

# Product Environmental Profile

**IGP10S-Intelligent, two-wire transmitter for measurement of absolute and gauge pressure**

**IAP – IDP – IGP series**





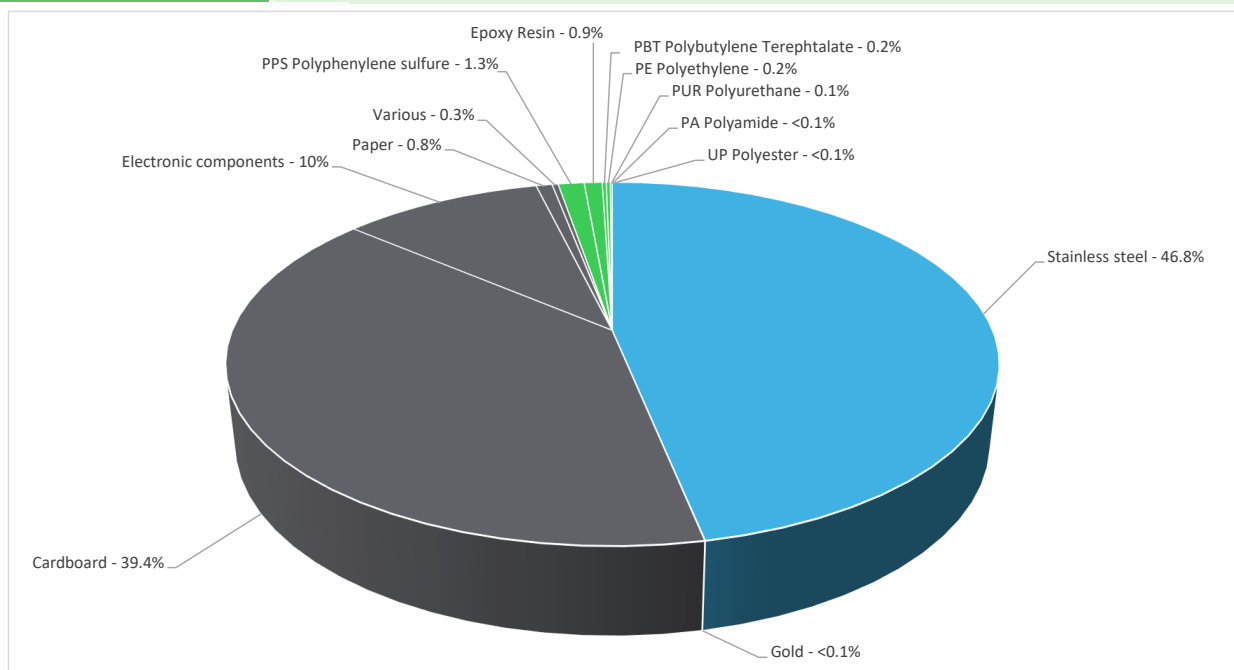
## General information

|                            |                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference product          | IGP10S-Intelligent, two-wire transmitter for measurement of absolute and gauge pressure                                                                                                                                                                                                                                                                                              |
| Description of the product | Field installed electronic transmitter for measuring pressure under a range of conditions within Industrial applications.                                                                                                                                                                                                                                                            |
| Description of the range   | The products of the range are: This PEP covers IAP05S, IAP10S, IAP50S, IDP05S, IDP10S, IDP50S, IGP05S, IGP50S and IGP10S Intelligent, two-wire transmitter for measurement of absolute and gauge pressure<br>The environmental impacts of this reference 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, during its 10 years of lifetime with a maximum power consumption of 0.69 W at 100% usage                                                                                                                                           |



## Constituent materials

|                        |       |                                                                           |
|------------------------|-------|---------------------------------------------------------------------------|
| Reference product mass | 2.5kg | including the product, its packaging, additional elements and accessories |
|------------------------|-------|---------------------------------------------------------------------------|



|          |       |
|----------|-------|
| Plastics | 2.7%  |
| Metals   | 46.8% |
| Others   | 50.5% |



## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric website

<https://www.se.com>



## Additional environmental information

|             |                          |     |                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|--------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| End Of Life | Recyclability potential: | 77% | The recyclability rate was calculated from the recycling rates of each material making up the product with the exception of data using the ESR database. For materials or components using the ESR database or the absence of data the conservative hypothesis "0% recyclability" was used.<br>Schneider specific rates have been calculated based on REEECYLAB tool developed by Ecosystem |
|-------------|--------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|


**Environmental impacts**

|                                  |                                                                                                                                                                                                                                                                     |        |                                                                                |           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------|-----------|
| Reference service life time      | 10 years                                                                                                                                                                                                                                                            |        |                                                                                |           |
| Product category                 | Other equipments - Active product                                                                                                                                                                                                                                   |        |                                                                                |           |
| Life cycle of the product        | The manufacturing, the distribution, the installation, the use and the end of life were taken into consideration in this study                                                                                                                                      |        |                                                                                |           |
| Electricity consumption          | The electricity consumed during manufacturing processes is considered for each part of the product individually, the final assembly generates a negligible consumption                                                                                              |        |                                                                                |           |
| Installation elements            | Installation will vary based on the client's specific situation. It is not expected to involve significant physical operations or materials.                                                                                                                        |        |                                                                                |           |
| Use scenario                     | The product is in active mode 100% of the time with a power use of 0.69 W for 10 years                                                                                                                                                                              |        |                                                                                |           |
| Time representativeness          | The collected data are representative of the year 2024                                                                                                                                                                                                              |        |                                                                                |           |
| Technological representativeness | Manufacturing process of Electronics parts by using soldering process, Metal parts by using forging and Casting process and Plastic parts by using Injection moulding process for Intelligent, two-wire transmitter for measurement of absolute and gauge pressure. |        |                                                                                |           |
| Geographical representativeness  | APAC-14.05%, EU-19.6%, NA-58.17%, LATAM-7.84% and ME-0.34%                                                                                                                                                                                                          |        |                                                                                |           |
| Energy model used                | [A1 - A3]                                                                                                                                                                                                                                                           | [A5]   | [B6]                                                                           | [C1 - C4] |
|                                  | Electricity Mix; Low voltage; 2020; United States, US                                                                                                                                                                                                               | Europe | Electricity Mix; Production mix; Low voltage; APAC, BR, US, CA, MX, TR & UE-27 | Europe    |

Detailed results of the optional indicators mentioned in PCRed4 are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.se.com/contact>

| Mandatory Indicators                                         |                           | IGP10S-Intelligent, two-wire transmitter for measurement of absolute and gauge pressure |                           |                     |                     |                 |                         |                          |
|--------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| Impact indicators                                            | Unit                      | Total (without Module D)                                                                | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads |
| Contribution to climate change                               | kg CO2 eq                 | 1.06E+02                                                                                | 2.97E+01                  | 4.62E+01            | 4.03E-02            | 2.55E+01        | 4.55E+00                | -4.64E+00                |
| Contribution to climate change-fossil                        | kg CO2 eq                 | 1.07E+02                                                                                | 3.08E+01                  | 4.62E+01            | 4.03E-02            | 2.55E+01        | 4.55E+00                | -4.63E+00                |
| Contribution to climate change-biogenic                      | kg CO2 eq                 | -1.12E+00                                                                               | -1.16E+00                 | 0*                  | 0*                  | 0*              | 0*                      | -1.11E-02                |
| Contribution to climate change-land use and land use change  | kg CO2 eq                 | 2.01E-06                                                                                | 2.00E-06                  | 0*                  | 0*                  | 0*              | 1.47E-08                | 0.00E+00                 |
| Contribution to ozone depletion                              | kg CFC-11 eq              | 5.07E-05                                                                                | 9.21E-06                  | 4.14E-05            | 0*                  | 9.54E-08        | 0*                      | -6.88E-07                |
| Contribution to acidification                                | mol H+ eq                 | 5.19E-01                                                                                | 1.93E-01                  | 1.81E-01            | 5.56E-04            | 1.31E-01        | 1.35E-02                | -2.81E-02                |
| Contribution to eutrophication, freshwater                   | kg (PO4) <sup>3-</sup> eq | 1.98E-04                                                                                | 1.22E-04                  | 5.49E-06            | 2.05E-07            | 3.33E-05        | 3.65E-05                | -7.05E-06                |
| Contribution to eutrophication, marine                       | kg N eq                   | 1.26E-01                                                                                | 3.20E-02                  | 7.47E-02            | 2.63E-04            | 1.56E-02        | 3.05E-03                | -2.69E-03                |
| Contribution to eutrophication, terrestrial                  | mol N eq                  | 1.39E+00                                                                                | 3.41E-01                  | 8.04E-01            | 2.68E-03            | 2.07E-01        | 3.30E-02                | -3.14E-02                |
| Contribution to photochemical ozone formation - human health | kg COVNM eq               | 4.66E-01                                                                                | 1.14E-01                  | 2.89E-01            | 6.43E-04            | 5.07E-02        | 1.08E-02                | -1.10E-02                |
| Contribution to resource use, minerals and metals            | kg Sb eq                  | 3.85E-02                                                                                | 3.85E-02                  | 0*                  | 0*                  | 6.95E-06        | 0*                      | -1.50E-03                |
| Contribution to resource use, fossils                        | MJ                        | 1.87E+03                                                                                | 4.90E+02                  | 6.04E+02            | 4.73E-01            | 5.13E+02        | 2.60E+02                | -1.09E+02                |
| Contribution to water use                                    | m3 eq                     | 1.96E+01                                                                                | 1.41E+01                  | 2.46E+00            | 9.78E-02            | 1.62E+00        | 1.38E+00                | -2.03E+00                |

| Inventory flows Indicators                                    |      | IGP10S-Intelligent, two-wire transmitter for measurement of absolute and gauge pressure |                           |                     |                     |                 |                         |                          |
|---------------------------------------------------------------|------|-----------------------------------------------------------------------------------------|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| Inventory flows                                               | Unit | Total (without Module D)                                                                | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads |
| Contribution to renewable primary energy used as energy       | MJ   | 1.26E+02                                                                                | 5.93E-01                  | 0*                  | 0*                  | 1.25E+02        | 2.86E-02                | -8.80E-01                |
| Contribution to renewable primary energy used as raw material | MJ   | 2.17E+01                                                                                | 2.17E+01                  | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to total renewable primary energy                | MJ   | 1.47E+02                                                                                | 2.23E+01                  | 0*                  | 0*                  | 1.25E+02        | 2.86E-02                | -8.80E-01                |
| Contribution to non renewable primary energy used as energy   | MJ   | 1.86E+03                                                                                | 4.84E+02                  | 6.04E+02            | 4.73E-01            | 5.13E+02        | 2.60E+02                | -1.09E+02                |

| Inventory flows                                                   | Unit | Total (without Module D) | [A1 - A3] - Manufacturing | [A4] - Distribution | [A5] - Installation | [B1 - B7] - Use | [C1 - C4] - End of life | [D] - Benefits and loads |
|-------------------------------------------------------------------|------|--------------------------|---------------------------|---------------------|---------------------|-----------------|-------------------------|--------------------------|
| Contribution to non renewable primary energy used as raw material | MJ   | 5.76E+00                 | 5.76E+00                  | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to total non renewable primary energy                | MJ   | 1.87E+03                 | 4.90E+02                  | 6.04E+02            | 4.73E-01            | 5.13E+02        | 2.60E+02                | -1.09E+02                |
| Contribution to use of secondary material                         | kg   | 3.87E-05                 | 3.87E-05                  | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to use of renewable secondary fuels                  | MJ   | 0.00E+00                 | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to use of non renewable secondary fuels              | MJ   | 0.00E+00                 | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to net use of fresh water                            | m³   | 4.57E-01                 | 3.27E-01                  | 5.74E-02            | 2.28E-03            | 3.79E-02        | 3.20E-02                | -4.72E-02                |
| Contribution to hazardous waste disposed                          | kg   | 7.60E+02                 | 7.59E+02                  | 0*                  | 0*                  | 5.81E-01        | 2.60E-01                | -1.18E+02                |
| Contribution to non hazardous waste disposed                      | kg   | 2.48E+01                 | 1.91E+01                  | 5.97E-02            | 1.07E+00            | 4.37E+00        | 1.26E-01                | -3.84E+00                |
| Contribution to radioactive waste disposed                        | kg   | 1.53E-02                 | 4.73E-03                  | 9.66E-03            | 0*                  | 8.58E-04        | 1.25E-05                | -1.73E-03                |
| Contribution to components for reuse                              | kg   | 0.00E+00                 | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to materials for recycling                           | kg   | 1.40E+00                 | 1.80E-01                  | 0*                  | 0*                  | 0*              | 1.22E+00                | 0.00E+00                 |
| Contribution to materials for energy recovery                     | kg   | 0.00E+00                 | 0*                        | 0*                  | 0*                  | 0*              | 0*                      | 0.00E+00                 |
| Contribution to exported energy                                   | MJ   | 1.39E-02                 | 1.83E-03                  | 0*                  | 0*                  | 0*              | 1.20E-02                | 0.00E+00                 |

\* represents less than 0.01% of the total life cycle of the reference flow

Contribution to biogenic carbon content of the product kg of C 0.00E+00

Contribution to biogenic carbon content of the associated packaging kg of C 3.01E-01

\* The calculation of the biogenic carbon is based on the Ademe for the Cardboard (28%), EN16485 for Wood (39,52%), and APESA/RECORD for Paper (37,8%)

| Mandatory Indicators                                         |                           | IGP10S-Intelligent, two-wire transmitter for measurement of absolute and gauge pressure |      |      |      |      |      |          |      |
|--------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------|------|------|------|------|------|----------|------|
| Impact indicators                                            | Unit                      | [B1 - B7] - Use                                                                         | [B1] | [B2] | [B3] | [B4] | [B5] | [B6]     | [B7] |
| Contribution to climate change                               | kg CO2 eq                 | 2.55E+01                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 2.55E+01 | 0*   |
| Contribution to climate change-fossil                        | kg CO2 eq                 | 2.55E+01                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 2.55E+01 | 0*   |
| Contribution to climate change-biogenic                      | kg CO2 eq                 | 0*                                                                                      | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to climate change-land use and land use change  | kg CO2 eq                 | 0*                                                                                      | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to ozone depletion                              | kg CFC-11 eq              | 9.54E-08                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 9.54E-08 | 0*   |
| Contribution to acidification                                | mol H+ eq                 | 1.31E-01                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 1.31E-01 | 0*   |
| Contribution to eutrophication, freshwater                   | kg (PO4) <sup>3-</sup> eq | 3.33E-05                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 3.33E-05 | 0*   |
| Contribution to eutrophication marine                        | kg N eq                   | 1.56E-02                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 1.56E-02 | 0*   |
| Contribution to eutrophication, terrestrial                  | mol N eq                  | 2.07E-01                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 2.07E-01 | 0*   |
| Contribution to photochemical ozone formation - human health | kg COVNM eq               | 5.07E-02                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 5.07E-02 | 0*   |
| Contribution to resource use, minerals and metals            | kg Sb eq                  | 6.95E-06                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 6.95E-06 | 0*   |
| Contribution to resource use, fossils                        | MJ                        | 5.13E+02                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 5.13E+02 | 0*   |
| Contribution to water use                                    | m3 eq                     | 1.62E+00                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 1.62E+00 | 0*   |

| Inventory flows Indicators                                                                                      |      | IGP10S-Intelligent, two-wire transmitter for measurement of absolute and gauge pressure |      |      |      |      |      |          |      |
|-----------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------|------|------|------|------|------|----------|------|
| Inventory flows                                                                                                 | Unit | [B1 - B7] - Use                                                                         | [B1] | [B2] | [B3] | [B4] | [B5] | [B6]     | [B7] |
| Contribution to use of renewable primary energy excluding renewable primary energy used as raw material         | MJ   | 1.25E+02                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 1.25E+02 | 0*   |
| Contribution to use of renewable primary energy resources used as raw material                                  | MJ   | 0*                                                                                      | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to total use of renewable primary energy resources                                                 | MJ   | 1.25E+02                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 1.25E+02 | 0*   |
| Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material | MJ   | 5.13E+02                                                                                | 0*   | 0*   | 0*   | 0*   | 0*   | 5.13E+02 | 0*   |
| Contribution to use of non renewable primary energy resources used as raw material                              | MJ   | 0*                                                                                      | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |

| Inventory flows                                                     | Unit | [B1 - B7] - Use | [B1] | [B2] | [B3] | [B4] | [B5] | [B6]     | [B7] |
|---------------------------------------------------------------------|------|-----------------|------|------|------|------|------|----------|------|
| Contribution to total use of non-renewable primary energy resources | MJ   | 5.13E+02        | 0*   | 0*   | 0*   | 0*   | 0*   | 5.13E+02 | 0*   |
| Contribution to use of secondary material                           | kg   | 0*              | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to use of renewable secondary fuels                    | MJ   | 0*              | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to use of non renewable secondary fuels                | MJ   | 0*              | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to net use of freshwater                               | m³   | 3.79E-02        | 0*   | 0*   | 0*   | 0*   | 0*   | 3.79E-02 | 0*   |
| Contribution to hazardous waste disposed                            | kg   | 5.81E-01        | 0*   | 0*   | 0*   | 0*   | 0*   | 5.81E-01 | 0*   |
| Contribution to non hazardous waste disposed                        | kg   | 4.37E+00        | 0*   | 0*   | 0*   | 0*   | 0*   | 4.37E+00 | 0*   |
| Contribution to radioactive waste disposed                          | kg   | 8.58E-04        | 0*   | 0*   | 0*   | 0*   | 0*   | 8.58E-04 | 0*   |
| Contribution to components for reuse                                | kg   | 0*              | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to materials for recycling                             | kg   | 0*              | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to materials for energy recovery                       | kg   | 0*              | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |
| Contribution to exported energy                                     | MJ   | 0*              | 0*   | 0*   | 0*   | 0*   | 0*   | 0*       | 0*   |

\* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version v6.2.3, database version 2024-01 in compliance with ISO14044, EF3.1 method is applied, for biogenic carbon storage, assessment methodology 0/0 is used

To estimate the impact on the environment of other products in this family, you can use two different methods. For the Manufacturing, Distribution, and End-Of-Life phases, you can extrapolate the impact of each indicator based on the product weight (extrapolation by mass). And for the Usage phase, you can estimate the impact by looking at the amount of energy consumed.

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

The Manufacturing and Distribution phases across all mandatory indicators drive the environmental impacts equally. The Resource Use, Mineral and Metals indicator is entirely affected by the Manufacturing phas. On the other hand, the Ozone Depletion indicator attributes 81.7% of the impact to the Distribution phase.

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_V3 | Drafting rules                                            | PCR-4-ed4-EN-2021 09 06                                                                            |
| Date of issue                                                                                                     | 10-2024          | Supplemented by<br>Information and<br>reference documents | PSR-0005-ed3-EN-2023 06 06<br><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 14021 : 2016                         |                  |                                                           |                                                                                                    |
| Internal                   X                   External                                                           |                  |                                                           |                                                                                                    |
| The PCR review was conducted by a panel of experts chaired by Julie Orgelet (DDemain)                             |                  |                                                           |                                                                                                    |
| PEPs are compliant with XP C08-100-1:2016 and EN 50693:2019 or NF E38-500 :2022                                   |                  |                                                           |                                                                                                    |
| The components of the present PEP may not be compared with components from any other program.                     |                  |                                                           |                                                                                                    |
| Document complies with ISO 14021:2016 "Environmental labels and declarations. Type II environmental declarations" |                  |                                                           |                                                                                                    |

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