

Valve Positioning Sensor

The Lansitec Valve Positioning Sensor leverages LoRa technology and a built-in magnet sensor to track valve rotation angles with 1° accuracy. This compact device measures both the direction and total number of turns, reporting real-time data to a LoRaWAN gateway. With configurable heartbeat intervals and operating modes, plus support for FOTA over Bluetooth, it delivers reliable performance and minimal maintenance in industrial or municipal environments.

1° Rotation Accuracy

Precisely detect forward or reverse valve turns within a 360° range, enabling efficient and accurate monitoring.

Compact Design

Small footprint makes for easy installation where space is at a premium.

LoRaWAN Connectivity

Transmit data over distances >1 km (urban), using AES128 encryption.

Long Battery Life

Dual 2800mAh batteries (5600mAh total) support around four years of typical usage.

FOTA Over Bluetooth

Update firmware without disassembling or uninstalling the sensor.

3D Accelerometer

G-sensor allows for additional motion-based detection and system calibration.



SCENARIO



SMART CAMPUS OR MALL

Cover large indoor spaces such as campuses, shopping malls, and convention centers with minimal gateways. Take advantage of built-in network server support for quick, unified device management.



MUNICIPAL WATER MANAGEMENT

Oversee distribution valves across urban networks. Track valve angles and usage to schedule preventive maintenance and reduce water loss or unauthorized alterations.



SMART IRRIGATION



REMOTE INFRASTRUCTURE

Track rotation of irrigation valves on large farms or golf courses, ensuring timely watering schedules and detecting issues before crops or landscapes are impacted.

Install on valves in distant or hard-to-reach locations such as hydroelectric dams or remote pumping stations; real-time angle reports allow quick operational decisions without physical inspections.

SPECIFICATIONS

SYSTEM

Standby Current	20 μ A
FOTA Over Bluetooth	Support
G-sensor	Support
Calibration	Support

CONNECTIVITY

Activation Mode	OTAA or ABP
LoRa Frequency	US915, AU915, EU868, EU433, AS920-923, AS923-925, RU864, ID920, KR920, IN865, KZ865, CN470, CN470-Ali
LoRa TX power	0 to 14 dBm
LoRa Sensitivity	-137 dBm @ SF12, BW 125 kHz
LoRa Communication Distance	>1 km in an urban area
Encryption	AES128

FUNCTIONS

Angle Accuracy	1°
Report Delay	5s
Max. Number of Turns	\pm 50
Degree Range	0°~360°
Multiple Bluetooth gateway LoRaWAN report synchronization	Sync the clock and LoRaWAN report
TDMA	Support
Bluetooth Data Compression	Support
Configurable Bluetooth data filter and payload report	Filter any data bytes in a Bluetooth payload and report any via LoRaWAN

MECHANICS

Dimension	78x79x35mm with the mounting lugs; 78x66x35mm without the mounting lugs
Ingress Protection	IP68
Weight	133g

Operating Temperature	-20°C ~ +70°C
Storage Temperature	-10°C ~ +30°C
Operating Humidity	0% ~ 95% (non-condensing)
Housing Material	PC and ABS
PCB Coating	Water proof coating

POWER

Battery	2800mAh * 2
Standby Time	~4 year @ 5 valve state reports everyday

ORDERING INFORMATION

Product Description	Part Number
Rotary Valve Sensor, LoRaWAN, 5600mAh	100-000S1