



Benefits



Using LoRaWAN technology for wireless monitoring



Featuring four Hall sensors on the top of the gas meter backpack, two are dedicated to **Anti-theft measures**, while the other two are utilized for data reading



Easy to configure, low deployment cost



Compatible with Landys Gas Meter



Battery power, lifetime up to 2 years

GAS METER PULSE READER

As an add-on sensor, it assists in reading the pulse of gas usage for each tenant and is compatible with Landis gas meters. The data collected by the sensor will be transmitted wirelessly to the server, allowing for monitoring via a web-based platform.

Sensor implementations:



BUILDING (MALL)



MANUFACTURER



GAS & OIL



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SMART GAS METER



The gas meter reader sensor is specifically designed to measure usage from Landis, Elster, or similar gas meters. As the rotating part of the gas meter passes through these sensors, it initiates a reading, enabling remote meter reading.

This gas meter reader integrates with LoRaWAN technology to support wireless communication, leveraging STMicroelectronics' advanced LoRa technology.

Distinguishing itself from other gas meter readers, it boasts exceptional sensitivity, with a maximum receive power of -134 dBm, allowing it to capture even the faintest signals. The device also features an internal battery power source and an advanced battery management system. Precise calculations significantly extend the battery life, ensuring continuous, uninterrupted operation and enhancing the overall efficiency and reliability of gas meters in metering applications.

Electrical Parameters

PARAMETERS	Gas Meter Pulse Reader
Power supply	Built-in battery 3.6V (ER18505 4000mAh) (Ultra-low power consumption)
Data reading support	Infrared data reading support
Standby current	$\leq 40\mu\text{A}$
Active current	$\leq 4\text{mA}$
TX current	$\leq 127\text{mA}$ @ 22dBm
Battery usage monitoring	Accurate Coulomb Measurement
Battery undervoltage warning	Yes
MCU temperature monitoring	Yes
CPU working temperature	$-20^{\circ}\text{C} \dots +85^{\circ}\text{C}$
Storage temperature	$-10^{\circ}\text{C} \dots +60^{\circ}\text{C}$
Anti-tampering	Anti tampering feature helps user detect interference from magnets





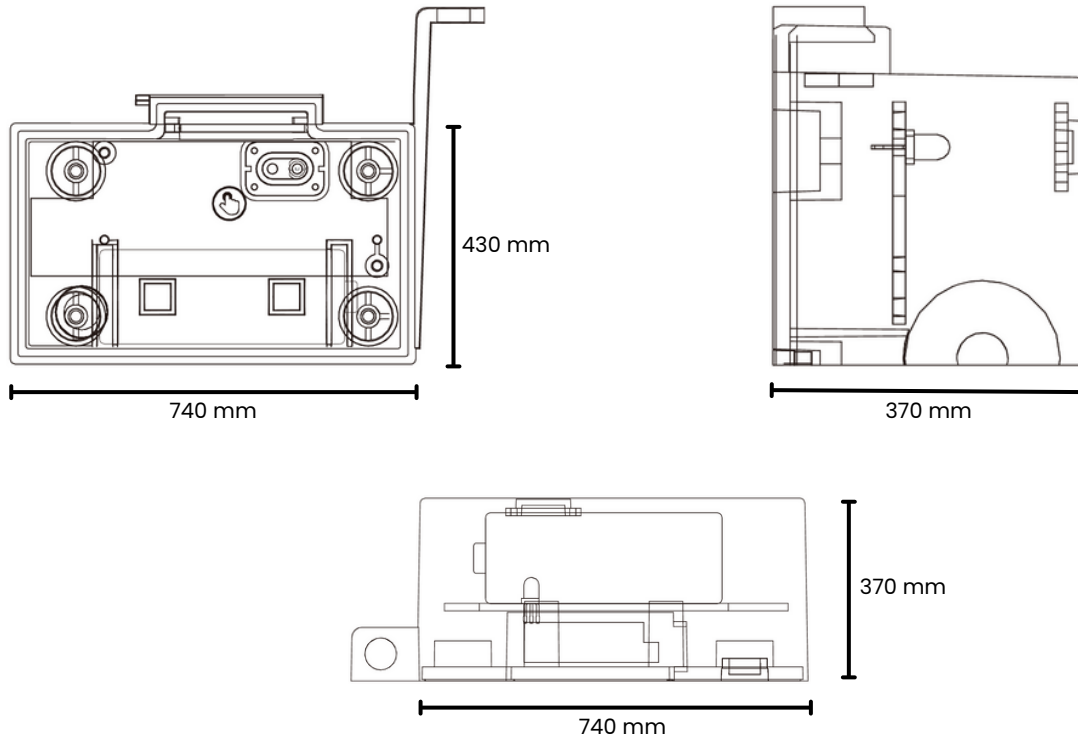
LoRa Radio Parameters

PARAMETERS	Gas Meter Pulse Reader
Communication protocol	LoRaWAN
LoRa MAC version	1.0.3
Device type	Class A
Network registration way	OTAA, ABP
LoRaWAN uplink confirmation	Confirm or Partially Confirm
MCU	Arm® 32-bit Cortex®-M4
Memory	256KB Flash; 64KB RAM
ISM Bands	AS923, AU915, EU868
TX Power	Up to 22dBm
Uplink channels	8 settable channels with bandwidth of 125kHz
RX sensitivity	Down to -125dBm@BW = 125 kHz, SF = 7
Spreading factor	SF7 ~ SF10(Adaptive)
LBT (Listen Before Talk)	Yes
Report interval	Configurable via Downlink Commands
Data cache when LoRa network interrupt	Yes
Data logger in local device	Optional
Communication distance	3km to 10km (Eyesight distance in open space)
Near field communication way	Infrared Tools
Anti-tampering	Yes
Anti-dismantling alarm function	Yes





Dimensions



Implementations



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