

Product Environmental Profile

Mini Miniature Circuit Breaker

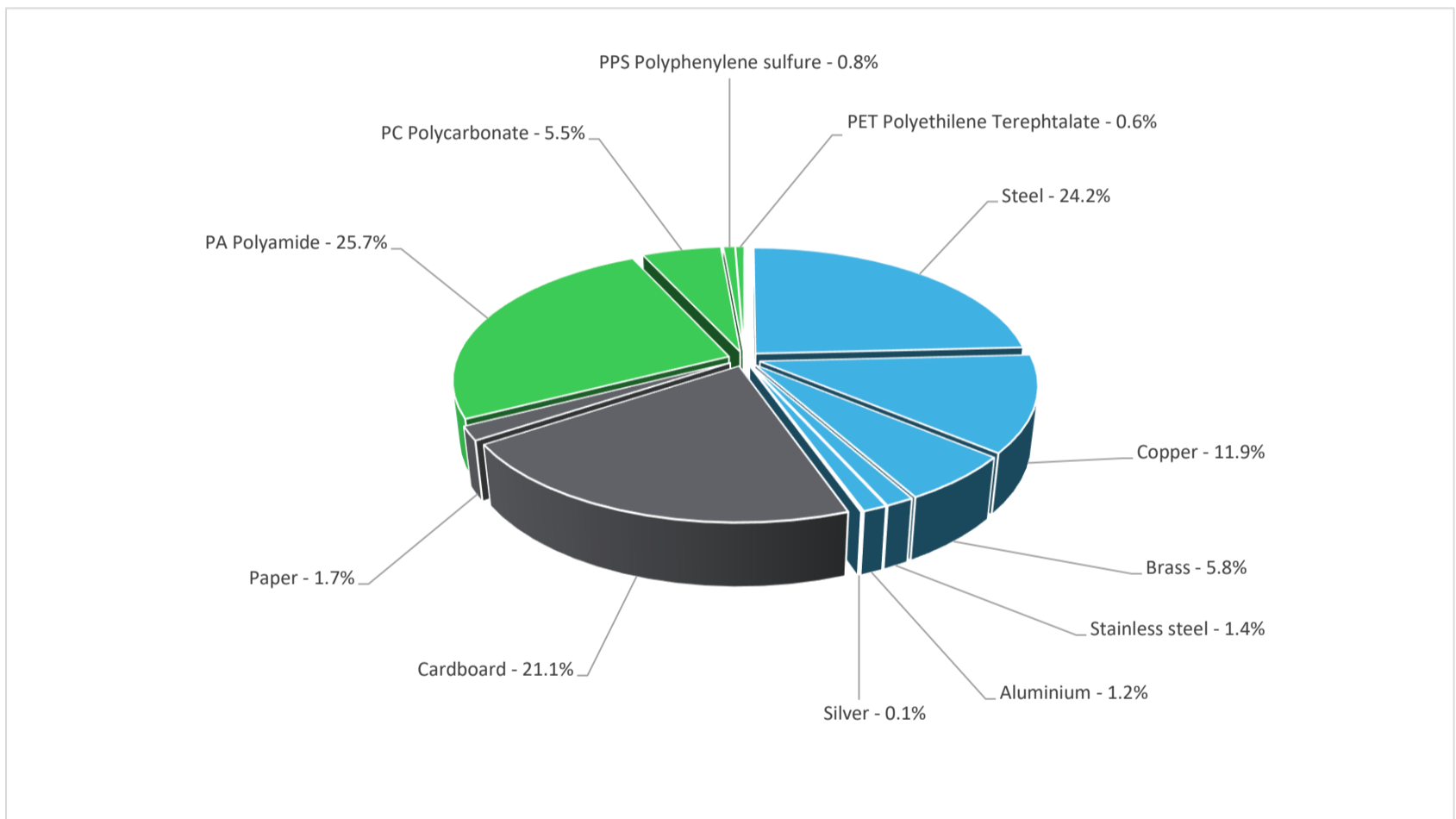


General information

Reference product	Mini Miniature Circuit Breaker - P8032
Description of the product	The 1 Pole Miniature MCB provides protection against overcurrent and overload in low voltage distribution systems. It is mainly used for household or similar applications. It has an operational voltage of 230V and is available in 10A, 16A, 20A, 25A & 32A. It conforms to IS/IEC 60898-1.
Functional unit	Protect during the 20-year installation against overload conditions in the installation. It ensures non tripping for a current up to 1.13 In (conventional non trip current) for 1 hour and ensures that trip a current of 1.45 In (conventional trip current) within 1 hour. It ensures protection from short-circuit current between 5In - 10In in less than 100mS. The IP20 Class is the degree of protection against the ingress of solid foreign objects and water with harmful effects in accordance with the standard IEC 60529 This protection is ensured in accordance with the following parameters: 1. Rated Operational Voltage Ue (V AC) (Max) @ 50 / 60 Hz = 230/240 2. In = Rated current in continuous operation (A) = 32 3. Number of Poles = 1 4. Rated breaking capacity (Icn) = 3000A 5. Tripping Curve: C 6. Rated Insulation Voltage Ui (V AC) = 500 7. Impulse Withstand Voltage Uimp (kV) = 4

Constituent materials

Reference product mass	83.4 g including the product, its packaging and additional elements and accessories
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Plastics	32.6%
Metals	44.6%
Others	22.8%

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website

<https://www.se.com/ww/en/work/support/green-premium/>

Additional environmental information

End Of Life	Recyclability potential:	83%	Recyclability rate has been calculated based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).
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Environmental impacts

Reference service life time	20 years			
Product category	Circuit-breakers			
Installation elements	The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).			
Use scenario	The product is in active mode 30% of the time with a power use of 3.6W for 20 years.			
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.			
Geographical representativeness	India			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Production mix; Low voltage; IN	Electricity Mix; Production mix; Low voltage; IN	Electricity Mix; Production mix; Low voltage; IN	Electricity Mix; Production mix; Low voltage; IN

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

Mandatory Indicators		Mini Miniature Circuit Breaker - P8032						
Impact indicators	Unit	Total	Manufacturing [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to climate change	kg CO2 eq	6.89E+01	4.34E-01	2.40E-02	3.44E-02	6.83E+01	9.29E-02	-2.75E-01
Contribution to climate change-fossil	kg CO2 eq	6.89E+01	4.26E-01	2.40E-02	3.29E-02	6.83E+01	9.09E-02	-2.72E-01
Contribution to climate change-biogenic	kg CO2 eq	1.86E-02	8.39E-03	0*	1.53E-03	6.64E-03	2.00E-03	-3.40E-03
Contribution to climate change-land use and land use change	kg CO2 eq	3.34E-08	0*	0*	0*	0*	3.34E-08	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	8.72E-07	4.54E-07	2.12E-08	2.28E-09	3.93E-07	1.56E-09	-4.64E-08
Contribution to acidification	mol H+ eq	5.27E-01	4.49E-03	1.04E-04	1.37E-04	5.22E-01	5.29E-04	-3.14E-03
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	8.14E-05	3.93E-06	0*	2.49E-07	6.03E-06	7.12E-05	-5.58E-07
Contribution to eutrophication marine	kg N eq	5.60E-02	3.68E-04	4.80E-05	3.62E-05	5.54E-02	8.95E-05	-1.72E-04
Contribution to eutrophication, terrestrial	mol N eq	6.44E-01	3.88E-03	5.20E-04	2.73E-04	6.38E-01	1.04E-03	-1.97E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.87E-01	1.38E-03	1.71E-04	7.29E-05	1.85E-01	3.10E-04	-7.69E-04
Contribution to resource use, minerals and metals	kg Sb eq	1.02E-04	9.93E-05	0*	0*	4.62E-07	2.01E-06	-7.79E-05
Contribution to resource use, fossils	MJ	1.09E+03	6.58E+00	2.92E-01	3.58E-01	1.08E+03	5.64E+00	-5.58E+00
Contribution to water use	m3 eq	3.23E+00	1.14E-01	1.22E-03	1.47E-02	3.02E+00	7.99E-02	-1.78E-01

Additional indicators for the French regulation are available as well

Inventory flows Indicators		Mini Miniature Circuit Breaker - P8032						
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6.00E+01	2.46E-02	0*	2.57E-02	5.99E+01	4.81E-02	-6.77E-02
Contribution to use of renewable primary energy resources used as raw material	MJ	2.67E-01	2.67E-01	0*	0*	0*	0*	-4.75E-02
Contribution to total use of renewable primary energy resources	MJ	6.02E+01	2.92E-01	0*	2.57E-02	5.99E+01	4.81E-02	-1.15E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.09E+03	5.93E+00	2.92E-01	3.58E-01	1.08E+03	5.64E+00	-5.58E+00
Contribution to use of non renewable primary energy resources used as raw material	MJ	6.41E-01	6.41E-01	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1.09E+03	6.58E+00	2.92E-01	3.58E-01	1.08E+03	5.64E+00	-5.58E+00

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Contribution to use of secondary material	kg	5.85E-03	5.85E-03	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of freshwater	m³	7.53E-02	2.66E-03	2.84E-05	3.42E-04	7.04E-02	1.86E-03	-4.14E-03
Contribution to hazardous waste disposed	kg	6.26E+00	4.09E+00	0*	0*	2.10E+00	7.38E-02	-6.30E+00
Contribution to non hazardous waste disposed	kg	1.26E+01	5.78E-01	0*	1.12E-01	1.19E+01	0*	-2.82E-01
Contribution to radioactive waste disposed	kg	6.10E-04	1.64E-04	4.78E-06	1.50E-05	4.26E-04	4.53E-07	-1.16E-04
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	5.50E-02	0*	0*	1.89E-02	0*	3.61E-02	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to biogenic carbon content of the product	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	0.00E+00	0*	0*	0*	0*	0*	0.00E+00

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

Life cycle assessment performed with EIME version 5.9.4, database version 2022-01 in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

The Use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators. In the manufacturing phase for ADPe indicator, main contribution is silver contacts with an impact of 54%.

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 :	ENVPEP2303022_V1	Drafting rules	PEP-PCR-ed4-2021 09 06
Validity period	5 years	Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	05/2023	Information and reference documents	www.pep-ecopassport.org
Independent verification of the declaration and data, in compliance with ISO 14021 : 2016			
Internal	X	External	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (Ddmain)			
PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019			
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. Type II environmental declarations »			

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