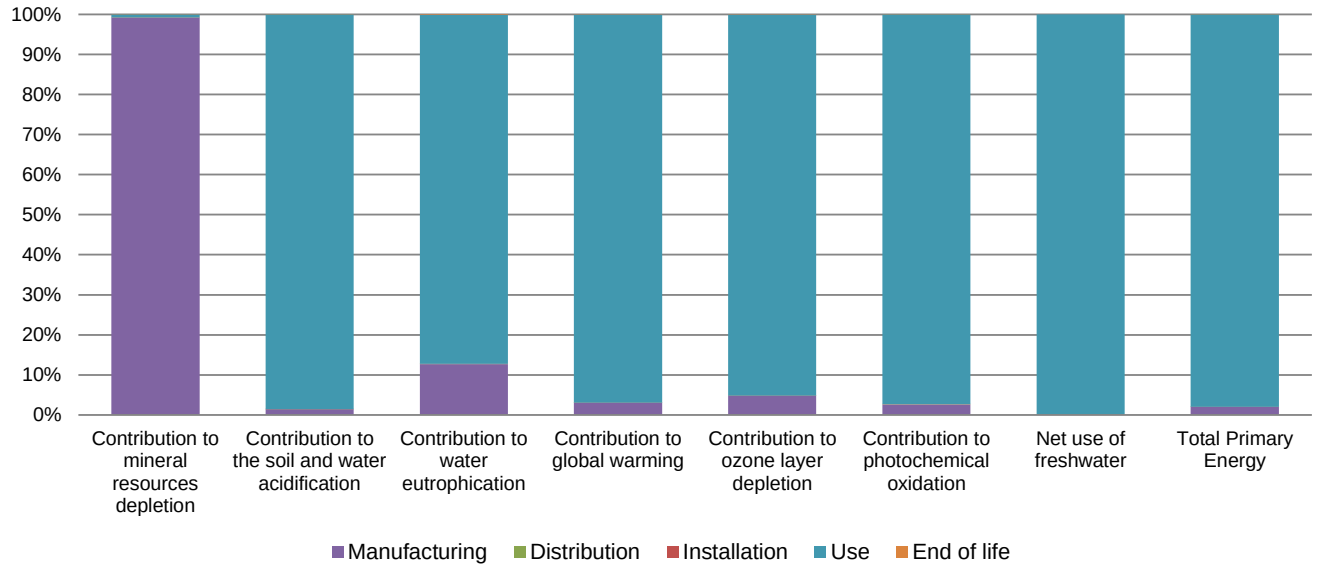
The Timing Relay presents the following relevent environmental aspects	
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 10.9 g, consisting of cardboard (94.4%), paper (5.6%) Product distribution optimised by setting up local distribution centres
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 card (33.88g) 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: **18%** 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	Other equipments - Active product
Installation elements	No special components needed
Use scenario	The product is in active mode 100% of the time with a power use of 1.5W, for 10 years
Geographical representativeness	Europe
Technological representativeness	The product is a control relay with a time delay built in. The main purpose of the product is to time events in industrial automation system by closing or opening contacts before, during or after a set timing period.

Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: Indonesia	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	**Timing Relay - RE22R2MMW**						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	7.60E-04	7.55E-04	0*	0*	5.59E-06	0*
Contribution to the soil and water acidification	kg SO_2 eq	2.73E-01	3.87E-03	6.20E-05	0*	2.69E-01	4.40E-05
Contribution to water eutrophication	kg PO_4^{3-} eq	1.86E-02	2.36E-03	1.43E-05	0*	1.62E-02	2.08E-05
Contribution to global warming	kg CO_2 eq	6.65E+01	2.01E+00	1.36E-02	0*	6.44E+01	6.34E-02
Contribution to ozone layer depletion	kg CFC11 eq	4.41E-06	2.14E-07	0*	0*	4.19E-06	2.19E-09
Contribution to photochemical oxidation	kg C_2H_4 eq	1.52E-02	4.02E-04	4.42E-06	0*	1.48E-02	3.75E-06
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	2.33E+02	0*	0*	0*	2.33E+02	0*
Total Primary Energy	MJ	1.31E+03	2.64E+01	1.92E-01	0*	1.29E+03	1.90E-01



Optional indicators	Timing Relay - RE22R2MMW						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	7.56E+02	2.51E+01	1.91E-01	0*	7.31E+02	1.77E-01
Contribution to air pollution	m³	3.00E+03	2.24E+02	5.77E-01	0*	2.77E+03	1.39E+00
Contribution to water pollution	m³	2.94E+03	2.82E+02	2.23E+00	0*	2.66E+03	2.82E+00
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.41E-03	1.41E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.64E+02	8.09E-01	0*	0*	1.64E+02	0*
Total use of non-renewable primary energy resources	MJ	1.15E+03	2.56E+01	1.92E-01	0*	1.12E+03	1.90E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.64E+02	5.97E-01	0*	0*	1.64E+02	0*
Use of renewable primary energy resources used as raw material	MJ	2.12E-01	2.12E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.15E+03	2.38E+01	1.92E-01	0*	1.12E+03	1.90E-01
Use of non renewable primary energy resources used as raw material	MJ	1.76E+00	1.76E+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	2.75E+00	2.50E+00	0*	0*	3.36E-02	2.08E-01
Non hazardous waste disposed	kg	2.41E+02	6.08E-01	0*	0*	2.40E+02	0*
Radioactive waste disposed	kg	1.61E-01	3.64E-04	0*	0*	1.60E-01	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	3.06E-02	3.11E-03	0*	1.08E-02	0*	1.67E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1.69E-02	0*	0*	0*	0*	1.69E-02
Exported Energy	MJ	3.57E-05	4.53E-06	0*	3.12E-05	0*	0*

** represents less than 0.01% of the total life cycle of the reference flow*

Life cycle assessment performed with EIME version EIME 5.7.0.2, database version 2018-03 in compliance with ISO14044.

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 number	ENVPEP1401008_V2	*Drafting rules*	PCR-ed3-EN-2015 04 02
Date of issue	04/2018	*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

Internal X External

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »

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