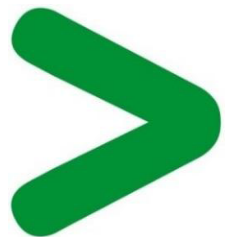


# Product Environmental Profile

## Complete Non-Illuminated Plastic Button and Switch





## General information

### Representative product

Complete Non-Illuminated Plastic Button and Switch -XB5AA31

### Description of the product

non-illuminated plastic complete unit with contact function. It combines simplicity of installation, flexibility, and robustness. It meets the requirements of the majority of industrial applications.

### Functional unit

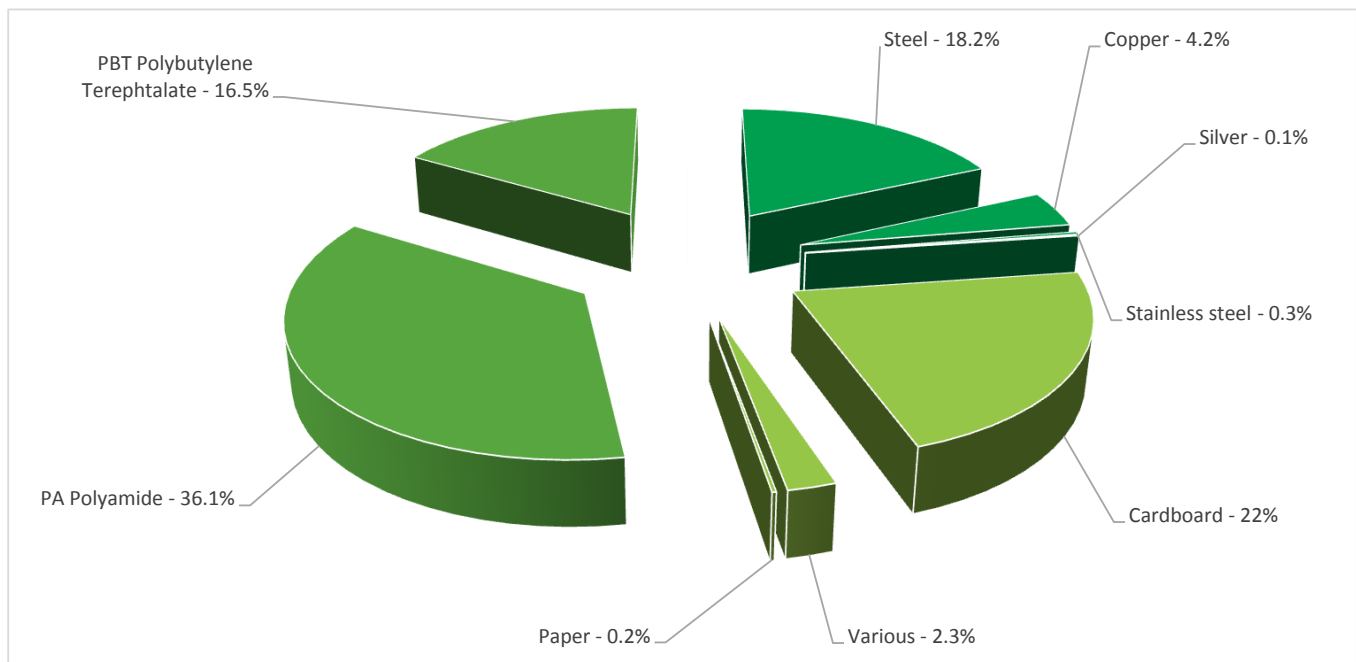
Switch ON or OFF during 20 years the 10A electrical contact with 30% use rate.



## Constituent materials

### Reference product mass

36.4 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 Complete Non-Illuminated Plastic Button and Switch presents the following relevant environmental aspects

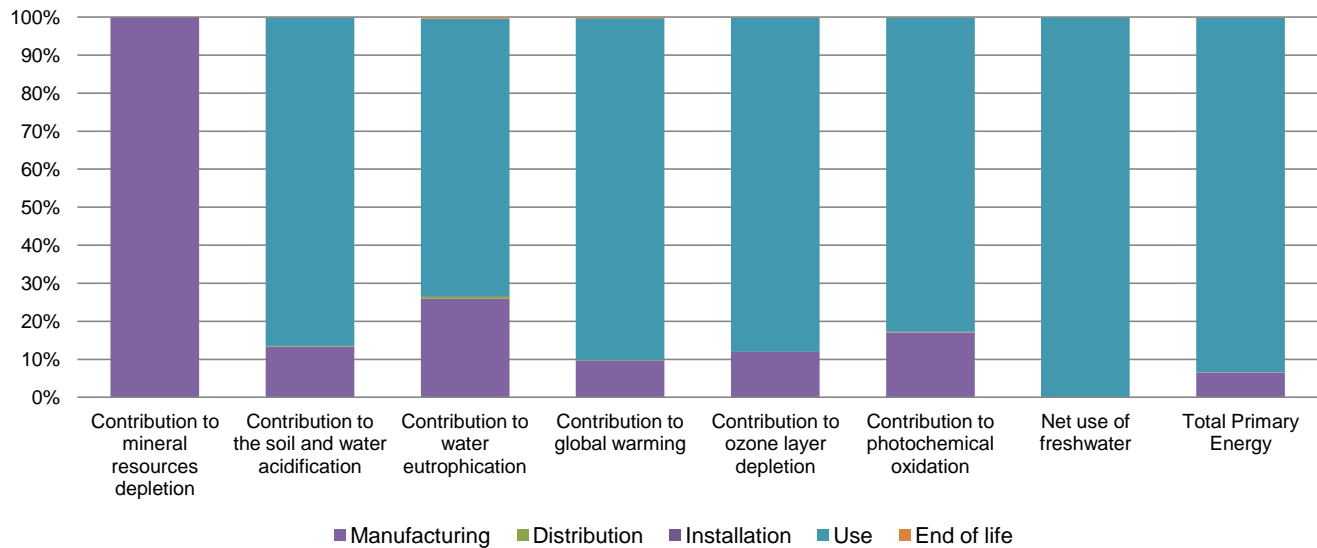
|                      |   |
|----------------------|---|
| <b>Manufacturing</b> | Manufactured at a Schneider Electric production site ISO14001 certified   |
| <b>Distribution</b>  | Weight and volume of the packaging optimized, based on the European Union's packaging directive<br>Packaging weight is 8.5 g, consisting of cardboard (99.2%), Paper (0.8%)   |
| <b>Installation</b>  | XB5AA31 does not require any installation operations.   |
| <b>Use</b>           | The product does not require special maintenance operations.  |
| <b>End of life</b>   | <p>End of life optimized to decrease the amount of waste and allow recovery of the product components and materials</p> <p>This product contains Plastic part with brominated flame retardants (5.0g) that should be separated from the stream of waste so as to optimize end-of-life treatment.</p> <p>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</p> <p><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></p> <p>Recyclability potential: <b>29%</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).</p> |



## 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>                     | The product is in ON mode 70% of the time with a power use of 0.085W and in OFF mode 30% of the time without power use, for 20 years  |  |  |  |
| <b>Geographical representativeness</b>  | Europe  |  |  |  |
| <b>Technological representativeness</b> | non-illuminated plastic complete unit with contact function. It combines simplicity of installation, flexibility, and robustness. It meets the requirements of the majority of industrial applications. |  |  |  |
| <b>Energy model used</b>                | <b>Manufacturing</b>  | <b>Installation</b>  | <b>Use</b>   | <b>End of life</b>   |
|   | Energy model used: France   | 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                            |                                     | Complete Non-Illuminated Plastic Button and Switch - XB5AA31 |               |              |              |          |             |
|--|-------------------------------------|--|---------------|--------------|--------------|----------|-------------|
| Impact indicators                                | Unit                                | Total  | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to mineral resources depletion      | kg Sb eq                            | 2,96E-04   | 2,96E-04      | 0*           | 0*           | 1,90E-07 | 0*          |
| Contribution to the soil and water acidification | kg SO <sub>2</sub> eq               | 1,06E-02   | 1,41E-03      | 2,14E-05     | 2,42E-06     | 9,13E-03 | 9,22E-06    |
| Contribution to water eutrophication             | kg PO <sub>4</sub> <sup>3-</sup> eq | 7,55E-04   | 1,95E-04      | 4,94E-06     | 5,69E-07     | 5,51E-04 | 2,80E-06    |
| Contribution to global warming                   | kg CO <sub>2</sub> eq               | 2,43E+00   | 2,34E-01      | 4,70E-03     | 7,86E-04     | 2,19E+00 | 5,93E-03    |
| Contribution to ozone layer depletion            | kg CFC11 eq                         | 1,62E-07   | 1,95E-08      | 0*           | 4,94E-11     | 1,43E-07 | 2,16E-10    |
| Contribution to photochemical oxidation          | kg C <sub>2</sub> H <sub>4</sub> eq | 6,08E-04   | 1,04E-04      | 1,53E-06     | 2,63E-07     | 5,02E-04 | 9,41E-07    |
| Resources use                                    | Unit                                | Total  | Manufacturing | Distribution | Installation | Use      | End of Life |
| Net use of freshwater                            | m3                                  | 7,94E+00   | 9,14E-04      | 0*           | 0*           | 7,94E+00 | 0*          |
| Total Primary Energy                             | MJ                                  | 4,69E+01   | 3,02E+00      | 6,64E-02     | 1,22E-02     | 4,37E+01 | 4,39E-02    |



| Optional indicators   |                | Complete Non-Illuminated Plastic Button and Switch - XB5AA31 |               |              |              |          |             |
|---|----------------|--|---------------|--------------|--------------|----------|-------------|
| Impact indicators   | Unit           | Total  | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to fossil resources depletion  | MJ             | 2,75E+01   | 2,52E+00      | 6,60E-02     | 1,11E-02     | 2,48E+01 | 4,01E-02    |
| Contribution to air pollution   | m <sup>3</sup> | 1,22E+02   | 2,68E+01      | 2,00E-01     | 8,63E-02     | 9,42E+01 | 3,22E-01    |
| Contribution to water pollution   | m <sup>3</sup> | 1,63E+02   | 7,11E+01      | 7,72E-01     | 9,22E-02     | 9,03E+01 | 4,13E-01    |
| Resources use   | Unit           | Total  | Manufacturing | Distribution | Installation | Use      | End of Life |
| Use of secondary material   | kg             | 3,48E-03   | 3,48E-03      | 0*           | 0*           | 0*       | 0*          |
| Total use of renewable primary energy resources   | MJ             | 5,78E+00   | 2,23E-01      | 0*           | 0*           | 5,56E+00 | 0*          |
| Total use of non-renewable primary energy resources   | MJ             | 4,11E+01   | 2,80E+00      | 6,63E-02     | 1,22E-02     | 3,82E+01 | 4,38E-02    |
| Use of renewable primary energy excluding renewable primary energy used as raw material         | MJ             | 5,61E+00   | 4,81E-02      | 0*           | 0*           | 5,56E+00 | 0*          |
| Use of renewable primary energy resources used as raw material                                  | MJ             | 1,74E-01   | 1,74E-01      | 0*           | 0*           | 0*       | 0*          |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ             | 4,06E+01   | 2,27E+00      | 6,63E-02     | 1,22E-02     | 3,82E+01 | 4,38E-02    |
| Use of non renewable primary energy resources used as raw material                              | MJ             | 5,26E-01   | 5,26E-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*                 |
| <b>Waste categories</b>                | <b>Unit</b> | <b>Total</b> | <b>Manufacturing</b> | <b>Distribution</b> | <b>Installation</b> | <b>Use</b> | <b>End of Life</b> |
| Hazardous waste disposed               | kg          | 4,24E-01     | 3,63E-01             | 0*                  | 8,54E-03            | 1,14E-03   | 5,10E-02           |
| Non hazardous waste disposed           | kg          | 8,28E+00     | 1,19E-01             | 0*                  | 0*                  | 8,16E+00   | 0*                 |
| Radioactive waste disposed             | kg          | 5,52E-03     | 7,27E-05             | 0*                  | 0*                  | 5,45E-03   | 0*                 |
| <b>Other environmental information</b> | <b>Unit</b> | <b>Total</b> | <b>Manufacturing</b> | <b>Distribution</b> | <b>Installation</b> | <b>Use</b> | <b>End of Life</b> |
| Materials for recycling                | kg          | 1,93E-02     | 2,46E-03             | 0*                  | 8,42E-03            | 0*         | 8,46E-03           |
| Components for reuse                   | kg          | 0,00E+00     | 0*                   | 0*                  | 0*                  | 0*         | 0*                 |
| Materials for energy recovery          | kg          | 1,18E-03     | 1,50E-04             | 0*                  | 0*                  | 0*         | 1,03E-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 5.7.0, 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°   | ENVPEP101143EN_V0 | Drafting rules                      | PCR-ed3-EN-2015 04 02  |
| Date of issue   | 11/2017           | Supplemented by                     | PSR-0005-ed2-EN-2016 03 29   |
| Validity period   | 5 years           | Information and reference documents | <a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a> |
| Independent verification of the declaration and data, in compliance with ISO 14025 : 2010                                   |                   |                                     |  |
| Internal  | X                 | External                            |  |
| 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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