

Product Environmental Profile

Resi9 - Residual current breaker with overcurrent protection (RCBO) - 1P+N, 16A, B curve, 6000A, A type, 30mA, 18mm width

Representative of all the Residual current breaker with overcurrent protection Acti9 iCVm40, iCVr40 and Resi9 RCBO compact





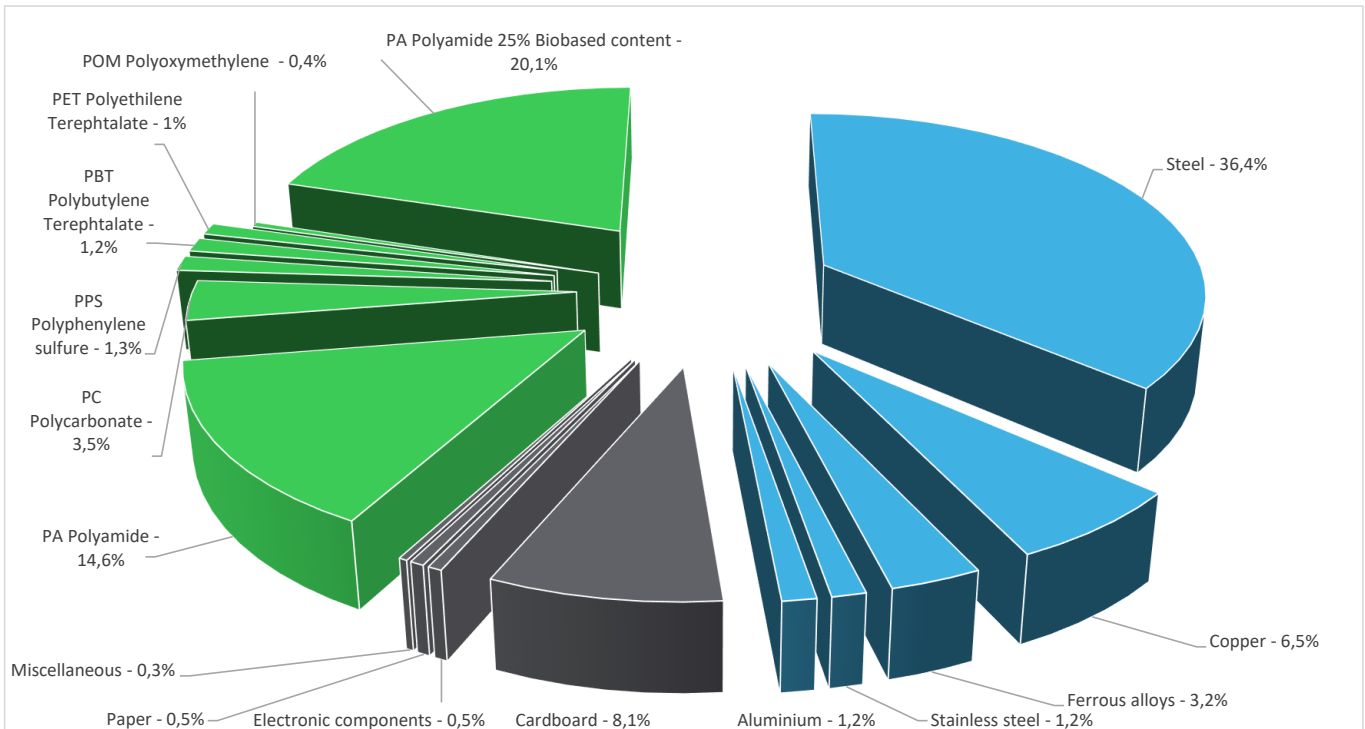
General information

Reference product	Resi9 - Residual current breaker with overcurrent protection (RCBO) - 1P+N, 16A, B curve, 6000A, A type, 30mA, 18mm width - R9DX01616
Description of the product	This Resi9 product is a compact arc fault detection RCBO and protects against short circuit, cable overload, electrical shock by indirect contact and fire hazards.
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: all the Residual current breaker with overcurrent protection Acti9 iCVm40, iCVr40 and Resi9 RCBO compact
Functional unit	Protect the installation against overloads and short circuits and protect people and premises at risk of fire or explosion against insulation defects in a circuit with rated voltage 240V , rated current 16A, with 1P+N poles, a rated breaking capacity 6000A , the tripping curve B, the sensitivity 30mA, and the differential protection type A, and, if applicable, the specific specifications, in the Household/Commercial, according to the appropriate use scenario, and during the reference service life of the product of 20 years.
Specifications are:	<ul style="list-style-type: none"> - Rated operating voltage (Ue) : 240 V - Rated current (In) : 16 A - Number of poles (Np) : 1P+N - Rated breaking capacity : 6000 A - Tripping curve (Cd) : B - Sensitivity (S) : 30 mA - Type of differential protection (Tp) : A - IP20 for the standalone product - IP40 when installed in a modular enclosure - Low voltage (AC)



Constituent materials

Reference product mass 139 g including the product, its packaging, additional elements and accessories



Plastics	42,1%
Metals	48,5%
Others	9,4%



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:	52%	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECYLAB 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).
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Environmental impacts

Reference service life time	20 years			
Product category	Differential circuit breakers - Household / Commercial			
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 any installation operations			
Use scenario	Load rate = 15% 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
	Spain	Europe		Europe
	[A1 - A3]	[A5]	[B6]	[C1 - C4]
Energy model used	Electricity Mix; Low voltage; 2020; Spain, ES	No energy used	Electricity Mix; Low voltage; 2020; 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		Resi9 - Residual current breaker with overcurrent protection (RCBO) - 1P+N, 16A, B curve, 6000A, A type, 30mA, 18mm width - R9DX01616						
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	3,04E+00	9,71E-01	2,70E-02	3,02E-02	1,75E+00	2,62E-01	-2,69E-01
Contribution to climate change-fossil	kg CO2 eq	3,01E+00	9,87E-01	2,70E-02	1,42E-02	1,72E+00	2,61E-01	-2,64E-01
Contribution to climate change-biogenic	kg CO2 eq	3,88E-02	0*	0*	1,60E-02	3,87E-02	3,67E-04	-5,10E-03
Contribution to climate change-land use and land use change	kg CO2 eq	6,73E-06	6,70E-06	0*	0*	0*	3,48E-08	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	3,99E-07	3,87E-07	4,15E-11	1,83E-10	7,51E-09	3,74E-09	-4,60E-08
Contribution to acidification	mol H+ eq	1,76E-02	7,53E-03	1,71E-04	4,16E-05	9,18E-03	6,58E-04	-2,96E-03
Contribution to eutrophication, freshwater	kg P eq	2,79E-05	2,31E-05	1,02E-08	3,04E-07	4,20E-06	3,09E-07	-4,64E-07
Contribution to eutrophication marine	kg N eq	2,15E-03	8,32E-04	8,03E-05	1,81E-05	1,07E-03	1,42E-04	-1,61E-04
Contribution to eutrophication, terrestrial	mol N eq	2,89E-02	9,07E-03	8,81E-04	1,30E-04	1,72E-02	1,63E-03	-1,88E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	7,01E-03	2,92E-03	2,22E-04	2,99E-05	3,41E-03	4,33E-04	-7,38E-04
Contribution to resource use, minerals and metals	kg Sb eq	4,09E-04	4,08E-04	0*	0*	5,69E-07	0*	-8,31E-05
Contribution to resource use, fossils	MJ	6,20E+01	1,77E+01	3,78E-01	1,33E-01	4,21E+01	1,73E+00	-5,71E+00
Contribution to water use	m3 eq	8,34E-01	6,71E-01	1,03E-04	1,25E-03	1,33E-01	2,88E-02	-1,75E-01

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Inventory flows Indicators		Resi9 - Residual current breaker with overcurrent protection (RCBO) - 1P+N, 16A, B curve, 6000A, A type, 30mA, 18mm width - R9DX01616							
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	1,04E+01	4,82E-01	0*	1,84E-02	9,85E+00	8,62E-02	-9,97E-02	
Contribution to use of renewable primary energy resources used as raw material	MJ	1,35E-01	1,35E-01	0*	0*	0*	0*	2,66E-02	
Contribution to total use of renewable primary energy resources	MJ	1,06E+01	6,17E-01	0*	1,84E-02	9,85E+00	8,62E-02	-7,30E-02	
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6,04E+01	1,60E+01	3,78E-01	1,33E-01	4,21E+01	1,73E+00	-5,71E+00	
Contribution to use of non renewable primary energy resources used as raw material	MJ	1,63E+00	1,63E+00	0*	0*	0*	0*	0,00E+00	
Contribution to total use of non-renewable primary energy resources	MJ	6,20E+01	1,77E+01	3,78E-01	1,33E-01	4,21E+01	1,73E+00	-5,71E+00	
Contribution to use of secondary material	kg	1,17E-02	1,17E-02	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	1,96E-02	1,56E-02	2,39E-06	9,23E-05	3,11E-03	7,82E-04	-4,07E-03	
Contribution to hazardous waste disposed	kg	1,03E+01	1,03E+01	0*	0*	4,84E-02	1,74E-03	-6,52E+00	
Contribution to non hazardous waste disposed	kg	1,17E+00	7,48E-01	9,50E-04	6,19E-03	2,64E-01	1,45E-01	-2,16E-01	
Contribution to radioactive waste disposed	kg	4,26E-04	3,55E-04	6,77E-07	8,98E-07	6,23E-05	6,42E-06	-1,12E-04	
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to materials for recycling	kg	8,56E-02	6,49E-03	0*	1,02E-02	0*	6,89E-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	1,29E-03	6,59E-05	0*	5,43E-04	0*	6,82E-04	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 3,56E-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		Resi9 - Residual current breaker with overcurrent protection (RCBO) - 1P+N, 16A, B curve, 6000A, A type, 30mA, 18mm width - R9DX01616							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	1,75E+00	0*	0*	0*	0*	0*	1,75E+00	0*
Contribution to climate change-fossil	kg CO2 eq	1,72E+00	0*	0*	0*	0*	0*	1,72E+00	0*
Contribution to climate change-biogenic	kg CO2 eq	3,87E-02	0*	0*	0*	0*	0*	3,87E-02	0*
Contribution to climate change-land use and land use change	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to ozone depletion	kg CFC-11 eq	7,51E-09	0*	0*	0*	0*	0*	7,51E-09	0*
Contribution to acidification	mol H+ eq	9,18E-03	0*	0*	0*	0*	0*	9,18E-03	0*
Contribution to eutrophication, freshwater	kg P eq	4,20E-06	0*	0*	0*	0*	0*	4,20E-06	0*
Contribution to eutrophication marine	kg N eq	1,07E-03	0*	0*	0*	0*	0*	1,07E-03	0*
Contribution to eutrophication, terrestrial	mol N eq	1,72E-02	0*	0*	0*	0*	0*	1,72E-02	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	3,41E-03	0*	0*	0*	0*	0*	3,41E-03	0*
Contribution to resource use, minerals and metals	kg Sb eq	5,69E-07	0*	0*	0*	0*	0*	5,69E-07	0*
Contribution to resource use, fossils	MJ	4,21E+01	0*	0*	0*	0*	0*	4,21E+01	0*
Contribution to water use	m3 eq	1,33E-01	0*	0*	0*	0*	0*	1,33E-01	0*


Inventory flows Indicators		Resi9 - Residual current breaker with overcurrent protection (RCBO) - 1P+N, 16A, B curve, 6000A, A type, 30mA, 18mm width - R9DX01616							
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	9,85E+00	0*	0*	0*	0*	0*	9,85E+00	0*
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of renewable primary energy resources	MJ	9,85E+00	0*	0*	0*	0*	0*	9,85E+00	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4,21E+01	0*	0*	0*	0*	0*	4,21E+01	0*
Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of non-renewable primary energy resources	MJ	4,21E+01	0*	0*	0*	0*	0*	4,21E+01	0*
Contribution to use of secondary material	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of non renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to net use of freshwater	m³	3,11E-03	0*	0*	0*	0*	0*	3,11E-03	0*
Contribution to hazardous waste disposed	kg	4,84E-02	0*	0*	0*	0*	0*	4,84E-02	0*
Contribution to non hazardous waste disposed	kg	2,64E-01	0*	0*	0*	0*	0*	2,64E-01	0*
Contribution to radioactive waste disposed	kg	6,23E-05	0*	0*	0*	0*	0*	6,23E-05	0*
Contribution to components for reuse	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for recycling	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for energy recovery	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to exported energy	MJ	0*	0*	0*	0*	0*	0*	0*	0*

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

Life cycle assessment performed with EIME version v6.2.4, 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-02065-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	09-2025	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 XP C08-100-1:2016 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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