

# Product Environmental Profile

## Easy9 RCBO 1PN C 16A 30mA AC SLIM





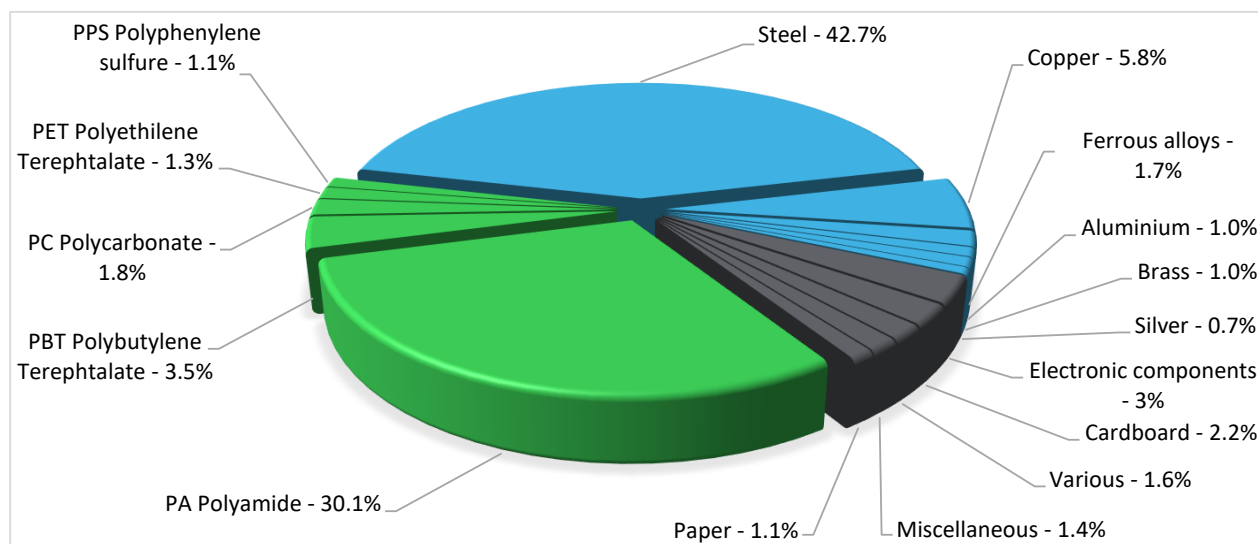
## General information

Representative product	Easy9 RCBO 1PN C 16A 30mA AC SLIM - EZ9D33616
Description of the product	The main function of this product is to provide protection of people against electric shocks, terminal overload, and short circuit.
Description of the range	<p>This range consists of RCBO of 6 A to 32 A, 1 PN, C curve. The representative product used for the analysis is Easy9 Slim 1PN C 16A 30mA AC RCBO (commercial reference: EZ9D33616). The linked references are all 1P, mass of these products is same, the weight of these product is 140.375 g including packaging.</p> <p>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.</p>
Functional unit	<p>Protect during 20 years the installation against overloads and short-circuits and people and premises at risk of fire or explosion against insulation defects in circuit with 230V and 16A. This protection is ensured in accordance with the following parameters:</p> <ul style="list-style-type: none"> <li>- Number of poles =1P</li> <li>- Rated breaking capacity =4500A</li> <li>- Tripping curve= C</li> <li>- Sensitivity =30mA</li> <li>- Type of differential protection =AC</li> <li>- Followed standard=IEC 61009-1</li> </ul>



## Constituent materials

Reference product mass 140.475 g including the product, its packaging and additional elements and accessories



Plastics	37.8%
Metals	52.9%
Others	9.3%



## Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) 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), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate- BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) as mentioned in the 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 Easy9 RCBO 1PN C 16A 30mA AC SLIM presents the following relevant environmental aspects

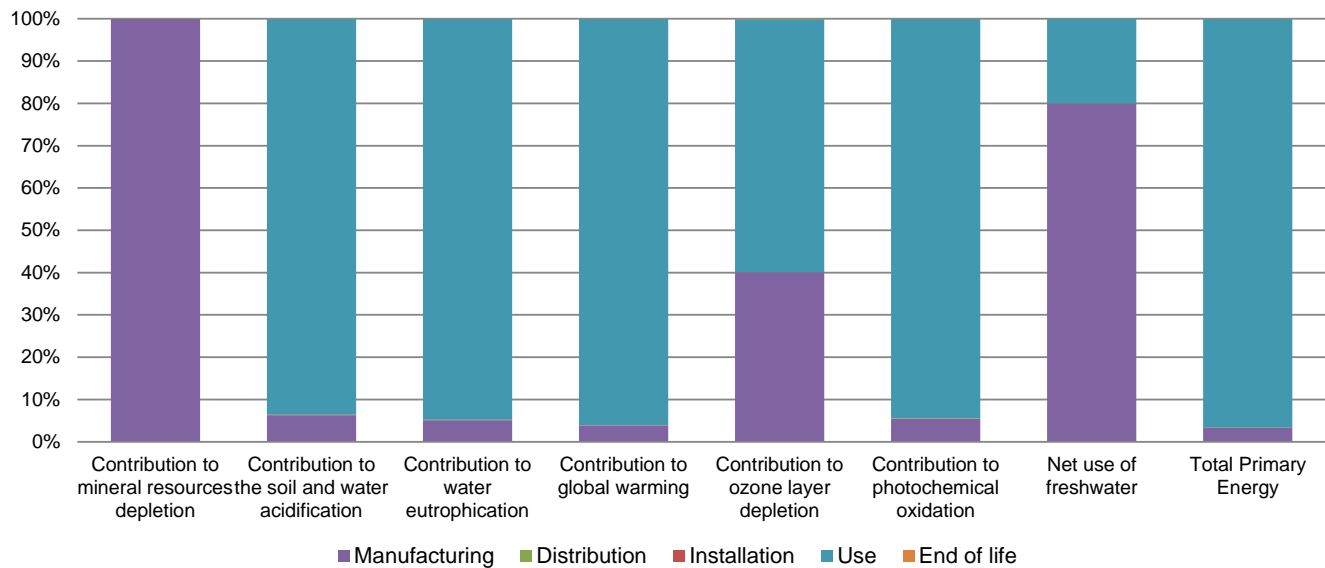
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 4.5 g, consisting of cardboard(67%) paper(33%)
<b>Installation</b>	Ref EZ9D33616 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>51%</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>	Differential circuit breaker			
<b>Installation elements</b>	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).			
<b>Use scenario</b>	Load rate: 50% of In Use time rate: 30% of RLT			
<b>Geographical representativeness</b>	China			
<b>Technological representativeness</b>	The main function of this product is to provide protection of people against electric shocks, terminal overload, and short 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 mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN

Compulsory indicators		Easy9 RCBO 1PN C 16A 30mA AC SLIM - EZ9D33616					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.20E-03	1.20E-03	0*	0*	2.25E-07	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	5.95E-02	3.77E-03	8.27E-05	0*	5.56E-02	4.06E-05
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	1.55E-02	7.98E-04	1.90E-05	0*	1.47E-02	1.12E-05
Contribution to global warming	kg CO <sub>2</sub> eq	5.34E+01	2.07E+00	1.81E-02	0*	5.13E+01	2.11E-02
Contribution to ozone layer depletion	kg CFC11 eq	6.84E-07	2.75E-07	0*	0*	4.08E-07	9.18E-10
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	6.97E-03	3.83E-04	5.90E-06	0*	6.57E-03	4.23E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m <sup>3</sup>	2.86E-01	2.29E-01	0*	0*	5.73E-02	0*
Total Primary Energy	MJ	8.69E+02	2.88E+01	2.56E-01	0*	8.40E+02	1.97E-01



Optional indicators		Easy9 RCBO 1PN C 16A 30mA AC SLIM - EZ9D33616					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	7.98E+02	2.19E+01	2.54E-01	0*	7.76E+02	1.59E-01
Contribution to air pollution	m³	5.63E+03	3.06E+02	7.70E-01	0*	5.32E+03	1.43E+00
Contribution to water pollution	m³	2.90E+03	3.44E+02	2.98E+00	0*	2.55E+03	1.71E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	4.38E-03	4.38E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	4.40E+01	9.57E-01	0*	0*	4.31E+01	0*
Total use of non-renewable primary energy resources	MJ	8.25E+02	2.79E+01	2.56E-01	0*	7.97E+02	1.97E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	4.40E+01	9.23E-01	0*	0*	4.31E+01	0*
Use of renewable primary energy resources used as raw material	MJ	3.39E-02	3.39E-02	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	8.24E+02	2.64E+01	2.56E-01	0*	7.97E+02	1.97E-01
Use of non renewable primary energy resources used as raw material	MJ	1.52E+00	1.52E+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	1.38E+01	1.20E+01	0*	0*	1.65E+00	2.01E-01
Non hazardous waste disposed	kg	1.02E+01	9.10E-01	0*	0*	9.31E+00	0*
Radioactive waste disposed	kg	7.55E-04	4.47E-04	4.58E-07	0*	3.07E-04	9.55E-07
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	8.63E-02	1.35E-02	0*	4.45E-03	0*	6.83E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.77E-03	0*	0*	0*	0*	2.77E-03
Exported Energy	MJ	1.41E-05	1.33E-06	0*	1.28E-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 v5.9.4, database version 2022-01 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.

For our products, the first proposition for significant parameter is energy consumption values.

Depending on the impact analysis, the environmental indicators (without RMD) of other products in this family may be proportional extrapolated by energy consumption values. For RMD, 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	ENVPEP2209021_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	04/2023	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			
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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