



Green Power 2.0

Delphys Xtend GP

Hot-scalable UPS system up to 2.4 MW



Socomec is member of:



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 ecofriendly 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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■ Representative product

Reference product

Considering the many possible variants, this PEP is made from the configuration 1200kVA – C97 fully equipped, composed of the following elements:

Quantity	Name	Commercial reference
1	Cabinet AC 1200kVA	1731200212
1	Battery coupling cabinet	1700000005
6	Xmodule (200kW)	1730200033
6	Xbay	1700000019 to 1700000024

With the system configuration:

- Separated grid (rectifier, Bypass) ;
- Distributed Bypass;
- Power cables from the bottom (AC and DC).

Main characteristics:

Product	Input dependency characteristics	Configuration	Performance classification	Power kVA/kW	Dimensions	Acoustic noise	Power factor
Delphys GP Xtend 1200kVA – C97	VFI monomode	Modular ASI with Bypass	VFI-SS-111	1200/1200	2120 x 5760 x 960	≤75dBA	>0.99

Functional unit

To protect the load of 1200kW against input power failure during 15 years and switch to the energy storage system to avoid power outage.

■ Material and substances

Declaration of the constitutive materials according to IEC 62474

Metals, % weight		Plastics, % weight		Others, % weight	
Other ferrous alloys – non stainless	51.5%	Other thermoplastics	7.3%	Other organics	5.2%
Copper and its alloys	19.5%	Other plastics	2.6%	Ceramics and Glass	1.2%
Aluminium and its alloys	9.8%	PVC	0.8%	Other inorganics	0.7%
Stainless steels	0.7%				
Zinc and its alloys	0.7%				
Other non-ferrous metals and alloys	<0.1%				
Precious metals	<0.1%				
Nickel and its alloys	<0.1%				

The estimated content of recycled materials is 24.6% based on a Life Cycle Analysis model with EIME software which is a software distributed by CODDE, a subsidiary of Bureau Veritas.

The mass of the reference product is 4.7t (without batteries). This mass includes the mass of packaging: wooden pallet (130kg), corrugated cardboard (84kg), PE film (1.25kg).

The material balance or the unitary cabinets constitutive of the reference product type configuration is available on request.

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 directive 2011/65/EC: 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 mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ethers (PBDEs).

REACH regulation 1907/2006 :



To the best of our knowledge at the publication date of this document, none of the substance of the candidate list to authorization (SVHC) has been found in the references covered by this PEP.

■ Manufacturing



The products covered by this PEP are manufactured on the Huttenheim production site, in 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 ISO14001 certified logistic partners.

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, except impacts from packaging waste. The transport of a technician has also been taken into account.

■ Use

Electric consumption

Consumption scenario: *European energy mix*

Load rate (%)	25%	50%	75%	100%
Time distribution (%)	25%	50%	25%	0

Total energy consumed during 15 years:

Reference product	Delphys GP Xtend, 1200kVA – C97
Total energy consumption	4 030 695 kWh
Average UPS efficiency	94.78%

Care and maintenance

It is recommended to carry out periodic specialized maintenance in order to keep the equipment at the maximum level of efficiency and to avoid the installation being out of service with possible damage/risks.

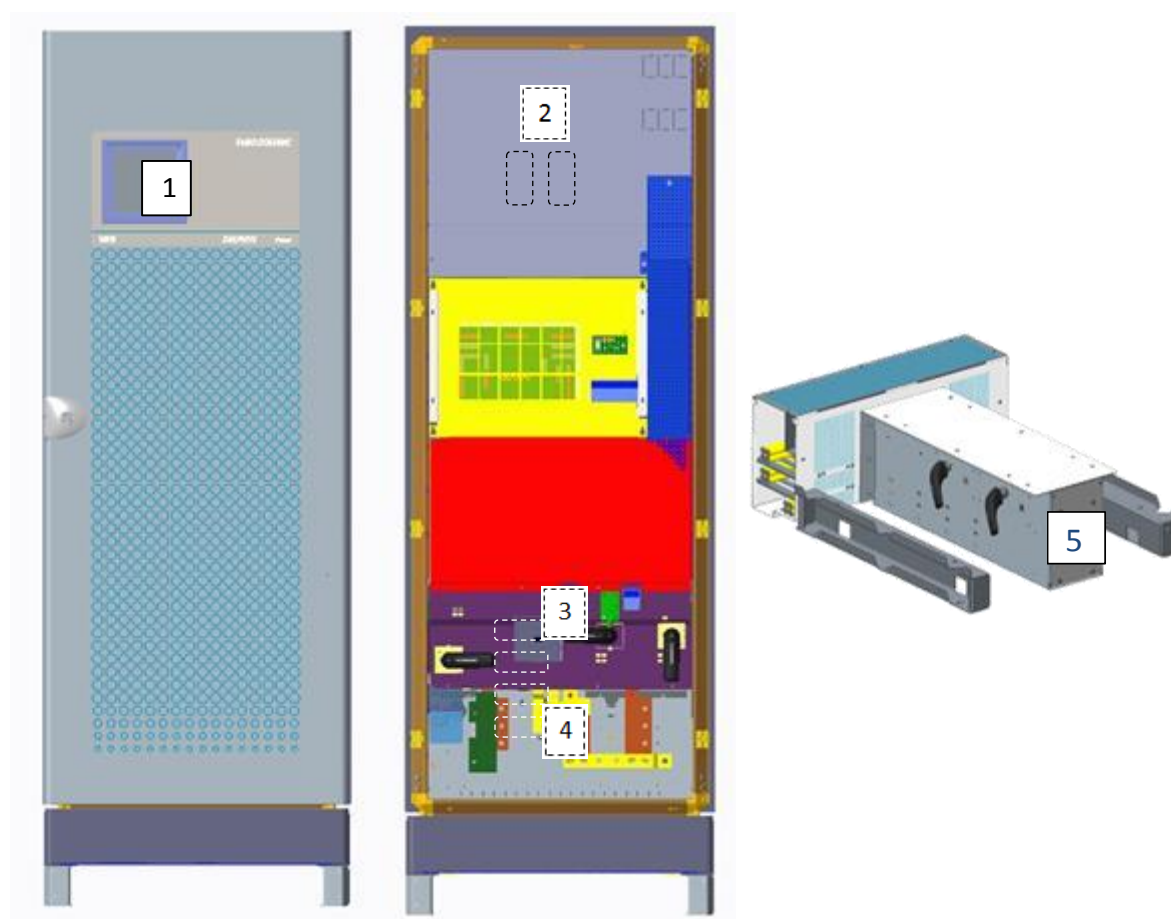
Consumables

The product does not require consumables.

End of life

End of life treatment according to IEC TR 62635

During dismantling, some parts could constitute a safety hazard for treatment operators and damage environment. See below the location of such components that need to be dismantled and oriented towards appropriate end of life facilities according to the applicable local legislation.



1. LCD screen – 1.1 kg
2. Chemical capacitors – 14 kg
3. Polypropylene capacitors C10 – 2 kg
4. Polypropylene capacitors C30 – 6 kg
5. Printed Circuit Board Assembly (deployed in the product) – 8kg

Note: maintenance and disassembly should always be conducted by qualified personnel.

Recovery potential of the product according to IEC TR 62635

The total potential value of this product is 72.6%.

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

■ Additional information



This environmental declaration lists the information required in the Annex A and B (substances: criterion 1) of IEC 62040-4 (Edition 1.0 2013-04) and EN 62040-4:2013 (2014-03).

■ Environmental impacts

Méthodologie : analyse de cycle de vie (ACV)



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 ecopassport product category rules. For more details, follow the link: www.pep-ecopassport.org

This study was carried out with the version 5.5.0.11 of the software EIME with version database Codde_2015_04. The software is distributed by CODDE which is a subsidiary of Bureau Veritas. This product respects the rules defined in the PSR-0010-ed1.1-EN-2015 10 16: Uninterruptible Power Supply (UPS).

Life cycle steps

Step	Geographical representativeness	Scenario								
Manufacturing (M)	Production of electronic components: Europe Production of packaging and other components: Europe Assembly: France (Huttenheim) Last logistic platform: France (Benfeld)	From the raw material extraction to the last Socomec logistic platform, including packaging. Wastes generated during manufacturing have been taken into account.								
Distribution (D)	Distribution scenario: Europe	From the last Socomec logistic platform to the final customer. No reconditioning has been taken into account in the analysis.								
Installation (I)	Transport and treatment of packaging wastes: Local	Transport of a technician: 1000km. Local road transport of generated wastes to the treatment site, and landfilling								
Use (U)	Energy mix: Europe Production of maintenance components : analog to manufacturing phase	Power consumption required during 15 years according to the consumption scenario described on page 4. Preventive maintenance scenario on 15 years:								
		<table><tr><td>Components</td><td>Condensator filters</td><td>Fans</td><td>Power supply PCB</td></tr><tr><td>Number of replacement</td><td>2</td><td>3</td><td>2</td></tr></table>	Components	Condensator filters	Fans	Power supply PCB	Number of replacement	2	3	2
		Components	Condensator filters	Fans	Power supply PCB					
Number of replacement	2	3	2							
End of life (EOL)	Transport and treatment of the product: Local	Road transport from the final customer to the treatment sites. End of life treatment: landfilling.								

Environmental impacts of the Delphys GP Xtend, configuration 1200kVA – C97

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

Indicators	Unit	Total impact	M	D	I	U	EOL
Contribution to global warming	kg CO ₂ eq.	2,38E+09	5,74E+05	0*	0*	2,38E+09	0*
Contribution to ozone layer depletion	kg CFC11 eq.	5,79E+02	1,20E+00	0*	0*	5,78E+02	0*
Contribution to the soil and water acidification	kg SO ₂ eq.	1,80E+07	2,01E+03	0*	0*	1,80E+07	0*
Contribution to water eutrophication	kg (PO ₄) ³⁻ eq.	6,75E+05	1,94E+02	0*	0*	6,75E+05	0*
Contribution to photochemical ozone formation	kg C ₂ H ₄ eq.	8,51E+05	1,26E+02	0*	0*	8,51E+05	0*
Contribution to the depletion of abiotic resources - elements	kg Sb eq.	1,11E+02	2,35E+00	0*	0*	1,08E+02	0*
Contribution to the depletion of abiotic resources - fossil fuels	MJ	2,45E+10	5,31E+06	0*	0*	2,45E+10	0*
Contribution to water pollution	m ³	9,99E+10	2,36E+07	0*	0*	9,99E+10	0*
Contribution to air pollution	m ³	1,02E+11	1,95E+07	0*	0*	1,02E+11	0*
Use of renewable primary energy (excl. raw materials)	MJ	3,45E+09	2,32E+06	0*	0*	3,45E+09	0*
Use of renewable primary energy used as raw materials	MJ	4,99E+03	4,75E+03	0*	0*	0*	0*
Total use of renewable primary energy resources	MJ	3,45E+09	2,33E+06	0*	0*	3,45E+09	0*
Use of non-renewable primary energy (excl. raw materials)	MJ	3,77E+10	4,54E+07	0*	0*	3,76E+10	0*
Use of non-renewable primary energy used as raw materials	MJ	1,60E+04	1,23E+04	0*	0*	0*	0*
Total use of non-renewable primary energy resources	MJ	3,77E+10	4,54E+07	0*	0*	3,76E+10	0*
Use of secondary materials	kg	1,30E+03	1,28E+03	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*
Net use of fresh water	m ³	6,21E+06	6,59E+03	0*	0*	6,21E+06	0*
Hazardous waste disposed of	kg	1,11E+05	1,10E+05	0*	0*	7,03E+02	0*
Non-hazardous waste disposed of	kg	8,90E+09	9,25E+05	0*	0*	8,90E+09	0*
Radioactive waste disposed of	kg	7,27E+06	1,50E+04	0*	0*	7,26E+06	0*
Components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for recycling	kg	0,00E+00	0*	0*	0*	0*	0*
Materials for energy recovery	kg	0,00E+00	0*	0*	0*	0*	0*
Exported energy	MJ by energy vector	0,00E+00	0*	0*	0*	0*	0*
Total use of primary energy during the life cycle	MJ	4,11E+10	4,77E+07	0*	0*	4,11E+10	0*

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).

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Independant verification of the declaration and data, in compliance with ISO 14025 : 2010	
Internal : ☒	External : ☐
The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)	
PEP are compliant with XP C08-100-1 :2014	
The elements of the present PEP cannot be compared with elements from another program	
Document in compliance with ISO 14025: 2010 « Environmental labels and declarations. Type III environmental declarations »	



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