# **Product Environmental Profile**

#### ComPacT BREAKER NSX250F 36kA AC 3P3D 250A 2.2



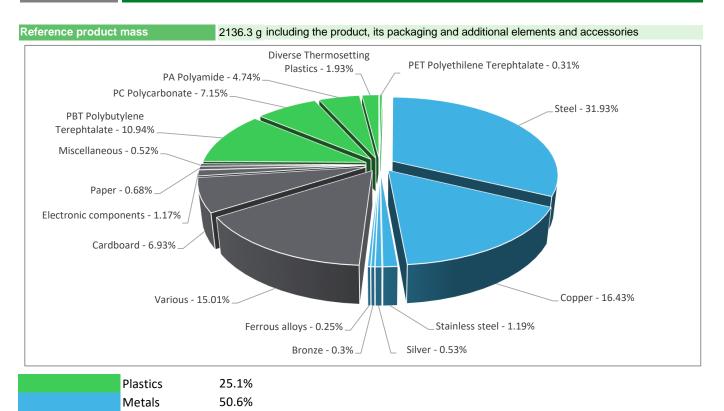




### **General information**

| Representative product     | ComPacT BREAKER NSX250F 36kA AC 3P3D 250A 2.2 - C25F32D250   |  |  |  |  |
|----------------------------|--|--|--|--|--|
| Description of the product | The ComPact NSX250F 3 pole circuit breaker equipped with Micrologic 2.2 trip unit is designed to provide protection against overloads and short-circuits for industrial and commercial electrical distribution systems with assigned voltage upto 690VAC and rated current of 250A.  |  |  |  |  |
| Functional unit            | This product is to protect the installation during 20 years against overloads and short-circuits in circuit with assigned voltage 690VAC and rated current 250A. This protection is ensured in accordance with the following parameters:  - Number of poles = 3  - Rated service breaking capacity Ics at 380/415 V AC = 36 kA (according to IEC 60947-2)  - Tripping curve = Long time and instantances protections |  |  |  |  |

## Constituent materials



## E | Substance assessment

24.3%

Others

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 2 January 2013, amended in March 2015, 2015/863/EU and in November 2017, 2017/2102/EU) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium or flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE), Bis (2-ethylhexyl)phthalate - DEHP, Benzyl butyl phthalate – BBP, Dibutyl phthalate - DBP, Diisobutyl phthalate - DIBP) as mentioned in the Directive.

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website <a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page</a>



| The ComPacT BREAKER NSX250F 36kA AC 3P3D 250A 2.2 presents the following relevent environmental aspects |   |  |  |  |  |  |
|---|---|--|--|--|--|--|
| Manufacturing   | Manufactured at a Schneider Electric production site ISO14001 certified   |  |  |  |  |  |
|   | Weight and volume of the packaging optimized, based on the European Union's packaging directive   |  |  |  |  |  |
| Distribution  | Packaging weight is 146.7 g, consisting of Cardboard (96.9%), Paper (2.6%) & PE film (0.5%).  |  |  |  |  |  |
|   | Product distribution optimised by setting up local distribution centres   |  |  |  |  |  |
| Installation  | The product does not require special installation procedure and requires little to no energy to install. The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal). |  |  |  |  |  |
| Use   | The product does not require special maintenance operations.  |  |  |  |  |  |
|   | End of life optimized to decrease the amount of waste and allow recovery of the product components and materials  |  |  |  |  |  |
|   | This product contains Plastic part (194g) with Brominated Flame Retardant & Printed Circuit Board Assembly (21.27g) that should be separated from the stream of waste so as to optimize end-of-life treatment.                      |  |  |  |  |  |
| End of life   | The location of these components and other recommendations are given in the End of Life Instruction document which is available on the Schneider-Electric Green Premium website   |  |  |  |  |  |
|   | http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page  |  |  |  |  |  |
|   | Recyclability potential:  Based on "ECO'DEEE recyclability and recoverability calculation method"  (version V1, 20 Sep. 2008 presented to the French Agency for Environment and Energy Management: ADEME).                          |  |  |  |  |  |

# **Environmental impacts**

| Reference life time              | 20 years  |  |  |   |  |  |
|----------------------------------|---|--|--|---|--|--|
| Product category                 | Circuit-breakers  |  |  |   |  |  |
| 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 mode 30% of the time with a power use of 13.13W and in stand-by mode 70% of the time with a power use of 0W, for 20 years.   |  |  |   |  |  |
| Geographical representativeness  | Global  |  |  |   |  |  |
| 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. |  |  |   |  |  |
|                                  | Manufacturing   | Installation   | Use  | End of life   |  |  |
| Energy model used                | Energy model used: SE Alpes   | Electricity mix;<br>AC;consumption mix, at<br>consumer; 220V; CN;at<br>consumer; < 1kV; EU-27; at<br>consumer; 240V; AU;at<br>consumer; 230V; IN | Electricity mix; AC;consumption mix, at consumer; 220V; CN;at consumer; < 1kV; EU- 27; at consumer; 240V; AU;at consumer; 230V; IN | Electricity mix; AC;consumption mix, at consumer; 220V; CN;at consumer; < 1kV; EU-27; at consumer; 240V; AU;at consumer; 230V; IN |  |  |

| Compulsory indicators                            |                                     | ComPacT B | REAKER NSX250I | F 36kA AC 3P3 | D 250A 2.2 - 0 | 25F32D250 |             |
|--|-------------------------------------|-----------|----------------|---------------|----------------|-----------|-------------|
| Impact indicators                                | Unit                                | Total     | Manufacturing  | Distribution  | Installation   | Use       | End of Life |
| Contribution to mineral resources depletion      | kg Sb eq                            | 2.17E-02  | 2.17E-02       | 0*            | 0*             | 1.19E-05  | 0*          |
| Contribution to the soil and water acidification | kg SO₂ eq                           | 1.08E+00  | 1.03E-01       | 1.26E-03      | 0*             | 9.74E-01  | 5.85E-04    |
| Contribution to water eutrophication             | kg PO <sub>4</sub> 3- eq            | 1.93E-01  | 2.95E-02       | 2.90E-04      | 0*             | 1.63E-01  | 1.69E-04    |
| Contribution to global warming                   | kg CO <sub>2</sub> eq               | 6.39E+02  | 4.77E+01       | 2.76E-01      | 0*             | 5.90E+02  | 3.35E-01    |
| Contribution to ozone layer depletion            | kg CFC11<br>eq                      | 3.97E-05  | 2.74E-05       | 0*            | 0*             | 1.23E-05  | 1.40E-08    |
| Contribution to photochemical oxidation          | kg C <sub>2</sub> H <sub>4</sub> eq | 9.54E-02  | 7.46E-03       | 8.98E-05      | 0*             | 8.78E-02  | 6.05E-05    |



| Optional indicators   |      | ComPacT Bl | REAKER NSX250 | F 36kA AC 3P3 | D 250A 2.2 - ( | C25F32D250 |             |
|---|------|------------|---------------|---------------|----------------|------------|-------------|
| Impact indicators   | Unit | Total      | Manufacturing | Distribution  | Installation   | Use        | End of Life |
| Contribution to fossil resources depletion  | MJ   | 8.93E+03   | 5.64E+02      | 3.87E+00      | 0*             | 8.36E+03   | 2.28E+00    |
| Contribution to air pollution   | m³   | 5.89E+04   | 5.32E+03      | 1.17E+01      | 0*             | 5.35E+04   | 2.05E+01    |
| Contribution to water pollution   | m³   | 3.48E+04   | 6.54E+03      | 4.53E+01      | 0*             | 2.81E+04   | 2.54E+01    |
| Resources use   | Unit | Total      | Manufacturing | Distribution  | Installation   | Use        | End of Life |
| Use of secondary material   | kg   | 1.36E-01   | 1.36E-01      | 0*            | 0*             | 0*         | 0*          |
| Total use of renewable primary energy resources   | MJ   | 6.55E+02   | 7.49E+00      | 0*            | 0*             | 6.47E+02   | 0*          |
| Total use of non-renewable primary energy resources   | MJ   | 9.88E+03   | 6.37E+02      | 3.89E+00      | 0*             | 9.24E+03   | 2.83E+00    |
| Use of renewable primary energy excluding renewable primary energy used as raw material         | MJ   | 6.52E+02   | 4.66E+00      | 0*            | 0*             | 6.47E+02   | 0*          |
| Use of renewable primary energy resources used as raw material                                  | MJ   | 2.82E+00   | 2.82E+00      | 0*            | 0*             | 0*         | 0*          |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ   | 9.87E+03   | 6.22E+02      | 3.89E+00      | 0*             | 9.24E+03   | 2.83E+00    |
| Use of non renewable primary energy resources used as raw material                              | MJ   | 1.47E+01   | 1.47E+01      | 0*            | 0*             | 0*         | 0*          |
| Use of non renewable secondary fuels  | MJ   | 0.00E+00   | 0*            | 0*            | 0*             | 0*         | 0*          |
| Use of renewable secondary fuels  | MJ   | 0.00E+00   | 0*            | 0*            | 0*             | 0*         | 0*          |
| Waste categories  | Unit | Total      | Manufacturing | Distribution  | Installation   | Use        | End of Life |
| Hazardous waste disposed  | kg   | 1.64E+02   | 1.46E+02      | 0*            | 0*             | 1.52E+01   | 2.87E+00    |
| Non hazardous waste disposed  | kg   | 5.16E+02   | 1.08E+01      | 0*            | 0*             | 5.05E+02   | 0*          |
| Radioactive waste disposed  | kg   | 2.97E-01   | 1.53E-02      | 0*            | 0*             | 2.82E-01   | 0*          |
| Other environmental information   | Unit | Total      | Manufacturing | Distribution  | Installation   | Use        | End of Life |
| Materials for recycling   | kg   | 1.23E+00   | 1.16E-01      | 0*            | 1.45E-01       | 0*         | 9.73E-01    |
| Components for reuse  | kg   | 0.00E+00   | 0*            | 0*            | 0*             | 0*         | 0*          |
| Materials for energy recovery   | kg   | 5.06E-02   | 0*            | 0*            | 0*             | 0*         | 5.06E-02    |
| Exported Energy   | MJ   | 4.62E-04   | 4.34E-05      | 0*            | 4.18E-04       | 0*         | 0*          |

<sup>\*</sup> represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.9.3, database version 2020-12 in compliance with ISO14044.

The Manufacturing phase is impacting on Indicator of Abiotic depletion (elements, ultimate ultimate reserves) (ADPe for EN15804) & Ozone layer depletion ODP steady state (ODP for EN15804) and The Use phase is the life cycle phase which has the greatest impact on the rest of environmental indicators (based on compulsory indicators).

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 | ENVPEP2107007_V1 | Drafting rules                      | PCR-ed3-EN-2015 04 02      |
|---------------------|------------------|-------------------------------------|----------------------------|
| Date of issue       | 05/2022          | Supplemented by                     | PSR-0005-ed2-EN-2016 03 29 |
| Validity period     | 5 years          | Information and reference documents | www.pep-ecopassport.org    |

Independent verification of the declaration and data

Internal X External

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 - Self-declared environmental claims (Type II environmental labelling) »

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