

# Product Environmental Profile

## TBUX297248 - Expansion Model 5304 A/O Module

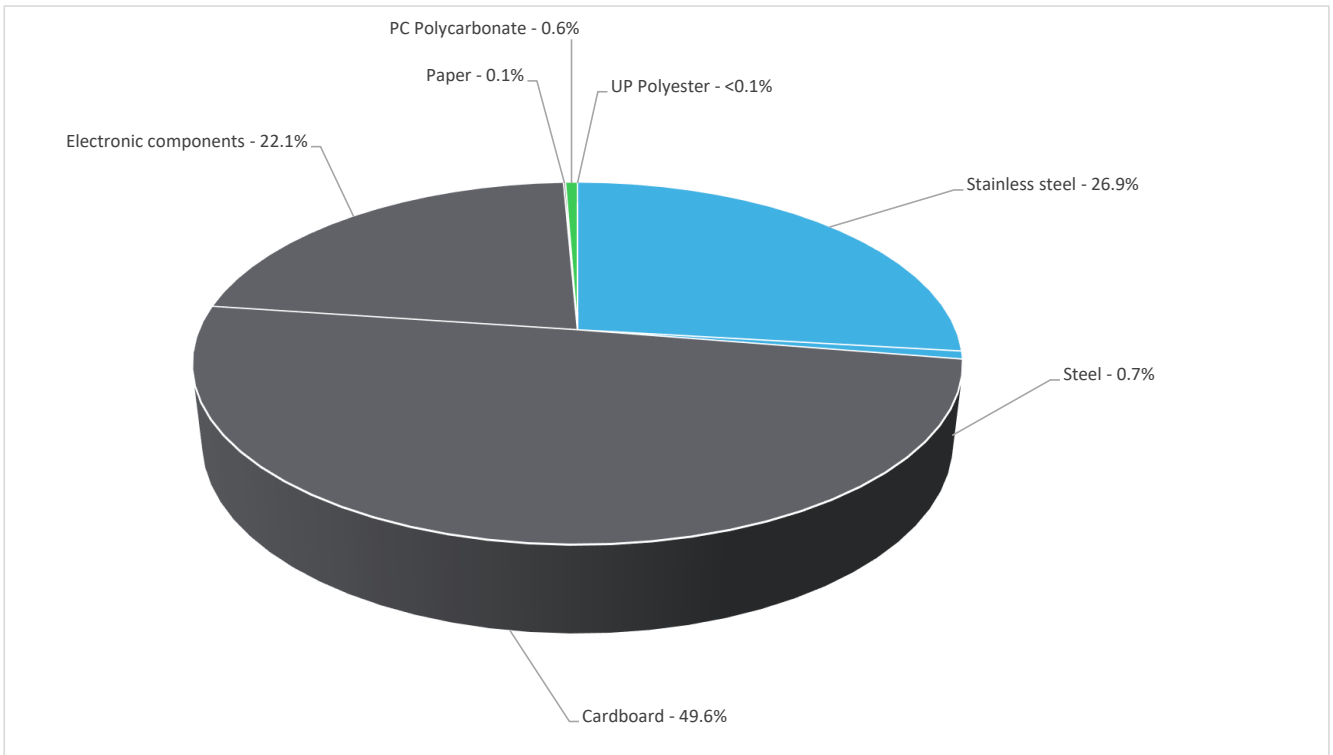


## General information

Reference product	TBUX297248 - Expansion Model 5304 A/O Module
Description of the product	The SCADAPack 5304 Analog output module is a part of the SCADAPack family of I/O Expansion and Communication modules to providing flexible I/O and telemetry options.
Functional unit	SCADAPack Smart RTU is easily expandable from its base I/O configuration to more than 700 process I/O points. maximum of twenty I/O modules may be connected for an expansion of up to 512 digital outputs, 512 digital inputs, 128 analog inputs, 64 counters and 64 analog outputs during 10 years lifetime with 0.15 W at 100% use rate.

## Constituent materials

Reference product mass 678 g including the product, its packaging and additional elements and accessories



Plastics	0,60%
Metals	27,60%
Others	71,80%

## 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:	54%	Recyclability rate has been calculated based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).
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## Environmental impacts

Reference service life time	10 years		
Product category	Other equipments - Active product		
Installation elements	Transport and end of life of packaging accounted for during installation		
Use scenario	The Expansion Model 5304 A/O module is in active mode 100% of the time with a power use of 0.15 W for 10 years.		
Technological representativeness	Manufacturing process of Electronics parts by using soldering process, Metal parts by using forging and Casting process and Plastic parts by using Injection moulding process for Expansion Model 5304 AO Module.		
Geographical representativeness	NA-19%, LATAM-35%, MENA-8%, EU-25%, APAC-13%		
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Production mix; Low voltage; MX	Europe	Electricity Mix; Production mix; Low voltage; US, CA, MX, BR, APAC, UE-27, TR.
			[C1 - C4]
			Europe

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), 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			TBUX297248 - Expansion Model 5304 A/O Module					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	Loads and Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to climate change	kg CO2 eq	1,25E+02	5,74E+01	6,11E+01	6,22E-01	5,33E+00	7,31E-01	-1,53E+00
Contribution to climate change-fossil	kg CO2 eq	1,25E+02	5,73E+01	6,11E+01	5,94E-01	5,32E+00	7,17E-01	-1,50E+00
Contribution to climate change-biogenic	kg CO2 eq	1,05E-01	5,71E-02	0*	2,76E-02	5,72E-03	1,40E-02	-2,76E-02
Contribution to climate change-land use and land use change	kg CO2 eq	3,57E-08	2,04E-08	0*	0*	0*	1,53E-08	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	3,11E-06	2,96E-06	7,08E-08	4,11E-08	2,22E-08	1,93E-08	-1,45E-07
Contribution to acidification	mol H+ eq	5,92E-01	2,95E-01	2,54E-01	2,47E-03	3,24E-02	8,77E-03	-8,42E-03
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	1,11E-04	5,71E-05	2,16E-05	4,49E-06	6,17E-06	2,20E-05	-8,74E-06
Contribution to eutrophication marine	kg N eq	2,08E-01	8,42E-02	1,14E-01	6,53E-04	3,57E-03	5,33E-03	-1,36E-03
Contribution to eutrophication, terrestrial	mol N eq	2,23E+00	9,15E-01	1,25E+00	4,93E-03	5,42E-02	5,69E-03	-1,29E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	5,60E-01	2,39E-01	3,06E-01	1,32E-03	1,15E-02	2,21E-03	-3,86E-03
Contribution to resource use, minerals and metals	kg Sb eq	3,37E-03	3,37E-03	2,41E-06	0*	0*	5,43E-07	-2,31E-04
Contribution to resource use, fossils	MJ	1,79E+03	7,85E+02	8,53E+02	6,47E+00	1,03E+02	4,17E+01	-2,38E+01
Contribution to water use	m3 eq	9,66E+01	5,92E+00	2,43E-01	2,65E-01	1,89E-01	9,00E+01	-7,91E-01

Additional indicators for the French regulation are available as well

Inventory flows Indicators			TBUX297248 - Expansion Model 5304 A/O Module					
Inventory flows	Unit	Total	Manufact.	Distribution	Installation	Use	End of Life	Loads and Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	4,36E+01	3,76E+00	9,59E-01	4,64E-01	3,80E+01	3,97E-01	3,54E+00
Contribution to use of renewable primary energy resources used as raw material	MJ	6,79E+00	6,79E+00	0*	0*	0*	0*	-6,15E+00
Contribution to total use of renewable primary energy resources	MJ	5,04E+01	1,05E+01	9,59E-01	4,64E-01	3,80E+01	3,97E-01	-2,61E+00
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,79E+03	7,84E+02	8,53E+02	6,47E+00	1,03E+02	4,17E+01	-2,38E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	1,79E+00	1,79E+00	0*	0*	0*	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	1,79E+03	7,85E+02	8,53E+02	6,47E+00	1,03E+02	4,17E+01	-2,38E+01
Contribution to use of secondary material	kg	2,03E-05	2,03E-05	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	m³	2,51E+00	1,38E-01	5,65E-03	6,18E-03	4,39E-03	2,36E+00	-1,84E-02
Contribution to hazardous waste disposed	kg	5,13E+01	5,08E+01	0*	7,35E-03	1,05E-01	3,63E-01	-1,83E+01
Contribution to non hazardous waste disposed	kg	1,97E+01	1,51E+01	1,81E+00	2,02E+00	8,02E-01	6,03E-03	-9,49E+00
Contribution to radioactive waste disposed	kg	5,09E-03	3,52E-03	1,15E-03	2,71E-04	1,38E-04	2,71E-06	-7,22E-04
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	5,30E-01	0*	0*	3,42E-01	0*	1,88E-01	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	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to biogenic carbon content of the product	kg de C	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	0,00E+00	0*	0*	0*	0*	0*	0,00E+00

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

Life cycle assessment performed with EIME version v5.9.4, database version 2022-01 in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

The Manufacturing and Distribution phases are the main contributors to the impacts across all the mandatory indicators. During the Manufacturing phase, the Resource Use, Minerals and Metals indicator is entirely affected, while Distribution phase affects Eutrophication, terrestrial by 56%.

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 :	ENVPEP2311016_V1	Drafting rules	PEP-PCR-ed4-2021 09 06
Date of issue	11/2023	Supplemented by	PSR-0005-ed2-2016 03 29
		Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14021 : 2016			
Internal	X	External	
<p>The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)</p> <p>PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019</p> <p>The elements of the present PEP cannot be compared with elements from another program.</p> <p>Document in compliance with ISO 14021 : 2016 « Environmental labels and declarations. Type II environmental declarations »</p>			

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