

# Product Environmental Profile

## 400-600A General Duty & Heavy Duty E-series Safety Switches

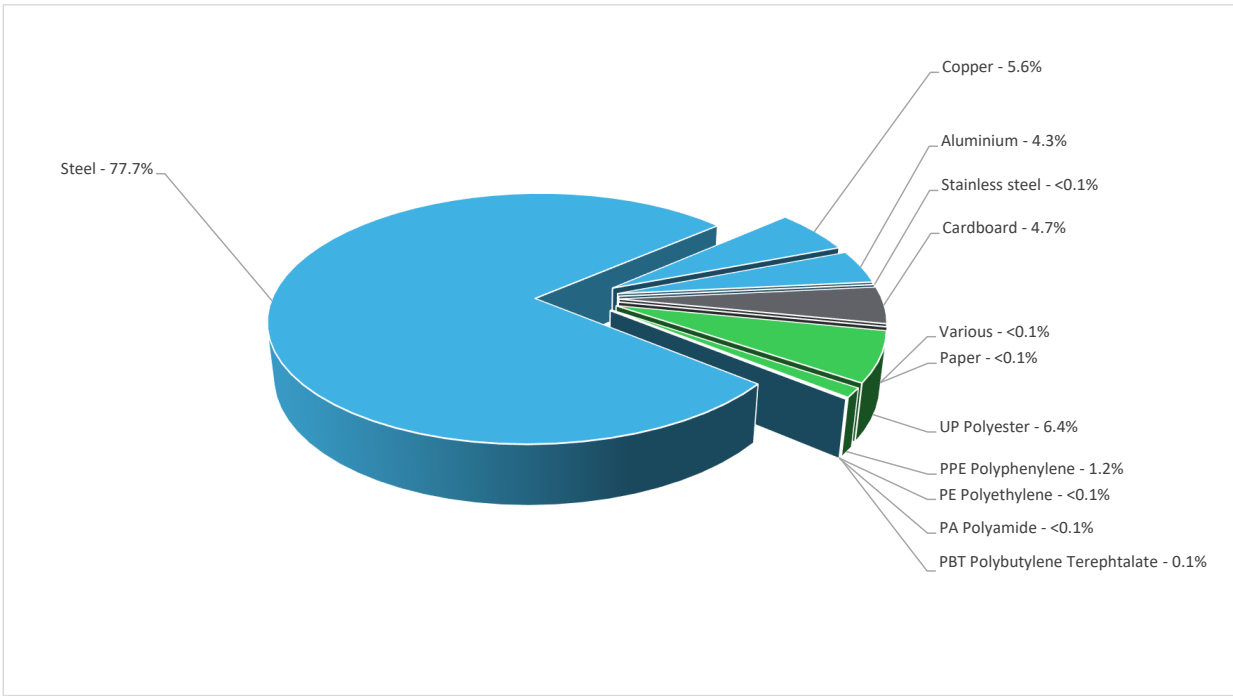


## General information

Reference product	400-600A General Duty & Heavy Duty E-series Safety Switches - H365NR
Description of the product	The main purpose of the E-series safety switch is to isolate power and provide an effective way to interrupt power in an emergency. Two primary applications for safety switches are as a lockout on sight disconnect and as a circuit isolation device.
Description of the range	Single product
Functional unit	Turn off all or part of an installation by separating the installation or part of the installation of all electrical energy or earth, for safety reasons with a rated voltage U, and rated current In ensuring isolation characterised by a rated voltage Ui, and if applicable the specific specifications, according to the appropriate use scenario, and during the reference service life of the product of 20 years.
Specifications are:	U = 600 V In = 600 A Ui = 2200V IP = NEMA TYPE 3R

## Constituent materials

Reference product mass	88500 g including the product, its packaging, additional elements and accessories
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Plastics	7.7%
Metals	87.6%
Others	4.7%

## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website

<https://www.se.com>

## Additional environmental information

End Of Life	Recyclability potential:	<b>90%</b>	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECYLAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR 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	Disconnectors - Low voltage		
Installation elements	The product does not require special installation procedure and requires little to no energy to install.		
Use scenario	Load rate = 50 % In Use rate (closed device) = 30 % RLT		
Time representativeness	The collected data are representative of the year 2025		
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are Similar and representative of the actual type of technologies used to make the product.		
Geographical representativeness	Final assembly site	Use phase	
	Monterrey, Mexico	US, Cannada, Mexico	
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Low voltage; 2020; Mexico, MX	No energy used	Electricity Mix; Low voltage; 2020; United States, US
			Electricity Mix; Low voltage; 2020; Canada, CA
			Electricity Mix; Low voltage; 2020; Mexico, MX
		[C1 - C4]	Global, European and French datasets are used.

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.se.com/contact>

Mandatory Indicators		400-600A General Duty & Heavy Duty E-series Safety Switches - H365NR						
Impact indicators	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to climate change	kg CO2 eq	1.55E+03	4.52E+02	2.24E+02	2.14E-01	6.56E+02	2.15E+02	-3.09E+02
Contribution to climate change-fossil	kg CO2 eq	1.54E+03	4.48E+02	2.24E+02	1.78E-01	6.52E+02	2.14E+02	-3.06E+02
Contribution to climate change-biogenic	kg CO2 eq	7.94E+00	3.66E+00	0*	3.61E-02	3.28E+00	9.55E-01	-2.97E+00
Contribution to climate change-land use and land use change	kg CO2 eq	1.67E-05	7.93E-07	0*	0*	0*	1.59E-05	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.19E-04	1.91E-05	1.97E-04	0*	2.45E-06	6.45E-07	-4.65E-05
Contribution to acidification	mol H+ eq	7.28E+00	2.62E+00	9.22E-01	2.13E-03	2.92E+00	8.14E-01	-2.55E+00
Contribution to eutrophication, freshwater	kg P eq	3.32E-02	2.05E-03	2.62E-05	0*	1.09E-03	3.01E-02	-5.81E-04
Contribution to eutrophication marine	kg N eq	1.31E+00	3.52E-01	4.19E-01	1.01E-03	3.71E-01	1.65E-01	-1.82E-01
Contribution to eutrophication, terrestrial	mol N eq	1.46E+01	3.82E+00	4.55E+00	1.02E-02	4.41E+00	1.84E+00	-2.11E+00
Contribution to photochemical ozone formation - human health	kg COVNM eq	4.63E+00	1.29E+00	1.52E+00	2.46E-03	1.22E+00	5.96E-01	-7.68E-01
Contribution to resource use, minerals and metals	kg Sb eq	1.48E-02	1.37E-02	0*	0*	1.25E-04	9.70E-04	-8.60E-02
Contribution to resource use, fossils	MJ	4.56E+04	1.45E+04	2.78E+03	0*	1.42E+04	1.40E+04	-6.68E+03
Contribution to water use	m3 eq	3.45E+02	2.00E+02	1.13E+01	3.72E-01	3.56E+01	9.76E+01	-1.53E+02

Inventory flows Indicators		400-600A General Duty & Heavy Duty E-series Safety Switches - H365NR						
Inventory flows	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.35E+03	1.79E+02	0*	0*	2.15E+03	2.35E+01	-9.80E+01
Contribution to use of renewable primary energy resources used as raw material	MJ	8.20E+01	8.20E+01	0*	0*	0*	0*	0.00E+00
Contribution to total use of renewable primary energy resources	MJ	2.44E+03	2.61E+02	0*	0*	2.15E+03	2.35E+01	-9.80E+01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.54E+04	1.44E+04	2.78E+03	0*	1.42E+04	1.40E+04	-6.68E+03
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.91E+02	1.91E+02	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	4.56E+04	1.45E+04	2.78E+03	0*	1.42E+04	1.40E+04	-6.68E+03
Contribution to use of secondary material	kg	0.00E+00	0*	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	8.03E+00	4.65E+00	2.64E-01	8.65E-03	8.30E-01	2.27E+00	-3.57E+00
Contribution to hazardous waste disposed	kg	1.00E+03	9.91E+02	1.85E-01	0*	1.18E+01	0*	-6.87E+03
Contribution to non hazardous waste disposed	kg	4.09E+02	2.94E+02	2.27E-01	4.09E+00	1.01E+02	9.89E+00	-2.92E+02
Contribution to radioactive waste disposed	kg	2.10E-01	1.41E-01	4.44E-02	0*	2.37E-02	7.66E-04	-1.62E-01
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	8.33E+01	9.81E+00	0*	0*	0*	7.35E+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	8.25E-01	9.85E-02	0*	0*	0*	7.27E-01	0.00E+00

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

Contribution to biogenic carbon content of the product kg of C 0.00E+00

Contribution to biogenic carbon content of the associated packaging kg of C 1.13E+00

\* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)


Mandatory Indicators		400-600A General Duty & Heavy Duty E-series Safety Switches - H365NR							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	6.56E+02	0*	0*	0*	0*	0*	6.56E+02	0*
Contribution to climate change-fossil	kg CO2 eq	6.52E+02	0*	0*	0*	0*	0*	6.52E+02	0*
Contribution to climate change-biogenic	kg CO2 eq	3.28E+00	0*	0*	0*	0*	0*	3.28E+00	0*
Contribution to climate change-land use and land use change	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to ozone depletion	kg CFC-11 eq	2.45E-06	0*	0*	0*	0*	0*	2.45E-06	0*
Contribution to acidification	mol H+ eq	2.92E+00	0*	0*	0*	0*	0*	2.92E+00	0*
Contribution to eutrophication, freshwater	kg P eq	1.09E-03	0*	0*	0*	0*	0*	1.09E-03	0*
Contribution to eutrophication marine	kg N eq	3.71E-01	0*	0*	0*	0*	0*	3.71E-01	0*
Contribution to eutrophication, terrestrial	mol N eq	4.41E+00	0*	0*	0*	0*	0*	4.41E+00	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.22E+00	0*	0*	0*	0*	0*	1.22E+00	0*
Contribution to resource use, minerals and metals	kg Sb eq	1.25E-04	0*	0*	0*	0*	0*	1.25E-04	0*
Contribution to resource use, fossils	MJ	1.42E+04	0*	0*	0*	0*	0*	1.42E+04	0*
Contribution to water use	m3 eq	3.56E+01	0*	0*	0*	0*	0*	3.56E+01	0*

Inventory flows Indicators		400-600A General Duty & Heavy Duty E-series Safety Switches - H365NR								
Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]	
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.15E+03	0*	0*	0*	0*	0*	2.15E+03	0*	
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to total use of renewable primary energy resources	MJ	2.15E+03	0*	0*	0*	0*	0*	2.15E+03	0*	
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.42E+04	0*	0*	0*	0*	0*	1.42E+04	0*	
Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to total use of non-renewable primary energy resources	MJ	1.42E+04	0*	0*	0*	0*	0*	1.42E+04	0*	
Contribution to use of secondary material	kg	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to use of renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to use of non renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to net use of freshwater	m³	8.30E-01	0*	0*	0*	0*	0*	8.30E-01	0*	
Contribution to hazardous waste disposed	kg	1.18E+01	0*	0*	0*	0*	0*	1.18E+01	0*	
Contribution to non hazardous waste disposed	kg	1.01E+02	0*	0*	0*	0*	0*	1.01E+02	0*	
Contribution to radioactive waste disposed	kg	2.37E-02	0*	0*	0*	0*	0*	2.37E-02	0*	
Contribution to components for reuse	kg	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to materials for recycling	kg	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to materials for energy recovery	kg	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to exported energy	MJ	0*	0*	0*	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 v6.2.4, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

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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		Supplemented by	PSR-0005-ed3-2023 06 06
Verifier accreditation N°	VH08	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue	03-2025	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)			
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022			
The components of the present PEP may not be compared with components from any other program.			
Document complies with ISO 14025:2006 "Environmental labels and declarations. Type III environmental declarations"			
			

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