

# Product Environmental Profile

TBUP474I-IA50-BB00 - SCADAPack 474i RTU

SCADAPack 47x

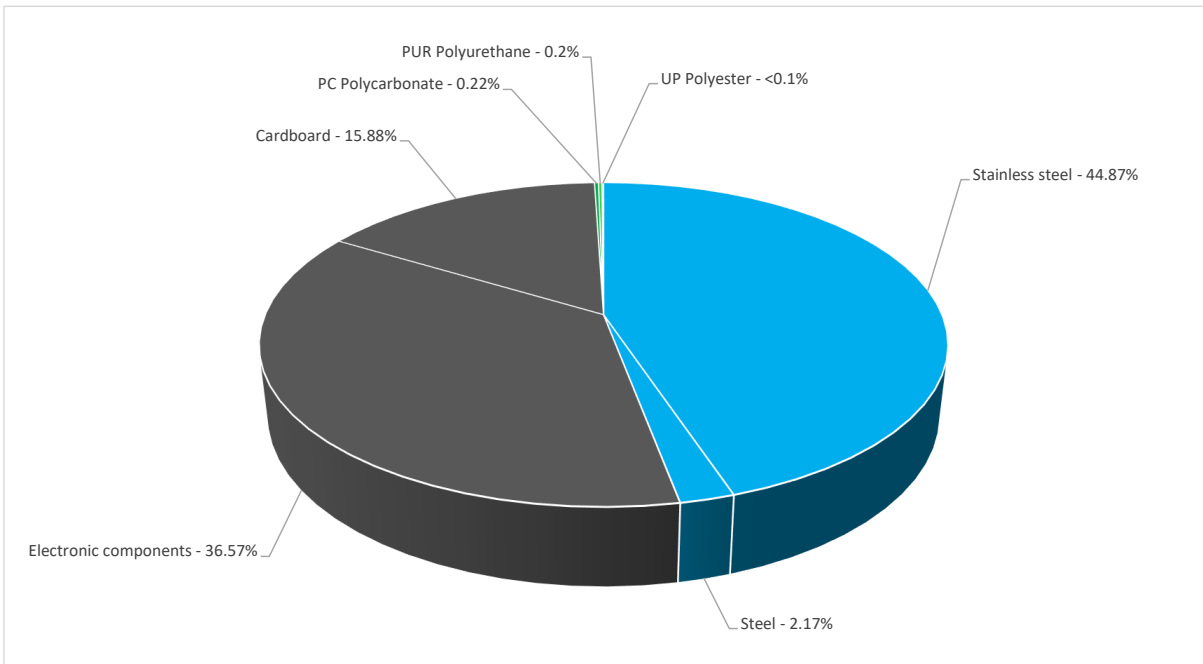


## General information

Reference product	TBUP474I-IA50-BB00 - SCADAPack 474i RTU
Description of the product	The SCADAPack™ 470i and 474i integrate the SCADAPack x70 Smart RTU platform with a Linux-based application processor, offering a secure and versatile solution. These rugged industrial devices combine Smart RTU, edge controller, and embedded Linux computer functionalities with strong cybersecurity.
Description of the range	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. This PEP covers SCADAPack 47x Series RTU.
Functional unit	The SCADAPack 470i and 474i Smart RTUs Monitoring and transition of data from field instruments to a central monitoring system up to 20 digital inputs, 12 digital outputs, 12 analog inputs and 2 analog outputs plus I/O expansion with integrated Edge platform, during its 10 years lifetime with a power use of 6 W at 100% use rate.

## Constituent materials

Reference product mass 1333 g including the product, its packaging, additional elements and accessories



Plastics	0.5%
Metals	47.0%
Others	52.5%

## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website <https://www.se.com>

## Additional environmental information

End Of Life	Recyclability potential:	55%	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECYLAB 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). 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		
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study		
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption		
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 6 W for 10 years.		
Time representativeness	The collected data are representative of the year 2025		
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 SCADAPack 474i RTU		
Geographical representativeness	Final assembly site	Use phase	
	Reynosa, Mexico	NA-19%, LATAM-35%, MENA-8%, EU-25%, APAC-13%	
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Low voltage; 2020; Mexico, MX	Europe	Electricity Mix; Production mix; Low voltage; APAC, BR, US, CA, MX, TR & UE-27
			[C1 - C4]
			Europe

Detailed results of the optional indicators mentioned in PCR<sub>ed4</sub> are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.se.com/contact>

Mandatory Indicators		TBUP474I-IA50-BB00 - SCADAPack 474i RTU						
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	2.41E+02	6.72E+01	2.51E+01	0*	1.46E+02	2.57E+00	-2.46E+00
Contribution to climate change-fossil	kg CO2 eq	2.41E+02	6.75E+01	2.51E+01	0*	1.46E+02	2.56E+00	-2.45E+00
Contribution to climate change-biogenic	kg CO2 eq	3.24E-01	0*	0*	0*	6.49E-01	3.21E-03	-5.69E-03
Contribution to climate change-land use and land use change	kg CO2 eq	4.14E-05	4.11E-05	0*	0*	0*	3.29E-07	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	4.72E-05	2.40E-05	2.25E-05	0*	6.61E-07	3.64E-08	-3.64E-07
Contribution to acidification	mol H+ eq	1.35E+00	3.29E-01	9.87E-02	0*	9.12E-01	6.40E-03	-1.47E-02
Contribution to eutrophication, freshwater	kg P eq	3.10E-04	2.02E-04	2.99E-06	4.25E-08	9.08E-05	1.40E-05	-3.74E-06
Contribution to eutrophication, marine	kg N eq	1.99E-01	5.50E-02	4.06E-02	5.47E-05	1.02E-01	1.49E-03	-1.42E-03
Contribution to eutrophication, terrestrial	mol N eq	2.41E+00	6.06E-01	4.37E-01	5.57E-04	1.35E+00	1.60E-02	-1.66E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	6.96E-01	2.02E-01	1.57E-01	1.34E-04	3.33E-01	4.29E-03	-5.81E-03
Contribution to resource use, minerals and metals	kg Sb eq	1.32E-02	1.32E-02	0*	0*	3.75E-05	0*	-7.92E-04
Contribution to resource use, fossils	MJ	3.72E+03	8.00E+02	3.29E+02	0*	2.58E+03	1.60E+01	-5.78E+01
Contribution to water use	m3 eq	3.40E+01	2.24E+01	1.34E+00	2.03E-02	1.01E+01	1.68E-01	-1.07E+00

Inventory flows Indicators		TBUP474I-IA50-BB00 - SCADAPack 474i RTU						
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 renewable primary energy used as energy	MJ	7.15E+02	4.84E+01	0*	0*	6.66E+02	7.34E-01	-4.62E-01
Contribution to renewable primary energy used as raw material	MJ	1.17E+00	1.17E+00	0*	0*	0*	0*	0.00E+00
Contribution to total renewable primary energy	MJ	7.17E+02	4.96E+01	0*	0*	6.66E+02	7.34E-01	-4.62E-01

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 non renewable primary energy used as energy	MJ	3.72E+03	7.94E+02	3.29E+02	0*	2.58E+03	1.60E+01	-5.78E+01
Contribution to non renewable primary energy used as raw material	MJ	6.75E+00	6.75E+00	0*	0*	0*	0*	0.00E+00
Contribution to total non renewable primary energy	MJ	3.72E+03	8.00E+02	3.29E+02	0*	2.58E+03	1.60E+01	-5.78E+01
Contribution to use of secondary material	kg	2.51E-01	2.51E-01	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 fresh water	m³	7.89E-01	5.17E-01	3.12E-02	4.73E-04	2.35E-01	4.98E-03	-2.49E-02
Contribution to hazardous waste disposed	kg	2.02E+02	1.98E+02	0*	0*	3.61E+00	5.18E-01	-6.25E+01
Contribution to non hazardous waste disposed	kg	4.24E+01	1.32E+01	3.25E-02	2.22E-01	2.81E+01	8.14E-01	-2.04E+00
Contribution to radioactive waste disposed	kg	1.80E-02	9.32E-03	5.25E-03	0*	3.34E-03	4.14E-05	-9.17E-04
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	7.49E-01	1.02E-01	0*	0*	0*	6.47E-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	7.34E-03	9.63E-04	0*	0*	0*	6.37E-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 of C 0.00E+00

Contribution to biogenic carbon content of the associated packaging kg of C 6.22E-02

\* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39.52%), and APESA/RECORD for Paper (37.8%)

Mandatory Indicators		TBUP474I-IA50-BB00 - SCADAPack 474i RTU							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	1.46E+02	0*	0*	0*	0*	0*	1.46E+02	0*
Contribution to climate change-fossil	kg CO2 eq	1.46E+02	0*	0*	0*	0*	0*	1.46E+02	0*
Contribution to climate change-biogenic	kg CO2 eq	6.49E-01	0*	0*	0*	0*	0*	6.49E-01	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	6.61E-07	0*	0*	0*	0*	0*	6.61E-07	0*
Contribution to acidification	mol H+ eq	9.12E-01	0*	0*	0*	0*	0*	9.12E-01	0*
Contribution to eutrophication, freshwater	kg P eq	9.08E-05	0*	0*	0*	0*	0*	9.08E-05	0*
Contribution to eutrophication marine	kg N eq	1.02E-01	0*	0*	0*	0*	0*	1.02E-01	0*
Contribution to eutrophication, terrestrial	mol N eq	1.35E+00	0*	0*	0*	0*	0*	1.35E+00	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	3.33E-01	0*	0*	0*	0*	0*	3.33E-01	0*
Contribution to resource use, minerals and metals	kg Sb eq	3.75E-05	0*	0*	0*	0*	0*	3.75E-05	0*
Contribution to resource use, fossils	MJ	2.58E+03	0*	0*	0*	0*	0*	2.58E+03	0*
Contribution to water use	m3 eq	1.01E+01	0*	0*	0*	0*	0*	1.01E+01	0*

Inventory flows Indicators		TBUP474I-IA50-BB00 - SCADAPack 474i RTU							
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	6.66E+02	0*	0*	0*	0*	0*	6.66E+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	6.66E+02	0*	0*	0*	0*	0*	6.66E+02	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.58E+03	0*	0*	0*	0*	0*	2.58E+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	2.58E+03	0*	0*	0*	0*	0*	2.58E+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	m³	2.35E-01	0*	0*	0*	0*	0*	2.35E-01	0*
Contribution to hazardous waste disposed	kg	3.61E+00	0*	0*	0*	0*	0*	3.61E+00	0*
Contribution to non hazardous waste disposed	kg	2.81E+01	0*	0*	0*	0*	0*	2.81E+01	0*

Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to radioactive waste disposed	kg	3.34E-03	0*	0*	0*	0*	0*	3.34E-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 v6.2.5-6, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used

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 Use phase and Manufacturing phases across all mandatory indicators drive the environmental impacts equally. The Resource use, fossils indicator attributes 69.3% of the impact to the Use phase and on the other hand, the Resource Use, Mineral and Metals indicator is 99.7% affected by the Manufacturing phase.

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.

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.

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Date of issue	10-2025	Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
		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	
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 14021:2016 "Environmental labels and declarations. Type II environmental declarations"			

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