

Smarten-up your Valves!



Why:

- Improved Operations by increased Digitalization Saves on Costs!

What:

- Wireless MEMS position sensors equipped with latest technology and BLE 5 communication

How:

- Mechanical Valves can easily be retrofitted with Fusion sensors communicating to a Smart Phone or via a gateway to a data cloud / ERP system.
- Works just as easy with multi turn or 0-90 degree valves
- Quick and easy installation - no cabling needed

Description of Applications

Trisense's Wireless Valve Position Transmitter Fusion 200 fits to any type of manual operated valves, and will log current and past valve position with date and time of position change. This saves time and cost, and avoids safety issues due to maloperations of manually operated valves. Data will be transferred to a Smartphone or via a gateway to a dedicated data cloud or to the control room.

Fusion 200 has no moving parts and no mechanical units that opens for failures and maintenance. Onboard sophisticated microprocessors and MEMS (Micro Electro Mechanical Systems) sensors detects valve position and movement. Embedded software algorithms keep track of valve position in percent open with high resolution for all sorts of valves, part turn valves (ball or butterfly) or multi-turn valves (globe or gate, with or without gear). The algorithm allows calibration of individual valves electronically at installation. The sensor can also conduct linear measurements.

Fusion 200 is battery powered and communicates wireless with BLE (Bluetooth® Low Energy/BLE 5.0) to operator's terminals running companion apps for a range of operational applications, including transfer of logged data to ERP systems by means of web services.

Design and Technology Features

- Measures multi-turn, 0-90 degrees and linear movements
- Connects to smart phones and tablets with BLE5 (Bluetooth® Low Energy) Certified Bluetooth® Wireless technology
- Nominal range: Up to 300 m* (900 feet) depending on plant conditions. Density in obstructions in the line-of-sight between sensor and gateway might affect transmission range and position of Gateway. It is advisable to position the Gateway at a high position in the facility but at some distance from the ceiling. Also, the gateway should be positioned where the obstructions between sensor and gateway are at a minimum. Several Gateways within the sensor area may be anticipated.
- Housing: High impact polycarbonate and stainless steel construction
- Ultra-low power consumption, no battery change between valve service periods
- Secure Field programmable
- Cloud Architecture
- Android and iOS app for calibration purposes and data retrieval (when not connected to a gateway)

*Range may be longer or shorter depending upon placement and density of pipe structure etc.

Reference Environmental and Electrical Specification

Internal 3,6 V battery no field replacement

The complete assembly will withstand saline and humid atmosphere

Operating temperature: Minus 40°C (- 40°F) to Plus 80°C (176°F)

Environmental protection according to IEC standard 60529 to IP 67

Explosion protection Ex II 1 G ia IIB T4 Ga

Tested according to IEC 60079-0:2012 and IEC 60079-11

EMC Directive: EN 61326-1:2013, EN 61326-2-3: 2013