

# Product Environmental Profile

**Resi9 - Residual Current Circuit Breaker - 2P/4P - 16 to 100A**

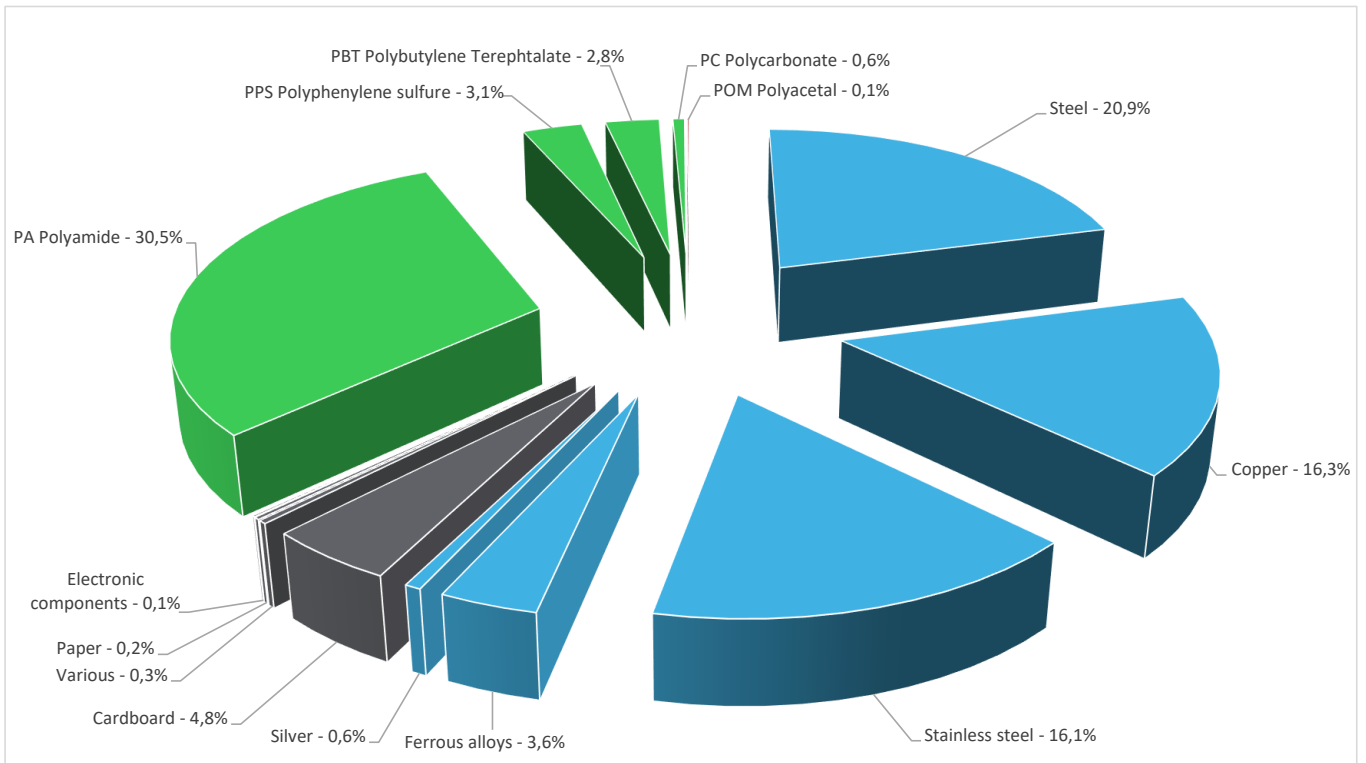


## General information

Reference product	Resi9 - Residual Current Circuit Breaker - 4P - 40A - 300mA - AC Type - R9R14440
Description of the product	Resi9 Residual Current Circuit Breaker provides protection against insulation faults in residential electrical installations.
Description of the range	<p>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.</p> <p>In addition of the reference product, this PEP covers all Resi9 RCCB 2P/4P with rated current from 16 to 100A, with earth leakage sensitivities from 10 to 500 mA and AC or A type protection class.</p>
Functional unit	<p>Protect during 20 years people and premises at risk of fire or explosion against insulation defects in circuit with assigned voltage 400VAC and rated current 40A (In). This protection is ensured in accordance with the following parameters:</p> <ul style="list-style-type: none"> <li>- Number of poles : 4</li> <li>- Sensitivity : 300mA</li> <li>- Type of differential protection : AC</li> </ul>

## Constituent materials

Reference product mass 420 g including the product, its packaging and additional elements and accessories



Plastics	37,1%
Metals	57,5%
Others	5,4%

## 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:	<b>59%</b>	Recyclability rate has been calculated based on REEECYLAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE 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	Blocks and differential switches			
Installation elements	No special components needed			
Use scenario	Load rate: 50% of 40A (In) Use time rate: 30% of the time over 20 years (RLT)			
Geographical representativeness	Europe			
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			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Low voltage; 2018; Spain, SP	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Europe, EU-27

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			Resi9 - Residual Current Circuit Breaker - 4P - 40A - 300mA - AC Type - R9R14440					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to climate change	kg CO2 eq	6,33E+01	4,00E+00	5,49E-02	2,46E-02	5,82E+01	1,02E+00	-2,24E+00
Contribution to climate change-fossil	kg CO2 eq	6,31E+01	3,93E+00	5,49E-02	2,46E-02	5,81E+01	1,01E+00	-2,19E+00
Contribution to climate change-biogenic	kg CO2 eq	1,65E-01	7,38E-02	0*	4,53E-05	7,76E-02	1,38E-02	-5,09E-02
Contribution to climate change-land use and land use change	kg CO2 eq	2,38E-07	8,81E-09	0*	0*	0*	2,30E-07	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	8,24E-07	5,65E-07	8,41E-11	1,14E-10	2,49E-07	1,03E-08	-4,28E-07
Contribution to acidification	mol H+ eq	3,65E-01	2,91E-02	3,53E-04	0*	3,32E-01	3,60E-03	-5,05E-02
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	7,61E-04	1,12E-04	0*	4,14E-07	1,59E-04	4,89E-04	-3,46E-06
Contribution to eutrophication marine	kg N eq	4,19E-02	3,41E-03	1,66E-04	1,00E-05	3,77E-02	6,19E-04	-1,57E-03
Contribution to eutrophication, terrestrial	mol N eq	6,11E-01	3,53E-02	1,82E-03	7,55E-05	5,67E-01	7,13E-03	-1,83E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,35E-01	1,15E-02	4,60E-04	2,50E-05	1,21E-01	2,08E-03	-8,50E-03
Contribution to resource use, minerals and metals	kg Sb eq	2,73E-03	2,72E-03	0*	0*	4,21E-06	1,38E-05	-8,28E-04
Contribution to resource use, fossils	MJ	1,57E+03	5,26E+01	7,65E-01	0*	1,48E+03	3,70E+01	-4,62E+01
Contribution to water use	m3 eq	2,67E+00	0*	0*	6,90E-04	1,93E+00	8,23E-01	-2,62E+00

Additional indicators for the French regulation are available as well

Inventory flows Indicators			Resi9 - Residual Current Circuit Breaker - 4P - 40A - 300mA - AC Type - R9R14440					
Inventory flows	Unit	Total	Manufact.	Distribution	Installation	Use	End of Life	Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2,86E+02	1,26E+00	0*	0*	2,85E+02	3,34E-01	-1,30E+00
Contribution to use of renewable primary energy resources used as raw material	MJ	4,08E-01	4,08E-01	0*	0*	0*	0*	-1,13E-02
Contribution to total use of renewable primary energy resources	MJ	2,87E+02	1,67E+00	0*	0*	2,85E+02	3,34E-01	-1,31E+00
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,57E+03	4,80E+01	7,65E-01	0*	1,48E+03	3,70E+01	-4,62E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	4,64E+00	4,64E+00	0*	0*	0*	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1,57E+03	5,26E+01	7,65E-01	0*	1,48E+03	3,70E+01	-4,62E+01
Contribution to use of secondary material	kg	4,00E-08	4,00E-08	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	5,53E-02	0*	0*	0*	4,76E-02	1,38E-02	-5,94E-02
Contribution to hazardous waste disposed	kg	2,93E+01	2,78E+01	0*	0*	1,09E+00	4,02E-01	-6,94E+01
Contribution to non hazardous waste disposed	kg	1,12E+01	2,64E+00	1,93E-03	2,57E-02	8,37E+00	1,41E-01	-1,36E+00
Contribution to radioactive waste disposed	kg	2,62E-03	8,60E-04	1,37E-06	1,21E-06	1,75E-03	7,22E-06	-6,30E-04
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	7,21E-01	4,87E-01	0*	5,60E-04	0*	2,34E-01	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	1,15E-02	0*	0*	1,15E-02	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 v5.9.4, 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>

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-00930-V01.01-EN	Drafting rules	PEP-PCR-ed4-2021 09 06
Verifier accreditation N°	VH48	Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	03/2023	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		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)			
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 14025 : 2006 « Environmental labels and declarations. Type III environmental declarations »			



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