# Product Environmental Profile

## C - BUS DIMMER

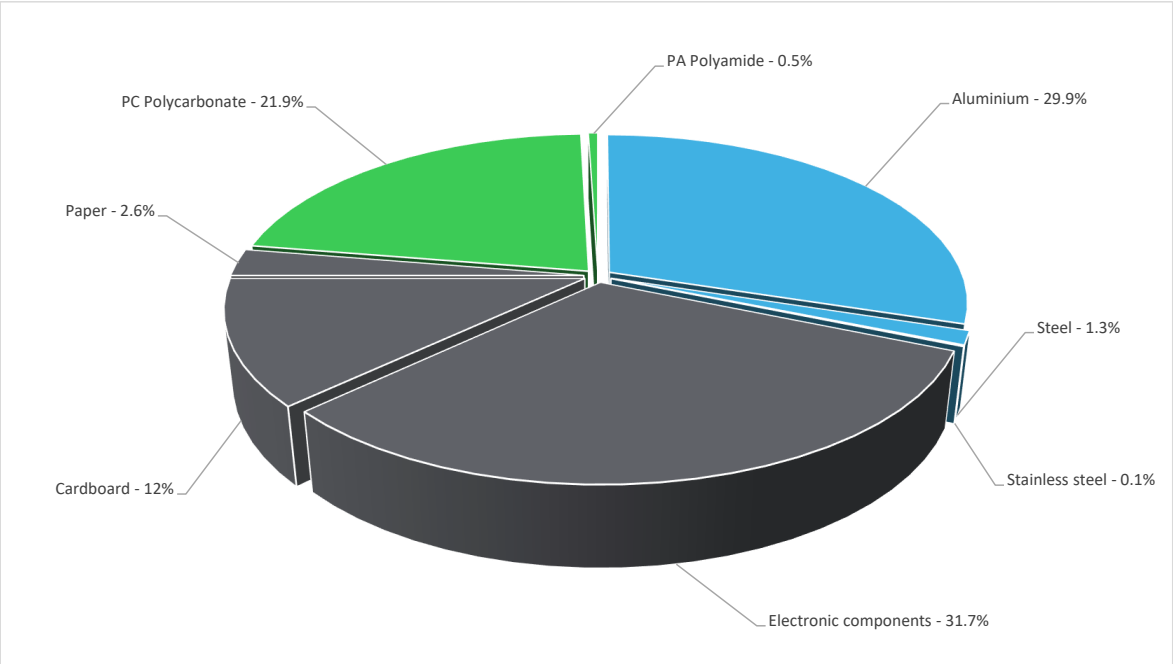


# General information

| | |
|---|---|
| **Reference product** | C - BUS DIMMER - 5504D2D |
| **Description of the product** | The main purpose of the C-Bus Dimmer is to control the lightning function and adjust the brightness of the light for different scenarios. |
| **Functional unit** | The main function of this product is to provide support for remote ON-OFF for a simple C-Bus network and permit all channels to be turned On or Off without C-Bus network communications with a voltage range between 220-240V according to the IEC 669-2-2 standard and protection class IP20 in accordance with IEC 60529, AS60669.2.1:2020, AS/NZS 60669.1:2020+A1 stansards with the dimensions of 93mm x 216mm x 69mm.<br><br>Technical Characteristics:<br>No. of Channels: 4<br>Rated operational current [Ie]: 2A<br>Rated operational voltage [Ue]: 220-240V |

# Constituent materials

| | | |
|---|---|---|
| **Reference product mass** | 787 g | including the product, its packaging and additional elements and accessories |




| | | |
|---|---|---|
| | Plastics | 22.4% |
| | Metals | 31.3% |
| | Others | 46.3% |

# Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website
https://www.se.com/ww/en/work/support/green-premium/

# Additional environmental information

| | | | |
|---|---|---|---|
| **End Of Life** | Recyclability potential: | **36%** | Recyclability rate has been calculated based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE recyclability and recoverability calculation method" 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 - Active product |
| **Installation elements** | No special installation components need during installation phase, but transport of packaging to disposal, and disposal of packaging accounted for during installation. |
| **Use scenario** | The product is in active with C-Bus supply on mode 30% of the time with a power use of 5.9W and in active with C-Bus supply off mode 70% of the time with a power use of 2.9W for a reference life time of 10 years. |
| **Technological representativeness** | The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production. |
| **Geographical representativeness** | Australia |

| **Energy model used** | [A1 - A3] | [A5] | [B6] | [C1 - C4] |
|---|---|---|---|---|
| | Electricity Mix; Production mix; Low voltage; CN | Electricity Mix; Production mix; Low voltage; AUS | Electricity Mix; Production mix; Low voltage; AUS | Electricity Mix; Production mix; Low voltage; AUS |

Detailed results, including all the impact indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format

Country Customer Care Center - http://www.schneider-electric.com/contact

| Mandatory Indicators | | C - BUS DIMMER - 5504D2D | | | | | |
|---|---|---|---|---|---|---|---|
| Impact indicators | Unit | Total | Manufacturing [A1 - A3] | Distribution [A4] | Installation [A5] | Use [B1 - B7] | End of Life [C1 - C4] | Benefits [D] |
| Contribution to climate change | kg CO2 eq | 3.58E+02 | 4.76E+01 | 2.27E-01 | 2.11E-01 | 3.09E+02 | 1.05E+00 | -3.45E+00 |
| Contribution to climate change-fossil | kg CO2 eq | 3.58E+02 | 4.75E+01 | 2.27E-01 | 2.02E-01 | 3.09E+02 | 1.03E+00 | -3.35E+00 |
| Contribution to climate change-biogenic | kg CO2 eq | 3.14E-01 | 1.30E-01 | 0* | 9.38E-03 | 1.51E-01 | 2.39E-02 | -9.15E-02 |
| Contribution to climate change-land use and land use change | kg CO2 eq | 1.35E-07 | 1.35E-07 | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to ozone depletion | kg CFC-11 eq | 8.29E-06 | 6.53E-06 | 2.00E-07 | 1.40E-08 | 1.50E-06 | 4.06E-08 | -4.52E-07 |
| Contribution to acidification | mol H+ eq | 2.37E+00 | 3.25E-01 | 9.86E-04 | 8.38E-04 | 2.03E+00 | 1.26E-02 | -2.21E-02 |
| Contribution to eutrophication, freshwater | kg $(PO4)^{3-}$ eq | 1.26E-04 | 1.14E-04 | 2.66E-08 | 1.53E-06 | 2.19E-06 | 8.39E-06 | -1.35E-05 |
| Contribution to eutrophication marine | kg N eq | 2.69E-01 | 3.47E-02 | 4.53E-04 | 2.22E-04 | 2.25E-01 | 8.82E-03 | -1.93E-03 |
| Contribution to eutrophication, terrestrial | mol N eq | 2.93E+00 | 3.69E-01 | 4.91E-03 | 1.67E-03 | 2.55E+00 | 5.24E-03 | -2.08E-02 |
| Contribution to photochemical ozone formation - human health | kg COVNM eq | 8.76E-01 | 1.22E-01 | 1.61E-03 | 4.47E-04 | 7.50E-01 | 2.06E-03 | -6.83E-03 |
| Contribution to resource use, minerals and metals | kg Sb eq | 1.57E-03 | 1.57E-03 | 0* | 0* | 4.78E-06 | 0* | -1.44E-05 |
| Contribution to resource use, fossils | MJ | 5.39E+03 | 6.00E+02 | 2.75E+00 | 2.20E+00 | 4.78E+03 | 9.14E+00 | -4.51E+01 |
| Contribution to water use | m3 eq | 1.81E+02 | 1.26E+01 | 0* | 9.01E-02 | 1.22E+01 | 1.56E+02 | -6.77E-01 |

| Inventory flows Indicators | | C - BUS DIMMER - 5504D2D | | | | | |
|---|---|---|---|---|---|---|---|
| Inventory flows | Unit | Total | Manufact. [A1 - A3] | Distribution [A4] | Installation [A5] | Use [B1 - B7] | End of Life [C1 - C4] | Benefits [D] |
| Contribution to use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 3.83E+02 | 2.14E+01 | 0* | 1.58E-01 | 3.61E+02 | 6.80E-01 | -1.55E+00 |
| Contribution to use of renewable primary energy resources used as raw material | MJ | 7.26E-01 | 7.26E-01 | 0* | 0* | 0* | 0* | -7.00E-01 |
| Contribution to total use of renewable primary energy resources | MJ | 3.84E+02 | 2.21E+01 | 0* | 1.58E-01 | 3.61E+02 | 6.80E-01 | -2.25E+00 |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 5.38E+03 | 5.91E+02 | 2.75E+00 | 2.20E+00 | 4.78E+03 | 9.14E+00 | -4.51E+01 |
| Contribution to use of non renewable primary energy resources used as raw material | MJ | 8.40E+00 | 8.40E+00 | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to total use of non-renewable primary energy resources | MJ | 5.39E+03 | 6.00E+02 | 2.75E+00 | 2.20E+00 | 4.78E+03 | 9.14E+00 | -4.51E+01 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Contribution to use of secondary material | kg | 8.67E-02 | 8.67E-02 | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to use of renewable secondary fuels | MJ | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to use of non renewable secondary fuels | MJ | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to net use of freshwater | m³ | 4.66E+00 | 2.94E-01 | 0* | 2.10E-03 | 2.85E-01 | 4.08E+00 | -1.58E-02 |
| Contribution to hazardous waste disposed | kg | 2.12E+01 | 1.26E+01 | 0* | 2.50E-03 | 7.89E+00 | 6.89E-01 | -1.34E+00 |
| Contribution to non hazardous waste disposed | kg | 6.85E+01 | 1.79E+01 | 0* | 6.87E-01 | 4.97E+01 | 2.20E-01 | -6.84E+00 |
| Contribution to radioactive waste disposed | kg | 2.20E-02 | 1.69E-02 | 4.51E-05 | 9.22E-05 | 4.90E-03 | 1.40E-05 | -4.47E-03 |
| Contribution to components for reuse | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to materials for recycling | kg | 3.67E-01 | 6.46E-03 | 0* | 1.16E-01 | 0* | 2.44E-01 | 0.00E+00 |
| Contribution to materials for energy recovery | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to exported energy | MJ | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to biogenic carbon content of the product | kg de C | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to biogenic carbon content of the associated packaging | kg de C | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |

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

*Life cycle assessment performed with EIME version 5.9.4, database version 2022-01 in compliance with ISO14044.*

*Detailed results, including all 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.schneider-electric.com/contact*

*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 :* | ENVPEP2310006_V1 | *Drafting rules* | PEP-PCR-ed4-2021 09 06 |
| *Validity period* | 5 years | *Supplemented by* | PSR-0005-ed2-2016 03 29 |
| *Date of issue* | 10/2023 | *Information and reference documents* | www.pep-ecopassport.org |

*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)*

*PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019*

*The elements of the present PEP cannot be compared with elements from another program.*

*Document in compliance with ISO 14021 : 2016 « Environmental labels and declarations. Type II environmental declarations »*

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