

# Process Automation

## NEON Valve Sensor

Monitors valve position of both quarter-turn and multi-turn valves





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# Valve monitoring to enhance on-site safety

Having access to reliable data is essential to making good decisions and, as a result, running a more efficient and streamlined operation. Manually operated valves require regular checks and adjustments, a process that can be greatly improved through digitisation. By monitoring these assets remotely, spillage and contamination can be prevented, enhancing on-site safety.

Our NEON Valve Sensors are designed to communicate whether a valve is in the open or closed position. This capability reduces the likelihood of false positives while providing you with outstanding measurement accuracy.

The NEON QT Valve Sensor ensures universal compatibility with any sized quarter-turn valve available on the market. We designed the MT Valve Sensor for all multi-turn / 360° valves.

Communications via a privately hosted LoRaWAN network ensures IT security is a given, and the total cost of ownership can be minimised. As valves are most often operated in environments with explosive atmospheres, all NEON Valve Sensors are IECEx class 1 / ATEX zone 1 certified<sup>1</sup>.



## Key Benefits

Maximise efficiency, safety, and insight with intelligent valve position monitoring.

- Reduce manual rounds with remote access to data.
- Increase safety thanks to instant notifications and trigger alarms.
- Minimise downtime through early fault detection.
- Lower implementation and scaling costs with easy deployment option.
- Improve insights with time synchronization and trending building.
- Reduce maintenance turnaround with intelligent data.
- Dramatically reduce human error thanks to precise data on valve positioning

## Technical Overview

The NEON Valve Sensor

Sensor	Magnetic field detection
Range	Determines valve state: closed or open with a 2° accuracy
Wireless protocols	LoRaWAN 868, 915 MHz <sup>2</sup> , 923 Mhz
Dimensions	95 x 64 x 39 mm (L x W x H)
Operating temperature	-40°C to 80°C (-40°F to 176°F)
Certifications	IECEX Class 1 <sup>1</sup> / ATEX Zone 1 <sup>1</sup> , IP-65 rated
Lifetime	Battery life up to 5 years
Mounting Options	Stainless steel brackets available

## 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 compatible<sup>2</sup>
- Based on the highest security standards
- 100% ownership of data
- Delivered with unique provisioning keys
- IECEx Class 1 / ATEX zone 1 certified<sup>1</sup>
- Battery powered for easy deployment
- Installation within live environments ensuring continuous operation
- Integration with existing data backends or DCS
- Detailed and extensive documentation
- No legacy; compatible with all types of different assets
- Provision of lifecycle support
- Availability of spare parts and refurbishment packages

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

<sup>2</sup> Compatible with international LoRaWAN standards (long-range, low power wide-area network)

# IECEX Class 1 ATEX Zone 1 Certified

**Our NEON technology is designed to operate at industrial sites handling combustible gasses and other hazardous elements.**

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.

NEON Valve Sensor works via retrofitting. The devices are installed on top of existing valves with a bracket, extending its longevity for the digital age.

**Supports several types of manual valves from quarter-turn to multi-turn.**



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