

Product Environmental Profile

2-WIRE RS-485 INSULATED REPEATER

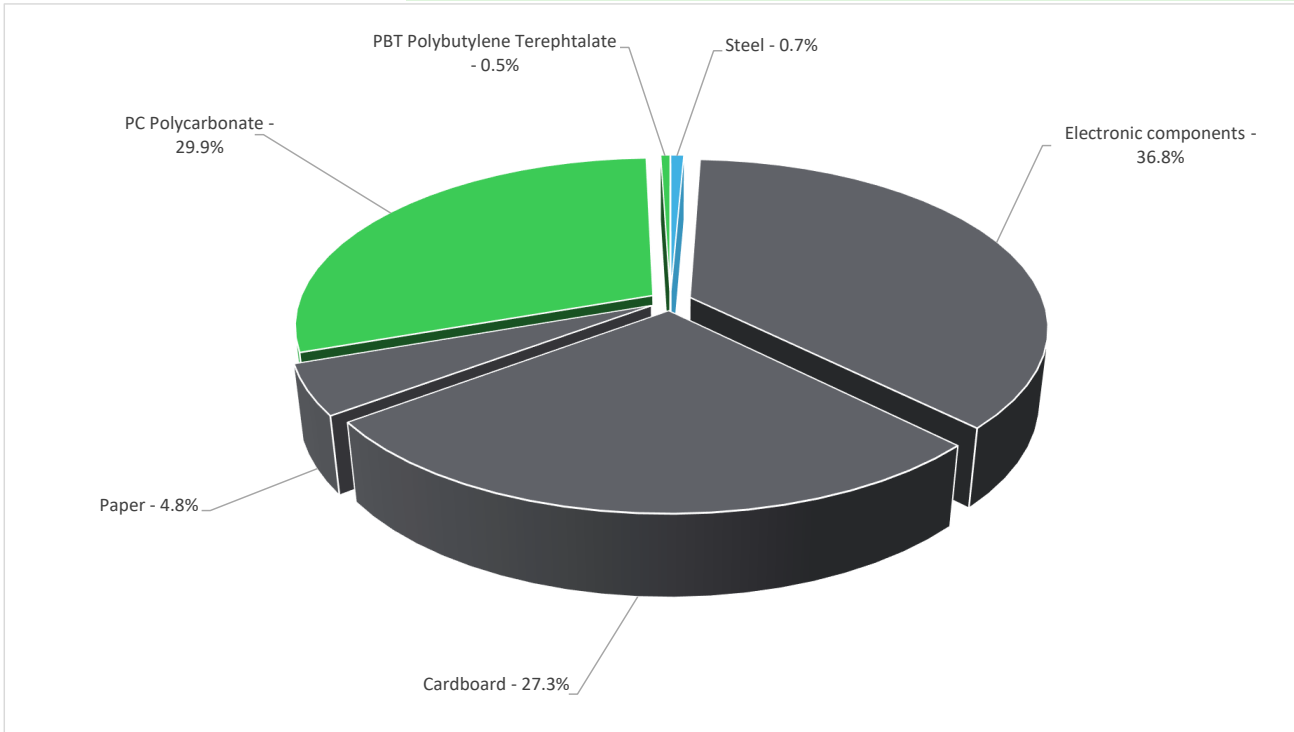


General information

Reference product	2-WIRE RS-485 INSULATED REPEATER - TRV00211
Description of the product	The main purpose of the product is to monitor or control electrical values, alarm status, open/close signals in the ULP connection System which is isolated and inserted between the Modbus network inside the equipment and the Modbus network outside the equipment.
Functional unit	To monitor or control electrical values, alarm status, open/close signals in the ULP connection System which is isolated and inserted between the Modbus network inside the equipment and the Modbus network outside the equipment for 10 years.

Constituent materials

Reference product mass	105.9 g including the product, its packaging and additional elements and accessories
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Plastics	30.4%
Metals	0.7%
Others	68.9%

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:	1%	Recyclability rate has been calculated based on REEECYLAB 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).
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Environmental impacts

Reference service life time	10 years		
Product category	Other equipments - Active product		
Installation elements	No special components needed		
Use scenario	The product is in active mode 100% of load rate with a power use of 0.36W for the lifetime of 10 years		
Technological representativeness	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production.		
Geographical representativeness	Europe		
Energy model used	[A1 - A3]	[A5]	[B6]
	Electricity Mix; Production mix; Low voltage; CN	Electricity Mix; Production mix; Low voltage; UE-27	Electricity Mix; Production mix; Low voltage; UE-27
			[C1 - C4]
			Electricity Mix; Production mix; Low voltage; UE-27

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		2-WIRE RS-485 INSULATED REPEATER - TRV00211						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to climate change	kg CO2 eq	2.13E+01	8.09E+00	1.69E-02	6.42E-02	1.29E+01	1.61E-01	-2.25E-02
Contribution to climate change-fossil	kg CO2 eq	2.12E+01	8.08E+00	1.69E-02	6.14E-02	1.29E+01	1.58E-01	-2.55E-02
Contribution to climate change-biogenic	kg CO2 eq	2.69E-02	2.94E-03	0*	2.86E-03	1.72E-02	3.84E-03	3.07E-03
Contribution to climate change-land use and land use change	kg CO2 eq	5.14E-09	5.14E-09	0*	0*	0*	0*	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	1.07E-06	1.01E-06	0*	4.25E-09	5.53E-08	5.13E-09	-3.71E-10
Contribution to acidification	mol H+ eq	1.31E-01	5.49E-02	1.13E-04	2.55E-04	7.38E-02	1.96E-03	-1.11E-04
Contribution to eutrophication, freshwater	kg (PO4) ³⁻ eq	5.23E-05	1.51E-05	6.34E-09	4.64E-07	3.54E-05	1.35E-06	-2.54E-07
Contribution to eutrophication marine	kg N eq	1.62E-02	6.31E-03	5.33E-05	6.75E-05	8.38E-03	1.40E-03	-3.01E-05
Contribution to eutrophication, terrestrial	mol N eq	1.95E-01	6.72E-02	5.85E-04	5.10E-04	1.26E-01	6.90E-04	-2.30E-04
Contribution to photochemical ozone formation - human health	kg COVNM eq	4.98E-02	2.23E-02	1.48E-04	1.36E-04	2.69E-02	2.75E-04	-5.54E-05
Contribution to resource use, minerals and metals	kg Sb eq	3.03E-03	3.03E-03	0*	0*	9.36E-07	0*	-9.83E-07
Contribution to resource use, fossils	MJ	4.24E+02	9.31E+01	2.36E-01	6.69E-01	3.29E+02	9.40E-01	-1.62E-01
Contribution to water use	m3 eq	2.77E+01	2.12E+00	0*	2.74E-02	4.57E-01	2.51E+01	-1.11E-02

Additional indicators for the French regulation are available as well

Inventory flows Indicators			2-WIRE RS-485 INSULATED REPEATER - TRV00211					
Inventory flows	Unit	Total	Manufact. [A1 - A3]	Distribution [A4]	Installation [A5]	Use [B1 - B7]	End of Life [C1 - C4]	Benefits [D]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	6.66E+01	3.23E+00	0*	4.80E-02	6.32E+01	1.09E-01	1.56E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	1.79E-01	1.79E-01	0*	0*	0*	0*	-1.73E-01
Contribution to total use of renewable primary energy resources	MJ	6.68E+01	3.41E+00	0*	4.80E-02	6.32E+01	1.09E-01	-1.66E-02
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.23E+02	9.17E+01	2.36E-01	6.69E-01	3.29E+02	9.40E-01	-1.62E-01
Contribution to use of non renewable primary energy resources used as raw material	MJ	1.38E+00	1.38E+00	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	4.24E+02	9.31E+01	2.36E-01	6.69E-01	3.29E+02	9.40E-01	-1.62E-01
Contribution to use of secondary material	kg	2.90E-02	2.90E-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 freshwater	m³	7.17E-01	4.94E-02	0*	6.39E-04	1.06E-02	6.56E-01	-2.59E-04
Contribution to hazardous waste disposed	kg	5.88E+01	5.85E+01	0*	0*	2.41E-01	7.50E-02	-7.39E-02
Contribution to non hazardous waste disposed	kg	4.15E+00	2.04E+00	5.93E-04	2.09E-01	1.86E+00	3.59E-02	-3.74E-01
Contribution to radioactive waste disposed	kg	1.22E-03	8.02E-04	4.23E-07	2.81E-05	3.89E-04	1.67E-06	-1.94E-05
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	3.61E-02	0*	0*	3.53E-02	0*	8.04E-04	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	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>

For all the impact indicators, The Use stage is the greatest contributor due to the energy losses occurring throughout the product reference service lifetime except the Climate change-Land use and land use change (GWPlu), Ozone depletion (ODP),Resource use, minerals and metals(ADPe) and Water Use(WU) stages. The manufacturing stage is the main contributor on Climate change-Land use and land use change (GWPlu), Ozone depletion (ODP),Resource use, minerals and metals(ADPe) stages. The End Of Life stage is the main contributor on Water use (WU).

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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Verifier accreditation N°	VH08	Supplemented by	PSR-0005-ed2-2016 03 29
Date of issue	10/2023	Information and reference documents	www.pep-ecopassport.org
Validity period	5 years		
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010			
Internal	External	X	
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 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »			



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