# **Product Environmental Profile**

### Zelio Logic - Smart Relays







ENVPEP060406EN\_V3



#### General information

Representative product	Zelio Logic - Smart Relays - SR3B261BD					
Description of the product	Modular smart relay Zelio Logic - 26 I/O - 24 VDC clock - display					
Description of the range	This range consists of: compact smart relays with 10, 12 or 20 Inputs / Outputs, with or without a display unit; modular smart relays with 10 or 26 Inputs / Outputs and expansion modules with 4, 6, 10 or 14 Inputs / Outputs, communication expansion modules (Modbus, Ethernet, Modem interface, etc.).					
	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 provide automated control of simple systems from 10 to 40 I/O for 10 years 100% of the time.					

#### Constituent materials



#### 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 <a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</a>

## Additional environmental information

	The Zelio Logic - Smart Relays 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					
Distribution	Packaging weight is 46.4 g, consisting of cardboard (87%), paper (12%) and polyethylene film (1%)					
Installation	The product does not require any specific installation.					
Use	The product does not require special maintenance operations.					
	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials.					
	This product contains one lithium battery (3.46 g) and one electronic card (188 g) that should be separated from the stream of waste so as to optimize end-of-life treatment.					
End of life	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:11%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).					

## D Environmental impacts

Reference life time	10 years						
Installation elements	The transport of the packaging for disposal and disposal occurs during the installation phase						
Use scenario	The product is in active mode 100% of the time with a power use of 6W.						
Geographical representativeness	Europe						
Technological representativeness	Modular smart relay Zelio Logic - 26 I/O - 24 VDC clock - display						
	Manufacturing	Installation	Use	End of life			
Energy model used	Energy model used: France	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 Zelio Logic - Smart Relays - SR3B261BD							
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.54E-03	2.52E-03	0*	0*	2.24E-05	0*
Contribution to the soil and water acidification	kg $SO_2$ eq	1.13E+00	5.15E-02	2.18E-04	0*	1.07E+00	1.83E-04
Contribution to water eutrophication	kg PO4 <sup>3-</sup> eq	7.82E-02	1.32E-02	5.02E-05	0*	6.49E-02	9.62E-05
Contribution to global warming	kg $\rm CO_2$ eq	3.02E+02	4.38E+01	4.77E-02	0*	2.58E+02	3.10E-01
Contribution to ozone layer depletion	kg CFC11 eq	1.83E-05	1.55E-06	0*	0*	1.68E-05	1.09E-08
Contribution to photochemical oxidation	$kg C_2H_4 eq$	6.42E-02	5.14E-03	1.56E-05	0*	5.90E-02	1.47E-05
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	9.34E+02	4.52E-01	0*	0*	9.34E+02	0*
Total Primary Energy	MJ	5.82E+03	6.72E+02	6.75E-01	0*	5.14E+03	7.70E-01

EU-27



Manufacturing Distribution Installation Use End of life

Optional indicators		Zelio Logic - Smart Relays - SR3B261BD					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	3.59E+03	6.67E+02	6.71E-01	0*	2.92E+03	7.37E-01
Contribution to air pollution	M <sup>3</sup>	1.55E+04	4.39E+03	2.03E+00	0*	1.11E+04	5.65E+00
Contribution to water pollution	m³	1.36E+04	2.98E+03	7.85E+00	0*	1.06E+04	1.28E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	4.52E-02	4.52E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	6.58E+02	3.76E+00	0*	0*	6.54E+02	0*
Total use of non-renewable primary energy resources	MJ	5.16E+03	6.68E+02	6.74E-01	0*	4.49E+03	7.69E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6.58E+02	3.76E+00	0*	0*	6.54E+02	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	5.15E+03	6.62E+02	6.74E-01	0*	4.49E+03	7.69E-01
Use of non renewable primary energy resources used as raw material	MJ	6.43E+00	6.43E+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	5.56E+00	4.62E+00	0*	0*	1.34E-01	8.07E-01
Non hazardous waste disposed	kg	9.68E+02	8.20E+00	0*	0*	9.60E+02	0*
Radioactive waste disposed	kg	6.43E-01	2.15E-03	0*	0*	6.41E-01	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	8.82E-02	6.69E-03	0*	4.62E-02	0*	3.54E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	8.65E-02	7.25E-04	0*	0*	0*	8.58E-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 v5.7.0.2, database version 2016-11 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 of other products in this family may be proportionally extrapolated by the mass of the product for mineral resources depletion. For water eutrophication and global warming, the impact may be proportionally extrapolated at 20% by the mass of the product and 80% by energy consumption values. Other impact categories may be proportionally *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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		Validity period	5 years			
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010						
Internal	External X					
The PCR review was condu	ucted by a panel of experts chaired by Ph	nilippe Osset (SOLINNEN)				
PEP are compliant with XP	C08-100-1 :2014					
The elements of the present PEP cannot be compared with elements from another program.						
Document in compliance wi declarations »	ith ISO 14025 : 2010 « Environmental lab	pels and declarations. Type III env	ironmental			

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