

# Product Environmental Profile

## TeSys Giga 3P 100-220A Motor Circuit Breaker

### TeSys GV5

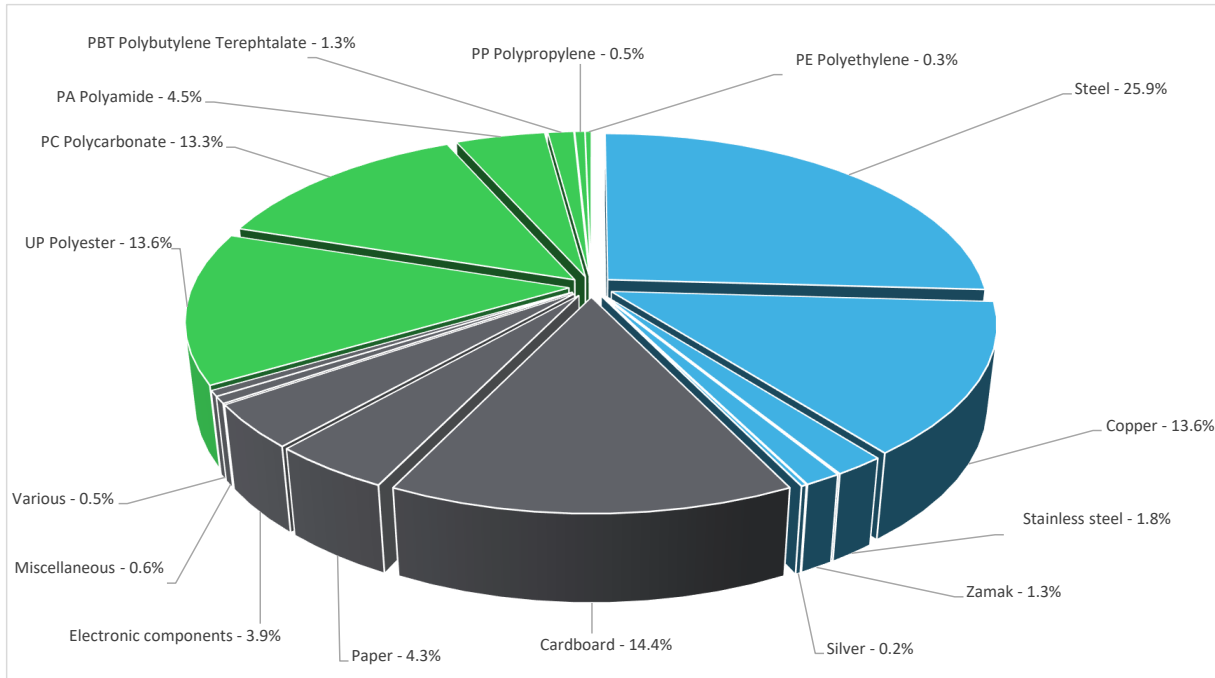


## General information

Reference product	TeSys Giga 3P 100-220A Motor Circuit Breaker - GV5P220H
Description of the product	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"
Description of the range	The products of the range are: The range product report includes :Motor power: 55-100kW at 400V/415V, TeSys Deca Frame 5 Motor circuit breakers, the representative product used for analysis is 90-100kW at 400V/415V (product number: GV5P220H ) The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	Protect the installation from overloads and short circuits in a circuit with rated voltage $U_e$ , rated current $I_n$ , with $N_p$ poles, a rated breaking capacity $I_{cu}$ , and, if applicable, the specific specifications, in the Industrial application area, according to the appropriate use scenario, and during the reference service life of the product of 20 years.
Specifications are:	$U_e = 690$ (V) $I_n = 220$ (A) $N_p = 3$ $I_{cu} : 70k$ (A)

## Constituent materials

Reference product mass	2620 g including the product, its packaging and additional elements and accessories
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Plastics	33.50%
Metals	42.80%
Others	23.70%

## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website  
<https://www.se.com/ww/en/work/support/green-premium/>

## Additional environmental information

<b>End Of Life</b>	Recyclability potential:	<b>69%</b>	The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used.
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## Environmental impacts

<b>Reference service life time</b>	20 years		
<b>Product category</b>	Circuit-breakers - Industrial		
<b>Installation elements</b>	No special components needed		
<b>Use scenario</b>	Load rate = 50 % In Use rate = 30% RLT		
<b>Time representativeness</b>	The collected data are representative of the year 2023		
<b>Technological representativeness</b>	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production.		
<b>Geographical representativeness</b>	Europe		
<b>Energy model used</b>	[A1 - A3] China, CN	[A5] Electricity Mix; Low voltage; 2018; Europe, EU-27	[B6] Electricity Mix; Low voltage; 2018; Europe, EU-27
			[C1 - C4] Electricity Mix; Low voltage; 2018; Europe, EU-27

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

Mandatory Indicators		TeSys Giga 3P 100-220A Motor Circuit Breaker - GV5P220H						
Impact indicators	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to climate change	kg CO2 eq	3.17E+02	2.86E+01	0*	4.99E-01	2.83E+02	4.62E+00	-4.02E+00
Contribution to climate change-fossil	kg CO2 eq	3.16E+02	2.80E+01	0*	4.75E-01	2.82E+02	4.55E+00	-3.89E+00
Contribution to climate change-biogenic	kg CO2 eq	1.08E+00	6.03E-01	0*	2.36E-02	3.77E-01	7.23E-02	-1.30E-01
Contribution to climate change-land use and land use change	kg CO2 eq	4.97E-04	4.94E-04	0*	0*	0*	3.14E-06	0.00E+00
Contribution to ozone depletion	kg CFC-11 eq	3.26E-06	1.99E-06	0*	6.46E-09	1.21E-06	5.42E-08	-6.38E-07
Contribution to acidification	mol H+ eq	1.88E+00	2.43E-01	0*	1.46E-03	1.61E+00	1.81E-02	-7.54E-02
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	3.44E-03	4.30E-04	0*	1.14E-05	7.74E-04	2.22E-03	-1.25E-05
Contribution to eutrophication marine	kg N eq	2.09E-01	2.20E-02	0*	6.34E-04	1.83E-01	3.37E-03	-3.16E-03
Contribution to eutrophication, terrestrial	mol N eq	3.04E+00	2.37E-01	0*	4.41E-03	2.76E+00	3.95E-02	-3.43E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	6.83E-01	8.23E-02	0*	1.01E-03	5.89E-01	1.13E-02	-1.43E-02
Contribution to resource use, minerals and metals	kg Sb eq	1.14E-02	1.13E-02	0*	0*	2.05E-05	7.06E-05	-1.30E-03
Contribution to resource use, fossils	MJ	7.92E+03	5.40E+02	0*	4.94E+00	7.21E+03	1.66E+02	-7.99E+01
Contribution to water use	m3 eq	2.16E+01	8.14E+00	0*	3.85E-02	1.00E+01	3.39E+00	-3.92E+00

Additional indicators for the French regulation are available as well

Inventory flows Indicators		TeSys Giga 3P 100-220A Motor Circuit Breaker - GV5P220H						
Inventory flows	Unit	Total (without Module D)	[A1 - A3] - Manufacturing	[A4] - Distribution	[A5] - Installation	[B1 - B7] - Use	[C1 - C4] - End of life	[D] - Benefits and loads
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1.40E+03	1.52E+01	0*	6.48E-01	1.38E+03	1.80E+00	-3.20E-01
Contribution to use of renewable primary energy resources used as raw material	MJ	9.60E+00	9.60E+00	0*	0*	0*	0*	-6.89E+00
Contribution to total use of renewable primary energy resources	MJ	1.41E+03	2.48E+01	0*	6.48E-01	1.38E+03	1.80E+00	-7.21E+00
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	7.89E+03	5.15E+02	0*	4.94E+00	7.21E+03	1.66E+02	-7.99E+01
Contribution to use of non renewable primary energy resources used as raw material	MJ	2.52E+01	2.52E+01	0*	0*	0*	0*	0.00E+00
Contribution to total use of non-renewable primary energy resources	MJ	7.92E+03	5.40E+02	0*	4.94E+00	7.21E+03	1.66E+02	-7.99E+01
Contribution to use of secondary material	kg	3.29E-06	3.29E-06	0*	0*	0*	0*	0.00E+00
Contribution to use of renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to use of non renewable secondary fuels	MJ	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to net use of freshwater	m <sup>3</sup>	5.15E-01	1.95E-01	0*	8.96E-04	2.33E-01	8.58E-02	-9.13E-02
Contribution to hazardous waste disposed	kg	1.17E+02	1.12E+02	0*	1.24E-02	5.28E+00	1.42E-01	-1.08E+02
Contribution to non hazardous waste disposed	kg	5.86E+01	1.71E+01	0*	2.13E-01	4.07E+01	6.16E-01	-2.52E+00
Contribution to radioactive waste disposed	kg	1.14E-02	2.77E-03	0*	2.64E-05	8.52E-03	5.63E-05	-1.17E-03
Contribution to components for reuse	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to materials for recycling	kg	1.58E+00	1.61E-01	0*	0*	0*	1.42E+00	0.00E+00
Contribution to materials for energy recovery	kg	0.00E+00	0*	0*	0*	0*	0*	0.00E+00
Contribution to exported energy	MJ	3.64E-02	1.64E-03	0*	2.04E-02	0*	1.44E-02	0.00E+00

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

Contribution to biogenic carbon content of the product	kg de C	0.00E+00
Contribution to biogenic carbon content of the associated packaging	kg de C	1.41E-01

Life cycle assessment performed with EIME version v6.1, database version 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

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 :	0	Drafting rules	PCR-4-ed4-EN-2021 09 06
Verifier accreditation N°	0	Supplemented by	PSR-0005-ed3-EN-2023 06 06
Date of issue	05-2024	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006			
Internal	X	External	
The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)			
PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022			
The components of the present PEP may not be compared with components from any other program.			
Document complies with ISO 14025:2006 "Environmental labels and declarations. Type III environmental declarations"			

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