# Product Environmental Profile

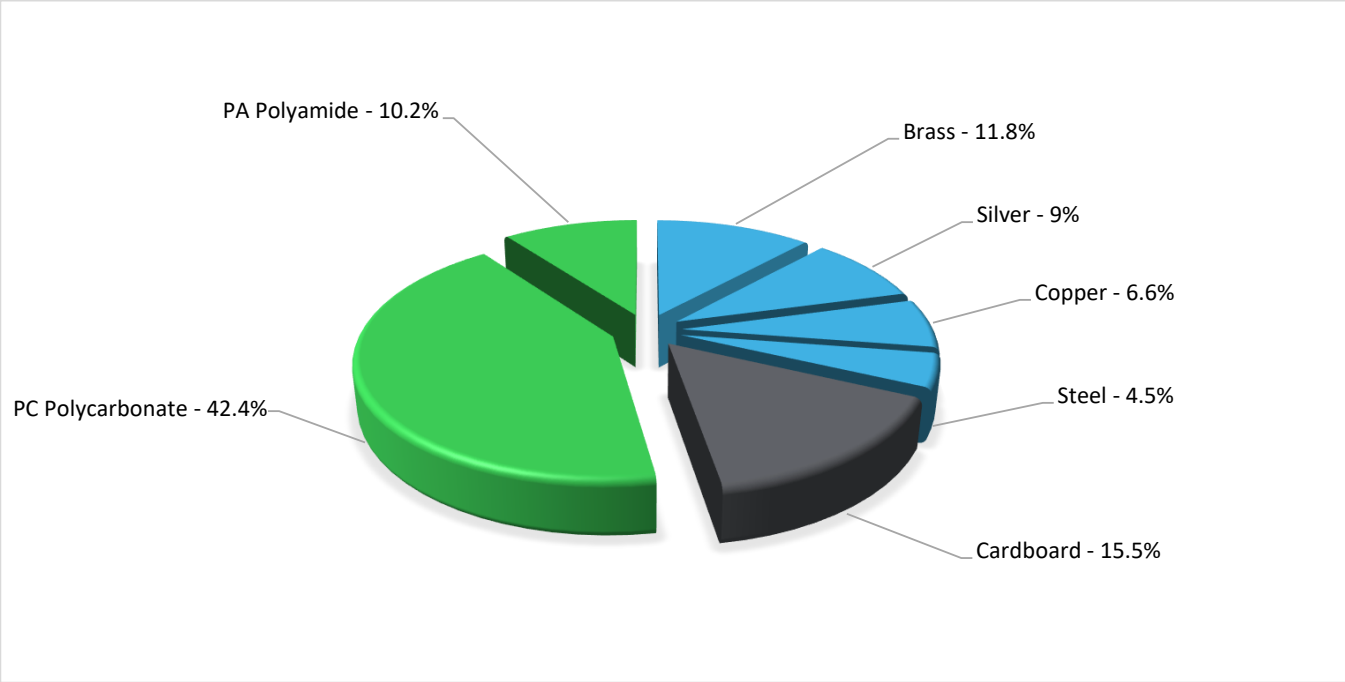
## DOUBLE POLE SWITCH WITH NEON AND EARTH

# General information

| | |
|---|---|
| **Representative product** | DOUBLE POLE SWITCH WITH NEON AND EARTH - KB31D20NE |
| **Description of the product** | DOUBLE POLE SWITCH WITH NEON AND EARTH is a switch to divert current. |
| **Functional unit** | Establish, support and interrupt for 20 years rated currents in normal conditions of circuit characterized by the current 20A, including any conditions specified for overload in operation characterized by the current 20A, for the operating voltage 250V AC for a specified time, in accordance with IEC 60669-1. |

# Constituent materials

| | | |
|---|---|---|
| **Reference product mass** | 112.3 g | including the product, its packaging and additional elements and accessories |




| | | |
|---|---|---|
| | Plastics | 52.6% |
| | Metals | 31.9% |
| | Others | 15.5% |

# Substance assessment

Products of this range are designed in conformity with the requirements of the RoHS directive (European Directive 2011/65/EU of 8 June 2011 and EU 2015/863) and do not contain, or only contain in the authorised proportions, lead, mercury, cadmium, hexavalent chromium, flame retardants (polybrominated biphenyls - PBB, polybrominated diphenyl ethers – PBDE), or phthalates (Bis(2-ethylhexyl) phthalate DEHP, Butyl benzyl 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

http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page

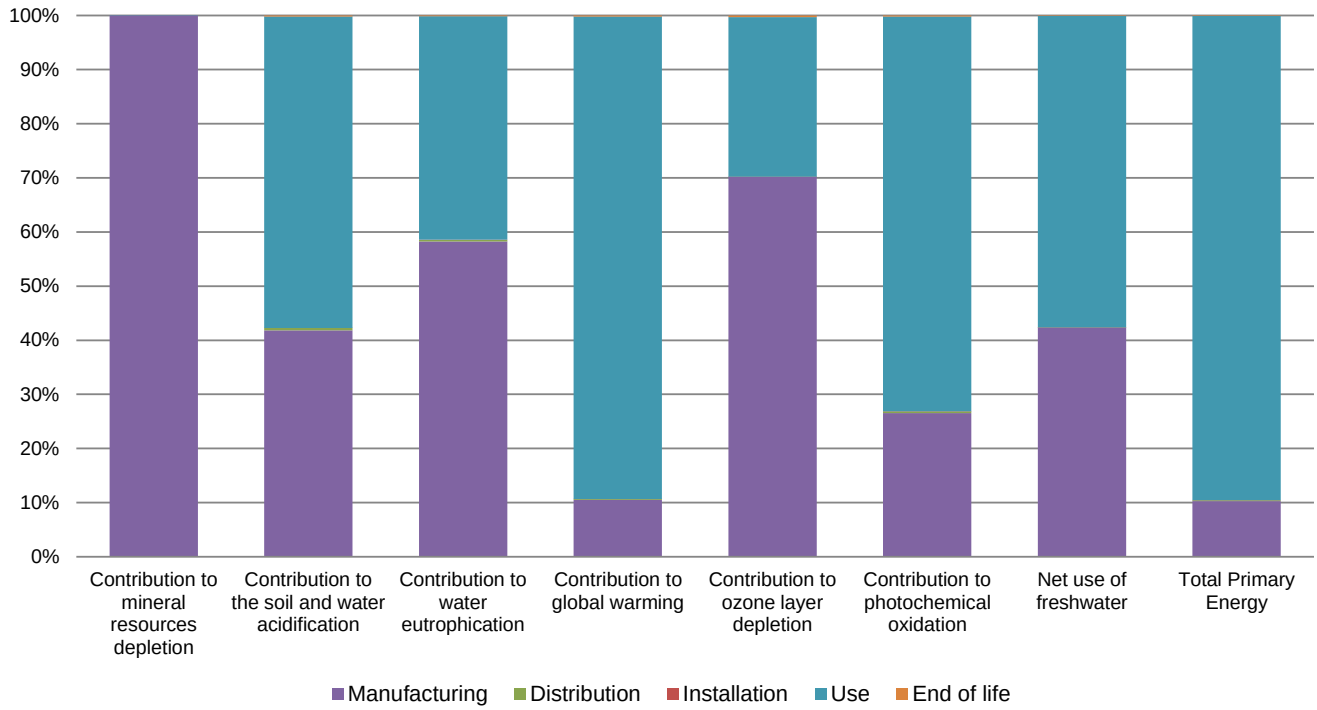
# Additional environmental information

| The DOUBLE POLE SWITCH WITH NEON AND EARTH presents the following relevent environmental aspects | |
|---|---|
| **Manufacturing** | Manufactured at a Schneider Electric production site ISO14001 certified |
| **Distribution** | Weight and volume of the packaging optimized, based on the European Union's packaging directive<br>Packaging weight is 17.3 g, consisting of Cardboard (100%) |
| **Installation** | Reference KB31D20NE does not require any installation operations. |
| **Use** | The product does not require special maintenance operations. |
| **End of life** | End of life optimized to decrease the amount of waste and allow recovery of the product components and materials<br>No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process.<br>Recyclability potential: **29%** 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** | Switches | | | |
| **Installation elements** | No special components needed | | | |
| **Use scenario** | Product dissipation is 0.578 W at 100% Load rate and 0.1445 W at load rate / rated current (In): 30% of In & percentage of utilization time: 50% | | | |
| **Geographical representativeness** | China | | | |
| **Technological representativeness** | All the technologies pertaining to product manufacturing are represented in manufacturing phase properly. | | | |
| **Energy model used** | **Manufacturing** | **Installation** | **Use** | **End of life** |
| | Energy model used: China | Electricity mix; AC; consumption mix, at consumer; 220V; CN | Electricity mix; AC; consumption mix, at consumer; 220V; CN | Electricity mix; AC; consumption mix, at consumer; 220V; CN |

| **Compulsory indicators** | **DOUBLE POLE SWITCH WITH NEON AND EARTH - KB31D20NE** | | | | | | |
|---|---|---|---|---|---|---|---|
| **Impact indicators** | **Unit** | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to mineral resources depletion | kg Sb eq | 6.99E-03 | 6.99E-03 | 0* | 0* | 0* | 0* |
| Contribution to the soil and water acidification | kg $SO_2$ eq | 1.46E-02 | 6.09E-03 | 6.62E-05 | 3.90E-06 | 8.37E-03 | 2.91E-05 |
| Contribution to water eutrophication | kg $PO_4^{3-}$ eq | 5.35E-03 | 3.12E-03 | 1.52E-05 | 9.48E-07 | 2.21E-03 | 8.64E-06 |
| Contribution to global warming | kg $CO_2$ eq | 8.67E+00 | 9.08E-01 | 1.45E-02 | 9.36E-04 | 7.72E+00 | 1.78E-02 |
| Contribution to ozone layer depletion | kg CFC11 eq | 2.09E-07 | 1.47E-07 | 2.94E-11 | 0* | 6.15E-08 | 6.84E-10 |
| Contribution to photochemical oxidation | kg $C_2H_4$ eq | 1.36E-03 | 3.60E-04 | 4.72E-06 | 2.92E-07 | 9.89E-04 | 2.98E-06 |
| **Resources use** | **Unit** | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Net use of freshwater | m3 | 1.50E-02 | 6.35E-03 | 0* | 0* | 8.62E-03 | 1.39E-05 |
| Total Primary Energy | MJ | 1.41E+02 | 1.45E+01 | 2.05E-01 | 0* | 1.26E+02 | 1.39E-01 |




| Optional indicators | | DOUBLE POLE SWITCH WITH NEON AND EARTH - KB31D20NE | | | | | |
|---|---|---|---|---|---|---|---|
| **Impact indicators** | **Unit** | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to fossil resources depletion | MJ | 1.28E+02 | 1.07E+01 | 2.04E-01 | 0* | 1.17E+02 | 1.12E-01 |
| Contribution to air pollution | m³ | 1.04E+03 | 2.40E+02 | 6.16E-01 | 0* | 8.01E+02 | 1.02E+00 |
| Contribution to water pollution | m³ | 5.71E+02 | 1.83E+02 | 2.38E+00 | 1.42E-01 | 3.84E+02 | 1.28E+00 |
| **Resources use** | **Unit** | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Use of secondary material | kg | 5.76E-03 | 5.76E-03 | 0* | 0* | 0* | 0* |
| Total use of renewable primary energy resources | MJ | 7.90E+00 | 1.42E+00 | 0* | 0* | 6.48E+00 | 0* |
| Total use of non-renewable primary energy resources | MJ | 1.33E+02 | 1.31E+01 | 2.05E-01 | 0* | 1.20E+02 | 1.39E-01 |
| Use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 7.56E+00 | 1.07E+00 | 0* | 0* | 6.48E+00 | 0* |
| Use of renewable primary energy resources used as raw material | MJ | 3.44E-01 | 3.44E-01 | 0* | 0* | 0* | 0* |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 1.32E+02 | 1.13E+01 | 2.05E-01 | 0* | 1.20E+02 | 1.39E-01 |
| Use of non renewable primary energy resources used as raw material | MJ | 1.86E+00 | 1.86E+00 | 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 | 1.92E+01 | 1.88E+01 | 0* | 0* | 2.49E-01 | 1.61E-01 |
| Non hazardous waste disposed | kg | 2.55E+00 | 1.14E+00 | 5.15E-04 | 0* | 1.40E+00 | 4.25E-04 |
| Radioactive waste disposed | kg | 5.42E-04 | 4.95E-04 | 3.67E-07 | 0* | 4.62E-05 | 6.80E-07 |
| **Other environmental information** | **Unit** | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Materials for recycling | kg | 5.55E-02 | 1.11E-02 | 0* | 1.72E-02 | 0* | 2.72E-02 |
| Components for reuse | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* |
| Materials for energy recovery | kg | 2.93E-03 | 0* | 0* | 0* | 0* | 2.93E-03 |
| Exported Energy | MJ | 5.47E-05 | 5.14E-06 | 0* | 4.96E-05 | 0* | 0* |

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

*Life cycle assessment performed with EIME version EIME v5.9.1, database version 2016-11 in compliance with ISO14044.*

The using phase has the greatest impact on Acidification potential of soil and water, Global Warming, Photochemical oxidation, Net use of freshwater and Total Primary Energy. The manufacturing phase has the greatest impact on Abiotic depletion, Eutrophication and Ozone layer depletion (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* | ENVPEP110902EN_V2 | *Drafting rules* | PCR-ed3-EN-2015 04 02 |
| *Date of issue* | 09/2021 | *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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