Product Environmental Profile

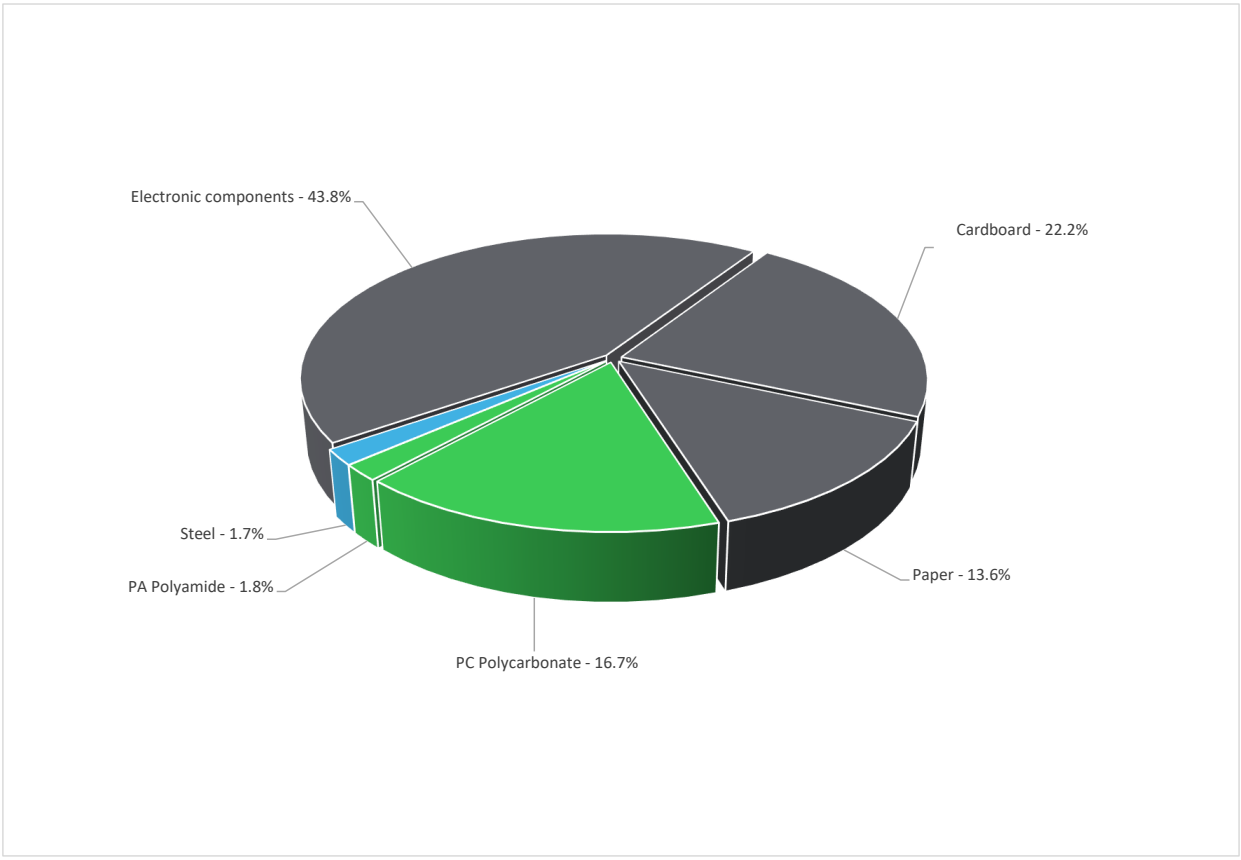
CONNECTED SINGLE SWITCH

General information

Reference product	CONNECTED SINGLE SWITCH - CS16A1MSW_WE
Description of the product	The main purpose of the product is to complete or break an electric circuit in order by using an electrical appliance and smartphone app. The materials constituent of packaging are cardboard (73%), paper (27%).
Description of the range	Single product
Functional unit	Establish, support and interrupt rated currents in normal conditions of circuit characterised by the current Ith, including any conditions specified for overload in operation characterized by the current Ie, for the operating voltage Ue and a current for short-circuit Icw, according to the appropriate use scenario, and for the reference service life of the product of 10 years. This product includes a digital remote measurement and control service in respect of lighting, roller blinds and electrical devices via a smartphone app
Specifications are:	Rated Voltage Un : 230V Rated Current In : 16A IP : 20 IEC standards : IEC60669-2-2

Constituent materials

Reference product mass	57.51 g	including the product and its packaging.



Others	79.7%
Plastics	18.5%
Metals	1.8%

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:	**6%**	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database, the ESR database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).

Environmental impacts

Reference service life time	10 years			
Product category	Other equipments - Active product			
Installation elements	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted during the installation phase (including transport to disposal).			
Use scenario	The product (Active parts) is in active mode 30% of the time with a power use of 1.13W and in stand-by mode 70% of the time with a power use of 0.81W for 10 years			
Time representativeness	The collected data are representative of the year 2023			
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 représentaive of the actual type of technologies used to make the product.			
Geographical representativeness	Rest of the World			
Energy model used	**[A1 - A3]**	**[A5]**	**[B6]**	**[C1 - C4]**
	Electricity Mix; Low voltage; 2018; India, IN	Electricity Mix; Low voltage; 2018; India, IN	Electricity Mix; Low voltage; 2018; India, IN	Electricity Mix; Low voltage; 2018; India, IN

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.schneider-electric.com/contact

Mandatory Indicators		CONNECTED SINGLE SWITCH - CS16A1MSW_WE						
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	1.30E+02	1.47E+01	9.56E-02	0*	1.15E+02	1.13E-01	-7.18E-03
Contribution to climate change-fossil	kg CO2 eq	1.29E+02	1.45E+01	9.56E-02	0*	1.15E+02	1.13E-01	-6.91E-03
Contribution to climate change-biogenic	kg CO2 eq	1.64E-01	1.53E-01	0*	0*	1.11E-02	2.75E-04	-2.72E-04
Contribution to climate change-land use and land use change	kg CO2 eq	1.54E-05	1.54E-05	0*	0*	0*	4.68E-09	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	2.72E-06	1.97E-06	8.44E-08	0*	6.59E-07	3.23E-10	-1.50E-09
Contribution to acidification	mol H+ eq	9.74E-01	9.72E-02	4.20E-04	0*	8.76E-01	1.21E-04	-2.51E-04
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	3.94E-05	1.99E-05	1.12E-08	4.07E-09	1.01E-05	9.31E-06	-1.02E-08
Contribution to eutrophication marine	kg N eq	1.05E-01	1.21E-02	1.93E-04	0*	9.30E-02	4.20E-05	-5.69E-06
Contribution to eutrophication, terrestrial	mol N eq	1.18E+00	1.06E-01	2.10E-03	0*	1.07E+00	4.48E-04	-6.67E-05
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.45E-01	3.35E-02	6.85E-04	0*	3.10E-01	1.11E-04	-3.49E-05
Contribution to resource use, minerals and metals	kg Sb eq	1.39E-03	1.39E-03	0*	0*	7.75E-07	2.81E-07	-3.06E-06
Contribution to resource use, fossils	MJ	2.02E+03	2.10E+02	1.19E+00	0*	1.80E+03	3.98E-01	-1.42E-01
Contribution to water use	m3 eq	8.77E+00	3.68E+00	4.85E-03	1.95E-03	5.08E+00	1.22E-02	-1.24E-02

Inventory flows Indicators		CONNECTED SINGLE SWITCH - CS16A1MSW_WE						
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	1.12E+02	1.13E+01	0*	0*	1.00E+02	0*	-6.39E-03
Contribution to use of renewable primary energy resources used as raw material	MJ	4.21E-01	4.21E-01	0*	0*	0*	0*	0.00E+00
Contribution to total use of renewable primary energy resources	MJ	1.12E+02	1.18E+01	0*	0*	1.00E+02	0*	-6.39E-03

Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.02E+03	2.10E+02	1.19E+00	0*	1.80E+03	3.98E-01	-1.42E-01
Contribution to use of non renewable primary energy resources used as raw material	MJ	5.76E-01	5.76E-01	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	2.02E+03	2.10E+02	1.19E+00	0*	1.80E+03	3.98E-01	-1.42E-01
Contribution to use of secondary material	kg	4.20E-07	4.20E-07	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	2.04E-01	8.58E-02	1.13E-04	4.53E-05	1.18E-01	2.84E-04	-2.88E-04
Contribution to hazardous waste disposed	kg	5.23E+01	4.87E+01	0*	0*	3.52E+00	2.47E-02	-2.65E-01
Contribution to non hazardous waste disposed	kg	4.57E+01	2.58E+01	0*	2.13E-02	1.99E+01	1.21E-02	-3.47E-03
Contribution to radioactive waste disposed	kg	2.07E-02	1.99E-02	1.90E-05	0*	7.15E-04	0*	-1.70E-06
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	2.53E-03	1.55E-04	0*	0*	0*	2.38E-03	0.00E+00
Contribution to materials for energy recovery	kg	8.58E-09	8.58E-09	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	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

Contribution to biogenic carbon content of the product	kg de C	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	6.74E-03

Mandatory Indicators		CONNECTED SINGLE SWITCH - CS16A1MSW_WE							
Impact indicators	**Unit**	**[B1 - B7] - Use**	**[B1]**	**[B2]**	**[B3]**	**[B4]**	**[B5]**	**[B6]**	**[B7]**
Contribution to climate change	kg CO2 eq	1.15E+02	0*	0*	0*	0*	0*	1.15E+02	0*
Contribution to climate change-fossil	kg CO2 eq	1.15E+02	0*	0*	0*	0*	0*	1.15E+02	0*
Contribution to climate change-biogenic	kg CO2 eq	1.11E-02	0*	0*	0*	0*	0*	1.11E-02	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	6.59E-07	0*	0*	0*	0*	0*	6.59E-07	0*
Contribution to acidification	mol H+ eq	8.76E-01	0*	0*	0*	0*	0*	8.76E-01	0*
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	1.01E-05	0*	0*	0*	0*	0*	1.01E-05	0*
Contribution to eutrophication marine	kg N eq	9.30E-02	0*	0*	0*	0*	0*	9.30E-02	0*
Contribution to eutrophication, terrestrial	mol N eq	1.07E+00	0*	0*	0*	0*	0*	1.07E+00	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.10E-01	0*	0*	0*	0*	0*	3.10E-01	0*
Contribution to resource use, minerals and metals	kg Sb eq	7.75E-07	0*	0*	0*	0*	0*	7.75E-07	0*
Contribution to resource use, fossils	MJ	1.80E+03	0*	0*	0*	0*	0*	1.80E+03	0*
Contribution to water use	m3 eq	5.08E+00	0*	0*	0*	0*	0*	5.08E+00	0*

Inventory flows Indicators		CONNECTED SINGLE SWITCH - CS16A1MSW_WE							
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	1.00E+02	0*	0*	0*	0*	0*	1.00E+02	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	1.00E+02	0*	0*	0*	0*	0*	1.00E+02	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.80E+03	0*	0*	0*	0*	0*	1.80E+03	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	1.80E+03	0*	0*	0*	0*	0*	1.80E+03	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	m^3	1.18E-01	0*	0*	0*	0*	0*	1.18E-01	0*
Contribution to hazardous waste disposed	kg	3.52E+00	0*	0*	0*	0*	0*	3.52E+00	0*
Contribution to non hazardous waste disposed	kg	1.99E+01	0*	0*	0*	0*	0*	1.99E+01	0*
Contribution to radioactive waste disposed	kg	7.15E-04	0*	0*	0*	0*	0*	7.15E-04	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 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 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 :	ENVPEP2407033_V1-EN	*Drafting rules*	PCR-4-ed4-EN-2021 09 06
Validity period	5 years	*Supplemented by*	PSR-0005-ed3.1-EN-2023 12 08
Date of issue	09-2024	*Information and reference documents*	www.pep-ecopassport.org

Independent verification of the declaration and data, in compliance with ISO 14021 : 2016

Internal External

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 14021:2016 "Environmental labels and declarations. Type II environmental declarations"

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