



## RESYS B40 0,03-10A

Residual current monitoring and protection relay



Socomec is member of :

**ecosystem**

Member of WEEE Europe



**Gimélec**

Environment and sustainable  
development commissions



## 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.

PEP ecopassport® Registration number: SOCO-00136-V01.01-EN

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## ● Manufacturing

The products covered by this PEP are manufactured on a production site in Italy 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 ISO 14001 certified logistic partners.

No reconditionning 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             | 4                                  | 100%                  |

Product power consumption during its total lifespan (10 years): 350,4 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.

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

The recovery recyclability of the product is 22,74%.

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: EIME v6.2.5  
Database version: CODDE-2024-04

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 : Italy | 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.                                                                                                    |
| 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 20 years and maintenance 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 RESYS B40 0,03-10A, 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) |
|---------------------------------------------------|--------------------|--------------|-----------|----------|----------|-----------|-------------|
| Climate change                                    | kg CO2 eq.         | 1,44E+02     | 2,06E+01  | 4,40E-02 | 1,69E-01 | 1,23E+02  | 2,52E-02    |
| Climate change-Biogenic                           | kg CO2 eq.         | 3,02E-01     | 0*        | 0*       | 9,04E-02 | 2,27E-01  | 0*          |
| Climate change-Fossil                             | kg CO2 eq.         | 1,44E+02     | 2,06E+01  | 4,40E-02 | 7,85E-02 | 1,23E+02  | 2,52E-02    |
| Climate change-Land use and land use change       | kg CO2 eq.         | 1,41E-04     | 1,41E-04  | 0*       | 0*       | 0*        | 0*          |
| Ozone depletion                                   | kg CFC-11 eq.      | 3,09E-06     | 2,49E-06  | 0*       | 0*       | 5,98E-07  | 4,74E-10    |
| Acidification                                     | mol H+ eq.         | 7,67E-01     | 1,34E-01  | 2,79E-04 | 0*       | 6,32E-01  | 1,22E-04    |
| Eutrophication, freshwater                        | kg P eq.           | 3,73E-04     | 4,14E-05  | 0*       | 0*       | 3,25E-04  | 6,83E-06    |
| Eutrophication, marine                            | kg N eq.           | 9,18E-02     | 1,45E-02  | 1,31E-04 | 7,74E-05 | 7,70E-02  | 4,23E-05    |
| Eutrophication, terrestrial                       | mol N eq.          | 1,39E+00     | 1,54E-01  | 1,44E-03 | 0*       | 1,24E+00  | 4,64E-04    |
| Photochemical ozone formation - human health      | kg NMVOC eq.       | 2,94E-01     | 5,13E-02  | 3,62E-04 | 5,20E-05 | 2,42E-01  | 1,23E-04    |
| Resource use, minerals and metals                 | kg SB eq.          | 7,20E-03     | 7,16E-03  | 0*       | 0*       | 4,36E-05  | 0*          |
| Resource use, fossils                             | MJ                 | 3,36E+03     | 2,45E+02  | 6,15E-01 | 0*       | 3,11E+03  | 3,68E-01    |
| Water use                                         | m3 eq.             | 1,48E+01     | 5,37E+00  | 0*       | 0*       | 9,45E+00  | 0*          |
| Particulate matter                                | Disease occurrence | 5,83E-06     | 7,37E-07  | 2,27E-09 | 0*       | 5,09E-06  | 8,85E-10    |
| Ionising radiation, human health                  | kBq U235 eq.       | 1,85E+02     | 7,74E+00  | 0*       | 0*       | 1,77E+02  | 0*          |
| Ecotoxicity, freshwater                           | CTUe               | 3,14E+02     | 8,04E+01  | 0*       | 6,46E-01 | 2,33E+02  | 2,04E-01    |
| Human toxicity, cancer                            | CTUh               | 3,40E-08     | 1,85E-08  | 0*       | 8,45E-12 | 1,55E-08  | 4,12E-12    |
| Human toxicity, non-cancer                        | CTUh               | 9,45E-07     | 5,74E-07  | 0*       | 1,75E-10 | 3,71E-07  | 0*          |
| Land use                                          | No dimension       | 3,84E+00     | 4,25E-01  | 0*       | 0*       | 3,41E+00  | 0*          |
| Renewable primary energy used as energy           | MJ                 | 8,33E+02     | 9,37E+00  | 0*       | 0*       | 8,24E+02  | 0*          |
| Renewable primary energy used as raw material     | MJ                 | 9,91E-01     | 9,91E-01  | 0*       | 0*       | 0*        | 0*          |
| Total renewable primary energy                    | MJ                 | 8,34E+02     | 1,04E+01  | 0*       | 0*       | 8,24E+02  | 0*          |
| Non renewable primary energy used as energy       | MJ                 | 3,36E+03     | 2,41E+02  | 6,15E-01 | 0*       | 3,11E+03  | 3,68E-01    |
| Non renewable primary energy used as raw material | MJ                 | 3,94E+00     | 3,94E+00  | 0*       | 0*       | 0*        | 0*          |
| Total non renewable primary energy                | MJ                 | 3,36E+03     | 2,45E+02  | 6,15E-01 | 0*       | 3,11E+03  | 3,68E-01    |
| Total primary energy                              | MJ                 | 4,19E+03     | 2,55E+02  | 6,16E-01 | 0*       | 3,94E+03  | 0*          |
| Use of secondary material                         | kg                 | 2,38E-06     | 2,38E-06  | 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                            | m3                 | 3,47E-01     | 1,25E-01  | 0*       | 0*       | 2,22E-01  | 0*          |
| Hazardous waste disposed                          | kg                 | 9,72E+01     | 9,18E+01  | 0*       | 0*       | 5,41E+00  | 0*          |
| Non hazardous waste disposed                      | kg                 | 2,66E+01     | 5,53E+00  | 0*       | 4,01E-02 | 2,08E+01  | 2,26E-01    |
| Radioactive waste disposed                        | kg                 | 7,42E-03     | 2,63E-03  | 1,10E-06 | 0*       | 4,78E-03  | 7,74E-06    |
| Components for reuse                              | kg                 | 0,00E+00     | 0*        | 0*       | 0*       | 0*        | 0*          |
| Materials for recycling                           | kg                 | 1,73E-04     | 1,73E-04  | 0*       | 0*       | 0*        | 0*          |
| Materials for energy recovery                     | kg                 | 5,50E-08     | 5,50E-08  | 0*       | 0*       | 0*        | 0*          |
| Exported Energy                                   | MJ                 | 0,00E+00     | 0*        | 0*       | 0*       | 0*        | 0*          |
| Biogenic carbon content - Product                 | kg of C            | 0,00E+00     | 0*        | 0*       | 0*       | 0*        | 0*          |
| Biogenic carbon content - Packaging               | kg of C            | 1,71E-02     | 1,71E-02  | 0*       | 0*       | 0*        | 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).

# PRODUCT ENVIRONMENTAL PROFILE

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-00136-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: 05-2025                                                                                             | 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)                              |                                                                                                            |
| PEPs are compliant with XP C08-100-1 : 2016 or EN 50693:2019                                                       |                                                                                                            |
| 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" |                                                                                                            |

*This document is intended to be only informative and non-contractual and does not create any right or obligation or commitment for Socomec towards its associates, customers or any other person or entity. All the values indicated in this document may change depending on many factors (use conditions, applications, installations, environment...). The life time mentioned in this document is only indicative and is not intended to be the minimal, maximal or average life time of the product.*

## Other references covered and extrapolation factors

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                    | Part number |
|--------------------------|-------------|
| RESYS B40 0,03-10A       | 49313601    |
| RESYS B40 0,03-10A RS485 | 49313602    |