



## Switch disconnector Sirco PV



### 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.

Socomec is member of :

**créer** CLUSTER RESEARCH :  
EXCELLENCE IN ECODSIGN  
& RECYCLING



**Gimélec**

Environment and sustainable  
development commissions

## ■ Representative product

### Reference product

The representative product is the Sirco PV 2x250A with sales reference 27PV2024.

### References covered by this PEP

Sirco PV 2x100A to 2x400A with sales references 27PV2009, 27PV 2019, 27PV2032 et 27PV2039.

### Function

Make and break under load condition and provide safety isolation of low voltage photovoltaic applications during 20 years.

## ■ Material and substances

### Declaration of the constitutive materials according to IEC 62474

Total weight including packaging: Sirco 2x250A : 1,850 kg  
 Sirco 2x400A : 5,650 kg

#### For the Sirco 2x250A

Metals, % weight		Plastics, % weight		Others, % weight	
Stainless steels	10,9%	Thermoplastics	53,9%	Ceramics and Glass	1,5%
Other Ferrous alloys, non-stainless steels	5,7%	Others	<0,1%	Others Inorganics	0,3%
Copper and its alloys	10,7%			Cardboard and paper	11,5%
Zinc and its alloys	5,5%			Others Organics	<0,1%
Precious Metals	<0,1%				
Other non-ferrous metals and alloys	<0,1%				

Sirco 2x250A	<b>Metals, % weight: 32,8%</b>	<b>Plastics, % weight: 53,9%</b>	<b>Others, % weight: 13,3%</b>
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Sirco 2x400A	<b>Metals, % weight: 31,2%</b>	<b>Plastics, % weight: 55,1%</b>	<b>Others, % weight: 13,7%</b>
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The recycled content is estimated at 12 %.

## 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 does not generate any significant impacts on the environment.

## ■ Use phase

### Power consumption

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

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

Mode	Dissipated power of the reference product (W)	Time distribution (%)
Active	0,918	30
Stop	0	70

Product power consumption during its total lifespan (20 years) : 161 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

Sirco PV does not contain any substances, mixtures or hazardous components within the meaning of annex VII of the directive WEEE 2012/19/EU which would require a dismantling for selective treatment of materials and components.

Sirco PV can go directly into sorting and crushing facilities for valorization in accordance with current legislation.

Remark:

This product does not contain any battery.

### Recovery potential of the product according to IEC TR 62635

The total potential value of this product is 30%.

This potential value takes into account the material recycling and energy recovery.

## ■ Environmental impacts

### Calculation methodology: life cycle assessment (LCA)



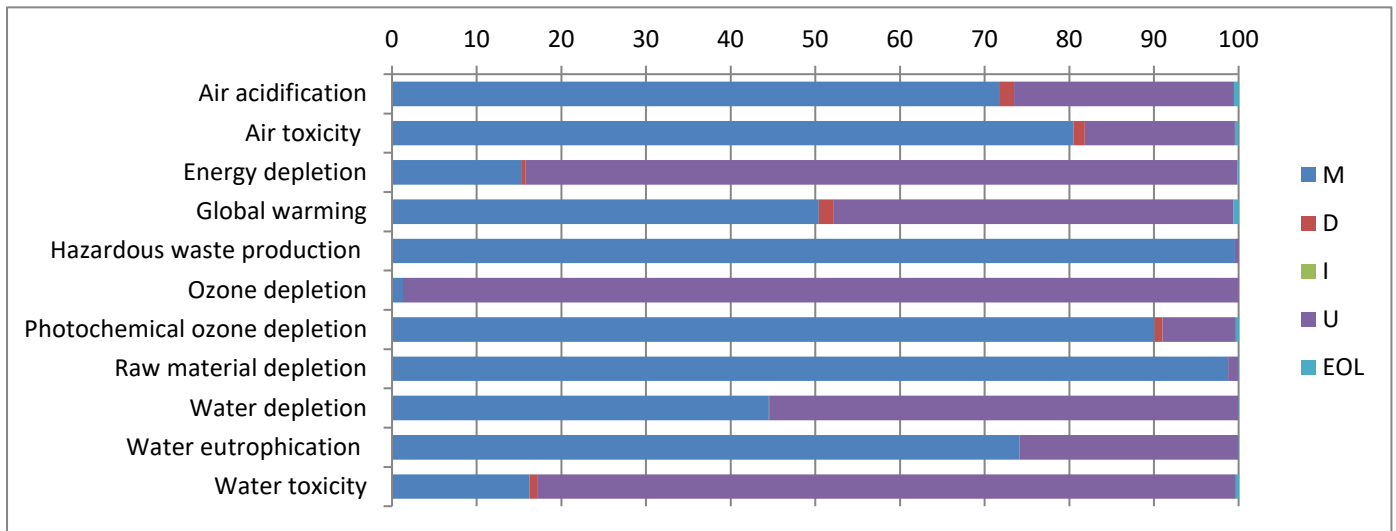
The calculation of the impacts on the environment was made using a life cycle assessment methodology in accordance with the ISO 14040 requirements and with PEP eco passport product category rules .For more details follow the link: [www.pep-ecopassport.org](http://www.pep-ecopassport.org)

The whole life cycle has been taken into account:

<b>Manufacturing (M)</b>	From the raw material extraction to the last Socomec logistic platform, including packaging.
<b>Distribution (D)</b>	From the last Socomec logistic platform to the final customer following an average French distribution scenario.
<b>Installation (I)</b>	Neglected (*)
<b>Use phase (U)</b>	Power consumption required to operate the product during 20 years according to consumption scenario described on page 4. Energy model considered: French
<b>End Of Life (EOL)</b>	Road transport over 1000 kms from the final customer to the dismantling sites.

## Sirco PV 2x250A's environmental impact

Indicators	Units	M	D	I	U	EOL	Total	K
Air acidification	g H+ eq	2,23E+00	5,15E-02	0,0*	8,05E-01	1,72E-02	3,10E+00	2,79
Air toxicity	m <sup>3</sup>	4,62E+06	7,65E+04	0,0*	1,02E+06	2,55E+04	5,74E+06	3,03
Energy depletion	MJ	1,19E+02	3,91E+00	0,0*	6,56E+02	1,30E+00	7,80E+02	2,51
Global warming	g CO <sup>2</sup> eq	7,90E+03	2,77E+02	0,0*	7,40E+03	9,23E+01	1,57E+04	2,48
Hazardous waste production	kg	2,54E-01	3,43E-07	0,0*	1,15E-03	1,14E-07	2,56E-01	2,73
Ozone depletion	g CFC-11 eq	1,99E-04	5,25E-07	0,0*	1,50E-02	1,75E-07	1,52E-02	2,51
Photochemical ozone depletion	g C2H4 eq	5,81E+00	6,18E-02	0,0*	5,59E-01	2,06E-02	6,45E+00	2,61
Raw material depletion	Y-1	2,26E-14	5,66E-18	0,0*	2,75E-16	1,89E-18	2,29E-14	1,07
Water depletion	dm <sup>3</sup>	6,74E+01	2,88E-02	0,0*	8,39E+01	9,59E-03	1,51E+02	2,75
Water eutrophication	g PO <sub>4</sub> <sup>3-</sup> eq	4,85E-01	5,15E-04	0,0*	1,69E-01	1,72E-04	6,54E-01	2,77
Water toxicity	m <sup>3</sup>	2,07E+00	1,18E-01	0,0*	1,05E+01	3,95E-02	1,28E+01	2,57



To get indicators of the Sirco PV 2x400A multiply the total column by coefficient K.

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