

Product Environmental Profile

**Switch disconnecter, Compact INS2500 , 2500 A,
standard version with black rotary handle, 4P**

Compact INS switch disconnecter





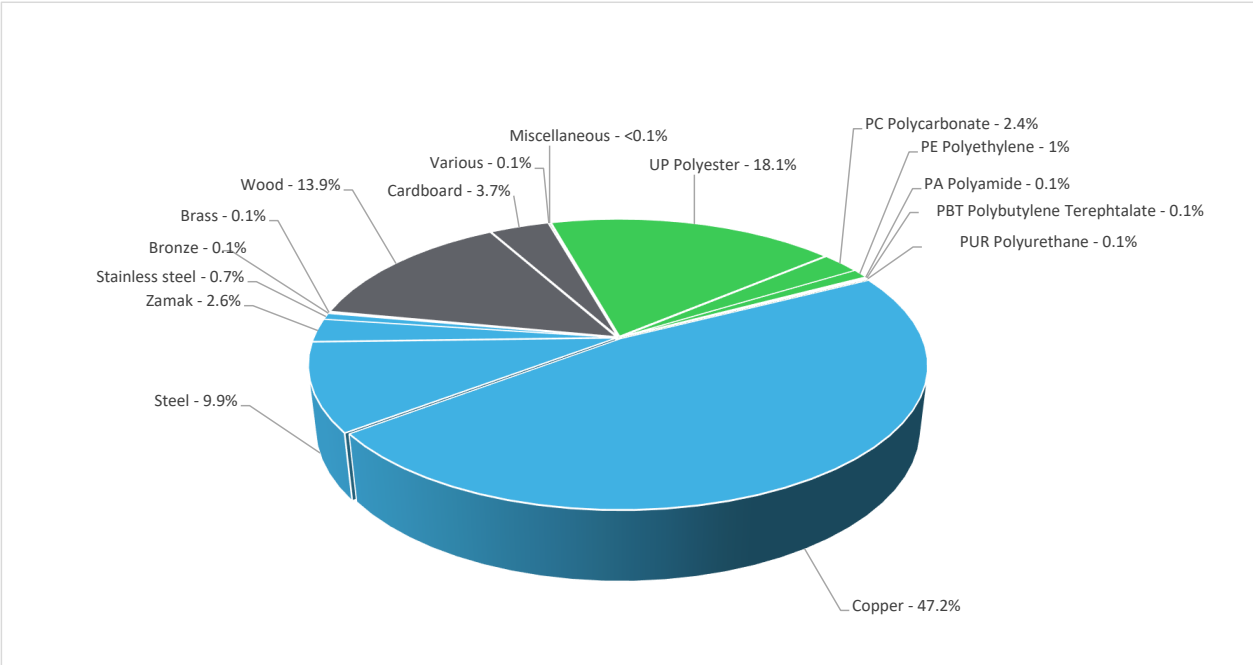
General information

| | |
|----------------------------|---|
| Reference product | Switch disconnecter, Compact INS2500 , 2500 A, standard version with black rotary handle, 4P - 31341 |
| Description of the product | <p>This Compact INS2500 is a 4 poles non-automatic switch-disconnector with black rotary handle. It is suitable for isolation with positive contact indication, as defined by IEC 60947-1 and IEC60947-3 standards. The operational current is 2500A at 415VAC in categoriesAC21B, AC22B.</p> <p>The rated voltage is 690VAC 50/60Hz or 250VDC. The black rotary handle is designed to offer easy operation and high performance in interruption of currents.</p> |
| Description of the range | <p>The products of the range are: This range consists of 800A-2500 A, 3P/4P switch disconnecter, the representative product used for analysis is Switch disconnecter, Compact INS2500 , 2500 A, standard version with black rotary handle, 4 P (31341)</p> <p>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.</p> |
| Functional unit | Turn off all or part of an installation by separating the installation or part of the installation of all electrical energy or earth, for safety reasons with a rated voltage U, and rated current In ensuring isolation characterised by a rated voltage Ui, and if applicable the specific specifications, according to the appropriate use scenario, and during the reference service life of the product of 20 years. |
| Specifications are: | U = 690 V AC 50/60 Hz 250 V DC In = 2500 A Ui = 1000 V AC 50/60 Hz |



Constituent materials

| | |
|------------------------|---|
| Reference product mass | 55117.82 g including the product, its packaging and additional elements and accessories |
|------------------------|---|



| | |
|----------|--------|
| Plastics | 21.80% |
| Metals | 60.60% |
| Others | 17.60% |



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: | 95% | The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used. |
|-------------|--------------------------|-----|---|



Environmental impacts

| | | | | |
|----------------------------------|---|---|---|---|
| Reference service life time | 20 years | | | |
| Product category | Disconnectors - Low voltage | | | |
| Installation elements | No special components needed | | | |
| Use scenario | Load rate = 50 % In Use rate (closed device) = 30 % RLT | | | |
| Time representativeness | The collected data are representative of the year 2023 | | | |
| 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 | Rest of the World | | | |
| Energy model used | [A1 - A3] | [A5] | [B6] | [C1 - C4] |
| | Electricity Mix; Low voltage; 2018; China, CN | Electricity Mix; Low voltage; 2018; China, CN | Electricity Mix; Low voltage; 2018; China, CN | Electricity Mix; Low voltage; 2018; China, CN |

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.schneider-electric.com/contact>

| Mandatory Indicators | | Switch disconnecter, Compact INS2500 , 2500 A, standard version with black rotary handle, 4P - 31341 | | | | | | |
|--|---------------------------|--|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| 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 | 3.91E+03 | 2.81E+02 | 8.50E+01 | 1.52E+01 | 3.44E+03 | 8.36E+01 | -8.61E+01 |
| Contribution to climate change-fossil | kg CO2 eq | 3.82E+03 | 2.19E+02 | 8.50E+01 | 2.35E+00 | 3.44E+03 | 7.81E+01 | -8.09E+01 |
| Contribution to climate change-biogenic | kg CO2 eq | 8.09E+01 | 6.20E+01 | 0* | 1.28E+01 | 4.93E-01 | 5.57E+00 | -5.24E+00 |
| Contribution to climate change-land use and land use change | kg CO2 eq | 2.05E-03 | 1.91E-03 | 0* | 0* | 0* | 1.49E-04 | 0.00E+00 |
| Contribution to ozone depletion | kg CFC-11 eq | 1.39E-04 | 4.15E-05 | 7.46E-05 | 2.15E-08 | 1.96E-05 | 3.29E-06 | -2.14E-05 |
| Contribution to acidification | mol H+ eq | 3.35E+01 | 6.66E+00 | 3.49E-01 | 4.79E-03 | 2.58E+01 | 7.62E-01 | -4.61E+00 |
| Contribution to eutrophication, freshwater | kg (PO4) ³⁻ eq | 2.01E-01 | 2.67E-02 | 0* | 0* | 7.27E-04 | 1.74E-01 | -1.18E-04 |
| Contribution to eutrophication marine | kg N eq | 3.31E+00 | 2.96E-01 | 1.59E-01 | 1.64E-03 | 2.75E+00 | 9.75E-02 | -8.02E-02 |
| Contribution to eutrophication, terrestrial | mol N eq | 3.76E+01 | 3.37E+00 | 1.72E+00 | 2.08E-02 | 3.12E+01 | 1.27E+00 | -9.42E-01 |
| Contribution to photochemical ozone formation - human health | kg COVNM eq | 1.14E+01 | 1.32E+00 | 5.74E-01 | 4.35E-03 | 9.20E+00 | 3.19E-01 | -5.58E-01 |
| Contribution to resource use, minerals and metals | kg Sb eq | 5.77E-02 | 5.21E-02 | 0* | 0* | 4.41E-05 | 5.52E-03 | -4.29E-02 |
| Contribution to resource use, fossils | MJ | 6.51E+04 | 6.09E+03 | 1.05E+03 | 7.44E+00 | 5.56E+04 | 2.30E+03 | -1.52E+03 |
| Contribution to water use | m3 eq | 6.65E+02 | 3.40E+02 | 4.29E+00 | 1.80E+00 | 1.52E+02 | 1.67E+02 | -2.21E+02 |

| Inventory flows Indicators | | Switch disconnecter, Compact INS2500 , 2500 A, standard version with black rotary handle, 4P - 31341 | | | | | | |
|---|------|--|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| 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 use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 6.66E+03 | 6.35E+02 | 0* | 0* | 5.89E+03 | 1.35E+02 | -1.16E+02 |
| Contribution to use of renewable primary energy resources used as raw material | MJ | 1.88E+02 | 1.88E+02 | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to total use of renewable primary energy resources | MJ | 6.84E+03 | 8.22E+02 | 0* | 0* | 5.89E+03 | 1.35E+02 | -1.16E+02 |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 6.48E+04 | 5.79E+03 | 1.05E+03 | 7.44E+00 | 5.56E+04 | 2.30E+03 | -1.52E+03 |
| Contribution to use of non renewable primary energy resources used as raw material | MJ | 3.04E+02 | 3.04E+02 | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to total use of non-renewable primary energy resources | MJ | 6.51E+04 | 6.09E+03 | 1.05E+03 | 7.44E+00 | 5.56E+04 | 2.30E+03 | -1.52E+03 |

| Inventory flows Indicators | | Switch disconnecter, Compact INS2500 , 2500 A, standard version with black rotary handle, 4P - 31341 | | | | | | |
|--|------|--|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| 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 use of secondary material | kg | 0.00E+00 | 0* | 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 | 1.55E+01 | 7.94E+00 | 9.99E-02 | 4.19E-02 | 3.53E+00 | 3.90E+00 | -5.14E+00 |
| Contribution to hazardous waste disposed | kg | 4.70E+03 | 4.60E+03 | 0* | 0* | 1.04E+02 | 0* | -3.84E+03 |
| Contribution to non hazardous waste disposed | kg | 7.23E+02 | 1.07E+02 | 8.61E-02 | 1.12E+01 | 5.99E+02 | 5.00E+00 | -2.35E+01 |
| Contribution to radioactive waste disposed | kg | 6.74E-02 | 2.46E-02 | 1.68E-02 | 3.00E-04 | 2.45E-02 | 1.14E-03 | -1.33E-02 |
| Contribution to components for reuse | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* | 0.00E+00 |
| Contribution to materials for recycling | kg | 4.97E+01 | 5.32E+00 | 0* | 0* | 0* | 4.44E+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 | 1.12E+00 | 7.85E-01 | 0* | 0* | 0* | 3.38E-01 | 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 | 3.76E+00 |

| Mandatory Indicators | | Switch disconnecter, Compact INS2500 , 2500 A, standard version with black rotary handle, 4P - 31341 | | | | | | | | |
|--|---------------------------|--|------|------|------|------|------|----------|------|--|
| Impact indicators | Unit | [B1 - B7] - Use | [B1] | [B2] | [B3] | [B4] | [B5] | [B6] | [B7] | |
| Contribution to climate change | kg CO2 eq | 3.44E+03 | 0* | 0* | 0* | 0* | 0* | 3.44E+03 | 0* | |
| Contribution to climate change-fossil | kg CO2 eq | 3.44E+03 | 0* | 0* | 0* | 0* | 0* | 3.44E+03 | 0* | |
| Contribution to climate change-biogenic | kg CO2 eq | 4.93E-01 | 0* | 0* | 0* | 0* | 0* | 4.93E-01 | 0* | |
| Contribution to climate change-land use and land use change | kg CO2 eq | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* | |
| Contribution to ozone depletion | kg CFC-11 eq | 1.96E-05 | 0* | 0* | 0* | 0* | 0* | 1.96E-05 | 0* | |
| Contribution to acidification | mol H+ eq | 2.58E+01 | 0* | 0* | 0* | 0* | 0* | 2.58E+01 | 0* | |
| Contribution to eutrophication, freshwater | kg (PO4) ³⁻ eq | 7.27E-04 | 0* | 0* | 0* | 0* | 0* | 7.27E-04 | 0* | |
| Contribution to eutrophication marine | kg N eq | 2.75E+00 | 0* | 0* | 0* | 0* | 0* | 2.75E+00 | 0* | |
| Contribution to eutrophication, terrestrial | mol N eq | 3.12E+01 | 0* | 0* | 0* | 0* | 0* | 3.12E+01 | 0* | |
| Contribution to photochemical ozone formation - human health | kg COVNM eq | 9.20E+00 | 0* | 0* | 0* | 0* | 0* | 9.20E+00 | 0* | |
| Contribution to resource use, minerals and metals | kg Sb eq | 4.41E-05 | 0* | 0* | 0* | 0* | 0* | 4.41E-05 | 0* | |
| Contribution to resource use, fossils | MJ | 5.56E+04 | 0* | 0* | 0* | 0* | 0* | 5.56E+04 | 0* | |
| Contribution to water use | m3 eq | 1.52E+02 | 0* | 0* | 0* | 0* | 0* | 1.52E+02 | 0* | |

| Inventory flows Indicators | | Switch disconnecter, Compact INS2500 , 2500 A, standard version with black rotary handle, 4P - 31341 | | | | | | | |
|---|------|--|------|------|------|------|------|----------|------|
| 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 | 5.89E+03 | 0* | 0* | 0* | 0* | 0* | 5.89E+03 | 0* |
| Contribution to use of renewable primary energy resources used as raw material | MJ | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to total use of renewable primary energy resources | MJ | 5.89E+03 | 0* | 0* | 0* | 0* | 0* | 5.89E+03 | 0* |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 5.56E+04 | 0* | 0* | 0* | 0* | 0* | 5.56E+04 | 0* |
| Contribution to use of non renewable primary energy resources used as raw material | MJ | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to total use of non-renewable primary energy resources | MJ | 5.56E+04 | 0* | 0* | 0* | 0* | 0* | 5.56E+04 | 0* |
| Contribution to use of secondary material | kg | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to use of renewable secondary fuels | MJ | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to use of non renewable secondary fuels | MJ | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to net use of freshwater | m³ | 3.53E+00 | 0* | 0* | 0* | 0* | 0* | 3.53E+00 | 0* |
| Contribution to hazardous waste disposed | kg | 1.04E+02 | 0* | 0* | 0* | 0* | 0* | 1.04E+02 | 0* |
| Contribution to non hazardous waste disposed | kg | 5.99E+02 | 0* | 0* | 0* | 0* | 0* | 5.99E+02 | 0* |
| Contribution to radioactive waste disposed | kg | 2.45E-02 | 0* | 0* | 0* | 0* | 0* | 2.45E-02 | 0* |
| Contribution to components for reuse | kg | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to materials for recycling | kg | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to materials for energy recovery | kg | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |
| Contribution to exported energy | MJ | 0* | 0* | 0* | 0* | 0* | 0* | 0* | 0* |

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

Life cycle assessment performed with EIME version v6.1, database version 2023-02 in compliance with ISO14044, EF 3.0 method is applied, for biogenic carbon storage, assessment methodology 0/0 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 : | ENVPEP1304028_V3 | Drafting rules | PCR-4-ed4-EN-2021 09 06 |
| Date of issue | 09-2024 | Supplemented by Information and reference documents | PSR-0005-ed3.1-EN-2023 12 08 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" | | | |

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