Product Environmental Profile

Switch disconnector
Sirco 3x125A
(3x125A - 3x160A)

Socomec is member of :

créer CLUSTER RESEARCH : EXCELLENCE IN ECODESIGN & RECYCLING

THE GLOBAL COMPACT

Gimélec

Environment and
sustainable development commissions

The commitments of Socomec to respect the environment

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

- Develop innovating solutions primarily focused on energy efficiency to help its customer in the design of less energy-consuming, better managed and eco friendly installations.
- Diversify its product offer in the renewable energy and energy efficiency sectors,
- Minimize the environmental impact of its industrial activities through the progressive ISO 14001 certification of its production sites,
- Minimize at the preliminary design stage the environmental impacts of its products taking into account their whole life cycle,
- Provide his customers with reliable data on the environmental performance of the products.

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Innovative Power Solutions

Representative product

Reference product
The product representative of the product family this study is based on is the Sirco 3x125A with commercial reference 26003014.

References covered by this PEP
The commercial references also covered by this PEP are Sirco B3 3P 160A - 26003017.

Function
Make and break under load condition and provide safety isolation of low voltage applications up to 415VAC and DC during 20 years.

Material and substances

Declaration of the constitutive materials according to IEC 62474
Total weight of the reference product including packaging: 1,1kg

Metals, % weight		Plastics, % weight		Others, % weight	
Stainless steels	< 1.0%	Thermoplastics	1.5%	Ceramics and Glass	0.6%
Other ferrous alloys, non-stainless steels	8.1%	Others	49.4%	Others, non organic	< 1.0%
Zinc and its alloys	2.9%			Packaging Cardboard and paper	8.6%
Copper and its alloys	27.2%				
Other non-ferrous metals and alloys	< 1.0%				

The mass of the products covered by the material balance is 1,1kg.
The recycled content is estimated at 19 %.

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.

ROHS directives 2002/95/EC and 2011/65/EC compliance: although the majority of Socomec products are outside the scope of the ROHS directives, a ROHS compliance process has been in progress on a voluntary basis since 2006. 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) and polybrominated diphenyl ethers (PBDEs).

REACH 1907/2006 regulation: to the best of our knowledge at the publication date of this document, none of the substance of the candidate list to authorization (SVHC) have been found in the references covered by this PEP.

Manufacturing

The products covered by this PEP are manufactured on a site where impacts on the environment are reduced by optimizing its energy consumption and by practicing a rigorous waste management.

Moreover, Socomec is committed to the progressive ISO 14001 certification of its manufacturing sites.

Distribution

As part of its distribution policy aiming to respect the environment, Socomec is in favor of groupage transports and ISO14001 certified logistic partners.

The packaging complies with Directive 94/62/EC.
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.

Packaging design solutions favors mono-material recyclable cardboard without coloring or bleaching. The wedging of the packaged product is made of recycled cardboard, no polystyrene is used.

Installation

The installation stage consists in connecting the product to the existing electrical installation. The installation do not generate any significant impacts on the environment.

Use phase

Power consumption

Use phase scenario : non-continous operation scenario during 20 years

- Load rate / rated current : 30% of In
- Percentage of utilization time : 30%

Mode	Dissipated power of the reference product (W)	Time distribution (%)
Active	0,5	30
Stop	0	70

Power consumption of the total life of the product: 25,5 kWh.

Care and maintenance
The product does not require any maintenance or special maintenance under normal conditions of use.

End of life

End of life treatment
SIRCO references covered by this PEP do not contain hazardous components as defined in the Waste Directive 2008/98/EC.

Recovery potential of the product according to IEC TR 62635
The recovery potential of the product is 41%.
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

The whole life cycle has been taken into account:

Manufacturing (M)	From the raw material extraction to the last Socomec logistic platform, including packaging
Distribution (D)	From the last Socomec logistic platform to the final customer following an French average distribution scenario
Installation (I)	Neglected (*)
Use phase (U)	Power consumption required to operate the product during 20 years according to consumption scenario described on page 3. Energy model considered: French
End Of Life (EOL)	Road transport from the final customer to the dismantling, material and energy recovery sites. Treatment.

The study was carried out with the version 5.2 of the software EIME with version database Codde_2013_02. The software is distributed by CODDE which is a subsidiary of BUREAU VERITAS.

Indicators

								Extrapolation
Indicators	**Units**	**Total**	**M**	**D**	**I**	**U**	**EOL**	**K0**
Air acidification	g H+ eq	2,52E+00	2,07E+00	2,10E-02	0*	4,26E-01	7,52E-03	1,11
Air toxicity	m³	4,56E+06	3,98E+06	3,13E+04	0*	5,39E+05	1,25E+04	1,08
Energy depletion	MJ	5,42E+02	1,93E+02	1,51E+00	0*	3,47E+02	8,48E-01	1,43
Global warming	g CO_2 eq,	9,06E+03	4,98E+03	1,07E+02	0*	3,92E+03	4,54E+01	1,29
Hazardous waste production	kg	3,43E-01	3,42E-01	1,33E-07	0*	6,07E-04	4,95E-04	1,00
Ozone depletion	g CFC-11 eq,	8,73E-03	7,78E-04	2,03E-07	0*	7,95E-03	6,38E-06	1,61
Photochemical ozone creation	g C_2H_4 eq,	3,28E+00	2,93E+00	2,67E-02	0*	2,96E-01	1,87E-02	1,06
Raw material depletion	Y-1	3,23E-14	3,22E-14	2,19E-18	0*	1,46E-16	9,51E-19	1,00
Water depletion	dm3	1,29E+02	8,47E+01	1,11E-02	0*	4,44E+01	1,01E-01	1,23
Water eutrophication	g PO_4 eq,	8,20E-01	7,30E-01	1,99E-04	0*	8,94E-02	1,96E-04	1,07
Water toxicity	m³	7,53E+00	1,90E+00	4,58E-02	0*	5,57E+00	1,22E-02	1,49

The table above shows the 11 environmental impact indicators of the reference product.
To get indicators of B3 sirco 3P 160A with reference 26003017, multiply the total column by coefficient K0.

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