Product Environmental Profile

Acti9 - iCV40N/H VigiARC Active 1P+N - 6A to 40A - B/C Curve - 30mA - A-SI Type

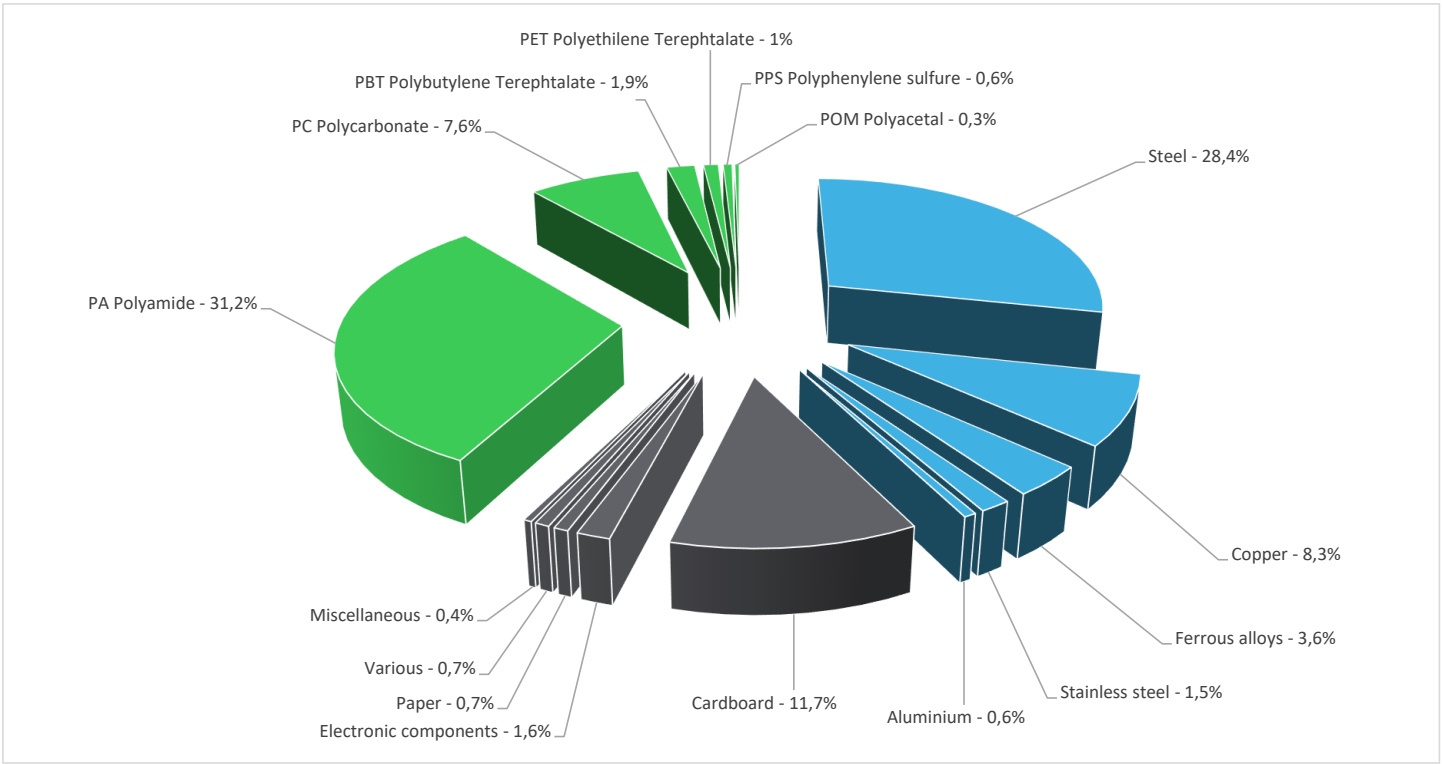
Arc fault detection Residual Current Breaker with Overcurrent protection

General information

Reference product	Acti9 - iCV40N VigiARC Active - 1P+N - 16A - C Curve - 30mA - A-SI type - AFDD RCBO - A9TDEC616
Description of the product	Acti9 iCV40N VigiARC Active 1P+N - 16A - C Curve - 30mA A-SI type - (Ref A9TDEC616) is designed to protect electrical installations againts overcurrents and insulation faults with assigned voltage 230VAC and rated current of 16A. In addition to these protections, the Acti9 iCV40N VigiARC Active monitors for electric arcs that occur in cables and connections, that may cause a fire.
Description of the range	The environmental impacts of the reference product are representative of the impacts of the other products of the range which are developed with a similar technology. In addition of the reference product, this PEP covers all Acti9 iC40N ARC, iCV40N VigiARC and iCV40H VigiARC Active Arc Fault Detection Devices.
Functional unit	Provide for 20 years the following functions in final circuits with operational voltage 230VAC (Ue) and rated current 16A (In): ▪ circuit protection against overload and short-circuit currents (circuit breaker function) with the following characteristics : -number of poles : 1P + N -rated breaking capacity Icn = 6000A -tripping curve B ▪ protection for people against electric shocks by direct contacts and indirect contacts with the following characteristics : -sensitivity : 30mA, -type of differential protection : A-SI ▪ protection against fire hazards by detection of abnormal electric arcs, ▪ protection against load fire hazards due to slow overvoltages (network overvoltage), ▪ fire hazard tripping indication via the front panel indicator, ▪ tripping faults diagnosis by LED blinking in front face.

Constituent materials

Reference product mass	246 g	including the product, its packaging and additional elements and accessories



Plastics	42,5%
Metals	42,3%
Others	15,2%

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:	**47%**	Recyclability rate has been calculated based on REEECY'LAB 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	No special components needed			
Use scenario	Load rate: 50% of 16A (In) Use time rate: 30% of the time over 20 years (RLT)			
Geographical representativeness	Europe			
Technological representativeness	Acti9 iCV40N VigiARC Active 1P+N - 16A - C Curve - 30mA A-SI type - (Ref A9TDEC616) is designed to protect electrical installations againts overcurrents and insulation faults with assigned voltage 230VAC and rated current of 16A. In addition to these protections, the Acti9 iCV40N VigiARC Active monitors for electric arcs that occur in cables and connections, that may cause a fire.			
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		**Acti9 - iCV40N VigiARC Active - 1P+N - 16A - C Curve - 30mA - A-SI type - AFDD RCBO - A9TDEC616**						
Impact indicators	**Unit**	**Total**	**Manufacturing [A1 - A3]**	**Distribution [A4]**	**Installation [A5]**	**Use [B1 - B7]**	**End of Life [C1 - C4]**	**Benefits [D]**
Contribution to climate change	kg CO2 eq	6,92E+01	3,25E+00	3,22E-02	3,62E-02	6,53E+01	5,80E-01	-1,02E+00
Contribution to climate change-fossil	kg CO2 eq	6,91E+01	3,22E+00	3,22E-02	3,61E-02	6,52E+01	5,75E-01	-1,01E+00
Contribution to climate change-biogenic	kg CO2 eq	1,36E-01	2,22E-02	0*	1,23E-04	1,09E-01	4,47E-03	-9,81E-03
Contribution to climate change-land use and land use change	kg CO2 eq	1,64E-07	1,41E-08	0*	0*	8,21E-08	6,80E-08	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	1,28E-06	5,03E-07	0*	2,50E-10	7,71E-07	4,37E-09	-1,69E-07
Contribution to acidification	mol H+ eq	4,06E-01	2,60E-02	2,07E-04	0*	3,79E-01	1,60E-03	-1,19E-02
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	5,10E-04	2,53E-05	0*	5,96E-07	3,39E-04	1,45E-04	-1,65E-06
Contribution to eutrophication marine	kg N eq	4,62E-02	2,71E-03	9,72E-05	1,56E-05	4,30E-02	3,81E-04	-6,32E-04
Contribution to eutrophication, terrestrial	mol N eq	6,65E-01	2,92E-02	1,07E-03	1,17E-04	6,32E-01	2,97E-03	-7,36E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,49E-01	9,57E-03	2,69E-04	3,83E-05	1,39E-01	8,98E-04	-2,90E-03
Contribution to resource use, minerals and metals	kg Sb eq	8,61E-04	4,24E-04	0*	0*	4,33E-04	4,09E-06	-3,31E-04
Contribution to resource use, fossils	MJ	1,70E+03	4,87E+01	4,48E-01	0*	1,63E+03	1,75E+01	-2,22E+01
Contribution to water use	m3 eq	8,74E+00	7,51E-01	0*	1,54E-03	5,39E+00	2,59E+00	-6,87E-01

Additional indicators for the French regulation are available as well

Inventory flows Indicators		Acti9 - iCV40N VigiARC Active - 1P+N - 16A - C Curve - 30mA - A-SI type - AFDD RCBO - A9TDEC616						
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3,03E+02	8,88E-01	0*	0*	3,02E+02	1,10E-01	-3,01E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	1,19E+00	5,95E-01	0*	0*	5,95E-01	0*	-4,31E-02
Contribution to total use of renewable primary energy resources	MJ	3,04E+02	1,48E+00	0*	0*	3,02E+02	1,10E-01	-3,44E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,69E+03	4,60E+01	4,48E-01	0*	1,63E+03	1,75E+01	-2,22E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	5,24E+00	2,62E+00	0*	0*	2,62E+00	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1,70E+03	4,87E+01	4,48E-01	0*	1,63E+03	1,75E+01	-2,22E+01
Contribution to use of secondary material	kg	1,71E-05	8,53E-06	0*	0*	8,53E-06	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	8,73E-02	1,02E-02	0*	0*	6,88E-02	8,29E-03	-1,50E-02
Contribution to hazardous waste disposed	kg	2,56E+01	1,20E+01	0*	0*	1,34E+01	2,27E-01	-2,68E+01
Contribution to non hazardous waste disposed	kg	1,38E+01	2,34E+00	0*	4,07E-02	1,13E+01	1,04E-01	-8,03E-01
Contribution to radioactive waste disposed	kg	3,39E-03	7,61E-04	8,03E-07	2,29E-06	2,62E-03	4,96E-06	-3,45E-04
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	2,05E-01	9,59E-04	0*	1,52E-03	1,03E-01	1,00E-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	3,25E-02	0*	0*	1,62E-02	1,62E-02	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, 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-00667-V01.01-EN	*Drafting rules*	PEP-PCR-ed4-2021 09 06
Verifier accreditation N°	VH39	*Supplemented by*	PSR-0005-ed2-2016 03 29
Date of issue	01/2023	*Information and reference documents*	www.pep-ecopassport.org
		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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