

# Product Environmental Profile

## Differential thermal overload relay, TeSys K, 3.7-5.5A

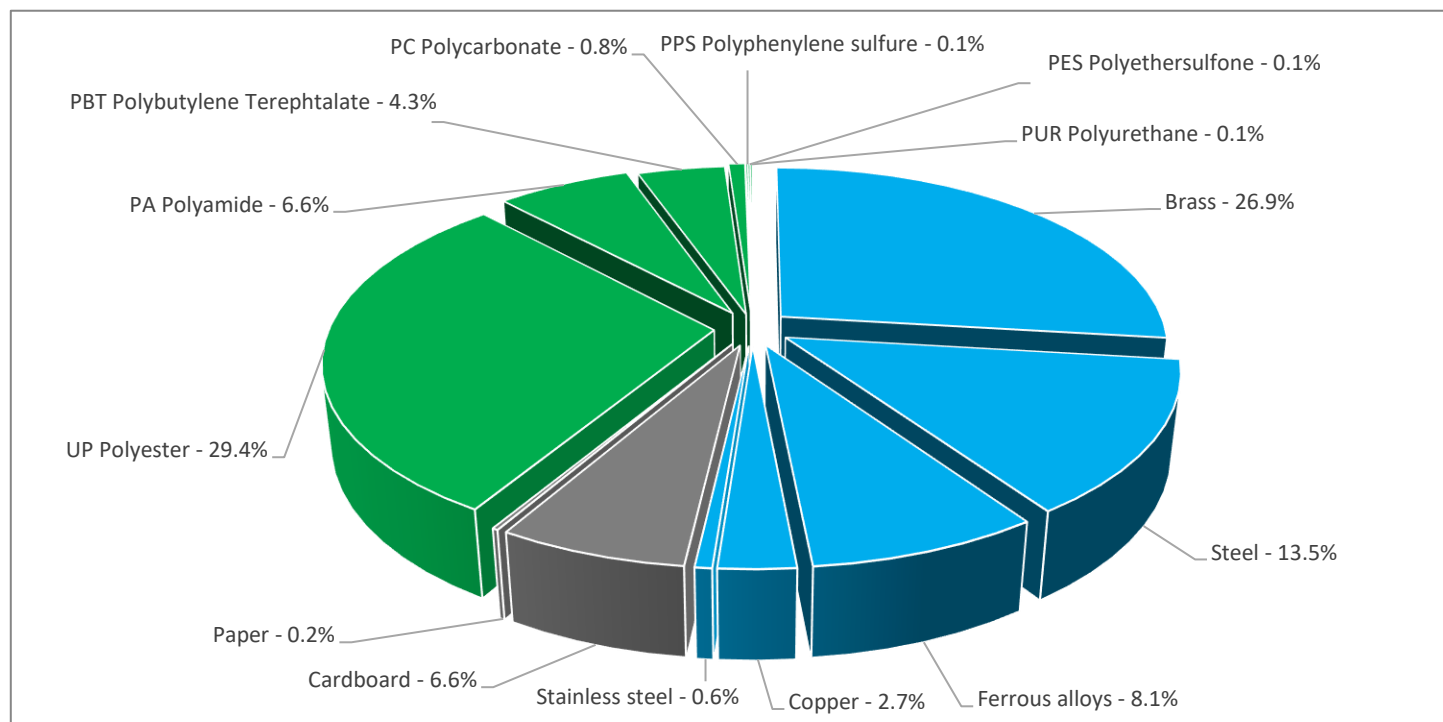


## General information

<b>Representative product</b>	Differential thermal overload relay, TeSys K, 3.7-5.5A - LR2K0312
<b>Description of the product</b>	The main purpose of the thermal overload relays is to detect overload currents in order to protect the motor.
<b>Functional unit</b>	The functional unit of the LR2K0312 is to detect overload currents in order to protect the load for 20 years. Standardized product characteristics to provide: rated insulation voltage: 690V conventional free air thermal current:6A rated operational voltage:690V AC rated impulse withstand voltage:6KV thermal protection adjustment range:3.7-5.5A thermal overload class: 10A

## Constituent materials

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



Plastics	41.4%
Metals	51.8%
Others	6.8%

## Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) 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), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate– BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) as mentioned in the 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 Differential thermal overload relay, TeSys K, 3.7-5.5A presents the following relevant environmental aspects

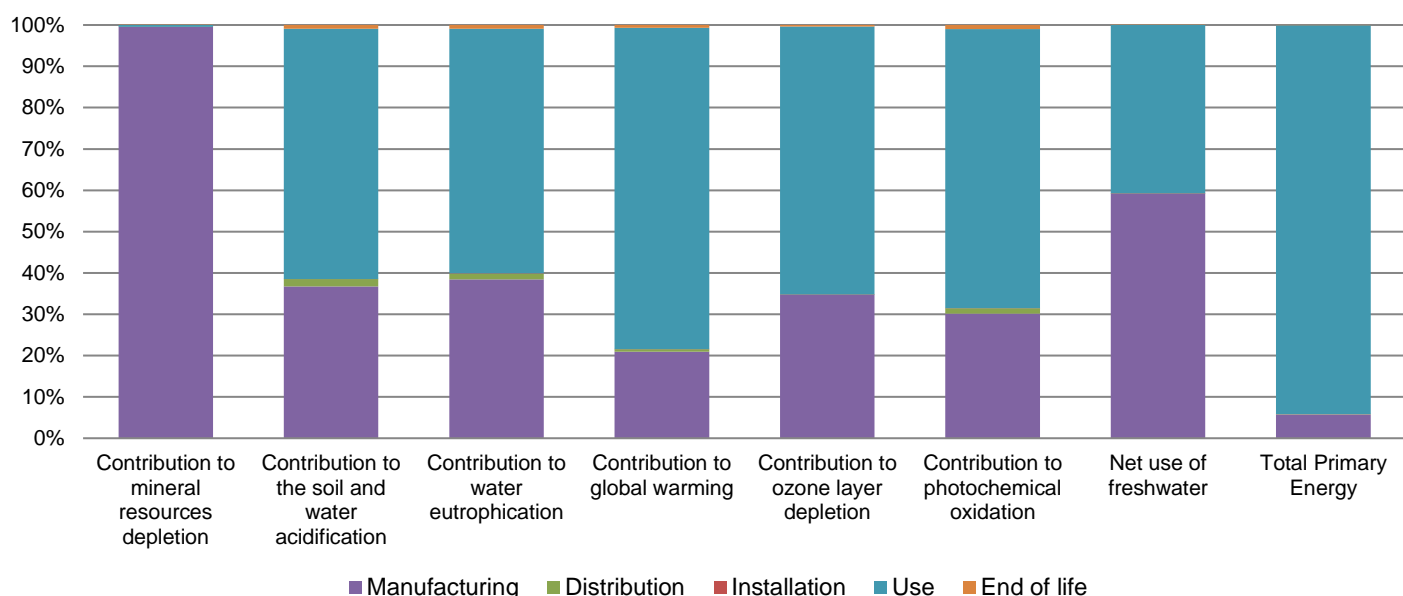
<b>Manufacturing</b>	Manufactured at a Schneider Electric production site ISO14001 certified
<b>Distribution</b>	Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 12.8 g, consisting of cardboard(100%)
<b>Installation</b>	Ref LR2K0312 does not require any installation operations.
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	<p>End of life optimized to decrease the amount of waste and allow recovery of the product components and materials</p> <p>This product contains Plastic parts with brominated FR(2.92g) that should be separated from the stream of waste so as to optimize end-of-life treatment.</p> <p>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</p> <p><a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</a></p> <p>Recyclability potential: <b>47%</b> 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).</p>

## Environmental impacts

<b>Reference life time</b>	20 years			
<b>Product category</b>	Other equipments - Passive product - non-continuous operation			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	load rate / rated current (In): 30 % of In percentage of utilization time: 30%			
<b>Geographical representativeness</b>	France			
<b>Technological representativeness</b>	The main purpose of the thermal overload relays is to detect overload currents in order to protect the motor.			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Energy model used: Pisek, Czech Republic	Electricity mix; AC; consumption mix, at consumer; 230V; FR	Electricity mix; AC; consumption mix, at consumer; 230V; FR	Electricity mix; AC; consumption mix, at consumer; 230V; FR

### Compulsory indicators Differential thermal overload relay, TeSys K, 3.7-5.5A - LR2K0312

Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.31E-04	2.30E-04	0*	0*	9.52E-07	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	6.15E-03	2.26E-03	1.09E-04	2.89E-06	3.72E-03	5.46E-05
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	1.74E-03	6.69E-04	2.51E-05	7.02E-07	1.03E-03	1.53E-05
Contribution to global warming	kg CO <sub>2</sub> eq	4.17E+00	8.75E-01	2.39E-02	6.93E-04	3.24E+00	2.90E-02
Contribution to ozone layer depletion	kg CFC11 eq	3.77E-07	1.31E-07	4.84E-11	0*	2.44E-07	1.24E-09
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	5.92E-04	1.78E-04	7.78E-06	2.16E-07	4.00E-04	5.68E-06
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	1.50E-01	8.89E-02	0*	0*	6.11E-02	2.49E-05
Total Primary Energy	MJ	4.39E+02	2.55E+01	3.37E-01	0*	4.13E+02	2.65E-01



Optional indicators		Differential thermal overload relay, TeSys K, 3.7-5.5A - LR2K0312					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	6.02E+01	1.49E+01	3.35E-01	8.98E-03	4.47E+01	2.13E-01
Contribution to air pollution	m³	6.89E+02	4.44E+02	1.02E+00	0*	2.41E+02	1.92E+00
Contribution to water pollution	m³	2.74E+02	9.04E+01	3.93E+00	1.05E-01	1.77E+02	2.31E+00
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	6.92E-03	6.92E-03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	1.12E+00	1.05E+00	4.50E-04	0*	6.31E-02	2.93E-04
Total use of non-renewable primary energy resources	MJ	4.38E+02	2.44E+01	3.37E-01	0*	4.13E+02	2.64E-01
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	8.56E-01	7.92E-01	4.50E-04	0*	6.31E-02	2.93E-04
Use of renewable primary energy resources used as raw material	MJ	2.59E-01	2.59E-01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	4.36E+02	2.22E+01	3.37E-01	0*	4.13E+02	2.64E-01
Use of non renewable primary energy resources used as raw material	MJ	2.18E+00	2.18E+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	1.29E+01	7.85E+00	0*	0*	4.75E+00	2.76E-01
Non hazardous waste disposed	kg	1.39E+00	1.08E+00	8.48E-04	0*	3.12E-01	8.11E-04
Radioactive waste disposed	kg	3.38E-03	1.36E-04	6.04E-07	0*	3.24E-03	1.28E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.17E-01	1.88E-02	0*	1.27E-02	0*	8.55E-02
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	3.97E-03	0*	0*	0*	0*	3.97E-03
Exported Energy	MJ	4.05E-05	3.80E-06	0*	3.67E-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 v5.9.4, database version 2022-11 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	ENVPEP2211018_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	01/2023	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Validity period	5 years	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
<i>Independent verification of the declaration and data</i>			
Internal	X	External	
<i>The elements of the present PEP cannot be compared with elements from another program.</i>			
<i>Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »</i>			

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