Product Environmental Profile

SSP3 Solid State Relay

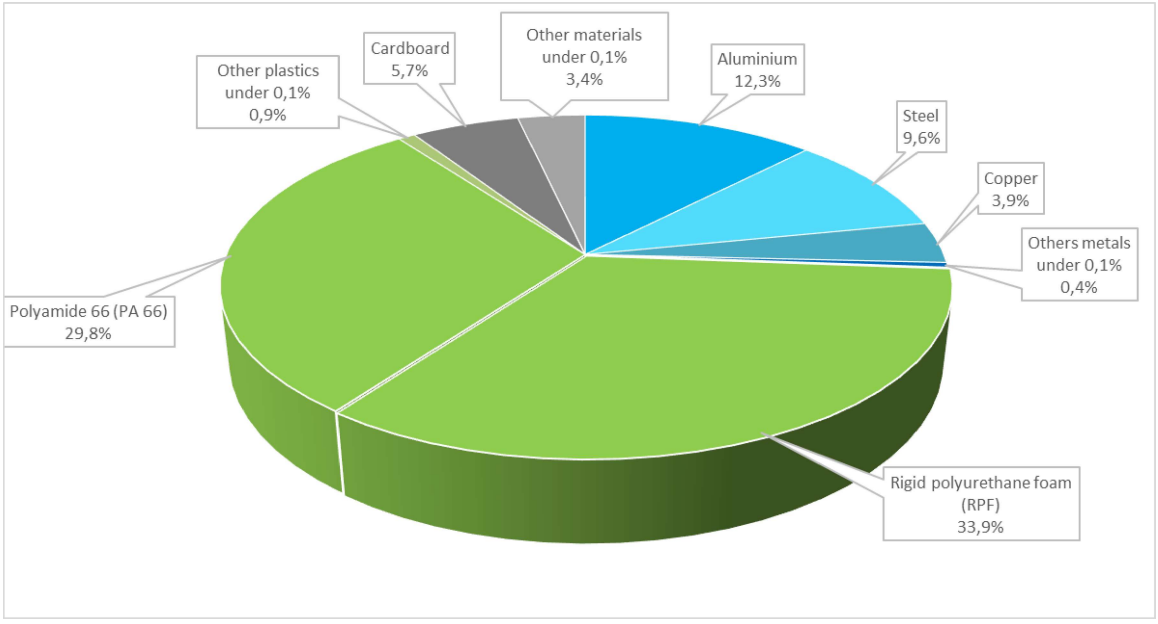
General information

Reference product	SSP3 Solid State Relay- SSP3A250P7T
Description of the product	A relay protects electronic devices by switching the current from one path to another one.
Description of the range	The PEP applies to the SSP3 product range, including the different switching modes, different control voltage and different operational voltage. According to the manufacturer, the reference product is the most impacting: it is both heaviest and most powerful product.
Functional unit	Description: Protect during 10 years against overvoltage electrical equipment by switching the current on and off, with rated operational current: 3 x 25 or 50 AAC; rated operational voltage: up to 660 VAC and control voltage: 4-32 VDC, 18-36 VAC or 90-280 VAC; (depending on the product)
Product's final assembly site	Malta and China

Characteristics of covered products		
References	**Product mass in kg (without packaging)**	**Power in W**
SSP3A225BDRT	0,351	80
SSP3A250BDRT	0,356	160
SSP3A250B7T	0,355	160
SSP3A250P7RT	0,354	160
SSP3A225P7T	0,351	80
SSP3A250BDT	0,355	160
SSP3A225BDT	0,354	80
SSP3A250P7T - reference product	**0,357**	**160**

Constituent materials

Reference product mass	377 g	including the product, its packaging, additional elements and accessories



Plastics	64.60%
Metals	26.20%
Others	9.20%

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:	**28.7%**	The recyclability rate was calculated using EIME tool based on the Eco 'DEE method (2008) and the CODDE database (including recyclability potential data)

Environmental impacts

Reference service lifetime	10 years
Product category	Other equipment's - Active product
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates also consumption that is take into account separately.
Installation elements	No special components needed
Use scenario	Active product: Energy Consumption Active 20% of the time and off 80%
Time representativeness	The collected data are representative of the year 2024
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	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Malta and China	Global	Global	Global

Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Low voltage; 2020; China, CN Electricity Mix; Low voltage; 2020; Malta, MT	Global: only module Europe available	Global	No primary energy model 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		SSP3 Solid State Relay : SSP3A250P7T						
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	1,81E+03	1,00E+01	0*	0*	1,80E+03	1,91E-01	-3,79E-01
Contribution to climate change-fossil	kg CO2 eq	1,81E+03	1,00E+01	0*	0*	1,79E+03	1,89E-01	-3,66E-01
Contribution to climate change-biogenic	kg CO2 eq	1,46E+00	0*	0*	5,67E-02	1,42E+00	1,74E-03	-1,29E-02
Contribution to climate change-land use and land use change	kg CO2 eq	2,13E-07	8,04E-08	3,43E-08	4,91E-10	0*	9,80E-08	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	1,02E-05	1,74E-06	0*	0*	8,46E-06	1,14E-08	-8,02E-08
Contribution to acidification	mol H+ eq	1,13E+01	7,09E-02	3,84E-03	0*	1,12E+01	0*	-4,10E-03
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$eq	1,42E-03	7,32E-05	0*	0*	1,30E-03	4,69E-05	-1,99E-06
Contribution to eutrophication marine	kg N eq	1,27E+00	8,57E-03	8,76E-04	0*	1,26E+00	2,11E-04	-2,69E-04
Contribution to eutrophication, terrestrial	mol N eq	1,52E+01	8,80E-02	9,59E-03	0*	1,51E+01	2,68E-03	-2,96E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	4,20E+00	2,95E-02	2,48E-03	0*	4,17E+00	6,61E-04	-1,06E-03
Contribution to resource use, minerals and metals	kg Sb eq	5,53E-04	3,03E-04	0*	0*	2,48E-04	1,64E-06	-1,08E-04
Contribution to resource use, fossils	MJ	3,27E+04	1,50E+02	0*	0*	3,25E+04	5,04E+00	-6,44E+00
Contribution to water use	m3 eq	1,02E+02	2,78E+00	0*	0*	9,89E+01	4,55E-02	-1,57E-01

Inventory flows Indicators		SSP3 Solid State Relay :- SSP3A250P7T						
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	4,09E+03	4,47E+00	0*	0*	4,08E+03	0*	-3,28E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	4,16E-01	4,16E-01	0*	0*	0*	0*	0,00E+00
Contribution to total use of renewable primary energy resources	MJ	4,09E+03	4,89E+00	0*	0*	4,08E+03	0*	-3,28E-01
Contribution to use of non-renewable primary energy excluding non-renewable primary energy used as raw material	MJ	3,27E+04	1,43E+02	0*	0*	3,25E+04	5,04E+00	-6,44E+00
Contribution to use of non-renewable primary energy resources used as raw material	MJ	6,87E+00	6,87E+00	0*	0*	0*	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	3,27E+04	1,50E+02	0*	0*	3,25E+04	5,04E+00	-6,44E+00
Contribution to use of secondary material	kg	7,04E-05	7,04E-05	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	m^3	2,37E+00	6,28E-02	0*	0*	2,30E+00	1,10E-03	-3,65E-03
Contribution to hazardous waste disposed	kg	5,14E+01	5,91E+00	0*	1,34E-02	4,50E+01	4,61E-01	-2,82E+00
Contribution to non-hazardous waste disposed	kg	3,09E+02	3,43E+00	0*	0*	3,05E+02	9,80E-02	-7,74E-01
Contribution to radioactive waste disposed	kg	4,02E-02	3,05E-03	0*	0*	3,71E-02	1,48E-05	-6,16E-04
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	5,68E-02	7,54E-03	0*	0*	0*	4,93E-02	0,00E+00
Contribution to materials for energy recovery	kg	5,19E-04	5,19E-04	0*	0*	0*	0*	0,00E+00
Contribution to exported energy	MJ	9,77E-04	9,77E-04	0*	0*	0*	0*	0,00E+00

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

Biogenic carbon		
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	4,10E-03

* 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		SSP3 Solid State Relay - SSP3A250P7T							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	1,80E+03	0*	0*	0*	0*	0*	1,80E+03	0*
Contribution to climate change-fossil	kg CO2 eq	1,79E+03	0*	0*	0*	0*	0*	1,79E+03	0*
Contribution to climate change-biogenic	kg CO2 eq	1,42E+00	0*	0*	0*	0*	0*	1,42E+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	8,46E-06	0*	0*	0*	0*	0*	8,46E-06	0*
Contribution to acidification	mol H+ eq	1,12E+01	0*	0*	0*	0*	0*	1,12E+01	0*
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$eq	1,30E-03	0*	0*	0*	0*	0*	1,30E-03	0*
Contribution to eutrophication marine	kg N eq	1,26E+00	0*	0*	0*	0*	0*	1,26E+00	0*
Contribution to eutrophication, terrestrial	mol N eq	1,51E+01	0*	0*	0*	0*	0*	1,51E+01	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	4,17E+00	0*	0*	0*	0*	0*	4,17E+00	0*
Contribution to resource use, minerals and metals	kg Sb eq	2,48E-04	0*	0*	0*	0*	0*	2,48E-04	0*
Contribution to resource use, fossils	MJ	3,25E+04	0*	0*	0*	0*	0*	3,25E+04	0*
Contribution to water use	m3 eq	9,89E+01	0*	0*	0*	0*	0*	9,89E+01	0*

Inventory flows Indicators		SSP3 Solid State Relay : SSP3A250P7T							
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	4,08E+03	0*	0*	0*	0*	0*	4,08E+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	4,08E+03	0*	0*	0*	0*	0*	4,08E+03	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3,25E+04	0*	0*	0*	0*	0*	3,25E+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	3,25E+04	0*	0*	0*	0*	0*	3,25E+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	2,30E+00	0*	0*	0*	0*	0*	2,30E+00	0*
Contribution to hazardous waste disposed	kg	4,50E+01	0*	0*	0*	0*	0*	4,50E+01	0*
Contribution to non hazardous waste disposed	kg	3,05E+02	0*	0*	0*	0*	0*	3,05E+02	0*
Contribution to radioactive waste disposed	kg	3,71E-02	0*	0*	0*	0*	0*	3,71E-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 v6.2.2, database version 2024-04 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.

Registration number :	SCHN-01413-V01.01-EN	*Drafting rules*	PEP-PCR-ed4-2021 09 06
		Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Verifier accreditation N°	VH08	*Information and reference documents*	www.pep-ecopassport.org
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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