

Product Environmental Profile

Acti9 iID - Residual Current Circuit Breaker (RCCB) - 4P - 40A - 30mA - B type

Representative of all Acti9 iID - RCCB - B type - 2P and 4P - up to 80A - up to 500mA





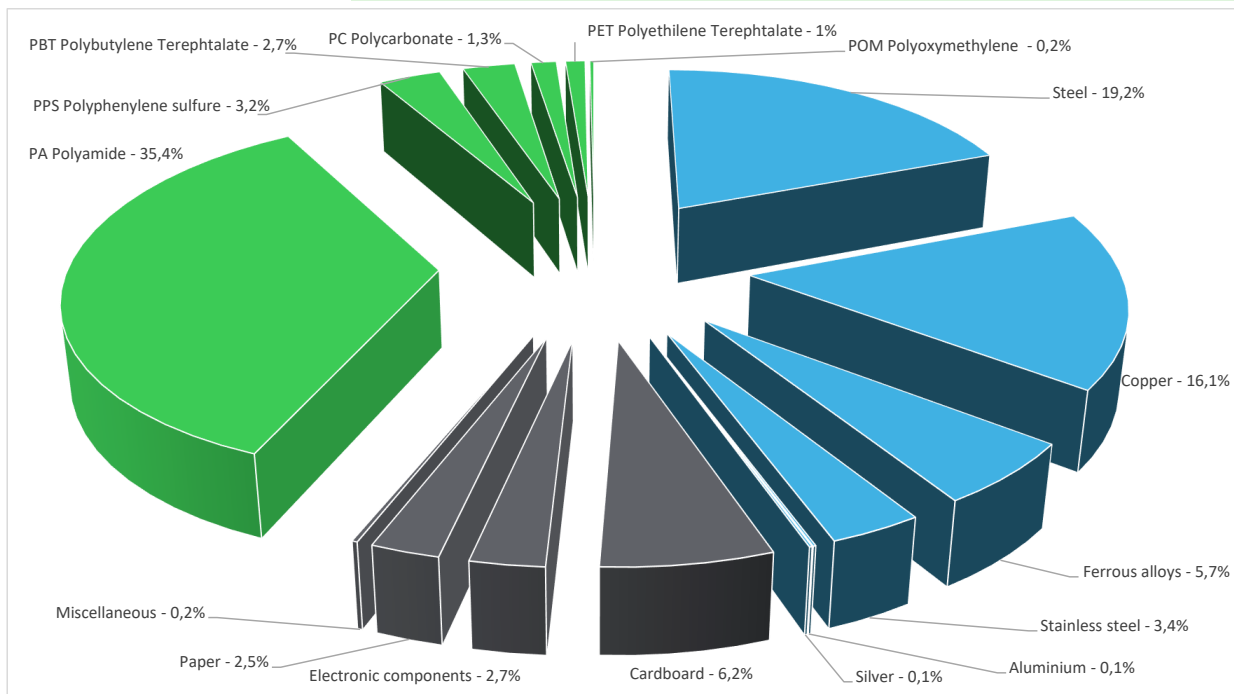
General information

Reference product	Acti9 iID - Residual Current Circuit Breaker (RCCB) - 4P - 40A - 30mA - B type - A9Z51440
Description of the product	The Acti9 iID differential switch ensures the protection of people against electric shock by direct and indirect contact as well as the protection of installations and electric vehicle charging station against the risk of fire.
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: In addition of the reference product, this PEP covers all RCCB Acti9 iID B type with 2P and 4P up to 80A up to 500mA.
Functional unit	Protect people and premises at risk of fire or explosion against insulation defects in a circuit with rated voltage Ue (400V AC), rated current In (40A), with 4 poles, sensitivity S (30mA), and the differential protection B type, and if applicable the specific specifications, in the Industrial application area, while protecting them against the penetration of solid objects and liquids (IP40), and with a degree of protection against external mechanical impacts (IK05) in accordance with the standard IEC 62262 according to the appropriate use scenario, and during the 20-year reference service life of the product.
Specifications are:	Ue = 400 V AC - Low voltage In = 40 A Np = 4 S = 30mA Tp = B type



Constituent materials

Reference product mass 433,8 g including the product, its packaging and additional elements and accessories



Plastics	43,8%
Metals	44,6%
Others	11,6%



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:	56%	The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used.
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Environmental impacts

Reference service life time	20 years			
Product category	Blocks and differential switches - Industrial			
Installation elements	Ref A9Z51440 does not require any installation operations.			
Use scenario	Load rate = 50 % In (40A) Use rate = 30% RLT (20 years)			
Time representativeness	The collected data are representative of the year 2023			
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 repr��sentative of the actual type of technologies used to make the product.			
Geographical representativeness	Europe			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; High voltage; 2018; Spain, ES	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 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.schneider-electric.com/contact>

Mandatory Indicators		Acti9 iID - Residual Current Circuit Breaker (RCCB) - 4P - 40A - 30mA - B type - A9Z51440						
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	7,28E+01	5,88E+00	1,26E-01	4,04E-02	6,57E+01	9,71E-01	-5,27E-01
Contribution to climate change-fossil	kg CO2 eq	7,25E+01	5,76E+00	1,26E-01	3,85E-02	6,57E+01	9,56E-01	-5,15E-01
Contribution to climate change-biogenic	kg CO2 eq	2,17E-01	1,13E-01	0*	1,91E-03	8,77E-02	1,43E-02	-1,20E-02
Contribution to climate change-land use and land use change	kg CO2 eq	8,48E-06	8,08E-06	0*	0*	0*	4,05E-07	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	1,91E-06	1,62E-06	1,92E-10	5,23E-10	2,81E-07	9,10E-09	-9,77E-08
Contribution to acidification	mol H+ eq	4,23E-01	4,34E-02	8,38E-04	1,18E-04	3,75E-01	3,35E-03	-1,17E-02
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	7,58E-04	1,29E-04	0*	9,25E-07	1,80E-04	4,48E-04	-8,10E-07
Contribution to eutrophication marine	kg N eq	4,81E-02	4,44E-03	3,95E-04	5,14E-05	4,26E-02	6,11E-04	-3,67E-04
Contribution to eutrophication, terrestrial	mol N eq	6,99E-01	4,62E-02	4,34E-03	3,57E-04	6,40E-01	7,26E-03	-4,29E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,56E-01	1,59E-02	1,10E-03	8,19E-05	1,37E-01	2,03E-03	-1,98E-03
Contribution to resource use, minerals and metals	kg Sb eq	1,62E-03	1,60E-03	0*	0*	4,76E-06	1,42E-05	-1,94E-04
Contribution to resource use, fossils	MJ	1,79E+03	8,50E+01	1,75E+00	4,00E-01	1,67E+03	2,81E+01	-1,09E+01
Contribution to water use	m3 eq	5,71E+00	2,80E+00	0*	3,12E-03	2,33E+00	5,82E-01	-6,05E-01

Inventory flows Indicators		Acti9 iID - Residual Current Circuit Breaker (RCCB) - 4P - 40A - 30mA - B type - A9Z51440						
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	3,25E+02	2,81E+00	0*	5,24E-02	3,22E+02	3,53E-01	-3,08E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	1,12E+00	1,12E+00	0*	0*	0*	0*	-1,03E-03
Contribution to total use of renewable primary energy resources	MJ	3,26E+02	3,93E+00	0*	5,24E-02	3,22E+02	3,53E-01	-3,09E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,79E+03	8,05E+01	1,75E+00	4,00E-01	1,67E+03	2,81E+01	-1,09E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	4,56E+00	4,56E+00	0*	0*	0*	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1,79E+03	8,50E+01	1,75E+00	4,00E-01	1,67E+03	2,81E+01	-1,09E+01
Contribution to use of secondary material	kg	1,90E-05	1,90E-05	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	1,33E-01	6,53E-02	0*	7,26E-05	5,42E-02	1,36E-02	-1,41E-02
Contribution to hazardous waste disposed	kg	2,49E+01	2,36E+01	0*	0*	1,23E+00	1,19E-02	-1,62E+01
Contribution to non hazardous waste disposed	kg	1,29E+01	3,26E+00	4,40E-03	1,73E-02	9,46E+00	1,84E-01	-3,31E-01
Contribution to radioactive waste disposed	kg	3,97E-03	1,97E-03	3,13E-06	2,13E-06	1,98E-03	1,02E-05	-1,60E-04
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	3,58E-01	1,37E-01	0*	0*	0*	2,21E-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	4,98E-03	1,45E-03	0*	1,65E-03	0*	1,88E-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 de C	0,00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	1,16E-02

Mandatory Indicators		Acti9 iID - Residual Current Circuit Breaker (RCCB) - 4P - 40A - 30mA - B type - A9Z51440							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	6,57E+01	0*	0*	0*	0*	0*	6,57E+01	0*
Contribution to climate change-fossil	kg CO2 eq	6,57E+01	0*	0*	0*	0*	0*	6,57E+01	0*
Contribution to climate change-biogenic	kg CO2 eq	8,77E-02	0*	0*	0*	0*	0*	8,77E-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	2,81E-07	0*	0*	0*	0*	0*	2,81E-07	0*
Contribution to acidification	mol H+ eq	3,75E-01	0*	0*	0*	0*	0*	3,75E-01	0*
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	1,80E-04	0*	0*	0*	0*	0*	1,80E-04	0*
Contribution to eutrophication marine	kg N eq	4,26E-02	0*	0*	0*	0*	0*	4,26E-02	0*
Contribution to eutrophication, terrestrial	mol N eq	6,40E-01	0*	0*	0*	0*	0*	6,40E-01	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,37E-01	0*	0*	0*	0*	0*	1,37E-01	0*
Contribution to resource use, minerals and metals	kg Sb eq	4,76E-06	0*	0*	0*	0*	0*	4,76E-06	0*
Contribution to resource use, fossils	MJ	1,67E+03	0*	0*	0*	0*	0*	1,67E+03	0*
Contribution to water use	m3 eq	2,33E+00	0*	0*	0*	0*	0*	2,33E+00	0*

Inventory flows Indicators		Acti9 iID - Residual Current Circuit Breaker (RCCB) - 4P - 40A - 30mA - B type - A9Z51440							
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	3,22E+02	0*	0*	0*	0*	0*	3,22E+02	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	3,22E+02	0*	0*	0*	0*	0*	3,22E+02	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,67E+03	0*	0*	0*	0*	0*	1,67E+03	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	1,67E+03	0*	0*	0*	0*	0*	1,67E+03	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	5,42E-02	0*	0*	0*	0*	0*	5,42E-02	0*
Contribution to hazardous waste disposed	kg	1,23E+00	0*	0*	0*	0*	0*	1,23E+00	0*
Contribution to non hazardous waste disposed	kg	9,46E+00	0*	0*	0*	0*	0*	9,46E+00	0*
Contribution to radioactive waste disposed	kg	1,98E-03	0*	0*	0*	0*	0*	1,98E-03	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 v6.1, database version 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 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-00416-V02.01-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	07-2024	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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