Product Environmental Profile

24VDC POWER SUPPLY AD MODULE 200/240 VAC
**General information**

**Reference product**

24VDC POWER SUPPLY AD MODULE 200/240 VAC - LV454444

**Description of the product**

The product is an external DC power supply module. Its function is to provide the DC voltage necessary to power on the electronic trip units. These compact electronic switch mode power supplies provide a quality of output current that is suitable for the loads supplied and compatible with:
- ComPacT NS circuit breaker
- MasterPacT NG circuit breaker
- MasterPacT MT Circuit Breaker
- MasterPacT NT Circuit Breaker
- ComPacT NSX circuit breaker
- PowerPacT Multistandard Circuit Breaker
- MasterPacT MTZ1 Circuit Breaker
- MasterPacT MTZ2 Circuit Breaker
- MasterPacT MTZ3 Circuit Breaker
- PowerPacT H Circuit Breaker
- PowerPacT J Circuit Breaker
- PowerPacT L Circuit Breaker
- PowerPacT P Circuit Breaker
- PowerPacT R Circuit Breaker

**Functional unit**

To ensure service continuity of electronic trip unit of an electrical system for 10 years at a 34% use rate, in accordance with the relevant standards.

**Constituent materials**

**Reference product mass**

370 g including the product, its packaging and additional elements and accessories

![Material pie chart]

- **Electronic components**: 48.1%
- **PC Polycarbonate**: 28.66%
- **UP Polyester**: 0.26%
- **Aluminium**: 1.4%
- **Copper**: <0.1%
- **Ferrous alloys**: <0.1%
- **Cardboard**: 14.27%
- **Paper**: 6.75%
- **Glass**: <0.1%
- **PA Polyamide**: 0.46%
- **PC Polycarbonate**: 28.66%
- **PA Polyamide**: 0.46%

**Plastics**: 29.4%
**Metals**: 1.5%
**Others**: 69.1%

**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/](https://www.se.com/ww/en/work/support/green-premium/)

**Additional environmental information**

**End Of Life**

**Recyclability potential**: 2%

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 components needed**

### Use scenario
- **24VDC POWER SUPPLY AD MODULE 200/240 VAC will in active phase 34 % of the time with 4.2W power consumption and in Off Phase 66% during 10 years of lifetime.**

### 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
- **Europe**

### Energy model used

<table>
<thead>
<tr>
<th>Impact indicators</th>
<th>Unit</th>
<th>Total</th>
<th>Manufacturing</th>
<th>Distribution</th>
<th>Installation</th>
<th>Use</th>
<th>End of Life</th>
<th>Loads and Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution to climate change</td>
<td>kg CO₂ eq</td>
<td>6.18E+01</td>
<td>9.74E+00</td>
<td>5.92E-02</td>
<td>1.47E-01</td>
<td>5.13E+01</td>
<td>6.05E-01</td>
<td>-1.06E-01</td>
</tr>
<tr>
<td>Contribution to climate change-fossil</td>
<td>kg CO₂ eq</td>
<td>6.17E+01</td>
<td>9.71E+00</td>
<td>5.92E-02</td>
<td>1.41E-01</td>
<td>5.12E+01</td>
<td>5.88E-01</td>
<td>-1.21E-01</td>
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<tr>
<td>Contribution to climate change-biogenic</td>
<td>kg CO₂ eq</td>
<td>1.18E-01</td>
<td>2.59E-02</td>
<td>0*</td>
<td>6.55E-03</td>
<td>6.84E-02</td>
<td>1.76E-02</td>
<td>1.49E-02</td>
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<tr>
<td>Contribution to climate change-land use and land use change</td>
<td>kg CO₂ eq</td>
<td>7.84E-09</td>
<td>7.16E-09</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>6.79E-10</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>Contribution to ozone depletion</td>
<td>kg CFC-11 eq</td>
<td>4.35E-06</td>
<td>4.10E-06</td>
<td>0*</td>
<td>9.76E-09</td>
<td>2.19E-07</td>
<td>2.33E-08</td>
<td>-6.81E-09</td>
</tr>
<tr>
<td>Contribution to acidification</td>
<td>mol H+ eq</td>
<td>3.50E-01</td>
<td>4.76E-02</td>
<td>3.95E-04</td>
<td>5.85E-04</td>
<td>2.93E-01</td>
<td>8.92E-03</td>
<td>-6.70E-04</td>
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<tr>
<td>Contribution to eutrophication, freshwater</td>
<td>kg (PO₄)³⁻ eq</td>
<td>1.65E-04</td>
<td>1.62E-05</td>
<td>2.22E-08</td>
<td>1.06E-06</td>
<td>1.40E-04</td>
<td>7.62E-06</td>
<td>-8.90E-07</td>
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<tr>
<td>Contribution to eutrophication marine</td>
<td>kg N eq</td>
<td>5.05E-02</td>
<td>1.05E-02</td>
<td>1.86E-04</td>
<td>1.55E-04</td>
<td>3.32E-02</td>
<td>6.42E-03</td>
<td>-1.04E-04</td>
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<tr>
<td>Contribution to eutrophication, terrestrial</td>
<td>kg N eq</td>
<td>5.86E-01</td>
<td>8.02E-02</td>
<td>2.04E-03</td>
<td>1.17E-03</td>
<td>4.99E-01</td>
<td>2.97E-03</td>
<td>-8.34E-04</td>
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<tr>
<td>Contribution to photochemical ozone formation - human health</td>
<td>kg COVNM eq</td>
<td>1.34E-01</td>
<td>2.49E-02</td>
<td>5.18E-04</td>
<td>3.12E-04</td>
<td>1.07E-01</td>
<td>1.21E-03</td>
<td>-2.16E-04</td>
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<tr>
<td>Contribution to resource use, minerals and metals</td>
<td>kg Sb eq</td>
<td>7.46E-04</td>
<td>7.42E-04</td>
<td>0*</td>
<td>0*</td>
<td>3.71E-06</td>
<td>0*</td>
<td>-2.89E-07</td>
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<tr>
<td>Contribution to resource use, fossils</td>
<td>MJ</td>
<td>1.58E+03</td>
<td>2.47E+02</td>
<td>8.24E-01</td>
<td>1.53E+00</td>
<td>1.31E+03</td>
<td>3.52E+00</td>
<td>-8.67E-01</td>
</tr>
<tr>
<td>Contribution to water use</td>
<td>m³ eq</td>
<td>1.21E+02</td>
<td>4.55E+00</td>
<td>0*</td>
<td>6.29E-02</td>
<td>1.81E+00</td>
<td>1.15E+02</td>
<td>-2.54E-02</td>
</tr>
</tbody>
</table>

**Mandatory Indicators**

24VDC POWER SUPPLY AD MODULE 200/240 VAC - LV454444

**Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - http://www.schneider-electric.com/contact**

Additional indicators for the French regulation are available as well.
### Inventory flows Indicators

| Contribution to use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 2.61E+02 | 9.79E+00 | 0° | 1.10E-01 | 2.51E+02 | 5.01E-01 | 4.22E-01 |
| Contribution to use of renewable primary energy resources used as raw material | MJ | 3.28E-01 | 3.28E-01 | 0° | 0° | 0° | 0° | -3.49E-01 |
| Contribution to total use of renewable primary energy resources | MJ | 2.62E+02 | 1.01E+01 | 0° | 1.10E-01 | 2.51E+02 | 5.01E-01 | 7.30E-02 |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 1.55E+03 | 2.42E+02 | 8.24E-01 | 1.53E+00 | 1.31E+03 | 3.52E+00 | -8.67E-01 |
| Contribution to use of non renewable primary energy resources used as raw material | MJ | 5.08E+00 | 5.08E+00 | 0° | 0° | 0° | 0° | 0.00E+00 |
| Contribution to total use of non-renewable primary energy resources | MJ | 1.56E+03 | 2.47E+02 | 8.24E-01 | 1.53E+00 | 1.31E+03 | 3.52E+00 | -8.67E-01 |
| Contribution to use of secondary material | kg | 7.12E-02 | 7.12E-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 | 3.16E+00 | 1.06E+01 | 0° | 1.47E-03 | 4.22E+02 | 3.01E+00 | -5.91E-04 |
| Contribution to hazardous waste disposed | kg | 4.01E+01 | 3.88E+01 | 0° | 0° | 9.58E-01 | 3.06E-01 | -1.14E-02 |
| Contribution to non hazardous waste disposed | kg | 1.53E+01 | 7.34E+00 | 2.07E-03 | 4.80E-01 | 7.38E+00 | 1.23E-01 | -1.23E+00 |
| Contribution to radioactive waste disposed | kg | 6.19E-02 | 6.03E-02 | 0° | 6.44E-05 | 1.54E-03 | 0° | -1.52E-04 |
| Contribution to components for reuse | kg | 0.00E+00 | 0° | 0° | 0° | 0° | 0° | 0.00E+00 |
| Contribution to materials for recycling | kg | 8.65E-02 | 0° | 0° | 8.10E-02 | 0° | 5.50E-03 | 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 v5.9.4, database version 2022-01 in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCR ed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - [http://www.schneider-electric.com/contact](http://www.schneider-electric.com/contact)

For all the impact indicators, The Use stage is the greatest contributor due to the energy losses occurring throughout the product reference service lifetime except the Climate change-Land use and land use change (GWPU). Ozone depletion (ODP), Resource use, minerals and metals(ADPe) and Water Use(WU) stages. The manufacturing stage is the main contributor on Climate change-Land use and land use change (GWPU), Ozone depletion (ODP), Resource use, minerals and metals(ADPe) stages. The End Of Life stage is the main contributor on Water use (WU).

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 :
- SCHN-01048-V01.01-EN
- PSR-0005-ed2-2016 03 29

### Verification:
- Internal
- External

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

PEP are compliant with EN 50693:2019

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

Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »

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