# **Product Environmental Profile**

#### INTELLIGENT PRESSURE TRANSMITTER

IGP, IAP, IDP and IMV series of intelligent pressure sensing and transmitting gauges (multiple configurations)





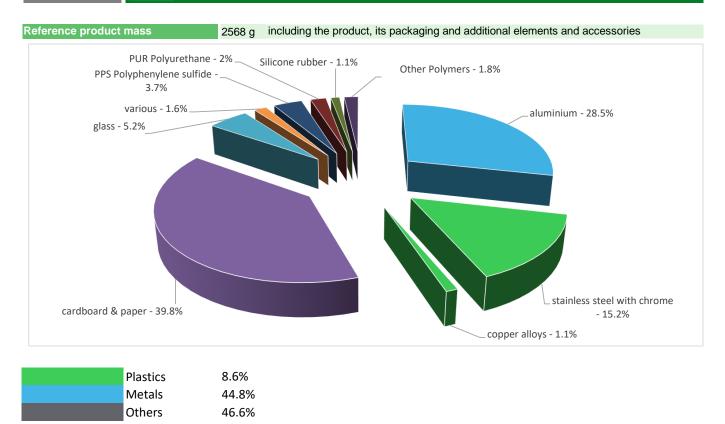




#### **General information**

| Representative product     | INTELLIGENT PRESSURE TRANSMITTER - IGP10S   |  |  |  |  |
|----------------------------|---|--|--|--|--|
| Description of the product | Field installed electronic transmitter for measuring pressure under a range of conditions within Industrial applications.   |  |  |  |  |
| Description of the range   | IGP, IAP, IDP and IMV series of intelligent pressure sensing and transmitting gauges (multiple configurations)  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            | Continuous measurement of gauge pressure within industrial processes, and transmission of output signal, for remote configuration and monitoring, in accordance with the relevant standards for a duration of 10 years. |  |  |  |  |

### Constituent materials



### 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

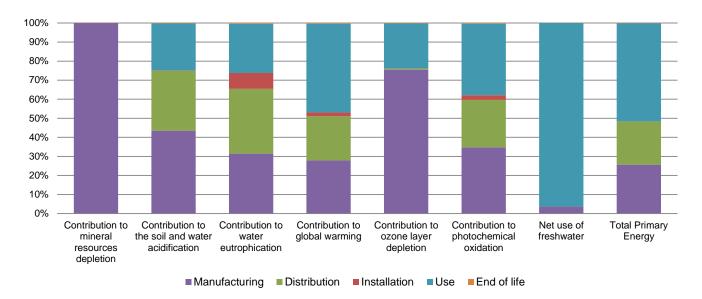


| Th  | e INTELLIGENT PRESSURE TRANSMITTER presents the following relevent environmental aspects   |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Design  |  |  |  |  |  |  |
| Manufacturing   | Manufactured at a production site complying with the regulations   |  |  |  |  |  |
|   | Weight and volume of the packaging optimized, based on the European Union's packaging directive  |  |  |  |  |  |
| Distribution  | Packaging weight is 1067.8 g, consisting of Paper pulp (55%), Cardboard (43%) and Paper (2%)   |  |  |  |  |  |
| Product distribution optimised by setting up local distribution centres |  |  |  |  |  |  |
| Installation  | The IGP10S does not require any special installation materials or operations. Installation per MI 020-601.   |  |  |  |  |  |
| Use   | The product does not require special maintenance operations.   |  |  |  |  |  |
|   | End of life optimized to decrease the amount of waste and allow recovery of the product components and materials   |  |  |  |  |  |
|   | This product contains PCBAs (56g, 21g and 17g) and a Sensor PCBA Assembly (418g) that should be separated from the stream of waste so as to optimize end-of-life treatment.                                |  |  |  |  |  |
| End of life   | 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:  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                 | Active product   |                                  |                                  |                                  |  |  |
| Installation elements            | Transport and end of life of packaging accounted for during installation.                                |                                  |                                  |                                  |  |  |
| Use scenario                     | The product consumes an estimated average of 0.69 W.   |                                  |                                  |                                  |  |  |
| Geographical representativeness  | Worldwide  |                                  |                                  |                                  |  |  |
| Technological representativeness | The means of production and transport modeled are representative of the technologies used in production. |                                  |                                  |                                  |  |  |
|                                  | Manufacturing  | Installation                     | Use                              | End of life                      |  |  |
| Energy model used                | Energy model used: United<br>States of America   | U.S., Brazil, China and the E.U. | U.S., Brazil, China and the E.U. | U.S., Brazil, China and the E.U. |  |  |

| Compulsory indicators                            | INTELLIGENT PRESSURE TRANSMITTER - IGP10S |          |               |              |              |          |             |
|--|---|----------|---------------|--------------|--------------|----------|-------------|
| Impact indicators                                | Unit                                      | Total    | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to mineral resources depletion      | kg Sb eq                                  | 5.33E-03 | 5.33E-03      | 7.08E-07     | 0*           | 7.07E-07 | 0*          |
| Contribution to the soil and water acidification | kg SO <sub>2</sub> eq                     | 1.70E-01 | 7.37E-02      | 5.33E-02     | 2.84E-04     | 4.18E-02 | 5.01E-04    |
| Contribution to water eutrophication             | kg PO <sub>4</sub> 3- eq                  | 3.49E-02 | 1.10E-02      | 1.19E-02     | 2.91E-03     | 9.01E-03 | 1.43E-04    |
| Contribution to global warming                   | kg CO <sub>2</sub> eq                     | 7.64E+01 | 2.13E+01      | 1.77E+01     | 1.52E+00     | 3.55E+01 | 2.81E-01    |
| Contribution to ozone layer depletion            | kg CFC11<br>eq                            | 4.46E-06 | 3.36E-06      | 2.72E-08     | 3.76E-09     | 1.05E-06 | 1.34E-08    |
| Contribution to photochemical oxidation          | kg C₂H₄ eq                                | 1.50E-02 | 5.21E-03      | 3.71E-03     | 3.68E-04     | 5.62E-03 | 5.17E-05    |
| Resources use                                    | Unit                                      | Total    | Manufacturing | Distribution | Installation | Use      | End of Life |
| Net use of freshwater                            | m3  | 8.98E+00 | 3.26E-01      | 1.65E-03     | 0*           | 8.65E+00 | 0*          |
| Total Primary Energy                             | MJ  | 1.11E+03 | 2.84E+02      | 2.50E+02     | 9.62E-01     | 5.68E+02 | 2.44E+00    |



| Optional indicators   |      | INTELLIGENT PRESSURE TRANSMITTER - IGP10S |               |              |              |          |             |
|---|------|---|---------------|--------------|--------------|----------|-------------|
| Impact indicators   | Unit | Total                                     | Manufacturing | Distribution | Installation | Use      | End of Life |
| Contribution to fossil resources depletion  | MJ   | 1.04E+03                                  | 2.55E+02      | 2.49E+02     | 9.22E-01     | 5.31E+02 | 2.23E+00    |
| Contribution to air pollution   | m³   | 5.79E+03                                  | 2.42E+03      | 3.56E+02     | 6.94E+00     | 2.98E+03 | 1.74E+01    |
| Contribution to water pollution   | m³   | 7.00E+03                                  | 2.26E+03      | 2.92E+03     | 8.72E+01     | 1.71E+03 | 2.18E+01    |
| Resources use   | Unit | Total                                     | Manufacturing | Distribution | Installation | Use      | End of Life |
| Use of secondary material   | kg   | 4.84E-01                                  | 4.84E-01      | 0*           | 0*           | 0*       | 0*          |
| Total use of renewable primary energy resources   | MJ   | 1.22E+02                                  | 1.75E+01      | 2.82E-01     | 0*           | 1.04E+02 | 0*          |
| Total use of non-renewable primary energy resources   | MJ   | 9.83E+02                                  | 2.66E+02      | 2.50E+02     | 9.61E-01     | 4.63E+02 | 2.44E+00    |
| Use of renewable primary energy excluding renewable primary energy used as raw material         | MJ   | 1.00E+02                                  | 0*            | 2.82E-01     | 0*           | 1.04E+02 | 0*          |
| Use of renewable primary energy resources used as raw material                                  | MJ   | 2.19E+01                                  | 2.19E+01      | 0*           | 0*           | 0*       | 0*          |
| Use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ   | 9.75E+02                                  | 2.58E+02      | 2.50E+02     | 9.61E-01     | 4.63E+02 | 2.44E+00    |
| Use of non renewable primary energy resources used as raw material                              | MJ   | 7.61E+00                                  | 7.61E+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   | 4.35E+01                                  | 4.04E+01      | 0*           | 0*           | 9.20E-01 | 2.18E+00    |
| Non hazardous waste disposed  | kg   | 6.37E+01                                  | 4.82E+01      | 5.32E-01     | 1.07E+00     | 1.39E+01 | 7.37E-03    |
| Radioactive waste disposed  | kg   | 2.08E-02                                  | 1.40E-02      | 3.40E-04     | 3.04E-06     | 6.49E-03 | 1.23E-05    |
| Other environmental information   | Unit | Total                                     | Manufacturing | Distribution | Installation | Use      | End of Life |
| Materials for recycling   | kg   | 1.52E+00                                  | 4.22E-01      | 0*           | 0*           | 0*       | 1.10E+00    |
| Components for reuse  | kg   | 0.00E+00                                  | 0*            | 0*           | 0*           | 0*       | 0*          |
| Materials for energy recovery   | kg   | 4.20E-02                                  | 1.00E-03      | 0*           | 0*           | 0*       | 4.10E-02    |
| Exported Energy   | MJ   | 0.00E+00                                  | 0*            | 0*           | 0*           | 0*       | 0*          |

<sup>\*</sup> represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version EIME v5.6.0.1, 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.

The environmental indicators of other products in this family may be proportional extrapolated, by life cycle phase, based on the ratio of the amount of a key parameter of the product, over the amount of that key parameter within the reference product. Proportionality rules are based on the following key parameters for impacts by lifecycle phase: Manufacturing phase impacts - mass of the electronic boards (with components) and mass of the product excluding packaging.\* Distribution phase impacts - total mass of product (including packaging). Installation phase impacts - mass of packaging. Use phase impacts - product lifetime energy consumption. End of Life impacts - the product mass (excluding packaging).

\*For all other phases the parameter ratio times the reference phase impact will generally yield the product phase impact. For the manufacturing phase the impact is to be multiplied by the average of the first and second parameter ratios.

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 | ENVPEP1801005-V01.02-EN | Drafting rules                      | PCR-ed3-EN-2015 04 02      |
|---------------------|-------------------------|-------------------------------------|----------------------------|
| Date of issue       | 07/2019                 | Supplemented by                     | PSR-0005-ed2-EN-2016 03 29 |
| Validity period     | 5 years                 | Information and reference documents | www.pep-ecopassport.org    |

Independent verification of the declaration and data

Internal X External

The elements of the present PEP cannot be compared with elements from another program.

Document in compliance with ISO 14021:2016 « Environmental labels and declarations - Self-declared environmental claims (Type II environmental labelling) »

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