

# Product Environmental Profile

**TBUX297334X - Expansion Model 5606-24 I/O module, ATEX**

**SCADAPack 5000**



**Schneider**  
Electric



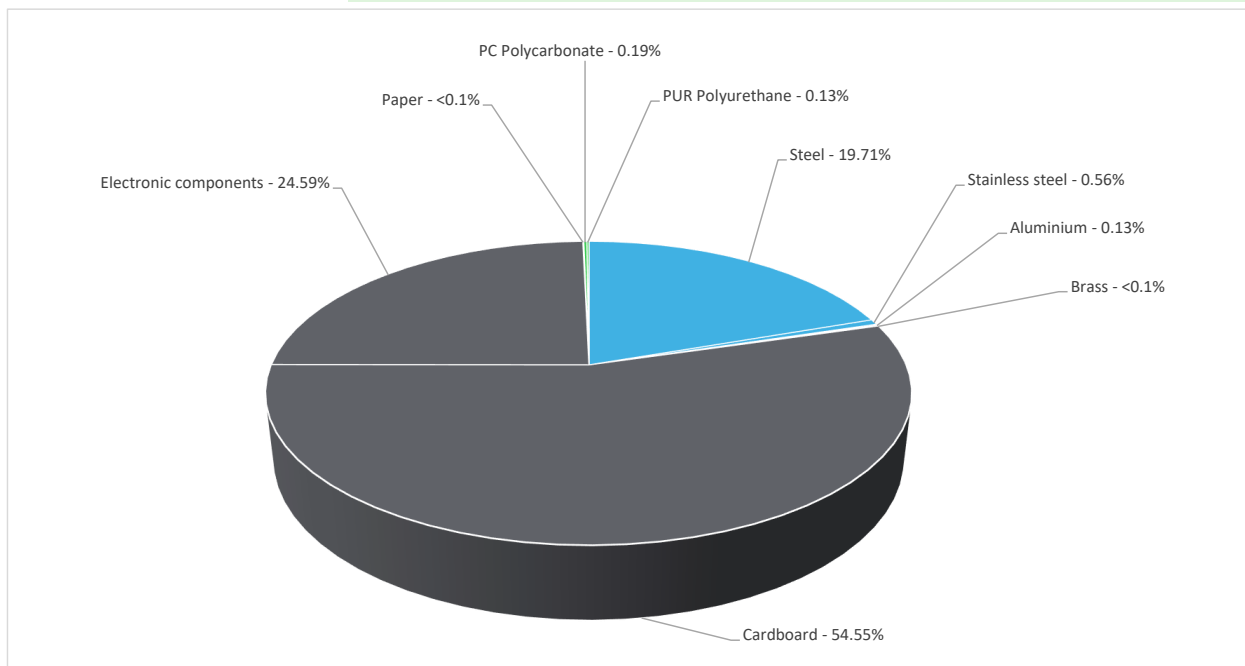
## General information

Reference product	TBUX297334X - Expansion Model 5606-24 I/O module, ATEX
Description of the product	The 5606 I/O module increases the I/O capability of a SCADAPack E Smart RTU by providing 8 analog and 32 digital inputs, 16 digital and 2 optional analog outputs.
Description of the range	The products of the range are: This PEP covers TBUX297328x and TBUX297334x series The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	The 5606 input module measures current or voltage inputs in the ranges of 0 to 20mA, 0 to 5 V. Each input is individually configured for input type and range, during 10 years of lifetime with 2.5 W at 100% use rate in accordance with CSA, UL, ATEX and IECEx as per IEC 60079-15 standards.



## Constituent materials

Reference product mass	2160 g including the product, its packaging and additional elements and accessories
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Plastics	0.32%
Metals	20.49%
Others	79.19%



## 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:	45%	The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used. Schneider specific rates have been calculated based on REEECYLAB tool developed by Ecosystem.
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## Environmental impacts

Reference service life time	10 years			
Product category	Other equipments - Active product			
Installation elements	Installation will vary based on the client's specific situation. It is not expected to involve significant physical operations or materials.			
Use scenario	The product is in active mode 100% of the time with a power use of 2.5 W for 10 years			
Time representativeness	The collected data are representative of the year 2024			
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 5606-24 I/O module.			
Geographical representativeness	NA-19%, LATAM-35%, MENA-8%, EU-25%, APAC-13%			
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; 2018; Mexico, MX	Europe	Electricity Mix; Production mix; Low voltage; US, CA, MX, BR, APAC, UE-27, TR.	Europe

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		TBUX297334X - Expansion Model 5606-24 I/O module, ATEX						
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	5.03E+02	3.69E+02	4.22E+01	0*	8.88E+01	3.00E+00	-1.72E+00
Contribution to climate change-fossil	kg CO2 eq	5.02E+02	3.68E+02	4.22E+01	0*	8.87E+01	3.00E+00	-1.72E+00
Contribution to climate change-biogenic	kg CO2 eq	4.77E-01	3.81E-01	0*	6.55E-04	9.53E-02	4.03E-04	-5.14E-03
Contribution to climate change-land use and land use change	kg CO2 eq	6.35E-06	6.33E-06	0*	0*	0*	2.18E-08	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	8.10E-05	4.29E-05	3.78E-05	0*	3.69E-07	0*	-2.53E-07
Contribution to acidification	mol H+ eq	4.28E+00	3.57E+00	1.65E-01	6.15E-04	5.41E-01	5.75E-03	-1.04E-02
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	4.25E-04	2.90E-04	5.01E-06	2.26E-07	1.03E-04	2.64E-05	-2.69E-06
Contribution to eutrophication marine	kg N eq	4.72E-01	3.43E-01	6.81E-02	2.91E-04	5.95E-02	1.57E-03	-9.90E-04
Contribution to eutrophication, terrestrial	mol N eq	4.97E+00	3.32E+00	7.33E-01	2.96E-03	9.04E-01	1.65E-02	-1.15E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.59E+00	1.13E+00	2.64E-01	7.11E-04	1.91E-01	5.02E-03	-4.04E-03
Contribution to resource use, minerals and metals	kg Sb eq	2.63E-02	2.63E-02	0*	0*	5.20E-06	0*	-5.28E-04
Contribution to resource use, fossils	MJ	7.46E+03	5.12E+03	5.33E+02	0*	1.71E+03	9.31E+01	-3.90E+01
Contribution to water use	m3 eq	6.94E+01	6.34E+01	2.17E+00	1.08E-01	3.15E+00	5.04E-01	-7.15E-01

Additional indicators for the French regulation are available as well

Inventory flows Indicators		TBUX297334X - Expansion Model 5606-24 I/O module, ATEX						
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	8.17E+02	1.83E+02	0*	0*	6.33E+02	0*	-3.37E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	2.44E+01	2.44E+01	0*	0*	0*	0*	0.00E+00
Contribution to total use of renewable primary energy resources	MJ	8.41E+02	2.08E+02	0*	0*	6.33E+02	0*	-3.37E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.46E+03	5.12E+03	5.33E+02	0*	1.71E+03	9.31E+01	-3.90E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	2.04E+00	2.04E+00	0*	0*	0*	0*	0.00E+00

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 total use of non-renewable primary energy resources	MJ	7.46E+03	5.12E+03	5.33E+02	0*	1.71E+03	9.31E+01	-3.90E+01
Contribution to use of secondary material	kg	1.68E-04	1.68E-04	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	1.62E+00	1.48E+00	5.06E-02	2.52E-03	7.32E-02	1.17E-02	-1.66E-02
Contribution to hazardous waste disposed	kg	5.17E+02	5.15E+02	0*	0*	1.75E+00	5.24E-01	-4.17E+01
Contribution to non hazardous waste disposed	kg	1.28E+02	1.13E+02	5.26E-02	1.18E+00	1.34E+01	3.20E-02	-1.42E+00
Contribution to radioactive waste disposed	kg	4.22E-02	3.14E-02	8.51E-03	0*	2.30E-03	6.77E-06	-6.62E-04
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	5.02E-01	6.51E-02	0*	0*	0*	4.37E-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	5.93E-03	6.82E-04	0*	0*	0*	5.24E-03	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	3.31E-01

Life cycle assessment performed with EIME version v6.2.1, database version 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

To estimate the impact on the environment of other products in this family, you can use two different methods. For the Manufacturing, Distribution, and End-Of-Life phases, you can extrapolate the impact of each indicator based on the product weight (extrapolation by mass). And for the Usage phase, you can estimate the impact by looking at the amount of energy consumed.

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

The phase of the product's life cycle that has the most significant impact on the environment is the Manufacturing phase, followed by Use Phase. In the Manufacturing phase, the Resource Use, Minerals and Metals indicator is entirely affected. Moreover, the energy consumed during the usage phase contributes to almost 24% of the Eutrophication, freshwater.

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-2311019_V1	Drafting rules	PCR-4-ed4-EN-2021 09 06
Date of issue	06-2024	Supplemented by	PSR-0005-ed3-EN-2023 06 06
		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 14025 : 2006			
Internal <input checked="" type="checkbox"/> External <input type="checkbox"/>			
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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