Product Environmental Profile

Homeline Electronic Breakers

[Image of representative product]
General information

Representative product: Homeline Electronic Breakers - HOM115CAFI

Description of the product: The main purpose of the Homeline™ Miniature Circuit Breaker product range is to ensure protection of low voltage electrical installations.

Functional unit: Protect during 20 years the installation against overloads and short-circuits in circuit with assigned voltage 120 VAC and rated current 15A In. This protection is ensured in accordance with the following parameters:
- Number of poles 1 Pole;
- Rated breaking capacity 10 kA;

Constituent materials

Reference product mass: 293.86 g including the product, its packaging and additional elements and accessories.

![Diagram showing constituent materials]

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastics</td>
<td>61.3%</td>
</tr>
<tr>
<td>Metals</td>
<td>27.7%</td>
</tr>
<tr>
<td>Others</td>
<td>11.0%</td>
</tr>
</tbody>
</table>

Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate – BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) as mentioned in the Directive.

The Homeline Electronic Breakers presents the following relevant environmental aspects:

**Manufacturing**
- Manufactured at a Schneider Electric production site ISO14001 certified

**Distribution**
- Weight and volume of the packaging optimized, based on the European Union’s packaging directive.
  - Packaging weight is 29.71 g, consisting of Cardboard (64.7%), Paper (31.3%), Plastic (4%).

**Installation**
- Ref HOM115CAFI does not require any installation operations.

**Use**
- The product does not require special maintenance operations.

**End of life**
- End of life optimized to decrease the amount of waste and allow recovery of the product components and materials.
- This product contains electronic card (4.629g) that should be separated from the stream of waste so as to optimize end-of-life treatment.
- The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website.


### Environmental impacts

**Reference life time**
- 20 years

**Product category**
- Circuit-breakers

**Installation elements**
- The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).

**Use scenario**
- Load rate: 50% of In
- Use time rate: 30% of RLT

**Geographical representativeness**
- United States of America

**Technological representativeness**
- The technologies represented in this assessment regards to the main purposes of Homeline™ Miniature Circuit Breaker: ensure protection of low voltage electrical installations.

**Energy model used**
- Manufacturing: Energy model used: Mexico
- Installation: Electricity mix AC; Europe consistent; consumption mix, at power plant; US
- Use: Electricity mix AC; Europe consistent; consumption mix, at power plant; US
- End of life: Electricity mix AC; Europe consistent; consumption mix, at power plant; US

**Compulsory indicators**

<table>
<thead>
<tr>
<th>Impact indicators</th>
<th>Unit</th>
<th>Total</th>
<th>Manufacturing</th>
<th>Distribution</th>
<th>Installation</th>
<th>Use</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution to mineral resources depletion</td>
<td>kg Sb eq</td>
<td>2.15E-04</td>
<td>2.14E-04</td>
<td>0*</td>
<td>0*</td>
<td>4.95E-07</td>
<td>0*</td>
</tr>
<tr>
<td>Contribution to the soil and water acidification</td>
<td>kg SO₂ eq</td>
<td>4.28E-02</td>
<td>3.87E-03</td>
<td>1.73E-04</td>
<td>0*</td>
<td>3.87E-02</td>
<td>9.13E-05</td>
</tr>
<tr>
<td>Contribution to water eutrophication</td>
<td>kg PO₄³⁻ eq</td>
<td>1.10E-02</td>
<td>6.67E-04</td>
<td>3.99E-05</td>
<td>0*</td>
<td>1.02E-02</td>
<td>2.81E-05</td>
</tr>
<tr>
<td>Contribution to global warming</td>
<td>kg CO₂ eq</td>
<td>4.08E+01</td>
<td>1.61E+00</td>
<td>3.79E-02</td>
<td>0*</td>
<td>3.91E+01</td>
<td>6.03E-02</td>
</tr>
<tr>
<td>Contribution to ozone layer depletion</td>
<td>kg CFC11 eq</td>
<td>1.82E-06</td>
<td>2.41E-07</td>
<td>0*</td>
<td>0*</td>
<td>1.58E-06</td>
<td>2.29E-09</td>
</tr>
<tr>
<td>Contribution to photochemical oxidation</td>
<td>kg C₃H₆ eq</td>
<td>7.43E-03</td>
<td>4.57E-04</td>
<td>1.24E-05</td>
<td>0*</td>
<td>6.95E-03</td>
<td>9.27E-06</td>
</tr>
</tbody>
</table>

**Resources use**

<table>
<thead>
<tr>
<th>Impact indicators</th>
<th>Unit</th>
<th>Total</th>
<th>Manufacturing</th>
<th>Distribution</th>
<th>Installation</th>
<th>Use</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net use of freshwater</td>
<td>m³</td>
<td>1.40E-01</td>
<td>7.19E-02</td>
<td>0*</td>
<td>0*</td>
<td>6.83E-02</td>
<td>4.52E-05</td>
</tr>
<tr>
<td>Total Primary Energy</td>
<td>MJ</td>
<td>7.11E+02</td>
<td>2.59E+01</td>
<td>5.36E-01</td>
<td>0*</td>
<td>6.84E+02</td>
<td>4.34E-01</td>
</tr>
</tbody>
</table>
The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

Life cycle assessment performed with EIME version EIME v5.9.1, database version 2016-11 in compliance with ISO14044.

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).
Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

<table>
<thead>
<tr>
<th>Registration number</th>
<th>ENVPEP1406034_V2</th>
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<tr>
<td>Date of issue</td>
<td>12/2021</td>
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<tr>
<td>Validity period</td>
<td>5 years</td>
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| Drafting rules       | PCR-ed3-EN-2015 04 02 |
| Supplemented by      | PSR-0005-ed2-EN-2016 03 29 |
| Information and reference documents | www.pep-ecopassport.org |

Independent verification of the declaration and data
Internal X External

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »

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