Product Environmental Profile

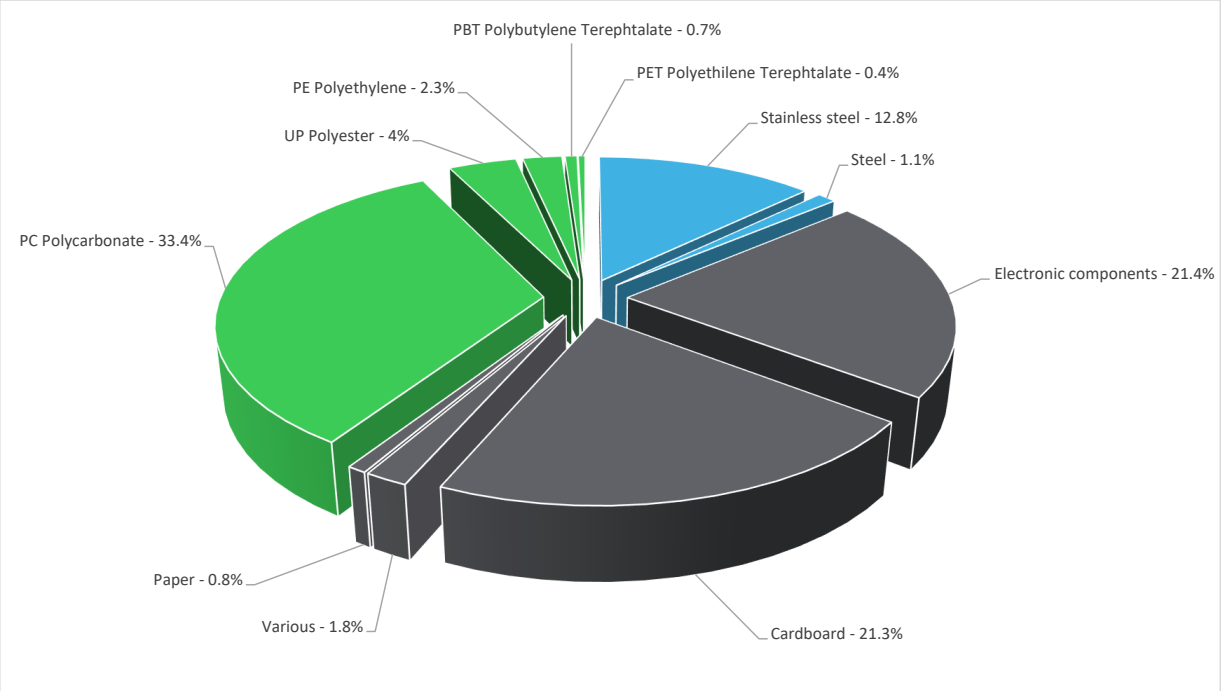
TESYS Tera Operator Control Unit (HMI)

General information

Reference product	TESYS Tera Operator Control Unit (HMI) - LTMTCUF
Description of the product	Operator Control Unit (HMI) with fast device replacement service for the TeSys Tera product. Operates at 5Vdc and 140mA
Description of the range	Single product
Functional unit	An Operator Control Unit (HMI) to configure, monitor, and control the connected load.
Specifications are:	U= 5Vdc In= 140mA UL 60947-4-1A EN/IEC 61131-2 CSA C22.2 No 60947-4-1 Flame retardance: V2 conforming to UL 94

Constituent materials

Reference product mass	265 g	including the product, its packaging, additional elements and accessories



Plastics	40.80%	
Metals	13.90%	
Others	45.30%	

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:	**18%**	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB 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).

Environmental impacts

Reference service life time	20 years			
Product category	Other equipments - Passive product - continuous operation			
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			
Installation elements	No special components needed			
Use scenario	The product is in active mode 100% of the time with a power use of 0.7W for 20 years			
Time representativeness	The collected data are representative of the year 2025			
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are Similar and Representative of the actual type of technologies used to make the product.			
Final assembly site	WPF plant, Wuxi, China			
Geographical representativeness	Rest of the World			
Energy model used	**[A1 - A3]**	**[A5]**	**[B6]**	**[C1 - C4]**
	Electricity Mix; Low voltage; 2020; China, CN	Electricity Mix; Low voltage; 2020; Asia Pacific, APAC	Electricity Mix; Low voltage; 2020; Asia Pacific, APAC	Electricity Mix; Low voltage; 2020; Asia Pacific, APAC
		Electricity Mix; Low voltage; 2020; United States, US	Electricity Mix; Low voltage; 2020; United States, US	Electricity Mix; Low voltage; 2020; United States, US
		Electricity Mix; Low voltage; 2020; Europe, EU-27	Electricity Mix; Low voltage; 2020; Europe, EU-27	Electricity Mix; Low voltage; 2020; Europe, EU-27
		Electricity Mix; Low voltage; 2020; Global, GLO	Electricity Mix; Low voltage; 2020; Global, GLO	Electricity Mix; Low voltage; 2020; Global, GLO
		Electricity Mix; Low voltage; 2020; Australia, AU	Electricity Mix; Low voltage; 2020; Australia, AU	Electricity Mix; Low voltage; 2020; Australia, AU

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.se.com/contact

Mandatory Indicators		**TESYS Tera Operator Control Unit (HMI) - LTMTCUF**						
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	1.20E+01	4.88E+00	1.06E-01	1.19E-02	6.48E+00	5.56E-01	-1.44E-01
Contribution to climate change-fossil	kg CO2 eq	1.21E+01	4.97E+00	1.06E-01	1.19E-02	6.44E+00	5.56E-01	-6.62E-02
Contribution to climate change-biogenic	kg CO2 eq	-4.52E-02	-8.90E-02	0*	0*	0*	0*	-7.81E-02
Contribution to climate change-land use and land use change	kg CO2 eq	1.36E-04	1.36E-04	0*	0*	0*	0*	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	7.38E-07	6.13E-07	9.33E-08	9.41E-11	3.09E-08	4.07E-10	-1.78E-08
Contribution to acidification	mol H+ eq	7.47E-02	3.43E-02	4.60E-04	3.13E-05	3.92E-02	6.77E-04	-4.35E-04
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$eq	1.96E-05	1.20E-05	1.24E-08	1.10E-08	6.22E-06	1.35E-06	8.62E-07
Contribution to eutrophication, marine	kg N eq	8.53E-03	3.63E-03	2.11E-04	1.44E-05	4.45E-03	2.21E-04	3.18E-05
Contribution to eutrophication, terrestrial	mol N eq	9.84E-02	3.88E-02	2.29E-03	1.49E-04	5.48E-02	2.40E-03	-3.21E-06
Contribution to photochemical ozone formation - human health	kg COVNM eq	2.97E-02	1.35E-02	7.50E-04	3.53E-05	1.47E-02	6.60E-04	-8.31E-05
Contribution to resource use, minerals and metals	kg Sb eq	3.96E-04	3.95E-04	0*	0*	1.01E-06	0*	-4.33E-05
Contribution to resource use, fossils	MJ	2.10E+02	7.77E+01	1.32E+00	2.77E-02	1.23E+02	8.09E+00	-2.34E+00
Contribution to water use	m3 eq	2.26E+00	1.81E+00	5.37E-03	6.07E-03	3.77E-01	6.45E-02	-4.10E-02

Inventory flows Indicators	**TESYS Tera Operator Control Unit (HMI) - LTMTCUF**

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	1.90E+01	2.57E+00	0*	0*	1.64E+01	0*	-2.53E-01
Contribution to renewable primary energy used as raw material	MJ	3.62E-02	3.62E-02	0*	0*	0*	0*	9.90E-01
Contribution to total renewable primary energy	MJ	1.90E+01	2.61E+00	0*	0*	1.64E+01	0*	7.37E-01
Contribution to non renewable primary energy used as energy	MJ	2.06E+02	7.33E+01	1.32E+00	2.77E-02	1.23E+02	8.09E+00	-2.34E+00
Contribution to non renewable primary energy used as raw material	MJ	4.38E+00	4.38E+00	0*	0*	0*	0*	0.00E+00
Contribution to total non renewable primary energy	MJ	2.10E+02	7.77E+01	1.32E+00	2.77E-02	1.23E+02	8.09E+00	-2.34E+00
Contribution to use of secondary material	kg	6.22E-02	6.22E-02	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	m^3	5.25E-02	4.20E-02	1.25E-04	1.41E-04	8.80E-03	1.50E-03	-9.55E-04
Contribution to hazardous waste disposed	kg	1.23E+01	1.21E+01	0*	0*	1.69E-01	5.52E-02	-3.41E+00
Contribution to non hazardous waste disposed	kg	2.39E+00	1.14E+00	0*	6.03E-02	1.07E+00	1.17E-01	-7.05E-02
Contribution to radioactive waste disposed	kg	7.55E-04	5.84E-04	2.10E-05	1.52E-07	1.45E-04	4.80E-06	-3.14E-05
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	4.03E-02	4.99E-03	0*	0*	0*	3.54E-02	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	4.04E-04	5.39E-05	0*	0*	0*	3.50E-04	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	1.62E-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		TESYS Tera Operator Control Unit (HMI) - LTMTCUF							
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to climate change	kg CO2 eq	6.48E+00	0*	0*	0*	0*	0*	6.48E+00	0*
Contribution to climate change-fossil	kg CO2 eq	6.44E+00	0*	0*	0*	0*	0*	6.44E+00	0*
Contribution to climate change-biogenic	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	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	3.09E-08	0*	0*	0*	0*	0*	3.09E-08	0*
Contribution to acidification	mol H+ eq	3.92E-02	0*	0*	0*	0*	0*	3.92E-02	0*
Contribution to eutrophication, freshwater	kg $(PO4)^{3-}$ eq	6.22E-06	0*	0*	0*	0*	0*	6.22E-06	0*
Contribution to eutrophication marine	kg N eq	4.45E-03	0*	0*	0*	0*	0*	4.45E-03	0*
Contribution to eutrophication, terrestrial	mol N eq	5.48E-02	0*	0*	0*	0*	0*	5.48E-02	0*
Contribution to photochemical ozone formation - human health	kg COVNM eq	1.47E-02	0*	0*	0*	0*	0*	1.47E-02	0*
Contribution to resource use, minerals and metals	kg Sb eq	1.01E-06	0*	0*	0*	0*	0*	1.01E-06	0*
Contribution to resource use, fossils	MJ	1.23E+02	0*	0*	0*	0*	0*	1.23E+02	0*
Contribution to water use	m3 eq	3.77E-01	0*	0*	0*	0*	0*	3.77E-01	0*

Inventory flows Indicators		TESYS Tera Operator Control Unit (HMI) - LTMTCUF							
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	1.64E+01	0*	0*	0*	0*	0*	1.64E+01	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	1.64E+01	0*	0*	0*	0*	0*	1.64E+01	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.23E+02	0*	0*	0*	0*	0*	1.23E+02	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	1.23E+02	0*	0*	0*	0*	0*	1.23E+02	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	m^3	8.80E-03	0*	0*	0*	0*	0*	8.80E-03	0*
Contribution to hazardous waste disposed	kg	1.69E-01	0*	0*	0*	0*	0*	1.69E-01	0*
Contribution to non hazardous waste disposed	kg	1.07E+00	0*	0*	0*	0*	0*	1.07E+00	0*
Contribution to radioactive waste disposed	kg	1.45E-04	0*	0*	0*	0*	0*	1.45E-04	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, database version 2025-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

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.

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		Supplemented by	PSR-0005-ed3.1-EN-2023 12 08
Date of issue	03-2025	*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)			
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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