



ENVIRONMENTAL PRODUCT DECLARATION

SIMATIC S7-300/1500 Connecting Cables

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.

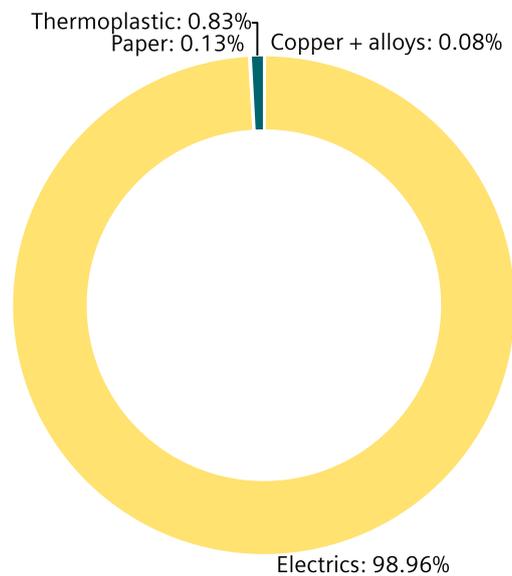
Products	Please refer to appendix
Represented by the reference product	6ES7923-5CB00-0DB0
Product Description	Connecting cables shielded and unshielded for SIMATIC S7-300/1500
Functional Unit	Production of 1 pc. SIMATIC S7-1500 Connecting cable, shielded and use over the reference service lifetime of 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 1.99 kg adds up with packaging weight of 0.02 kg to a total weight of 2.01 kg. Packaging consists of: Corrugated box (average composition), PE film.

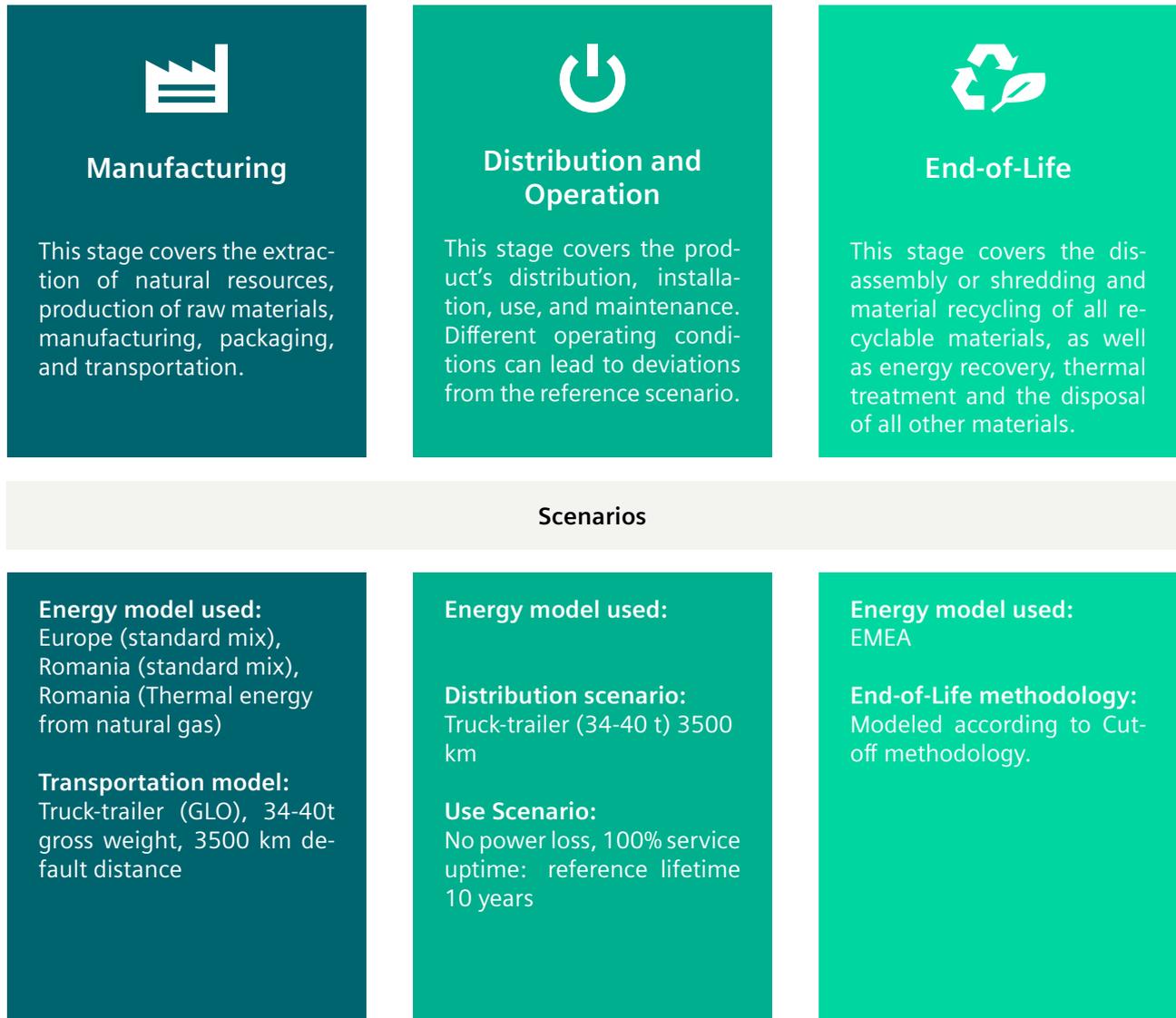
Product Weight 1.99 kg



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



Key environmental performance indicators

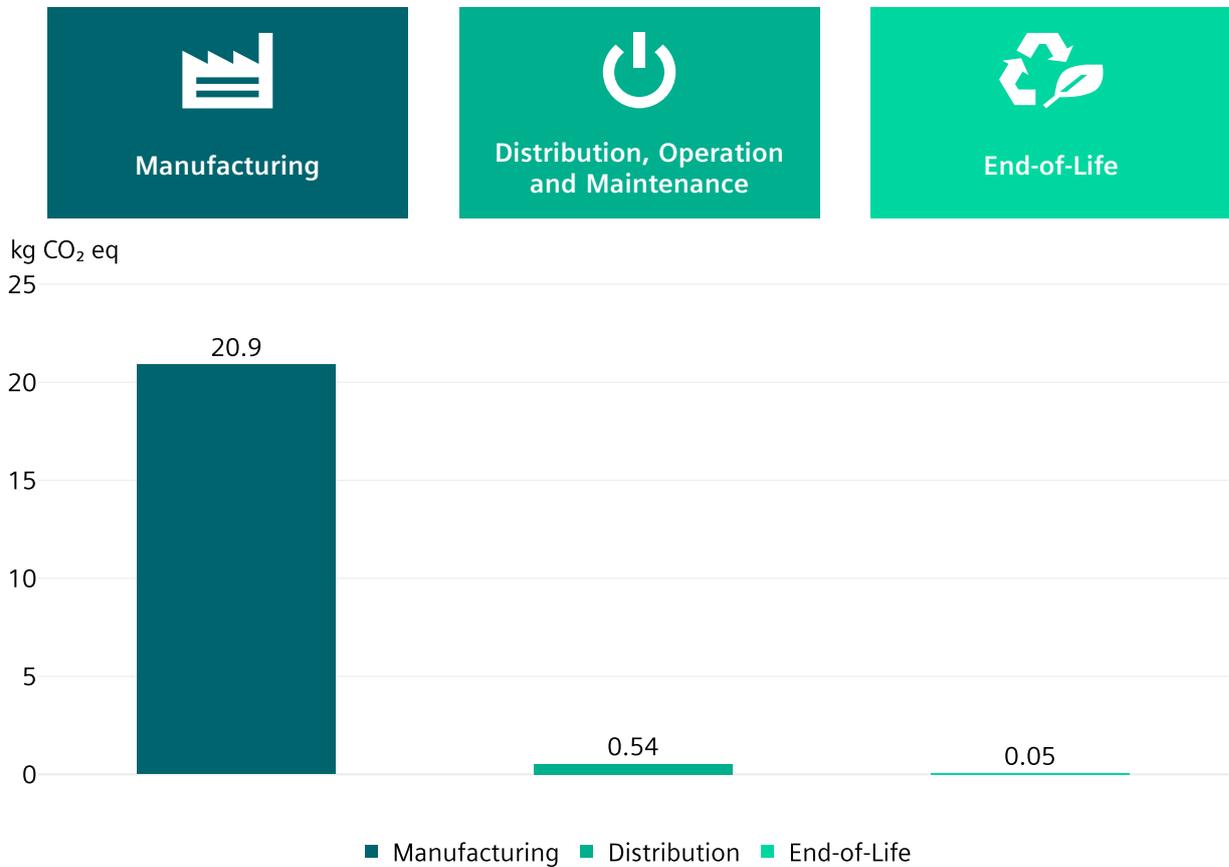
The following impact categories characterize the product's environmental footprint. They have been calculated with LCIA methodology EN15804+A2 (EF 3.1); LCA tool: Green Digital Twin Version 4.0, Database: One Siemens LCA Database (based on Sphera MLC CUP 2024.1).

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.

Impact Category	Unit	Total	Manufacturing	Distribution	End of life
Climate change – total	kg CO ₂ eq	2.15E+1	2.09E+1	5.38E-1	5.20E-2
Climate change – fossil	kg CO ₂ eq	2.14E+1	2.08E+1	5.28E-1	4.84E-2
Climate change – biogenic	kg CO ₂ eq	4.29E-2	3.86E-2	1.25E-3	3.11E-3
Climate Change, land use and land use change	kg CO ₂ eq	4.53E-2	3.64E-2	8.80E-3	9.63E-5
Ozone depletion	kg CFC-11 eq	1.31E-10	1.31E-10	7.74E-14	7.12E-14
Acidification	Mole of H+ eq	1.25E-1	1.24E-1	7.18E-4	1.41E-4
Eutrophication, freshwater	kg P eq	3.98E-5	3.74E-5	2.24E-6	1.30E-7
Eutrophication, marine	kg N eq	1.16E-2	1.13E-2	2.60E-4	3.45E-5
Eutrophication, terrestrial	Mole of N eq	1.25E-1	1.21E-1	3.10E-3	3.83E-4
Photochemical ozone formation, human health	kg NMVOC eq	3.84E-2	3.75E-2	7.15E-4	1.08E-4
Resource use, mineral and metals	kg Sb eq	5.66E-3	5.66E-3	4.56E-8	1.51E-9
Resource use, fossils	MJ	2.51E+2	2.43E+2	6.90E+0	3.72E-1
Water use	m ³ world eq deprived water	4.43E+0	4.41E+0	8.50E-3	5.45E-3
Particulate matter	Disease incidences	1.16E-6	1.15E-6	7.19E-9	1.61E-9
Ionising radiation, human health	kBq U235 eq	4.21E-1	4.18E-1	1.83E-3	7.29E-4
Ecotoxicity, freshwater – total	CTUe	1.07E+2	1.02E+2	5.12E+0	2.29E-1
Human toxicity, cancer – total	CTUh	5.95E-9	5.85E-9	1.03E-10	5.08E-12
Human toxicity, non-cancer – total	CTUh	3.92E-7	3.87E-7	4.64E-9	1.76E-10
Land Use	dimensionless (pt)	9.20E+1	8.85E+1	3.39E+0	6.89E-2

Climate change

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



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:

- **product recyclability of up to 92%** mainly due to metal content
- **energy recoverability of up to 1%** from plastic materials
- **minimum disposal 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 recommended for environmental reasons. Observe all local and applicable laws.

Appendix

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

Product	Description	Manufacturing	Distribution	Operation	End-of-Life
6ES7923-5CB00-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 10.0 m	1	1	-	1
6ES7923-5CB00-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 10.0 m	0,878	0,878	-	0,878
6ES7923-5BJ00-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 8.0 m	0,810	0,810	-	0,810
6ES7923-5BJ00-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 8.0 m	0,712	0,712	-	0,712
6ES7923-5BG50-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 6.5 m	0,667	0,667	-	0,667
6ES7923-5BG50-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 6.5 m	0,588	0,588	-	0,588
6ES7923-5BF00-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 5.0 m	0,524	0,524	-	0,524
6ES7923-5BF00-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 5.0 m	0,463	0,463	-	0,463
6ES7923-5BE00-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 4.0 m	0,429	0,429	-	0,429
6ES7923-5BE00-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 4.0 m	0,380	0,380	-	0,380
6ES7923-5BD00-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 3.0 m	0,334	0,334	-	0,334
6ES7923-5BD00-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 3.0 m	0,298	0,298	-	0,298
6ES7923-5BC50-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 2.5 m	0,287	0,287	-	0,287
6ES7923-5BC50-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 2.5 m	0,256	0,256	-	0,256
6ES7923-5BC00-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 2.0 m	0,239	0,239	-	0,239
6ES7923-5BC00-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 2.0 m	0,215	0,215	-	0,215
6ES7923-5BB50-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 1.5 m	0,191	0,191	-	0,191
6ES7923-5BB00-0DB0	Connecting cable shielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 1.0 m	0,144	0,144	-	0,144

Product	Description	Manufacturing	Distribution	Operation	End-of-Life
6ES7923-5BB00-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 1.0 m	0,132	0,132	-	0,132
6ES7923-5BA50-0CB0	Connecting cable unshielded for SIMATIC S7-1500 50x0.14 mm ² , Length = 0.5 m	0,090	0,090	-	0,090
6ES7923-5CB00-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 10.0 m	0,878	0,878	-	0,878
6ES7923-5BJ00-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 8.0 m	0,810	0,810	-	0,810
6ES7923-5BG50-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 6.5 m	0,667	0,667	-	0,667
6ES7923-5BF00-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 5.0 m	0,390	0,390	-	0,390
6ES7923-5BE00-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 4.0 m	0,429	0,429	-	0,429
6ES7923-5BD00-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 3.0 m	0,298	0,298	-	0,298
6ES7923-5BC50-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 2.5 m	0,287	0,287	-	0,287
6ES7923-5BC00-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 2.0 m	0,239	0,239	-	0,239
6ES7923-5BB50-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 1.5 m	0,191	0,191	-	0,191
6ES7923-5BB00-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 1.0 m	0,144	0,144	-	0,144

Product	Description	Manufacturing	Distribution	Operation	End-of-Life
6ES7923-5BA50-0EB0	Connecting cable unshielded for SIMATIC S7-300/1500 0.14 mm ² front 4 x 16 pole and connection module 1 x 50 pole, Length = 0.5 m	0,090	0,090	-	0,090
6ES7923-5BD00-0GB0	Connecting cable unshielded for SIMATIC S7-1500 0.14 mm ² , Length = 3.0m, 1 pcs. 40 of 50 pole IDC connector	0,252	0,252	-	0,252
6ES7923-5BC50-0GB0	Connecting cable unshielded for SIMATIC S7-1500 0.14 mm ² , Length = 2.5m, 1 pcs. 40 of 50 pole IDC connector	0,218	0,218	-	0,218
6ES7923-5BC00-0GB0	Connecting cable unshielded for SIMATIC S7-1500 0.14 mm ² , Length = 2.0m, 1 pcs. 40 of 50 pole IDC connector	0,184	0,184	-	0,184
6ES7923-5BB00-0GB0	Connecting cable unshielded for SIMATIC S7-1500 0.14 mm ² , Length = 1.0m, 1 pcs. 40 of 50 pole IDC connector	0,117	0,117	-	0,117
6ES7923-0CB00-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 10.0 m	0,488	0,488	-	0,488
6ES7923-0CB00-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 10.0 m	0,337	0,337	-	0,337
6ES7923-0BJ00-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 8.0 m	0,400	0,400	-	0,400
6ES7923-0BJ00-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 8.0 m	0,279	0,279	-	0,279
6ES7923-0BG50-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 6.5 m	0,334	0,334	-	0,334
6ES7923-0BG50-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 6.5 m	0,236	0,236	-	0,236
6ES7923-0BF00-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 5.0 m	0,268	0,268	-	0,268
6ES7923-0BF00-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 5.0 m	0,193	0,193	-	0,193
6ES7923-0BE00-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 4.0 m	0,224	0,224	-	0,224
6ES7923-0BE00-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 4.0 m	0,164	0,164	-	0,164
6ES7923-0BD00-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 3.0 m	0,180	0,180	-	0,180

Product	Description	Manufacturing	Distribution	Operation	End-of-Life
6ES7923-0BD00-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 3.0 m	0,135	0,135	-	0,135
6ES7923-0BC50-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 2.5 m	0,159	0,159	-	0,159
6ES7923-0BC50-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 2.5 m	0,121	0,121	-	0,121
6ES7923-0BC00-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 2.0 m	0,137	0,137	-	0,137
6ES7923-0BC00-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 2.0 m	0,106	0,106	-	0,106
6ES7923-0BB50-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14 mm ² , Length = 1.5 m	0,092	0,092	-	0,092
6ES7923-0BB00-0DB0	Connecting cable shielded for SIMATIC S7-300/1500 16x0.14mm ² , Length = 1.0 m	0,093	0,093	-	0,093
6ES7923-0BB00-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14mm ² , Length = 1.0 m	0,078	0,078	-	0,078
6ES7923-0BA50-0CB0	Connecting cable unshielded for SIMATIC S7-300/1500 16x0.14mm ² , Length = 0.5 m	0,063	0,063	-	0,063

Legal Disclaimer

This Environmental Product Declaration (EPD) is for information purposes only. It is based upon the standards mentioned above. This EPD does not warrant or guarantee the composition of a product or that the product will retain a particular composition for a particular period. Therefore, all warranties, representations, conditions, and all other terms of any kind whatsoever implied by statute or common law are – to the fullest extent permitted by applicable law – excluded.

Siemens therefore does not assume any liability for any error or for any consequence which may arise from the use of this information to the maximum extent under the law.

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

Siemens AG
Digital Industries
Process Automation
Östliche Rheinbrückenstr. 50
76187 Karlsruhe
Germany

Subject to changes and errors.

The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. In particular no assurance is given that those descriptions and performance features stand under warranty or guarantee in sense of any liability for any error or for any consequence which may arise from the use of this information to the maximum extent under the law. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

All product designations may be trademarks or product names of Siemens AG or other companies whose use by third parties for their own purposes could violate the rights of the owners.

© 2025 by Siemens