

Product Environmental Profile

Circuit breaker, ComPacT NSX160F, 36kA/415VAC, 4 poles, MicroLogic Vigi 4.2 trip unit 100A

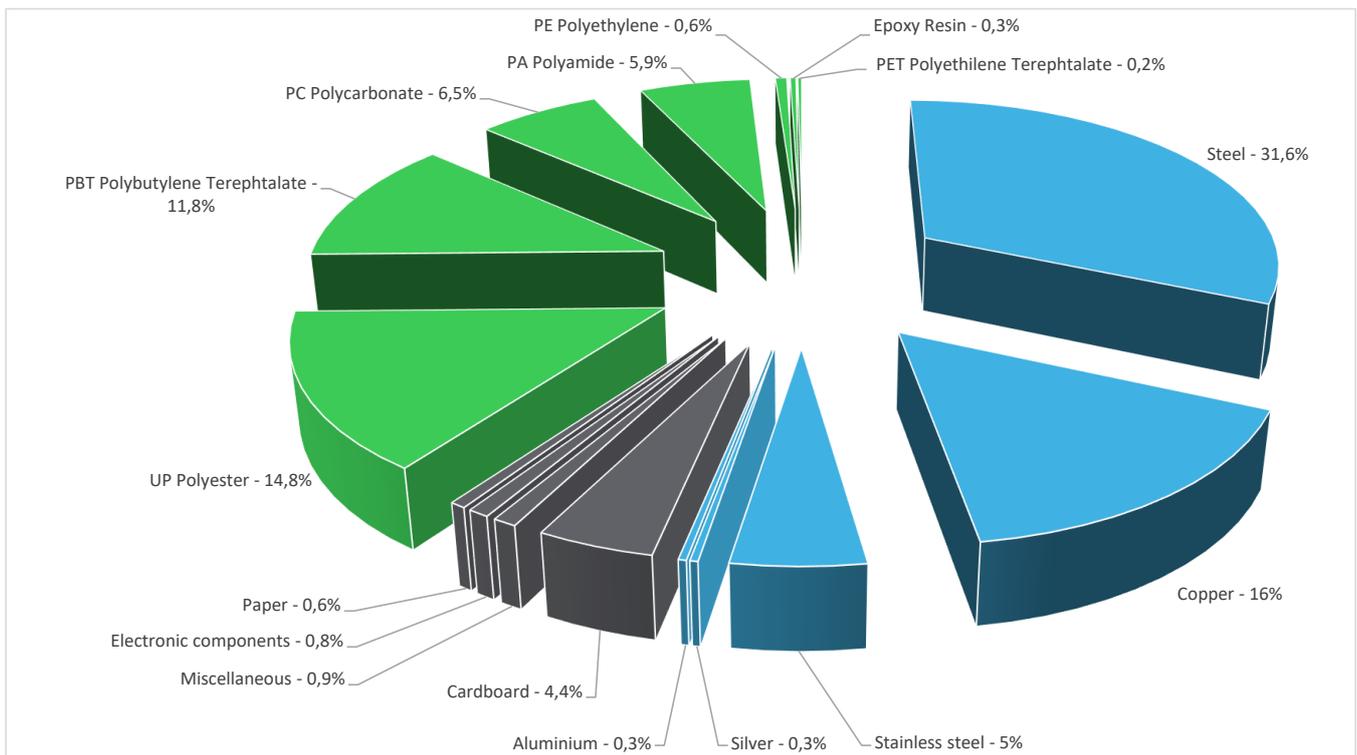


General information

Reference product	Circuit breaker, ComPacT NSX160F, 36kA/415VAC, 4 poles, MicroLogic Vigi 4.2 trip unit 100A - C16F44V100
Description of the product	The ComPacT NSX 160F 4P circuit breaker equipped with a MicroLogic 4.2 electronic trip unit is designed to provide protection to industrial and commercial electrical distribution systems (with assigned voltage up to 690VAC and rated current up to 100A) against overloads and short-circuits. This electronic trip unit also provides an earth leakage protection to detect and react to ground faults.
Functional unit	<p>Protect during 20 years the installation against overloads and short-circuits and people and premises at risk of fire or explosion against insulation defects in circuit with assigned voltage up to 690VAC and rated current up to 100A. This protection is ensured in accordance with the following parameters:</p> <ul style="list-style-type: none"> - Number of poles = 4P - Rated breaking capacity = F 36kA 415VAC - Tripping curve = Adjustable [LSOIR = long time, short time (fixed delay), instantaneous, residual current] - Number of protected poles = 4D 3D+N/2 3D - Sensitivity = Adjustable [30mA-5A] - Type of differential protection = Class A - IP degree of protection = IP40 conforming to IEC 60529 - IK degree of protection = IK07 conforming to IEC 62262

Constituent materials

Reference product mass 2780 g including the product, its packaging and additional elements and accessories



Metals	53,2%
Plastics	40,1%
Others	6,7%

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%	Recyclability rate has been calculated based on REEECYLAB 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).
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Environmental impacts

Reference service life time	20 years		
Product category	Differential circuit breaker		
Installation elements	No special components needed during the installation phase. The disposal of the packaging materials is accounted for during this phase (including transport to disposal).		
Use scenario	Load rate: 50% of In Use time rate: 30% of RLT		
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.		
Geographical representativeness	Europe		
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27
			[C1 - C4]
			Electricity Mix; Production mix; Low voltage; UE-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		Circuit breaker, ComPacT NSX160F, 36kA/415VAC, 4 poles, MicroLogic Vigi 4.2 trip unit 100A - C16F44V100							Loads and Benefits
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life		
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]		
Contribution to climate change	kg CO2 eq	1,02E+02	2,36E+01	3,64E-01	2,35E-01	7,27E+01	4,90E+00	-5,13E+00	
Contribution to climate change-fossil	kg CO2 eq	1,01E+02	2,33E+01	3,64E-01	2,25E-01	7,26E+01	4,81E+00	-5,04E+00	
Contribution to climate change-biogenic	kg CO2 eq	4,13E-01	2,14E-01	0*	1,04E-02	9,70E-02	9,18E-02	-8,93E-02	
Contribution to climate change-land use and land use change	kg CO2 eq	1,53E-06	4,56E-08	0*	0*	0*	1,49E-06	0,00E+00	
Contribution to ozone depletion	kg CFC-11 eq	4,97E-06	4,57E-06	5,57E-10	1,55E-08	3,11E-07	6,93E-08	-8,96E-07	
Contribution to acidification	mol H+ eq	6,76E-01	2,34E-01	2,34E-03	9,37E-04	4,15E-01	2,33E-02	-9,65E-02	
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	3,46E-03	9,01E-05	0*	1,70E-06	1,99E-04	3,17E-03	-8,77E-06	
Contribution to eutrophication marine	kg N eq	7,69E-02	2,39E-02	1,10E-03	2,49E-04	4,71E-02	4,48E-03	-3,50E-03	
Contribution to eutrophication, terrestrial	mol N eq	1,03E+00	2,60E-01	1,20E-02	1,89E-03	7,08E-01	4,44E-02	-4,05E-02	
Contribution to photochemical ozone formation - human health	kg COVNM eq	2,58E-01	9,05E-02	3,04E-03	5,04E-04	1,51E-01	1,30E-02	-1,77E-02	
Contribution to resource use, minerals and metals	kg Sb eq	1,32E-02	1,31E-02	0*	0*	5,27E-06	8,93E-05	-1,79E-03	
Contribution to resource use, fossils	MJ	2,44E+03	3,60E+02	5,06E+00	2,45E+00	1,85E+03	2,23E+02	-1,07E+02	
Contribution to water use	m3 eq	3,10E+01	1,16E+01	0*	1,00E-01	2,57E+00	1,67E+01	-5,10E+00	

Additional indicators for the French regulation are available as well

Inventory flows Indicators		Circuit breaker, ComPacT NSX160F, 36kA/415VAC, 4 poles, MicroLogic Vigi 4.2 trip unit 100A - C16F44V100						
Inventory flows	Unit	Total	Manufact.	Distribution	Installation	Use	End of Life	Loads and Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3,68E+02	1,01E+01	0*	1,75E-01	3,56E+02	2,21E+00	-2,01E+00
Contribution to use of renewable primary energy resources used as raw material	MJ	7,66E-01	7,66E-01	0*	0*	0*	0*	-7,26E-01
Contribution to total use of renewable primary energy resources	MJ	3,69E+02	1,08E+01	0*	1,75E-01	3,56E+02	2,21E+00	-2,73E+00
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2,42E+03	3,37E+02	5,06E+00	2,45E+00	1,85E+03	2,23E+02	-1,07E+02
Contribution to use of non renewable primary energy resources used as raw material	MJ	2,31E+01	2,31E+01	0*	0*	0*	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	2,44E+03	3,60E+02	5,06E+00	2,45E+00	1,85E+03	2,23E+02	-1,07E+02
Contribution to use of secondary material	kg	1,08E-01	1,08E-01	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	7,61E-01	2,71E-01	0*	2,33E-03	5,99E-02	4,27E-01	-1,19E-01
Contribution to hazardous waste disposed	kg	2,25E+02	2,21E+02	0*	0*	1,36E+00	2,64E+00	-1,49E+02
Contribution to non hazardous waste disposed	kg	2,38E+01	1,21E+01	1,27E-02	7,63E-01	1,05E+01	4,37E-01	-4,74E+00
Contribution to radioactive waste disposed	kg	8,36E-03	6,02E-03	9,08E-06	1,02E-04	2,19E-03	3,57E-05	-1,70E-03
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	1,58E+00	7,70E-03	0*	1,29E-01	0*	1,44E+00	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	0,00E+00	0*	0*	0*	0*	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 v5.9.4, 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>

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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Verifier accreditation N°	VH08	Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	12/2023	Information and reference documents	www.pep-ecopassport.org
		Validity period	5 years
<i>Independent verification of the declaration and data, in compliance with ISO 14025 : 2010</i>			
Internal	External	X	
<i>The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)</i>			
<i>PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019</i>			
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »</i>			
			

Schneider Electric Industries SAS

Country Customer Care Center
<http://www.se.com/contact>

35, rue Joseph Monier
 CS 30323
 F- 92500 Rueil Malmaison Cedex
 RCS Nanterre 954 503 439
 Capital social 928 298 512 €

www.se.com

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