

Product Environmental Profile

ComPacT NSX500 DC 1500V Circuit Breaker





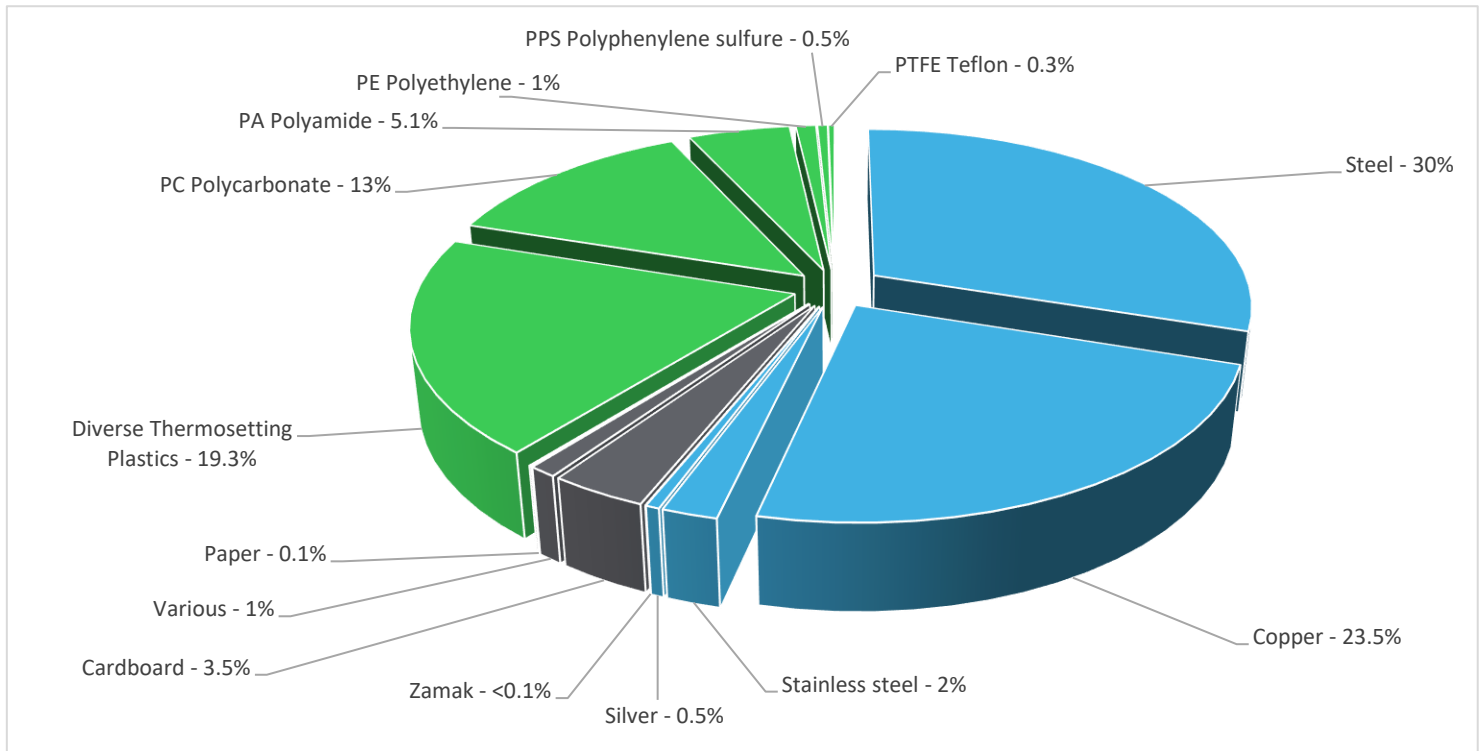
General information

Representative product	ComPacT NSX500 DC 1500V Circuit Breaker - C50F4TM500D3
Description of the product	The ComPacT NSX500 DC 4 pole circuit breaker equipped with Thermal-magnetic (TM-D) trip units is designed to provide protection against overloads and short-circuits for industrial and commercial electrical distribution systems with assigned voltage upto 1500VDC and rated current of 500A.
Functional unit	<p>This product is to protect the installation during 20 years against overloads and short-circuits in circuit with assigned voltage 1500VDC and rated current 500A. This protection is ensured in accordance with the following parameters:</p> <ul style="list-style-type: none"> - Number of poles = 4 - Rated service breaking capacity Ics at 1500 V DC = 50 kA (according to IEC 60947-2) - Tripping curve = Long time and instantaneous protections



Constituent materials

Reference product mass	7830 g including the product, its packaging and additional elements and accessories
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Plastics	39.4%
Metals	56.0%
Others	4.6%



Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) 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), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate– BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) as mentioned in the 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 NSX500 DC 1500V Circuit Breaker presents the following relevant environmental aspects

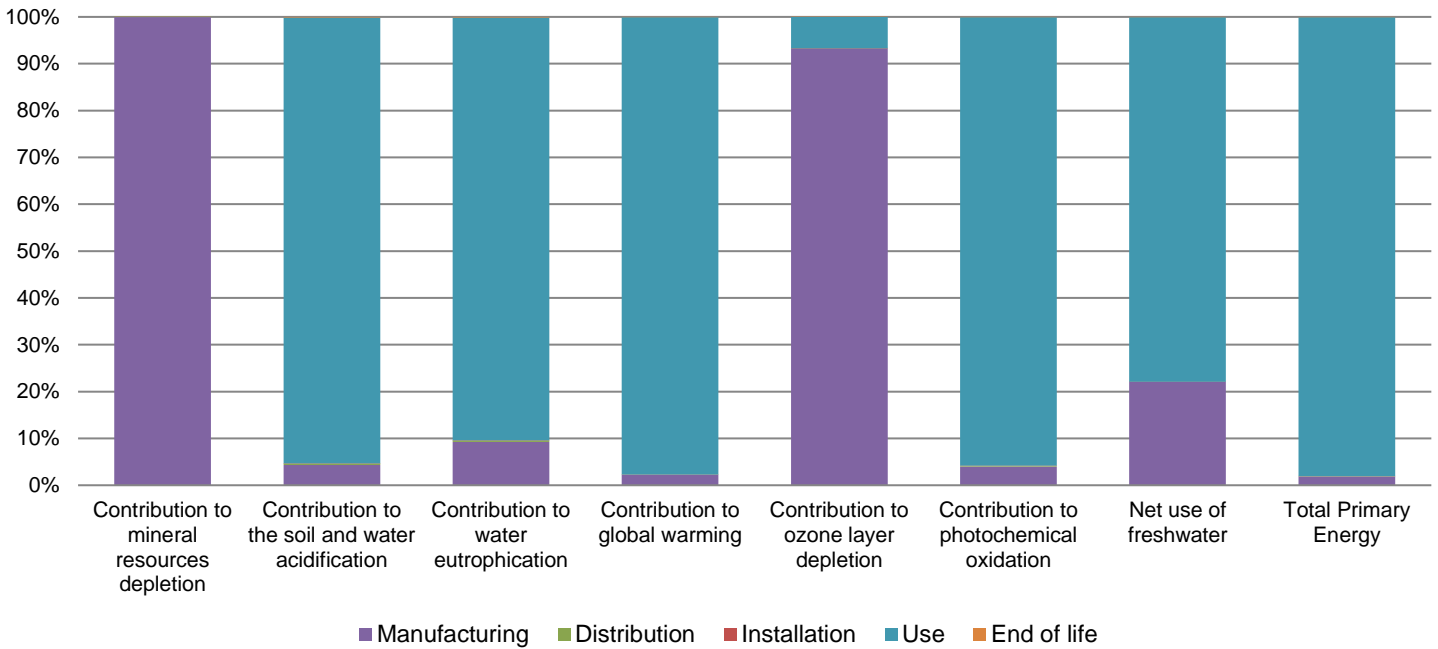
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 348.2 g, consisting of Cardboard (76.1%) / paper (2.0 %) / PE (21.9%) Product distribution optimised by setting up local distribution centres
Installation	Ref C50F4TM500D3 does not require any installation operations
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 Plastic with Brominated FR(4.07g) 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: 53% 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	Circuit-breakers			
Installation elements	The disposal of the packaging materials for installation phase			
Use scenario	Load rate: 50% of In Use time rate: 30% of RLT			
Geographical representativeness	China			
Technological representativeness	The ComPacT NSX500 DC 4 pole circuit breaker equipped with Thermal-magnetic (TM-D) trip units is designed to provide protection against overloads and short-circuits for industrial and commercial electrical distribution systems with assigned voltage upto 1500VDC and rated current of 500A.			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: SBMLV, China	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 NSX500 DC 1500V Circuit Breaker - C50F4TM500D3					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.91E-02	2.91E-02	0*	0*	7.86E-06	0*
Contribution to the soil and water acidification	kg SO ₂ eq	2.04E+00	8.78E-02	7.74E-03	0*	1.94E+00	2.16E-03
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	5.67E-01	5.25E-02	1.78E-03	0*	5.12E-01	5.97E-04
Contribution to global warming	kg CO ₂ eq	1.83E+03	4.00E+01	1.70E+00	0*	1.79E+03	1.11E+00
Contribution to ozone layer depletion	kg CFC11 eq	2.13E-04	1.99E-04	0*	0*	1.43E-05	4.86E-08
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	2.40E-01	9.52E-03	5.51E-04	0*	2.29E-01	2.26E-04
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m ³	2.57E+00	5.67E-01	0*	0*	2.00E+00	9.75E-04
Total Primary Energy	MJ	2.99E+04	5.53E+02	2.41E+01	0*	2.93E+04	1.05E+01

ENVPEP2106002_V1 - Product Environmental Profile - ComPacT NSX500 DC 1500V Circuit Breaker



Optional indicators		ComPacT NSX500 DC 1500V Circuit Breaker - C50F4TM500D3						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	
Contribution to fossil resources depletion	MJ	2.74E+04	3.36E+02	2.39E+01	0*	2.71E+04	8.45E+00	
Contribution to air pollution	m³	2.01E+05	1.55E+04	7.16E+01	0*	1.86E+05	7.60E+01	
Contribution to water pollution	m³	9.39E+04	4.48E+03	2.80E+02	0*	8.91E+04	9.09E+01	
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	
Use of secondary material	kg	3.03E-01	3.03E-01	0*	0*	0*	0*	
Total use of renewable primary energy resources	MJ	1.52E+03	1.75E+01	0*	0*	1.50E+03	0*	
Total use of non-renewable primary energy resources	MJ	2.84E+04	5.36E+02	2.41E+01	0*	2.78E+04	1.05E+01	
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.52E+03	1.21E+01	0*	0*	1.50E+03	0*	
Use of renewable primary energy resources used as raw material	MJ	5.43E+00	5.43E+00	0*	0*	0*	0*	
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.83E+04	4.68E+02	2.41E+01	0*	2.78E+04	1.05E+01	
Use of non renewable primary energy resources used as raw material	MJ	6.74E+01	6.74E+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	5.77E+02	5.09E+02	0*	0*	5.77E+01	1.06E+01	
Non hazardous waste disposed	kg	3.52E+02	2.71E+01	6.05E-02	6.27E-02	3.25E+02	0*	
Radioactive waste disposed	kg	2.28E-02	1.20E-02	4.31E-05	2.50E-06	1.07E-02	5.08E-05	
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	
Materials for recycling	kg	4.82E+00	7.33E-01	0*	2.93E-01	0*	3.80E+00	
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	
Materials for energy recovery	kg	1.45E-01	0*	0*	0*	0*	1.45E-01	
Exported Energy	MJ	8.60E-04	8.08E-05	0*	7.79E-04	0*	0*	

* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.9.1, database version 2018-11 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	ENVPEP2106002_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	11/2021	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	Information and reference documents	www.pep-ecopassport.org
<i>Independent verification of the declaration and data</i>			
Internal	X	External	
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »</i>			

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