Product Environmental Profile

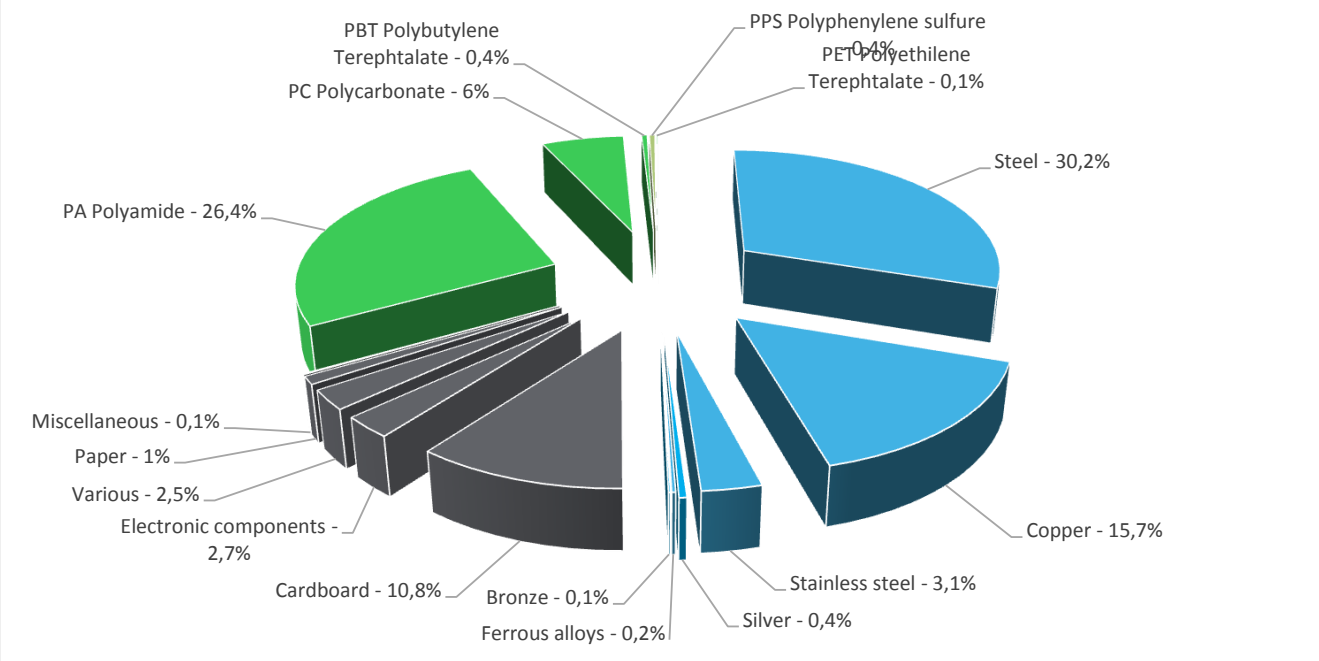
Compact NSXm 160F 4P Earth Leakage Circuit Breaker with electronic trip unit Micrologic 4.1 Everlink connections

General information

Representative product	Compact NSXm 160F 4P Earth Leakage Circuit Breaker with electronic trip unit Micrologic 4.1 Everlink connections - LV426728
Description of the product	Compact NSXm 160F 4P Earth Leakage Circuit Breaker with electronic Micrologic 4.1 trip unit is designed to provide protection of installation against overloads and short-circuits and provide earth leakage protection in electrical distribution systems with assigned voltage up to 440VAC and rated current up to 160A.
Functional unit	Provide during 20 years protection of installation against overloads and short-circuits and earth leakage protection in electrical distribution system with assigned voltage up to 440VAC and rated current up to 160A. The protections are ensured in accordance with the following parameters: - Number of poles = 4 - Protection of installation: rated service breaking capacity Ics at 415VAC = 36kA (according to IEC 60947-2) adjustable long time and short time protections and non-adjustable instantaneous protection - Earth leakage protection: adjustable sensitivity IΔn class A and AC adjustable time delay Δt

Constituent materials

Reference product mass	1848 g	including the product, its packaging and additional elements and accessories



	Plastics	33,3%
	Metals	49,7%
	Others	17,1%

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website
http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page

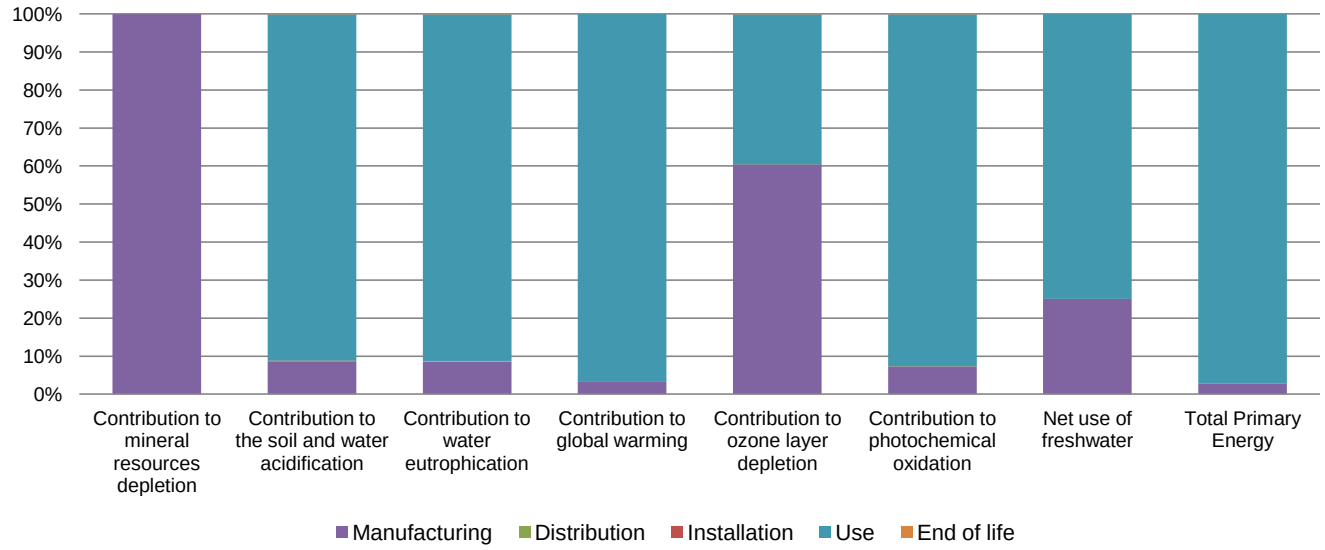
Additional environmental information

The Compact NSXm 160F 4P Earth Leakage Circuit Breaker with electronic trip unit Micrologic 4.1 Everlink connections presents the following relevent environmental aspects	
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 229,1g, consisting of cardboard (208,7g), paper (19,4g) and PE film (1g) Product distribution optimised by setting up local distribution centres
Installation	The Compact NSXm 160F 4P ELCB with Micrologic 4.1 trip unit does not need any installation operation
Use	The product does not require special maintenance operations.
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials This product contains 3 electronic boards (25g, 21g and 3g) that should be separated from the stream of waste so as to optimize end-of-life treatment. The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page Recyclability potential: **52%** Based on “ECO’DEEE recyclability and recoverability calculation method” (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental impacts

Reference life time	20 years			
Product category	Differential circuit breaker			
Installation elements	No special components needed			
Use scenario	Load rate: 50% of In Use time rate: 30% of RLT			
Geographical representativeness	China			
Technological representativeness	Compact NSXm 160F 4P Earth Leakage Circuit Breaker with electronic Micrologic 4.1 trip unit is designed to provide protection of installation against overloads and short-circuits and provide earth leakage protection in electrical distribution systems with assigned voltage up to 440VAC and rated current up to 160A.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: Poland	Electricity mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN

Compulsory indicators		Compact NSXm 160F 4P Earth Leakage Circuit Breaker with electronic trip unit Micrologic 4.1 Everlink connections - LV426728					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	9,48E-03	9,47E-03	0*	0*	2,17E-06	0*
Contribution to the soil and water acidification	kg SO_2 eq	5,87E-01	5,10E-02	1,09E-03	0*	5,35E-01	5,37E-04
Contribution to water eutrophication	kg PO_4^{3-} eq	1,55E-01	1,33E-02	2,51E-04	0*	1,41E-01	1,61E-04
Contribution to global warming	kg CO_2 eq	5,11E+02	1,70E+01	2,38E-01	0*	4,93E+02	3,37E-01
Contribution to ozone layer depletion	kg CFC11 eq	9,94E-06	6,00E-06	0*	0*	3,93E-06	1,39E-08
Contribution to photochemical oxidation	kg C_2H_4 eq	6,82E-02	4,92E-03	7,77E-05	0*	6,32E-02	5,49E-05
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	7,35E-01	1,84E-01	0*	0*	5,50E-01	2,62E-04
Total Primary Energy	MJ	8,31E+03	2,33E+02	3,37E+00	0*	8,07E+03	2,58E+00



Optional indicators		Compact NSXm 160F 4P Earth Leakage Circuit Breaker with electronic trip unit Micrologic 4.1 Everlink connections - LV426728					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	7,92E+03	1,99E+02	3,35E+00	0*	7,71E+03	2,36E+00
Contribution to air pollution	m³	5,51E+04	3,91E+03	1,01E+01	0*	5,12E+04	1,87E+01
Contribution to water pollution	m³	2,73E+04	2,68E+03	3,92E+01	0*	2,45E+04	2,40E+01
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,18E-01	1,18E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	4,24E+02	1,02E+01	0*	0*	4,14E+02	0*
Total use of non-renewable primary energy resources	MJ	7,89E+03	2,23E+02	3,37E+00	0*	7,66E+03	2,58E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	4,20E+02	5,87E+00	0*	0*	4,14E+02	0*
Use of renewable primary energy resources used as raw material	MJ	4,30E+00	4,30E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7,87E+03	2,06E+02	3,37E+00	0*	7,66E+03	2,58E+00
Use of non renewable primary energy resources used as raw material	MJ	1,72E+01	1,72E+01	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*

Waste categories	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	1,49E+02	1,30E+02	0*	0*	1,59E+01	2,59E+00
Non hazardous waste disposed	kg	9,61E+01	6,62E+00	0*	0*	8,95E+01	0*
Radioactive waste disposed	kg	6,88E-03	3,92E-03	6,03E-06	0*	2,95E-03	1,29E-05
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1,27E+00	1,60E-01	0*	2,27E-01	0*	8,81E-01
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	6,17E-02	5,04E-03	0*	0*	0*	5,67E-02
Exported Energy	MJ	0,00E+00	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 EIME v5.6.0.1, database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

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-00249-V01.01-EN	*Drafting rules*	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH08	*Supplemented by*	PSR-0005-ed2-EN-2016 03 29
Date of issue	08/2017	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025 : 2010

Internal External X

The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)

PEP are compliant with XP C08-100-1 :2014

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »

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