Product Environmental Profile

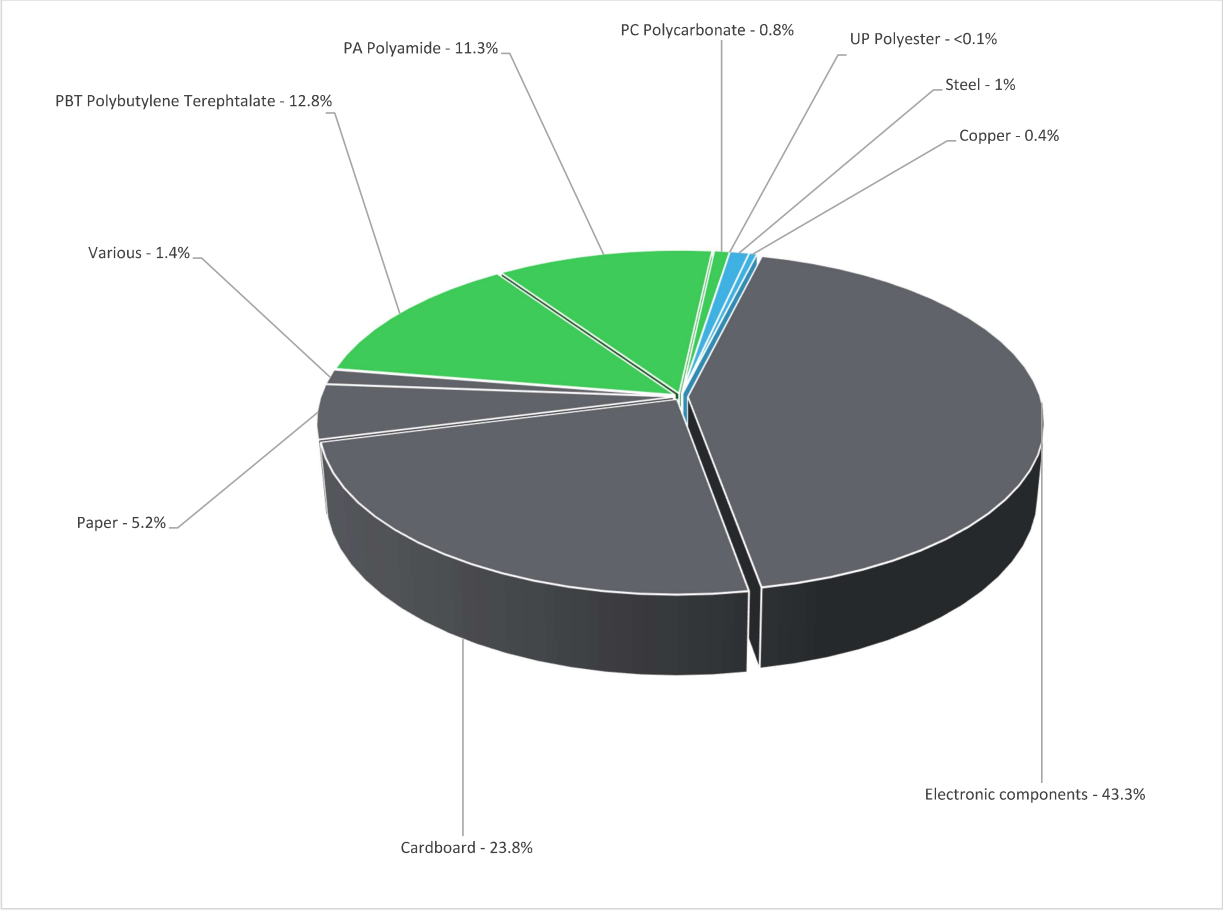
Harmony XB5S Biometric Switch

General information

Reference product	Harmony XB5S Biometric Switch - XB5S1B2L2
Description of the product	The product is a switch in the Harmony range, which uses digital fingerprint reading as a method of control. Its purpose is to improve the safety level of the operators and machines by means of better access control only a person authorised to do so must be allowed to activate the function.Typical applications are: access to machine parameters via the controller, PLC or MMI, Maintenance mode management, unlocking machine protection devices.
Functional unit	Harmony XB5 bistable biometric switch has a pre-wired cable connection and is supplied with 24V DC. This biometric switch allows control of authorization to access areas, machine commands and functions without the use of easy-to-lose keys. This product will be 50% active mode with power consumption of 6W and 50% in standby mode with 1.2W of power consumption during 10 years of life time and adhering to internations standards IP20, IP65, IEC 61000-6-4 & 61000-6-2.

Constituent materials

Reference product mass	192 g	including the product, its packaging and additional elements and accessories



	Others	73.7%
	Plastics	24.9%
	Metals	1.4%

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:	2%	Recyclability rate has been calculated based on REEECY'LAB 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).

Environmental impacts

Reference service life time	10 years			
Product category	Other equipments - Active product			
Installation elements	No special installation components need during installation phase, but transport of packaging to disposal, and disposal of packaging accounted for during installation.			
Use scenario	The product uses 6 W of electricity when in active mode of 50% and 1.2 W of power when in stand by mode of 50% during life span of 10 years.			
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	Global			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Production mix; Low voltage; FR	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27
		Electricity Mix; Production mix; Low voltage; US	Electricity Mix; Production mix; Low voltage; US	Electricity Mix; Production mix; Low voltage; US
		Electricity Mix; Production mix; Low voltage; BR	Electricity Mix; Production mix; Low voltage; BR	Electricity Mix; Production mix; Low voltage; BR
		Electricity Mix; Production mix; Low voltage; APAC	Electricity Mix; Production mix; Low voltage; APAC	Electricity Mix; Production mix; Low voltage; APAC

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		Harmony XB5S Biometric Switch - XB5S1B2L2						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	Loads and Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to climate change	kg CO2 eq	1.73E+02	4.73E+00	2.51E-02	1.01E-01	1.68E+02	1.90E-01	-1.40E-01
Contribution to climate change-fossil	kg CO2 eq	1.72E+02	4.70E+00	2.51E-02	9.68E-02	1.67E+02	1.82E-01	-1.35E-01
Contribution to climate change-biogenic	kg CO2 eq	2.06E-01	2.69E-02	0*	4.50E-03	1.67E-01	8.06E-03	-4.35E-03
Contribution to climate change-land use and land use change	kg CO2 eq	1.24E-08	9.58E-09	0*	0*	0*	2.80E-09	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.34E-06	5.96E-07	0*	6.70E-09	7.32E-07	1.05E-08	-7.64E-09
Contribution to acidification	mol H+ eq	9.89E-01	4.32E-02	1.61E-04	4.02E-04	9.42E-01	4.03E-03	-7.92E-04
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	2.69E-04	1.54E-05	0*	7.32E-07	2.44E-04	8.73E-06	-1.26E-06
Contribution to eutrophication marine	kg N eq	1.16E-01	4.24E-03	7.58E-05	1.06E-04	1.09E-01	2.89E-03	-1.59E-04
Contribution to eutrophication, terrestrial	mol N eq	1.40E+00	4.55E-02	8.32E-04	8.04E-04	1.35E+00	1.36E-03	-1.36E-03
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.76E-01	1.55E-02	2.10E-04	2.15E-04	3.60E-01	5.59E-04	-3.77E-04
Contribution to resource use, minerals and metals	kg Sb eq	6.01E-03	6.01E-03	0*	0*	7.03E-06	0*	-3.41E-06
Contribution to resource use, fossils	MJ	3.55E+03	6.17E+01	0*	1.05E+00	3.49E+03	1.97E+00	-1.35E+00
Contribution to water use	m3 eq	5.94E+01	1.68E+00	0*	4.33E-02	6.12E+00	5.16E+01	-8.66E-02

Additional indicators for the French regulation are available as well

Inventory flows Indicators		Harmony XB5S Biometric Switch - XB5S1B2L2						
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Loads and Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	5.41E+02	8.69E-01	0*	7.56E-02	5.40E+02	2.28E-01	5.95E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	1.08E+00	1.08E+00	0*	0*	0*	0*	-1.00E+00
Contribution to total use of renewable primary energy resources	MJ	5.42E+02	1.95E+00	0*	7.56E-02	5.40E+02	2.28E-01	-4.07E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3.55E+03	5.93E+01	0*	1.05E+00	3.49E+03	1.97E+00	-1.35E+00
Contribution to use of non renewable primary energy resources used as raw material	MJ	2.37E+00	2.37E+00	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	3.55E+03	6.17E+01	0*	1.05E+00	3.49E+03	1.97E+00	-1.35E+00
Contribution to use of secondary material	kg	1.94E-05	1.94E-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	m³	1.53E+00	3.91E-02	0*	1.01E-03	1.42E-01	1.35E+00	-2.02E-03
Contribution to hazardous waste disposed	kg	1.12E+01	7.58E+00	0*	1.20E-03	3.43E+00	1.43E-01	-2.86E-01
Contribution to non hazardous waste disposed	kg	2.78E+01	2.30E+00	0*	3.29E-01	2.51E+01	2.59E-02	-1.46E+00
Contribution to radioactive waste disposed	kg	5.29E-03	8.98E-04	6.27E-07	4.42E-05	4.34E-03	1.80E-06	-7.73E-05
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	5.84E-02	0*	0*	5.57E-02	0*	2.71E-03	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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		Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	10/2023	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

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

Internal X External

The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)

PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14021 : 2016 « Environmental labels and declarations. Type II environmental declarations »

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 €

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