

Product Environmental Profile

Smart X Sensors

Smart X Sensors measure the CO₂, relative humidity, and/or temperature of air in a living space.





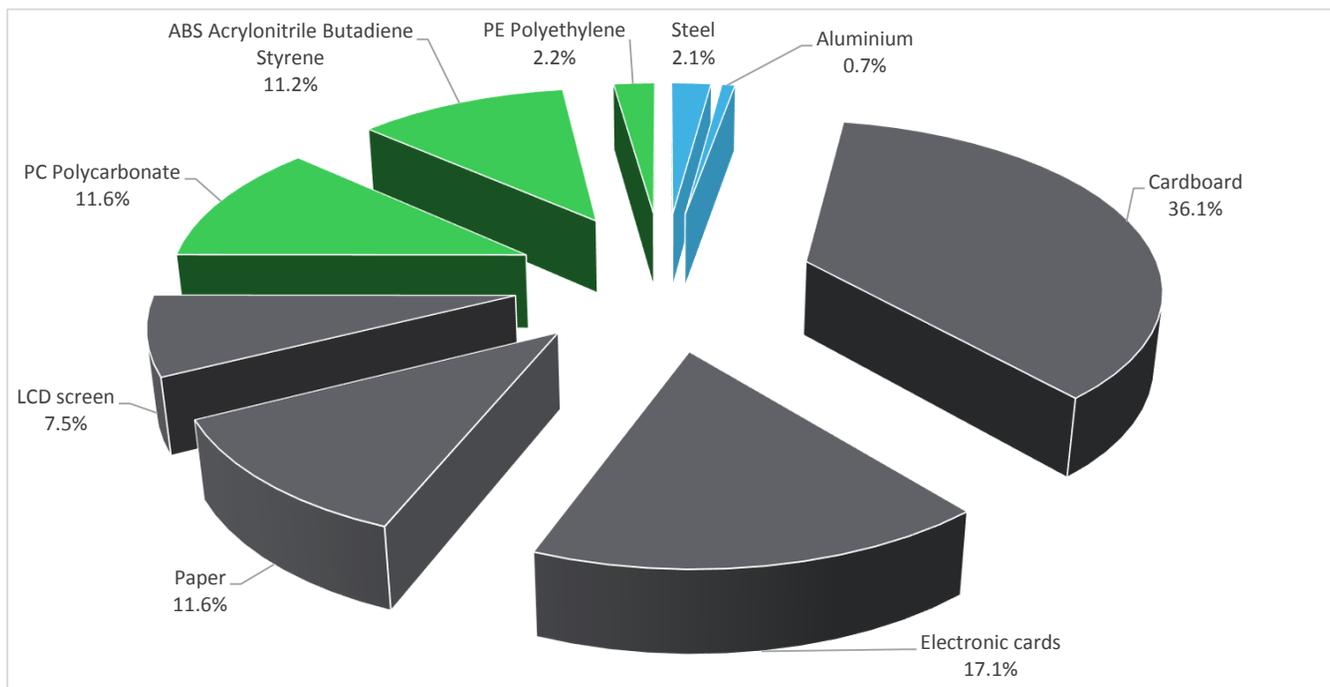
General information

Representative product	Smart X Sensors - SXWSBTHCXSXX
Description of the product	Smart X Sensors are a family of living space sensors that measure the levels of CO2 (if equipped), relative humidity (if equipped), and temperature of air. These sensors are modular and are separated into two parts: the sensor base and the cover. They use a RJ-45 sensor bus which provides communication and power from the Smart X controller.
Description of the range	Smart X Sensors measure the CO2, relative humidity, and/or temperature of air in a living space. The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	Collecting and transmitting temperature, CO2 and/or relative humidity data for a commercial living space to a controller over 10 years.



Constituent materials

Reference product mass 300.1 g including the product, its packaging and additional elements and accessories



Plastics	25.0%
Metals	2.8%
Others	72.3%



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 Schneider-Electric Green Premium website

<http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page>

Additional environmental information

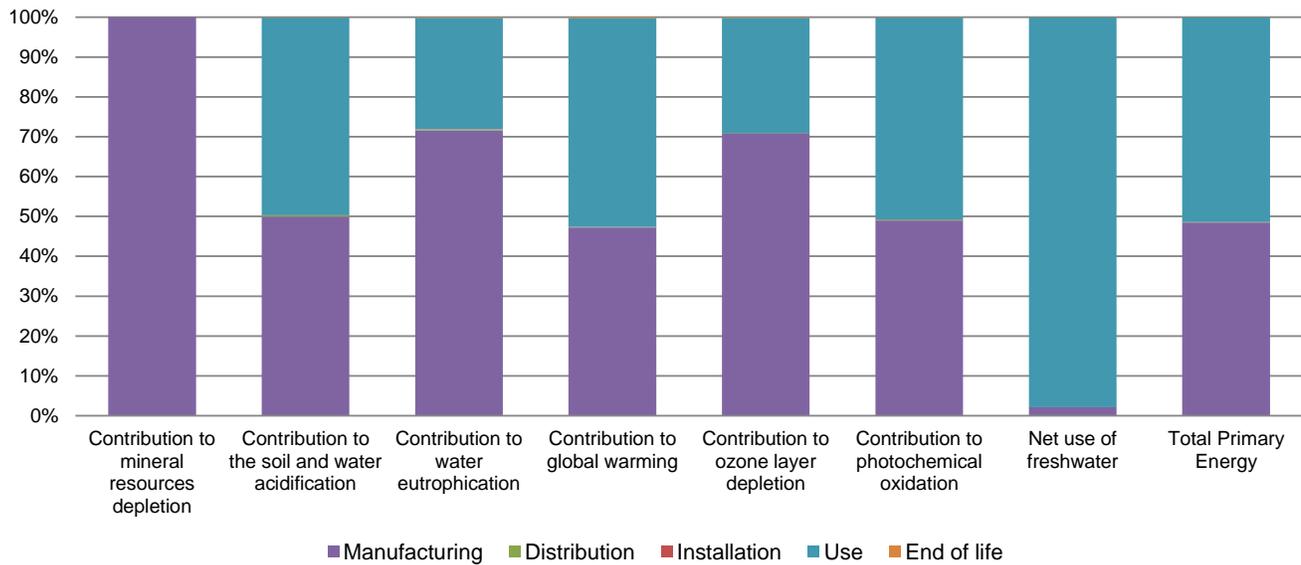
The Smart X Sensors presents the following relevant environmental aspects

Manufacturing	Manufactured at a production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 116.1 g, consisting of cardboard (94%), low-density polyethylene (6%) Product distribution optimised by setting up local distribution centres
Installation	The product does not require any special installation materials or operations. Installation is to be performed by qualified personnel.
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 This product contains electronic cards (54.0g), ABS plastic containing brominated flame retardants (33.9g) that should be separated from the stream of waste so as to optimize end-of-life treatment. The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page Recyclability potential: 21% 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	Transportation and disposal of packaging are accounted for during installation. No special installation components needed.			
Use scenario	453mW during active mode (backlight on), 335mW during standby mode (backlight off), approximately one hour per day in active mode.			
Geographical representativeness	The product can be used in all regions, but the majority of the product is deployed in the U.S., Europe, Middle East and Asia			
Technological representativeness	The means of material production, processing and transport modeled are representative of the technologies used in production.			
Energy model used	Manufacturing	Installation	Use	End of life
	China and France	EU-27	US, EU-27, Australia and Russia (for the rest of the world)	EU-27

Compulsory indicators		Smart X Sensors - SXWSBTHCXSSX					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	4.34E-03	4.34E-03	0*	0*	0*	0*
Contribution to the soil and water acidification	kg SO ₂ eq	5.66E-02	2.83E-02	1.77E-04	2.73E-05	2.80E-02	8.01E-05
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1.71E-02	1.23E-02	4.07E-05	8.53E-06	4.78E-03	3.45E-05
Contribution to global warming	kg CO ₂ eq	3.78E+01	1.79E+01	3.87E-02	6.58E-03	1.98E+01	9.97E-02
Contribution to ozone layer depletion	kg CFC11 eq	1.81E-06	1.28E-06	0*	0*	5.23E-07	3.74E-09
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	6.70E-03	3.28E-03	1.26E-05	2.04E-06	3.40E-03	7.09E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m ³	1.14E+01	2.43E-01	0*	0*	1.11E+01	0*
Total Primary Energy	MJ	5.26E+02	2.55E+02	5.47E-01	8.49E-02	2.70E+02	3.55E-01



Optional indicators		Smart X Sensors - SXWSBTHCSXX					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	5.64E+02	2.60E+02	5.44E-01	8.65E-02	3.03E+02	3.30E-01
Contribution to air pollution	m ³	2.91E+03	1.46E+03	1.65E+00	3.07E-01	1.45E+03	2.56E+00
Contribution to water pollution	m ³	2.59E+03	1.71E+03	6.37E+00	9.78E-01	8.66E+02	4.77E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	4.01E-03	4.01E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	2.77E+01	4.78E+00	0*	0*	2.29E+01	0*
Total use of non-renewable primary energy resources	MJ	4.98E+02	2.50E+02	5.47E-01	8.46E-02	2.47E+02	3.55E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	2.49E+01	2.00E+00	0*	0*	2.29E+01	0*
Use of renewable primary energy resources used as raw material	MJ	2.77E+00	2.77E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.94E+02	2.46E+02	5.47E-01	8.46E-02	2.47E+02	3.55E-01
Use of non renewable primary energy resources used as raw material	MJ	3.63E+00	3.63E+00	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	1.64E+01	1.56E+01	0*	0*	4.10E-01	3.91E-01
Non hazardous waste disposed	kg	2.01E+01	6.35E+00	0*	6.02E-03	1.37E+01	0*
Radioactive waste disposed	kg	1.01E-02	2.26E-03	0*	0*	7.87E-03	2.19E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.68E-01	1.90E-02	0*	1.11E-01	0*	3.86E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.53E-02	0*	0*	0*	0*	2.53E-02
Exported Energy	MJ	3.46E-04	3.26E-05	0*	3.14E-04	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.7.0.2, database version 2016-11 in compliance with ISO14044.

The manufacturing and use phases are the life cycle phase which have the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

The environmental indicators of other products in this family (excluding accessory portions) may be proportional extrapolated, by life cycle phase, by multiplying by the ratio of the amount of a key parameter of the product*, over the amount of that key parameter within the reference product. Proportionality rules are based on the following key parameters for impacts by lifecycle phase: Manufacturing phase impacts - the product mass (excluding packaging)**. Distribution phase impacts - total mass of product (including packaging). Installation phase impacts - mass of packaging. Use phase impacts - total watts of electricity consumed by the product during its lifetime. End of Life impacts - the product mass (excluding packaging).

*For this range, the product refers to either the integrated product or the combination of a sensor base and a cover.

**When extrapolating for the manufacturing phase to non-LCD screen containing products in the range, reduce the impacts of each category by 50% except for abiotic depletion (ADPE), which directly proportional to the product mass.

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-00317-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH08	Information and reference documents	www.pep-ecopassport.org
Date of issue	02/2018	Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010			
Internal	X	External	
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 »			



Schneider Electric Industries SAS

Country Customer Care Center
<http://www.schneider-electric.com/contact>

35, rue Joseph Monier
 CS 30323
 F- 92506 Rueil Malmaison Cedex
 RCS Nanterre 954 503 439
 Capital social 896 313 776 €

www.schneider-electric.com

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