Product Environmental Profile

XXS18P1PM12 Ultrasonic Sensor

PEP eco PASSPORT®

Telemecanique Sensors

Simply easy !™
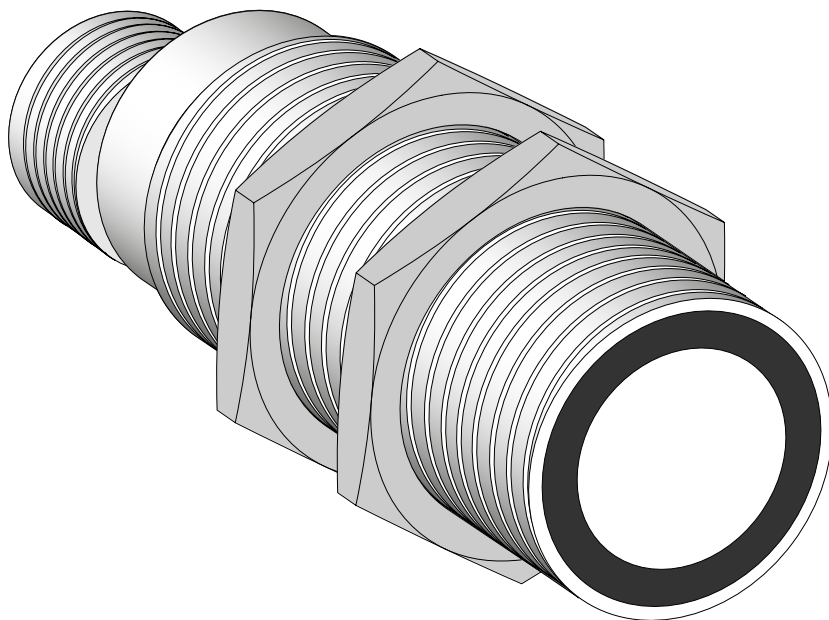
General information

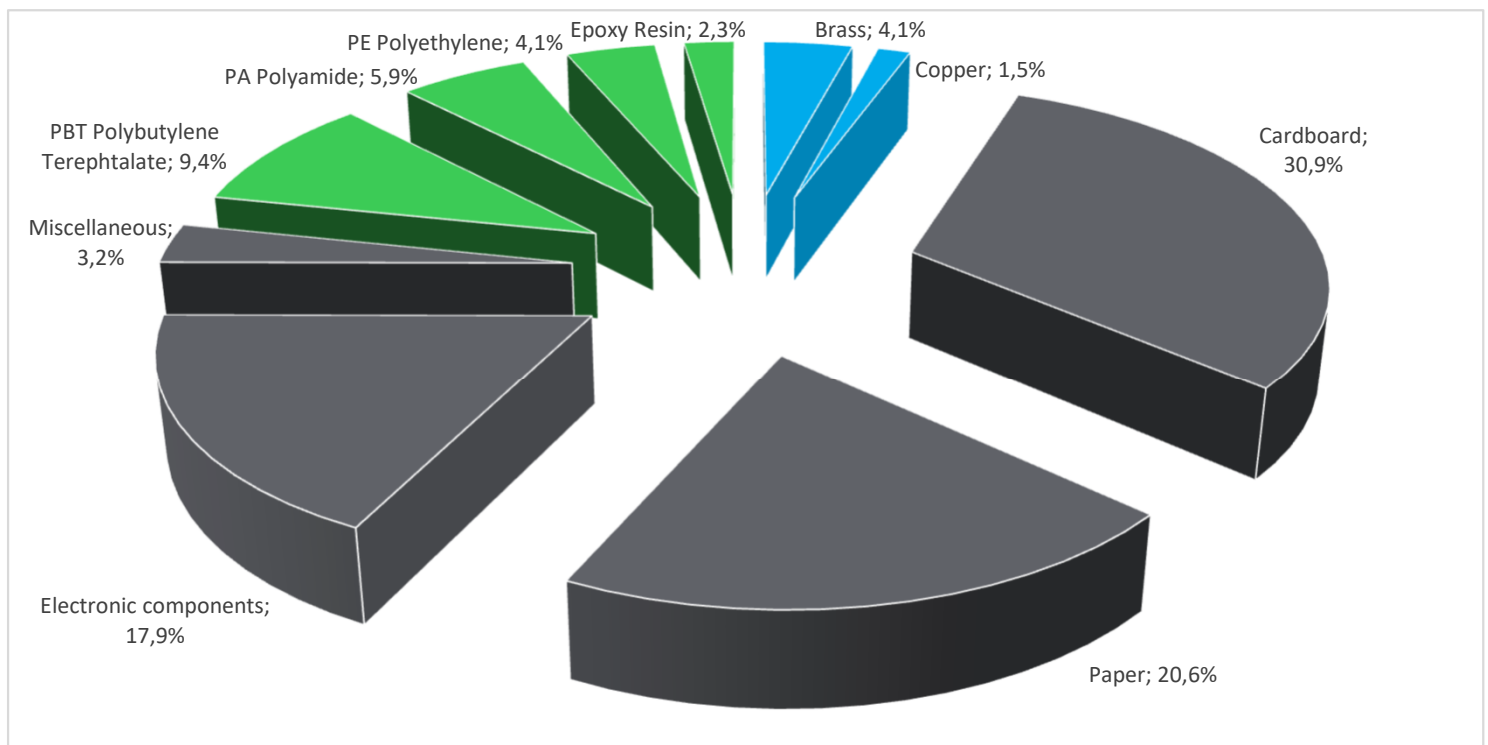| Representative product	XXS18P1PM12 Ultrasonic Sensor - XXS18P1PM12.
Description of the product	The main purpose of XXS18P1PM12 and more generally of any ultrasonic sensor, installed in automated installations, is to transmit to the control system the information of presence, absence or positioning. Ultrasonic sensors detect any material, irrespective of color, light ambiance at the same distance. The product range 'XX*18* series' consists in 18 mm diameter cylindrical products with: - Straight detection: 1m adjustable with remote teach push-button, - Deviation angle of object (square metallic plate 10cm x10cm) to be detected at 1meter: -7°/+7°, - Minimum size of detected object: cylinder diameter 1mm at 600mm distance, - Several output types: Discrete PNP, Analogue 4-20mA and 0-10V, - Electrical connection: M12- 5pins connector, - Compatible with industrial use: IP65 & IP67 protection degrees.
Functional unit	The functional unit is to transmit to the control system the information of presence, absence or positioning of any material, irrespective of color or light ambiance, at 1m, during 10 years, with IP65 & IP67 protection degrees.

Constituent materials

Reference product mass (g)	47 including the product, its packaging and additional elements and accessories.

PE Polyethylene; 4,1%   Epoxy Resin; 2,3%   Brass; 4,1%
PA Polyamide; 5,9%   Copper; 1,5%
PBT Polybutylene Terephtalate; 9,4%   Cardboard; 30,9%
Miscellaneous; 3,2%
Electronic components; 17,9%
Paper; 20,6%

	Plastics	21,7%
	Metals	5,6%
	Others	72,6%

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 2002/95/EC of 27 January 2003), 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 Telemecanique Sensors website:
http://www.tesensors.com/global/en/support/reach-rohs/

Additional environmental information

	The XXS18P1PM12 Ultrasonic Sensor presents the following relevent environmental aspects
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified.
Distribution	Weight and volume of the packaging is optimized, based on the European Union's packaging directive. Packaging weight is 28,6 g, consisting of 38% paper, 56% cardboard and 6% plastics.
Installation	The reference XXS18P1PM12 is screwed upright in a hole made by the installer. The M18 nuts are delivered with the product.
Use	The product does not require special maintenance operations.
End of life	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials. No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: **11%** 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	10 years.
Installation elements	Components needed are delivered with the product.
Use scenario	100 % of the time in active mode with 0.69W absorbed power. Assumed service life is 10 years.
Geographical representativeness	Europe.
Technological representativeness	The main purpose of XXS18P1PM12 and more generally of any ultrasonic sensor, installed in automated installations, is to transmit to the control system the information of presence, absence or positioning. Ultrasonic sensors detect any material, irrespective of color, light ambiance at the same distance. The product range 'XX*18* series' consists in 18 mm diameter cylindrical products with: - Straight detection: 1m adjustable with remote teach push-button, - Deviation angle of object (square metallic plate 10cm x10cm) to be detected at 1meter: -7°/+7°, - Minimum size of detected object: cylinder diameter 1mm at 600mm distance, - Several output types: Discrete PNP, Analogue 4-20mA and 0-10V, - Electrical connection: M12- 5pins connector, - Compatible with industrial use: IP65 & IP67 protection degrees.

	Manufacturing	Installation	Use	End of life
Energy model used	Energy model used: USA	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		XXS18P1PM12 Ultrasonic Sensor - XXS18P1PM12.					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	6,92E-05	6,67E-05	0*	0*	2,45E-06	0*
Contribution to the soil and water acidification	kg SO_2 eq	1,19E-01	2,86E-03	1,18E-04	0*	1,16E-01	0*
Contribution to water eutrophication	kg PO_4^{3-} eq	7,83E-03	7,19E-04	2,71E-05	1,47E-06	7,08E-03	2,05E-06
Contribution to global warming	kg CO_2 eq	2,97E+01	1,40E+00	2,61E-02	0*	2,82E+01	3,87E-03
Contribution to ozone layer depletion	kg CFC11 eq	2,58E-06	7,74E-07	0*	0*	1,80E-06	0*
Contribution to photochemical oxidation	kg C_2H_4 eq	6,61E-03	2,20E-04	8,39E-06	0*	6,38E-03	7,52E-07
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1,02E+02	0*	0*	0*	1,02E+02	0*
Total Primary Energy	MJ	5,82E+02	1,98E+01	3,70E-01	0*	5,62E+02	0*
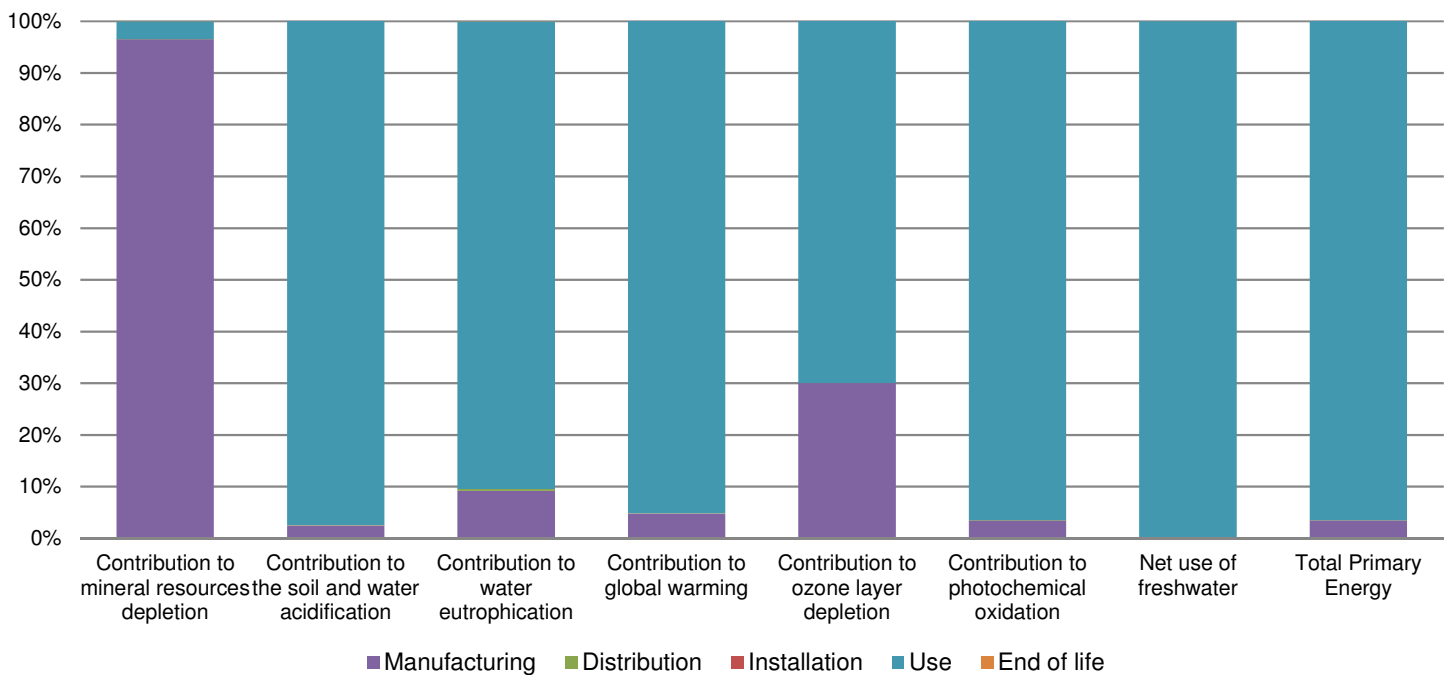
Optional indicators		XXS18P1PM12 Ultrasonic Sensor - XXS18P1PM12.					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	3,38E+02	1,76E+01	3,67E-01	0*	3,20E+02	0*
Contribution to air pollution	m³	1,31E+03	1,04E+02	1,08E+00	0*	1,21E+03	2,56E-01
Contribution to water pollution	m³	1,37E+03	2,00E+02	4,30E+00	2,35E-01	1,17E+03	3,09E-01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1,34E-02	1,34E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	7,30E+01	1,14E+00	0*	0*	7,18E+01	0*
Total use of non-renewable primary energy resources	MJ	5,09E+02	1,86E+01	3,69E-01	0*	4,90E+02	0*
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	7,28E+01	9,94E-01	0*	0*	7,18E+01	0*
Use of renewable primary energy resources used as raw material	MJ	1,48E-01	1,48E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	5,09E+02	1,82E+01	3,69E-01	0*	4,90E+02	0*
Use of non renewable primary energy resources used as raw material	MJ	4,10E-01	4,10E-01	0*	0*	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	1,11E+00	1,05E+00	0*	0*	1,48E-02	4,49E-02
Non hazardous waste disposed	kg	1,05E+02	1,98E-01	0*	0*	1,05E+02	0*
Radioactive waste disposed	kg	7,04E-02	7,57E-04	0*	0*	6,97E-02	0*
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	3,03E-02	0*	0*	2,77E-02	0*	2,60E-03
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	5,33E-04	0*	0*	0*	0*	5,33E-04
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 phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

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-00340-V01.01-EN	*Drafting rules*	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH26		
Date of issue	05/2018	*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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