



**Eaton Z-SCH 4 Pole Installation  
contactor with 40A rated current**

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Representative product</b>                     | Z-SCH230/40-40 (Y7-248852)<br>Product Category: Contactors, remote Control Switch                                                                                                                                                                                                                                                                                                                                                             |
| <b>Description of the product</b>                 | Eaton Z-SCH Installation contactor are designed to establish and cut off the supply of a downstream installation from an electrical and/or mechanical control in industrial application areas. The reference product has 4 poles and rated voltage of 440 V AC.                                                                                                                                                                               |
| <b>Homogeneous Environmental Families Covered</b> | The PEP concerns following product offerings from Eaton Z-SCH Installation contactor as mentioned below:<br><br>248853 - Z-SCH230/40-22<br>248854 - Z-SCH230/40-31<br>218855 – Z-SCH230/40-20                                                                                                                                                                                                                                                 |
| <b>Functional unit</b>                            | Establish and cut off the supply of a downstream installation from an electrical and/or mechanical control characterised by the composition of 4 NO poles, a rated voltage of 440V AC, a rated current 40A at AC-1, a control circuit voltage 230V AC, with 4 poles, and IP20 rating in the in the Industrial application areas, according to the appropriate use scenario, and during the reference service life of the product of 20 years. |
| <b>Company information</b>                        | Eaton Industries (Austria) GmbH<br>Eugenia 1, 3943 Schrems, Austria<br>Email: <a href="mailto:productstewardship-es@eaton.com">productstewardship-es@eaton.com</a>                                                                                                                                                                                                                                                                            |

| Constituent Materials  |                              |                 |                |
|------------------------|------------------------------|-----------------|----------------|
| Reference product mass | 4.10E-01 kg (With packaging) |                 |                |
| Category PEP Material  | Materials                    | Mass (kg)       | Percentage (%) |
| Metals                 | Stainless Steel with Chrome  | 1.51E-01        | 36.80%         |
| Plastics               | Polyamide 6                  | 1.08E-01        | 26.40%         |
| Metals                 | Copper                       | 7.69E-02        | 18.80%         |
| Others                 | Cardboard                    | 6.07E-02        | 14.80%         |
| Metals                 | Cast Iron                    | 7.54E-03        | 1.80%          |
| Metals                 | Nickel                       | 2.24E-03        | <1.0%          |
| Plastics               | Polyoxymethylene (POM)       | 1.29E-03        | <1.0%          |
| Metals                 | Brass                        | 1.12E-03        | <1.0%          |
| Metals                 | Tin                          | 3.03E-04        | <1.0%          |
| Metals                 | Bronze                       | 1.80E-04        | <1.0%          |
| Plastics               | Polycarbonate (PC)           | 1.70E-04        | <1.0%          |
| Others                 | Silicon Rubber               | 1.24E-04        | <1.0%          |
| Metals                 | Zinc                         | 6.42E-05        | <1.0%          |
| Metals                 | Silver                       | 1.21E-05        | <1.0%          |
| Total                  |                              | <b>4.10E-01</b> | <b>100.00%</b> |

#### Substance Assessment

The representative product is compliant with the EU-RoHS Directive (2011/65/EU) without exemption and the product does not contain substances as Substance-of-Very-High-Concern (SVHC) on the Candidate List of the EU-REACH Regulation (1907/2006/EC).

#### Additional Environmental Information

|                      |                                                                                                                                                                                                                                                                                                                |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Manufacturing</b> | The reference product is manufactured at the direct source supplier plant in Austria which has set operational procedures for environmental protection and complies with local regulations.                                                                                                                    |
| <b>Distribution</b>  | Eaton is committed to minimizing weight and volume of product and packaging with focus to optimize transport efficiency.                                                                                                                                                                                       |
| <b>Installation</b>  | The installation process does not require any energy consumption and there is no waste other than the obsolete product packaging generated during this step.                                                                                                                                                   |
| <b>Use</b>           | The product requires energy consumption during operation.                                                                                                                                                                                                                                                      |
| <b>End of life</b>   | The recyclability rate of the overall product is 92.2% if it is properly dismantled prior to shredding. The rate is calculated based on "ECO'DEEE recyclability and recoverability calculation method" (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME). |

## Environmental Impacts

The calculation of the environmental impacts is the result of the Product's Life Cycle Analysis in accordance with ISO 14040/44, covering the entire lifecycle, i.e., "Cradle-to-Grave" including the following life cycle phases: production, distribution, installation, use and end of life.

System modelling was carried out using the commercial LCA software EIME v6.3.2-4 with database version CODDE-2025-04.

Indicators Set: PEF EF 3.1 (Compliance: PEP ed.4, EN15804+A2) v2.0

|                            |                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Manufacturing Phase</b> | The reference product is manufactured at the direct source supplier plant in Austria.<br>Energy model used: Austria                                                                                                                                                                                                                                      |
| <b>Distribution Phase</b>  | Distribution of the product in its packaging from the Eaton's last logistics platform to the installation place in Europe is considered as per actual data.                                                                                                                                                                                              |
| <b>Installation Phase</b>  | Product is installed in Europe. Installation of product and treatment of packaging waste are considered in this phase. There is no energy consumption for reference product.<br>Energy model used: Europe                                                                                                                                                |
| <b>Use Phase</b>           | Reference lifetime: 20 Years<br>Usage profile: The product has power loss of 14.6 W at full load condition. For industrial applications considering 50% of the loading rate and 50% use time rate, total losses are 319.74 kWh over the 20 years.<br>Product do not require any maintenance/replacement during useful life.<br>Energy Model Used: Europe |
| <b>End of life Phase</b>   | Product disposed with WEEE guidelines.<br>Energy model used: Europe                                                                                                                                                                                                                                                                                      |
| <b>Module-D</b>            | Module D is calculated according to PCR-ed4-EN-2021 09 06 based on the materials recycled and the modelled end-of-life scenario.<br>It expresses the net benefits and loads beyond the boundaries of the system and are not to be included in the life cycle totals.                                                                                     |

## Environmental Impact Indicators: Mandatory

| Mandatory environmental impact indicators                    | Units                      | Sum      | A1-A3 - Manufacturing | A4 - Distribution | A5 - Installation | B1-B7 - Use | C1-C4 - End of life | B6 - Operational energy use | D - Benefits and loads beyond the system boundaries |
|--------------------------------------------------------------|----------------------------|----------|-----------------------|-------------------|-------------------|-------------|---------------------|-----------------------------|-----------------------------------------------------|
| <b>Climate change - total</b>                                | kg CO2 eq.                 | 1.33E+02 | 3.12E+00              | 9.21E-02          | 1.75E-01          | 1.29E+02    | 3.36E-01            | 1.29E+02                    | -1.56E+00                                           |
| <b>Climate change - fossil fuels</b>                         | kg CO2 eq.                 | 1.30E+02 | 3.16E+00              | 9.21E-02          | 7.60E-02          | 1.26E+02    | 3.33E-01            | 1.26E+02                    | -1.61E+00                                           |
| <b>Climate change - biogenics</b>                            | kg CO2 eq.                 | 2.91E+00 | -4.37E-02             | 3.77E-07          | 9.89E-02          | 2.85E+00    | 2.40E-03            | 2.85E+00                    | 5.43E-02                                            |
| <b>Climate change - land use and land use transformation</b> | kg CO2 eq.                 | 8.22E-07 | 5.61E-07              | 1.39E-07          | 8.47E-10          | 0.00E+00    | 1.21E-07            | 0.00E+00                    | -2.16E-07                                           |
| <b>Ozone depletion</b>                                       | kg eq. CFC-11              | 1.04E-06 | 4.70E-07              | 1.12E-09          | 9.68E-10          | 5.54E-07    | 1.47E-08            | 5.54E-07                    | -2.75E-07                                           |
| <b>Acidification (AP)</b>                                    | mole of H <sup>+</sup> eq. | 7.15E-01 | 3.61E-02              | 1.45E-04          | 2.05E-04          | 6.77E-01    | 1.84E-03            | 6.77E-01                    | -1.79E-02                                           |
| <b>Freshwater eutrophication</b>                             | kg P eq.                   | 3.55E-04 | 4.32E-05              | 3.44E-07          | 9.10E-07          | 3.10E-04    | 9.30E-07            | 3.10E-04                    | -3.35E-05                                           |
| <b>Marine aquatic eutrophication</b>                         | kg of N eq.                | 8.17E-02 | 2.20E-03              | 2.64E-05          | 9.47E-05          | 7.92E-02    | 2.15E-04            | 7.92E-02                    | -1.16E-03                                           |

| Mandatory environmental impact indicators     | Units                            | Sum      | A1-A3 - Manufacturing | A4 - Distribution | A5 - Installation | B1-B7 - Use | C1-C4 - End of life | B6 - Operational energy use | D - Benefits and loads beyond the system boundaries |
|-----------------------------------------------|----------------------------------|----------|-----------------------|-------------------|-------------------|-------------|---------------------|-----------------------------|-----------------------------------------------------|
| Terrestrial eutrophication                    | mole of N eq.                    | 1.30E+00 | 2.61E-02              | 2.89E-04          | 6.22E-04          | 1.27E+00    | 2.52E-03            | 1.27E+00                    | -1.26E-02                                           |
| Photochemical ozone formation                 | kg of NMVOC eq.                  | 2.61E-01 | 8.93E-03              | 9.36E-05          | 1.45E-04          | 2.51E-01    | 7.14E-04            | 2.51E-01                    | -4.59E-03                                           |
| Depletion of abiotic resources - elements     | kg eq. Sb                        | 4.23E-04 | 3.81E-04              | 3.29E-08          | 3.46E-09          | 4.19E-05    | 6.54E-08            | 4.19E-05                    | -2.17E-04                                           |
| Depletion of abiotic resources - fossil fuels | MJ                               | 3.16E+03 | 5.14E+01              | 1.64E+00          | 6.74E-01          | 3.10E+03    | 5.84E+00            | 3.10E+03                    | -2.52E+01                                           |
| Water scarcity                                | m3 of eq.. deprivation worldwide | 1.20E+01 | 1.94E+00              | 3.32E-03          | 5.65E-03          | 9.80E+00    | 2.49E-01            | 9.80E+00                    | -9.86E-01                                           |

### Inventory Flow Indicators: Mandatory

| Inventory flow indicators                                                                                               | Units | Sum      | A1-A3 - Manufacturing | A4 - Distribution | A5 - Installation | B1-B7 - Use | C1-C4 - End of life | B6 - Operational energy use | D - Benefits and loads beyond the system boundaries |
|-------------------------------------------------------------------------------------------------------------------------|-------|----------|-----------------------|-------------------|-------------------|-------------|---------------------|-----------------------------|-----------------------------------------------------|
| Use of renewable primary energy, excluding renewable primary energy resources used as raw materials                     | MJ    | 7.31E+02 | 4.54E+00              | 5.16E-03          | 9.28E-02          | 7.26E+02    | 5.94E-01            | 7.26E+02                    | -1.82E-01                                           |
| Use of renewable primary energy resources used as raw materials                                                         | MJ    | 1.43E+00 | 1.43E+00              | 0.00E+00          | 0.00E+00          | 0.00E+00    | 0.00E+00            | 0.00E+00                    | -8.96E-01                                           |
| Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)     | MJ    | 7.32E+02 | 5.98E+00              | 5.16E-03          | 9.28E-02          | 7.26E+02    | 5.94E-01            | 7.26E+02                    | -1.08E+00                                           |
| Use of non-renewable primary energy, excluding non-renewable primary energy resources used as raw materials             | MJ    | 3.16E+03 | 4.77E+01              | 1.64E+00          | 6.74E-01          | 3.10E+03    | 5.84E+00            | 3.10E+03                    | -2.21E+01                                           |
| Use of non-renewable primary energy resources used as raw materials                                                     | MJ    | 3.70E+00 | 3.70E+00              | 0.00E+00          | 0.00E+00          | 0.00E+00    | 0.00E+00            | 0.00E+00                    | -3.06E+00                                           |
| Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) | MJ    | 3.16E+03 | 5.14E+01              | 1.64E+00          | 6.74E-01          | 3.10E+03    | 5.84E+00            | 3.10E+03                    | -2.52E+01                                           |
| Use of secondary materials                                                                                              | kg    | 0.00E+00 | 0.00E+00              | 0.00E+00          | 0.00E+00          | 0.00E+00    | 0.00E+00            | 0.00E+00                    | 0.00E+00                                            |
| Use of renewable secondary fuels                                                                                        | MJ    | 0.00E+00 | 0.00E+00              | 0.00E+00          | 0.00E+00          | 0.00E+00    | 0.00E+00            | 0.00E+00                    | 0.00E+00                                            |
| Use of non-renewable secondary fuels                                                                                    | MJ    | 0.00E+00 | 0.00E+00              | 0.00E+00          | 0.00E+00          | 0.00E+00    | 0.00E+00            | 0.00E+00                    | 0.00E+00                                            |
| Net use of fresh water                                                                                                  | m3    | 2.82E-01 | 4.55E-02              | 7.72E-05          | 4.41E-04          | 2.29E-01    | 6.68E-03            | 2.29E-01                    | -2.30E-02                                           |
| Hazardous waste disposed of                                                                                             | kg    | 3.15E+01 | 2.76E+01              | 3.85E-04          | 3.76E-03          | 3.57E+00    | 3.55E-01            | 3.57E+00                    | -1.63E+01                                           |
| Non-hazardous waste disposed of                                                                                         | kg    | 2.11E+01 | 1.31E+00              | 8.55E-03          | 2.45E-02          | 1.95E+01    | 2.85E-01            | 1.95E+01                    | -4.03E-01                                           |
| Radioactive waste disposed of                                                                                           | kg    | 4.91E-03 | 2.73E-04              | 6.77E-06          | 4.35E-06          | 4.59E-03    | 3.27E-05            | 4.59E-03                    | -1.45E-04                                           |

| Inventory flow indicators                           | Units                     | Sum      | A1-A3 -<br>Manufacturing | A4 -<br>Distribution | A5 -<br>Installation | B1-B7 -<br>Use | C1-C4 -<br>End of life | B6 -<br>Operational<br>energy use | D -<br>Benefits<br>and loads<br>beyond<br>the system<br>boundaries |
|-----------------------------------------------------|---------------------------|----------|--------------------------|----------------------|----------------------|----------------|------------------------|-----------------------------------|--------------------------------------------------------------------|
| Components for re-use                               | kg                        | 0.00E+00 | 0.00E+00                 | 0.00E+00             | 0.00E+00             | 0.00E+00       | 0.00E+00               | 0.00E+00                          | 0.00E+00                                                           |
| Materials for recycling                             | kg                        | 5.24E-01 | 1.45E-01                 | 0.00E+00             | 4.98E-02             | 0.00E+00       | 3.29E-01               | 0.00E+00                          | 0.00E+00                                                           |
| Materials for energy recovery                       | kg                        | 0.00E+00 | 0.00E+00                 | 0.00E+00             | 0.00E+00             | 0.00E+00       | 0.00E+00               | 0.00E+00                          | 0.00E+00                                                           |
| Exported energy                                     | MJ by<br>energy<br>vector | 0.00E+00 | 0.00E+00                 | 0.00E+00             | 0.00E+00             | 0.00E+00       | 0.00E+00               | 0.00E+00                          | 0.00E+00                                                           |
| Biogenic carbon content of the product              | kg of C.                  | 0.00E+00 | 0.00E+00                 | 0.00E+00             | 0.00E+00             | 0.00E+00       | 0.00E+00               | 0.00E+00                          | 0.00E+00                                                           |
| Biogenic carbon content of the associated packaging | kg of C.                  | 3.35E-02 | 3.35E-02                 | 0.00E+00             | 0.00E+00             | 0.00E+00       | 0.00E+00               | 0.00E+00                          | 0.00E+00                                                           |

#### Environmental Impact Indicators: Optional

| Optional Environmental impact indicators          | Units                    | Sum      | A1-A3 -<br>Manufacturing | A4 -<br>Distribution | A5 -<br>Installation | B1-B7 -<br>Use | C1-C4 - End<br>of life | B6 -<br>Operational<br>energy use | D -<br>Benefits<br>and loads<br>beyond<br>the system<br>boundaries |
|---------------------------------------------------|--------------------------|----------|--------------------------|----------------------|----------------------|----------------|------------------------|-----------------------------------|--------------------------------------------------------------------|
| Emission of fine particles                        | incidence<br>of diseases | 5.78E-06 | 4.71E-07                 | 1.25E-09             | 1.20E-09             | 5.30E-06       | 1.22E-08               | 5.30E-06                          | -2.57E-07                                                          |
| Ionizing radiation, human health                  | kBq of<br>U235 eq.       | 1.70E+02 | 7.68E-01                 | 3.26E-03             | 9.12E-03             | 1.69E+02       | 1.46E-01               | 1.69E+02                          | -2.58E-01                                                          |
| Ecotoxicity, fresh water                          | CTUe                     | 3.22E+03 | 3.02E+03                 | 2.69E+00             | 1.02E+00             | 1.94E+02       | 2.83E+00               | 1.94E+02                          | -2.56E+03                                                          |
| Human toxicity, cancer effects                    | CTUh                     | 1.81E-06 | 1.79E-06                 | 1.80E-11             | 7.28E-09             | 1.60E-08       | 2.26E-10               | 1.60E-08                          | -1.06E-06                                                          |
| Human toxicity, non-cancer effects                | CTUh                     | 7.25E-07 | 3.43E-07                 | 3.44E-10             | 2.17E-10             | 3.79E-07       | 3.03E-09               | 3.79E-07                          | -2.06E-07                                                          |
| Impacts related to land use/soil quality          | -                        | 3.45E+00 | 1.53E-02                 | 3.94E-04             | 2.05E-04             | 3.43E+00       | 7.99E-03               | 3.43E+00                          | -6.02E-04                                                          |
| Total use of primary energy during the life cycle | MJ                       | 3.89E+03 | 5.73E+01                 | 1.64E+00             | 7.67E-01             | 3.83E+03       | 6.44E+00               | 3.83E+03                          | -2.63E+01                                                          |

To evaluate the environmental impact of other product covered by this PEP, multiply the impact figures by-

#### Factors for Manufacturing, Distribution, Installation, Use, End-of-Life, and Module-D Phase:

| Part Number           | Product Description        | Multiplying Factor for different phases |              |              |      |             |          |
|-----------------------|----------------------------|-----------------------------------------|--------------|--------------|------|-------------|----------|
|                       |                            | Manufacturing                           | Distribution | Installation | Use  | End of Life | Module D |
| 248852<br>(reference) | Z-SCH230/40-40 (reference) | 1.00                                    |              |              |      |             |          |
| 248853                | Z-SCH230/40-22             | 1.00                                    |              |              | 0.59 | 1.00        |          |
| 248854                | Z-SCH230/40-31             | 1.00                                    |              |              | 0.79 | 1.00        |          |
| 248855                | Z-SCH230/40-20             | 1.00                                    |              |              | 0.59 | 1.00        |          |

## Disclaimer

This Product Environmental Profile and its content is based on information available to us. It refers to the product at the date of issue. We make no express or implied representations or warranties with respect to the information contained herein.

|                                                                                                                                                              |                      |                                     |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------|-------------------------------------------------------------------------------------|
| Registration Number                                                                                                                                          | EATO-00482-V01.01-EN | Drafting rules                      | PCR-ed4-EN-2021 09 06                                                               |
| Verifier accreditation Number                                                                                                                                | VH56                 | Supplemented by                     | PSR-0005-ed3.1-EN-2023 12 08                                                        |
| Date of issue                                                                                                                                                | 11-2025              | Information and reference documents | <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>                |
|                                                                                                                                                              |                      | Validity period                     | 5 years                                                                             |
| Independent verification of the declaration and data, in compliance with ISO 14025: 2006                                                                     |                      |                                     |                                                                                     |
| Internal                                                                                                                                                     | X                    | External                            |                                                                                     |
| The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)                                                                        |                      |                                     |  |
| PEPs are compliant with XP C08-100-1:2016 and 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 »                                        |                      |                                     |                                                                                     |