Product Environmental Profile

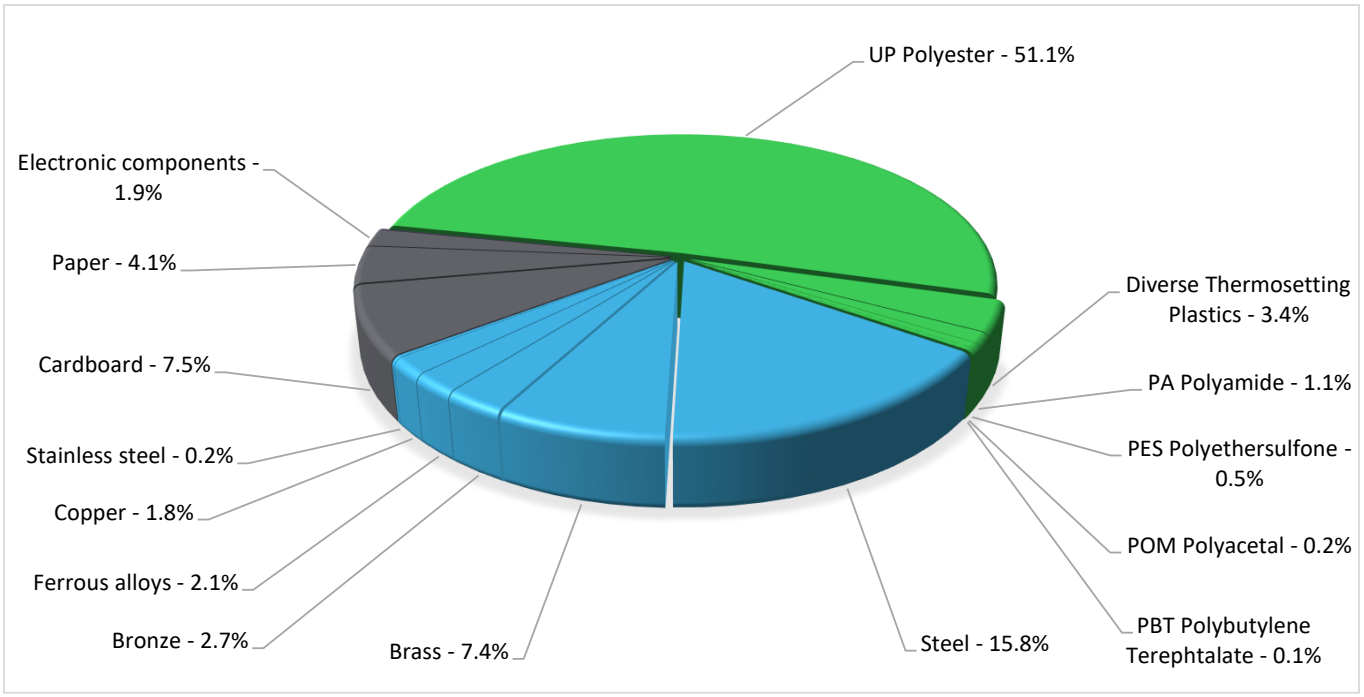
MINIATURE CIRCUIT BREAKER 120V 15A

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



Plastics	56.5%
Metals	30.0%
Others	13.5%

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

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

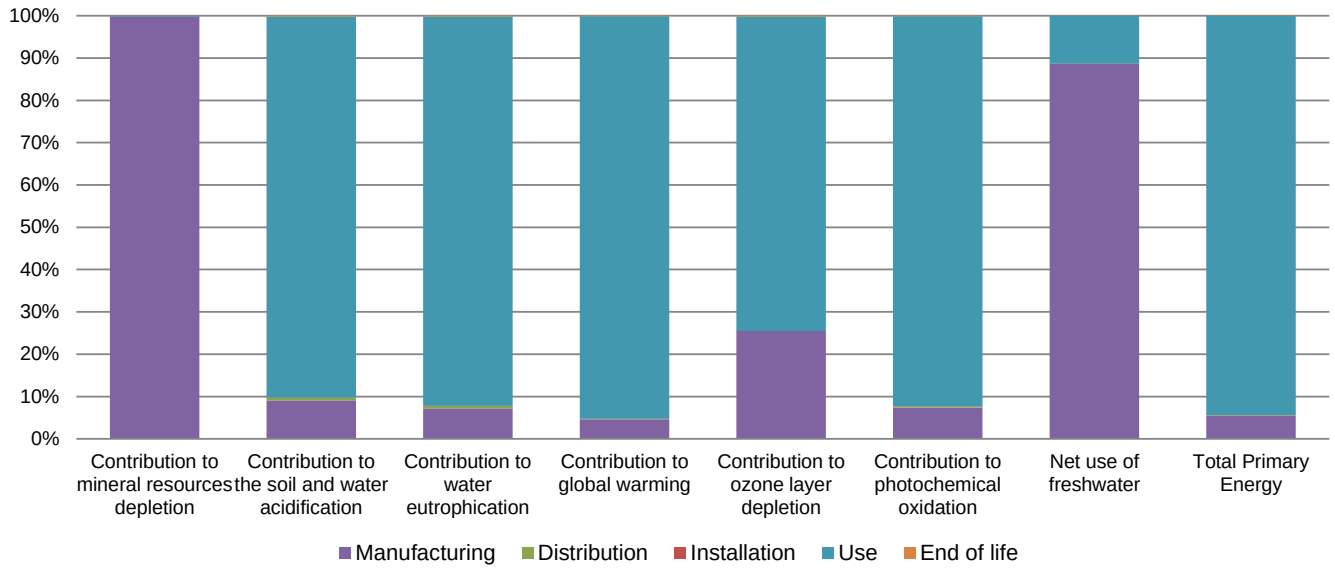
Additional environmental information

The MINIATURE CIRCUIT BREAKER 120V 15A 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 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	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. 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: **31%** 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	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 Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: Mexico	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; US	Electricity mix; AC; consumption mix, at consumer; 120V; 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	2.21E-04	2.20E-04	0*	0*	3.67E-07	0*
Contribution to the soil and water acidification	kg SO_2 eq	3.97E-02	3.60E-03	2.68E-04	6.74E-06	3.58E-02	6.76E-05
Contribution to water eutrophication	kg PO_4^{3-} eq	1.03E-02	7.38E-04	6.17E-05	1.97E-06	9.43E-03	2.15E-05
Contribution to global warming	kg CO_2 eq	3.93E+01	1.80E+00	5.95E-02	0*	3.74E+01	4.82E-02
Contribution to ozone layer depletion	kg CFC11 eq	9.12E-07	2.33E-07	1.21E-10	0*	6.78E-07	1.73E-09
Contribution to photochemical oxidation	kg C_2H_4 eq	6.22E-03	4.60E-04	1.91E-05	0*	5.73E-03	6.81E-06
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m³	5.82E-01	5.16E-01	0*	0*	6.61E-02	0*
Total Primary Energy	MJ	5.33E+02	2.90E+01	8.42E-01	0*	5.03E+02	3.19E-01



Optional indicators		MINIATURE CIRCUIT BREAKER 120V 15A - QO115PCAFI					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	4.75E+02	1.88E+01	8.37E-01	0*	4.55E+02	2.57E-01
Contribution to air pollution	m³	3.53E+03	3.56E+02	2.46E+00	0*	3.17E+03	2.34E+00
Contribution to water pollution	m³	2.01E+03	1.53E+02	9.79E+00	2.43E-01	1.84E+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	3.22E+01	1.95E+00	0*	0*	3.02E+01	0*
Total use of non-renewable primary energy resources	MJ	5.01E+02	2.70E+01	8.41E-01	0*	4.73E+02	3.19E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.16E+01	1.43E+00	0*	0*	3.02E+01	0*
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	4.98E+02	2.35E+01	8.41E-01	0*	4.73E+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	7.56E+00	6.19E+00	0*	0*	9.99E-01	3.63E-01
Non hazardous waste disposed	kg	7.17E+00	1.45E+00	2.12E-03	1.13E-03	5.71E+00	9.68E-04
Radioactive waste disposed	kg	1.13E-03	5.43E-04	1.51E-06	0*	5.88E-04	1.60E-06
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.16E-01	2.27E-02	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	8.81E-05	8.27E-06	0*	7.98E-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).

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 conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)			
PEP are compliant with XP C08-100-1 :2016			
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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