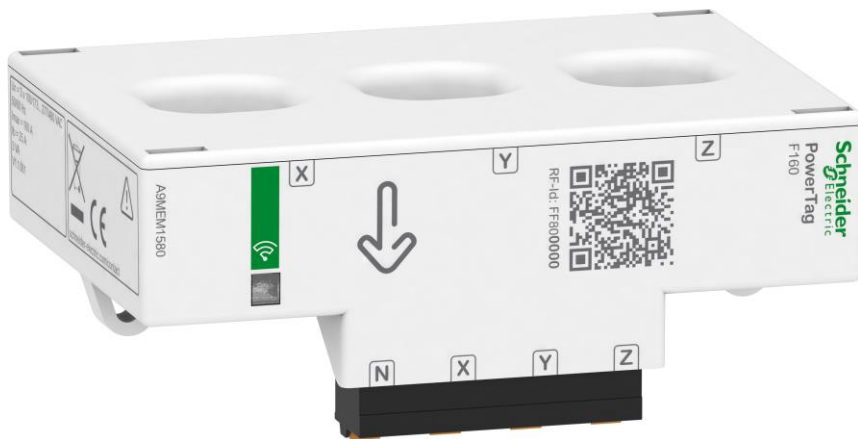


# Product Environmental Profile

## PowerTag Energy F160





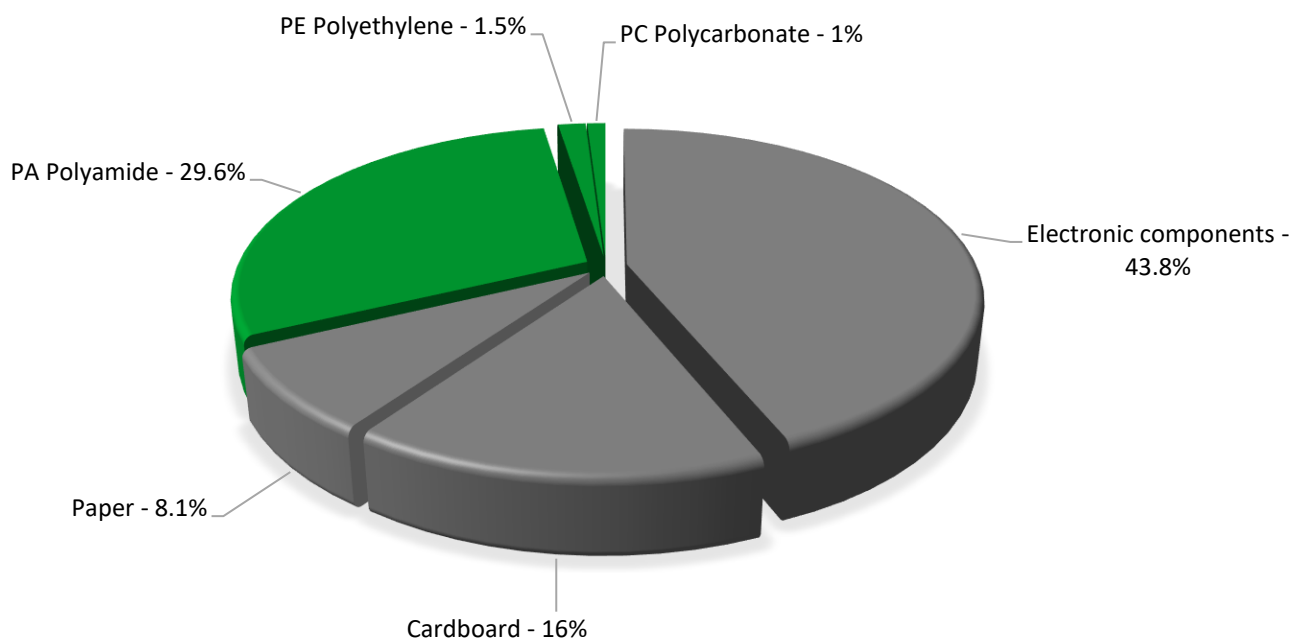
## General information

|                            |                                                                                                                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Representative product     | PowerTag Energy F160 - A9MEM1580                                                                                                                                                                                                                                              |
| Description of the product | The PowerTag F160 is a wireless energy sensor, used to manage energy and monitor load.                                                                                                                                                                                        |
| Functional unit            | The PowerTag F160 is able to measure currents up to 160A and voltage from 100Vac to 480Vac. So that it can calculate Power, Energy, ... and send those values through wireless communication to a concentrator.<br>It complies with the energy measurement standard 61557-12. |



## Constituent materials

|                        |       |                                                                              |
|------------------------|-------|------------------------------------------------------------------------------|
| Reference product mass | 133 g | including the product, its packaging and additional elements and accessories |
|------------------------|-------|------------------------------------------------------------------------------|



|          |       |
|----------|-------|
| Plastics | 32.1% |
| Metals   | 0.0%  |
| Others   | 67.9% |



## Substance assessment

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

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



## Additional environmental information

### The PowerTag Energy F160 presents the following relevant environmental aspects

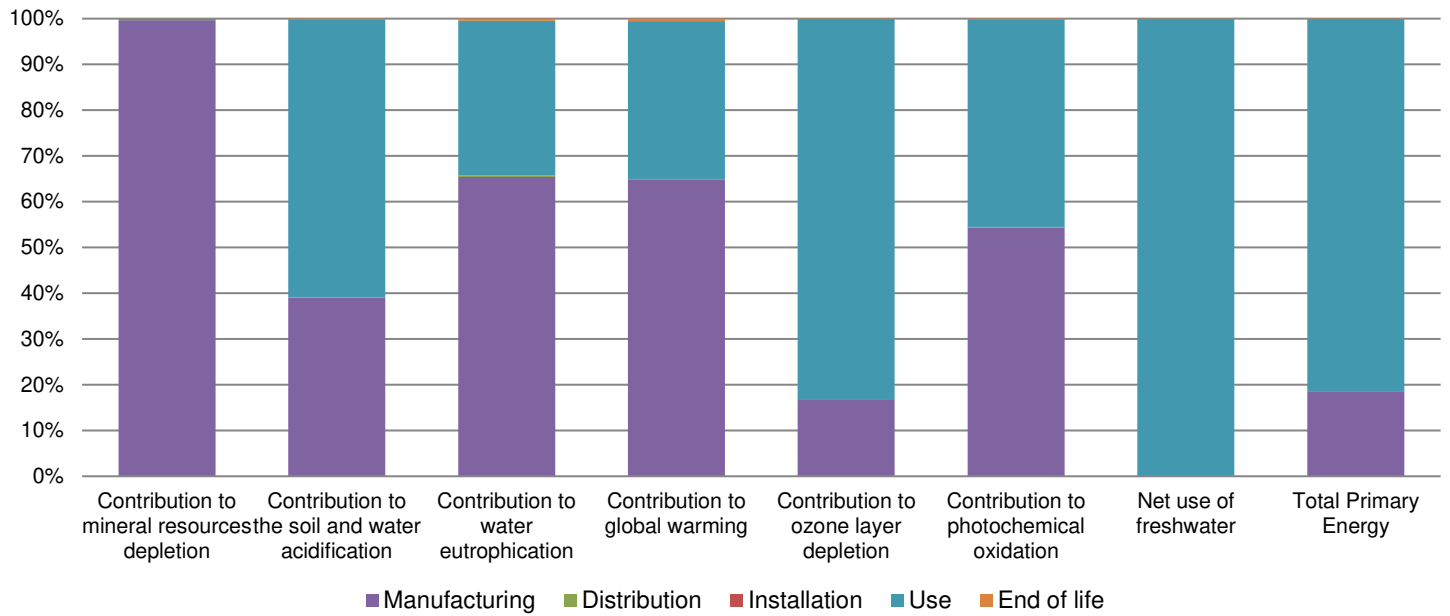
|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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 33.1 g, consisting of cardboard (66.46%), paper (33.54%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Installation</b>  | 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).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <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 PCBA POWER(23.56g), PCBA ACQUISITION(contains 3 sensor PCBs)(36.75g) 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>12%</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

|                                  |                                                                                                                                                                                                                                     |                                                                  |                                                                  |                                                                  |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------|
| Reference life time              | 10 years                                                                                                                                                                                                                            |                                                                  |                                                                  |                                                                  |
| Product category                 | Other equipments - Active product                                                                                                                                                                                                   |                                                                  |                                                                  |                                                                  |
| Installation elements            | 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 scenario                     | The product is in active mode 100% of the time with a power use of 0.7W, for 10 years.                                                                                                                                              |                                                                  |                                                                  |                                                                  |
| Geographical representativeness  | France                                                                                                                                                                                                                              |                                                                  |                                                                  |                                                                  |
| Technological representativeness | The PowerTag F160 is a wireless energy sensor, used to manage energy and monitor load.                                                                                                                                              |                                                                  |                                                                  |                                                                  |
| Energy model used                | Manufacturing                                                                                                                                                                                                                       | Installation                                                     | Use                                                              | End of life                                                      |
|                                  | Energy model used: Latvia                                                                                                                                                                                                           | Electricity grid mix; AC; consumption mix, at consumer; 230V; FR | Electricity grid mix; AC; consumption mix, at consumer; 230V; FR | Electricity grid mix; AC; consumption mix, at consumer; 230V; FR |

| Compulsory indicators                            |                                     | PowerTag Energy F160 - A9MEM1580 |               |              |              |          |             |
|--------------------------------------------------|-------------------------------------|----------------------------------|---------------|--------------|--------------|----------|-------------|
| Impact indicators                                | Unit                                | Total                            | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to mineral resources depletion      | kg Sb eq                            | 9.39E-04                         | 9.36E-04      | 0*           | 0*           | 3.25E-06 | 0*          |
| Contribution to the soil and water acidification | kg SO <sub>2</sub> eq               | 4.09E-02                         | 1.59E-02      | 7.84E-05     | 7.46E-06     | 2.48E-02 | 5.83E-05    |
| Contribution to water eutrophication             | kg PO <sub>4</sub> <sup>3-</sup> eq | 6.69E-03                         | 4.38E-03      | 1.80E-05     | 1.81E-06     | 2.26E-03 | 3.11E-05    |
| Contribution to global warming                   | kg CO <sub>2</sub> eq               | 1.93E+01                         | 1.25E+01      | 1.72E-02     | 0*           | 6.67E+00 | 1.01E-01    |
| Contribution to ozone layer depletion            | kg CFC11 eq                         | 1.15E-05                         | 1.94E-06      | 0*           | 0*           | 9.53E-06 | 3.42E-09    |
| Contribution to photochemical oxidation          | kg C <sub>2</sub> H <sub>4</sub> eq | 3.16E-03                         | 1.72E-03      | 5.59E-06     | 5.58E-07     | 1.44E-03 | 4.63E-06    |
| Resources use                                    | Unit                                | Total                            | Manufacturing | Distribution | Installation | Use      | End of Life |
| Net use of freshwater                            | m3                                  | 1.58E+02                         | 5.63E-02      | 0*           | 0*           | 1.58E+02 | 0*          |
| Total Primary Energy                             | MJ                                  | 7.47E+02                         | 1.38E+02      | 2.43E-01     | 0*           | 6.08E+02 | 2.43E-01    |



| Optional indicators                                                                             |      | PowerTag Energy F160 - A9MEM1580 |               |              |              |          |             |
|-------------------------------------------------------------------------------------------------|------|----------------------------------|---------------|--------------|--------------|----------|-------------|
| Impact indicators                                                                               | Unit | Total                            | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to fossil resources depletion                                                      | MJ   | 1.92E+02                         | 1.15E+02      | 2.41E-01     | 2.32E-02     | 7.67E+01 | 2.00E-01    |
| Contribution to air pollution                                                                   | m³   | 1.21E+03                         | 9.82E+02      | 7.30E-01     | 0*           | 2.22E+02 | 1.77E+00    |
| Contribution to water pollution                                                                 | m³   | 1.56E+03                         | 1.21E+03      | 2.82E+00     | 2.72E-01     | 3.38E+02 | 4.14E+00    |
| Resources use                                                                                   | Unit | Total                            | Manufacturing | Distribution | Installation | Use      | End of Life |
| Use of secondary material                                                                       | kg   | 2.11E-02                         | 2.11E-02      | 0*           | 0*           | 0*       | 0*          |
| Total use of renewable primary energy resources                                                 | MJ   | 4.91E+01                         | 4.99E+00      | 0*           | 0*           | 4.41E+01 | 0*          |
| Total use of non-renewable primary energy resources                                             | MJ   | 6.98E+02                         | 1.33E+02      | 2.42E-01     | 0*           | 5.64E+02 | 2.42E-01    |
| Use of renewable primary energy excluding renewable primary energy used as raw material         | MJ   | 4.88E+01                         | 4.74E+00      | 0*           | 0*           | 4.41E+01 | 0*          |
| Use of renewable primary energy resources used as raw material                                  | MJ   | 2.55E-01                         | 2.55E-01      | 0*           | 0*           | 0*       | 0*          |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ   | 6.96E+02                         | 1.32E+02      | 2.42E-01     | 0*           | 5.64E+02 | 2.42E-01    |
| Use of non renewable primary energy resources used as raw material                              | MJ   | 1.82E+00                         | 1.82E+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   | 2.24E+00                         | 1.97E+00      | 0*           | 0*           | 1.26E-02 | 2.57E-01    |
| Non hazardous waste disposed                                                                    | kg   | 1.67E+01                         | 3.01E+00      | 0*           | 0*           | 1.36E+01 | 0*          |
| Radioactive waste disposed                                                                      | kg   | 2.03E-01                         | 1.57E-03      | 0*           | 0*           | 2.01E-01 | 0*          |
| Other environmental information                                                                 | Unit | Total                            | Manufacturing | Distribution | Installation | Use      | End of Life |
| Materials for recycling                                                                         | kg   | 5.33E-02                         | 7.76E-03      | 0*           | 3.29E-02     | 0*       | 1.26E-02    |
| Components for reuse                                                                            | kg   | 0.00E+00                         | 0*            | 0*           | 0*           | 0*       | 0*          |
| Materials for energy recovery                                                                   | kg   | 2.80E-02                         | 0*            | 0*           | 0*           | 0*       | 2.80E-02    |
| Exported Energy                                                                                 | MJ   | 1.05E-04                         | 9.84E-06      | 0*           | 9.48E-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 v5.8.1, database version 2016-11 in compliance with ISO14044.

The manufacturing and use phase are the life cycle phases which have the greatest impact on the majority of environmental indicators (based on compulsory indicators). The manufacturing phase has the greatest impact on Abiotic depletion, Eutrophication, Global warming, Photochemical oxidation; The Use phase has the greatest impact on Acidification potential of soil and water, Ozone layer depletion ODP steady state, Net use of freshwater and Total primary energy.

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 :                                                                                                       | SCHN-00578-V01.01-EN | Drafting rules                      | PCR-ed3-EN-2015 04 02                                                |
| Verifier accreditation N°                                                                                                   | VH39                 | Supplemented by                     | PSR-0005-ed2-EN-2016 03 29                                           |
| Date of issue                                                                                                               | 07/2020              | 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)                                     |                      |                                     |                                                                      |
| PEP are compliant with XP C08-100-1 :2016                                                                                   |                      |                                     |                                                                      |
| 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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SCHN-00578-V01.01-EN

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07/2020