

Process Automation

NEON Pressure Sensor

Measures pressure continuously -
best design for digital & analogue workflows





NEON Pressure Sensor

Continuously monitors pressure - for digital and analogue workflows

Accurate pressure readings are critical for any facility's safe and efficient operation. As the processing industry rapidly transforms into the digital age, engineers are beginning to gain greater visibility into their facilities by adding increasingly more data measuring points. However, while data leads innovation, we understand that, in certain situations, traditional instrumentation can still play a vital role for engineers.

Addressing these demands, IMI has developed a pressure sensor that is accurate, versatile, and robust. The NEON Pressure Sensor is available in several pressure ranges and various other options, including one with a Badotherm gauge. The analogue meter addresses an engineer's need for immediate visual feedback when performing manual inspections, delicate maintenance, or possible emergency procedures. This design is best for digital and analogue workflows, with less failure points than competing installations.

NEON Pressure Sensors provide data for predictive maintenance and monitoring, issuing alerts when tolerances are breached. They are retrofittable, with up to ten years of battery life, and communicate wirelessly via a local LoRaWAN network. The NEON Pressure Sensor is available with the option for an IECEx / ATEX Zone 0 certification, if required or wanted.



Key Benefits

Maximise efficiency, safety, and insight with intelligent pressure monitoring.

- Reduce manual rounds by enabling remote data access.
- Increase safety through instant notifications and trigger alarms.
- Minimise downtime through early fault detection.
- Lower implementation and scaling costs with easy deployment options.
- Improve insights with time synchronisation and trend analysis.
- Reduce maintenance time with smart data insights.

Technical Overview

The NEON Pressure Sensor

Sensor	Digital only: a sensor with digital readout to the transmitter. No visual readout.
Options	With gauge: a Badotherm analogue gauge with built in digital readout to the transmitter.
Range (relative, bar or PSI, $\pm 0.4\%$ FS)	Digital only: -1 ... 9 bar 0 ... 2.5 - 1000 bar
Mounting	Version with gauge: -1 ... 0 - 600 bar
Mounting	Inside and outside UNF, NTP, metric and G thread options
Lifetime	Battery life up to 10 years
Certifications	ATEX Zone 0 ¹ / IECEx Zone 0 ¹ / North America Class 1 Div 1 / Class 1 Zone 0 ² IP65
Wireless protocols	LoRaWAN 868, 915, 923 MHz (Region specific frequencies and certifications upon request)
Operating temperature transmitter	-40°C to 70°C (-40°F to 158°F)
Dimensions	Transmitter: 100 x 70 x 57 mm (L x W x H) Badotherm gauge: \varnothing 100mm Digital only sensor: \varnothing 24mm / 70 mm height

LoRa Devices Designed For Heavy Industry

The NEON product line supports all industrial customers moving towards LoRaWAN as the Industrial IoT network of the future.

LoRaWAN networks provide industrial facilities with a secure solution with no vendor lock-in that is quickly becoming an industry standard. The network can scale tens of thousands of sensors and cover sites in their entirety with only a small number of gateways. Best of all, the low power approach can extend the lifetime of our NEON products significantly.

NEON offers you a standardised approach to collecting data points and an approach to creating integrated solutions within existing IT ecosystems.

- Fully LoRaWAN compatible³
- Based on the highest security standards
- 100% ownership of data
- IECEx/ATEX zone 0 certified - if required
- Battery powered for easy deployment
- Installation within live environments ensuring continuous operation
- Integration with existing data backends or DCS
- Visualisation via IMI TWGT's SolidRed Suite or any other IoT platform
- Detailed and extensive documentation
- No legacy; compatible with all types of different assets
- Provision of lifecycle support
- Availability of spare parts and refurbishment packages

¹ ATEX/IECEx certification is optional if wanted

² IS Class I Div 1, Group C, D T4 - AEx ia IIB T4 Gb II 2G Ex ia IIB T4 Gb

³ Compatible with international LoRaWAN standards (long-range, low power wide-area network)

IECEX Class 0 ATEX Zone 0 Certified

The NEON product line is built to not only operate in industrial sites where explosive gasses are being handled but also all other elements that a sensor may be exposed to in the course of its lifetime.

It has been tested and certified to work in conditions from -40° to 80° Celsius without hampering performance. The devices are designed

and engineered for safe, secure deployment in wireless LoRaWAN networks and are fully remotely configurable, ensuring both longevity and reliability within an operation.

The NEON Pressure Sensor can be installed / mounted using its bracket with a band clamp or bolts. The cable between the transmitter and sensor part allows for flexible placing options and easy access on-site.

Accurate pressure readings are critical for safety and efficiency.

NEON Pressure Sensor Non-Ex Variant

The NEON Pressure Sensor is also available in a non-ATEX / IECEx certified version, tailored for industrial environments where such certification is not required. Built with the same standards as the ATEX / IECEx certified version, this sensor delivers the same accurate pressure readings.

The non-Ex variant is ideal for facilities outside of explosive zones, such as manufacturing, pulp and paper, water management, and automation, offering all the benefits of the known NEON capabilities and features without the need for intrinsic safety compliance.

With the trusted NEON form factor, full LoRaWAN compatibility, and industry-grade resilience, this sensor offers a powerful, cost effective solution for widespread asset monitoring – engineered to perform for up to a decade in the field.

Key Benefits

- Cost-effective for non-hazardous environments
- Seamless integration via full LoRaWAN compatibility
- Rugged, industry-grade design with trusted NEON form factor
- Battery life up to 10 years



Process Automation

The information in this brochure is provided for general informational purposes only. Specifications for products and services are subject to change without prior notice. IMI plc and its subsidiaries own all product brands mentioned herein.

IMI makes no warranties or representations about the accuracy or completeness of the content in this brochure and assumes no liability for any errors or omissions it may contain. We reserve the right to modify, enhance, or discontinue any product or service described herein without prior notification..

IMI plc

Lakeside, Solihull Parkway
Birmingham Business Park
Birmingham
B37 7XZ
United Kingdom

www.imiplc.com/process-automation

16004.01/25EN

