

# Product Environmental Profile



## Current measurement modules

### DIRIS Digiware S



### 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 :



Member of WEEE Europe



Environment and sustainable development commissions



PEP ecopassport® Registration number: SOCO-00093-V01.01-EN

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## ● Product information :

### Reference product

The representative product is the DIRIS Digiware S-130 with sales reference 48290160 with the following description: DIRIS Digiware S modules are used with DIRIS Digiware system designed for monitoring and reporting electrical energy. DIRIS Digiware S modules integrate current sensors and can replace or complete DIRIS Digiware I modules and their associated current sensors.

### Other covered references

This PEP covers other references listed in the table at the end of the document.

### Functional unit

Measure the current with integrated current sensors to measure circuits up to 63A during 10 years.

## ● Materials and substances

### Declaration of the constitutives materials

Total mass of the reference product (including packaging): 0,079 kg among which packaging: 0,027 kg

For the reference product:

| Plastics as % of weight        |               | Metals as % of weight     |              | Other as % of weight         |               |
|--------------------------------|---------------|---------------------------|--------------|------------------------------|---------------|
| PC                             | 10,94%        |                           |              | Electronic components        | 40,82%        |
| ABS                            | 10,55%        |                           |              | Cardboard                    | 24,89%        |
| Polyamide                      | 2,85%         |                           |              | Paper                        | 9,86%         |
|                                |               |                           |              | Other organics               | <0,1%         |
|                                |               |                           |              |                              |               |
|                                |               |                           |              |                              |               |
|                                |               |                           |              |                              |               |
|                                |               |                           |              |                              |               |
|                                |               |                           |              |                              |               |
|                                |               |                           |              |                              |               |
| Other plastics                 | <0,1%         |                           |              |                              |               |
|                                |               |                           |              |                              |               |
| <b>Total Plastics: 0,02 kg</b> | <b>24,38%</b> | <b>Total Metals: 0 kg</b> | <b>0,00%</b> | <b>Total Others: 0,06 kg</b> | <b>75,62%</b> |

### 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 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 reconditioning 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 phase 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

| Use phase scenario | Active 100% of the time            |                       |
|--------------------|------------------------------------|-----------------------|
| Mode               | Power of the reference product [W] | Time distribution [%] |
| Active             | 0,35                               | 100%                  |

Product power consumption during its total lifespan (10 years): 30,66 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*.

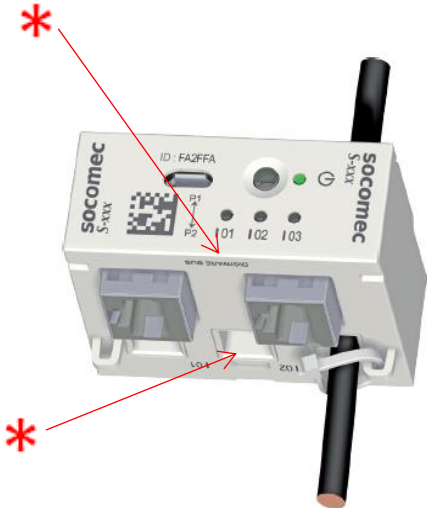
Maintenance and disassembly should always be conducted by qualified personnel.

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.

With a screwdriver in the notches\*, dissociate the 2 parts of the plastic housing.  
Then repeat the operations on the opposite face of the product.

Remove the superior part of the plastic housing in order to access the electronic cards.

Take the electronic card out of the plastic housing.  
Head all of the parts towards the appropriate recycling industry according to the legislation.



Recyclability potential of the product according to IEC TR 62635

The recovery recyclability of the product is 69,79%.  
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](http://www.pep-ecopassport.org)

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

EIME version: 6.1.2  
Database version: CODDE-2023-02

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<br>Production of other components and packaging : Europe<br>Assembly : France | From the raw material extraction to the last Socomec logistic platform, including packaging<br>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. No product reconditioning.                                                                         |
| 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 10 years 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.<br>End of life treatment.                                                               |

## Environmental impacts of the DIRIS Digiware S-130, 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) |
|-------------------------------------------------------------------------------------------------|--------------------|--------------|-----------|----------|----------|-----------|-------------|
| Acidification                                                                                   | mol H+ eq.         | 1,36E-01     | 6,42E-02  | 8,82E-05 | 1,40E-05 | 7,17E-02  | 3,11E-05    |
| Climate change - Total                                                                          | kg CO2 eq.         | 2,24E+01     | 9,74E+00  | 1,39E-02 | 5,57E-02 | 1,26E+01  | 6,44E-03    |
| Climate change - Biogenic                                                                       | kg CO2 eq.         | 3,57E-02     | 1,89E-02  | 0*       | 0*       | 1,68E-02  | 0*          |
| Climate change - Fossil                                                                         | kg CO2 eq.         | 2,23E+01     | 9,72E+00  | 1,39E-02 | 5,57E-02 | 1,25E+01  | 6,44E-03    |
| Climate change - Land use and land use transformation                                           | kg CO2 eq.         | 1,65E-05     | 1,65E-05  | 0*       | 0*       | 0*        | 0*          |
| Ecotoxicity, freshwater                                                                         | CTUe               | 2,95E+02     | 1,59E+02  | 0*       | 2,73E-01 | 1,35E+02  | 5,96E-02    |
| Particulate matter                                                                              | disease occurrence | 9,09E-07     | 3,52E-07  | 7,17E-10 | 9,65E-11 | 5,56E-07  | 2,26E-10    |
| Eutrophication, freshwater                                                                      | kg P eq.           | 5,67E-05     | 2,06E-05  | 0*       | 0*       | 3,44E-05  | 1,72E-06    |
| Eutrophication, marine                                                                          | kg N eq.           | 1,52E-02     | 6,90E-03  | 4,14E-05 | 5,48E-05 | 8,15E-03  | 1,09E-05    |
| Eutrophication, terrestrial                                                                     | mol N eq.          | 1,96E-01     | 7,30E-02  | 4,54E-04 | 5,38E-05 | 1,22E-01  | 1,19E-04    |
| Human toxicity, cancer                                                                          | CTUh               | 2,20E-07     | 2,19E-07  | 0*       | 0*       | 1,47E-09  | 0*          |
| Human toxicity, non-cancer                                                                      | CTUh               | 4,21E-07     | 3,63E-07  | 0*       | 1,00E-10 | 5,81E-08  | 0*          |
| Ionising radiation, human health                                                                | kBq U235 eq.       | 2,04E+01     | 1,71E+00  | 0*       | 0*       | 1,87E+01  | 0*          |
| Land use                                                                                        | No dimension       | 3,07E-01     | 5,74E-02  | 0*       | 0*       | 2,50E-01  | 0*          |
| Ozone depletion                                                                                 | kg CFC-11 éq.      | 1,27E-06     | 1,22E-06  | 0*       | 0*       | 5,37E-08  | 0*          |
| Photochemical ozone formation, human health                                                     | kg NMVOC eq.       | 5,06E-02     | 2,42E-02  | 1,14E-04 | 2,89E-05 | 2,62E-02  | 3,16E-05    |
| Abiotic resource depletion - fossil fuels or resource depletion - fossils                       | MJ                 | 4,37E+02     | 1,17E+02  | 1,94E-01 | 0*       | 3,20E+02  | 9,36E-02    |
| Abiotic resource depletion - elements or resource depletion - metals and minerals               | kg Sb eq.          | 4,19E-03     | 4,19E-03  | 0*       | 0*       | 9,10E-07  | 0*          |
| Water use                                                                                       | m³ eq.             | 4,06E+00     | 3,61E+00  | 0*       | 0*       | 4,45E-01  | 0*          |
| Net use of freshwater                                                                           | m³                 | 9,47E-02     | 8,43E-02  | 0*       | 0*       | 1,04E-02  | 0*          |
| Total Primary Energy                                                                            | MJ                 | 5,03E+02     | 1,21E+02  | 1,95E-01 | 0*       | 3,82E+02  | 9,53E-02    |
| Total use of non-renewable primary energy resources                                             | MJ                 | 4,37E+02     | 1,17E+02  | 1,94E-01 | 0*       | 3,20E+02  | 9,36E-02    |
| Total use of renewable primary energy resources                                                 | MJ                 | 6,64E+01     | 4,91E+00  | 0*       | 0*       | 6,15E+01  | 0*          |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ                 | 4,36E+02     | 1,15E+02  | 1,94E-01 | 0*       | 3,20E+02  | 9,36E-02    |
| Use of non renewable primary energy resources used as raw material                              | MJ                 | 1,21E+00     | 1,21E+00  | 0*       | 0*       | 0*        | 0*          |
| Use of non renewable secondary fuels                                                            | MJ                 | 0,00E+00     | 0*        | 0*       | 0*       | 0*        | 0*          |
| Use of renewable primary energy excluding renewable primary energy used as raw material         | MJ                 | 6,57E+01     | 4,22E+00  | 0*       | 0*       | 6,15E+01  | 0*          |
| Use of renewable primary energy resources used as raw material                                  | MJ                 | 6,84E-01     | 6,84E-01  | 0*       | 0*       | 0*        | 0*          |
| Use of renewable secondary fuels                                                                | MJ                 | 0,00E+00     | 0*        | 0*       | 0*       | 0*        | 0*          |
| Use of secondary material                                                                       | kg                 | 2,00E-06     | 2,00E-06  | 0*       | 0*       | 0*        | 0*          |
| Hazardous waste disposed                                                                        | kg                 | 6,02E+01     | 6,00E+01  | 0*       | 0*       | 2,35E-01  | 0*          |
| Non hazardous waste disposed                                                                    | kg                 | 4,38E+00     | 2,49E+00  | 4,89E-04 | 2,71E-02 | 1,81E+00  | 5,69E-02    |
| Radioactive waste disposed                                                                      | kg                 | 1,52E-03     | 1,13E-03  | 3,48E-07 | 0*       | 3,78E-04  | 1,95E-06    |

|                               |    |          |    |    |    |    |    |
|-------------------------------|----|----------|----|----|----|----|----|
| Components for reuse          | kg | 0,00E+00 | 0* | 0* | 0* | 0* | 0* |
| Exported Energy               | MJ | 0,00E+00 | 0* | 0* | 0* | 0* | 0* |
| Materials for energy recovery | kg | 0,00E+00 | 0* | 0* | 0* | 0* | 0* |
| Materials for recycling       | kg | 0,00E+00 | 0* | 0* | 0* | 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 | 7,56E-03 | 7,56E-03 | 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"

|                                                                                                                                                                                                                                                        |  |                                                                                                            |                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Registration number : SOCO-00093-V01.01-EN                                                                                                                                                                                                             |  | Drafting Rules : "PEP-PCR-ed4-EN 2021 09 06"                                                               |                                                                                      |
| Verifier accreditation number : VH46                                                                                                                                                                                                                   |  | Information and reference documents : <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a> |                                                                                      |
| Date of issue: 02-2024                                                                                                                                                                                                                                 |  | Validity period : 5 years                                                                                  |                                                                                      |
| Independant verification of the declaration and data, in compliance with ISO 14025 : 2006                                                                                                                                                              |  |                                                                                                            |                                                                                      |
| Internal : <input checked="" type="checkbox"/>                                                                                                                                                                                                         |  | External : <input type="checkbox"/>                                                                        |                                                                                      |
| The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)<br>PEPs are compliant with XP C08-100-1 : 2016 or EN 50693:2019<br>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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## Other references covered and extrapolation factors

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For the products covered by the PEP other than the reference product, the environmental impacts of each phase of the lifecycle may be calculated with extrapolation factors following the proportionality rules that you can find below.

Extrapolation factors are determined as follows and can be provided upon request:

- For the Manufacturing and Distribution phases they are proportional to the mass of the product with its packaging;
- For the Installation phase they are proportional to the mass of the packaging;
- For the Use phase they are proportional to the power losses of the product;
- For the End of Life phase they are proportional to the mass of the product without its packaging.

| Model                       | Reference |
|-----------------------------|-----------|
| DIRIS Digiware S-130        | 48290160  |
| DIRIS Digiware S-135        | 48290161  |
| DIRIS Digiware S-DATACENTER | 48290162  |
| DIRIS Digiware S-130 MID    | 48290163  |
| DIRIS Digiware S-135 MID    | 48290164  |