Product Environmental Profile

ATV340 22kW 3PH 400V

ATV340 – 11kW - 15kW - 18.5kW - 22kW 3PH 400V
## General information

<table>
<thead>
<tr>
<th>Representative product</th>
<th>ATV340 22kW 3PH 400V - ATV340D22N4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of the product</td>
<td>The main function of ATV340 is the speed control and torque of a three phase motors (Asynchronous and Permanent Magnet motors) in energy management for machines application.</td>
</tr>
<tr>
<td>Description of the range</td>
<td>ATV340 – 11kW - 15kW - 18.5kW - 22kW 3PH 400V</td>
</tr>
<tr>
<td>Functional unit</td>
<td>To control the speed and torque of a three phase motors (Asynchronous and Permanent Magnet motors) in energy management for machines application. Calculation of the environmental impacts is based on 10 years of product service lifetime. The usage profile taken into account is 40% uptime in use phase at 100% loading rate and 60% uptime in stand by phase.</td>
</tr>
</tbody>
</table>

## Constituent materials

| Reference product mass | 12020 g including the product, its packaging and additional elements and accessories |

- aluminium - 27.8%
- steel - 20.5%
- cardboard - 12.2%
- ferrites - 1.3%
- tin - 3.3%
- copper - 3.5%
- iron - 2%
- PE-LD - 1%
- phenolic - 0.9%
- epoxy - 3.5%
- triphenyl phosphate - 2.5%
- various - 7.5%
- electrolyte - 2%
- glass fiber - 2.3%
- polycarbonate (PC) - 7.7%
- paper - 2%

## 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.

**Additional environmental information**

The ATV340 22kW 3PH 400V presents the following relevant environmental aspects

<table>
<thead>
<tr>
<th>Design</th>
<th>Products are designed to be &quot;Green Premium&quot;.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>Manufactured at a Schneider Electric production site ISO14001 certified</td>
</tr>
<tr>
<td>Distribution</td>
<td>Weight and volume of the packaging optimized, based on the European Union's packaging directive</td>
</tr>
<tr>
<td></td>
<td>Packaging weight is 1662.5 g, consisting of cardboard (88.45%), paper (4.21%), packaging label (0.12%), plastic foam (7.22%)</td>
</tr>
<tr>
<td>Installation</td>
<td>Product distribution optimised by setting up local distribution centres</td>
</tr>
<tr>
<td>Use</td>
<td>Does not require any special installation operations</td>
</tr>
<tr>
<td></td>
<td>The product does not require special maintenance operations</td>
</tr>
</tbody>
</table>

**End of life**

End of life optimized to decrease the amount of waste and allow recovery of the product components and materials

This product contains:
- Electronic card (2582.2g)
- Electronic capacitor (955.8g)
- Cable (121.9g)

that should be separated from the stream of waste so as to optimize end-of-life treatment.

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


Recyclability potential: 64%

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**

<table>
<thead>
<tr>
<th>Reference life time</th>
<th>10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product category</td>
<td>Active products</td>
</tr>
<tr>
<td>Installation elements</td>
<td>No special components needed</td>
</tr>
<tr>
<td>Use scenario</td>
<td>Consumed power is 670 W 40 % of the time in Active mode, 39 W 60 % of the time in Standby mode, 0 W 0 % of the time in Sleep mode and 0 W 0 % of the time in Off mode.</td>
</tr>
<tr>
<td></td>
<td>The product is in active mode 40% of the time with a power use of 670W and in stand-by mode 60% of the time with a power use of 39W, for 10 years.</td>
</tr>
<tr>
<td>Geographical representativeness</td>
<td>Worldwide</td>
</tr>
</tbody>
</table>
The main function of ATV340 is the speed control and torque of a three phase motors (Asynchronous and Permanent Magnet motors) in energy management for machines application.

**Energy model used**

<table>
<thead>
<tr>
<th></th>
<th>Manufacturing</th>
<th>Installation</th>
<th>Use</th>
<th>End of life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy model used: Indonesia</td>
<td>Electricity Mix; AC; consumption mix, at consumer; &lt; 1kV; EU-27</td>
<td>Electricity Mix; AC; consumption mix, at consumer; &lt; 1kV; EU-27</td>
<td>Electricity Mix; AC; consumption mix, at consumer; &lt; 1kV; EU-27</td>
<td></td>
</tr>
</tbody>
</table>

**Compulsory indicators**

<table>
<thead>
<tr>
<th>Impact indicators</th>
<th>Unit</th>
<th>Total</th>
<th>Manufacturing</th>
<th>Distribution</th>
<th>Installation</th>
<th>Use</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution to mineral resources depletion</td>
<td>kg Sb eq</td>
<td>2.66E-01</td>
<td>2.66E-01</td>
<td>0*</td>
<td>0*</td>
<td>6.87E-04</td>
<td>0*</td>
</tr>
<tr>
<td>Contribution to the soil and water acidification</td>
<td>kg SO₂ eq</td>
<td>1.15E+02</td>
<td>6.14E-01</td>
<td>0*</td>
<td>0*</td>
<td>1.14E+02</td>
<td>0*</td>
</tr>
<tr>
<td>Contribution to water eutrophication</td>
<td>kg PO₄³⁻ eq</td>
<td>4.40E+00</td>
<td>1.28E-01</td>
<td>1.63E-03</td>
<td>0*</td>
<td>4.27E+00</td>
<td>1.77E-03</td>
</tr>
<tr>
<td>Contribution to global warming</td>
<td>kg CO₂ eq</td>
<td>1.54E+04</td>
<td>3.29E+02</td>
<td>1.55E+00</td>
<td>0*</td>
<td>1.51E+04</td>
<td>4.85E+00</td>
</tr>
<tr>
<td>Contribution to ozone layer depletion</td>
<td>kg CFC11 eq</td>
<td>3.70E-03</td>
<td>4.02E-05</td>
<td>0*</td>
<td>0*</td>
<td>3.66E-03</td>
<td>0*</td>
</tr>
<tr>
<td>Contribution to photochemical oxidation</td>
<td>kg C₂H₄ eq</td>
<td>5.45E+00</td>
<td>6.39E-02</td>
<td>0*</td>
<td>0*</td>
<td>5.39E+00</td>
<td>0*</td>
</tr>
</tbody>
</table>

**Optional indicators**

<table>
<thead>
<tr>
<th>Impact indicators</th>
<th>Unit</th>
<th>Total</th>
<th>Manufacturing</th>
<th>Distribution</th>
<th>Installation</th>
<th>Use</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution to fossil resources depletion</td>
<td>MJ</td>
<td>1.59E+05</td>
<td>3.83E+03</td>
<td>2.18E+01</td>
<td>0*</td>
<td>1.55E+05</td>
<td>1.92E+01</td>
</tr>
<tr>
<td>Contribution to air pollution</td>
<td>m³</td>
<td>6.78E+05</td>
<td>3.19E+04</td>
<td>0*</td>
<td>0*</td>
<td>6.46E+05</td>
<td>1.44E+02</td>
</tr>
<tr>
<td>Contribution to water pollution</td>
<td>m³</td>
<td>6.66E+05</td>
<td>3.25E+04</td>
<td>2.55E+02</td>
<td>0*</td>
<td>6.32E+05</td>
<td>3.80E+02</td>
</tr>
<tr>
<td>Use of secondary material</td>
<td>kg</td>
<td>2.91E+02</td>
<td>2.91E+02</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>Total use of renewable primary energy resources</td>
<td>MJ</td>
<td>2.20E+04</td>
<td>1.59E+02</td>
<td>0*</td>
<td>0*</td>
<td>2.18E+04</td>
<td>0*</td>
</tr>
<tr>
<td>Total use of non-renewable primary energy resources</td>
<td>MJ</td>
<td>2.89E+05</td>
<td>5.10E+03</td>
<td>0*</td>
<td>0*</td>
<td>2.83E+05</td>
<td>0*</td>
</tr>
<tr>
<td>Use of renewable primary energy excluding renewable primary energy used as raw material</td>
<td>MJ</td>
<td>2.20E+04</td>
<td>1.27E+02</td>
<td>0*</td>
<td>0*</td>
<td>2.18E+04</td>
<td>0*</td>
</tr>
</tbody>
</table>
Use of renewable primary energy resources used as raw material | MJ | 3.15E+01 | 3.15E+01 | 0* | 0* | 0* | 0*
Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 2.89E+05 | 5.02E+03 | 0* | 0* | 2.83E+05 | 0*
Use of non renewable primary energy resources used as raw material | MJ | 8.23E+01 | 8.23E+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*

**Waste categories**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Total</th>
<th>Manufacturing</th>
<th>Distribution</th>
<th>Installation</th>
<th>Use</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous waste disposed</td>
<td>kg</td>
<td>4.76E+02</td>
<td>4.57E+02</td>
<td>0*</td>
<td>1.76E+00</td>
<td>0*</td>
</tr>
<tr>
<td>Non hazardous waste disposed</td>
<td>kg</td>
<td>5.65E+04</td>
<td>8.12E+01</td>
<td>0*</td>
<td>0*</td>
<td>5.64E+04</td>
</tr>
<tr>
<td>Radioactive waste disposed</td>
<td>kg</td>
<td>4.60E+01</td>
<td>3.87E+02</td>
<td>0*</td>
<td>0*</td>
<td>4.60E+01</td>
</tr>
</tbody>
</table>

**Other environmental information**

<table>
<thead>
<tr>
<th>Unit</th>
<th>Total</th>
<th>Manufacturing</th>
<th>Distribution</th>
<th>Installation</th>
<th>Use</th>
<th>End of Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials for recycling</td>
<td>kg</td>
<td>9.43E+00</td>
<td>1.16E+00</td>
<td>0*</td>
<td>1.57E+00</td>
<td>0*</td>
</tr>
<tr>
<td>Components for reuse</td>
<td>kg</td>
<td>0.00E+00</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>Materials for energy recovery</td>
<td>kg</td>
<td>1.21E+00</td>
<td>8.31E-02</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>Exported Energy</td>
<td>MJ</td>
<td>2.86E-04</td>
<td>2.86E-04</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
</tbody>
</table>

* 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 2015-04.

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.

The mineral resources depletion of the product of the family maybe proportional extrapolated by mass of product.

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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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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