

Product Environmental Profile

MAX9 ARC FAULT DETECTION DEVICE





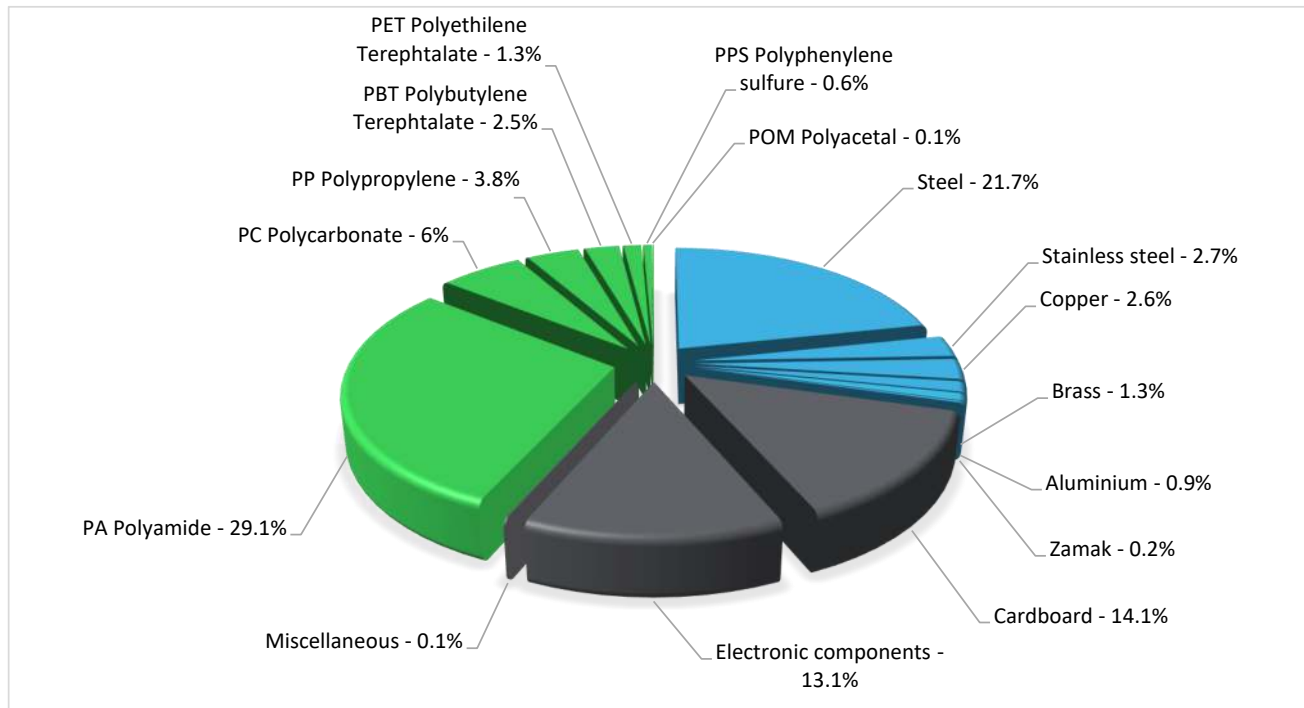
General information

Representative product	MAX9 ARC FAULT DETECTION DEVICE - MX9A3220
Description of the product	Protection against fire hazards by detection of abnormal electric arcs; Protection against load fire hazards due to slow overvoltages; Fire hazard tripping indication via the front panel indicator; Device self-diagnostics via the test button.
Functional unit	Protect during 10 years the installation against overloads and short-circuits and people and premises at risk of fire or explosion against insulation defects in circuit with assigned voltage 240 V and rated current 20 A. This protection is ensured in accordance with the following parameters: <ul style="list-style-type: none"> - Number of poles 1P+N - Rated breaking capacity 6000 A - Tripping curve C - Sensitivity 30 mA - IP20 in accordance with the standard IEC 60529



Constituent materials

Reference product mass	240 g	including the product, its packaging and additional elements and accessories
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Plastics	43.3%
Metals	29.4%
Others	27.3%



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

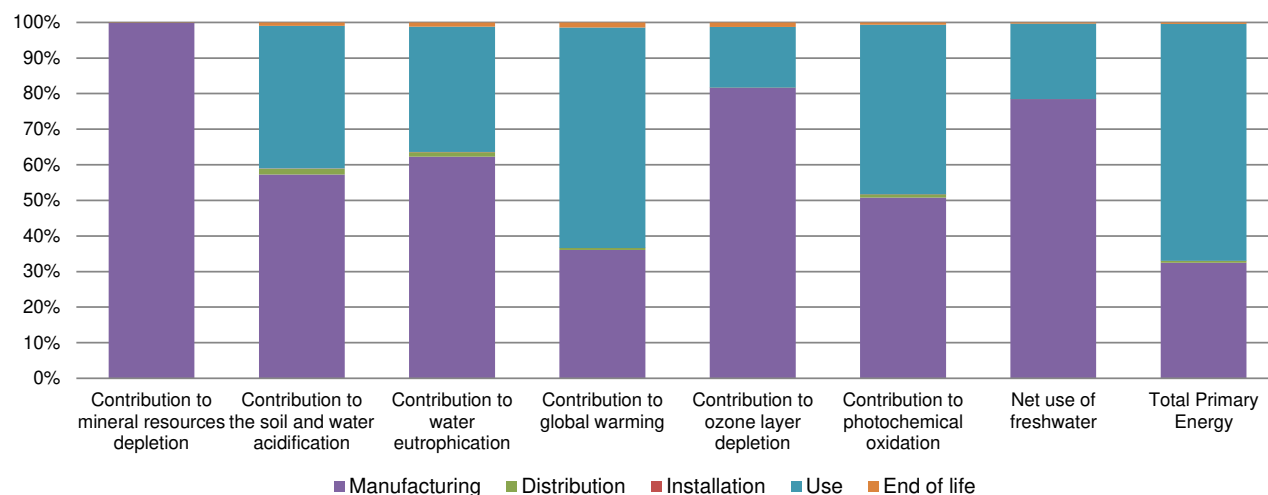
The MAX9 ARC FAULT DETECTION DEVICE presents the following relevant environmental aspects	
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 35 g, consisting of cardboard (99.9%), Paper(0.01%)
Installation	This product range does not require any installation operations
Use	The product does not require special maintenance operations.
End of life	<p>End of life optimized to decrease the amount of waste and allow recovery of the product components and materials</p> <p>This product contains electronic card (31.5g) that should be separated from the stream of waste so as to optimize end-of-life treatment.</p> <p>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</p> <p>http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</p> <p>Recyclability potential: 39% 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).</p>



Environmental impacts

Reference life time	10 years			
Product category	Differential circuit breaker			
Installation elements	No special components needed			
Use scenario	Load rate: 50% of In Use time rate: 30% of RLT			
Geographical representativeness	Australia, New Zealand			
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
	Manufacturing plant location: shanghai	Electricity mix; AC; consumption mix, at consumer; 240V; AU	Electricity mix; AC; consumption mix, at consumer; 240V; AU	Electricity mix; AC; consumption mix, at consumer; 240V; AU

Compulsory indicators		MAX9 ARC FAULT DETECTION DEVICE - MX9A3220					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.08E-04	2.08E-04	0*	0*	4.57E-08	0*
Contribution to the soil and water acidification	kg SO ₂ eq	8.61E-03	4.93E-03	1.41E-04	7.89E-06	3.46E-03	7.88E-05
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	2.59E-03	1.61E-03	3.26E-05	1.92E-06	9.12E-04	3.02E-05
Contribution to global warming	kg CO ₂ eq	5.75E+00	2.07E+00	3.10E-02	1.89E-03	3.56E+00	8.04E-02
Contribution to ozone layer depletion	kg CFC11 eq	2.36E-07	1.92E-07	6.27E-11	0*	4.03E-08	2.91E-09
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	1.11E-03	5.64E-04	1.01E-05	5.90E-07	5.29E-04	7.41E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m ³	1.61E-02	1.26E-02	2.77E-06	0*	3.41E-03	4.83E-05
Total Primary Energy	MJ	8.38E+01	2.72E+01	4.38E-01	2.47E-02	5.58E+01	3.60E-01



Optional indicators		MAX9 ARC FAULT DETECTION DEVICE - MX9A3220					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	6.31E+01	1.76E+01	4.35E-01	2.46E-02	4.48E+01	2.92E-01
Contribution to air pollution	m³	6.24E+02	3.04E+02	1.32E+00	7.55E-02	3.16E+02	2.61E+00
Contribution to water pollution	m³	7.60E+02	6.02E+02	5.09E+00	2.87E-01	1.48E+02	4.26E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	2.47E-03	2.47E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.04E+01	1.04E+00	0*	0*	9.36E+00	0*
Total use of non-renewable primary energy resources	MJ	7.34E+01	2.62E+01	4.37E-01	2.47E-02	4.64E+01	3.59E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	9.71E+00	3.44E-01	0*	0*	9.36E+00	0*
Use of renewable primary energy resources used as raw material	MJ	6.95E-01	6.95E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.00E+01	2.28E+01	4.37E-01	2.47E-02	4.64E+01	3.59E-01
Use of non renewable primary energy resources used as raw material	MJ	3.42E+00	3.42E+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	7.97E+00	7.49E+00	0*	0*	1.00E-01	3.75E-01
Non hazardous waste disposed	kg	1.32E+00	7.81E-01	1.10E-03	2.57E-04	5.39E-01	1.04E-03
Radioactive waste disposed	kg	5.81E-04	5.53E-04	7.84E-07	0*	2.54E-05	2.02E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.39E-01	2.13E-02	0*	3.48E-02	0*	8.28E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1.89E-02	0*	0*	0*	0*	1.89E-02
Exported Energy	MJ	1.11E-04	1.04E-05	0*	1.00E-04	0*	0*

* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version 5.8.1, database version 2016-11 in compliance with ISO14044.

The manufacturing 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	ENVPEP2205013_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	11/2022	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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