

# Product Environmental Profile

Circuit breaker, TeSys GB2, 2P, 2A, Icu 15kA at 415V, Thermal magnetic, DIN rail mounted

Representative of all TeSys GB2DB control circuit breakers





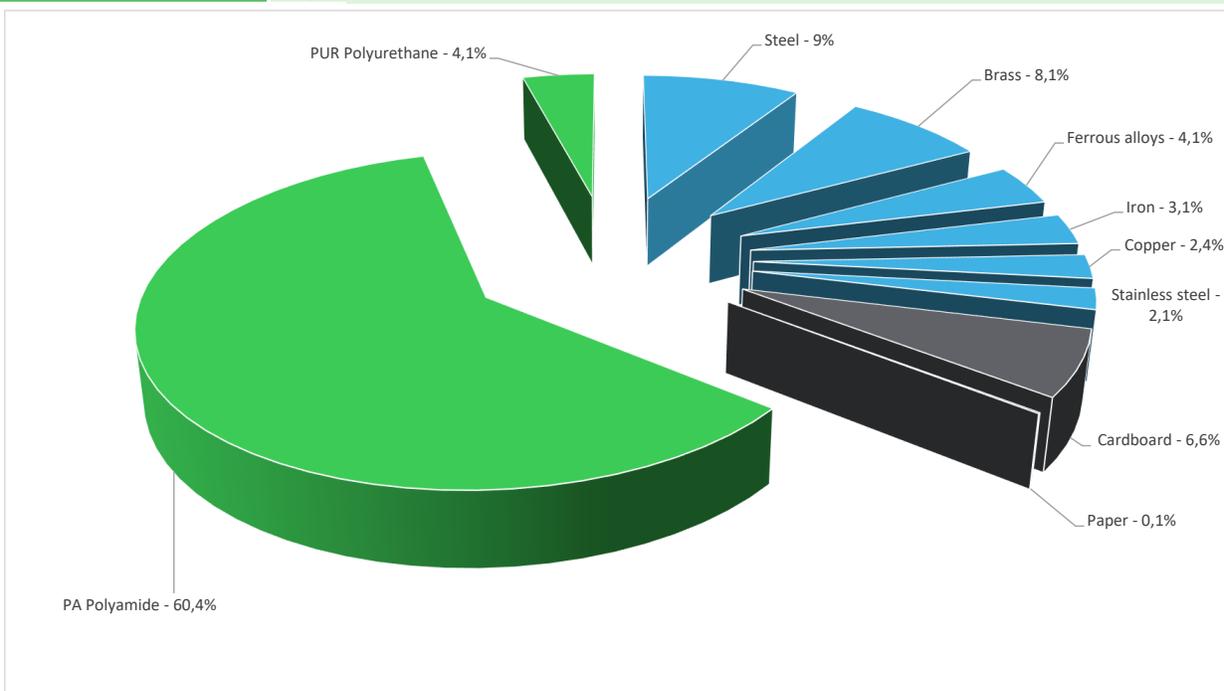
## General information

Reference product	Circuit breaker, TeSys GB2, 2P, 2A, Icu 15kA at 415V, Thermal magnetic, DIN rail mounted - GB2DB07
Description of the product	TeSys GB circuit breaker, 2 poles (2P), 2A/415V, for the protection of industrial equipment control circuits. It provides thermal magnetic protection with a magnetic tripping level at 26A (13 In) and breaking capacity Icu 15kA@415V. It can also be used for protection of DC loads up to 2A/48V DC-13 with a breaking capacity Icu 1.5kA@24V. Compact device (30mm wide), mounting on 35mm DIN-rail, control by toggle lever (start-stop guaranteed for 8000 cycles). Sold in lots of 3 units. It conforms to IEC 60947-1 and IEC 60947-2.
Description of the range	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. The products of the range are: All TeSys GB2DB control circuit breakers
Functional unit	Protect the installation against overloads and short circuits and protect people and premises at risk of fire or explosion against insulation defects in a circuit with rated voltage 415V (Ue), rated current 2A (In), with 2P poles, a rated breaking capacity 15kA (Icn), and, in the Industrial application areas, while protecting them against the penetration of solid objects and liquids (IP20) in accordance with the standard IEC 62262, according to the appropriate use scenario, and during the reference service life of the product of 20 years.
Specifications are:	Ue = 415 V In = 2 A Np = 1P+N Rated breaking capacity (A): 15kA IP20 Voltage range: Low voltage Current type: Alternative current



## Constituent materials

Reference product mass 115 g including the product, its packaging, additional elements and accessories



Plastics	64,5%
Metals	28,8%
Others	6,7%



## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website

<https://www.se.com>



## Additional environmental information

End Of Life	Recyclability potential:	30%	The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECYLAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability).
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## Environmental impacts

Reference service life time	20 years			
Product category	Differential circuit breakers - Industrial			
Life cycle of the product	The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study			
Electricity consumption	The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption			
Installation elements	No special components needed			
Use scenario	Load rate = 50 % In Use rate = 30% RLT			
Time representativeness	The collected data are representative of the year 2025			
Technological representativeness	The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are Similar and representative of the actual type of technologies used to make the product.			
Geographical representativeness	Final assembly site	Use phase		End-of-life
	Dijon, France	France		France
Energy model used	[A1 - A3]	[A5]	[B6]	[C1 - C4]
	Electricity Mix; Low voltage; 2020; France, FR	No energy used	Electricity Mix; Low voltage; 2020; France, FR	Global, European and French datasets are used.

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.se.com/contact>

Mandatory Indicators		Circuit breaker, TeSys GB2, 2P, 2A, Icu 15kA at 415V, Thermal magnetic, DIN rail mounted - GB2DB07						
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	5,80E+00	7,58E-01	2,24E-02	8,65E-03	4,73E+00	2,87E-01	-1,23E-01
Contribution to climate change-fossil	kg CO2 eq	5,54E+00	7,65E-01	2,24E-02	8,22E-03	4,46E+00	2,86E-01	-1,32E-01
Contribution to climate change-biogenic	kg CO2 eq	2,58E-01	0*	0*	4,32E-04	2,64E-01	5,56E-04	9,06E-03
Contribution to climate change-land use and land use change	kg CO2 eq	1,44E-08	5,13E-09	0*	0*	0*	9,23E-09	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	7,73E-08	2,43E-08	3,43E-11	1,17E-10	5,24E-08	4,80E-10	-3,34E-08
Contribution to acidification	mol H+ eq	2,96E-02	6,82E-03	1,42E-04	2,62E-05	2,21E-02	5,08E-04	-1,14E-03
Contribution to eutrophication, freshwater	kg P eq	1,91E-04	2,55E-05	0*	1,60E-07	1,48E-04	1,75E-05	-4,66E-07
Contribution to eutrophication marine	kg N eq	3,92E-03	6,63E-04	6,65E-05	1,13E-05	3,05E-03	1,28E-04	-8,23E-05
Contribution to eutrophication, terrestrial	mol N eq	5,97E-02	6,51E-03	7,29E-04	7,88E-05	5,09E-02	1,46E-03	-8,99E-04
Contribution to photochemical ozone formation - human health	kg COVNM eq	1,18E-02	2,26E-03	1,84E-04	1,79E-05	8,92E-03	4,20E-04	-3,43E-04
Contribution to resource use, minerals and metals	kg Sb eq	1,91E-04	1,85E-04	0*	0*	5,32E-06	5,63E-07	-3,09E-05
Contribution to resource use, fossils	MJ	6,43E+02	1,53E+01	3,12E-01	8,96E-02	6,20E+02	6,66E+00	-2,35E+00
Contribution to water use	m3 eq	1,42E+00	4,87E-01	0*	6,63E-04	8,68E-01	6,34E-02	-7,97E-02

Inventory flows Indicators		Circuit breaker, TeSys GB2, 2P, 2A, Icu 15kA at 415V, Thermal magnetic, DIN rail mounted - GB2DB07						
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	7,08E+01	3,19E-01	0*	1,18E-02	7,04E+01	1,50E-02	1,25E-03
Contribution to use of renewable primary energy resources used as raw material	MJ	1,45E-01	1,45E-01	0*	0*	0*	0*	-1,26E-01
Contribution to total use of renewable primary energy resources	MJ	7,09E+01	4,64E-01	0*	1,18E-02	7,04E+01	1,50E-02	-1,25E-01
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6,40E+02	1,31E+01	3,12E-01	8,96E-02	6,20E+02	6,66E+00	-2,35E+00
Contribution to use of non renewable primary energy resources used as raw material	MJ	2,24E+00	2,24E+00	0*	0*	0*	0*	0,00E+00
Contribution to total use of non-renewable primary energy resources	MJ	6,43E+02	1,53E+01	3,12E-01	8,96E-02	6,20E+02	6,66E+00	-2,35E+00
Contribution to use of secondary material	kg	1,01E-02	1,01E-02	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	m³	3,31E-02	1,13E-02	0*	1,54E-05	2,03E-02	1,48E-03	-1,86E-03
Contribution to hazardous waste disposed	kg	2,23E+00	2,04E+00	0*	2,27E-04	1,94E-01	0*	-2,41E+00
Contribution to non hazardous waste disposed	kg	1,50E+00	5,19E-01	7,86E-04	3,01E-03	8,91E-01	8,08E-02	-7,29E-02
Contribution to radioactive waste disposed	kg	4,08E-04	1,92E-04	5,60E-07	4,68E-07	2,12E-04	3,16E-06	-3,41E-05
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00
Contribution to materials for recycling	kg	3,48E-02	2,27E-03	0*	0*	0*	3,25E-02	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	4,95E-04	2,45E-05	0*	1,49E-04	0*	3,21E-04	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 of C 0,00E+00

Contribution to biogenic carbon content of the associated packaging kg of C 2,17E-03

\* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

Mandatory Indicators		Circuit breaker, TeSys GB2, 2P, 2A, Icu 15kA at 415V, Thermal magnetic, DIN rail mounted - GB2DB07								
Impact indicators	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]	
Contribution to climate change	kg CO2 eq	4,73E+00	0*	0*	0*	0*	0*	4,73E+00	0*	
Contribution to climate change-fossil	kg CO2 eq	4,46E+00	0*	0*	0*	0*	0*	4,46E+00	0*	
Contribution to climate change-biogenic	kg CO2 eq	2,64E-01	0*	0*	0*	0*	0*	2,64E-01	0*	
Contribution to climate change-land use and land use change	kg CO2 eq	0*	0*	0*	0*	0*	0*	0*	0*	
Contribution to ozone depletion	kg CFC-11 eq	5,24E-08	0*	0*	0*	0*	0*	5,24E-08	0*	
Contribution to acidification	mol H+ eq	2,21E-02	0*	0*	0*	0*	0*	2,21E-02	0*	
Contribution to eutrophication, freshwater	kg P eq	1,48E-04	0*	0*	0*	0*	0*	1,48E-04	0*	
Contribution to eutrophication marine	kg N eq	3,05E-03	0*	0*	0*	0*	0*	3,05E-03	0*	
Contribution to eutrophication, terrestrial	mol N eq	5,09E-02	0*	0*	0*	0*	0*	5,09E-02	0*	
Contribution to photochemical ozone formation - human health	kg COVNM eq	8,92E-03	0*	0*	0*	0*	0*	8,92E-03	0*	
Contribution to resource use, minerals and metals	kg Sb eq	5,32E-06	0*	0*	0*	0*	0*	5,32E-06	0*	
Contribution to resource use, fossils	MJ	6,20E+02	0*	0*	0*	0*	0*	6,20E+02	0*	
Contribution to water use	m³ eq	8,68E-01	0*	0*	0*	0*	0*	8,68E-01	0*	

Inventory flows Indicators		Circuit breaker, TeSys GB2, 2P, 2A, Icu 15kA at 415V, Thermal magnetic, DIN rail mounted - GB2DB07							
Inventory flows	Unit	[B1 - B7] - Use	[B1]	[B2]	[B3]	[B4]	[B5]	[B6]	[B7]
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	7,04E+01	0*	0*	0*	0*	0*	7,04E+01	0*
Contribution to use of renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of renewable primary energy resources	MJ	7,04E+01	0*	0*	0*	0*	0*	7,04E+01	0*
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6,20E+02	0*	0*	0*	0*	0*	6,20E+02	0*
Contribution to use of non renewable primary energy resources used as raw material	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to total use of non-renewable primary energy resources	MJ	6,20E+02	0*	0*	0*	0*	0*	6,20E+02	0*
Contribution to use of secondary material	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to use of non renewable secondary fuels	MJ	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to net use of freshwater	m³	2,03E-02	0*	0*	0*	0*	0*	2,03E-02	0*
Contribution to hazardous waste disposed	kg	1,94E-01	0*	0*	0*	0*	0*	1,94E-01	0*
Contribution to non hazardous waste disposed	kg	8,91E-01	0*	0*	0*	0*	0*	8,91E-01	0*
Contribution to radioactive waste disposed	kg	2,12E-04	0*	0*	0*	0*	0*	2,12E-04	0*
Contribution to components for reuse	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for recycling	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to materials for energy recovery	kg	0*	0*	0*	0*	0*	0*	0*	0*
Contribution to exported energy	MJ	0*	0*	0*	0*	0*	0*	0*	0*

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

Life cycle assessment performed with EIME version v6.2.4, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 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 :	SCHN-01403-V01.01-EN	Drafting rules	PEP-PCR-ed4-2021 09 06
		Supplemented by	PSR-0005-ed3-2023 06 06
Verifier accreditation N°	VH08	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
Date of issue	04-2025	Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2006			
Internal	External	X	
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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Published by Schneider Electric

SCHN-01403-V01.01-EN

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04-2025