# Product Environmental Profile

## Power interconnect, Lexium MC12, power infeed

## Lexium MC12 Power interconnects

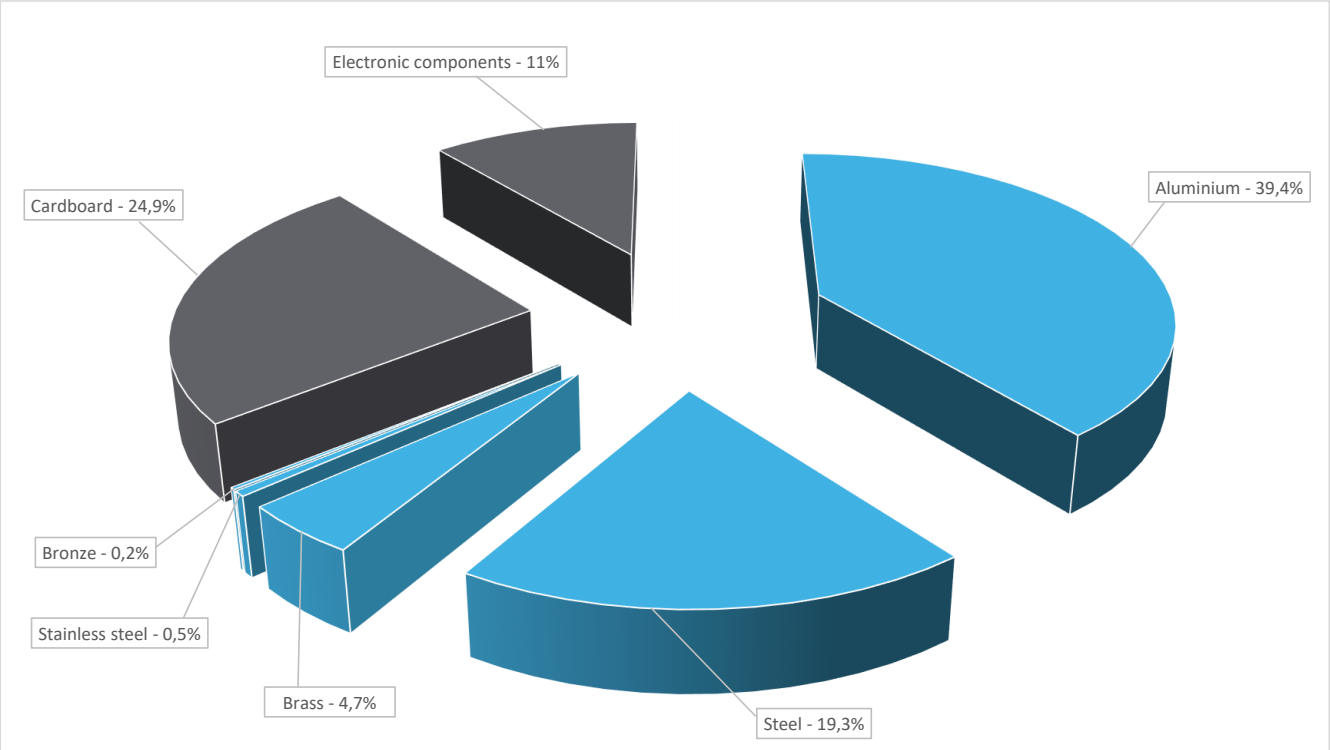


# General information

| | |
|---|---|
| **Reference product** | Power interconnect, Lexium MC12, power infeed - LXMMCBPAP01S100 |
| **Description of the product** | Power interconnects support the transmission of the DC power in the track. |
| **Description of the range** | The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.Lexium MC12 multi carrier is an innovative transport system to be used in machines. It uses latest linear motion technology to move products individually through the machine. These individual movements allow for new machine designs making machines faster, more flexible and space efficient. This range consists of LXMCBP power |
| **Functional unit** | To support the transmission of the DC power in the track with a 100% use rate during 10 years. |
| **Specifications are:** | DC bus Voltage: 48 Vdc<br>Connector Type: elbowed M23 connector<br>IP degree of protection: IP65 |

# Constituent materials

| | | |
|---|---|---|
| **Reference product mass** | 710 g | including the product and its packaging |




| | |
|---|---|
| Plastics | 0,0% |
| Metals | 64,1% |
| Others | 35,9% |

# Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website
https://www.se.com

# Additional environmental information

| | | | |
|---|---|---|---|
| End Of Life | Recyclability potential: | **83%** | The recyclability rate was calculated from the recycling rates of each material making up the product based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the EIME database and the related PSR was taken. If no data was found a conservative assumption was used (0% recyclability). |

# Environmental impacts

| | | | | |
|---|---|---|---|---|
| **Reference service life time** | 10 years | | | |
| **Product category** | Other equipments - Passive product - non-continuous operation | | | |
| **Life cycle of the product** | The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study. | | | |
| **Electricity consumption** | The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption. | | | |
| **Installation elements** | The product does not require any installation operations. | | | |
| **Use scenario** | The product consumes no energy during it use phase, because it is a passive connector. Its power dissipation is 2mW. | | | |
| **Time representativeness** | The collected data are representative of the year 2026. | | | |
| **Technological representativeness** | The Modules of Technologies such as material production, manufacturing processes and transport technology used in the PEP analysis (LCA EIME in the case) are similar and representative of the actual type of technologies used to make the product. | | | |
| **Geographical representativeness** | **Final assembly site** | **Use phase** | | **End-of-life** |
| | Lahr, GERMANY | Poland (30%), Croatia (15%), Europe (37%), China (10%) and Japan (8%) | | Global, European and French datasets are used. |
| **Energy model used** | **[A1 - A3]** | **[A5]** | **[B6]** | **[C1 - C4]** |
| | Electricity mix; Production mix; low voltage; 2022; Germany, DE | No energy used | Electricity mix; Consumption mix; Low voltage; 2022; Poland, PL | Global, European and French datasets are used. |

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.se.com/contact

| Mandatory Indicators | | Power interconnect, Lexium MC12, power infeed - LXMMCBPAP01S100 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Impact indicators** | **Unit** | **Total (without Module D)** | **[A1 - A3] - Manufacturing** | **[A4] - Distribution** | **[A5] - Installation** | **[B1 - B7] - Use** | **[C1 - C4] - End of life** | **[D] - Benefits and loads** |
| Contribution to climate change | kg CO2 eq | 8,86E+00 | 7,72E+00 | 2,70E-01 | 0,00E+00 | 1,05E-01 | 7,59E-01 | -4,27E+00 |
| Contribution to climate change-fossil | kg CO2 eq | 8,95E+00 | 7,82E+00 | 2,70E-01 | 0,00E+00 | 1,04E-01 | 7,57E-01 | -4,16E+00 |
| Contribution to climate change-biogenic | kg CO2 eq | -9,00E-02 | -9,29E-02 | 9,58E-07 | 0,00E+00 | 1,02E-03 | 1,90E-03 | -1,10E-01 |
| Contribution to climate change-land use and land use change | kg CO2 eq | 1,78E-06 | 7,51E-07 | 3,54E-07 | 0,00E+00 | 0,00E+00 | 6,73E-07 | 0,00E+00 |
| Contribution to ozone depletion | kg CFC-11 eq | 4,22E-06 | 4,19E-06 | 2,86E-09 | 0,00E+00 | 5,36E-10 | 2,79E-08 | -6,07E-07 |
| Contribution to acidification | mol H+ eq | 1,29E-01 | 1,25E-01 | 1,14E-03 | 0,00E+00 | 7,03E-04 | 2,46E-03 | -2,73E-02 |
| Contribution to eutrophication, freshwater | kg P eq | 5,95E-05 | 5,40E-05 | 9,39E-07 | 0,00E+00 | 9,32E-08 | 4,49E-06 | -1,49E-05 |
| Contribution to eutrophication, marine | kg N eq | 8,19E-03 | 7,53E-03 | 2,83E-04 | 0,00E+00 | 7,68E-05 | 3,03E-04 | -2,34E-03 |
| Contribution to eutrophication, terrestrial | mol N eq | 9,30E-02 | 8,54E-02 | 3,10E-03 | 0,00E+00 | 1,02E-03 | 3,44E-03 | -2,58E-02 |
| Contribution to photochemical ozone formation - human health | kg COVNM eq | 3,51E-02 | 3,29E-02 | 8,31E-04 | 0,00E+00 | 2,52E-04 | 1,07E-03 | -8,67E-03 |
| Contribution to resource use, minerals and metals | kg Sb eq | 7,31E-04 | 7,31E-04 | 8,14E-08 | 0,00E+00 | 0* | 2,02E-07 | -1,83E-04 |
| Contribution to resource use, fossils | MJ | 2,65E+02 | 2,47E+02 | 4,62E+00 | 0,00E+00 | 1,95E+00 | 1,19E+01 | -6,26E+01 |
| Contribution to water use | m3 eq | 8,26E+00 | 8,13E+00 | 9,16E-03 | 0,00E+00 | 6,31E-03 | 1,06E-01 | -9,68E-01 |

| Inventory flows Indicators | | Power interconnect, Lexium MC12, power infeed - LXMMCBPAP01S100 | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Inventory flows | Unit | Total (without Module D) | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads |
| Contribution to renewable primary energy used as energy | MJ | 1,42E+01 | 1,34E+01 | 1,31E-02 | 0,00E+00 | 3,17E-01 | 4,80E-01 | -2,43E+00 |
| Contribution to renewable primary energy used as raw material | MJ | 4,00E+00 | 4,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Contribution to total renewable primary energy | MJ | 1,82E+01 | 1,74E+01 | 1,31E-02 | 0,00E+00 | 3,17E-01 | 4,80E-01 | -2,43E+00 |
| Contribution to non renewable primary energy used as energy | MJ | 2,48E+02 | 2,29E+02 | 4,62E+00 | 0,00E+00 | 1,95E+00 | 1,19E+01 | -6,26E+01 |
| Contribution to non renewable primary energy used as raw material | MJ | 1,74E+01 | 1,74E+01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Contribution to total non renewable primary energy | MJ | 2,65E+02 | 2,47E+02 | 4,62E+00 | 0,00E+00 | 1,95E+00 | 1,19E+01 | -6,26E+01 |
| Contribution to use of secondary material | kg | 1,51E-01 | 1,51E-01 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Contribution to use of renewable secondary fuels | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Contribution to use of non renewable secondary fuels | MJ | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Contribution to net use of fresh water | m³ | 1,92E-01 | 1,89E-01 | 2,13E-04 | 0,00E+00 | 1,47E-04 | 3,17E-03 | -2,25E-02 |
| Contribution to hazardous waste disposed | kg | 5,45E+01 | 5,45E+01 | 0* | 0,00E+00 | 0* | 8,05E-02 | -1,45E+01 |
| Contribution to non hazardous waste disposed | kg | 5,27E+00 | 4,92E+00 | 2,17E-02 | 0,00E+00 | 1,78E-02 | 3,04E-01 | -6,65E+00 |
| Contribution to radioactive waste disposed | kg | 3,67E-03 | 3,61E-03 | 1,72E-05 | 0,00E+00 | 1,92E-06 | 4,37E-05 | -5,12E-03 |
| Contribution to components for reuse | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Contribution to materials for recycling | kg | 5,04E-01 | 7,98E-02 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 4,25E-01 | 0,00E+00 |
| Contribution to materials for energy recovery | kg | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 |
| Contribution to exported energy | MJ | 4,20E-03 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 0,00E+00 | 4,20E-03 | 0,00E+00 |

* represents less than 0.01% of the total life cycle of the reference flow

| | | |
|---|---|---|
| Contribution to biogenic carbon content of the product | kg of C | 0,00E+00 |
| Contribution to biogenic carbon content of the associated packaging | kg of C | 4,74E-02 |

** The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)*

| Mandatory Indicators | | Power interconnect, Lexium MC12, power infeed - LXMMCBPAP01S100 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Impact indicators | Unit | [B1 - B7] - Use | [B1] | [B2] | [B3] | [B4] | [B5] | [B6] | [B7] |
| Contribution to climate change | kg CO2 eq | 1,05E-01 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,05E-01 | 0 |
| Contribution to climate change-fossil | kg CO2 eq | 1,04E-01 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,04E-01 | 0 |
| Contribution to climate change-biogenic | kg CO2 eq | 1,02E-03 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,02E-03 | 0 |
| Contribution to climate change-land use and land use change | kg CO2 eq | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to ozone depletion | kg CFC-11 eq | 5,36E-10 | 0 | 0,00E+00 | 0 | 0 | 0 | 5,36E-10 | 0 |
| Contribution to acidification | mol H+ eq | 7,03E-04 | 0 | 0,00E+00 | 0 | 0 | 0 | 7,03E-04 | 0 |
| Contribution to eutrophication, freshwater | kg P eq | 9,32E-08 | 0 | 0,00E+00 | 0 | 0 | 0 | 9,32E-08 | 0 |
| Contribution to eutrophication marine | kg N eq | 7,68E-05 | 0 | 0,00E+00 | 0 | 0 | 0 | 7,68E-05 | 0 |
| Contribution to eutrophication, terrestrial | mol N eq | 1,02E-03 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,02E-03 | 0 |
| Contribution to photochemical ozone formation - human health | kg COVNM eq | 2,52E-04 | 0 | 0,00E+00 | 0 | 0 | 0 | 2,52E-04 | 0 |
| Contribution to resource use, minerals and metals | kg Sb eq | 0* | 0 | 0,00E+00 | 0 | 0 | 0 | 0* | 0 |
| Contribution to resource use, fossils | MJ | 1,95E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,95E+00 | 0 |
| Contribution to water use | m3 eq | 6,31E-03 | 0 | 0,00E+00 | 0 | 0 | 0 | 6,31E-03 | 0 |

| Inventory flows Indicators | | Power interconnect, Lexium MC12, power infeed - LXMMCBPAP01S100 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Inventory flows | Unit | [B1 - B7] - Use | [B1] | [B2] | [B3] | [B4] | [B5] | [B6] | [B7] |
| Contribution to use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 3,17E-01 | 0 | 0,00E+00 | 0 | 0 | 0 | 3,17E-01 | 0 |
| Contribution to use of renewable primary energy resources used as raw material | MJ | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to total use of renewable primary energy resources | MJ | 3,17E-01 | 0 | 0,00E+00 | 0 | 0 | 0 | 3,17E-01 | 0 |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 1,95E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,95E+00 | 0 |
| Contribution to use of non renewable primary energy resources used as raw material | MJ | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to total use of non-renewable primary energy resources | MJ | 1,95E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,95E+00 | 0 |
| Contribution to use of secondary material | kg | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to use of renewable secondary fuels | MJ | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to use of non renewable secondary fuels | MJ | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to net use of freshwater | m³ | 1,47E-04 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,47E-04 | 0 |
| Contribution to hazardous waste disposed | kg | 0* | 0 | 0,00E+00 | 0 | 0 | 0 | 0* | 0 |
| Contribution to non hazardous waste disposed | kg | 1,78E-02 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,78E-02 | 0 |
| Contribution to radioactive waste disposed | kg | 1,92E-06 | 0 | 0,00E+00 | 0 | 0 | 0 | 1,92E-06 | 0 |
| Contribution to components for reuse | kg | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to materials for recycling | kg | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to materials for energy recovery | kg | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |
| Contribution to exported energy | MJ | 0,00E+00 | 0 | 0,00E+00 | 0 | 0 | 0 | 0,00E+00 | 0 |

** represents less than 0.01% of the total life cycle of the reference flow*

*Life cycle assessment performed with EIME version v6.2.5-6, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology -1/1 is used*

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

*Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.*

| | | | |
|---|---|---|---|
| *Registration number :* | ENVPEP2110015_V2 | *Drafting rules* | PCR-ed4-2021 09 06 |
| | | *Supplemented by* | No PSR |
| *Date of issue* | 01/07/2026 | *Information and reference documents* | www.pep-ecopassport.org |
| | | *Validity period* | 5 years |

*Independent verification of the declaration and data, in compliance with ISO 14021 : 2016*

Internal X External

*The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)*

*PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022*

*The components of the present PEP may not be compared with components from any other program.*

*Document complies with ISO 14021:2016 "Environmental labels and declarations. Type II environmental declarations"*

*Schneider Electric Industries SAS*

*Country Customer Care Center*
*http://www.se.com/contact*

*Head Office*
*35, rue Joseph Monier*
*CS 30323*
*F- 92500 Rueil Malmaison Cedex*
*RCS Nanterre 954 503 439*
*Capital social 928 298 512 €*


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