

# Product Environmental Profile

## GV5 IEC 70kA Motor Breaker





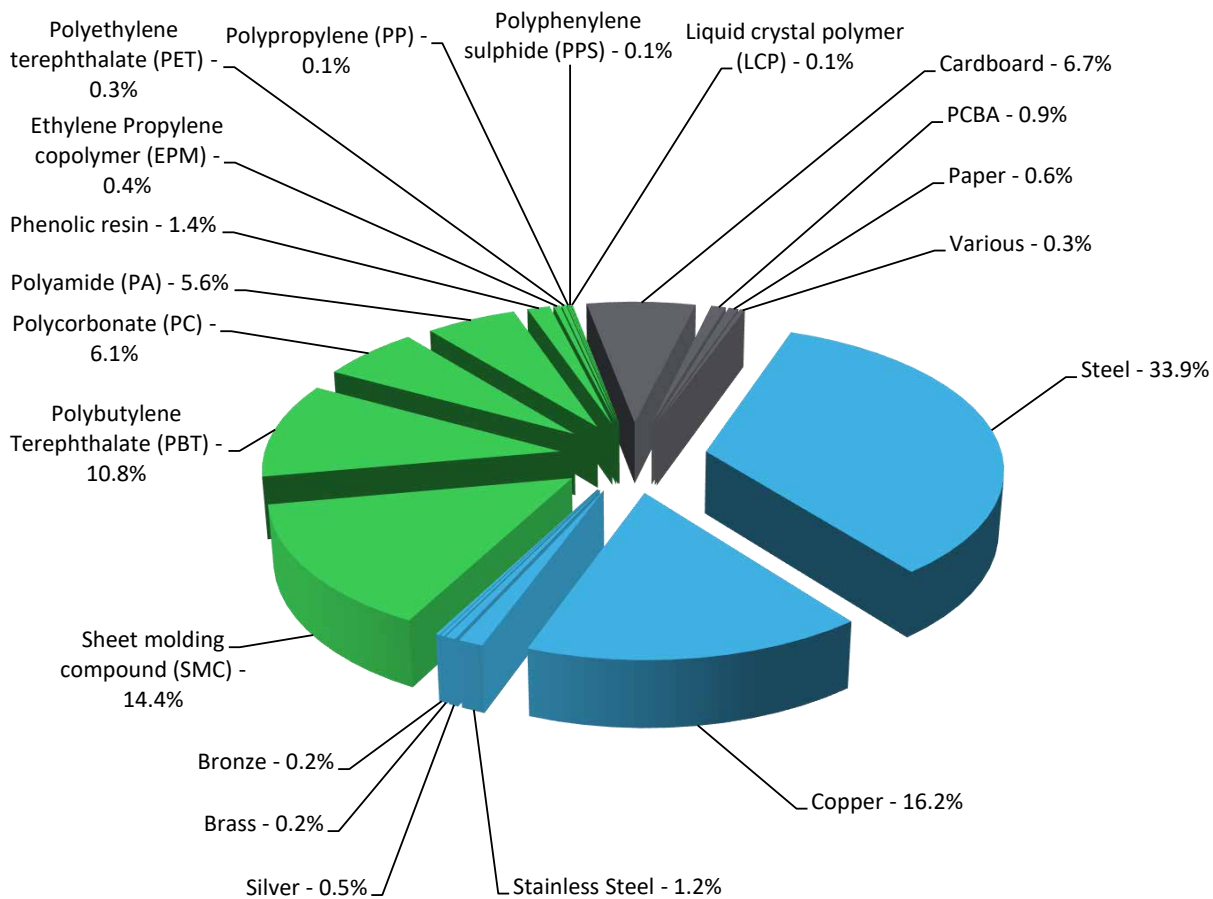
## General information

<b>Representative product</b>	GV5 IEC 70kA Motor Breaker -GV5P220H
<b>Description of the product</b>	"The Motor Breaker GV5P 3 pole circuit breaker equipped with Micrologic 2.2 trip unit is designed to provide protection against overloads and short-circuits for electrical motors with assigned voltage up to 690VAC and rated current of 220A"
<b>Functional unit</b>	Protect during 20 years the motor against overloads and short-circuits in circuit with assigned voltage up to 690VAC and 150A rated current. This protection is ensured in accordance with the following parameters: - Number of poles: 3 - Rated service breaking capacity Ics at 690VAC = 100% (according to IEC 60947-2) - Tripping curve: long time, short time and instantaneous protections, dual class (5 to 20)



## Constituent materials

<b>Reference product mass</b>	2050 g including the product, its packaging and additional elements and accessories
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## 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 GV5 IEC 70kA Motor Breaker 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 156.1 g, consisting of Cardboard (91%), Paper (8.5%) & PE film (0.5%). Product distribution optimised by setting up local distribution centres
<b>Installation</b>	The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).
<b>Use</b>	The product does not require special maintenance operations.
<b>End of life</b>	End of life optimized to decrease the amount of waste and allow recovery of the product components and materials  This product contains Plastic part (194g) with Brominated Flame Retardant (11.6g) & Printed Circuit Board Assembly (16g), 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  <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>  Recyclability potential: <b>53%</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).

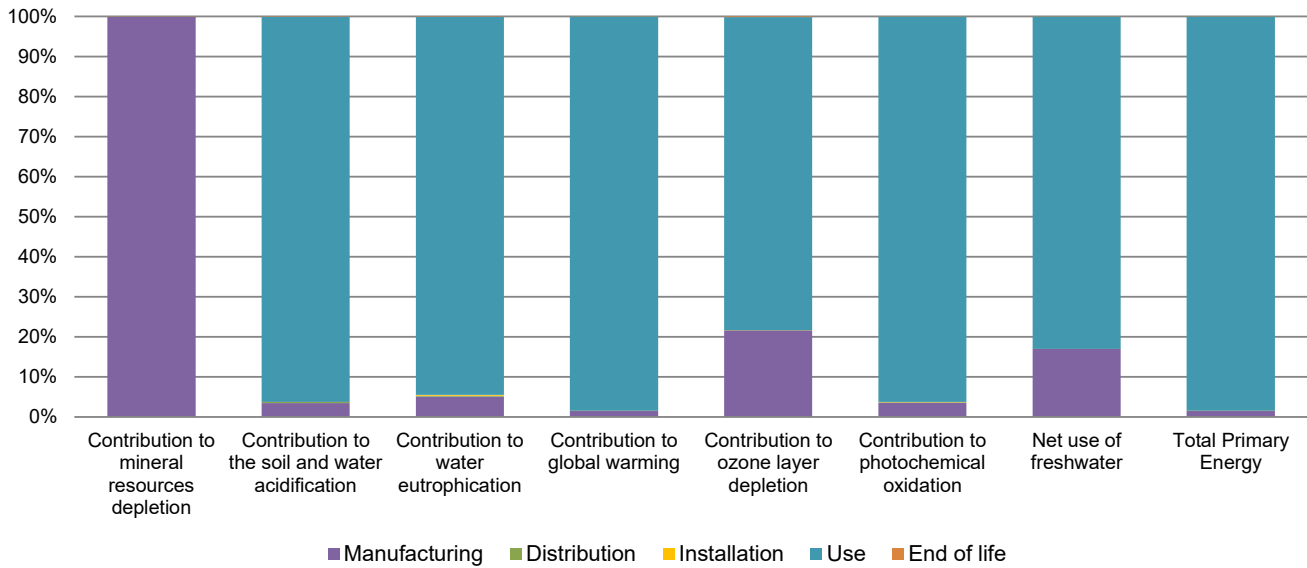
## Environmental impacts

<b>Reference life time</b>	20 years			
<b>Product category</b>	Passive products - non-continuous operation			
<b>Installation elements</b>	No special components needed			
<b>Use scenario</b>	Product dissipation is 13.125 W full load, loading rate is 30% and service uptime percentage is 30%			
<b>Geographical representativeness</b>	China			
<b>Technological representativeness</b>	"The Motor Breaker GV5P 3 pole circuit breaker equipped with Micrologic 2.2 trip unit is designed to provide protection against overloads and short-circuits for electrical motors with assigned voltage up to 690VAC and rated current of 220A"			
<b>Energy model used</b>	<b>Manufacturing</b>	<b>Installation</b>	<b>Use</b>	<b>End of life</b>
	Energy model used: SBMLV, 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		GV5 IEC 70kA Motor Breaker - GV5P220H					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to mineral resources depletion	kg Sb eq	2.32E-02	2.32E-02	0*	0*	3.08E-06	0*
Contribution to the soil and water acidification	kg SO <sub>2</sub> eq	7.91E-01	2.76E-02	2.03E-03	0*	7.61E-01	5.96E-04
Contribution to water eutrophication	kg PO <sub>4</sub> <sup>3-</sup> eq	2.13E-01	1.09E-02	4.66E-04	3.97E-04	2.01E-01	1.70E-04
Contribution to global warming	kg CO <sub>2</sub> eq	7.13E+02	1.07E+01	4.46E-01	2.16E-01	7.02E+02	3.31E-01
Contribution to ozone layer depletion	kg CFC11 eq	7.15E-06	1.55E-06	9.03E-10	0*	5.58E-06	1.40E-08
Contribution to photochemical oxidation	kg C <sub>2</sub> H <sub>4</sub> eq	9.35E-02	3.33E-03	1.44E-04	5.14E-05	8.99E-02	6.18E-05

Resources use		GV5 IEC 70kA Motor Breaker - GV5P220H					
	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Net use of freshwater	m3	9.44E-01	1.60E-01	0*	0*	7.83E-01	2.77E-04
Total Primary Energy	MJ	1.17E+04	1.72E+02	6.31E+00	0*	1.15E+04	2.89E+00



Optional indicators		GV5 IEC 70kA Motor Breaker - GV5P220H					
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Contribution to fossil resources depletion	MJ	1.11E+04	1.42E+02	6.26E+00	0*	1.10E+04	2.64E+00
Contribution to air pollution	m <sup>3</sup>	7.67E+04	3.83E+03	1.87E+01	0*	7.28E+04	2.09E+01
Contribution to water pollution	m <sup>3</sup>	3.62E+04	1.22E+03	7.33E+01	1.17E+01	3.49E+04	2.56E+01

Resources use		GV5 IEC 70kA Motor Breaker - GV5P220H					
	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life
Use of secondary material	kg	9.68E-02	9.68E-02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	5.95E+02	6.17E+00	0*	0*	5.89E+02	0*
Total use of non-renewable primary energy resources	MJ	1.11E+04	1.66E+02	6.30E+00	0*	1.09E+04	2.89E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	5.92E+02	3.24E+00	0*	0*	5.89E+02	0*
Use of renewable primary energy resources used as raw material	MJ	2.93E+00	2.93E+00	0*	0*	0*	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	1.11E+04	1.49E+02	6.30E+00	0*	1.09E+04	2.89E+00

Use of non renewable primary energy resources used as raw material	MJ	1.66E+01	1.66E+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*
<b>Waste categories</b>	<b>Unit</b>	<b>Total</b>	<b>Manufacturing</b>	<b>Distribution</b>	<b>Installation</b>	<b>Use</b>	<b>End of Life</b>
Hazardous waste disposed	kg	1.68E+02	1.43E+02	0*	0*	2.26E+01	2.90E+00
Non hazardous waste disposed	kg	1.38E+02	1.02E+01	1.58E-02	1.54E-01	1.27E+02	0*
Radioactive waste disposed	kg	9.84E-03	5.62E-03	1.13E-05	0*	4.19E-03	1.41E-05
<b>Other environmental information</b>	<b>Unit</b>	<b>Total</b>	<b>Manufacturing</b>	<b>Distribution</b>	<b>Installation</b>	<b>Use</b>	<b>End of Life</b>
Materials for recycling	kg	1.20E+00	1.72E-01	0*	0*	0*	1.03E+00
Components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	5.41E-02	5.85E-03	0*	0*	0*	4.83E-02
Exported Energy	MJ	7.60E-03	0*	0*	7.60E-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 v5.8.1, database version 2015-04.

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 N°	ENVPEP1905002_V1	Drafting rules	PCR-ed3-EN-2015 04 02
Date of issue	06/2019	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>
<b>Independent verification of the declaration and data, in compliance with ISO 14025 : 2010</b>			
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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