

Product Environmental Profile

Industrial Control and Machine Tool Transformers





General information

Representative product

Industrial Control and Machine Tool Transformers - 9070T500D1

Description of the product

Control power transformers from Schneider Electric set the industry standard for design innovation and performance. They are designed with low impedance windings for excellent voltage regulation, and can accommodate the high inrush current associated with contactors, starters, solenoids, and relays.

Functional unit

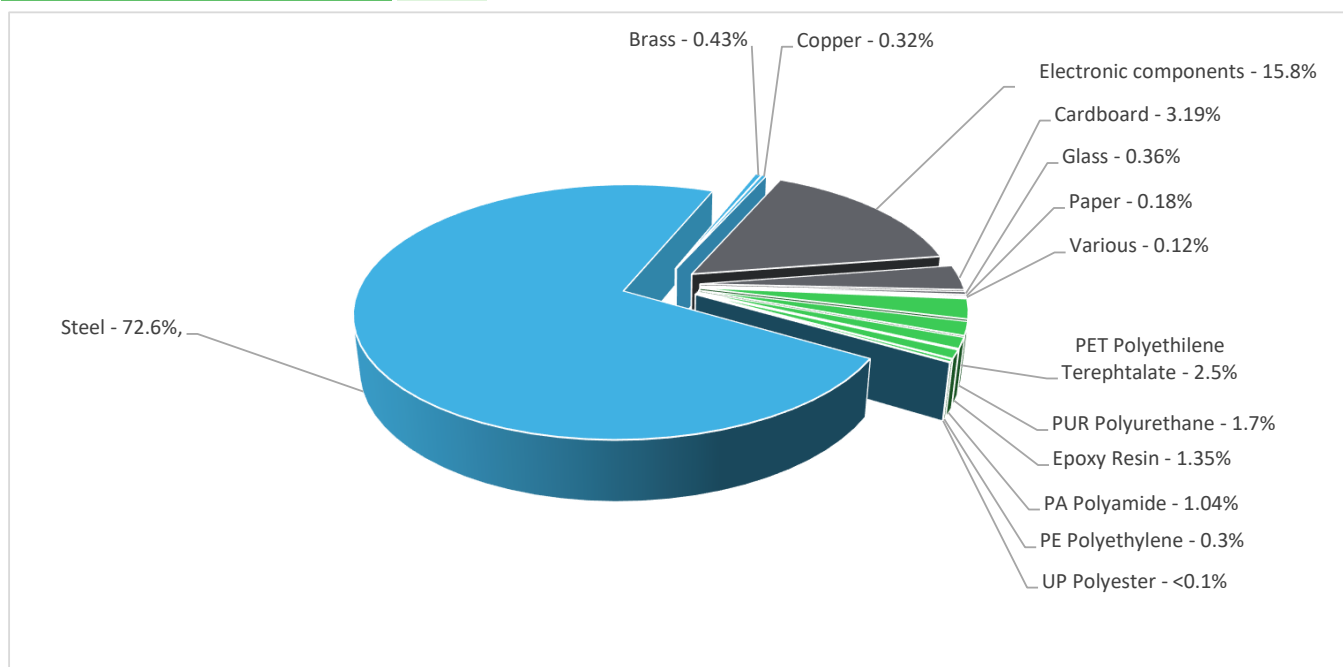
Convert distribution voltage of either 240V or 480V to required control voltage of 120V, units are specifically design to limit voltage drop during high inrush currents from control devices, during 20 years



Constituent materials

Reference product mass

5750 g including the product, its packaging and additional elements and accessories



| | |
|----------|-------|
| Plastics | 6.9% |
| Metals | 73.4% |
| Others | 19.7% |



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 Industrial Control and Machine Tool Transformers presents the following relevant environmental aspects

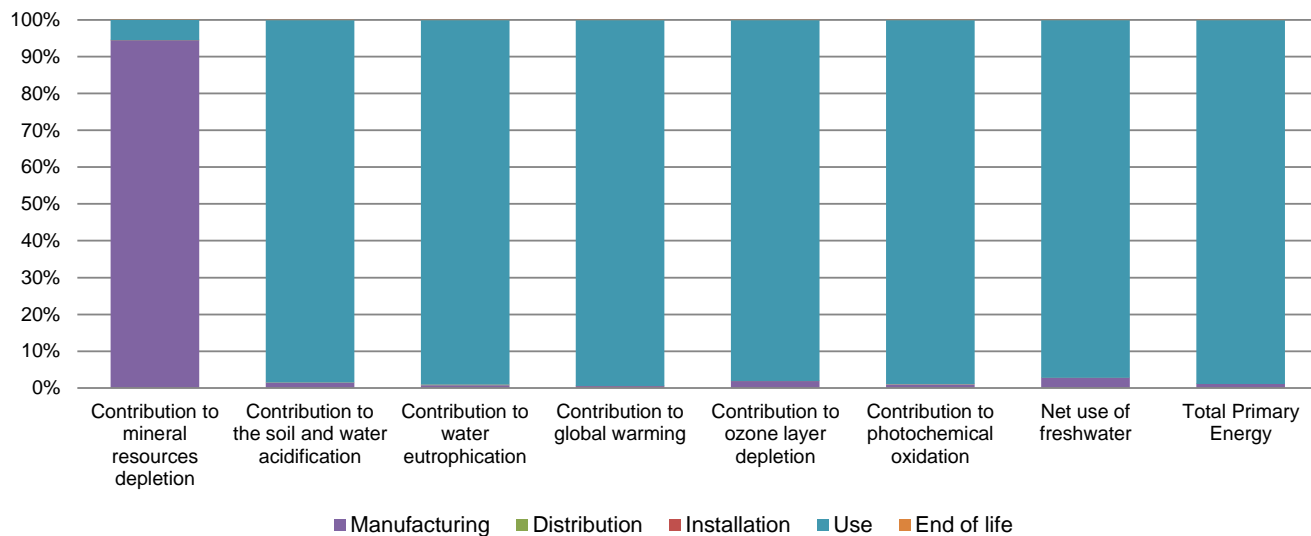
| | |
|----------------------|--|
| Manufacturing | Manufactured at a Schneider Electric production site ISO14001 certified |
| Distribution | Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 210.4 g, consisting of Cardboard (89.11%), Paper (5.06%), PE film (5.84%) Product distribution optimised by setting up local distribution centres |
| Installation | 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 | The Watts loss and thermal dissipation at multiple load levels for each size of Industrial Control and Machine Transformer is published in the "Type T Performance Data" chart in catalog 9070CT9901 available on the Schneider Electric website: http://download.schneider-electric.com/files?p_Reference=9070CT9901&p_EnDocType=Catalog&p_File_Id=153782572&p_File_Name=9070CT9901R805.pdf |
| End of life | End of life optimized to decrease the amount of waste and allow recovery of the product components and materials No special end-of-life treatment required. According to countries' practices this product can enter the usual end-of-life treatment process. Recyclability potential: 78% 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

| | | | | |
|---|---|---|---|---|
| Reference life time | 20 years | | | |
| Product category | Other equipments - Passive product - non-continuous operation | | | |
| Installation elements | No special components needed | | | |
| Use scenario | 60% of the time at Full Load with 51 W loss, 25% of the time at No Load with 21 W loss and 15% of the time OFF with 0W loss. | | | |
| Geographical representativeness | USA | | | |
| Technological representativeness | The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA-EIME in this case) are Similar and representative of the actual type of technologies used to make the product in production. | | | |
| Energy model used | Manufacturing | Installation | Use | End of life |
| | Energy model used: Mexico | Electricity mix; AC; consumption mix, at consumer; 120V; US | Electricity mix; AC; consumption mix, at consumer; 120V; US | Electricity mix; AC; consumption mix, at consumer; 120V; US |

| Compulsory indicators | | Industrial Control and Machine Tool Transformers - 9070T500D1 | | | | | |
|--|-------------------------------------|---|---------------|--------------|--------------|----------|-------------|
| Impact indicators | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to mineral resources depletion | kg Sb eq | 7.81E-04 | 7.38E-04 | 0* | 0* | 4.29E-05 | 0* |
| Contribution to the soil and water acidification | kg SO ₂ eq | 4.24E+00 | 5.81E-02 | 6.60E-03 | 0* | 4.18E+00 | 2.08E-03 |
| Contribution to water eutrophication | kg PO ₄ ³⁻ eq | 1.11E+00 | 8.49E-03 | 1.52E-03 | 5.52E-04 | 1.10E+00 | 6.06E-04 |
| Contribution to global warming | kg CO ₂ eq | 4.39E+03 | 2.23E+01 | 1.46E+00 | 0* | 4.36E+03 | 1.44E+00 |
| Contribution to ozone layer depletion | kg CFC11 eq | 8.07E-05 | 1.50E-06 | 0* | 0* | 7.91E-05 | 6.96E-08 |
| Contribution to photochemical oxidation | kg C ₂ H ₄ eq | 6.76E-01 | 6.64E-03 | 4.69E-04 | 6.98E-05 | 6.69E-01 | 2.28E-04 |

| Resources use | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
|-----------------------|------|----------|---------------|--------------|--------------|----------|-------------|
| Net use of freshwater | m3 | 7.93E+00 | 2.21E-01 | 0* | 0* | 7.71E+00 | 1.47E-03 |
| Total Primary Energy | MJ | 5.94E+04 | 6.40E+02 | 2.07E+01 | 0* | 5.87E+04 | 1.20E+01 |



| Optional indicators | | Industrial Control and Machine Tool Transformers - 9070T500D1 | | | | | |
|---|------|---|---------------|--------------|--------------|----------|-------------|
| Impact indicators | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to fossil resources depletion | MJ | 5.34E+04 | 2.24E+02 | 2.06E+01 | 0* | 5.31E+04 | 8.52E+00 |
| Contribution to air pollution | m³ | 3.74E+05 | 3.39E+03 | 6.05E+01 | 0* | 3.70E+05 | 7.85E+01 |
| Contribution to water pollution | m³ | 2.19E+05 | 2.55E+03 | 2.41E+02 | 0* | 2.15E+05 | 1.07E+03 |
| Resources use | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Use of secondary material | kg | 1.61E+00 | 1.61E+00 | 0* | 0* | 0* | 0* |
| Total use of renewable primary energy resources | MJ | 3.53E+03 | 4.44E+00 | 0* | 0* | 3.53E+03 | 0* |
| Total use of non-renewable primary energy resources | MJ | 5.59E+04 | 6.35E+02 | 2.07E+01 | 0* | 5.52E+04 | 1.19E+01 |
| Use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 3.53E+03 | 0* | 0* | 0* | 3.53E+03 | 0* |
| Use of renewable primary energy resources used as raw material | MJ | 4.81E+00 | 4.81E+00 | 0* | 0* | 0* | 0* |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 5.58E+04 | 6.07E+02 | 2.07E+01 | 0* | 5.52E+04 | 1.19E+01 |
| Use of non renewable primary energy resources used as raw material | MJ | 2.84E+01 | 2.84E+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 | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Hazardous waste disposed | kg | 1.48E+02 | 2.36E+01 | 0* | 0* | 1.17E+02 | 7.91E+00 |
| Non hazardous waste disposed | kg | 6.75E+02 | 7.81E+00 | 0* | 2.12E-01 | 6.67E+02 | 0* |
| Radioactive waste disposed | kg | 7.06E-02 | 1.93E-03 | 3.71E-05 | 0* | 6.86E-02 | 5.93E-05 |
| Other environmental information | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Materials for recycling | kg | 4.85E+00 | 4.46E-01 | 0* | 0* | 0* | 4.41E+00 |
| Components for reuse | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* |
| Materials for energy recovery | kg | 2.39E-02 | 0* | 0* | 0* | 0* | 2.39E-02 |
| Exported Energy | MJ | 6.26E-04 | 5.89E-05 | 0* | 5.68E-04 | 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 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 number : | SCHN-00600-V01.01-EN | Drafting rules | PCR-ed3-EN-2015 04 02 |
| Verifier accreditation N° | VH30 | Supplemented by | PSR-0005-ed2-EN-2016 03 29 |
| Date of issue | 11/2020 | 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 | X | External | |
| 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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