

Product Environmental Profile

Resi9 AFDD (Arc Fault Detection Device)

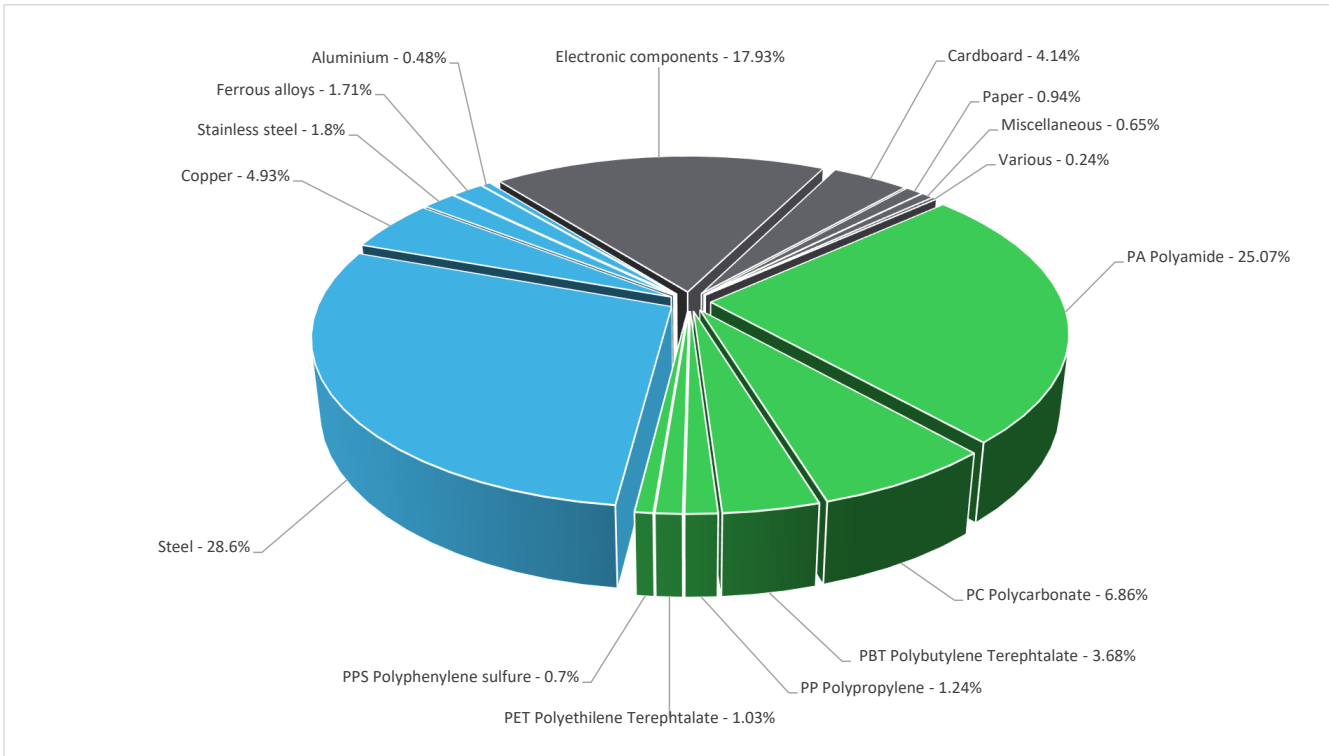


General information

Reference product	Resi9 AFDD (Arc Fault Detection Device) - R9TDB3616
Description of the product	The main function of this product is to ensure fire safety by detecting abnormal electric arcs, guarding against fire hazards caused by slow overvoltages, and displaying fire hazard tripping alerts through the front panel indicator. The device is self-diagnosed via the test button.
Functional unit	Protect during the 20 years of lifetime the installation against overloads, short-circuits, and people's safety, and also near the premises at risk of fire or explosion, against insulation defects in the circuit with the assigned voltage [U] 240 V and rated current [In] 16 A. This protection is ensured in accordance with the following parameters: - Number of poles 1P+N - Rated breaking capacity 6000A - Tripping curve C - Sensitivity : 30mA - Type of differential protection : A

Constituent materials

Reference product mass	210 g including the product, its packaging and additional elements and accessories
------------------------	--



Plastics	38.6%
Metals	37.5%
Others	23.9%

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:	39%	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).
-------------	--------------------------	-----	--


Environmental impacts

Reference service life time	20 years		
Product category	Combination of functions		
Installation elements	The product does not require a special installation procedure and requires little to no energy to install.		
Use scenario	Load rate: 50% of 16A (In) Use time rate: 30% of the time over 20 years (RLT)		
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	New Zealand		
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Production mix; Low voltage; CN	Electricity mix; AC; consumption mix, at consumer; 230V; NZ	Electricity mix; AC; consumption mix, at consumer; 230V; NZ
			[C1 - C4]
			Electricity mix; AC; consumption mix, at consumer; 230V; NZ

Detailed results, including all the impact indicators mentioned in PCRed4, 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 AFDD (Arc Fault Detection Device) - R9TDB3616						
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	2.07E+01	4.09E+00	6.05E-02	2.01E-02	1.60E+01	5.04E-01	-3.37E-01
Contribution to climate change-fossil	kg CO2 eq	2.07E+01	4.08E+00	6.05E-02	1.92E-02	1.60E+01	4.98E-01	-3.33E-01
Contribution to climate change-biogenic	kg CO2 eq	2.75E-02	8.82E-03	0*	8.94E-04	1.19E-02	5.87E-03	-3.90E-03
Contribution to climate change-land use and land use change	kg CO2 eq	8.02E-08	3.76E-09	0*	0*	4.01E-08	3.64E-08	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.13E-06	4.75E-07	5.34E-08	1.33E-09	5.97E-07	7.18E-09	-5.36E-08
Contribution to acidification	mol H+ eq	1.09E-01	3.16E-02	2.63E-04	7.98E-05	7.46E-02	2.89E-03	-3.57E-03
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	1.97E-04	2.00E-05	0*	1.45E-07	9.85E-05	7.88E-05	-7.78E-07
Contribution to eutrophication marine	kg N eq	1.67E-02	3.74E-03	1.21E-04	2.11E-05	1.13E-02	1.53E-03	-2.20E-04
Contribution to eutrophication, terrestrial	mol N eq	1.54E-01	4.04E-02	1.31E-03	1.60E-04	1.09E-01	2.69E-03	-2.46E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	5.09E-02	1.32E-02	4.30E-04	4.26E-05	3.64E-02	9.08E-04	-9.32E-04
Contribution to resource use, minerals and metals	kg Sb eq	8.46E-04	4.68E-04	0*	0*	3.76E-04	2.19E-06	-9.57E-05
Contribution to resource use, fossils	MJ	2.22E+02	5.76E+01	7.35E-01	2.09E-01	1.48E+02	1.56E+01	-6.84E+00
Contribution to water use	m3 eq	4.98E+01	5.47E-01	0*	8.59E-03	2.50E+01	2.43E+01	-2.14E-01

Inventory flows Indicators		Resi9 AFDD (Arc Fault Detection Device) - R9TDB3616						
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	1.47E+02	1.20E+00	0*	1.50E-02	1.46E+02	1.58E-01	1.85E-02
Contribution to use of renewable primary energy resources used as raw material	MJ	1.83E-01	1.64E-01	0*	0*	1.87E-02	0*	-1.99E-01
Contribution to total use of renewable primary energy resources	MJ	1.47E+02	1.37E+00	0*	1.50E-02	1.46E+02	1.58E-01	-1.80E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.17E+02	5.49E+01	7.35E-01	2.09E-01	1.45E+02	1.56E+01	-6.84E+00
Contribution to use of non renewable primary energy resources used as raw material	MJ	5.48E+00	2.74E+00	0*	0*	2.74E+00	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	2.22E+02	5.76E+01	7.35E-01	2.09E-01	1.48E+02	1.56E+01	-6.84E+00

Contribution to use of secondary material	kg	3.90E-03	3.30E-03	0*	0*	5.98E-04	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	1.30E+00	1.27E-02	0*	2.00E-04	6.51E-01	6.35E-01	-4.99E-03
Contribution to hazardous waste disposed	kg	1.61E+01	1.16E+01	0*	0*	4.31E+00	2.09E-01	-7.71E+00
Contribution to non hazardous waste disposed	kg	3.12E+00	1.09E+00	0*	6.54E-02	1.88E+00	7.91E-02	-5.24E-01
Contribution to radioactive waste disposed	kg	8.92E-04	4.44E-04	1.20E-05	8.78E-06	4.24E-04	3.95E-06	-1.31E-04
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	1.83E-01	0*	0*	1.11E-02	9.17E-02	8.07E-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, are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

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 :	ENVPEP2210009_V1-EN	Drafting rules	PEP-PCR-ed4-2021 09 06
Validity period	5 years	Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	10/2023	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 (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 14021 : 2016 « Environmental labels and declarations. Type II environmental declarations »			

Schneider Electric Industries SAS
Country Customer Care Center
<http://www.schneider-electric.com/contact>
35, rue Joseph Monier
CS 30323
F- 92500 Rueil Malmaison Cedex
RCS Nanterre 954 503 439
Capital social 928 298 512 €

www.se.com

ENVPEP2210009_V1-EN

Published by Schneider Electric

©2023 - Schneider Electric – All rights reserved

10/2023