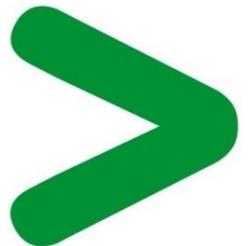


Product Environmental Profile

CANopen Smart Communication Module - TMSCO1





General information

Representative product

CANopen Smart Communication Module - TMSCO1

Description of the product

The TMSCO1 Smart Communication Module adds a CANopen port for CANopen master communication for the M262 Controllers:

- The link can be configured between 20 kbps and 1 Mbps and supports up to 63 slaves.
- Architectures based on CANopen are used to distribute I/O modules as close to the sensors and actuators as possible, thus reducing wiring costs and times, and to communicate with different devices such as variable speed drives, servo drives, etc.
- The CANopen configurator is integrated in the EcoStruxure Machine Expert software and can also be used to import standard description files in EDS format.

Functional unit

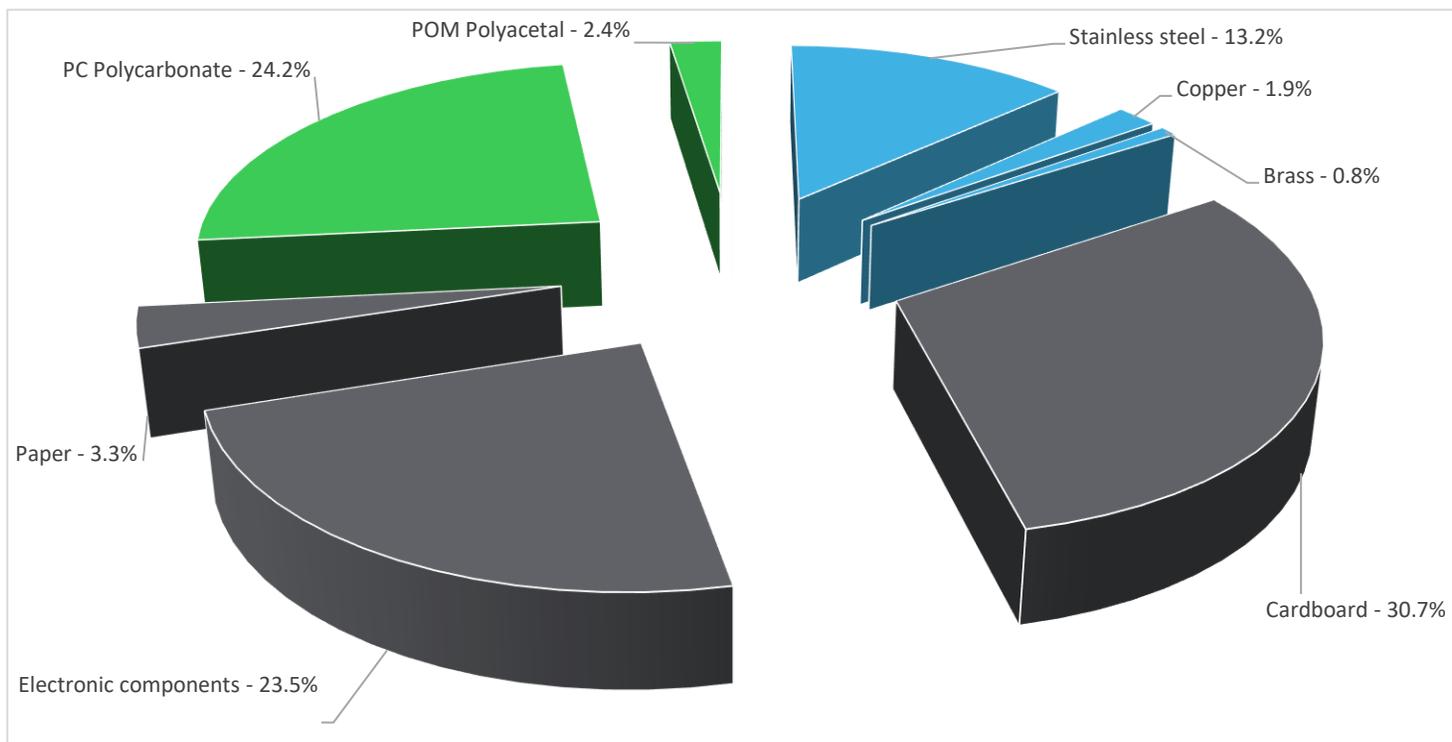
For adding a CANopen master network Equipped with a 9-way SUB-D connector to the M262 Controllers, at 1.2W 100% of the time for 10 years



Constituent materials

Reference product mass

250 g including the product, its packaging and additional elements and accessories



	Plastics	26.6%
	Metals	15.9%
	Others	57.5%

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 CANopen Smart Communication Module - TMSCO1 presents the following relevant 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 88 g, consisting of cardboard (90%) and paper (10%) Product distribution optimised by setting up local distribution centres
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 one electronic card (60.5g) 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: 35% 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).

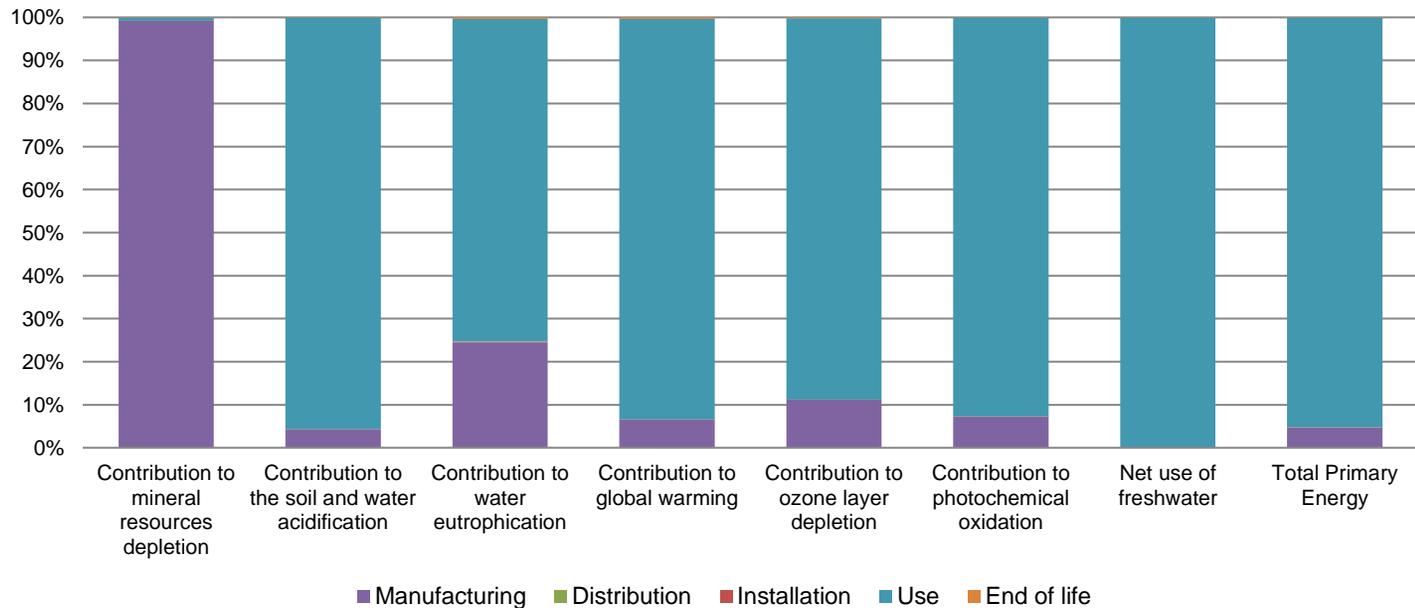
Environmental impacts

Reference life time	10 years			
Installation elements	No special components needed			
Use scenario	The product is in active mode 100% of the time with a power use of 1.2W for 10 years			
Geographical representativeness	Europe			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: Indonesia	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators

CANopen Smart Communication Module - TMSCO1 - TMSCO1

Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	5.96E-04	5.91E-04	0*	0*	4.48E-06	0*
Contribution to the soil and water acidification	kg SO ₂ eq	2.25E-01	9.68E-03	1.47E-04	0*	2.15E-01	1.06E-04
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1.73E-02	4.24E-03	3.39E-05	4.82E-06	1.30E-02	5.89E-05
Contribution to global warming	kg CO ₂ eq	5.53E+01	3.58E+00	3.23E-02	0*	5.15E+01	1.95E-01
Contribution to ozone layer depletion	kg CFC11 eq	3.78E-06	4.22E-07	0*	0*	3.36E-06	6.77E-09
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	1.27E-02	9.15E-04	1.05E-05	1.48E-06	1.18E-02	8.14E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.87E+02	0*	0*	0*	1.87E+02	0*
Total Primary Energy	MJ	1.08E+03	5.10E+01	4.56E-01	0*	1.03E+03	4.37E-01



Optional indicators	CANopen Smart Communication Module - TMSCO1 - TMSCO1						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	6.22E+02	3.66E+01	4.53E-01	0*	5.85E+02	3.60E-01
Contribution to air pollution	m ³	2.64E+03	4.18E+02	1.37E+00	0*	2.22E+03	3.14E+00
Contribution to water pollution	m ³	2.57E+03	4.36E+02	5.30E+00	7.22E-01	2.13E+03	7.82E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	1.44E-02	1.44E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.33E+02	2.66E+00	0*	0*	1.31E+02	0*
Total use of non-renewable primary energy resources	MJ	9.47E+02	4.84E+01	4.55E-01	0*	8.98E+02	4.36E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.32E+02	1.08E+00	0*	0*	1.31E+02	0*
Use of renewable primary energy resources used as raw material	MJ	1.58E+00	1.58E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	9.44E+02	4.52E+01	4.55E-01	0*	8.98E+02	4.36E-01
Use of non renewable primary energy resources used as raw material	MJ	3.12E+00	3.12E+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	3.92E+00	3.48E+00	0*	0*	2.69E-02	4.11E-01
Non hazardous waste disposed	kg	1.93E+02	1.02E+00	0*	0*	1.92E+02	0*
Radioactive waste disposed	kg	1.29E-01	6.55E-04	0*	0*	1.28E-01	0*

Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.61E-01	1.41E-02	0*	8.76E-02	0*	5.92E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	5.49E-02	0*	0*	0*	0*	5.49E-02
Exported Energy	MJ	2.78E-04	2.60E-05	0*	2.52E-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 v5.8.1, 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-00454-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH33	Information and reference documents	www.pep-ecopassport.org
Date of issue	04/2019	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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