# Product Environmental Profile

## ABL8REM24050 and ABL8REM24030
## Regulated switch mode power supplies

# General information

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|---|---|
| **Representative product** | Regulated switch mode power supply -ABL8REM24050 |
| **Description of the product** | Reference product is a regulated switch mode power supply 1 or 2-phase - 100..240 V AC - 24V - 5 A included in active product category |
| **Description of the range** | Product range consists of ABL8REM24050 and ABL8REM24030 : regulated switch mode power supplies 1 or 2-phase - 100..240 V AC - 24V - 3 A to 5 A included in active product category<br><br>The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology |
| **Functional unit** | To convert 3,39 kW per day at nominal load from 100/240V AC input to Safety Extra Low Voltage DC output (24V) 100% of the time for 10 years |

# Constituent materials

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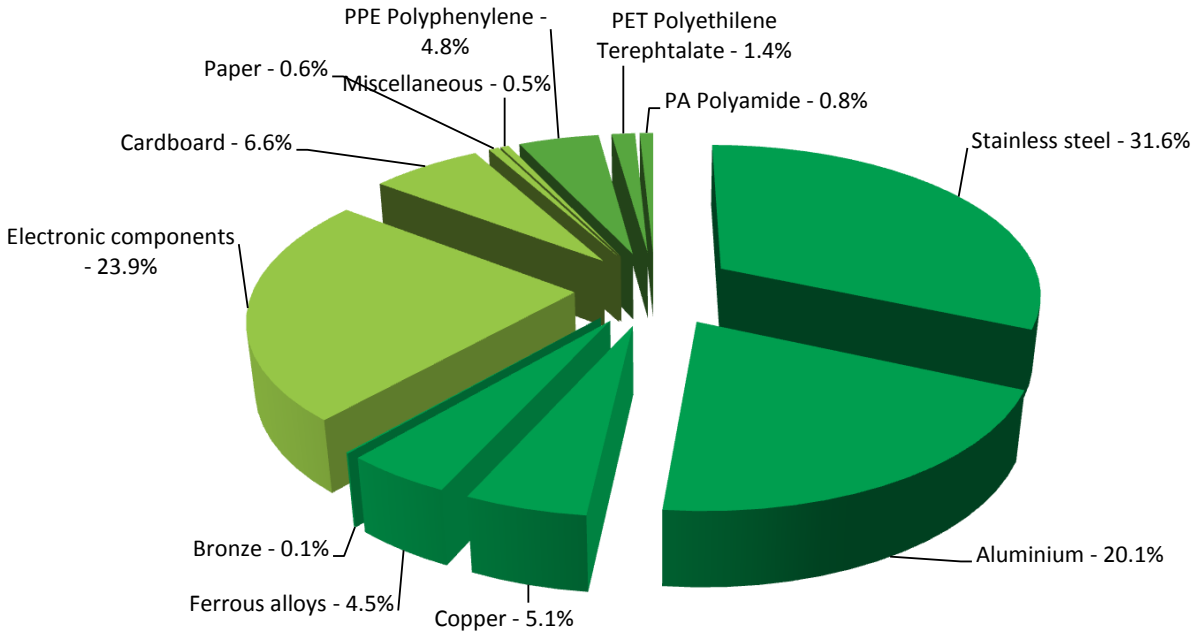
|---|---|---|
| **Reference product mass** | 812.5 g | including the product, its packaging and additional elements and accessories |




# 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 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) as mentioned in the Directive

As the products of the range are designed in accordance with the RoHS Directive (European Directive 2002/95/EC of 27 January 2003), they can be incorporated without any restriction in an assembly or an installation subject to this 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 Regulated switch mode power supply presents the following relevent environmental aspects | |
|---|---|
| **Manufacturing** | Manufactured at a Schneider Electric production site ISO14001 certified |
| **Distribution** | Weight and volume of the packaging is optimized, based on the European Union's packaging directive<br>Packaging weight is 58.1 g, consisting of cardboard (92%) and paper (8%) |
| **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>This product contains electronic cards (447g) integrating electrolytic capacitor (43,40g) that should be separated from the stream of waste so as to optimize end-of-life treatment<br>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<br>http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page<br>Recyclability potential: **48%** 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

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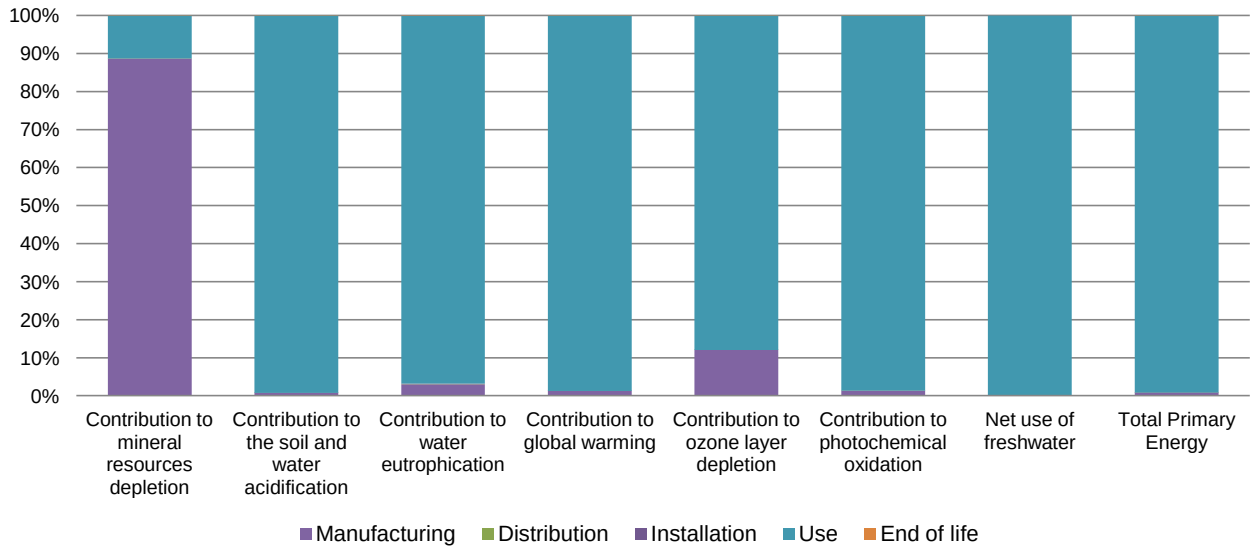
|---|---|---|---|---|
| **Reference life time** | 10 years | | | |
| **Installation elements** | Installation requires a manual operation in conformity of the operating manual | | | |
| **Use scenario** | The dissipated power depends on the conditions under which the product is implemented and used This dissipated power is 21.2 W for the ABL8 REM 24050 product. The thermal dissipation represents less than 17% of the power which passes through the product | | | |
| **Geographical representativeness** | Europe | | | |
| **Technological representativeness** | Reference product is a regulated switch mode power supply 1 or 2-phase - 100..240 V AC - 24V - 5 A included in active product category | | | |
| **Energy model used** | **Manufacturing** | **Installation** | **Use** | **End of life** |
| | Energy model used: China | Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27 | Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27 | Electricity grid mix; AC; consumption mix, at consumer; < 1kV; EU-27 |

| Compulsory indicators | Regulated switch mode power supply - ABL8REM24050 | | | | | |
|---|---|---|---|---|---|---|
| **Impact indicators** | **Unit** | Total | Manufacturing | Distribution | Installation | End of Life |
| Contribution to mineral resources depletion | kg Sb eq | 6,97E-04 | 6,18E-04 | 0* | 0* | 0* |
| Contribution to the soil and water acidification | kg $SO_2$ eq | 3,82E+00 | 2,84E-02 | 4,79E-04 | 0* | 4,09E-04 |
| Contribution to water eutrophication | kg $PO_4^{3-}$ eq | 2,37E-01 | 7,22E-03 | 1,10E-04 | 1,58E-04 | 2,04E-04 |
| Contribution to global warming | kg $CO_2$ eq | 9,22E+02 | 1,14E+01 | 1,05E-01 | 0* | 6,41E-01 |
| Contribution to ozone layer depletion | kg CFC11 eq | 6,74E-05 | 8,09E-06 | 0* | 0* | 2,47E-08 |
| Contribution to photochemical oxidation | kg $C_2H_4$ eq | 2,11E-01 | 2,73E-03 | 3,42E-05 | 0* | 3,32E-05 |
| **Resources use** | **Unit** | Total | Manufacturing | Distribution | Installation | End of Life |
| Net use of freshwater | m3 | 3,30E+03 | 0* | 0* | 0* | 0* |
| Total Primary Energy | MJ | 1,83E+04 | 1,56E+02 | 0* | 0* | 0* |




| Optional indicators | Regulated switch mode power supply - ABL8REM24050 | | | | | |
|---|---|---|---|---|---|---|
| **Impact indicators** | **Unit** | Total | Manufacturing | Distribution | Installation | End of Life |
| Contribution to fossil resources depletion | MJ | 1,05E+04 | 1,51E+02 | 1,47E+00 | 0* | 1,65E+00 |
| Contribution to air pollution | m³ | 4,07E+04 | 1,49E+03 | 4,46E+00 | 0* | 1,24E+01 |
| Contribution to water pollution | m³ | 3,88E+04 | 1,17E+03 | 1,72E+01 | 4,79E+00 | 2,77E+01 |
| **Resources use** | **Unit** | Total | Manufacturing | Distribution | Installation | End of Life |
| Use of secondary material | kg | 1,25E-02 | 1,25E-02 | 0* | 0* | 0* |
| Total use of renewable primary energy resources | MJ | 2,31E+03 | 3,17E+00 | 0* | 0* | 0* |
| Total use of non-renewable primary energy resources | MJ | 1,60E+04 | 1,53E+02 | 0* | 0* | 1,75E+00 |
| Use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 2,31E+03 | 2,07E+00 | 0* | 0* | 0* |
| Use of renewable primary energy resources used as raw material | MJ | 1,10E+00 | 1,10E+00 | 0* | 0* | 0* |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 1,60E+04 | 1,48E+02 | 0* | 0* | 1,75E+00 |
| Use of non renewable primary energy resources used as raw material | MJ | 4,61E+00 | 4,61E+00 | 0* | 0* | 0* |

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|---|---|---|---|---|---|---|
| Use of non renewable secondary fuels | MJ | 0,00E+00 | 0* | 0* | 0* | 0* |
| Use of renewable secondary fuels | MJ | 0,00E+00 | 0* | 0* | 0* | 0* |
| **Waste categories** | **Unit** | Total | Manufacturing | Distribution | Installation | End of Life |
| Hazardous waste disposed | kg | 2,28E+01 | 2,07E+01 | 0* | 0* | 1,60E+00 |
| Non hazardous waste disposed | kg | 3,40E+03 | 3,03E+00 | 0* | 0* | 0* |
| Radioactive waste disposed | kg | 2,27E+00 | 2,01E-03 | 0* | 0* | 0* |
| **Other environmental information** | **Unit** | Total | Manufacturing | Distribution | Installation | End of Life |
| Materials for recycling | kg | 3,60E-01 | 0* | 0* | 0* | 3,60E-01 |



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|---|---|---|---|---|---|---|
| Components for reuse | kg | 0,00E+00 | 0* | 0* | 0* | 0* |
| Materials for energy recovery | kg | 1,74E-01 | 0* | 0* | 0* | 1,74E-01 |
| Exported Energy | MJ | 0,00E+00 | 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 EIME v5.6, database version 2016-11.*

The use phase is the life cycle phase which has the greatest impact on the majority of environmental indicators (based on compulsory indicators).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

To extrapolate the impact to another product from the range, apply the following extrapolation rules to each indicator per life cycle stage:
MANUFACTURING(i) = (i) referent x [ 0.4 x (Mass of product in g / 754,5) + 0.2 x (Mass of packaging in g / 58) ]
DISTRIBUTION (i) = (i) referent x [Mass of product & packaging in g / 812,5]
INSTALLATION (i) = (i) referent constant
USE (i) = (i) referent x [Power dissipated in W / 21,2]
END OF LIFE (i) = (i) referent x [Mass of product in g / 754,5]

*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.*

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|---|---|---|---|
| *Registration N°* | SCHN-00204-V01.01-EN | *Drafting rules* | PCR-ed3-EN-2015 04 02 |
| *Verifier accreditation N°* | VH10 | *Supplemented by* | PSR-0005-ed2-EN-2016 03 29 |
| *Date of issue* | 05/2017 | *Information and reference documents* | www.pep-ecopassport.org |
| | | *Validity period* | 5 years |

*Independent verification of the declaration and data, in compliance with ISO 14025 : 2010*

Internal External X

*The PCR review was conducted by a panel of experts chaired by Philippe Osset (SOLINNEN)*

*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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