ABB Environmental targets

- **Sustainable development: factories**
  Achieve our operations within an environmental way by using an environmental management system such as ISO 14001, in all our operations. Apply environmental principles.

- **Sustainable development: supply chain**
  Promote the environmental responsibility all along the supply chain by supporting our suppliers, subcontractors and customers to be compliant with international environmental standards.

- **Sustainable development: climate change**
  Develop our manufacturing process in the way of a better energy efficiency and a decrease of the natural resources consumption.

- **Sustainable development: innovation**
  Develop and commercialize products and systems which are energy efficient. Ease the use of renewable energies.

- **ABB group responsibility**
  Promote transparency by editing an annual sustainability report based on the requirements of GRI.

**Products description**

The ABB terminal blocks offer the possibility to connect two or more wires on the same block. All products can be mounted on standard DIN rail.

<table>
<thead>
<tr>
<th>Trade reference</th>
<th>Type</th>
<th>Trade reference</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SNK605011R0000</td>
<td>ZP2.5-3P</td>
<td>1SNK605021R0000</td>
<td>ZP2.5-3P-BL</td>
</tr>
<tr>
<td>1SNK605031R0000</td>
<td>ZP2.5-3P-OR</td>
<td>1SNK605068R0000</td>
<td>ZP2.5-3P-GN</td>
</tr>
<tr>
<td>1SNK605069R0000</td>
<td>ZP2.5-3P-RD</td>
<td>1SNK605072R0000</td>
<td>ZP2.5-3P-WH</td>
</tr>
<tr>
<td>1SNK605073R0000</td>
<td>ZP2.5-3P-BK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Raw materials used

<table>
<thead>
<tr>
<th>Raw materials type</th>
<th>% / product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyamide</td>
<td>55.09%</td>
</tr>
<tr>
<td>Steel</td>
<td>23.29%</td>
</tr>
<tr>
<td>Copper</td>
<td>20.59%</td>
</tr>
<tr>
<td>Zinc</td>
<td>0.87%</td>
</tr>
<tr>
<td>Nickel</td>
<td>0.15%</td>
</tr>
</tbody>
</table>

Product weight (kg) 0.01028

These products do not contain any ABB prohibited substances (*)
These products are RoHS compliant Yes ☒ No ☐

(*) ABB list of prohibited or restricted substances available on request

These products have been ecodesigned in order to reduce impacts on environment and health and safety all along their life cycle.

Packaging have been designed in compliance with the legislation.

Environmental data

- During manufacturing phase, metals and parts of thermoplastics are recycling. The other wastes are landfilled (regular wastes) or treated (hazardous wastes).
- Recycling and disposal
  100 % of materials using for Terminal Blocks can be recycled.
  - recycling potential: 100% of metal weight
  - plastic parts can be recycled with energy recovery.
  These products are not considered as hazardous wastes.
- Packaging
  - Packaging is made of cardboards.
  - recycling potential: 100% of packaging weight
  - potential energy recovery from packaging: 100% of packaging weight

Environmental impacts

Methodology

The data and calculations are in accordance with the Product Specific Requirement (PSR) for Terminal Blocks, which specifies the following baselines for the LCA calculations (environmental impacts).

**Functional unit**
The functional unit for the LCA is 1 terminal block connected to external circuits related to the number of feed through circuits

**System boundaries**
The life cycle assessment covers all environmental aspects for:
- extraction, production and transport of raw materials
- manufacturing of main parts and assembly of the terminal block,
- transport and use of the product
- disposal without dismantling at the end of the product’s life
It includes consumption of material and energy resources as well as emissions and waste generation.
The life cycle assessment does not include:
- the manufacturing processes at suppliers including sub-suppliers,
- building, tools and machines including services and maintenance,
- phones, computers, software and other administrative tools,
- service and maintenance during the usage,
- environmental impacts from sales companies,
- material waste in production which are sent to recycling,
- recycling after end-of-life.

**Calculation rules**

- **Freight**
  We consider the use of a lorry semitrailer < 40 t, on a distance of 400 Km for raw materials and on a distance of 1500 Km for our products.

- **Energy consumption**
  We consider that the terminal block switches-on 22 hours per day, 358 days per year. The average lifetime of the product is 15 years. Important: these data are only a calculation rules. For technical data, see the catalog.

A French mix of energy has been used for calculating energy consumption during manufacturing and a European mix of energy for calculating energy losses through the contact during use.

**Energy consumption**

| Energy consumption | 5.67 kWh |

**Environmental impacts**

Environmental impacts are evaluated with the LCA Light Tool Software.

<table>
<thead>
<tr>
<th>Indicators (see glossary)</th>
<th>Global F+T+U</th>
<th>Units</th>
<th>Manufacturing M</th>
<th>Transport T</th>
<th>Use U</th>
<th>% use related to total (*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Warming Potential – GWP</td>
<td>3.20E+00</td>
<td>kg CO₂ equivalent</td>
<td>6.14E-02</td>
<td>8.88E-04</td>
<td>3.14E+00</td>
<td>98.05%</td>
</tr>
<tr>
<td>Acidification Potential – AP</td>
<td>4.65E-01</td>
<td>mole H⁺ equivalent</td>
<td>3.33E-02</td>
<td>1.54E-04</td>
<td>4.32E-01</td>
<td>92.81%</td>
</tr>
<tr>
<td>Photochemical Ozone Creation Potential – POCP</td>
<td>5.30E-04</td>
<td>kg ethylene equivalent</td>
<td>1.58E-05</td>
<td>5.86E-07</td>
<td>5.14E-04</td>
<td>96.92%</td>
</tr>
<tr>
<td>Eutrophication – NP</td>
<td>3.99E-02</td>
<td>kg O₂ equivalent</td>
<td>2.74E-03</td>
<td>3.63E-05</td>
<td>3.71E-02</td>
<td>93.04%</td>
</tr>
<tr>
<td>Ozone Depletion Potential – ODP</td>
<td>5.67E-07</td>
<td>kg CFC-11 equivalent</td>
<td>1.08E-10</td>
<td>0.00E+00</td>
<td>5.67E-07</td>
<td>99.98%</td>
</tr>
<tr>
<td>Environmental impact according to EPS 2000 method</td>
<td>4.48E+00</td>
<td>ELU</td>
<td>3.37E-01</td>
<td>2.85E-04</td>
<td>4.14E+00</td>
<td>92.47%</td>
</tr>
<tr>
<td>Environmental impact according to Eco-indicateur 99 method</td>
<td>1.53E-01</td>
<td>Eco-points</td>
<td>6.69E-03</td>
<td>6.47E-05</td>
<td>1.46E-01</td>
<td>95.59%</td>
</tr>
</tbody>
</table>

(*) The part of "use" related to "total" equals U/(M+T+U)

The environmental impact of the end of life are not included in this evaluation (no data available).
### Glossary

**Life Cycle Assessment (LCA)**  
Investigation and evaluation of the environmental impact of a product or a system throughout its life cycle (from cradle to grave).  
This approach is described by the international standards ISO 14040 to 14043.  
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**Product specific requirements (PSR)**  
Boundaries used for life cycle assessment evaluation

**Life cycle assessment approach**  
Method to quantify the environmental impact at each stage of the product life cycle (manufacturing, use and end of life)

**Regular wastes**  
Regular wastes are non dangerous wastes. They look like household refuses.  
They are defined by the European Union (annex of the decision 2000/532/CE modified by decisions 2001/118/CE and 2001/119/CE)

**Hazardous wastes**  
Hazardous wastes are toxical wastes and/or dangerous wastes. They are treated in a specific way according to national regulations.  
They are defined by the European Union (annex of the decision 2000/532/CE modified by decisions 2001/118/CE and 2001/119/CE)

**Ozone Depletion Potential – ODP**  
Index used to translate the level of emissions of various gases into a common measure to compare their contributions to breakdown of the ozone layer.  
ODPs are calculated as the change that would result from the emission of 1 Kg of a substance to that from emission of 1 Kg of CFC-11 (a freon).

**Recycling potential**  
% weight of product or packaging which can be recycled in a manufacturing process (for same or different product).

**Energy recovery potential**  
% weight of product or packaging which can be burned with energy recovery. The energy recovery from wastes can be used for example to heat up buildings or to generate electrical energy.

**Acidification Potential – AP**  
Chemical alteration of the environment, resulting in hydrogenous being produced more rapidly than they are dispersed or neutralised.  
Occurs mainly through fallout of sulphur and nitrogen compounds from combustion processes.  
Acidification can be harmful to terrestrial and aquatic life.

**Global Warming Potential – GWP**  
Index used to convert the level of various gases emissions into a common measure unit to compare their contributions to the absorption by the atmosphere of infrared radiation.  
GWPs are calculated as the absorption that would result from the emission of 1 Kg of a gas compared to emission of 1 Kg of carbon dioxide over 100 years.

**Eutrophication – NP**  
Water enrichment by nitrates and phosphates from organic material or surface runoff. This increases the growth of aquatic plants and can produce alga blooms that deoxygenate water and smother other aquatic life.

**Photochemical Ozone Creation Potential – POCP**  
Index used to convert the level of various gases emissions into a common measure unit to compare their contributions to the change of ground-level ozone concentration. POCPs are calculated as the change that would result from the emission of 1 Kg of a gas compared to the emission of 1 Kg ethylene.