



ENVIRONMENTAL PRODUCT DECLARATION

SITOP SEL1200

SITOP SEL1400

SITOP SEL1600

SITOP RED1200

SITOP CNX8600

SITOP PSE200U

SITOP CHO1400

SITOP PBM1200

Type II according to ISO 14021 including life cycle impact assessment (LCIA)



SIEMENS

General information

This environmental product declaration (EPD) is based on the international standard ISO 14021 ("Environmental labels and declarations – Self declared environmental claims – Type II environmental labelling"). 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.

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.

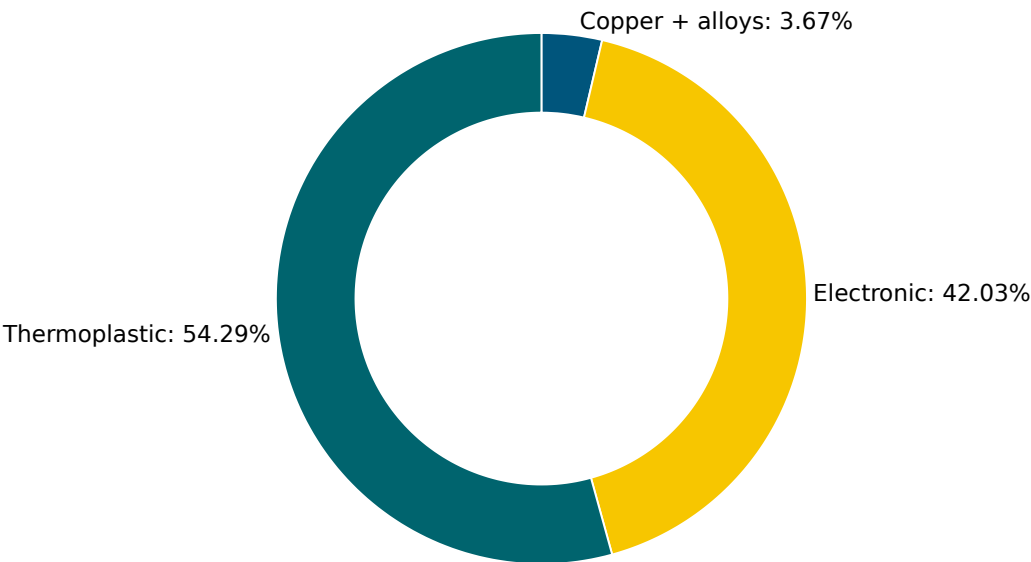
Products	Please refer to appendix
Represented by the reference product	6EP4437-7EB00-3CX0
Product Description	SITOP SEL1400 10 A Selectivity module 4-channel with limiting characteristic input: 24 V DC/40 A output: 24 V DC/4x 10 A threshold adjustable 2-10 A with monitoring interface *Ex approval no longer available*
Functional Unit	Production of 1 pc SITOP SEL1400 4 x245V / 10A and use over the reference service lifetime of 10 years. ¹

¹ The lifetime value used for calculation is a reference value and does not equate with the minimum, average or real life time.

Material composition

The following chart outlines the overall material composition of the calculated reference product without packaging. Product weight of 0.27 kg adds up with packaging weight of 0.05 kg to a total weight of 0.32 kg. Packaging consists of: Graphic Paper, PE film, Fixing material screws galvanized, Corrugated box, average composition.




Product Weight 0.27 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](#)

Life cycle stages and reference scenarios

 Manufacturing This stage covers the extraction of natural resources, production of raw materials, manufacturing, packaging, and transportation.	 Distribution and Operation This stage covers the product's distribution, installation, use, and maintenance. Different operating conditions can lead to deviations from the reference scenario.	 End-of-Life This stage covers the disassembly or shredding and material recycling of all recyclable materials, as well as energy recovery, thermal treatment and the disposal of all other materials.
Scenarios		
Energy model used: Europe (standard mix) Transportation model: Truck-trailer (GLO), 34-40t gross weight, 3500 km default distance	Energy model used: Europe (standard mix) Distribution scenario: Truck-trailer, 34 - 40t gross weight 3500 km Use Scenario: Nominal output load; 10W power dissipation; 100% service uptime: reference lifetime 10 years.	Energy model used: EMEA End-of-Life methodology: Modeled according to Cut-off methodology.

Key environmental performance indicators

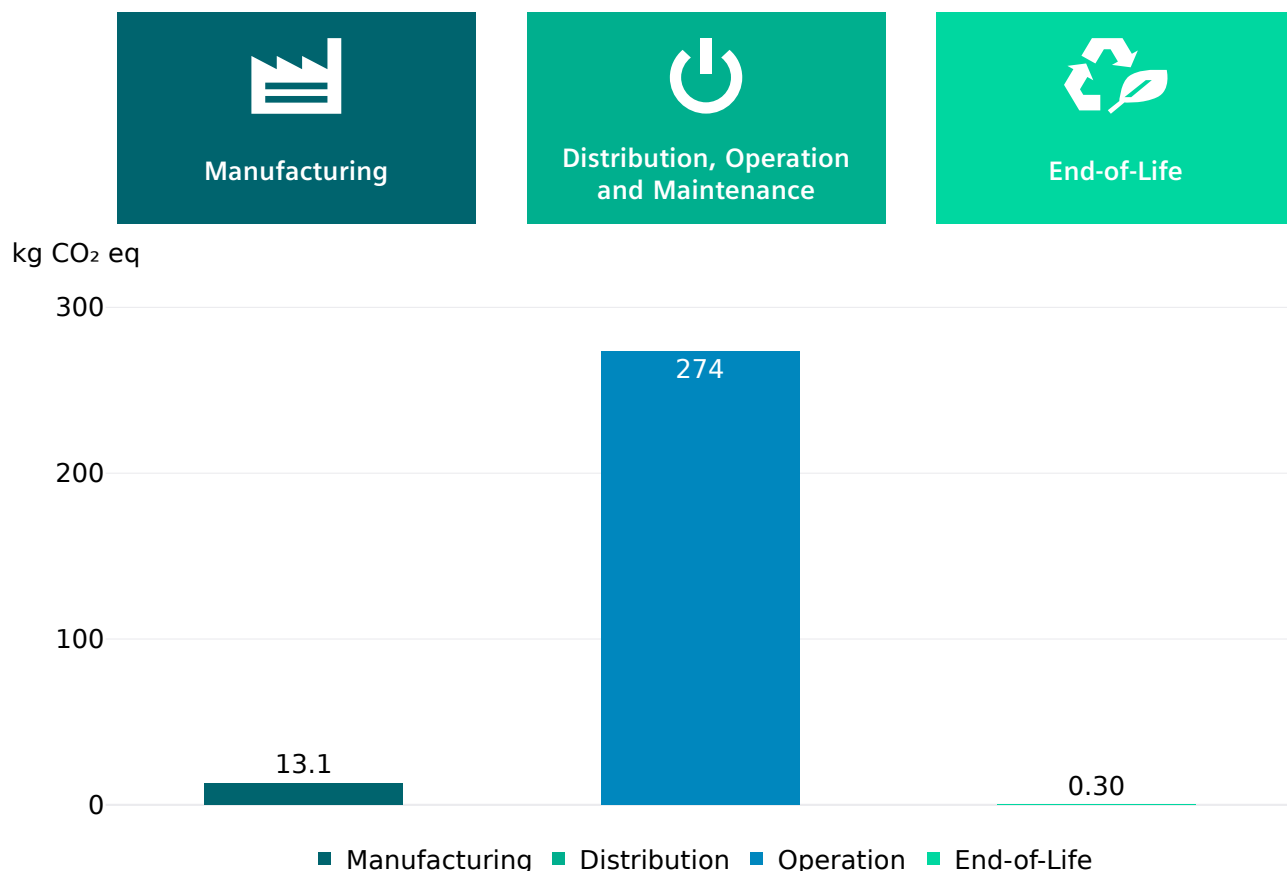
The following impact categories characterize the product's environmental footprint. They have been calculated with LCIA methodology EF3.1; LCA tool: Green Digital Twin (GDT), Database: One Siemens LCA Database (based on MLC CUP 2023.2, formerly GaBi).

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.

Impact Category	Unit	Total	Manufacturing	Distribution	Operation	End-of-life
Acidification	Mole of H+ eq	6.63E-1	8.51E-2	1.05E-4	5.78E-1	1.32E-4
Climate change – total	kg CO ₂ eq	2.87E+2	1.31E+1	8.21E-2	2.74E+2	3.04E-1
Climate change – fossil	kg CO ₂ eq	2.85E+2	1.31E+1	8.12E-2	2.71E+2	3.04E-1
Climate change – biogenic	kg CO ₂ eq	2.44E+0	4.22E-2	2.20E-4	2.40E+0	1.36E-4
Climate Change, land use and land use change	kg CO ₂ eq	3.90E-2	9.45E-3	7.58E-4	2.96E-2	7.94E-6
Ecotoxicity, freshwater – total	CTUe	1.68E+3	9.79E+1	7.99E-1	1.58E+3	1.46E-1
Eutrophication, freshwater	kg P eq	1.09E-3	7.68E-5	2.99E-7	1.02E-3	7.47E-7
Eutrophication, marine	kg N eq	1.49E-1	9.97E-3	3.56E-5	1.38E-1	4.95E-5
Eutrophication, terrestrial	Mole of N eq	1.55E+0	1.07E-1	4.29E-4	1.45E+0	5.91E-4
Human toxicity, cancer – total	CTUh	8.81E-8	4.31E-9	1.62E-11	8.38E-8	9.79E-12
Human toxicity, non-cancer – total	CTUh	1.53E-6	1.97E-7	7.21E-10	1.34E-6	4.38E-10
Ionising radiation, human health	kBq U235 eq	1.52E+2	1.45E+0	3.12E-4	1.50E+2	7.40E-3
Land Use	dimensionless (pt)	2.29E+3	4.72E+1	4.66E-1	2.24E+3	1.27E-1
Ozone depletion	kg CFC-11 eq	1.22E-8	7.21E-9	1.07E-14	5.01E-9	2.64E-13
Particulate matter	Disease incidences	5.71E-6	8.49E-7	7.69E-10	4.86E-6	7.85E-10
Photochemical ozone formation, human health	kg NMVOC eq	4.00E-1	3.10E-2	9.06E-5	3.69E-1	1.31E-4
Resource use, fossils	MJ	5.89E+3	1.93E+2	1.12E+0	5.69E+3	3.88E-1
Resource use, mineral and metals	kg Sb eq	1.15E-3	1.10E-3	5.43E-9	4.19E-5	2.24E-9
Water use	m ³ water eq deprived water	6.29E+1	3.25E+0	9.89E-4	5.96E+1	2.97E-2

Climate change

This chart shows the overall impact of the product on climate change – total. The operations phase is the lifecycle 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.



It leads to:

- an overall **product recyclability of up to 15%** mainly due to metal content
- an **energy recoverability of up to 58%** from plastic materials
- a **minimum disposal rate of 27%**

The exact final values depend on the used recycling process and add up to 100%.

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

For other racks „Key environmental performance indicators“ please refer the following factors:

Product	Description	Manufacturing	Distribution	Operation	End-of-Life
6EP4437-7EB00-3CX0	SITOP SEL1400 4 x 24V/10A	1	1	1	1
6EP1961-2BA11	SITOP PSE200U 3A	0,667	0,667	0,900	0,667
6EP1961-2BA21	SITOP PSE200U 10A	0,667	0,667	1	0,667
6EP1961-2BA31	SITOP PSE200U 3A Select	0,667	0,667	0,900	0,667
6EP1961-2BA41	SITOP PSE200U 10A	0,667	0,667	1	0,667
6EP1961-2BA51	SITOP PSE200U 3A Class 2	0,667	0,667	0,900	0,667
6EP1961-2BA61	SITOP PSE200U 3A Class 2 MSS	0,567	0,567	0,900	0,567
6EP4240-7HB00-0AX0	SITOP PBM1200	1,333	1,333	0,100	1,333
6EP4346-7RB00-0AX0	SITOP RED1200 2x10A	1,567	1,567	1,200	1,567
6EP4347-7RB00-0AX0	SITOP RED1200 2x20A	1,700	1,700	2,500	1,700
6EP4347-7RC00-0AX0	SITOP RED1200 2x20A Ex	1,700	1,700	2,500	1,700
6EP4348-7RB00-0AX0	SITOP RED1200 2x40A	3,367	3,367	4,600	3,367
6EP4436-8XB00-0CY0	SITOP CNX8600 4 x 5A	3,833	3,833	1,500	3,833
6EP4436-8XB00-0DY0	SITOP CNX8600 8 x 2,5A	4,300	4,300	1,500	4,300
6EP4437-7EB00-3DX0	SITOP SEL1400 8 x 24V/5A	1	1	1	1
6EP4437-7FB00-3CX0	SITOP SEL1200 4 x 24V/10A	1	1	1	1
6EP4437-7FB00-3DX0	SITOP SEL1200 8 x 24V/5A	1	1	1	1
6EP4437-8XB00-0CY0	SITOP CNX8600 4 x 10A	3,833	3,833	3	3,833
6EP4438-7EB00-3DX0	SITOP SEL1400 8 x 24V/10A	1	1	1,800	1
6EP4438-7EC00-3DX0	SITOP SEL1400 8x24V/10A Ex	1	1	1,800	1
6EP4438-7FB00-3DX0	SITOP SEL1200 8 x 24V/10A	1	1	1,800	1
6EP4438-7FC00-3DX0	SITOP SEL1200 8x24V/10A Ex	1	1	1,800	1

For other racks „Key environmental performance indicators“ please refer the following factors:

Product	Description	Manufacturing	Distribution	Operation	End-of-Life
6EP4448-7FB00-3CX0	SITOP SEL1200 4 x 48V/10A	1	1	1	1
6EP4437-8FB00-0CY0	SITOP SEL1600 4 x 24V/10A Expansion module	0,667	0,667	0,900	0,667
6EP4437-8FB00-4CY0	SITOP SEL1600 4 x 24V/10A Basic module	0,667	0,667	1	0,667
6EP4548-7XB00-3AX0	SITOP CHO1400	2,907	2,907	0,100	2,907

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Please be aware that the data of this EPD cannot be compared with data calculated based upon product category rules (PCRs) other than the standards mentioned above. The values given are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

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