Product Environmental Profile

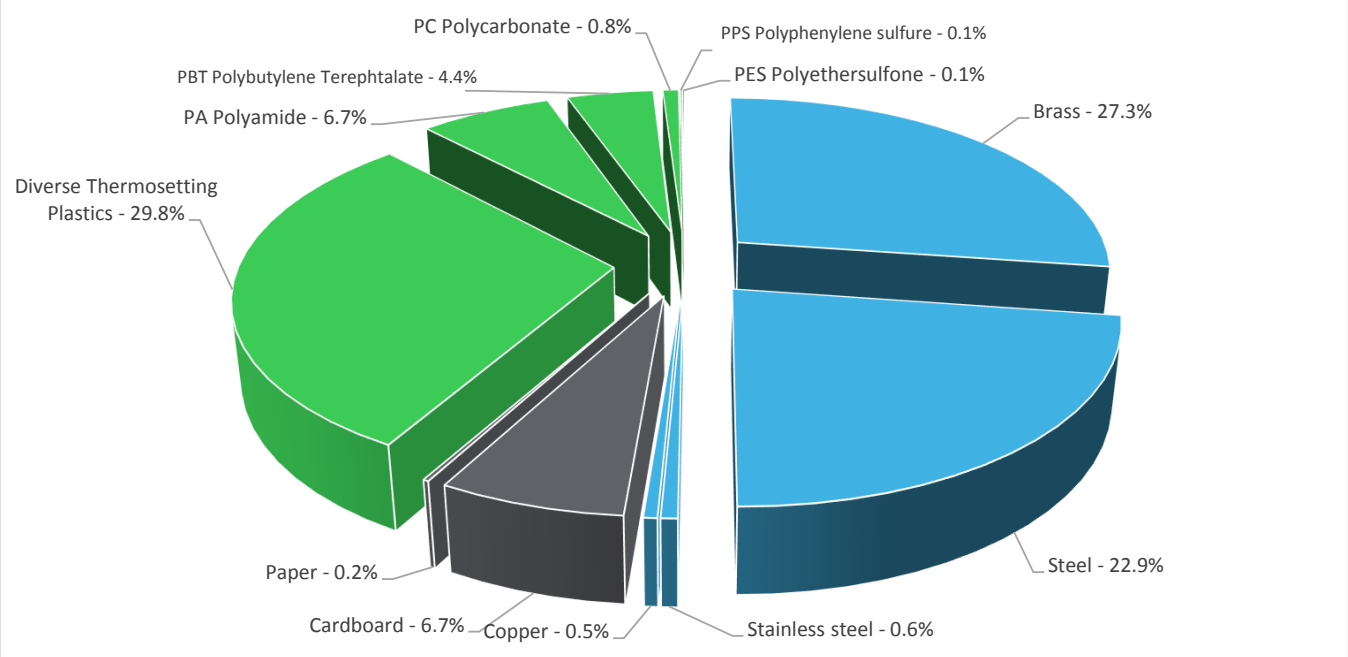
TeSys K thermal overload relay LR2K

General information

Representative product	TeSys K thermal overload relay LR2K - LR2K0312
Description of the product	The main function is to ensure the protection of motors. It is compensated and phase failure sensitive. Resetting can be either manual or automatic.
Functional unit	This product consists of thermal overload relays adjustable from 0.11 to 16 A with screw-clamp connection.

Constituent materials

Reference product mass	185 g	including the product, its packaging and additional elements and accessories



	Plastics	41.9%
	Metals	51.3%
	Others	6.9%

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

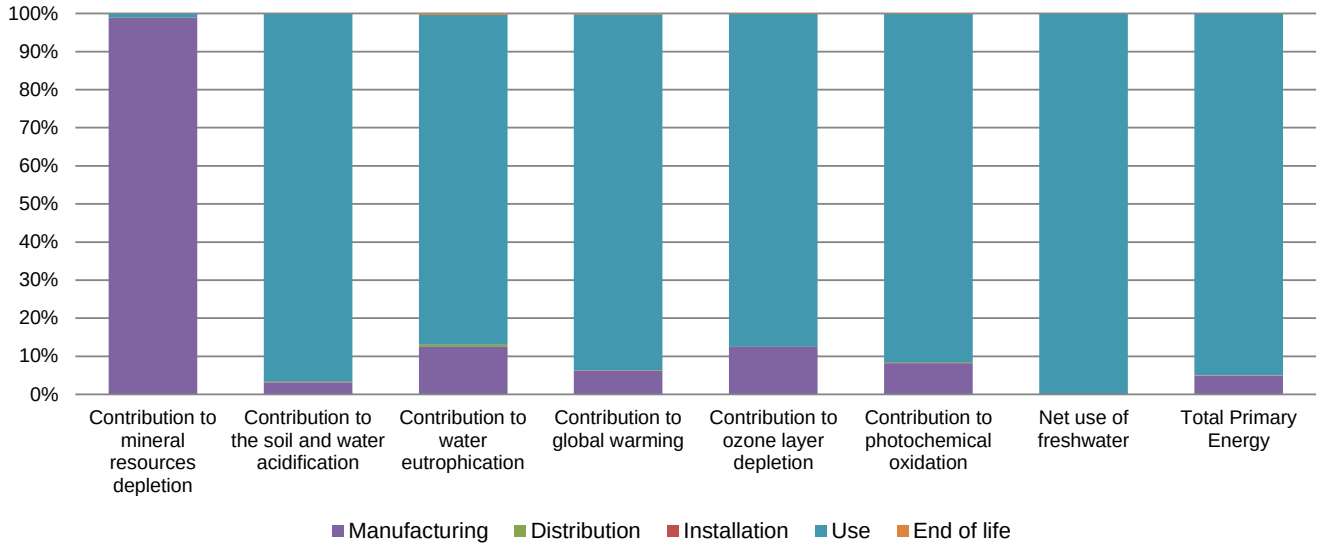
Additional environmental information

The TeSys K thermal overload relay LR2K presents the following relevent environmental aspects	
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 13.1 g, consisting of cardboard(98%), paper(2%)
Installation	Ref LR2K0312 does not require any installation 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 No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: **49%** 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	20 years			
Product category	Other equipments - Passive product - non-continuous operation			
Installation elements	No special components needed			
Use scenario	load rate / rated current (In): 30 % of In percentage of utilization time: 30%			
Geographical representativeness	Europe			
Technological representativeness	The main function is to ensure the protection of motors. It is compensated and phase failure sensitive. Resetting can be either manual or automatic.			
Energy model used	**Manufacturing**	**Installation**	**Use**	**End of life**
	Energy model used: Pisek, Czech Republic	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	**TeSys K thermal overload relay LR2K - LR2K0312**						
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.18E-04	1.16E-04	0*	0*	1.21E-06	0*
Contribution to the soil and water acidification	kg SO_2 eq	6.01E-02	1.92E-03	1.09E-04	0*	5.80E-02	5.36E-05
Contribution to water eutrophication	kg PO_4^{3-} eq	4.05E-03	5.03E-04	2.51E-05	7.18E-07	3.50E-03	1.50E-05
Contribution to global warming	kg CO_2 eq	1.49E+01	9.21E-01	2.39E-02	0*	1.39E+01	2.87E-02
Contribution to ozone layer depletion	kg CFC11 eq	1.04E-06	1.30E-07	0*	0*	9.06E-07	1.22E-09
Contribution to photochemical oxidation	kg C_2H_4 eq	3.49E-03	2.87E-04	7.78E-06	0*	3.19E-03	5.58E-06
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	5.04E+01	9.02E-03	0*	0*	5.04E+01	0*
Total Primary Energy	MJ	2.93E+02	1.42E+01	3.37E-01	0*	2.78E+02	2.60E-01



Optional indicators		TeSys K thermal overload relay LR2K - LR2K0312					
Impact indicators	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.72E+02	1.34E+01	3.35E-01	0*	1.58E+02	2.37E-01
Contribution to air pollution	m³	1.02E+03	4.14E+02	1.02E+00	0*	5.99E+02	1.88E+00
Contribution to water pollution	m³	6.75E+02	9.46E+01	3.93E+00	1.08E-01	5.74E+02	2.28E+00
Resources use	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	6.16E-03	6.16E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.58E+01	4.95E-01	0*	0*	3.53E+01	0*
Total use of non-renewable primary energy resources	MJ	2.57E+02	1.38E+01	3.37E-01	0*	2.42E+02	2.60E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.56E+01	2.36E-01	0*	0*	3.53E+01	0*
Use of renewable primary energy resources used as raw material	MJ	2.60E-01	2.60E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2.55E+02	1.24E+01	3.37E-01	0*	2.42E+02	2.60E-01
Use of non renewable primary energy resources used as raw material	MJ	1.34E+00	1.34E+00	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	9.34E+00	9.07E+00	0*	0*	7.25E-03	2.68E-01
Non hazardous waste disposed	kg	5.22E+01	3.20E-01	0*	0*	5.18E+01	0*
Radioactive waste disposed	kg	3.48E-02	1.82E-04	0*	0*	3.46E-02	0*
Other environmental information	**Unit**	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.19E-01	1.88E-02	0*	1.30E-02	0*	8.70E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	3.98E-03	0*	0*	0*	0*	3.98E-03
Exported Energy	MJ	4.14E-05	3.89E-06	0*	3.75E-05	0*	0*

** represents less than 0.01% of the total life cycle of the reference flow*

Life cycle assessment performed with EIME version EIME v5.7.0.2, 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.

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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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