Product Environmental Profile

SCADAPack 575 Smart RTU

SCADAPack Smart RTUs (570 and 575 Series)

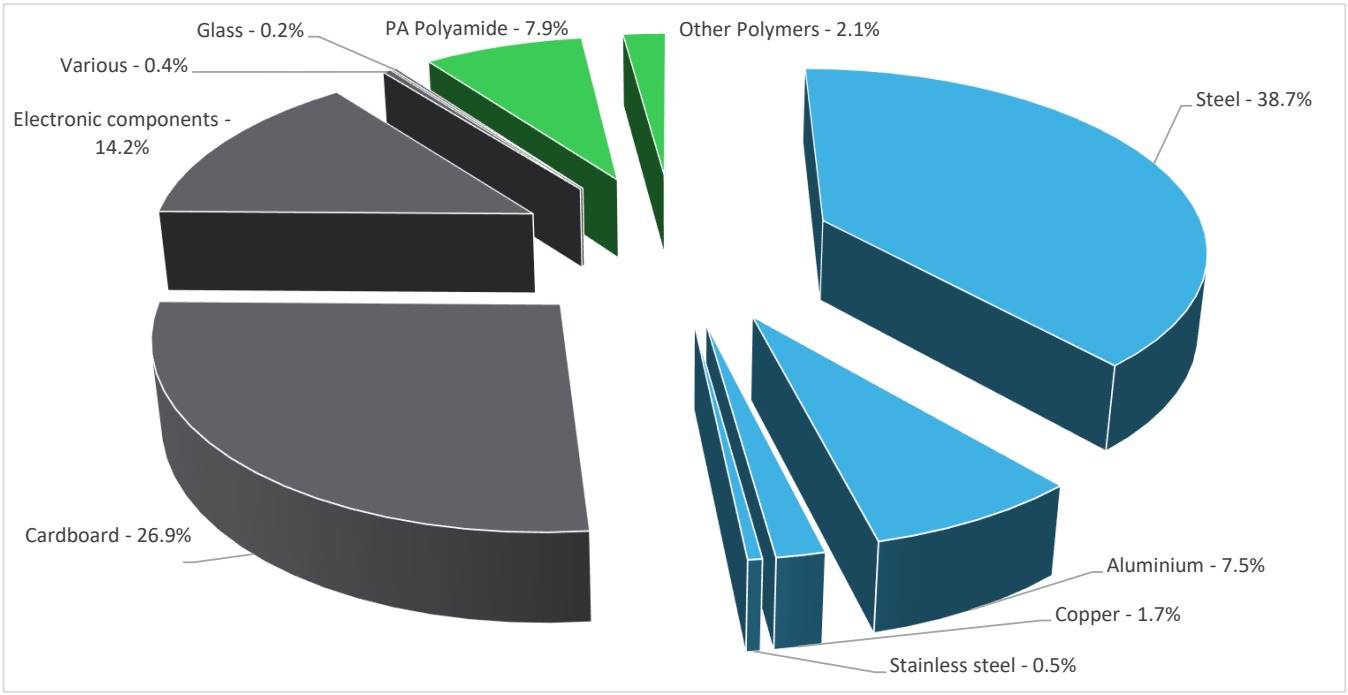
Schneider Electric

General information

Representative product	SCADAPack 575 Smart RTU - TBUP575-UA56-AB10S
Description of the product	The main function of the SCADAPack 575 is to provide a combination of a programmable automation controller with the versatility of a DNP3 centric remote telemetry unit.
Description of the range	SCADAPack Smart RTUs (570 and 575 Series) The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	To remotely monitor and control up to 100, or more, remote and local slave devices, up to 515 internal digital/analog inputs/outputs over 10 years, within adverse environments, wide ranging temperatures and hazardous locations.

Constituent materials

Reference product mass	1581 g	including the product, its packaging and additional elements and accessories



Plastics	10.0%
Metals	48.4%
Others	41.7%

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 2011/65/EU of 8 June 2011), 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

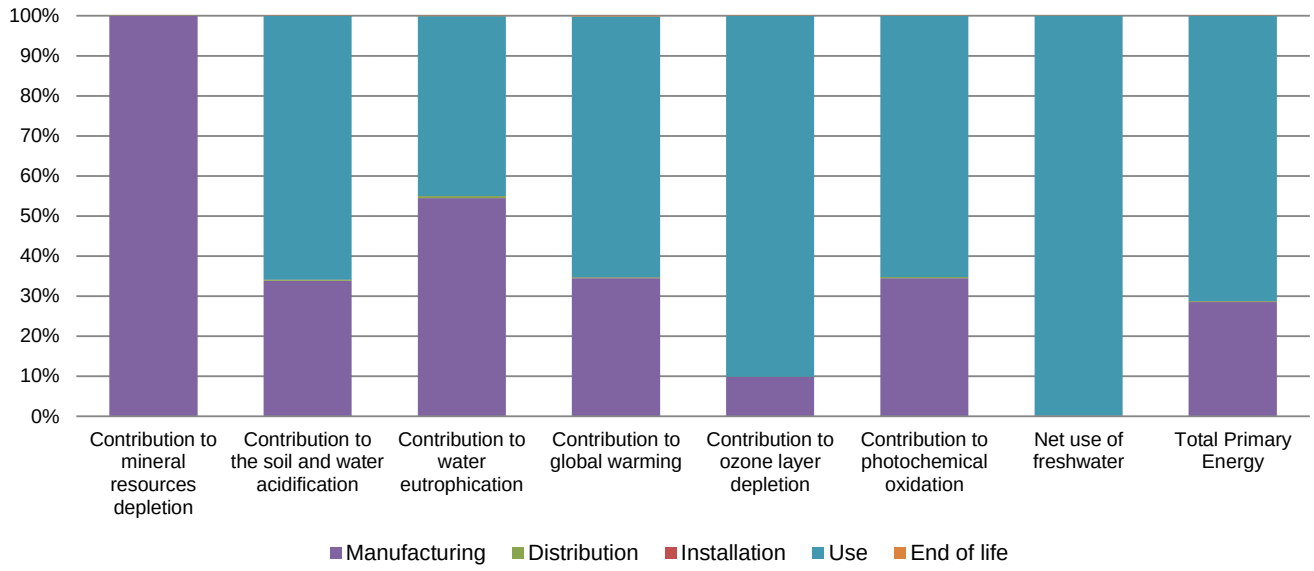
The SCADAPack 575 Smart RTU presents the following relevent environmental aspects	
Design	This product is a low-power controller (relative to many other automation products such as standard PLCs). This results in a reduced need for batteries in solar powered installations. Applications also include production optimization in O&G production fields resulting in less use of energy per barrel or BOE to produce the fluids. Another common application is pump control which can be optimized to take advantage of VFD (Variable Frequency Drives) and reduce overall energy consumption when pumping water or waste water.
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 420.4 g, consisting of Cardboard box (97.5%), CD (PC) (1%) and Anti-static bag (PET) (1.5%)
Installation	The product does not require any special installation materials or operations. Installation is to be performed by qualified personnel.
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 PCBAs (167g, 156g, 12.8g) and LiSoCl2 battery (6g) 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: **65%** 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
Product category	Other equipments - Active product
Installation elements	No special components needed
Use scenario	The product consumes an estimated average of < 4.8 W however actual consumption varies based on application specifics. The NVRAM and clock/calendar on the controller board is powered by a lithium battery that is rated for 2 years of power-off time. Actual battery life time depends on environmental conditions and the amount of time the product is not under power. Estimated average usage is approx. 1.2 batteries over the product life-time.
Geographical representativeness	The product can be used in all regions, but the majority of products are deployed in the U.S. (26%), France (20%), Australia. (18%) and Canada (10%).
Technological representativeness	The main function of the SCADAPack 575 is to provide a combination of a programmable automation controller with the versatility of a DNP3 centric remote telemetry unit.

Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Canada	U.S.	U.S.	U.S.

Compulsory indicators	**SCADAPack 575 Smart RTU - TBUP575-UA56-AB10S**						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.57E-02	1.57E-02	0*	0*	9.01E-06	0*
Contribution to the soil and water acidification	kg SO_2 eq	1.01E+00	3.41E-01	3.30E-03	0*	6.63E-01	4.73E-04
Contribution to water eutrophication	kg PO_4^{3-} eq	1.44E-01	7.84E-02	7.58E-04	0*	6.46E-02	2.03E-04
Contribution to global warming	kg CO_2 eq	3.73E+02	1.29E+02	7.34E-01	0*	2.43E+02	5.84E-01
Contribution to ozone layer depletion	kg CFC11 eq	3.51E-05	3.45E-06	0*	0*	3.16E-05	2.22E-08
Contribution to photochemical oxidation	kg C_2H_4 eq	7.47E-02	2.57E-02	2.34E-04	0*	4.87E-02	4.23E-05
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	2.13E+02	3.44E-01	0*	0*	2.13E+02	0*
Total Primary Energy	MJ	6.47E+03	1.85E+03	1.04E+01	0*	4.61E+03	2.13E+00



Optional indicators		SCADAPack 575 Smart RTU - TBUP575-UA56-AB10S					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	4.61E+03	1.64E+03	1.03E+01	0*	2.95E+03	1.73E+00
Contribution to air pollution	m³	2.32E+04	4.82E+03	3.01E+01	0*	1.83E+04	1.53E+01
Contribution to water pollution	m³	3.09E+04	1.93E+04	1.21E+02	0*	1.15E+04	2.81E+01
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	6.85E-01	6.85E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.80E+02	1.19E+01	0*	0*	3.68E+02	0*
Total use of non-renewable primary energy resources	MJ	6.09E+03	1.84E+03	1.04E+01	0*	4.24E+03	2.13E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.79E+02	1.07E+01	0*	0*	3.68E+02	0*
Use of renewable primary energy resources used as raw material	MJ	1.27E+00	1.27E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6.08E+03	1.83E+03	1.04E+01	0*	4.24E+03	2.13E+00
Use of non renewable primary energy resources used as raw material	MJ	9.31E+00	9.31E+00	0*	0*	2.04E-03	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	3.46E+01	2.79E+01	0*	9.45E-03	4.84E+00	1.84E+00
Non hazardous waste disposed	kg	3.33E+02	1.67E+01	0*	0*	3.16E+02	0*
Radioactive waste disposed	kg	4.82E-01	8.11E-03	0*	0*	4.74E-01	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.15E+00	2.66E-02	0*	4.11E-01	0*	7.13E-01
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	2.29E-01	8.18E-02	0*	0*	0*	1.47E-01
Exported Energy	MJ	0.00E+00	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 EIME v5.8.0, 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).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

Depending on the impact analysis, the environmental indicators (without Raw Material Depletion - RMD) of other products in this family may be proportionally extrapolated by energy consumption values. For RMD, impact may be proportionally extrapolated by mass 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	ENVPEP1811007_V1	*Drafting rules*	PCR-ed3-EN-2015 04 02
Date of issue	11/2018		
Validity period	5 years	*Information and reference documents*	www.pep-ecopassport.org

Independent verification of the declaration and data

Internal X External

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 - Self-declared environmental claims (Type II environmental labelling) »

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