



Company: Small Data Garden
 Product name: IOTSU® DP for LoRaWAN®
 Product code: IOTSU® L3 DP01
 Rev: 2.1_04thApr 2024



IOTSU® DP for LoRaWAN®

IOTSU® DP is a wireless device that can be used to measure the pressure circumstances in buildings. The device has two inlets, and it measures the pressure levels between them. Building pressure levels can be measured by connecting a measuring tube to one of the inlets and routing it outside of the building.

The device can be mounted using screws or adhesive tape. Installation of this maintenance-free device is quick and easy. Transmission and measurement cycles can be adjusted according to the need using downlinks.

IOTSU® DP uses the global LoRaWAN® network connection. There is no need for external power supply. Depending on transmission settings and environmental factors the battery of the device can last 5 years.

MEASURING AND RECORDING:

- Differential pressure

TECHNICAL SPECIFICATIONS:

Dimensions	: 63 x 114 x 30 mm
Weight	: 117 g with battery
Sensors	: Differential pressure
Transmission cycle	: 2 h, configurable via downlink
Measurement cycle	: Transmission cycle /4
Connectivity	: LoRaWAN® 1.0.4
Battery	: Size C, 3.6 V, replaceable
Expected battery life	: 5 years with default setting, Transmissions at SF12/DR0
Operating Conditions	: 0 °C...+50 °C, Relative humidity 10...95 % (Non-condensing)
Typical Accuracy	: ±3 % of reading, ± 0.1 Pa
Certifications	: CE
Mounting	: Screws, adhesive tape

Small Data Garden Oy's (SDG) products (IOTSU® Products) shall be used according to the manual and other instructions and not be used in any other way than their intended use defined by SDG. IOTSU® Products are designed for LPWAN technologies collecting non-critical information. SDG will not be held liable for any damage which may result from inaccurate readings and delayed data transmission. In case regular calibration of IOTSU® Products is needed, SDG shall not be responsible for this, and it is the Customer's responsibility to obtain calibration from a suitable service provider. For more information see SDG's General Terms and conditions for the supply of products and Legal Notices.



Measurement ranges

Range and resolution of the measurements depends on sensor type and the data transfer structure. To ensure the long battery life of IOTSU®, data packets sent over wireless networks are optimized.

Differential pressure

Sensor model: Sensirion SDP810 series

Resolution: 0.1 Pa

Range: ± 125 Pa

Sensor accuracy: ± 3 % of reading, ± 0.1 Pa

Long-term drift < 0.05 Pa/year

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CALIBRATION

The IOTSU® device has been configured to periodically perform automatic reference calibration to any onboard sensors that require it. The following describes the calibration methods for each sensor:

Differential pressure

Factory calibrated to measure the applied differential pressure. No possibility for re-calibration.

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Legal Notices

Small Data Garden Oy's (SDG) products (IOTSU® Products) shall be used according to the manual and other instructions and not be used in any other way than their intended use defined by SDG.

The user right of the firmware of SDG is limited to the version and specifications confirmed by SDG. Any unauthorised usage of device is prohibited and must be suspended by request of SDG. In addition, SDG is entitled to charge for unauthorised usage including administrative and solving cost. SDG shall not be responsible for damages caused by the user connecting the SDG's products (IOTSU® Products) and/or using the IOTSU® Products in any other way than their intended use nor for any damages caused by materials or product design defined by the client or by the working or manufacturing processes the client has determined.

IOTSU® Products are designed for collecting non-critical information for optimising energy consumption in long term usage and the IOTSU® Products are not intended to be used for life and security critical solutions. We rely on high-quality sensor, component and software suppliers and manufacturers and IT, LP-WAN and cloud service providers. However, for the reason that the accuracy and redundancy is depended among other things on operating circumstances, radiotechnology specifications and coverage, and because SDG relies on specifications provided by its suppliers, SDG will not be held liable for any damage which may result from inaccurate readings.

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