

Differential Pressure Sensor



Description

The differential pressure sensor from *Smart Box & GeoPortal* accurately measures differences in pressure between two locations and communicates this information through our portal. Application examples include monitoring of over pressure in sterile and clean rooms, as well as clogging of filters in air condition ducts and HVAC systems.

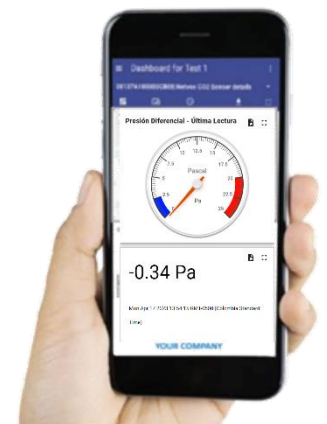
Operation

The wireless sensor measures differential pressure in the range of 25Pa to 5000Pa with industry leading accuracy of 0.1% of selected range. At regular interval, the sensor communicates with our portal and the alert notification system.

The values for maximum and minimum thresholds are configured in the portal to alert the users when insufficient or excessive differential pressure is detected activating notifications by email or by Telegram. The data is viewed real-time and exported as a data sheet or a graph. Likewise, the portal stores the data for analysis.

Main Features

- Uses LoRaWAN technology
- Range of the wireless network: 3 km
- RF Communication: 915 MHz
- Battery lifespan: 3 years
- Measures over and under pressure
- High performance industrial pressure transducer
- Measurement of battery level
- Easy to install and maintain



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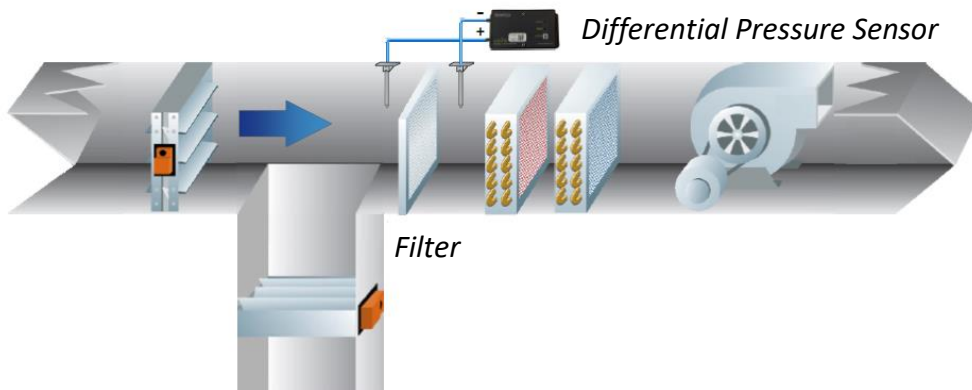
Specifications

Differential Pressure	
Weight	140 g with batteries
Size	129 mm x 67 mm x 41 mm
Battery	2 x 3.6V AA Lithium 14505 (Li-SOCI2)
Battery lifespan	3 years
Sampling interval	Configurable
Uplink interval	Configurable
Ranges	Up to 7 calibrated ranges
Accuracy	0.1% of full range
Range	25 Pa to 5000 Pa

Applications

Differential pressure sensors are used in hospital operation rooms, isolation wards, critical care units, laboratories, clean rooms, manufacturing plants etc. These rooms need to maintain a pressure difference, which requires continuous room pressure monitoring.

A different application is monitoring filter condition in HVAC systems. When a filter starts to clog, its resistance to air flow increases which is measured by the differential pressures sensor.



Example of a differential pressure sensor to monitor filter condition in a HVAC system

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