Product Environmental Profile

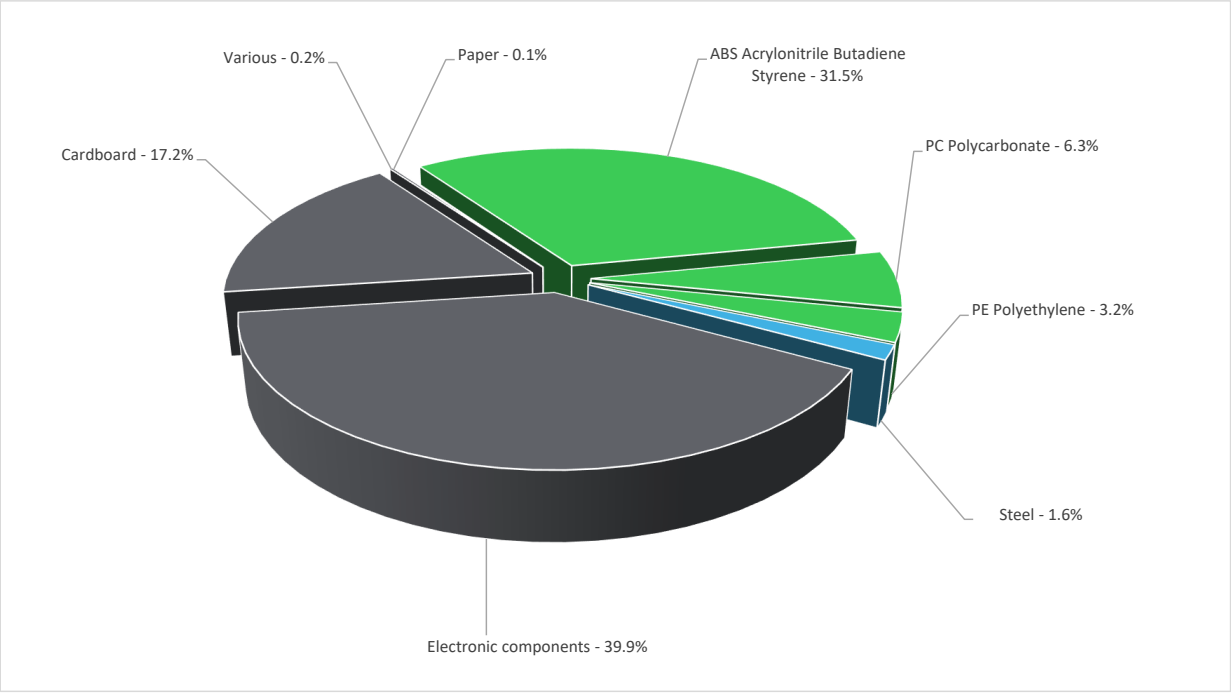
Living Space Air quality sensor - Protocol - Temp, RH, CO2, VOC, PM

General information

Reference product	Living Space Air quality sensor - Protocol - Temp, RH, CO2, VOC, PM - SLPSTCVP2
Description of the product	The main purpose of the product is to measure different environmental factors such as CO2, temperature, RH humidity, PM, VOC. The input ratings of the product is 30 VDC, or 24 Vac, 2W, Class 2. The product is packed in a polyethylene layer, boxed in cardboard and labelled
Description of the range	Single product
Functional unit	Other switchgear and controlgear solutions mentioned in the scope (e.g. fuses TC32, all-or-nothing relays TC94, Measuring relays and protection equipment TC95), apply the general rules of PCR and mention in the accompanying report the functional unit, the reference product characteristics, the reference lifetime and the use scenario which are applied consistently with the relevant IEC technical standards.
Specifications are:	Functional unit - To Display and Provide sensors data (Temperature, Humiditym CO2, VOC, PM) to a controller over BACNet/Modbus protocol according to the appropriate use scenario and for a reference life time of 10 years. IP rating - IP 30 UL 916, European conformance CE: EN61000-6-2 EN61000-6-3 EN61000 Series - industrial immunity EN 61326-1 Humidity setpoint - Scale: 0 to 100% RH

Constituent materials

Reference product mass	234.6 g	Including the product and its packaging.



Plastics	41.0%
Metals	1.6%
Others	57.4%

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%**	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 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.
Use scenario	The product is in active mode 20% of the time with a power use of 2.58W, and in standby 80% of the time with a power use of 1.15W for 10 years
Time representativeness	The collected data are representative of the year 2024
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 representative of the actual type of technologies used to make the product.
Final assembly site	Portland, OR, USA
Geographical representativeness	Rest of the World

[A1 - A3]	[A5]	[B6]	[C1 - C4]
Energy model used	Electricity Mix; Low voltage; 2018; China (A1) Electricity Mix; Low voltage; 2018; Europe (A1-A2) Electricity Mix; Low voltage; 2018; United States, US (A3)	Electricity Mix; Low voltage; 2018; Europe, EU-27	Electricity Mix; Low voltage; 2018; Asia Pacific, APAC Electricity Mix; Low voltage; 2018; Europe, EU-27 Electricity Mix; Low voltage; 2018; United States, US	Electricity Mix; Low voltage; 2018; Europe, EU-27

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		Living Space Air quality sensor - Protocol - Temp, RH, CO2, VOC, PM - SLPSTCVP2						
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	1.38E+02	6.10E+01	1.85E-01	2.41E-02	7.61E+01	5.37E-01	-1.44E-02
Contribution to climate change-fossil	kg CO2 eq	1.38E+02	6.10E+01	1.85E-01	2.41E-02	7.61E+01	5.37E-01	-1.44E-02
Contribution to climate change-biogenic	kg CO2 eq	8.78E-02	3.05E-02	0*	0*	5.73E-02	0*	-3.11E-05
Contribution to climate change-land use and land use change	kg CO2 eq	5.13E-08	5.13E-08	0*	0*	0*	0*	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	8.44E-06	7.92E-06	1.63E-07	7.68E-11	3.60E-07	0*	-2.12E-09
Contribution to acidification	mol H+ eq	8.62E-01	3.88E-01	8.02E-04	2.46E-05	4.73E-01	4.10E-04	-8.49E-05
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	1.85E-04	9.94E-05	2.16E-08	7.84E-09	8.34E-05	2.19E-06	-2.18E-08
Contribution to eutrophication marine	kg N eq	9.51E-02	4.15E-02	3.69E-04	1.07E-05	5.31E-02	1.88E-04	-8.29E-06
Contribution to eutrophication, terrestrial	mol N eq	1.09E+00	4.39E-01	3.99E-03	1.16E-04	6.47E-01	1.99E-03	-9.68E-05
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.23E-01	1.45E-01	1.31E-03	2.66E-05	1.76E-01	4.85E-04	-3.38E-05
Contribution to resource use, minerals and metals	kg Sb eq	8.82E-03	8.82E-03	0*	8.67E-11	2.55E-06	0*	-4.52E-06
Contribution to resource use, fossils	MJ	2.17E+03	6.87E+02	2.30E+00	2.35E-02	1.48E+03	1.44E+00	-3.31E-01
Contribution to water use	m3 eq	1.70E+01	1.40E+01	9.36E-03	5.66E-03	2.93E+00	2.88E-02	-5.96E-03

Inventory flows Indicators		Living Space Air quality sensor - Protocol - Temp, RH, CO2, VOC, PM - SLPSTCVP2						
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	2.20E+02	2.67E+01	0*	1.24E-04	1.93E+02	0*	-2.62E-03
Contribution to use of renewable primary energy resources used as raw material	MJ	8.32E-01	8.32E-01	0*	0*	0*	0*	0.00E+00
Contribution to total use of renewable primary energy resources	MJ	2.20E+02	2.75E+01	0*	1.24E-04	1.93E+02	0*	-2.62E-03
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.17E+03	6.82E+02	2.30E+00	2.35E-02	1.48E+03	1.44E+00	-3.31E-01
Contribution to use of non renewable primary energy resources used as raw material	MJ	5.08E+00	5.08E+00	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	2.17E+03	6.87E+02	2.30E+00	2.35E-02	1.48E+03	1.44E+00	-3.31E-01
Contribution to use of secondary material	kg	1.75E-06	1.75E-06	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	3.96E-01	3.26E-01	2.18E-04	1.32E-04	6.82E-02	6.72E-04	-1.39E-04
Contribution to hazardous waste disposed	kg	1.67E+02	1.65E+02	1.53E-04	1.06E-05	1.76E+00	9.27E-02	-3.57E-01
Contribution to non hazardous waste disposed	kg	2.54E+01	1.34E+01	1.88E-04	4.78E-02	1.18E+01	9.76E-02	-1.17E-02
Contribution to radioactive waste disposed	kg	7.31E-03	5.72E-03	3.67E-05	0*	1.55E-03	3.97E-06	-5.25E-06
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	4.25E-03	5.55E-04	0*	0*	0*	3.70E-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	4.61E-05	9.58E-06	0*	0*	0*	3.66E-05	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	1.13E-02

**The calculation of the biogenic carbon is based on the Ademe for the Cardborad (28%), and APESA/RECORD for paper (37.8%).*

Mandatory Indicators		Living Space Air quality sensor - Protocol - Temp, RH, CO2, VOC, PM - SLPSTCVP2							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	7.61E+01	0*	0*	0*	0*	0*	7.61E+01	0*
Contribution to climate change-fossil	kg CO2 eq	7.61E+01	0*	0*	0*	0*	0*	7.61E+01	0*
Contribution to climate change-biogenic	kg CO2 eq	5.73E-02	0*	0*	0*	0*	0*	5.73E-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	3.60E-07	0*	0*	0*	0*	0*	3.60E-07	0*
Contribution to acidification	mol H+ eq	4.73E-01	0*	0*	0*	0*	0*	4.73E-01	0*
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	8.34E-05	0*	0*	0*	0*	0*	8.34E-05	0*
Contribution to eutrophication marine	kg N eq	5.31E-02	0*	0*	0*	0*	0*	5.31E-02	0*
Contribution to eutrophication, terrestrial	mol N eq	6.47E-01	0*	0*	0*	0*	0*	6.47E-01	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.76E-01	0*	0*	0*	0*	0*	1.76E-01	0*
Contribution to resource use, minerals and metals	kg Sb eq	2.55E-06	0*	0*	0*	0*	0*	2.55E-06	0*
Contribution to resource use, fossils	MJ	1.48E+03	0*	0*	0*	0*	0*	1.48E+03	0*
Contribution to water use	m3 eq	2.93E+00	0*	0*	0*	0*	0*	2.93E+00	0*

Inventory flows Indicators		Living Space Air quality sensor - Protocol - Temp, RH, CO2, VOC, PM - SLPSTCVP2							
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	1.93E+02	0*	0*	0*	0*	0*	1.93E+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	1.93E+02	0*	0*	0*	0*	0*	1.93E+02	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.48E+03	0*	0*	0*	0*	0*	1.48E+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	1.48E+03	0*	0*	0*	0*	0*	1.48E+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	6.82E-02	0*	0*	0*	0*	0*	6.82E-02	0*
Contribution to hazardous waste disposed	kg	1.76E+00	0*	0*	0*	0*	0*	1.76E+00	0*
Contribution to non hazardous waste disposed	kg	1.18E+01	0*	0*	0*	0*	0*	1.18E+01	0*
Contribution to radioactive waste disposed	kg	1.55E-03	0*	0*	0*	0*	0*	1.55E-03	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 v6.2-6, database version 2024-04 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 :	SCHN-01197-V01.01-EN	*Drafting rules*	PCR-4-ed4-EN-2021 09 06
		Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Verifier accreditation N°	VH42	*Information and reference documents*	www.pep-ecopassport.org
Date of issue	06-2024	*Validity period*	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006			
Internal	External X		
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 14025:2006 "Environmental labels and declarations. Type III environmental declarations"			

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Published by Schneider Electric

SCHN-01197-V01.01-EN