

# Product Environmental Profile

**MCB/RCD 2MOD 2P 16A 30MA 10KA**





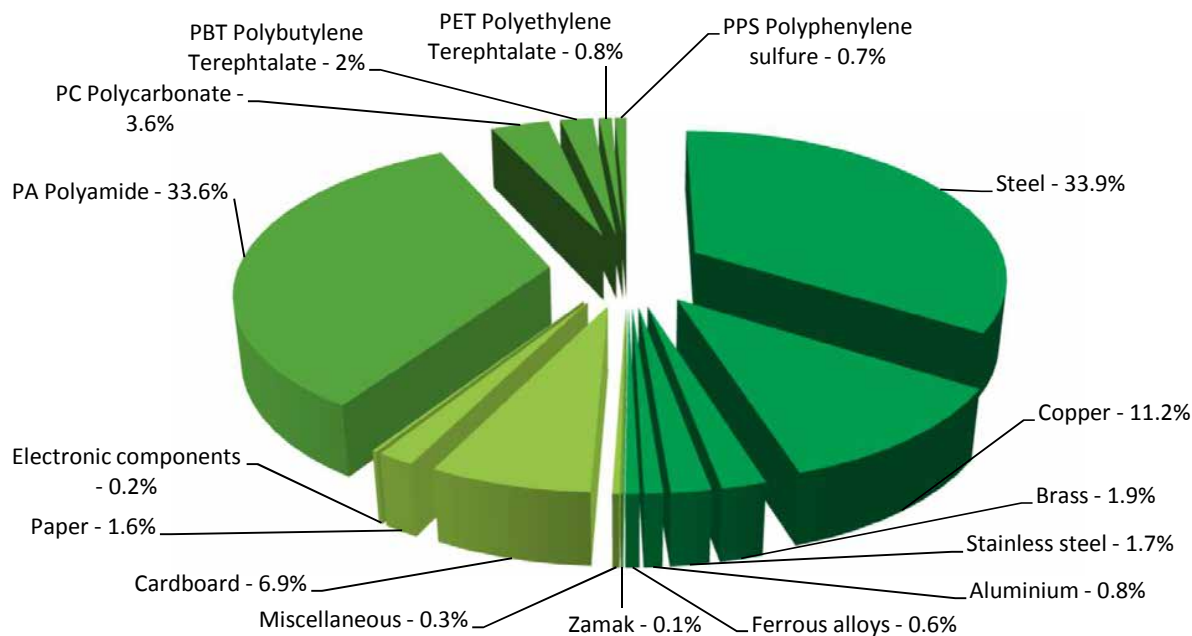
## General information

|                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Representative product</b>     | MCB/RCD 2MOD 2P 16A 30MA 10KA -4RCBM216/30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description of the product</b> | The main purpose of the Clipsal 4RCBM216/30 is to provide residual current and overcurrent protection for the wires and equipment in household and similar uses.                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Functional unit</b>            | Protect during 20 years the installation against overloads and short-circuits and people and premises at risk of fire or explosion against insulation defects in circuit with assigned voltage 240 VAC and rated current 16A. This protection is ensured in accordance with the following parameters: <ul style="list-style-type: none"> <li>- Number of poles 1P+N</li> <li>- Rated breaking capacity 10000A</li> <li>- Tripping curve C</li> <li>- Sensitivity 30mA</li> <li>- Type of differential protection AC type</li> </ul> |



## Constituent materials

|                               |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
| <b>Reference product mass</b> | 222,9 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 MCB/RCD 2MOD 2P 16A 30MA 10KA presents the following relevant environmental aspects

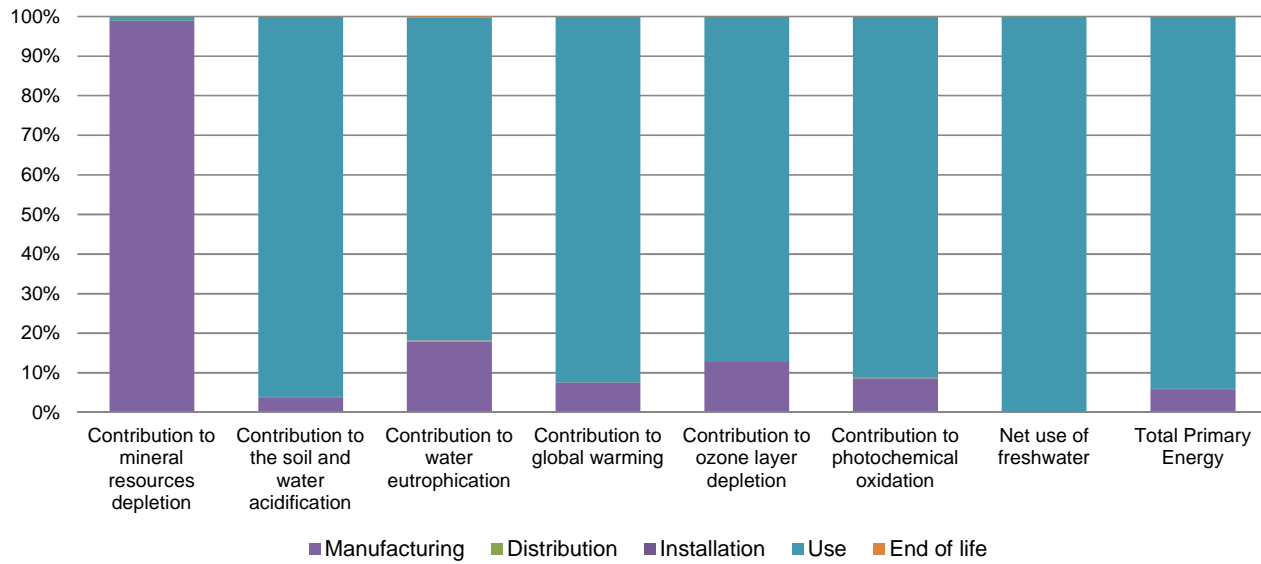
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Manufacturing</b> | Manufactured at a Schneider Electric production site ISO14001 certified                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Distribution</b>  | Weight and volume of the packaging optimized, based on the European Union's packaging directive<br>Packaging weight is 18.9 g, consisting of cardboard (82%), paper (18%)                                                                                                                                                                                                                                                                                                               |
| <b>Installation</b>  | Ref 4RCBM216/30 does not require any installations operations                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Use</b>           | The product does not require special maintenance operations.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>End of life</b>   | 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: <b>46%</b> 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

|                                         |                                                                                                                                                                  |                                                                      |                                                                      |                                                                      |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Reference life time</b>              | 20 years                                                                                                                                                         |                                                                      |                                                                      |                                                                      |
| <b>Product category</b>                 | Passive products - non-continuous operation                                                                                                                      |                                                                      |                                                                      |                                                                      |
| <b>Installation elements</b>            | No special components needed                                                                                                                                     |                                                                      |                                                                      |                                                                      |
| <b>Use scenario</b>                     | Product dissipation is 1 W full load, loading rate is 50% and service uptime percentage is 30%                                                                   |                                                                      |                                                                      |                                                                      |
| <b>Geographical representativeness</b>  | Europe                                                                                                                                                           |                                                                      |                                                                      |                                                                      |
| <b>Technological representativeness</b> | The main purpose of the Clipsal 4RCBM216/30 is to provide residual current and overcurrent protection for the wires and equipment in household and similar uses. |                                                                      |                                                                      |                                                                      |
| <b>Energy model used</b>                | <b>Manufacturing</b>                                                                                                                                             | <b>Installation</b>                                                  | <b>Use</b>                                                           | <b>End of life</b>                                                   |
|                                         | Energy model used: SPAIN                                                                                                                                         | 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                            |                                     | MCB/RCD 2MOD 2P 16A 30MA 10KA - 4RCBM216/30 |               |              |              |          |             |
|--------------------------------------------------|-------------------------------------|---------------------------------------------|---------------|--------------|--------------|----------|-------------|
| Impact indicators                                | Unit                                | Total                                       | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to mineral resources depletion      | kg Sb eq                            | 2.09E-04                                    | 2.07E-04      | 0*           | 0*           | 2.24E-06 | 0*          |
| Contribution to the soil and water acidification | kg SO <sub>2</sub> eq               | 1.12E-01                                    | 4.26E-03      | 1.31E-04     | 0*           | 1.07E-01 | 6.17E-05    |
| Contribution to water eutrophication             | kg PO <sub>4</sub> <sup>3-</sup> eq | 7.95E-03                                    | 1.42E-03      | 3.02E-05     | 1.27E-06     | 6.49E-03 | 1.73E-05    |
| Contribution to global warming                   | kg CO <sub>2</sub> eq               | 2.79E+01                                    | 2.09E+00      | 2.88E-02     | 0*           | 2.58E+01 | 3.30E-02    |
| Contribution to ozone layer depletion            | kg CFC11 eq                         | 1.92E-06                                    | 2.45E-07      | 0*           | 0*           | 1.68E-06 | 1.41E-09    |
| Contribution to photochemical oxidation          | kg C <sub>2</sub> H <sub>4</sub> eq | 6.48E-03                                    | 5.61E-04      | 9.37E-06     | 0*           | 5.90E-03 | 6.42E-06    |
| Resources use                                    | Unit                                | Total                                       | Manufacturing | Distribution | Installation | Use      | End of Life |
| Net use of freshwater                            | m <sup>3</sup>                      | 9.34E+01                                    | 1.83E-02      | 0*           | 0*           | 9.34E+01 | 0*          |
| Total Primary Energy                             | MJ                                  | 5.47E+02                                    | 3.19E+01      | 4.07E-01     | 0*           | 5.14E+02 | 2.99E-01    |



| Optional indicators                                                                             |      | MCB/RCD 2MOD 2P 16A 30MA 10KA - 4RCBM216/30 |               |              |              |          |             |
|-------------------------------------------------------------------------------------------------|------|---------------------------------------------|---------------|--------------|--------------|----------|-------------|
| Impact indicators                                                                               | Unit | Total                                       | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to fossil resources depletion                                                      | MJ   | 3.17E+02                                    | 2.38E+01      | 4.04E-01     | 0*           | 2.92E+02 | 2.73E-01    |
| Contribution to air pollution                                                                   | m³   | 1.62E+03                                    | 5.07E+02      | 1.22E+00     | 1.93E-01     | 1.11E+03 | 2.17E+00    |
| Contribution to water pollution                                                                 | m³   | 1.54E+03                                    | 4.65E+02      | 4.73E+00     | 2.06E-01     | 1.06E+03 | 2.62E+00    |
| Resources use                                                                                   | Unit | Total                                       | Manufacturing | Distribution | Installation | Use      | End of Life |
| Use of secondary material                                                                       | kg   | 8.64E-03                                    | 8.64E-03      | 0*           | 0*           | 0*       | 0*          |
| Total use of renewable primary energy resources                                                 | MJ   | 6.60E+01                                    | 5.84E-01      | 0*           | 0*           | 6.54E+01 | 0*          |
| Total use of non-renewable primary energy resources                                             | MJ   | 4.81E+02                                    | 3.13E+01      | 4.06E-01     | 0*           | 4.49E+02 | 2.99E-01    |
| Use of renewable primary energy excluding renewable primary energy used as raw material         | MJ   | 6.56E+01                                    | 2.46E-01      | 0*           | 0*           | 6.54E+01 | 0*          |
| Use of renewable primary energy resources used as raw material                                  | MJ   | 3.38E-01                                    | 3.38E-01      | 0*           | 0*           | 0*       | 0*          |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ   | 4.79E+02                                    | 2.89E+01      | 4.06E-01     | 0*           | 4.49E+02 | 2.99E-01    |
| Use of non renewable primary energy resources used as raw material                              | MJ   | 2.40E+00                                    | 2.40E+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   | 1.18E+01                                    | 1.14E+01      | 0*           | 1.91E-02     | 1.34E-02 | 3.14E-01    |
| Non hazardous waste disposed                                                                    | kg   | 9.73E+01                                    | 1.28E+00      | 0*           | 0*           | 9.60E+01 | 0*          |
| Radioactive waste disposed                                                                      | kg   | 6.48E-02                                    | 6.59E-04      | 0*           | 0*           | 6.41E-02 | 0*          |
| Other environmental information                                                                 | Unit | Total                                       | Manufacturing | Distribution | Installation | Use      | End of Life |
| Materials for recycling                                                                         | kg   | 1.29E-01                                    | 1.64E-02      | 0*           | 1.88E-02     | 0*       | 9.42E-02    |
| Components for reuse                                                                            | kg   | 0.00E+00                                    | 0*            | 0*           | 0*           | 0*       | 0*          |
| Materials for energy recovery                                                                   | kg   | 5.22E-03                                    | 6.63E-04      | 0*           | 0*           | 0*       | 4.56E-03    |
| Exported Energy                                                                                 | MJ   | 0.00E+00                                    | 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 EIME v5.5, 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).

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 N°                                                                                                             | SCHN-00243-V01.01-EN | Drafting rules                      | PCR-ed3-EN-2015 04 02                                                |
| Verifier accreditation N°                                                                                                   | VH08                 | Supplemented by                     | PSR-0005-ed2-EN-2016 03 29                                           |
| Date of issue                                                                                                               | 08/2017              | Information and reference documents | <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a> |
|                                                                                                                             |                      | 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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