# **Product Environmental Profile**

#### **MINIATURE CIRCUIT BREAKER 120V 15A**







#### **General information**

Representative product

MINIATURE CIRCUIT BREAKER 120V 15A - QO115PCAFI

**Description of the product** 

The main purpose of the QO™ Miniature Circuit Breaker product range is to ensure the protection of low voltage electrical installations.

Functional unit

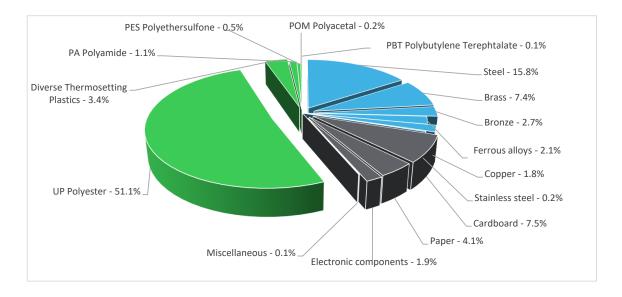
Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage 120 VAC and rated current 15A In. This protection is ensured in accordance with the following parameters:

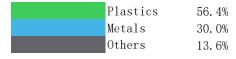
- Number of poles 1 Pole;
- Rated breaking capacity 10 kA;

### Constituent materials

Reference product mass

233.78 g including the product, its packaging and additional elements and accessories.





#### El

#### **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 <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

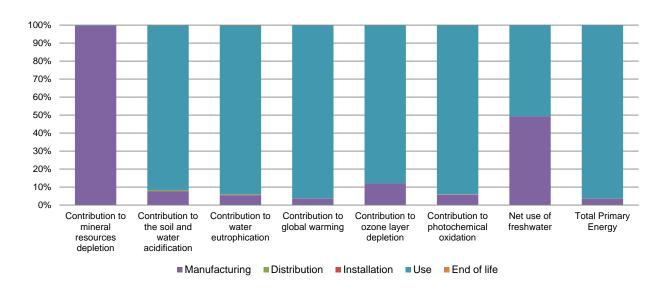
The MINIATURE CIRCUIT BREAKER 120V 15A presents the following relevent environmental aspects						
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified					
	Weight and volume of the packaging optimized, based on the European Union's packaging directive.					
Distribution	Packaging weight is 29 g, consisting of Cardboard(63%),Paper(32%),PE film (5%)					
	Product distribution optimised by setting up local distribution centres.					
Installation	Ref QO115PCAFI does not require any installation operations.					
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 electronic card (7.06g) 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					
	Based on "ECO'DEEE recyclability and recoverability calculation method"  Recyclability potential: 31% (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).					



## **P** Environmental impacts

Reference life time	20 years					
Product category	Circuit-breakers					
Installation elements	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).					
Use scenario	Load rate: 50% of In Use time rate: 30% of RLT					
Geographical representativeness	United States of America					
Technological representativeness	The technologies represented in this assessment regards to the main purpoes of QO™ Miniature Circuit Breaker : ensure the protection of low voltage electrical installations.					
	Manufacturing	Installation	Use	End of life		
Energy model used	Energy model used: Mexico	Electricity mix AC; Europe consistent; consumption mix, at power plant; US	Electricity mix AC; Europe consistent; consumption mix, at power plant; US	Electricity mix AC; Europe consistent; consumption mix, at power plant; US		

Compulsory indicators	MINIATURE CIRCUIT BREAKER 120V 15A - QO115PCAFI						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.81E-04	1.81E-04	0*	0*	4.95E-07	0*
Contribution to the soil and water acidification	$kg SO_2 eq$	4.23E-02	3.28E-03	2.68E-04	6.74E-06	3.87E-02	6.76E-05
Contribution to water eutrophication	kg PO <sub>4</sub> 3- eq	1.09E-02	6.01E-04	6.17E-05	1.97E-06	1.02E-02	2.15E-05
Contribution to global warming	kg CO <sub>2</sub> eq	4.07E+01	1.48E+00	5.95E-02	0*	3.91E+01	4.82E-02
Contribution to ozone layer depletion	kg CFC11 eq	1.79E-06	2.16E-07	0*	0*	1.58E-06	1.73E-09
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	7.41E-03	4.28E-04	1.91E-05	0*	6.95E-03	6.81E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.35E-01	6.66E-02	0*	0*	6.83E-02	3.46E-05
Total Primary Energy	MJ	7.10E+02	2.47E+01	8.42E-01	0*	6.84E+02	3.19E-01



Optional indicators		MINIATURE	CIRCUIT BREAK	ER 120V 15A	- QO115PCAF	1	
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	5.21E+02	1.45E+01	8.37E-01	0*	5.05E+02	2.57E-01
Contribution to air pollution	m³	4.36E+03	3.35E+02	2.46E+00	0*	4.02E+03	2.34E+00
Contribution to water pollution	m³	1.96E+03	1.26E+02	9.79E+00	2.43E-01	1.82E+03	3.14E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	8.97E-03	8.97E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.03E+00	1.69E+00	1.12E-03	0*	1.34E+00	3.48E-04
Total use of non-renewable primary energy resources	MJ	7.07E+02	2.30E+01	8.41E-01	0*	6.83E+02	3.19E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.51E+00	1.17E+00	1.12E-03	0*	1.34E+00	3.48E-04
Use of renewable primary energy resources used as raw material	MJ	5.25E-01	5.25E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.04E+02	1.95E+01	8.41E-01	0*	6.83E+02	3.19E-01
Use of non renewable primary energy resources used as raw material	MJ	3.55E+00	3.55E+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	8.42E+00	4.92E+00	0*	0*	3.13E+00	3.63E-01
Non hazardous waste disposed	kg	6.93E+00	1.39E+00	2.12E-03	1.13E-03	5.53E+00	9.68E-04
Radioactive waste disposed	kg	2.59E-03	6.18E-04	1.51E-06	0*	1.97E-03	1.60E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	9.35E-02	2.25E-05	0*	2.81E-02	0*	6.54E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	9.15E-03	0*	0*	0*	0*	9.15E-03
Exported Energy	MJ	7.99E-05	8.27E-09	0*	7.98E-05	0*	0*

<sup>\*</sup> represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.9.1, 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).

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	ENVPEP1406033_V2	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	12/2021	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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Published by Schneider Electric

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12/2021