



Pulse concentrator Countis ECi2



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 :



Environment and Sustainable development commission

■ Representative product

Reference product

The product representative of the product family this study is based on is the Countis ECi2 with commercial reference 48530000.

References covered by this PEP

Countis ECi2 : 48530000

Function

Record and convey to a PC or a programmable logic controller information on the number of pulses from different energy meters during 10 years.

■ Material and substances

Material declaration according to IEC 62474

Metals, % weight		Plastics, % weight		Others, % weight	
Stainless steels	< 0.5%	Thermoplastics	29.5%	Ceramics / Glass	8.5%
Other ferrous alloys, non-stainless steels	12.0%	Other plastics and Rubber	8.0%	Other inorganic materials	1.0%
Aluminum and its alloys	2.0%			Other organic materials	2.0%
Copper and its alloys	4.5%			Packaging Cardboard + Paper	28.5%
Other non-ferrous metals and alloys	3.5%				
Total weight		0,36 kg including 0,14 kg of electronic cards and LCD			

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 made on a site engaged in a program to reduce its environmental impact by optimizing energy and strict management of industrial waste consumption.

The Socomec Group is engaged in a progressive ISO14001 certification for all of its 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 colouring or bleaching. The wedging of the packaged product is made of recycled cardboard, no polystyrene is used. Eco-design studies are currently in progress to improve the environmental performance of packaging.

■ Installation

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

■ Use phase

Use phase scenario

The Countis ECi2 performs the functional unit during the whole use phase. Two different energy consumption modes are to be considered. In the first active mode the backlight is active. In the second mode (other) the backlight is off. To reduce the impacts of the Countis ECi2 on the environment, the backlight is present in factory, to turn off automatically after a short period of inactivity. In this study, it was considered that a key of the Countis ECi2 is pressed once per week.

The French energy model was used for the determination of the impacts. The Countis ECi2 does not require any maintenance.

According to the product category rules from PEP ecopassport Program, the Countis ECi2 is an active product entering in category 2 with an average use lifespan of 10 years.

Use phase scenario	Key pressed once per week	
	Countis ECi2 Power (W)	Time distribution (%)
Active	1.7	0.005
Other	1.5	99.995

The energy consumed in the lifespan of the product is 134 kWh.

■ End of life

According to waste directive 2008/98/CE, the Countis ECi2 contains components which need to be dismantled and oriented towards appropriate treatment facilities: electronic boards, LCD, lithium button battery.

Recovery potential of the product according to IEC TR 62635

The recovery potential of the product is 63%. This covers material and energy recovery potentials.

■ Environmental impacts

Calculation methodology : life cycle assessment (LCA)



The calculation of the product 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 average distribution scenario in France
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. End of life 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

The following table shows the 11 environmental impacts indicators of the reference product.

Indicators	Units	Total	Manufacturing	Distribution	Installation	Use	End of life
Air acidification	g H+ eq	7,47E+00	5,22E+00	8,35E-03	0*	2,24E+00	6,87E-03
Air toxicity	m ³	9,09E+06	6,24E+06	1,24E+04	0*	2,83E+06	1,02E+04
Energy depletion	MJ	2,17E+03	3,49E+02	6,33E-01	0*	1,82E+03	5,80E-01
Global warming	g CO ₂ eq,	4,70E+04	2,62E+04	4,49E+01	0*	2,06E+04	1,47E+02
Hazardous waste production	kg	6,43E-01	6,40E-01	5,56E-08	0*	3,18E-03	1,91E-04
Ozone depletion	g CFC-11 eq,	4,40E-02	2,29E-03	8,52E-08	0*	4,17E-02	7,07E-06
Photochemical ozone creation	g C ₂ H ₄ eq,	6,47E-03	4,89E-03	1,00E-05	0*	1,55E-03	1,56E-05
Raw material depletion	Y-1	1,35E-13	1,34E-13	9,19E-19	0*	7,65E-16	1,09E-18
Water depletion	dm ³	5,21E+02	2,88E+02	4,67E-03	0*	2,33E+02	8,87E-02
Water eutrophication	g PO ₄ ³⁻ eq,	1,07E+00	5,71E-01	8,35E-05	0*	4,69E-01	2,55E-02
Water toxicity	m ³	3,18E+01	1,96E+00	1,92E-02	0*	2,92E+01	6,09E-01

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