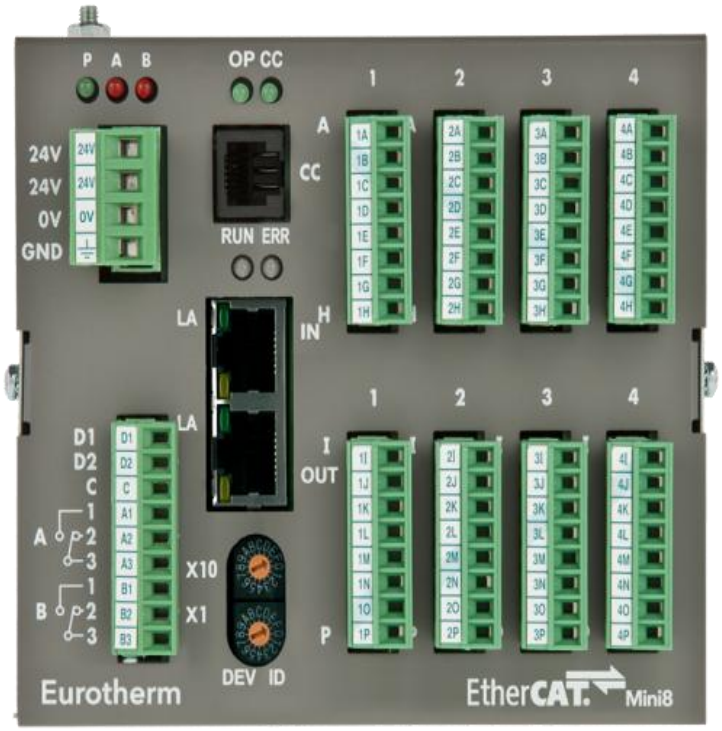
Product Environmental Profile

Mini8 (Loop Controller)



Life Is On

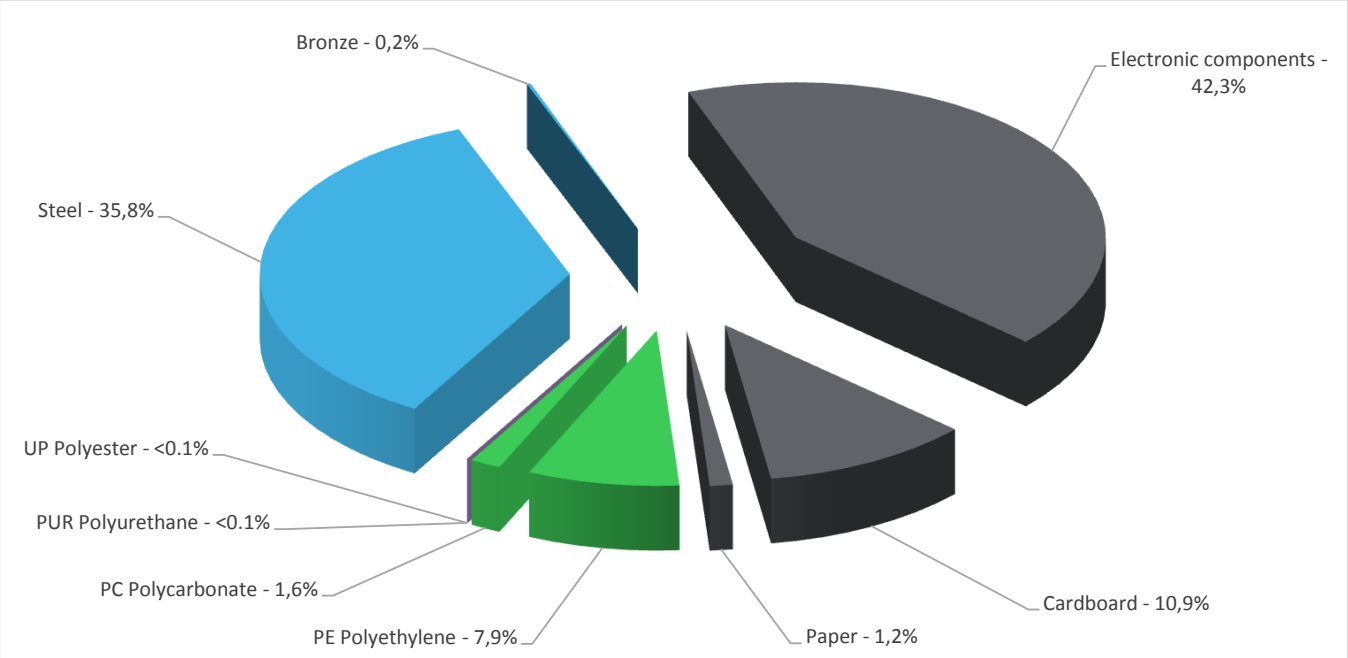
Eurotherm
by Schneider Electric

General information

Representative product	Mini8 (Loop Controller) - Mini8
Description of the product	A highly versatile and configurable DIN rail mounted controller. Able to take a wide range of input types such as TC, RTD, mV, mA, CT and Voltage. Utilizing PID control, together with timers, maths and logic functions, plus graphical user wiring features provide accurate control of relay, digital and mA output channels. It is often used together with a programmable logic controller and can multi-drop on either Serial, Fieldbus or Ethernet communications.
Functional unit	Provision of precision temperature measurement and / or control, for a period of 10 years, within industrial applications, with up to 16 control loops, interacting with up to 32 analogue inputs as well as communications via serial, Fieldbus or Ethernet. Configuration is achieved with graphical user wiring within software.

Constituent materials

Reference product mass	1297 g	including the product, its packaging and additional elements and accessories



Plastics	9,5%
Metals	36,0%
Others	54,4%

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 2002/95/EC of 27 January 2003), 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

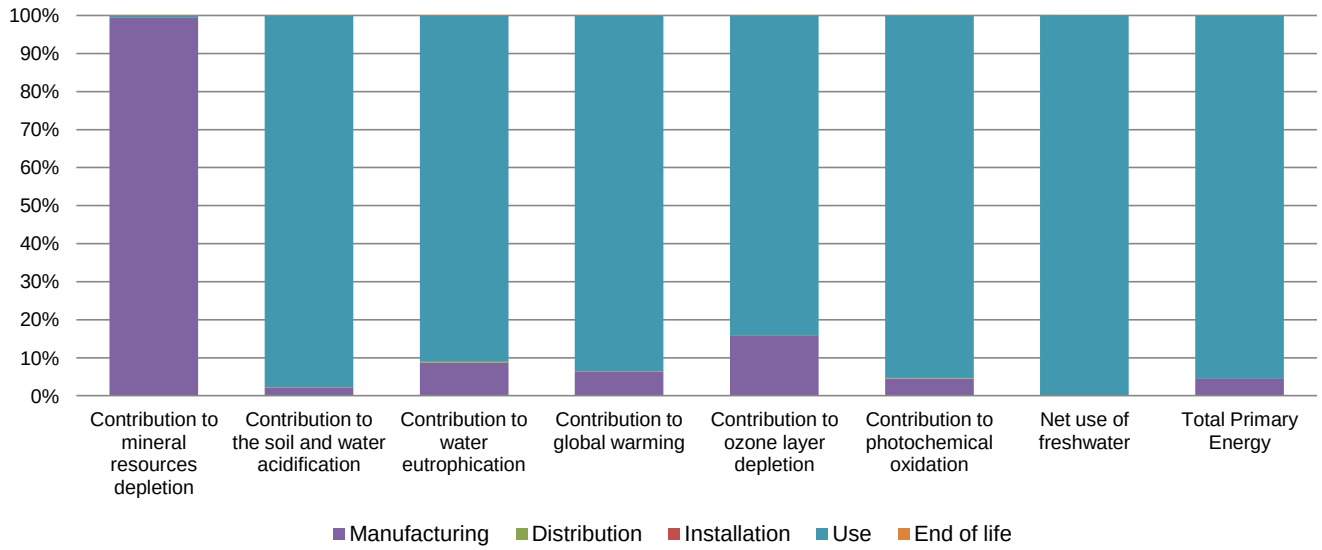
The Mini8 (Loop Controller) presents the following relevent environmental aspects	
Design	Very long product life and highly serviceable. Optimum control of customer process reduces energy use.
Manufacturing	Manufactured at a Schneider Electric production site ISO14001 certified
Distribution	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 275 g, consisting of Cardboard (51.6%), Expanded polyethylene (25.7%), PE film (11.5%), Polycarbonate (5.8%), Paper (5.5%) Packaging recycled materials is 51,6% of total packaging mass.
Installation	The Mini8 (Loop Controller) does not require any special installation materials or operations.
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 Electronic boards 492.4 (g), battery (4.9g) 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://www.eurotherm.co.uk/downloads/certificates/green-premium/Mini-8 Recyclability potential: **50%** 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 significant amount of material or energy needed to install the product. Only transport and disposal of packaging materials accounted for during installation.			
Use scenario	The product is in active mode 100% of the time with a power use of 15W for 10 years.			
Geographical representativeness	Product is used mainly in Europe, and to a lesser extent in Asia, Africa, North America, South America and Australia.			
Technological representativeness	A highly versatile and configurable DIN rail mounted controller. Able to take a wide range of input types such as TC, RTD, mV, mA, CT and Voltage. Utilizing PID control, together with timers, maths and logic functions, plus graphical user wiring features provide accurate control of relay, digital and mA output channels. It is often used together with a programmable logic controller and can multi-drop on either Serial, Fieldbus or Ethernet communications.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: Poland	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27	Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27

Compulsory indicators	Mini8 (Loop Controller) - Mini8						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1,15E-02	1,15E-02	0*	0*	5,59E-05	0*
Contribution to the soil and water acidification	kg SO_2 eq	2,75E+00	6,00E-02	2,81E-03	0*	2,69E+00	5,15E-04
Contribution to water eutrophication	kg PO_4^{3-} eq	1,79E-01	1,55E-02	6,45E-04	0*	1,62E-01	2,51E-04

Contribution to global warming	kg CO_2 eq	6,89E+02	4,39E+01	6,24E-01	0*	6,44E+02	7,81E-01
Contribution to ozone layer depletion	kg CFC11 eq	4,99E-05	7,90E-06	0*	0*	4,19E-05	2,85E-08
Contribution to photochemical oxidation	kg C_2H_4 eq	1,55E-01	7,07E-03	1,99E-04	0*	1,48E-01	4,31E-05
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	2,33E+03	2,91E-01	0*	0*	2,33E+03	0*
Total Primary Energy	MJ	1,35E+04	5,96E+02	8,83E+00	0*	1,29E+04	2,23E+00



Optional indicators	**Mini8 (Loop Controller) - Mini8**						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	7,83E+03	5,14E+02	8,78E+00	0*	7,31E+03	2,10E+00
Contribution to air pollution	m³	3,18E+04	4,00E+03	2,56E+01	0*	2,77E+04	1,61E+01
Contribution to water pollution	m³	3,11E+04	4,36E+03	1,03E+02	0*	2,66E+04	3,41E+01
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	2,41E-01	2,41E-01	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1,65E+03	1,39E+01	0*	0*	1,64E+03	0*
Total use of non-renewable primary energy resources	MJ	1,18E+04	5,82E+02	8,82E+00	0*	1,12E+04	2,23E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1,65E+03	1,17E+01	0*	0*	1,64E+03	0*
Use of renewable primary energy resources used as raw material	MJ	2,22E+00	2,22E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1,18E+04	5,71E+02	8,82E+00	0*	1,12E+04	2,23E+00
Use of non renewable primary energy resources used as raw material	MJ	1,13E+01	1,13E+01	0*	0*	0*	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	1,83E+01	1,59E+01	0*	8,49E-02	3,36E-01	2,04E+00
Non hazardous waste disposed	kg	2,41E+03	1,30E+01	0*	0*	2,40E+03	0*
Radioactive waste disposed	kg	1,61E+00	6,98E-03	0*	0*	1,60E+00	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	7,89E-01	9,13E-02	0*	1,90E-01	0*	5,07E-01
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*

Materials for energy recovery	kg	2,10E-01	1,65E-04	0*	0*	0*	2,10E-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 v5.6.0.1, 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).

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	ENVPEP1709012_V1-EN	*Drafting rules*	PCR-ed3-EN-2015 04 02
Date of issue	10/2017		
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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