



ENVIRONMENTAL PRODUCT DECLARATION

DELTA SCHUKO®

Socket outlets 5UB1...

Type II according to ISO 14021 including life cycle impact assessment (LCIA)
[siemens.com](https://www.siemens.com)



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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"). 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.

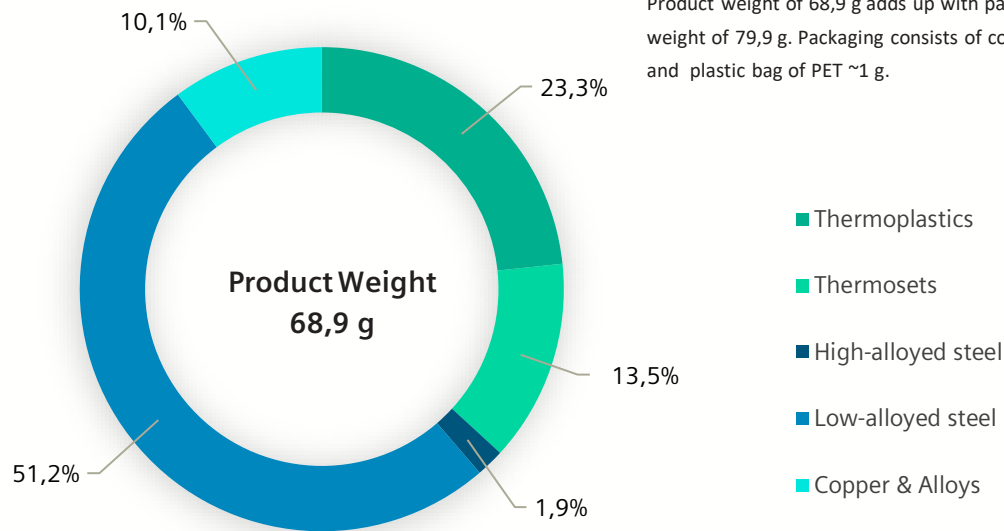
Siemens is dedicated to an environmentally conscious design of its products in line with IEC 62430 and has implemented an integrated management system according to ISO 9001, ISO 14001 and ISO 45001.

Products	All variants in the range of 5UB1...
Represented by	5UB1511
Product Description	DELTA i-system titanium white SCHUKO socket outlet
Functional Unit	Connect und disconnect the plug of a load consuming 16 A under a voltage of 250 V for 20 years while protecting the user from direct contact with live parts



Material composition

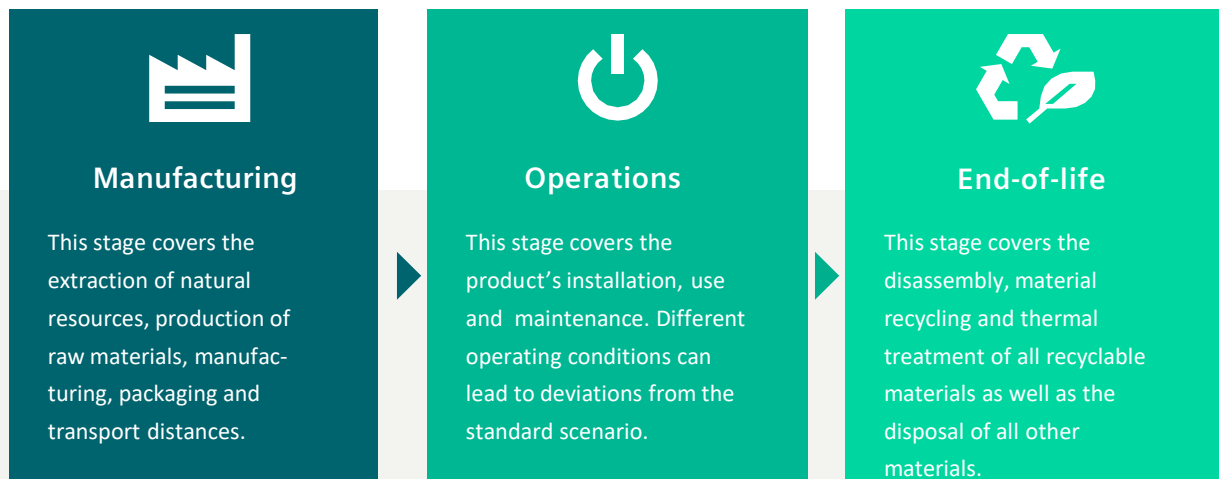
The following chart outlines the overall material composition of the calculated reference product.



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



Scenarios

Energy model used:

EU-28: Electricity grid mix

Transportation model used:

1570 km, GLO: Truck-trailer, Euro IV

Energy model used:

EU-28: Electricity grid mix

Use scenario:

0,55 W full load,
50% loading rate of I_n : 16A,
50% service uptime;
20 years reference lifetime

Energy model used:

EU-28: Electricity grid mix

Key environmental performance indicators

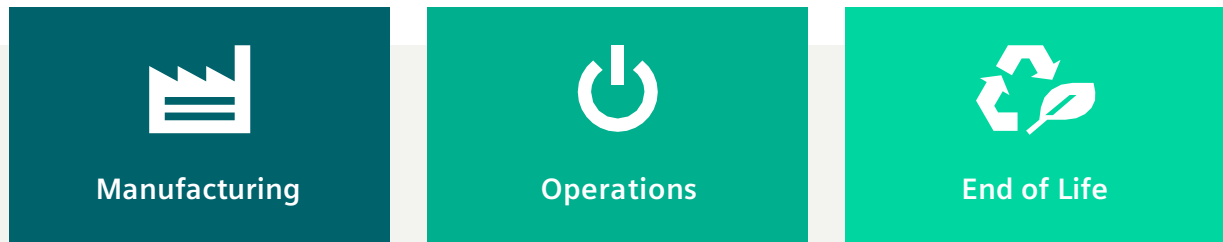
The following impact categories characterize the product's environmental footprint. The first 16 impact categories have been calculated with LCIA methodology EF3.0 and the last 6 with EN 15804+A2; LCA tool: GaBi 10.6.2, Database: GaBi Professional & Extensions, 2020.

Impact category	Unit	Total	Manufacturing	Operation	End of Life*
Acidification	Mole of H+ eq	1,04E-02	7,69E-04	9,75E-03	-1,34E-04
Global warming potential	kg CO ₂ eq	4,77E+00	2,84E-01	4,48E+00	7,42E-05
Ecotoxicity, freshwater – total	CTUe	3,73E+01	2,08E+00	3,53E+01	-6,18E-02
Eutrophication, freshwater	kg P eq	1,33E-05	3,91E-07	1,30E-05	-1,90E-09
Eutrophication, marine	kg N eq	2,32E-03	1,54E-04	2,19E-03	-2,53E-05
Eutrophication, terrestrial	Mole of N eq	2,43E-02	1,63E-03	2,30E-02	-2,48E-04
Human toxicity, cancer – total	CTUh	2,93E-09	2,00E-09	1,01E-09	-8,29E-11
Human toxicity, non-cancer – total	CTUh	4,05E-08	3,53E-09	3,71E-08	-1,60E-10
Ionising radiation, human health	kBq U235 eq	2,21E+00	2,32E-02	2,18E+00	3,02E-03
Land Use	dimensionless (pt)	2,95E+01	4,32E-01	2,91E+01	3,14E-02
Ozone depletion	kg CFC-11 eq	8,08E-09	7,96E-09	6,50E-11	4,59E-11
Particulate matter	Disease incidences	9,03E-08	6,80E-09	8,08E-08	2,71E-09
Photochemical ozone formation	kg NMVOC eq	6,39E-03	5,59E-04	5,91E-03	-8,60E-05
Resource use, fossils	MJ	8,46E+01	4,55E+00	8,06E+01	-5,91E-01
Resource use, mineral and metals	kg Sb eq	3,36E-06	2,81E-06	1,21E-06	-6,61E-07
Water scarcity	m ³ world eq	1,04E+00	1,77E-02	1,01E+00	8,79E-03
Use of non-renewable primary energy	MJ	8,46E+01	4,56E+00	8,06E+01	-5,95E-01
Use of renewable primary energy	MJ	4,54E+01	5,93E-01	4,47E+01	6,75E-02
Net use of fresh water	m ³	4,38E-02	1,00E-03	4,27E-02	1,55E-04
Hazardous waste disposed	kg	7,28E-09	3,38E-10	6,98E-09	-3,08E-11
Non-hazardous waste disposed	kg	7,22E-02	4,89E-03	6,07E-02	6,56E-03
Radioactive waste disposed	kg	1,30E-02	1,45E-04	1,29E-02	6,54E-06

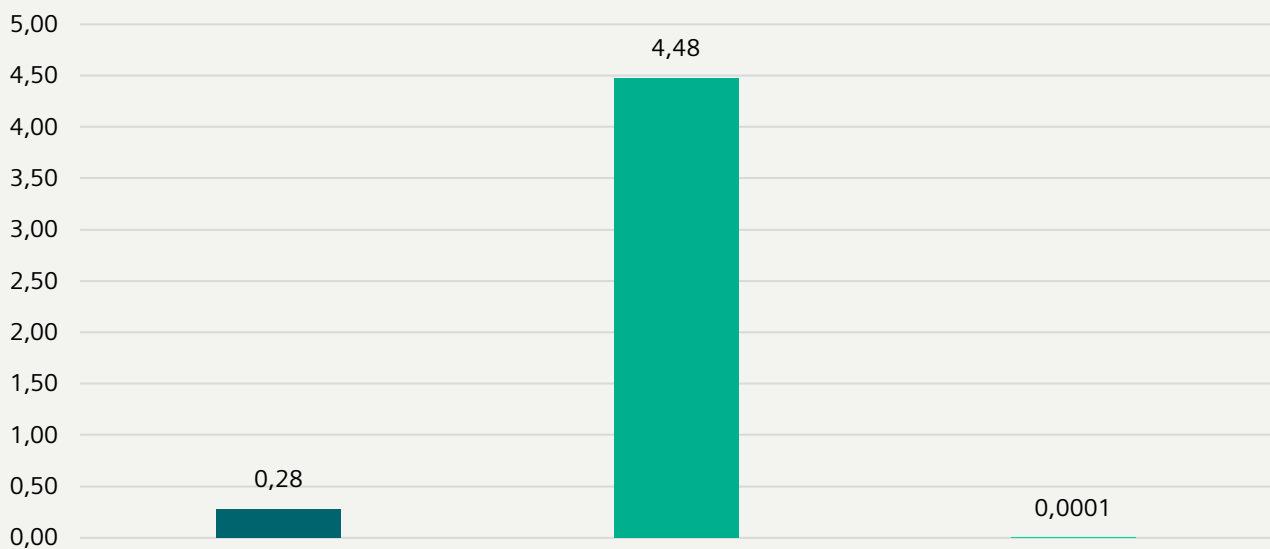
* Avoided burden method

Global warming potential

This chart shows the overall global warming potential of the product. The operations phase is the lifecycle phase with the biggest overall impact. Different operating conditions can lead to deviations from the standard scenario.



kg CO₂ eq



End-of-life scenario

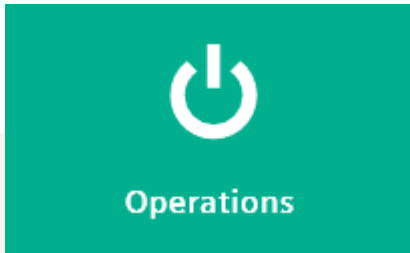
The end of life stage was modelled by shredding of the device, followed by sorting and material separation process. It leads to

- an overall **product recyclability of up to 63%** mainly due to high metal content
- an **energy recoverability of up to 44%** from plastic materials
- a **minimum landfill rate of 7%**

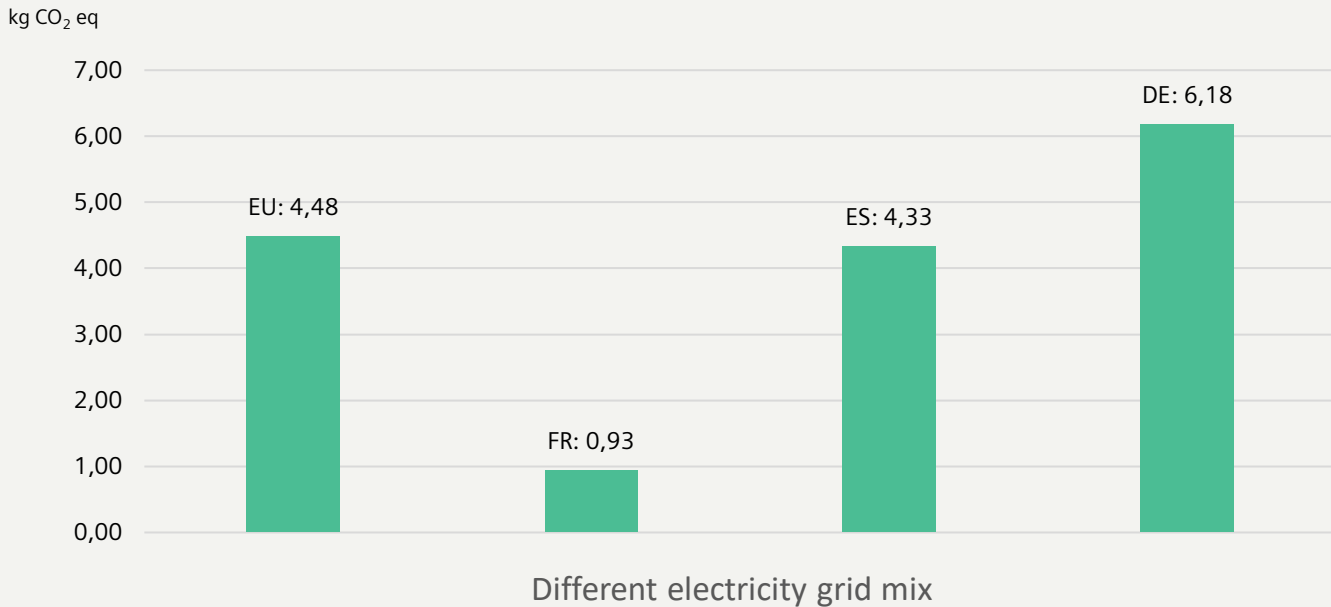
The exact final values depend on the used recycling process and add up to 100%.

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

Global warming potential



This chart shows the global warming potential of the product in the operation phase for some different energy model used (EU-28, FR, ES and DE).



Key environmental performance indicators in the operation phase for different energy model used

Impact category	Unit	EU: Electricity grid mix	FR: Electricity grid mix	ES: Electricity grid mix	DE: Electricity grid mix
Acidification	Mole of H+ eq	9,75E-03	2,34E-03	1,12E-02	8,64E-03
Global warming potential	kg CO ₂ eq	4,48E+00	9,31E-01	4,33E+00	6,18E+00
Ecotoxicity, freshwater – total	CTUe	3,53E+01	4,76E+01	2,59E+01	3,02E+01
Eutrophication, freshwater	kg P eq	1,30E-05	4,32E-06	5,49E-06	2,67E-05
Eutrophication, marine	kg N eq	2,19E-03	7,01E-04	2,61E-03	2,78E-03
Eutrophication, terrestrial	Mole of N eq	2,30E-02	6,85E-03	2,80E-02	2,89E-02
Human toxicity, cancer – total	CTUh	1,01E-09	5,39E-10	1,18E-09	1,14E-09
Human toxicity, non-cancer – total	CTUh	3,71E-08	2,20E-08	2,59E-08	4,52E-08
Ionising radiation, human health	kBq U235 eq	2,18E+00	8,25E+00	1,10E+00	6,74E-01
Land Use	dimensionless (pt)	2,91E+01	9,26E+00	1,83E+01	4,17E+01
Ozone depletion	kg CFC-11 eq	6,50E-11	3,17E-11	3,74E-11	1,33E-10
Particulate matter	Disease incidences	8,08E-08	2,00E-08	9,25E-08	6,85E-08
Photochemical ozone formation	kg NMVOC eq	5,91E-03	1,72E-03	7,42E-03	6,81E-03
Resource use, fossils	MJ	8,06E+01	9,26E+01	7,90E+01	7,72E+01
Resource use, mineral and metals	kg Sb eq	1,21E-06	5,70E-07	7,06E-07	2,79E-06
Water scarcity	m ³ world eq	1,01E+00	3,72E-01	5,41E+00	1,41E-01
Use of non-renewable primary energy	MJ	8,06E+01	9,26E+01	7,91E+01	7,72E+01
Use of renewable primary energy	MJ	4,47E+01	2,30E+01	4,83E+01	6,15E+01
Net use of fresh water	m ³	4,27E-02	4,41E-02	7,42E-02	2,47E-02
Hazardous waste disposed	kg	6,98E-09	2,29E-09	1,05E-08	8,04E-09
Non-hazardous waste disposed	kg	6,07E-02	3,02E-02	3,83E-02	7,63E-02
Radioactive waste disposed	kg	1,29E-02	3,22E-02	1,16E-02	6,80E-03

Legal Disclaimer

This Environmental Product Declaration (EPD) is for information purposes only. It is based upon the standards mentioned above.

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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.

Published by
Fábrica Electrotécnica JOSA, S.A.U.
Smart Infrastructure
Electrical Products
Portfolio Entities

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Spain

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