

Product Environmental Profile

Harmony HMI STM Operator Panel





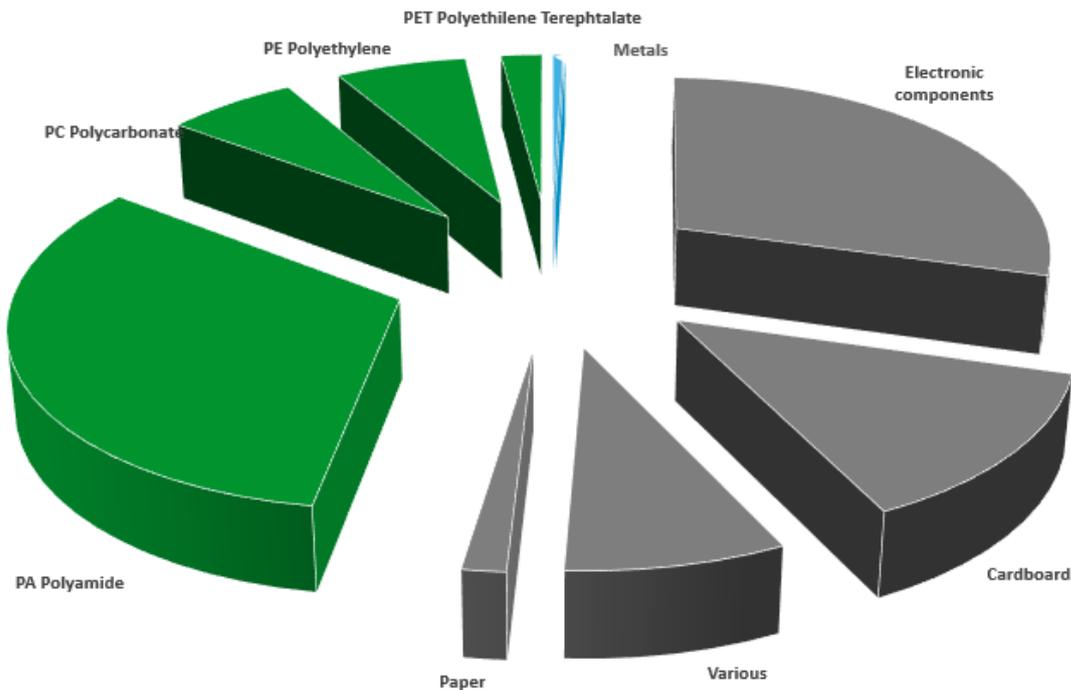
General information

| | |
|----------------------------|--|
| Representative product | Harmony 7W modular HMI - HMISTM6400 |
| Description of the product | Modular human machine interface |
| Description of the range | Harmony HMI STM Operator Panel The environmental impacts of this referenced product are representative of the impacts of the other products of the range which are developed with a similar technology. |
| Functional unit | To provide a modular human machine interface with ethernet communication during 10 years and a 100% use rate at 10.4W. |



Constituent materials

Reference product mass 997.8 g including the product, its packaging and additional elements and accessories



| | |
|----------|-------|
| Plastics | 47.5% |
| Metals | 0.2% |
| Others | 51.9% |



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 Harmony 7W modular HMI presents the following relevant environmental aspects

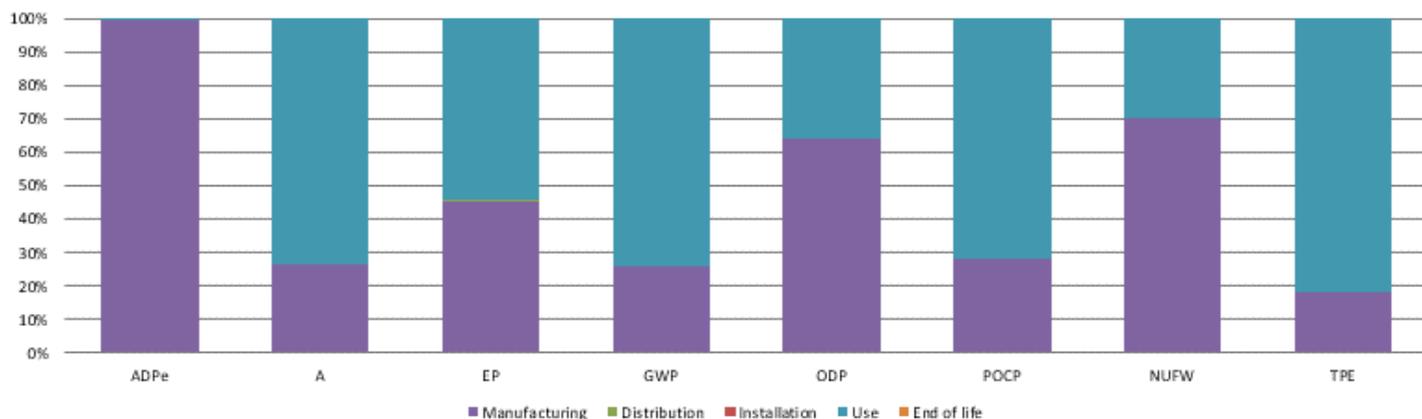
| | |
|----------------------|--|
| Manufacturing | Manufactured at a Schneider Electric production site ISO14001 certified |
| Distribution | Weight and volume of the packaging optimized, based on the European Union's packaging directive Packaging weight is 247.6 g, consisting of cardboard (55%), plastics (39%), paper (6%) Product distribution optimised by setting up local distribution centres |
| Installation | Anti rotation tee and tightening wrench tools can be used for installation |
| Use | The product does not require special maintenance operations. |
| 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 (73.5g), Plastic (309.7g) and batteries (3g) 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 http://www2.schneider-electric.com/sites/corporate/en/products-services/green-premium/green-premium.page Recyclability potential: 49% 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 | 10 years | | | |
| Product category | Other equipments - Active product | | | |
| Installation elements | No special components needed | | | |
| Use scenario | The product is in active mode 100% of the time with a power use of 10.4W | | | |
| Geographical representativeness | China, Europe and US | | | |
| Technological representativeness | Modular human machine interface | | | |
| Energy model used | Manufacturing | Installation | Use | End of life |
| | Energy model used: Indonesia | Electricity mix; AC; consumption mix, at consumer; 220V; CN | Electricity mix; AC; consumption mix, at consumer; 220V; CN | Electricity mix; AC; consumption mix, at consumer; 220V; CN |

| Compulsory indicators | | Harmony 7W modular HMI - HMISTM6400 | | | | | |
|--|-------------|-------------------------------------|---------------|--------------|--------------|----------|-------------|
| Impact indicators | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to mineral resources depletion | kg Sb eq | 3.47E-03 | 3.46E-03 | 0* | 0* | 1.35E-05 | 0* |
| Contribution to the soil and water acidification | kg SO2 eq | 7.91E-01 | 2.10E-01 | 5.88E-04 | 0* | 5.80E-01 | 2.87E-04 |
| Contribution to water eutrophication | kg PO43- eq | 2.83E-01 | 1.29E-01 | 1.35E-04 | 0* | 1.54E-01 | 1.06E-04 |
| Contribution to global warming | kg CO2 eq | 7.57E+02 | 1.99E+02 | 1.29E-01 | 0* | 5.58E+02 | 2.75E-01 |
| Contribution to ozone layer depletion | kg CFC11 eq | 2.50E-05 | 1.62E-05 | 0* | 0* | 8.87E-06 | 1.12E-08 |
| Contribution to photochemical oxidation | kg C2H4 eq | 1.07E-01 | 3.03E-02 | 4.19E-05 | 0* | 7.65E-02 | 2.72E-05 |
| Resources use | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Net use of freshwater | m3 | 4.64E+00 | 3.27E+00 | 0* | 0* | 1.37E+00 | 0* |
| Total Primary Energy | MJ | 1.49E+04 | 2.73E+03 | 1.82E+00 | 0* | 1.22E+04 | 0* |



| Optional indicators | | Harmony 7W modular HMI - HMISTM6400 | | | | | |
|---|----------------|-------------------------------------|---------------|--------------|--------------|----------|-------------|
| Impact indicators | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Contribution to fossil resources depletion | MJ | 1.01E+04 | 2.47E+03 | 1.81E+00 | 0* | 7.60E+03 | 1.08E+00 |
| Contribution to air pollution | m ³ | 7.14E+04 | 1.85E+04 | 0* | 0* | 5.29E+04 | 9.59E+00 |
| Contribution to water pollution | m ³ | 4.00E+04 | 1.21E+04 | 2.12E+01 | 0* | 2.78E+04 | 1.51E+01 |
| Resources use | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Use of secondary material | kg | 9.98E-02 | 9.98E-02 | 0* | 0* | 0* | 0* |
| Total use of renewable primary energy resources | MJ | 4.79E+02 | 4.59E+01 | 0* | 0* | 4.33E+02 | 0* |
| Total use of non-renewable primary energy resources | MJ | 1.44E+04 | 2.68E+03 | 1.82E+00 | 0* | 1.17E+04 | 0* |
| Use of renewable primary energy excluding renewable primary energy used as raw material | MJ | 4.78E+02 | 4.46E+01 | 0* | 0* | 4.33E+02 | 0* |
| Use of renewable primary energy resources used as raw material | MJ | 1.25E+00 | 1.25E+00 | 0* | 0* | 0* | 0* |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ | 1.44E+04 | 2.66E+03 | 1.82E+00 | 0* | 1.17E+04 | 0* |
| Use of non renewable primary energy resources used as raw material | MJ | 1.86E+01 | 1.86E+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 | 2.47E+02 | 1.79E+02 | 0* | 0* | 6.60E+01 | 1.30E+00 |
| Non hazardous waste disposed | kg | 1.25E+02 | 3.24E+01 | 0* | 0* | 9.23E+01 | 0* |
| Radioactive waste disposed | kg | 4.60E-02 | 6.46E-03 | 0* | 0* | 3.95E-02 | 7.56E-06 |
| Other environmental information | Unit | Total | Manufacturing | Distribution | Installation | Use | End of Life |
| Materials for recycling | kg | 5.76E-01 | 6.46E-02 | 0* | 1.35E-01 | 0* | 3.76E-01 |
| Components for reuse | kg | 0.00E+00 | 0* | 0* | 0* | 0* | 0* |
| Materials for energy recovery | kg | 6.25E-02 | 0* | 0* | 0* | 0* | 6.25E-02 |
| Exported Energy | MJ | 4.30E-04 | 4.04E-05 | 0* | 3.90E-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).

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range.

For Harmony HMI STM Operator Panels, the environmental indicator ADPe of other products in this family may be proportional extrapolated by product weight; for the indicator ODP, NUFW, impact may be 30% proportional extrapolated by energy consumption values and 70% proportional extrapolated by product weight; for other indicators, impact may be 30% proportional extrapolated by product weight and 70% proportional extrapolated by energy consumption values.

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.

| | | | |
|--|---------------------|--|--|
| <i>Registration number</i> | ENVPEP2007003_V1-EN | <i>Drafting rules</i> | PCR-ed3-EN-2015 04 02 |
| <i>Date of issue</i> | 10/2020 | | |
| <i>Validity period</i> | 5 years | <i>Information and reference documents</i> | www.pep-ecopassport.org |
| <i>Independent verification of the declaration and data</i> | | | |
| Internal | X | External | |
| <i>The elements of the present PEP cannot be compared with elements from another program.</i> | | | |
| <i>Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »</i> | | | |

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