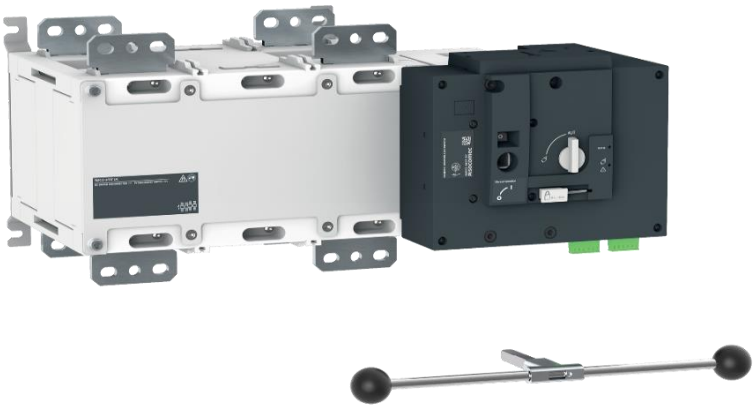
Product Environmental Profile

ISO 14025 COMPLIANT

SIRCOMOT DC 3200A

Motorised load break switch



The commitments of Socomec to respect the environment

As part of its environmental policy, Socomec is committed to:

- Incorporate the principles of the circular economy into the design of new products and services
- Promote longer product lifetimes
- Promote the use of environmentally responsible materials
- Design and develop solutions to further improve the energy efficiency of our products and services
- Inform our customers in a transparent manner about the environmental impact of our products throughout their life cycle.

To this end, Socomec is committed to constantly monitoring, anticipating and complying with environmental regulations as well as customer expectations relating to its products, and to ensuring that all those involved adhere to and take responsibility for its commitments.

Socomec is member of :

ecosystem

Member of WEEE Europe

THE GLOBAL COMPACT

Gimélec

Environment and sustainable development commisions

PEP eco PASS PORT®

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PRODUCT ENVIRONMENTAL PROFILE

● Product information :

Reference product

The representative product is the SIRCOMOT DC 3200A with sales reference 18DC4320 with the following description: Motorised load break switch

References covered by this PEP :

18DC4320 SIRCOMOT DC 3200A

Functional unit

Make and break currents by separating part of the installation from a source of electrical energy, with a rated current of 3200A and rated voltage of 1500VDC, for enclosure installation, in industrial applications areas, according to the appropriate use scenario, and during the reference life of 20 years of the product.
Provide isolation to ensure the disconnection of the circuit according to the appropriate use scenario.
Ensure remote operation via motorised control.

● Materials and substances

Declaration of the constitutives materials

Total mass of the reference product (including packaging): 48,2 kg among which packaging: 12,818 kg

For the SIRCOMOT DC 3200A

Metals	% weight	Plastics	%weight	Others	% weight
Other ferrous alloys - non stainless steels	14,8%	Others thermoplastics	39,1%	Other organics	26,2%
Copper and its alloys	11,5%	Other plastics	0,5%	Ceramics and glass	0,1%
Aluminium and its alloys	3,4%	PVC	<0,1%	Other inorganics	0,1%
Zinc and its alloys	2,3%				
Stainless steel	2,1%				
Other non-ferrous metals and alloys	<0,1%				
Nickel and its alloys	<0,1%				
Magnesium and its alloys	<0,1%				
Precious metals	<0,1%				

Substances management

Socomec is leading a program to limit the use of hazardous substances in the design of new products and to monitor the presence of substances of concern in its supplies to anticipate future use restrictions.

Directive 2011/65/EU : Product references covered by this PEP meet the requirements of the RoHS Directive on the restriction of substances such as lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), polybrominated diphenyl ethers (PBDEs) and phthalates (DIBP, DEHP, BBP, DBP).

REACH 1907/2006 regulation: To the best of our knowledge, based on the supplier declarations, at the publication date of this document, the product do not contain any other SVHC in a concentration above 0,1% per weight.

● Manufacturing

The products covered by this PEP are manufactured on the production site of Benfeld, France whose environmental management system has been ISO 14001 certified. Impacts on the environment are reduced by optimizing its energy consumption and by practicing a rigorous waste management

● Distribution

As part of its distribution policy aiming to respect the environment, Socomec is in favor of groupage transports and ISO 14001 certified logistic partners.

No reconditionning is planned for the product. This phase is consequently neglected.

The sizing of the packaging has been optimized to ensure the best possible protection of the product at the lowest possible volume in order to reduce the impact of the transport stage on the environment.

● Installation

The installation stage consists in connecting the product to the existing electrical installation.

The installation does not generate any significant impacts on the environment, except impacts from packaging waste.

● Use phase

Consumption scenario

Use phase scenario: European energy mix

Product	Mode	Dissipated power per pole at Ith (W)	Total dissipated power for the corresponding load rate (W)	Load rate (% of Ith)	Time distribution (% of RSL)
SIRCOMOT DC 3200A	In use	261 W	130,5 W	50%	30%
	Stop	0 W	0 W	50%	70%

The reference product has some electronic parts with a power of 1,4 W that consume energy during 100% of its life.

The energy consumed in the life of the reference product (20 years) is 7104,36 kWh.

Care and maintenance

The product does not require any maintenance under normal conditions of use.

Consumables

The product does not require consumables.

● End of life

End of life treatment
The following parts require specific care and selective treatment in accordance with Annex VII of the WEEE Directive 2012/19/EU - Waste of electrical and electronic equipment : Printed circuit board.

Other parts that require specific care when handled but are not subject to WEEE : Neodymium magnets

Maintenance and disassembly should always be conducted by qualified personnel.

Recovery potential of the product according to IEC TR 62635

The recovery potential of the product is 53,62%.

This covers material and energy recovery potentials.

● Environmental impacts

Calculation methodology: life cycle assessment (LCA)

The calculation of the impacts on the environment was made using a life cycle assessment methodology in accordance with the ISO 14040 requirements and with PEP eco passport product category rules. For more details follow the link:

www.pep-ecopassport.org

This study was carried out with the following version of the software EIME and of the database:

EIME version: EIME v5.9.4

Database version: CODDE-2022-01

For biogenic carbon storage the following methodology was used : 0/0

The whole life cycle has been taken into account:

Step	Geographical representativeness	Scenario
Manufacturing (M) (A1-A3)	Production of electronic components : Asia Production of other components and packaging : Europe Assembly : France	From the raw material extraction to the last Socomec logistic platform, including packaging Waste generated during manufacturing phase are taken into account.
Distribution (D) (A4)	Distribution scenario : Europe	From the last Socomec logistic platform to the final customer.
Installation (I) (A5)	Transport and treatment of packaging wastes : Local	Local road transport of 1000 km of generated wastes to the treatment site, end of life treatment.
Use phase (U) (B1-B7)	Energy mix : Europe	Power consumption required during 20 years and maintenance according to consumption scenario above mentionned.
End of life (EOL) (C1-C4)	Transport and treatment : Local	Road transport of 1000 km from the final customer to the treatment sites. End of life treatment.

Environmental impacts of the SIRCOMOT DC 3200A, per FU

The following impacts have been calculated to best represent geographically, temporally and technologically each step of the life cycle.

Indicators	Unit	Total impact	M (A1-A3)	D (A4)	I (A5)	U (B1-B7)	EOL (C1-C4)
Resource use, minerals and metals (Abiotic resource depletion – Elements)	kg Sb eq.	1,81E-02	1,84E-02	0*	0*	2,49E-04	0*
Resource use, fossils (Abiotic resource depletion – Fossil fuels)	MJ	6,70E+04	5,90E+03	3,56E+02	9,65E+01	6,07E+04	0*
Acidification	mol H+ eq.	2,19E+01	4,64E+00	1,61E-01	4,07E-02	1,70E+01	5,72E-02
Ecotoxicity, freshwater	CTUe	2,88E+04	8,84E+03	1,72E+01	6,91E+01	1,99E+04	1,25E+01
Human toxicity, cancer	CTUh	2,11E-02	2,11E-02	0*	2,39E-06	0*	0*
Human toxicity, non-cancer	CTUh	4,81E-05	3,00E-05	4,85E-08	5,38E-08	1,80E-05	0*
Eutrophication, freshwater	kg P eq.	1,37E-03	8,19E-04	9,56E-06	7,40E-05	1,90E-04	2,72E-04
Eutrophication, marine	kg N eq.	2,93E+00	5,38E-01	7,57E-02	1,44E-02	2,27E+00	3,71E-02
Eutrophication, terrestrial	mol N eq.	3,18E+01	5,78E+00	8,30E-01	1,24E-01	2,47E+01	4,05E-01
Climate change - total	kg CO2 eq.	4,36E+03	4,27E+02	2,55E+01	1,02E+01	3,87E+03	1,80E+01
Climate change - fossil	kg CO2 eq.	3,15E+02	6,97E+00	0*	0*	3,12E+02	0*
Climate change - biogenic	kg CO2 eq.	4,04E+03	4,20E+02	2,55E+01	1,47E+01	3,56E+03	1,80E+01
Climate change - land use and land transformation	kg CO2 eq.	3,19E-07	1,87E-07	0*	1,31E-07	0*	0*
Ionising radiation, human health	kBq U235 eq.	3,22E+03	2,54E+03	0*	3,28E-01	6,82E+02	5,53E-01
Land use	No dimension	1,03E+03	4,91E+00	0*	0*	1,02E+03	0*
Ozone depletion	kg CFC-11 éq.	1,54E-04	3,25E-05	3,91E-08	4,55E-07	1,21E-04	3,35E-07
Particulate matter	disease occurrence	2,17E-04	3,09E-05	1,31E-06	2,79E-07	1,84E-04	1,54E-07
Photochemical ozone formation, human health	kg NMVOC eq.	9,28E+00	1,95E+00	2,09E-01	3,36E-02	7,00E+00	9,05E-02
Water use	m^3 eq.	1,27E+03	1,55E+02	0*	3,16E+00	1,10E+03	4,25E+00
Use of renewable primary energy excluding renewable primary energy used as raw material	MJ	8,98E+03	9,39E+01	0*	4,11E+01	8,84E+03	0*
Use of renewable primary energy resources used as raw material	MJ	3,32E+02	3,32E+02	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	9,31E+03	4,26E+02	0*	4,11E+01	8,84E+03	0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	6,63E+04	5,22E+03	3,56E+02	9,65E+01	6,07E+04	0*
Use of non renewable primary energy resources used as raw material	MJ	6,83E+02	6,83E+02	0*	0*	0*	0*
Total use of non-renewable primary energy resources	MJ	6,70E+04	5,90E+03	3,56E+02	9,65E+01	6,07E+04	0*
Use of secondary material	kg	3,72E-06	3,72E-06	0*	0*	0*	0*
Use of renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Use of non renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*
Total Primary Energy	MJ	7,63E+04	6,33E+03	3,56E+02	1,38E+02	6,95E+04	0*
Net use of freshwater	m^3	2,95E+01	3,62E+00	0*	7,35E-02	2,57E+01	9,90E-02
Hazardous waste disposed	kg	1,20E+03	1,21E+03	0*	0*	1,81E+00	0*
Non hazardous waste disposed	kg	1,35E+04	4,80E+02	0*	2,83E+01	1,30E+04	0*
Radioactive waste disposed	kg	8,84E+00	1,61E-01	0*	3,05E-03	8,67E+00	5,78E-03
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for recycling	kg	6,14E+00	0*	0*	6,14E+00	0*	0*

Materials for energy recovery	**kg**	**2,90E+00**	**0***	**0***	**2,90E+00**	**0***	**0***
Exported Energy	**MJ by energy vector**	**4,17E+00**	**1,50E+00**	**0***	**2,67E+00**	**0***	**0***

Biogenic carbon content in the reference product:

Biogenic carbon content of the product	**kg of C**	**0,00E+00**	**0***	**N/A**	**N/A**	**N/A**	**N/A**
Biogenic carbon content of the associated packaging	**kg of C**	**4,52E+00**	**4,52E+00**	**N/A**	**N/A**	**N/A**	**N/A**

NB : 0 means that this impact either represents less than 0.01% of the total life cycle of the reference flow, or has no impact (in the case where the total impact is zero).*

For the use stage (U), the product does not require maintenance therefore the impacts values are representatives of the B6 phase from the use stage : "Energy requirements during the use stage"

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Independant verification of the declaration and data in compliance with ISO 14025 : 2006		
Internal : ☑	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 or EN 50693:2019 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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