

Product Environmental Profile

NSX400N 50kA AC 3P3D 400A 2.3





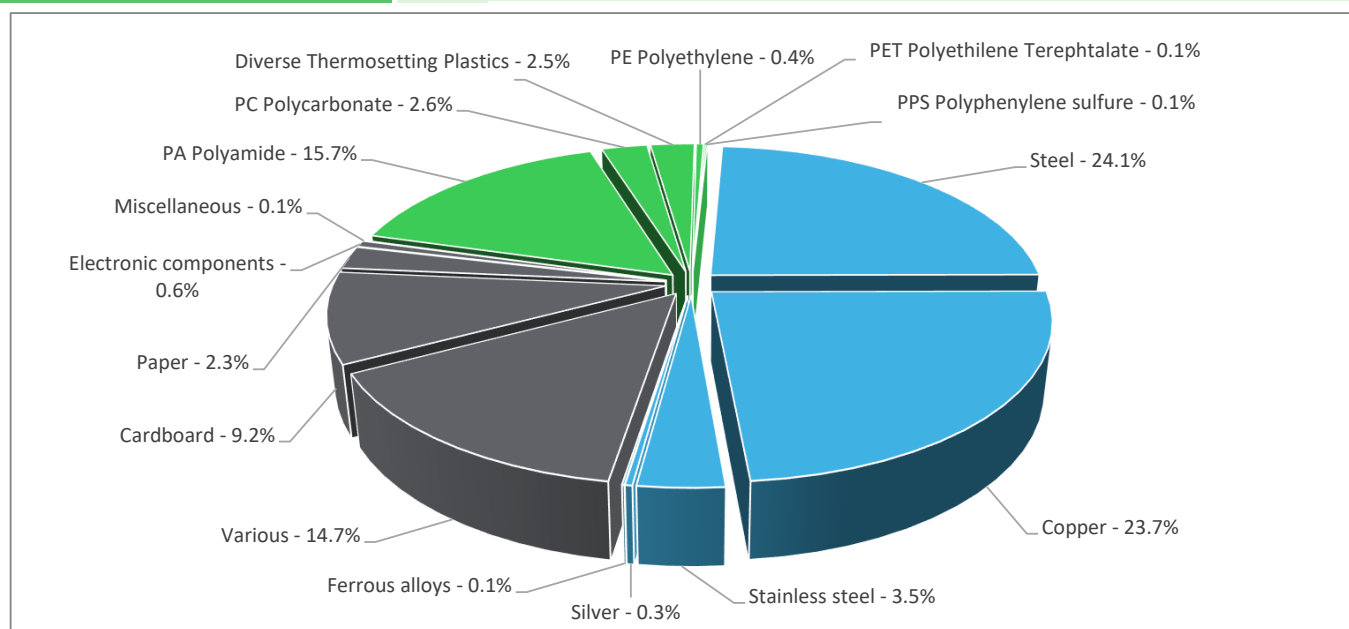
General information

Representative product	NSX400N 50kA AC 3P3D 400A 2.3 - C40N32D400
Description of the product	The Compact NSX400N 3 pole circuit breaker equipped with Micrologic 2.3 trip units is designed to provide protection against overloads and short-circuits for industrial and commercial electrical distribution systems with assigned voltage upto 690VAC and rated current of 400A.
Functional unit	Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage U and rated current In. This protection is ensured in accordance with the following parameters: - Number of poles Np : 3 - Rated service breaking capacity Ics at 380/415 V AC = 50 kA (according to IEC 60947-2) - Tripping curve Cd : Long time and instantaneous protections



Constituent materials

Reference product mass 6065 g including the product, its packaging and additional elements and accessories



Plastics	21.40%
Metals	51.70%
Others	26.90%



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 NSX400N 50kA AC 3P3D 400A 2.3 presents the following relevant environmental aspects

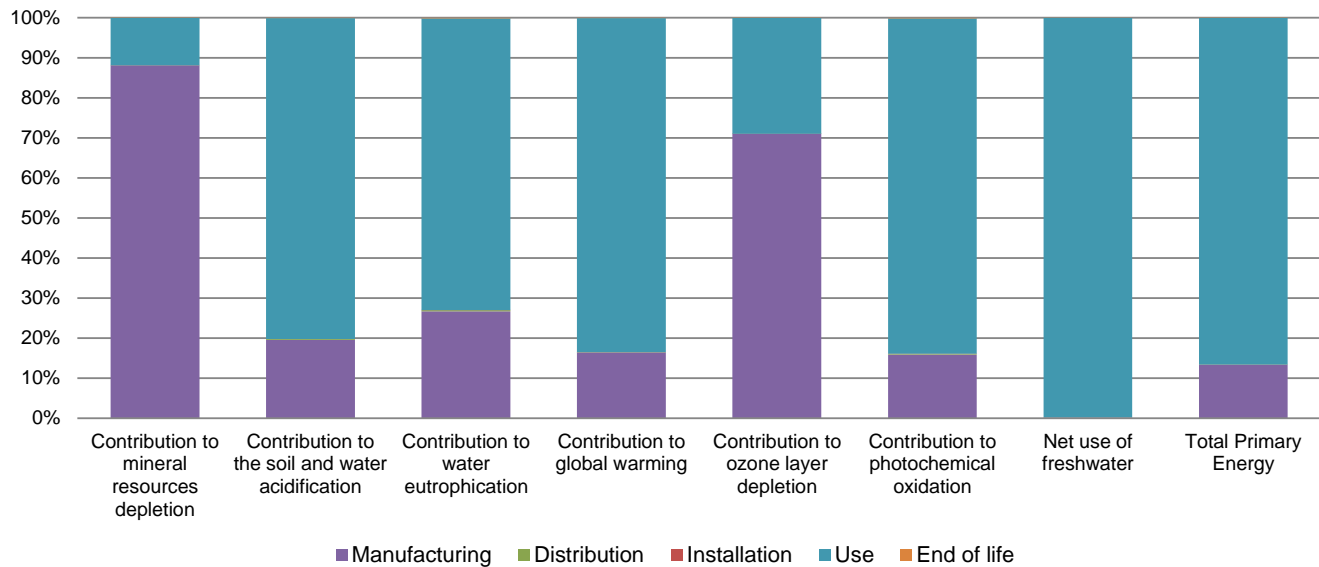
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 589.5 g, consisting of Cardboard (96.7%), PE film (2.8%), Paper (0.4%) and Polyester (0.1%) Product distribution optimised by setting up local distribution centres
Installation	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal)
Use	The Trip Unit have to be changed every 10 years.
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 Printed Circuit Board Assembly (33.8g) in Micrologic unit 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	Circuit-breakers			
Installation elements	No special components needed			
Use scenario	The product is in active mode 30% of the time with a power use of 14.4W and in off mode 70% of the time with a power use of 0W, for 20 years			
Geographical representativeness	Global			
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.			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: SE Alpes, France	Electricity mix; AC;consumption mix, at consumer; 220V; CN;at consumer; < 1kV; EU-27; at consumer; 240V; AU;at consumer; 230V; IN	Electricity mix; AC;consumption mix, at consumer; 220V; CN;at consumer; < 1kV; EU-27; at consumer; 240V; AU;at consumer; 230V; IN	Electricity mix; AC;consumption mix, at consumer; 220V; CN;at consumer; < 1kV; EU-27; at consumer; 240V; AU;at consumer; 230V; IN

Compulsory indicators		NSX400N 50kA AC 3P3D 400A 2.3 - C40N32D400					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.86E-02	1.64E-02	0*	0*	2.21E-03	0*
Contribution to the soil and water acidification	kg SO ₂ eq	1.42E+00	2.77E-01	3.57E-03	0*	1.13E+00	1.69E-03
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	2.71E-01	7.22E-02	8.23E-04	3.79E-05	1.97E-01	4.49E-04
Contribution to global warming	kg CO ₂ eq	8.16E+02	1.34E+02	7.83E-01	0*	6.80E+02	7.84E-01
Contribution to ozone layer depletion	kg CFC11 eq	1.14E-04	8.06E-05	0*	0*	3.29E-05	4.00E-08
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	1.21E-01	1.92E-02	2.55E-04	0*	1.01E-01	1.77E-04

Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	4.49E+02	5.92E-01	0*	0*	4.48E+02	0*
Total Primary Energy	MJ	1.30E+04	1.73E+03	1.11E+01	0*	1.13E+04	8.30E+00



Optional indicators		NSX400N 50kA AC 3P3D 400A 2.3 - C40N32D400					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.11E+04	1.54E+03	1.10E+01	0*	9.54E+03	6.68E+00
Contribution to air pollution	m³	7.95E+04	1.62E+04	3.33E+01	0*	6.32E+04	5.95E+01
Contribution to water pollution	m³	5.68E+04	2.09E+04	1.29E+02	0*	3.57E+04	6.94E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.44E+00	1.06E+00	0*	0*	3.83E-01	0*
Total use of renewable primary energy resources	MJ	7.48E+02	2.79E+01	0*	0*	7.20E+02	0*
Total use of non-renewable primary energy resources	MJ	1.23E+04	1.71E+03	1.11E+01	0*	1.05E+04	8.29E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	7.46E+02	2.68E+01	0*	0*	7.19E+02	0*
Use of renewable primary energy resources used as raw material	MJ	1.98E+00	1.12E+00	0*	0*	8.60E-01	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.22E+04	1.66E+03	1.11E+01	0*	1.05E+04	8.29E+00
Use of non renewable primary energy resources used as raw material	MJ	5.62E+01	4.80E+01	0*	0*	8.20E+00	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	4.71E+02	3.52E+02	0*	0*	1.10E+02	8.41E+00
Non hazardous waste disposed	kg	5.71E+02	1.35E+01	0*	0*	5.58E+02	0*
Radioactive waste disposed	kg	3.49E-01	3.11E-02	0*	0*	3.18E-01	4.05E-05
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	4.74E+00	3.60E-01	0*	5.74E-01	9.07E-01	2.90E+00
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	1.16E-01	0*	0*	0*	3.36E-02	8.26E-02
Exported Energy	MJ	2.50E-03	1.70E-04	0*	1.64E-03	6.95E-04	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 2016-11 in compliance with ISO14044.

The Manufacturing phase is impacting on Indicator of Abiotic depletion (elements, ultimate ultimate reserves) & Ozone layer depletion ODP steady state. The use phase is the life cycle phase which has the greatest impact on rest of the 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.

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<i>Validity period</i>	5 years	<i>Information and reference documents</i>	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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