Product Environmental Profile

Acti9 - Miniature circuit breaker P25M - 3P - 4A - K curve - 3kA

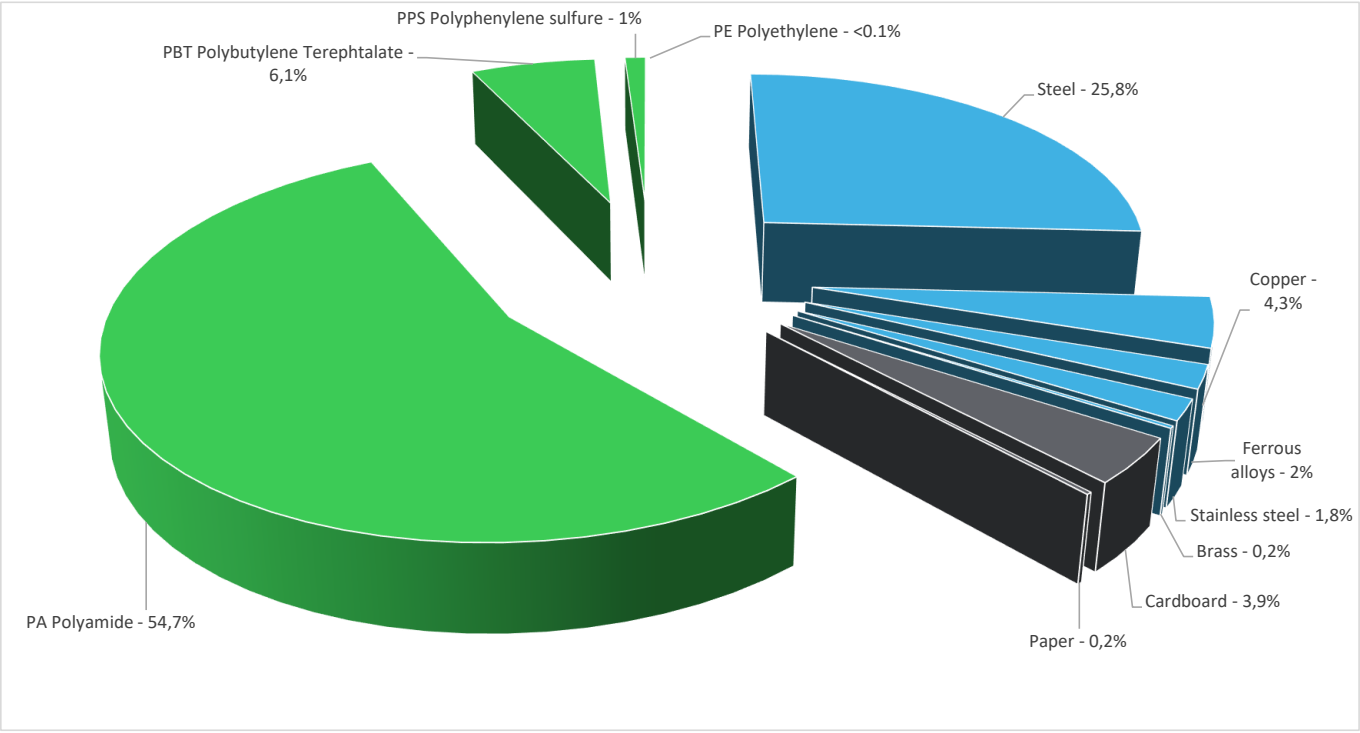
Representative of all P25M 3P miniature circuit breakers from 0.16A to 25A

General information

Reference product	Acti9 - Miniature circuit breaker P25M - 3P - 4A - K curve - 3kA - 21107
Description of the product	This Acti9 P25M is a low voltage miniature circuit breaker. It is a 3P circuit breaker with 3 protected poles, 4A rated current and K tripping curve. The Icu rated short circuit breaking capacity is up to 3kA at 690VAC conforming to EN/IEC 60898-1 standard. This product complies with both residential standard EN/IEC 60898-1 and industrial standard EN/IEC 60947-2. This miniature circuit breaker combines functions of circuit protection against short circuit and overload current, control and isolation. The motor protection cicuit breaker Acti9 P25M is designed for installation in modular final distribution enclosures. The Ue operational voltage is 440VAC. The Ui rated insulation voltage is 690VAC. The Uimp rated impulse withstand voltage is 6kV. The dimensions are (W) 45mm x (H) 89mm x (D) 70mm. It has an IP20 degree of protection (as per IEC/EN 60529) on its terminals.
Description of the range	The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology. The products of the range are representative of all P25M 3P miniature circuit breakers from 0.16A to 25A
Functional unit	Protect the installation from overloads and short circuits in a circuit with rated voltage Ue, rated current In, with Np poles, a rated breaking capacity Icu, and, if applicable, the specific specifications, in the Industrial application area, according to the appropriate use scenario, and during the reference service life of the product of 20 years.
Specifications are:	Ue = 440V AC In = 4A Np = 3 poles Icu = 3kA IP20 Low Voltage (AC)

Constituent materials

Reference product mass	393,9 g	including the product, its packaging, additional elements and accessories



	Plastics	61,8%
	Metals	34,1%
	Others	4,1%

Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website
https://www.se.com

Additional environmental information

End Of Life	Recyclability potential:	**31%**	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).

Environmental impacts

Reference service life time	20 years			
Product category	Circuit-breakers - Industrial			
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study			
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption			
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 % In Use rate = 30% RLT			
Time representativeness	The collected data are representative of the year 2024			
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are similar and representative of the actual type of technologies used to make the product.			
Geographical representativeness	Final assembly site	Use phase		End-of-life
	France	Europe		Europe
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity mix; Production mix; low voltage; 2022; France, FR	No energy used	Electricity mix; Production mix; low voltage; 2022; Europe, EU-27	Global, European and French datasets are used.

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.se.com/contact

Mandatory Indicators		Acti9 - Miniature circuit breaker P25M - 3P - 4A - K curve - 3kA - 21107						
Impact indicators	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to climate change	kg CO2 eq	4,23E+01	2,01E+00	6,06E-02	4,08E-02	3,98E+01	3,49E-01	-4,17E-01
Contribution to climate change-fossil	kg CO2 eq	4,14E+01	2,04E+00	6,06E-02	1,84E-02	3,90E+01	3,48E-01	-4,31E-01
Contribution to climate change-biogenic	kg CO2 eq	8,68E-01	-3,57E-02	0*	2,24E-02	8,80E-01	1,24E-03	1,42E-02
Contribution to climate change-land use and land use change	kg CO2 eq	6,00E-07	1,28E-07	8,77E-08	9,87E-10	0,00E+00	3,83E-07	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	3,22E-07	1,36E-07	6,93E-10	2,53E-10	1,71E-07	1,36E-08	-6,90E-08
Contribution to acidification	mol H+ eq	2,25E-01	1,44E-02	9,58E-05	5,40E-05	2,09E-01	1,69E-03	-4,96E-03
Contribution to eutrophication, freshwater	kg P eq	1,36E-04	3,82E-05	2,22E-07	3,85E-07	9,54E-05	1,35E-06	-8,93E-07
Contribution to eutrophication marine	kg N eq	2,62E-02	1,48E-03	1,84E-05	2,26E-05	2,44E-02	2,88E-04	-2,85E-04
Contribution to eutrophication, terrestrial	mol N eq	4,11E-01	1,54E-02	2,01E-04	1,63E-04	3,91E-01	3,61E-03	-3,24E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	8,43E-02	5,95E-03	6,44E-05	3,74E-05	7,74E-02	9,05E-04	-1,25E-03
Contribution to resource use, minerals and metals	kg Sb eq	1,44E-03	1,43E-03	0*	0*	1,29E-05	0*	-1,47E-04
Contribution to resource use, fossils	MJ	1,01E+03	4,75E+01	1,06E+00	1,84E-01	9,55E+02	7,54E+00	-9,69E+00
Contribution to water use	m3 eq	3,97E+00	9,10E-01	2,15E-03	1,49E-03	3,02E+00	3,86E-02	-2,97E-01

Inventory flows Indicators		Acti9 - Miniature circuit breaker P25M - 3P - 4A - K curve - 3kA - 21107						
Inventory flows	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2,25E+02	7,84E-01	0*	2,40E-02	2,24E+02	2,78E-01	-8,44E-02
Contribution to use of renewable primary energy resources used as raw material	MJ	6,40E-01	6,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-2,31E-01
Contribution to total use of renewable primary energy resources	MJ	2,25E+02	1,42E+00	0*	2,40E-02	2,24E+02	2,78E-01	-3,16E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,01E+03	4,23E+01	1,06E+00	1,84E-01	9,55E+02	7,54E+00	-9,69E+00
Contribution to use of non renewable primary energy resources used as raw material	MJ	5,12E+00	5,12E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1,01E+03	4,75E+01	1,06E+00	1,84E-01	9,55E+02	7,54E+00	-9,69E+00
Contribution to use of secondary material	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to use of renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to use of non renewable secondary fuels	MJ	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to net use of freshwater	m³	9,31E-02	2,12E-02	5,02E-05	1,14E-04	7,06E-02	1,07E-03	-6,91E-03
Contribution to hazardous waste disposed	kg	1,31E+01	1,19E+01	0*	0*	1,10E+00	1,04E-01	-1,15E+01
Contribution to non hazardous waste disposed	kg	6,90E+00	7,14E-01	5,38E-03	6,51E-03	6,00E+00	1,65E-01	-3,25E-01
Contribution to radioactive waste disposed	kg	1,63E-03	1,81E-04	4,26E-06	1,20E-06	1,42E-03	2,69E-05	-1,48E-04
Contribution to components for reuse	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to materials for recycling	kg	1,34E-01	1,25E-02	0,00E+00	1,29E-02	0,00E+00	1,08E-01	0,00E+00
Contribution to materials for energy recovery	kg	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Contribution to exported energy	MJ	1,87E-03	1,14E-04	0,00E+00	6,84E-04	0,00E+00	1,07E-03	0,00E+00

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

Contribution to biogenic carbon content of the product	kg of C	0,00E+00
Contribution to biogenic carbon content of the associated packaging	kg of C	4,45E-03

* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

Mandatory Indicators		Acti9 - Miniature circuit breaker P25M - 3P - 4A - K curve - 3kA - 21107							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	3,98E+01	0	0,00E+00	0	0	0	3,98E+01	0
Contribution to climate change-fossil	kg CO2 eq	3,90E+01	0	0,00E+00	0	0	0	3,90E+01	0
Contribution to climate change-biogenic	kg CO2 eq	8,80E-01	0	0,00E+00	0	0	0	8,80E-01	0
Contribution to climate change-land use and land use change	kg CO2 eq	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to ozone depletion	kg CFC-11 eq	1,71E-07	0	0,00E+00	0	0	0	1,71E-07	0
Contribution to acidification	mol H+ eq	2,09E-01	0	0,00E+00	0	0	0	2,09E-01	0
Contribution to eutrophication, freshwater	kg P eq	9,54E-05	0	0,00E+00	0	0	0	9,54E-05	0
Contribution to eutrophication marine	kg N eq	2,44E-02	0	0,00E+00	0	0	0	2,44E-02	0
Contribution to eutrophication, terrestrial	mol N eq	3,91E-01	0	0,00E+00	0	0	0	3,91E-01	0
Contribution to photochemical ozone formation - human health	kg COVNM eq	7,74E-02	0	0,00E+00	0	0	0	7,74E-02	0
Contribution to resource use, minerals and metals	kg Sb eq	1,29E-05	0	0,00E+00	0	0	0	1,29E-05	0
Contribution to resource use, fossils	MJ	9,55E+02	0	0,00E+00	0	0	0	9,55E+02	0
Contribution to water use	m3 eq	3,02E+00	0	0,00E+00	0	0	0	3,02E+00	0

Inventory flows Indicators		Acti9 - Miniature circuit breaker P25M - 3P - 4A - K curve - 3kA - 21107							
Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2,24E+02	0	0,00E+00	0	0	0	2,24E+02	0
Contribution to use of renewable primary energy resources used as raw material	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to total use of renewable primary energy resources	MJ	2,24E+02	0	0,00E+00	0	0	0	2,24E+02	0
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	9,55E+02	0	0,00E+00	0	0	0	9,55E+02	0
Contribution to use of non renewable primary energy resources used as raw material	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to total use of non-renewable primary energy resources	MJ	9,55E+02	0	0,00E+00	0	0	0	9,55E+02	0
Contribution to use of secondary material	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to use of renewable secondary fuels	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to use of non renewable secondary fuels	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to net use of freshwater	m³	7,06E-02	0	0,00E+00	0	0	0	7,06E-02	0
Contribution to hazardous waste disposed	kg	1,10E+00	0	0,00E+00	0	0	0	1,10E+00	0
Contribution to non hazardous waste disposed	kg	6,00E+00	0	0,00E+00	0	0	0	6,00E+00	0
Contribution to radioactive waste disposed	kg	1,42E-03	0	0,00E+00	0	0	0	1,42E-03	0
Contribution to components for reuse	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to materials for recycling	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to materials for energy recovery	kg	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0
Contribution to exported energy	MJ	0,00E+00	0	0,00E+00	0	0	0	0,00E+00	0

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

Life cycle assessment performed with EIME version v6.2.5-6, database version 2024-01 in compliance with ISO14044, EF3,1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

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 :	SCHN-02316-V01.01-EN	*Drafting rules*	PCR-4-ed4-EN-2021 09 06
		Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Verifier accreditation N°	VH48	*Information and reference documents*	www.pep-ecopassport.org
Date of issue	03-2026	*Validity period*	5 years

Independent verification of the declaration and data, in compliance with ISO 14025 : 2006

Internal External X

The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)

PEPs are compliant with NF C08-100-1:2022 and EN 50693:2019 or NF E38-500 :2022

The components of the present PEP may not be compared with components from any other program.

Document complies with ISO 14025:2006 "Environmental labels and declarations. Type III environmental declarations"

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