

Product Environmental Profile

Thermal overload relay LR9G 225A Spring





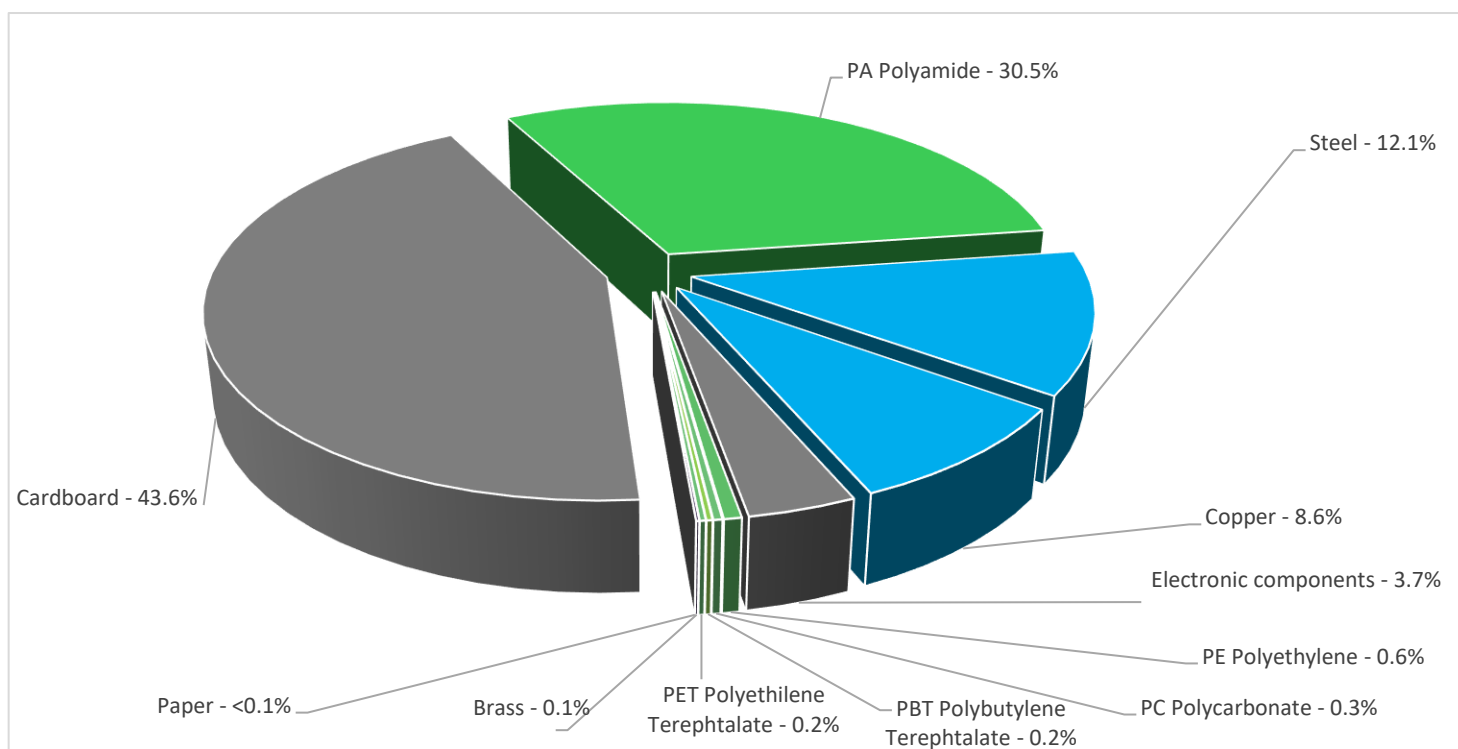
General information

Representative product	Thermal overload relay LR9G 225A Spring - LR9G225
Description of the product	The main purpose of Tesys LR9G225 thermal overload relays is to detect overload currents in order to protect the motor
Functional unit	Switch on and off, electrical power supply of a downstream installation with an electrical and mechanical control. The function unit is characterized by 3 poles, self-powered by motor current in bus bar, with thermal protection adjustment range 57~225A, Motor's rated voltage up to 1000Vac.



Constituent materials

Reference product mass	1411 g including the product, its packaging and additional elements and accessories
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Plastics	31.8%
Metals	20.8%
Others	47.4%



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

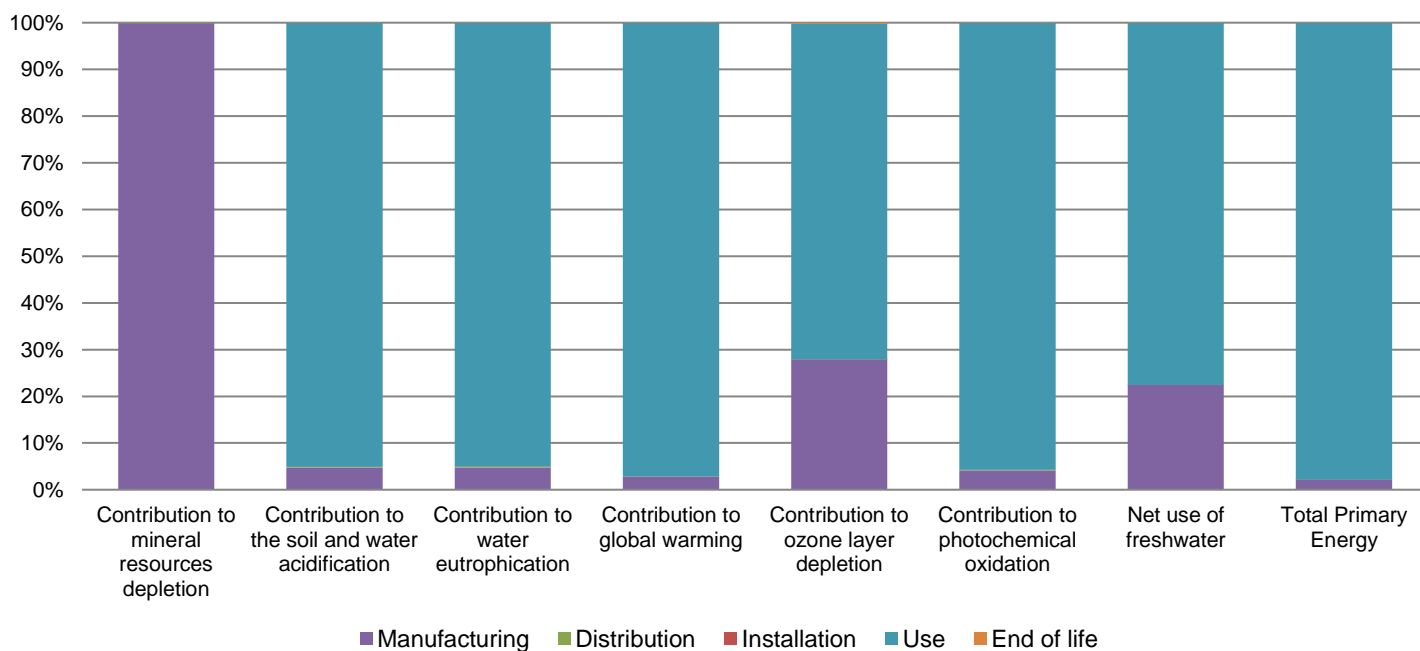
The Thermal overload relay LR9G 225A Spring presents the following relevant environmental aspects

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 634.3 g, consisting of cardboard (98.6%),PE film (1.4%)
Installation	Ref LR9G225 does not require any installation operations,The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).
Use	The product does not require special maintenance operations.
End of life	<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 electronic card (47.6g) 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>http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</p> <p>Recyclability potential: 36% 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

Reference life time	20 years			
Product category	Other equipments - Passive product - non-continuous operation			
Use scenario	If relay works with contactor, it also works like contactor: Current in bus bar(A):225 CT Turn ratio:1000 CT winding resistance:28 Total 3CT, The consumption : $3 \times (225A/1000)^2 \times 28\text{ohm} = 4.25W$			
Energy model used	Manufacturing	Installation	Use	End of life
	Energy model used: China	Electricity mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN	Electricity mix; AC; consumption mix, at consumer; 220V; CN

Compulsory indicators		Thermal overload relay LR9G 225A Spring - LR9G225					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	1.85E-03	1.84E-03	0*	0*	1.70E-06	0*
Contribution to the soil and water acidification	kg SO ₂ eq	4.42E-01	2.06E-02	8.31E-04	1.44E-04	4.20E-01	2.66E-04
Contribution to water eutrophication	kg PO ₄ ³⁻ eq	1.17E-01	5.57E-03	1.91E-04	3.77E-05	1.11E-01	8.89E-05
Contribution to global warming	kg CO ₂ eq	3.99E+02	1.11E+01	1.82E-01	0*	3.88E+02	2.10E-01
Contribution to ozone layer depletion	kg CFC11 eq	4.29E-06	1.20E-06	0*	0*	3.08E-06	7.76E-09
Contribution to photochemical oxidation	kg C ₂ H ₄ eq	5.19E-02	2.16E-03	5.93E-05	1.08E-05	4.96E-02	2.63E-05
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	5.58E-01	1.25E-01	0*	0*	4.33E-01	1.43E-04
Total Primary Energy	MJ	6.48E+03	1.38E+02	2.44E+00	0*	6.34E+03	1.21E+00



Optional indicators		Thermal overload relay LR9G 225A Spring - LR9G225					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	5.95E+03	8.53E+01	2.42E+00	0*	5.86E+03	9.73E-01
Contribution to air pollution	m³	4.19E+04	1.72E+03	7.74E+00	0*	4.02E+04	9.09E+00
Contribution to water pollution	m³	2.04E+04	1.03E+03	2.99E+01	5.24E+00	1.93E+04	1.29E+01
Resources use	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	2.05E-02	2.05E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3.33E+02	7.64E+00	0*	0*	3.25E+02	0*
Total use of non-renewable primary energy resources	MJ	6.15E+03	1.30E+02	2.44E+00	0*	6.02E+03	1.21E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	3.21E+02	0*	0*	0*	3.25E+02	0*
Use of renewable primary energy resources used as raw material	MJ	1.24E+01	1.24E+01	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6.14E+03	1.17E+02	2.44E+00	0*	6.02E+03	1.21E+00
Use of non renewable primary energy resources used as raw material	MJ	1.35E+01	1.35E+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	5.02E+01	3.64E+01	0*	0*	1.25E+01	1.36E+00
Non hazardous waste disposed	kg	9.19E+01	2.16E+01	0*	1.18E-02	7.03E+01	0*
Radioactive waste disposed	kg	5.60E-03	3.27E-03	4.61E-06	1.15E-06	2.32E-03	6.46E-06
Other environmental information	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Materials for recycling	kg	1.05E+00	1.38E-01	0*	6.24E-01	0*	2.91E-01
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	4.28E-02	0*	0*	0*	0*	4.28E-02
Exported Energy	MJ	2.15E-03	3.58E-04	0*	1.79E-03	0*	0*

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

Life cycle assessment performed with EIME version EIME v5.9.1, database version 2020-12 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 :	SCHN-00702-V01.01-EN	Drafting rules	PCR-ed3-EN-2015 04 02
Verifier accreditation N°	VH18	Supplemented by	PSR-0005-ed2-EN-2016 03 29
Date of issue	09/2021	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 Philippe Osset (SOLINNEN)

PEP are compliant with XP C08-100-1 :2016

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 »



Schneider Electric Industries SAS

Country Customer Care Center
<http://www.schneider-electric.com/contact>

35, rue Joseph Monier
CS 30323
F- 92506 Rueil Malmaison Cedex
RCS Nanterre 954 503 439
Capital social 896 313 776 €

www.schneider-electric.com

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