Product Environmental Profile

TBUP474IIA50BB00S - SCADAPack 474i Controller, Dry Contact Relay

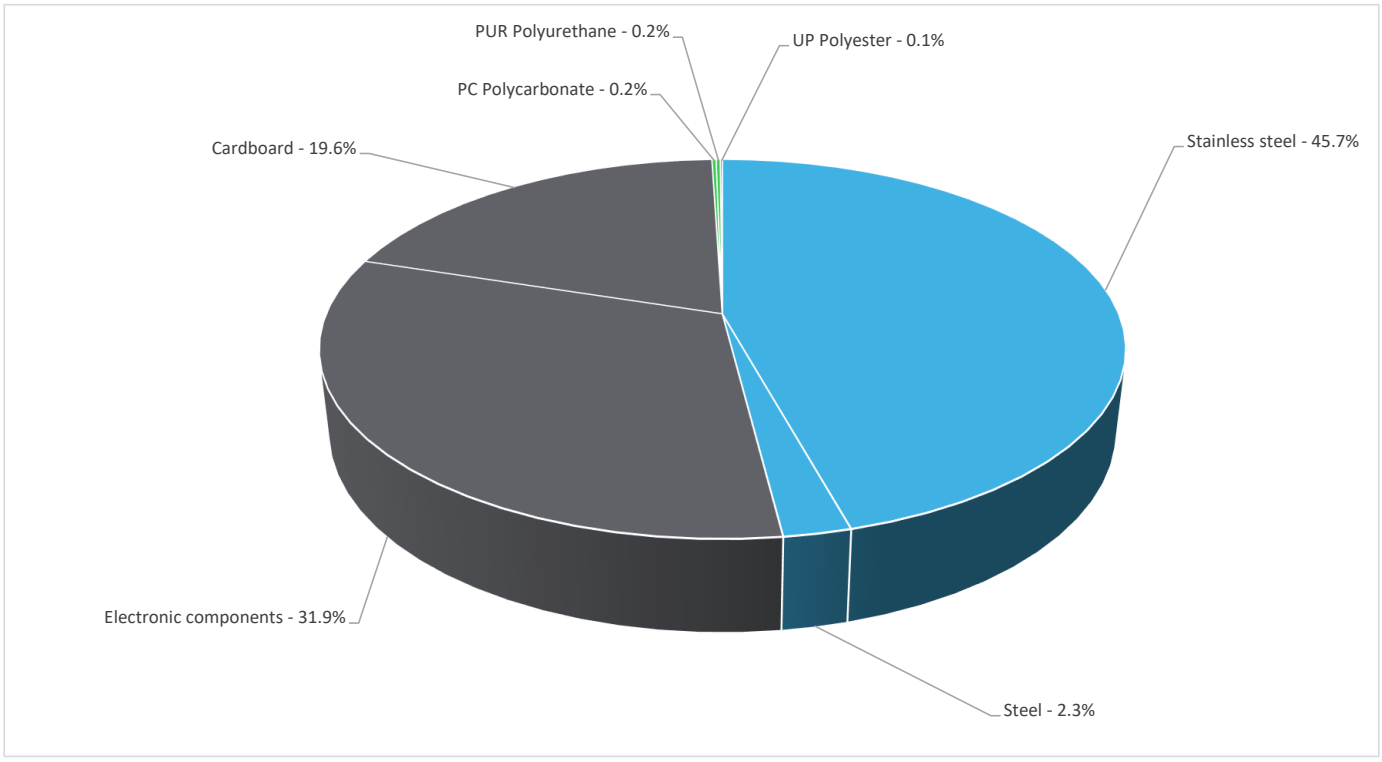
SCADAPack 47x

General information

Reference product	TBUP474IIA50BB00S - SCADAPack 474i Controller, Dry Contact Relay
Description of the product	SCADAPack 470i and 474i Smart RTUs are the latest models in the SCADAPack x70 series, and combine the x70 RTU platform with a Linux-based applications processor with cybersecurity at its core and provides a dedicated platform for advanced Edge services, protocols and applications.
Description of the range	This PEP covers TBUP470I and TBUP474I SCADAPack 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	Monitoring and transition of data from field instruments to a central monitoring system up to 16 digital inputs, 10 digital outputs, 8 analog inputs and 2 analog outputs plus I/O expansion with integrated Edge platform, during its 10 years lifetime with a power use of 6W at 100% use rate.

Constituent materials

Reference product mass	1382 g	including the product, its packaging and additional elements and accessories



	Plastics	0,5%
	Metals	48,0%
	Others	51,5%

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:	**59%**	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).

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 product is in active mode 100% of the time with a power use of 6 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 SCADAPack 474i Controller, Dry Contact Relay.
Geographical representativeness	NA-19%, LATAM-35%, MENA-8%, EU-25%, APAC-13%

Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Production mix; Low voltage; MX	Europe	Electricity Mix; Production mix; Low voltage; US, CA, MX, BR, APAC, UE-27, TR.	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		TBUP474IIA50BB00S - SCADAPack 474i Controller, Dry Contact Relay						
Impact indicators	Unit	Total	Manufacturing [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Load and Benefits [D]
Contribution to climate change	kg CO2 eq	4,70E+02	1,29E+02	1,25E+02	4,93E-01	2,13E+02	2,39E+00	-3,92E+00
Contribution to climate change-fossil	kg CO2 eq	4,70E+02	1,29E+02	1,25E+02	4,71E-01	2,13E+02	2,35E+00	-3,89E+00
Contribution to climate change-biogenic	kg CO2 eq	3,56E-01	6,51E-02	0*	2,19E-02	2,29E-01	4,07E-02	-2,77E-02
Contribution to climate change-land use and land use change	kg CO2 eq	5,51E-08	4,56E-08	0*	0*	0*	9,45E-09	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	8,77E-06	7,65E-06	1,44E-07	3,27E-08	8,86E-07	5,66E-08	-5,12E-07
Contribution to acidification	mol H+ eq	2,53E+00	6,90E-01	5,18E-01	1,96E-03	1,30E+00	2,67E-02	-2,25E-02
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	4,56E-04	1,36E-04	4,39E-05	3,56E-06	2,47E-04	2,51E-05	-1,10E-05
Contribution to eutrophication marine	kg N eq	5,72E-01	1,80E-01	2,33E-01	5,19E-04	1,43E-01	1,59E-02	-2,63E-03
Contribution to eutrophication, terrestrial	mol N eq	6,70E+00	1,95E+00	2,55E+00	3,91E-03	2,17E+00	1,83E-02	-2,83E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,61E+00	5,18E-01	6,24E-01	1,05E-03	4,60E-01	7,14E-03	-9,38E-03
Contribution to resource use, minerals and metals	kg Sb eq	9,24E-03	9,23E-03	4,91E-06	0*	1,25E-05	0*	-1,03E-03
Contribution to resource use, fossils	MJ	7,72E+03	1,72E+03	1,74E+03	5,14E+00	4,11E+03	1,44E+02	-8,08E+01
Contribution to water use	m3 eq	2,94E+02	2,03E+01	4,94E-01	2,11E-01	7,55E+00	2,65E+02	-1,74E+00

Additional indicators for the French regulation are available as well

Inventory flows Indicators		TBUP474IIA50BB00S - SCADAPack 474i Controller, Dry Contact Relay						
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Load and Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1,54E+03	1,74E+01	1,95E+00	3,69E-01	1,52E+03	1,15E+00	2,32E+00
Contribution to use of renewable primary energy resources used as raw material	MJ	5,39E+00	5,39E+00	0*	0*	0*	0*	-4,88E+00
Contribution to total use of renewable primary energy resources	MJ	1,55E+03	2,28E+01	1,95E+00	3,69E-01	1,52E+03	1,15E+00	-2,56E+00
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7,72E+03	1,71E+03	1,74E+03	5,14E+00	4,11E+03	1,44E+02	-8,08E+01

Inventory flows Indicators			TBUP474IIA50BB00S - SCADAPack 474i Controller, Dry Contact Relay					
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Load and Benefits [D]
Contribution to use of non renewable primary energy resources used as raw material	MJ	4,79E+00	4,79E+00	0*	0*	0*	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	7,72E+03	1,72E+03	1,74E+03	5,14E+00	4,11E+03	1,44E+02	-8,08E+01
Contribution to use of secondary material	kg	4,18E-05	4,18E-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	7,61E+00	4,73E-01	1,15E-02	4,91E-03	1,76E-01	6,94E+00	-4,05E-02
Contribution to hazardous waste disposed	kg	1,62E+02	1,56E+02	0*	0*	4,21E+00	1,15E+00	-8,13E+01
Contribution to non hazardous waste disposed	kg	5,91E+01	2,17E+01	3,68E+00	1,61E+00	3,21E+01	1,49E-02	-9,72E+00
Contribution to radioactive waste disposed	kg	1,57E-02	7,60E-03	2,35E-03	2,15E-04	5,51E-03	8,13E-06	-1,55E-03
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	9,23E-01	0*	0*	2,71E-01	0*	6,52E-01	0,00E+00
Contribution to materials for energy recovery	kg	2,92E-08	2,92E-08	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 Use 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 Use phase affects Eutrophication, freshwater by 54%.

For Manufacturing, Distribution and End of Life environmental indicators can be proportionally extrapolated by the mass of the product. For the Use phase by the energy consumption of the product.

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 :	ENVPEP2203001_V2	*Drafting rules*	PEP-PCR-ed4-2021 09 06
		Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	11/2023	*Information and reference documents*	www.pep-ecopassport.org
		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)

PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14021 : 2016 « Environmental labels and declarations. Type II environmental declarations »

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