

ENVIRONMENTAL PRODUCT DECLARATION/  
PRODUCT ENVIRONMENTAL PROFILE

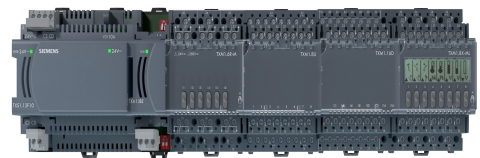
# Climatix™ - Modules

## I/O extension and communication modules POL9...

Type III according to ISO 14025



Type of product covered by this PEP



Reference product considered for this PEP

|                                                                                                               |                                                      |
|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>Owner of the declaration:</b> Siemens Switzerland Ltd                                                      | <b>Program holder and publisher:</b> PEP Ecopassport |
| <b>In compliance with:</b><br>ISO 14025; EN 50693:2019; PCR-4-ed4-EN-2021 09 06; PSR-0005-ed3.1-EN-2023 12 08 |                                                      |
| <b>EPD Type:</b><br>Representative product with extrapolation rules for homogeneous product family            | <b>EPD scope:</b><br>Cradle to Grave                 |

General information

This environmental product declaration (EPD) is based on the international standard ISO 14025 (“Environmental labels and declarations — Type III environmental declarations”). The data in this EPD has been evaluated on a full-scale life cycle assessment (LCA) study according to ISO 14040/44, taking into account the product category rules (PCR) for electronic and electrotechnical products and systems defined in EN 50693:2019 as well as PCR-4-ed4-EN-2021 09 06 Product Category Rules for Electrical, Electronic and HVAC-R Products and PSR-0005-ed3.1-EN-2023 12 08 – SPECIFIC RULES FOR Electrical switchgear and control gear Solutions, product category ‘other equipment - active product’.

Siemens is dedicated to an environmentally conscious design of its products in line with IEC 62430 and has implemented an integrated management system according to ISO 9001, ISO 14001 and ISO 45001.

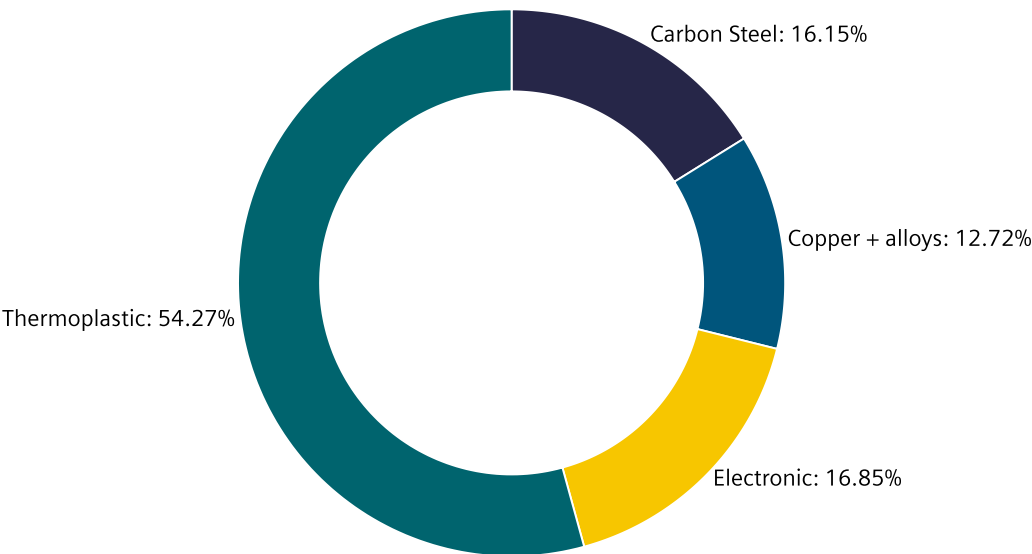
|                     |                                                                                                                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Products            | All products which can be found in the appendix.                                                                                                                                                                                               |
| Represented by      | BPZ:TXM1.16D (TXM1.16D)<br>This product is the reference product of this homogeneous product family (HPF) valid for this EPD, too. Product-specific scaling factors are given in the appendix.                                                 |
| Product Description | Climatix I/O extension modules (POL9...) extend the number of input and output signals of the connected Climatix controller. Climatix communication modules (POL90...) extend the communication interfaces of a connected Climatix controller. |
| Functional Unit     | Continuous signal and data exchange with connected devices with 1 W over a reference lifetime of 10 years.                                                                                                                                     |
| Production Site     | Zug, Switzerland                                                                                                                                                                                                                               |

Material composition

The product weight of 0.2 kg combined with the packaging weight of 0.02 kg results in a total weight of 0.22 kg. The following chart outlines the overall material composition of the reference product, excluding packaging. Packaging consists of: Wooden pallet (single use), Graphic paper.

The product, including packaging, consists of 26.03% metal, 48.92% plastics, and 25.04% other materials.

Product Weight 0.2 kg



# Substance assessment

At Siemens, we are committed to the development and production of environmentally sound and sustainably produced equipment. This includes avoiding hazardous substances in our products without compromising their benefits for our customers.

Please visit the following website to learn more about how we comply with product-related environmental regulations like RoHS, REACH, WEEE and others: [Product Related Environmental Protection](#)

## System boundaries and scenarios

The EPD covers the cradle to grave of the product including the following stages.

| Manufacturing stage |           |            | Distribution | Installation | Use stage |             |        |             |               |                        |                       | End-of-Life stage |           |                  |          | Benefits & loads beyond system boundary |
|---------------------|-----------|------------|--------------|--------------|-----------|-------------|--------|-------------|---------------|------------------------|-----------------------|-------------------|-----------|------------------|----------|-----------------------------------------|
| Raw materials       | Transport | Production | Transport    | Assembly     | Use       | Maintenance | Repair | Replacement | Refurbishment | Operational energy use | Operational water use | De-Installation   | Transport | Waste processing | Disposal | Reuse-Recovery-Recycling Potential      |
| A1                  | A2        | A3         | A4           | A5           | B1        | B2          | B3     | B4          | B5            | B6                     | B7                    | C1                | C2        | C3               | C4       | D                                       |
| X                   | X         | X          | X            | X            | 0         | 0           | 0      | 0           | 0             | X                      | 0                     | 0                 | X         | X                | X        | X                                       |

### Temporal and geographical scope and representativeness

Primary data of FY2022 for BOM and inbound transport and FY2024 for factory consumption and outbound transport; Secondary data: LCA tool: Green Digital Twin Version 4.0, Database: One Siemens LCA Database (based on MLC CUP 2024.1). The materials and components used in production are globally sourced and have been selected from Sphera data sets according to the global or regional representativeness.

### Data quality

Both primary and secondary data are used. To ensure the high quality and completeness of the LCA results, primary data have been used whenever possible. The main sources for primary data are the bill of materials and the bill of processes. Site specific data are provided by Siemens reporting system. Datasets for resources, such as electrical energy or natural gas, are chosen from the region where the device is produced and assembled. If primary data are not available, datasets reflecting state-of-the-art manufacturing technology are considered. Generic data originating from the LCA tool: Green Digital Twin Version 4.0, Database: One Siemens LCA Database (based on MLC CUP 2024.1).

### Allocation

For the end-of-life allocation, the "Polluter Pays" principle is adopted as required by the PCR-ed4-EN-2021 09 06 and PSR-0005-ed3.1-EN-2023 12 08. Waste treatment processes are allocated to the product system that generates the waste until the end-of-waste state is reached. The environmental burdens of recycling and energy recovery processes are therefore allocated to the product system that generates the waste, while the product system that uses the exported energy and recycled materials receives it burden-free. Potential benefits and avoided loads from recovery and recycling processes are considered in separate Benefits & Loads beyond system boundary section.

## Cut-off

According to EN 50693:2019 and PCR-ed4-EN-2021 09 06, the cut-off criteria can be set to a maximum of 5% of the overall environmental impacts. In this LCA, metal manufacturing scrap EoL has been excluded as the total overall impacts are below 1%.

## Scenarios:

The following information describes the scenarios in the different modules of the EPD.

|                                                |                                                                                                                                                                                   |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Manufacturing</b>                           | This stage covers the extraction of natural resources, production of raw materials, manufacturing, packaging, and upstream transportation.                                        |
| <b>Transportation to production site</b>       | Primary data and EN 50693:2019                                                                                                                                                    |
| <b>Production energy model used</b>            | A1: Global; A3: CH Electricity grid mix Standard                                                                                                                                  |
| <b>Distribution</b>                            | This stage covers the product's distribution.                                                                                                                                     |
| <b>Distribution: Transport model use</b>       | Truck (20-26 t) 817 km                                                                                                                                                            |
| <b>Installation</b>                            | This stage covers the End-of-Life treatment of transport packaging.                                                                                                               |
| <b>Installation: Energy model used</b>         | Not relevant                                                                                                                                                                      |
| <b>Use</b>                                     | This stage covers the operational energy use. All other modules do not apply for this product. Different operating conditions can lead to deviations from the reference scenario. |
| <b>Use: Energy model used and use scenario</b> | B: EU-28 Electricity grid mix Standard; Energy consumption model with 1.0 W 365 days 24/7<br>Reference lifetime 10 years                                                          |
| <b>EoL</b>                                     | This stage covers the disassembly, material recycling in addition to thermal treatment of all recoverable materials and the disposal of all other materials.                      |
| <b>EoL: Transport model use</b>                | Road Truck, 20 - 26t gross weight 1000.0 km                                                                                                                                       |
| <b>EoL: Energy model used</b>                  | C & D: Europe                                                                                                                                                                     |

## Life cycle assessment - results

The following impact categories characterize the product's environmental footprint. They have been calculated with characterization method EN15804+A2 (EF3.1); LCA tool: Green Digital Twin Version 4.0, Database: One Siemens LCA Database (based on MLC CUP 2024.1).

To ensure the high quality and completeness of the LCA results, primary data have been used whenever possible. Datasets for resources, such as electrical energy or natural gas, are chosen from the region where the device is produced and assembled. If primary data are not available, datasets reflecting state-of-the-art manufacturing technology are considered.

## Environmental performance indicators

| Indicators       | Unit                                   | Total - (w/o D) | A1-A3         | A4           | A5           | B1-B7     | C1-C4       | D                |
|------------------|----------------------------------------|-----------------|---------------|--------------|--------------|-----------|-------------|------------------|
|                  |                                        |                 | Manufacturing | Distribution | Installation | Use stage | End of life | Benefits & loads |
| CC - total       | kg CO <sub>2</sub> eq                  | 3.13E+1         | 5.76E+0       | 1.64E-2      | 3.24E-2      | 2.53E+1   | 1.78E-1     | -8.64E-2         |
| CC - fossil      | kg CO <sub>2</sub> eq                  | 3.11E+1         | 5.76E+0       | 1.60E-2      | 7.80E-4      | 2.51E+1   | 1.78E-1     | -8.76E-2         |
| CC - biogenic    | kg CO <sub>2</sub> eq                  | 2.48E-1         | -6.99E-3      | 3.84E-5      | 2.86E-2      | 2.26E-1   | 8.67E-5     | 2.10E-4          |
| CC - luluc       | kg CO <sub>2</sub> eq                  | 1.01E-2         | 5.62E-3       | 2.70E-4      | 6.40E-7      | 3.82E-3   | 3.44E-4     | -8.08E-4         |
| ODP              | kg CFC-11 eq                           | 9.58E-9         | 9.01E-9       | 2.37E-15     | 4.05E-15     | 5.69E-10  | 1.07E-13    | -2.28E-13        |
| AP               | Mole of H <sup>+</sup> eq              | 9.97E-2         | 5.12E-2       | 2.34E-5      | 7.92E-6      | 4.84E-2   | 6.86E-5     | -7.09E-4         |
| EP - freshwater  | kg P eq                                | 1.37E-4         | 3.07E-5       | 6.87E-8      | 1.56E-8      | 1.05E-4   | 1.02E-6     | -3.31E-7         |
| EP - marine      | kg N eq                                | 1.72E-2         | 5.08E-3       | 8.68E-6      | 2.95E-6      | 1.21E-2   | 2.07E-5     | -9.83E-5         |
| EP - terrestrial | Mole of N eq                           | 1.83E-1         | 5.52E-2       | 1.03E-4      | 3.50E-5      | 1.27E-1   | 2.63E-4     | -1.03E-3         |
| POCP             | kg NMVOC eq                            | 4.89E-2         | 1.68E-2       | 2.33E-5      | 8.54E-6      | 3.20E-2   | 5.84E-5     | -3.09E-4         |
| ADP - M & M      | kg Sb eq                               | 6.95E-4         | 6.90E-4       | 1.40E-9      | 4.60E-11     | 4.69E-6   | 2.73E-9     | -2.60E-5         |
| ADP - fossil     | MJ                                     | 6.10E+2         | 8.44E+1       | 2.12E-1      | 1.07E-2      | 5.25E+2   | 4.08E-1     | -9.89E-1         |
| WDP              | m <sup>3</sup> world eq deprived water | 8.45E+0         | 1.59E+0       | 2.49E-4      | 3.51E-3      | 6.84E+0   | 1.45E-2     | -3.59E-2         |
| PM               | Disease incidences                     | 8.22E-7         | 4.17E-7       | 2.30E-10     | 4.88E-11     | 4.04E-7   | 6.18E-10    | -6.25E-9         |
| IRP              | kBq U235 eq                            | 1.44E+1         | 5.57E-1       | 5.60E-5      | 7.22E-5      | 1.38E+1   | 2.30E-3     | -1.94E-3         |
| ETP - fw         | CTUe                                   | 1.99E+2         | 4.69E+1       | 1.57E-1      | 5.14E-3      | 1.52E+2   | 2.95E-1     | -3.16E-1         |
| HTP - c          | CTUh                                   | 1.04E-8         | 1.79E-9       | 3.18E-12     | 2.96E-13     | 8.55E-9   | 7.26E-12    | -4.01E-11        |
| HTP - nc         | CTUh                                   | 1.86E-7         | 5.46E-8       | 1.43E-10     | 1.32E-11     | 1.31E-7   | 2.46E-10    | -1.88E-9         |
| SQP              | dimensionless (pt)                     | 2.45E+2         | 2.15E+1       | 1.04E-1      | 2.81E-3      | 2.23E+2   | 1.75E-1     | -1.87E-1         |

**CC-total:** Climate change; **CC-fossil:** Climate change fossil; **CC-biogenic:** Climate change biogenic; **CC-LULUC:** Climate change land use and land use change; **ODP:** Depletion potential of the stratospheric ozone layer; **AP:** Acidification potential, accumulated exceedance; **EP-freshwater:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-marine:** Eutrophication potential, fraction of nutrients reaching freshwater end compartment; **EP-terrestrial:** Eutrophication potential, accumulated exceedance; **POCP:** Formation potential of tropospheric ozone; **ADP-M&M:** Abiotic depletion potential for non-fossil resources (minerals and metals); **ADP-fossil:** Abiotic depletion potential for fossil resources; **WDP:** Water deprivation potential, deprivation weighted water consumption; **PM:** Particulate matter emissions; **IRP:** Ionizing radiation, human health; **ETP-fw:** Ecotoxicity freshwater; **HTP-c:** Human toxicity, cancer effects; **HTP-nc:** Human toxicity, non-cancer effects; **SQP:** Land use related impacts / soil quality

## Resource use indicators and biogenic carbon content

| Indicators     | Unit    | Total - (w/o D) | A1-A3         | A4           | A5           | B1-B7     | C1-C4       | D                |
|----------------|---------|-----------------|---------------|--------------|--------------|-----------|-------------|------------------|
|                |         |                 | Manufacturing | Distribution | Installation | Use stage | End of life | Benefits & loads |
| PERE           | MJ      | 4.06E+2         | 2.61E+1       | 1.83E-2      | 2.55E-3      | 3.80E+2   | 9.08E-2     | -1.86E-1         |
| PERM           | MJ      | 0.00E+0         | 3.38E-1       | 0.00E+0      | -3.38E-1     | 0.00E+0   | 0.00E+0     | 0.00E+0          |
| PERT           | MJ      | 4.06E+2         | 2.64E+1       | 1.83E-2      | -3.35E-1     | 3.80E+2   | 9.08E-2     | -1.86E-1         |
| PENRE          | MJ      | 6.11E+2         | 8.44E+1       | 2.12E-1      | 1.07E-2      | 5.26E+2   | 4.08E-1     | -9.99E-1         |
| PENRM          | MJ      | 0.00E+0         | 3.39E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | -3.39E+0    | 1.94E-16         |
| PENRT          | MJ      | 6.11E+2         | 8.78E+1       | 2.12E-1      | 1.07E-2      | 5.26E+2   | -2.97E+0    | -9.99E-1         |
| SM             | kg      | 4.92E-3         | 4.92E-3       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |
| RSF            | MJ      | 0.00E+0         | 0.00E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |
| NRSF           | MJ      | 0.00E+0         | 0.00E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |
| FW             | m3      | 3.47E-1         | 5.62E-2       | 2.03E-5      | 8.27E-5      | 2.90E-1   | 3.80E-4     | -4.39E-3         |
| BIOGCPRODUCT   | kg of C | 0.00E+0         | 0.00E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |
| BIOGCPACKAGING | kg of C | 1.53E-2         | 1.53E-2       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |

**PERE:** Use of renewable primary energy; **PERM:** Use of renewable primary energy resources used as raw material; **PERT:** Total use of renewable primary energy resources; **PENRE:** Use of non-renewable primary energy; **PENRM:** Use of non-renewable primary energy resources used as raw material; **PENRT:** Total use of non-renewable primary energy resources; **SM:** Use of secondary materials; **RSF:** Use of renewable secondary fuels; **NRSF:** Use of non-renewable secondary fuels; **FW:** Use of net fresh water; **BIOGCPRODUCT:** Biogenic carbon content of the Product; **BIOGCPACKAGING:** Biogenic carbon content of the Packaging

## End-of-Life - Waste and output flows

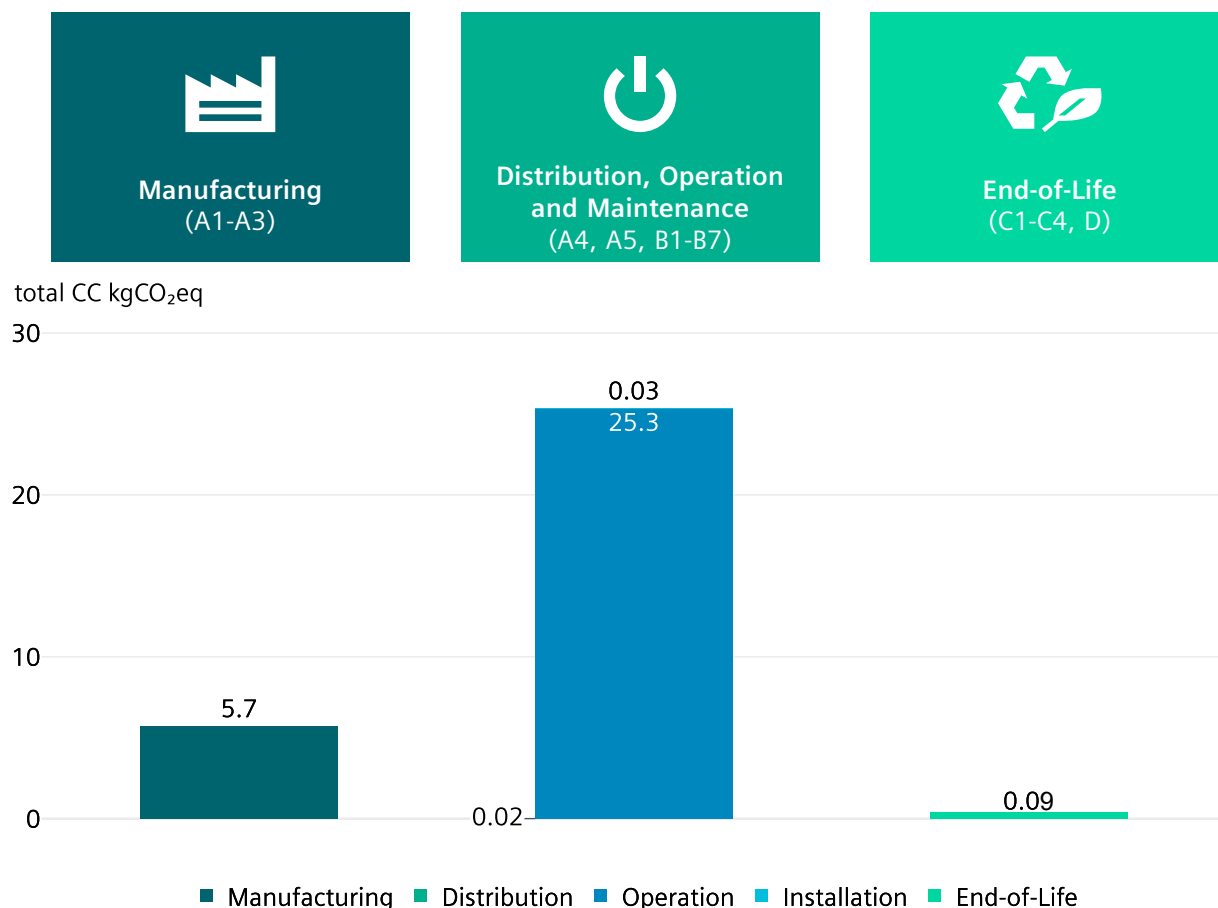
| Indicators | Unit | Total - (w/o D) | A1-A3         | A4           | A5           | B1-B7     | C1-C4       | D                |
|------------|------|-----------------|---------------|--------------|--------------|-----------|-------------|------------------|
|            |      |                 | Manufacturing | Distribution | Installation | Use stage | End of life | Benefits & loads |
| HWD        | kg   | 1.52E-6         | 1.52E-6       | 8.12E-12     | 5.23E-12     | 7.59E-7   | 1.45E-10    | -2.85E-9         |
| NHWD       | kg   | 4.92E-1         | 3.77E-1       | 3.46E-5      | 2.35E-3      | 4.34E-1   | 1.12E-1     | 3.82E-3          |
| RWD        | kg   | 4.66E-3         | 4.64E-3       | 3.86E-7      | 4.59E-7      | 8.39E-2   | 1.43E-5     | -2.16E-5         |
| MER        | kg   | 6.18E-2         | 7.18E-3       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 5.46E-2     | 0.00E+0          |
| MFR        | kg   | 3.48E-2         | 0.00E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 3.48E-2     | 0.00E+0          |
| CRU        | kg   | 0.00E+0         | 0.00E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |
| ETE        | MJ   | 0.00E+0         | 0.00E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |
| EEE        | MJ   | 0.00E+0         | 0.00E+0       | 0.00E+0      | 0.00E+0      | 0.00E+0   | 0.00E+0     | 0.00E+0          |

**HWD:** Hazardous waste disposed; **NHWD:** Non-hazardous waste disposed; **RWD:** Radioactive waste disposed; **MER:** Materials for energy recovery; **MFR:** Material for recycling; **CRU:** Components for reuse; **ETE:** Exported thermal energy; **EEE:** Exported electric energy.

## Additional environmental information

### Climate change

This chart shows the overall impact of the product on climate change – total. The operations phase is the life cycle phase with the biggest overall impact. Different operating conditions can lead to deviations from the reference scenario.



### End-of-Life results



The end-of-life stage was modelled by shredding of the device, followed by sorting and material separation process. The end-of-life parameters are calculated according to IEC TR 62635.

It leads to:

- an overall product recyclability of up to 21%
- an energy recoverability of up to 27%
- a minimum disposal rate of 52%

The exact final values depend on the recycling process used and together add up to a cumulative total of 100%. However, the LCA calculation of this PEP is carried out based on the default end-of-life scenarios of the PCR and its FAQ.

**Note:** The device should not be disposed of as unsorted municipal waste. Special treatment for specific components may be mandated by law or recommended for environmental reasons. Observe all local and applicable laws.

## Appendix

### Scaling factors

The results of the LCA of the reference product can be extrapolated to other products of a homogeneous product family according to the standard EN50693:2019. The scaling factors listed here are calculated according to this standard.

The extrapolation rules have been defined as follow:

- Manufacturing (A1-A3): 
$$\frac{m_{plastics,i} + m_{metals,i} + 13 \cdot m_{PCBA,i} + m_{others,i}}{m_{plastics,ref} + m_{metals,ref} + 13 \cdot m_{PCBA,ref} + m_{others,ref}}$$
- Distribution (A4): 
$$\frac{m_{product,i}}{m_{product,ref}}$$
- Installation (A5): 
$$\frac{m_{product,i}}{m_{product,ref}}$$
- Use Phase (B1-B7): 
$$\frac{m_{annual\ power\ consumption,i}}{m_{annual\ power\ consumption,ref}}$$
- End of life (C1-C4): 
$$\frac{6 \cdot m_{plastics,i} + 0.01 \cdot m_{metals,i} + 1 \cdot m_{PCBA,i} + 0.04 \cdot m_{others,i}}{6 \cdot m_{plastics,ref} + 0.01 \cdot m_{metals,ref} + 1 \cdot m_{PCBA,ref} + 0.04 \cdot m_{others,ref}}$$
- Benefits & Loads (D): 
$$\frac{1 \cdot m_{plastics,i} + 4 \cdot m_{metals,i} + 19 \cdot m_{PCBA,i} + 2 \cdot m_{others,i}}{1 \cdot m_{plastics,ref} + 4 \cdot m_{metals,ref} + 19 \cdot m_{PCBA,ref} + 2 \cdot m_{others,ref}}$$

To extrapolate the impact from the reference product to another product from the range, multiply the following scaling factors to the impact category per life cycle stage from page 5:

| Article Type             | A1-A3       | A4          | A5          | B1-B7       | C1-C4       | D           | Typ. Power Consumption [kWh/a]* |
|--------------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------------|
| <b>Reference Product</b> | <b>1.00</b> | <b>1.00</b> | <b>1.00</b> | <b>1.00</b> | <b>1.00</b> | <b>1.00</b> | <b>8.8</b>                      |
| POL902.00                | 0.60        | 0.53        | 0.53        | 0.70        | 0.59        | 0.51        | 6.1                             |
| POL903.00                | 0.12        | 0.10        | 0.10        | 0.60        | 0.05        | 0.11        | 5.3                             |
| POL904.00                | 0.83        | 0.58        | 0.58        | 1.40        | 0.60        | 0.72        | 12.3                            |
| POL906.00                | 0.60        | 0.53        | 0.53        | 0.40        | 0.59        | 0.51        | 3.5                             |
| POL907.00                | 0.92        | 0.59        | 0.59        | 2.00        | 0.61        | 0.80        | 17.5                            |
| POL908.00                | 0.88        | 0.59        | 0.59        | 1.40        | 0.61        | 0.76        | 12.3                            |
| POL909.50                | 0.96        | 0.60        | 0.60        | 1.40        | 0.61        | 0.84        | 12.3                            |
| POL909.80                | 0.96        | 0.60        | 0.60        | 1.40        | 0.61        | 0.84        | 12.3                            |
| POL925.00                | 0.78        | 0.61        | 0.61        | 2.10        | 0.60        | 0.67        | 18.4                            |
| POL925.20                | 0.78        | 0.61        | 0.61        | 2.10        | 0.60        | 0.67        | 18.4                            |
| POL935.00                | 0.76        | 0.61        | 0.61        | 0.50        | 0.56        | 0.66        | 4.4                             |
| POL937.00                | 0.96        | 0.65        | 0.65        | 1.20        | 0.57        | 0.84        | 10.5                            |
| POL945.00                | 1.46        | 0.89        | 0.89        | 2.40        | 0.81        | 1.28        | 21.0                            |
| POL94E.00                | 1.69        | 0.91        | 0.91        | 3.00        | 0.89        | 1.49        | 26.3                            |
| POL94M.00                | 1.88        | 0.94        | 0.94        | 2.30        | 0.97        | 1.65        | 20.1                            |
| POL94M.05                | 1.88        | 1.07        | 1.07        | 2.30        | 0.97        | 1.65        | 20.1                            |
| POL94U.00                | 2.53        | 1.09        | 1.09        | 3.20        | 0.95        | 2.24        | 28                              |
| POL955.00                | 2.12        | 1.21        | 1.21        | 2.50        | 1.13        | 1.85        | 21.9                            |

| Article Type | A1-A3 | A4   | A5   | B1-B7 | C1-C4 | D    | Typ. Power Consumption [kWh/a]* |
|--------------|-------|------|------|-------|-------|------|---------------------------------|
| POL955.60    | 2.12  | 1.21 | 1.21 | 2.50  | 1.13  | 1.85 | 21.9                            |
| POL955.95    | 2.38  | 1.31 | 1.31 | 4.50  | 1.13  | 2.09 | 39.4                            |
| POL956.00    | 2.12  | 1.21 | 1.21 | 4.40  | 1.13  | 1.85 | 38.5                            |
| POL95E.00    | 2.46  | 1.01 | 1.01 | 5.50  | 1.12  | 2.16 | 48.2                            |
| POL965.00    | 2.12  | 1.21 | 1.21 | 3.00  | 1.13  | 1.85 | 26.3                            |
| POL966.00    | 2.54  | 1.33 | 1.33 | 1.65  | 1.05  | 2.24 | 14.5                            |
| POL96E.00    | 5.12  | 2.33 | 2.33 | 8.00  | 1.74  | 4.53 | 70.1                            |
| POL96U.00    | 6.53  | 2.63 | 2.63 | 8.00  | 1.84  | 5.81 | 70.1                            |
| POL985.00    | 3.06  | 1.59 | 1.59 | 3.50  | 1.48  | 2.68 | 30.7                            |
| POL98E.00    | 5.82  | 2.59 | 2.59 | 8.00  | 2.02  | 5.16 | 70.1                            |
| POL98U.00    | 7.29  | 2.90 | 2.90 | 8.00  | 2.12  | 6.47 | 70.1                            |

\*Typical power consumption refers to the power usage for a typical application, normalized over a year, with products running, in standby mode, or switched off at different intervals.

## References

|                              |                                                                                                         |
|------------------------------|---------------------------------------------------------------------------------------------------------|
| ISO 14025:2010               | Environmental labels and declarations - Type III environmental declarations - Principles and procedures |
| ISO 14040/44                 | Lifecycle Assessment – Principles and framework                                                         |
| EN 50693:2019                | Product category rules for life cycle assessments of electronic and electrical products and systems     |
| PCR–ed4-EN-2021 09 06        | Product Category Rules for Electrical, Electronic and HVAC-R Products                                   |
| PSR-0005-ed3.1-EN-2023 12 08 | SPECIFIC RULES FOR Electrical switchgear and control gear Solutions                                     |



The GreenDigitalTwin is under regular surveillance by TÜV Rheinland®. In accordance with the standards ISO 14040:2006 + A1:2020 /ISO 14044:2006 + A1:2018 + A2:2020 the reviewer concludes that the LCA methodology developed by Siemens AG is scientifically based and reflects the state of the art.



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| The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)                                                                                            |                                                                                                       |
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| Document complies with ISO 14025:2006 'Environmental labels and declarations. Type III environmental declarations'                                                               |                                                                                                       |

