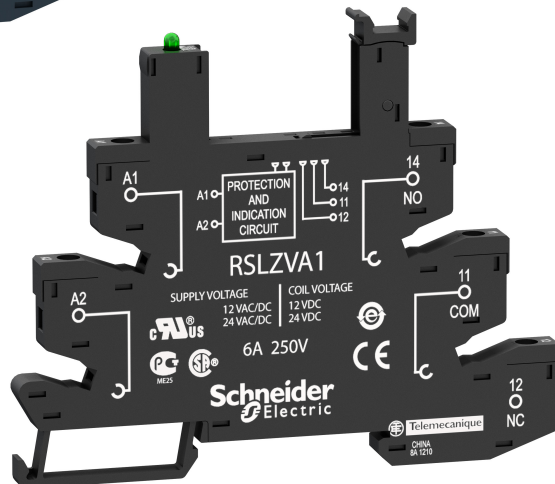
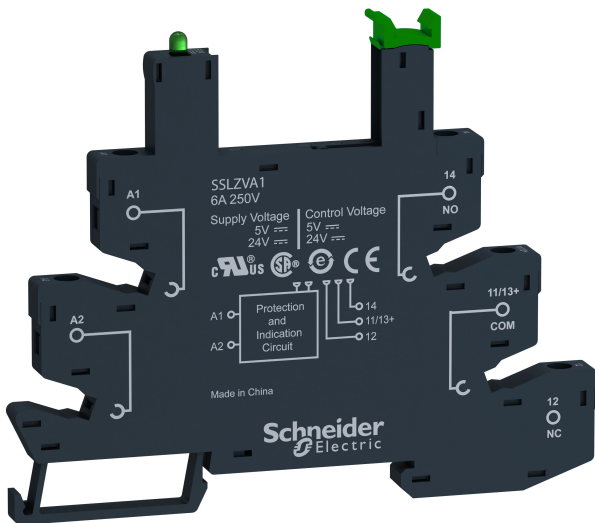


# Product Environmental Profile

**ZELIO Relays.**

**SSLZ... Sockets for SSL slim solid state relays**

**RSLZ... Sockets for RSL slim interface relays**





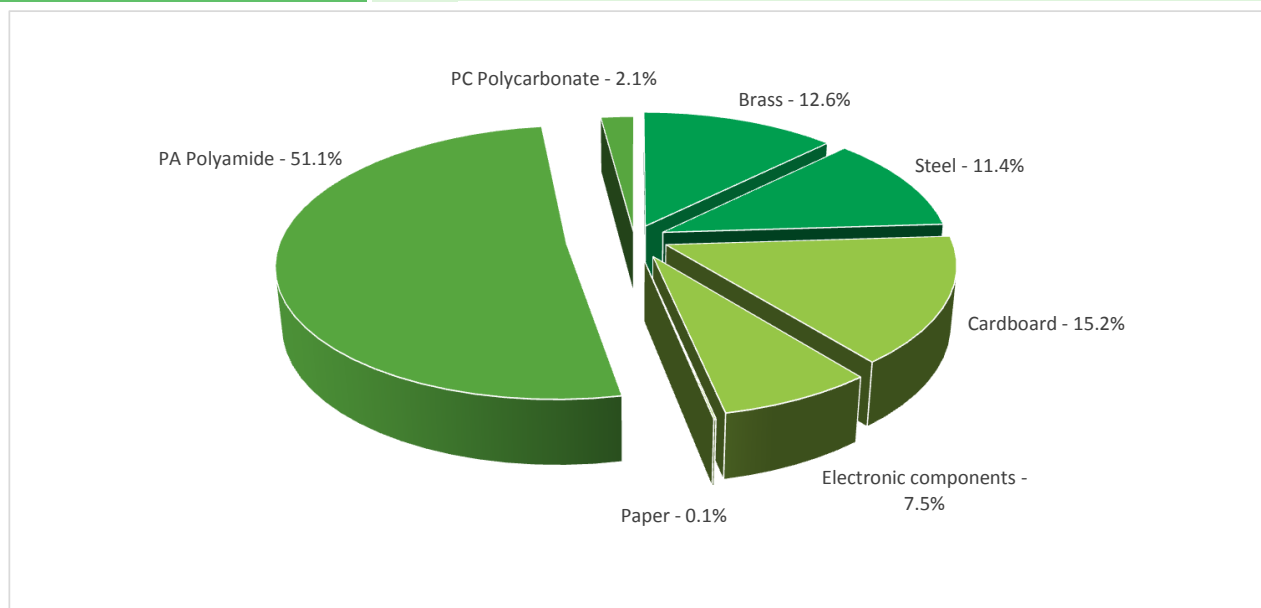
## General information

<b>Representative product</b>	Socket-slim plug-in relays-SSL1D and SSL1A series -SSLZVA4
<b>Description of the product</b>	The product is a connection socket which provide contact terminals and screw connector connection for SSL solid state relay which enables current to flow through it on one circuit and can switch a current on and off on a second circuit.
<b>Description of the range</b>	The range consists of SSL1D and SSL1A series designed for single-phase with DIN rail mounting socket and direct mounting on PCB; and provides with DC switching, Zero Voltage switching for resistive load and Random switching for inductive load applications. The range consists of 1 NO contact with input voltage range from 3 Vdc to 72 Vdc; output voltage range from 1 Vdc to 48Vdc and 24 Vac to 280 Vac.  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.
<b>Functional unit</b>	To provide a socket with built-in reverse polarity protection circuit and LED indicator for SSL solid state relay with control voltage 230 Vac during 20 years and a 30% use rate, in accordance with the French standards.



## Constituent materials

**Reference product mass** 28.69 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

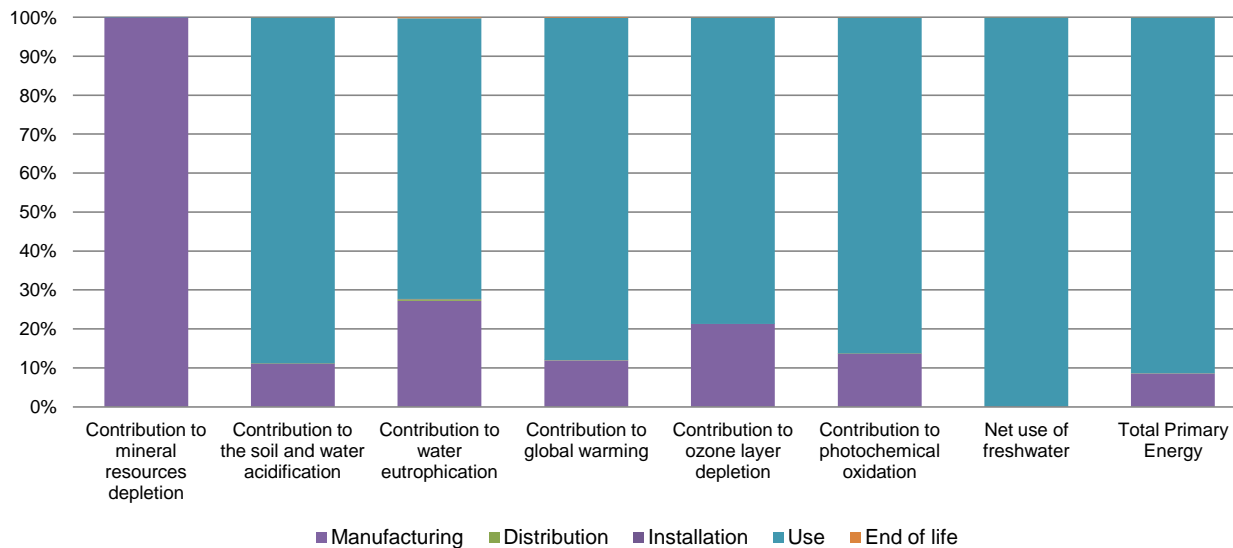
The Socket-slim plug-in relays-SSL1D and SSL1A series presents the following relevant environmental aspects	
<b>Design</b>	Product is not ecodesigned
<b>Manufacturing</b>	Manufactured at a production site complying with the regulations
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 4.4 g, consisting of cardboard (99.4%), paper (0.6%) Product distribution optimised by setting up local distribution centres
<b>Installation</b>	Ref SSLZVA4 does not require any installation operations
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	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: <b>20%</b> 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

<b>Reference life time</b>	20 years			
<b>Product category</b>	Passive products - non-continuous operation			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	Product dissipation is 0.1 W full load, loading rate is 30% and service uptime percentage is 30% The product is in active mode 30% of the time with a power use of 0.1W and 70% of the time in OFF mode, for 20 years			
<b>Geographical representativeness</b>	World			
<b>Technological representativeness</b>	The product is a connection socket which provide contact terminals and screw connector connection for SSL solid state relay which enables current to flow through it on one circuit and can switch a current on and off on a second circuit.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Energy model used: China	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	Socket-slim plug-in relays-SSL1D and SSL1A series - SSLZVA4						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	4,24E-04	4,24E-04	0*	0*	2,24E-07	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	1,21E-02	1,33E-03	1,69E-05	1,32E-06	1,07E-02	7,52E-06
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	9,00E-04	2,45E-04	3,89E-06	3,11E-07	6,49E-04	2,24E-06
Contribution to global warming	kg CO <sub>2</sub> eq	2,93E+00	3,49E-01	3,70E-03	4,20E-04	2,58E+00	4,61E-03
Contribution to ozone layer depletion	kg CFC11 eq	2,13E-07	4,54E-08	0*	3,45E-11	1,68E-07	1,81E-10
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	6,85E-04	9,27E-05	1,21E-06	1,38E-07	5,90E-04	7,69E-07
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m <sup>3</sup>	9,34E+00	1,62E-03	0*	0*	9,34E+00	0*

Total Primary Energy	MJ	5,63E+01	4,79E+00	5,23E-02	6,50E-03	5,14E+01	3,59E-02
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Optional indicators		Socket-slim plug-in relays-SSL1D and SSL1A series - SSLZVA4					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	3,33E+01	3,93E+00	5,20E-02	5,93E-03	2,92E+01	3,28E-02
Contribution to air pollution	m³	1,56E+02	4,52E+01	1,57E-01	4,64E-02	1,11E+02	2,63E-01
Contribution to water pollution	m³	1,29E+02	2,20E+01	6,09E-01	4,96E-02	1,06E+02	3,32E-01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,28E-03	1,28E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	6,72E+00	1,80E-01	0*	0*	6,54E+00	0*
Total use of non-renewable primary energy resources	MJ	4,96E+01	4,61E+00	5,23E-02	6,50E-03	4,49E+01	3,58E-02
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6,63E+00	9,01E-02	0*	0*	6,54E+00	0*
Use of renewable primary energy resources used as raw material	MJ	8,99E-02	8,99E-02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4,91E+01	4,08E+00	5,23E-02	6,50E-03	4,49E+01	3,58E-02
Use of non renewable primary energy resources used as raw material	MJ	5,32E-01	5,32E-01	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	5,45E-01	4,91E-01	0*	8,79E-03	1,34E-03	4,38E-02
Non hazardous waste disposed	kg	9,71E+00	1,07E-01	0*	0*	9,60E+00	0*
Radioactive waste disposed	kg	6,76E-03	3,47E-04	0*	0*	6,41E-03	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	5,49E-03	6,98E-04	0*	0*	0*	4,80E-03
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	8,72E-04	1,11E-04	0*	0*	0*	7,62E-04

Exported Energy	MJ	0,00E+00	0*	0*	0*	0*	0*
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\* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.6, database version 2017-03.

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.

Water Eutrophication (EP) and Ozone layer depletion (ODP) are 20% proportional to the weight of the product and 80% proportional to the energy consumption of the product. Abiotic depletion or Mineral Resources Depletion (ADPe) is proportional to the weight of the product. For other impact categories are proportional to the energy consumption 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°	ENVPEP1307071_V2	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	05/2017	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
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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