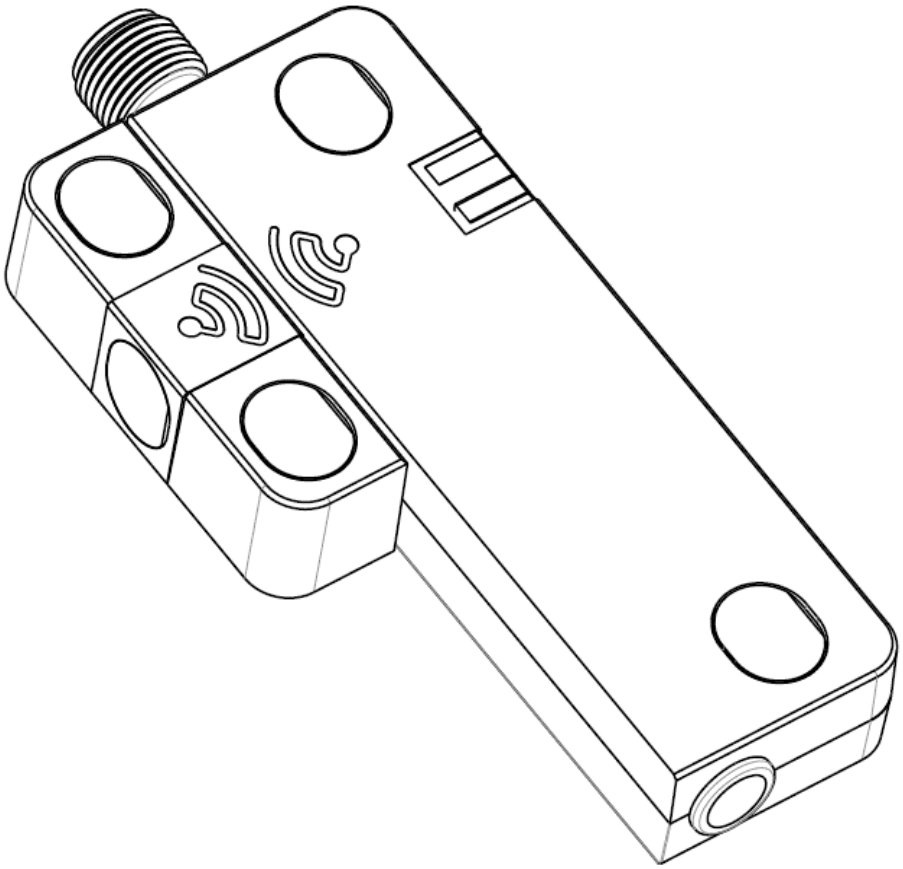
Product Environmental Profile

XCSRC30M12 Single Safety RFID contactless switch



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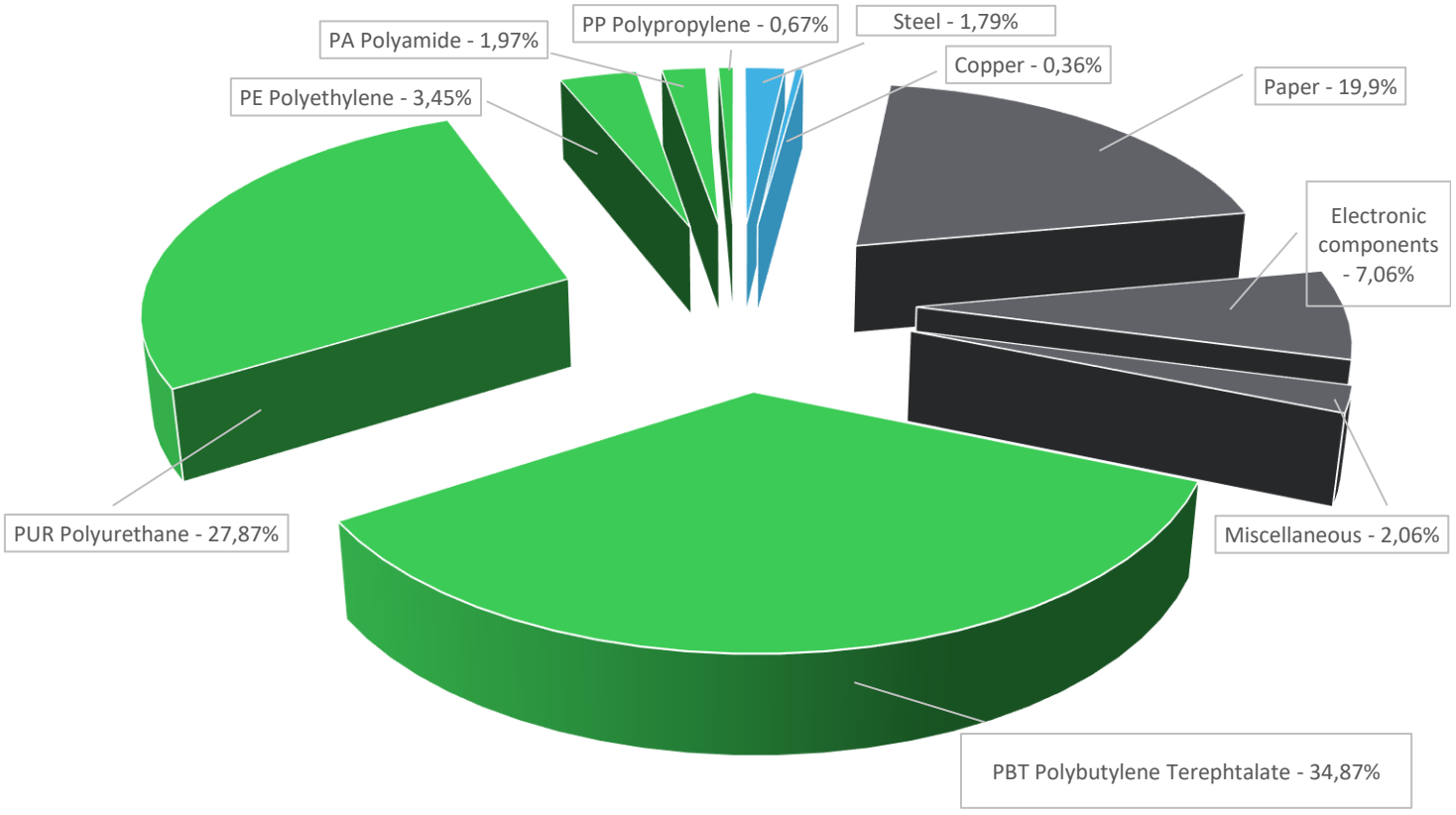
General information

Representative product	XCSRC30M12 Single Safety RFID contactless switch - XCSRC30M12
Description of the product	The main purpose of XCSRC30M12 and more generally of any RFID Safety Switch of the range, is to monitor the access to an hazardous area through door control. The basic applications include the monitoring of the position of movable safety guards to prevent hazardous situations from occurring when the safety guard is opened. A XCSR* RFID Safety Switch is a contactless radio-frequency system that consists of a reader and a transponder paired in factory with an unique code. The main characteristics are: - Rated Voltage (Ue): 24 V - Rated current in continuous operation (Ith): 60 mA - Protection to external short-circuits: up to 100 A - Compatible with operation under harsh industrial environments: IP65, IP66, IP67, following IEC60529 and IP69K following DIN 40050, IK04 following IEC62262 - Sensing distance: Assured Operating Distance (Sao): 10 mm Assured Released Distance (Sar): 35 mm - Risk time: < 120 ms (+ 18 ms per each additional safety switch in chained solutions).
Functional unit	Monitor the access to a hazardous area through door control during 20 years (reference lifetime following ISO 13849-1).

Constituent materials

Reference product mass (g)	111 including the product, its packaging and additional elements and accessories.



Plastics	68,8%
Metals	2,2%
Others	29,0%

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers - PBDE) as mentioned in the Directive.

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2011/65/EU of 8 June 2011), they can be incorporated without any restriction in an assembly or an installation subject to this Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website:
http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page

Additional environmental information

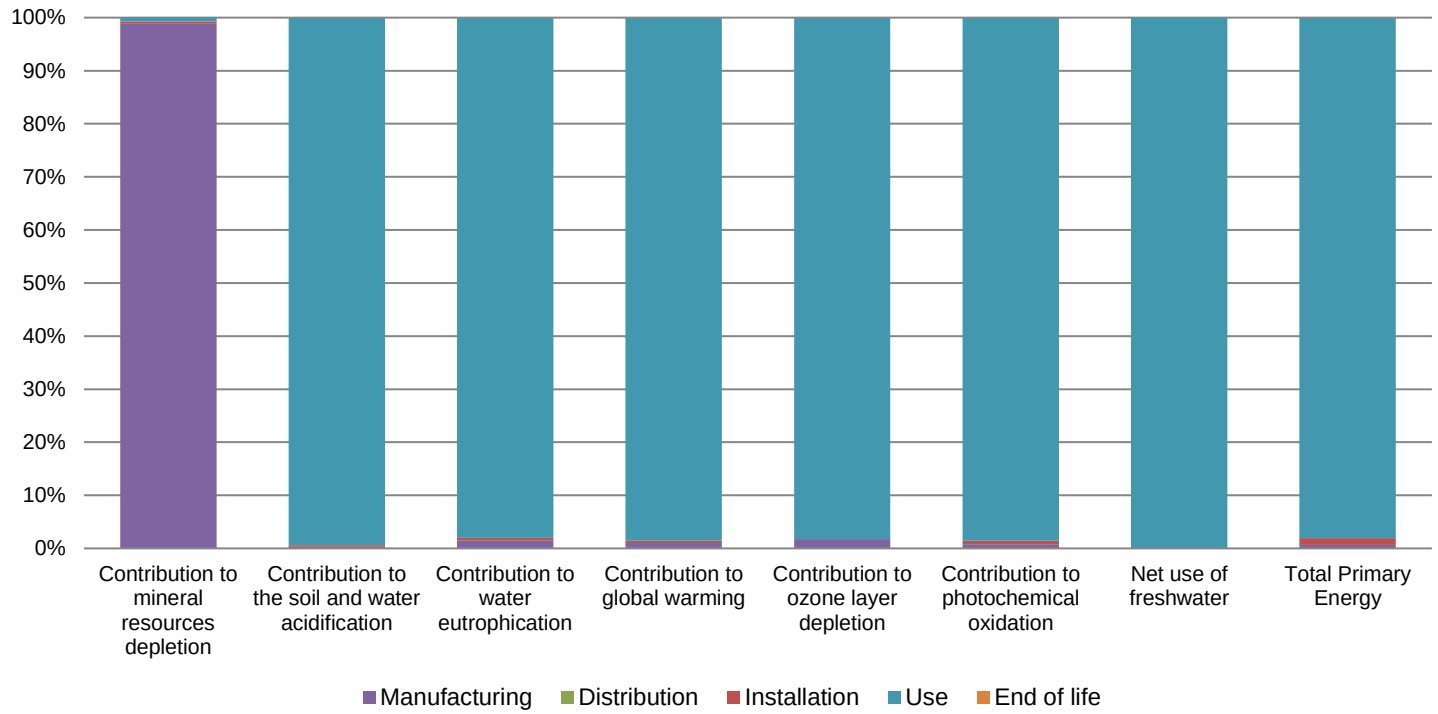
The XCSRC30M12 Single Safety RFID contactless switch presents the following relevent environmental aspects	
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified.
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive. Packaging weight is 26,7 g, consisting of 85% paper and 15% plastics.
Installation	For fixing the mounting support on the machine, the use of M4 tamper-proof screws is strongly recommended. The mounting support and screws - references XCSRZSRC1 and XCSRZSTK1 - are not provided with the XCSRC30M12.
Use	The product does not require special maintenance operations.
End of life	End of life is optimized to decrease the amount of waste and to allow the recovery of the product components and materials. No special end-of-life treatment is required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: **44%** Based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).

Environmental impacts

Reference life time	20 years.
Installation elements	One each of XCSRZSRC1 and XCSRZSTK1 references is considered. Production of the references (materials) as well as packaging and transports are taken into account.
Use scenario	The product is in use 100% of its 20 years reference lifetime whether door opened (10% of the time) at a 60mA intensity, or door closed (90% of the time) at a 90mA intensity, with a 24V power supply voltage. No other elements are necessary out of Electricity consumption (no maintenance).
Geographical representativeness	Europe.
Technological representativeness	The main purpose of XCSRC30M12 and more generally of any RFID Safety Switch of the range, is to monitor the access to an hazardous area through door control. The basic applications include the monitoring of the position of movable safety guards to prevent hazardous situations from occurring when the safety guard is opened. A XCSR* RFID Safety Switch is a contactless radio-frequency system that consists of a reader and a transponder paired in factory with an unique code. The main characteristics are: - Rated Voltage (Ue): 24 V - Rated current in continuous operation (Ith): 60 mA - Protection to external short-circuits: up to 100 A - Compatible with operation under harsh industrial environments: IP65, IP66, IP67, following IEC60529 and IP69K following DIN 40050, IK04 following IEC62262 - Sensing distance: Assured Operating Distance (Sao): 10 mm Assured Released Distance (Sar): 35 mm - Risk time: < 120 ms (+ 18 ms per each additional safety switch in chained solutions).

Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: France (Limoges)	Electricity grid mix 1kV-60kV; AC; consumption mix, at consumer; 1kV - 60kV; EU-27	Electricity grid mix 1kV-60kV; AC; consumption mix, at consumer; 1kV - 60kV; EU-27	Electricity grid mix 1kV-60kV; AC; consumption mix, at consumer; 1kV - 60kV; EU-27

Compulsory indicators	XCSRC30M12 Single Safety RFID contactless switch - XCSRC30M12						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2,05E-03	2,03E-03	0*	9,34E-06	1,48E-05	0*
Contribution to the soil and water acidification	kg SO_2 eq	7,05E-01	2,30E-03	0*	2,13E-03	7,01E-01	0*
Contribution to water eutrophication	kg PO_4^{3-} eq	4,37E-02	6,58E-04	4,80E-06	2,17E-04	4,29E-02	0*
Contribution to global warming	kg CO_2 eq	1,73E+02	1,78E+00	0*	7,27E-01	1,71E+02	0*
Contribution to ozone layer depletion	kg CFC11 eq	1,11E-05	1,97E-07	0*	0*	1,09E-05	0*
Contribution to photochemical oxidation	kg C_2H_4 eq	3,92E-02	3,00E-04	0*	2,78E-04	3,86E-02	0*
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	6,18E+02	0*	0*	0*	6,18E+02	0*
Total Primary Energy	MJ	3,47E+03	2,35E+01	0*	4,42E+01	3,40E+03	0*



Optional indicators		XCSRC30M12 Single Safety RFID contactless switch - XCSRC30M12					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1,97E+03	2,40E+01	0*	8,03E+00	1,94E+03	0*
Contribution to air pollution	m^3	7,58E+03	1,64E+02	0*	1,05E+02	7,31E+03	0*
Contribution to water pollution	m^3	7,46E+03	3,84E+02	0*	1,42E+01	7,06E+03	0*
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,15E-01	2,63E-02	0*	8,82E-02	0*	0*
Total use of renewable primary energy resources	MJ	4,36E+02	1,27E+00	0*	0*	4,35E+02	0*
Total use of non-renewable primary energy resources	MJ	3,03E+03	2,22E+01	0*	4,42E+01	2,97E+03	0*
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	4,36E+02	1,27E+00	0*	0*	4,35E+02	0*
Use of renewable primary energy resources used as raw material	MJ	0,00E+00	0*	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	3,03E+03	1,98E+01	0*	4,39E+01	2,97E+03	0*
Use of non renewable primary energy resources used as raw material	MJ	2,72E+00	2,46E+00	0*	2,69E-01	0*	0*
Use of non renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Waste categories	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Hazardous waste disposed	kg	6,69E-01	5,76E-01	0*	1,41E-04	8,95E-02	2,75E-03
Non hazardous waste disposed	kg	6,37E+02	3,58E-01	0*	0*	6,37E+02	0*
Radioactive waste disposed	kg	4,22E-01	1,71E-04	0*	0*	4,22E-01	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	2,62E-02	0*	0*	2,62E-02	0*	0*
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	6,87E-05	0*	0*	0*	0*	6,87E-05
Exported Energy	MJ	0,00E+00	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 EIME v5.6.0.1, database version 2016-11 in compliance with ISO14044.

The use stage is the life cycle stage which has the greatest impact on the majority of the environmental indicators (based on compulsory indicators).

The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.
To know the accurate environmental impacts of other products in XCSRC* series, complementary calculation has to be done. Please contact us at: global-green-sensors@schneider-electric.com

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-00343-V01.01-EN	*Drafting rules*	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH26		
Date of issue	10/2018	*Information and reference documents*	www.pep-ecopassport.org
		Validity period	5 years

Independent verification of the declaration and data, in compliance with ISO 14025 : 2010

Internal External X

The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)

PEP are compliant with XP C08-100-1 :2014

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

Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »

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