

EST378 Wireless Pressure Transducer

LoRa Communication

- ✓ Wireless Output
- ✓ Compact Design
- ✓ Low Power Consumption -10μA.
- ✓ Remote Control
- ✓ High-Capacity Battery
- ✓ High-performance Silicon Sensing Element
- ✓ High Sensitivity & Precision
- ✓ Digital Temperature Compensation & Nonlinear Correction



Applications

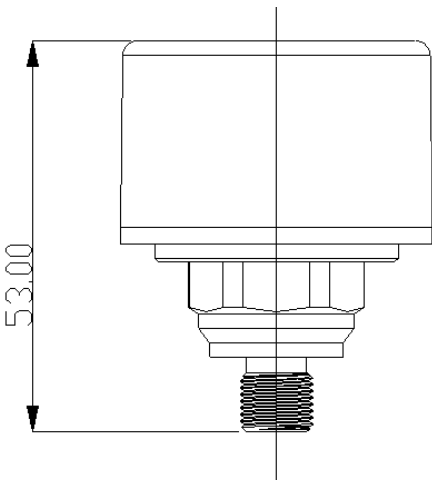
Smart communities | Intelligent Fire Protection | Smart Homes & Buildings | Smart metering | Smart Agriculture | Intelligent Logistics

Product Introduction

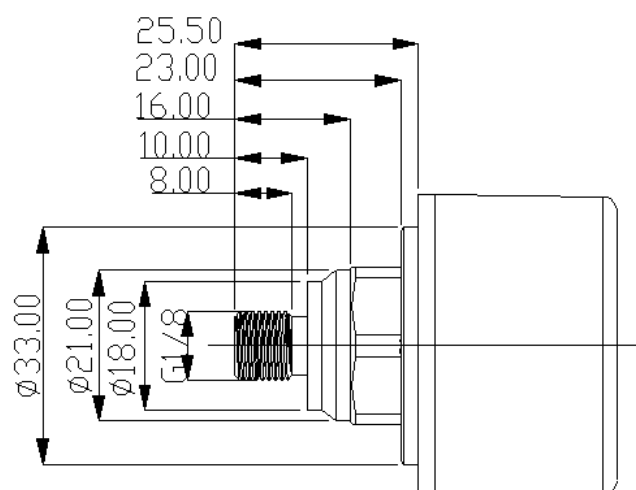
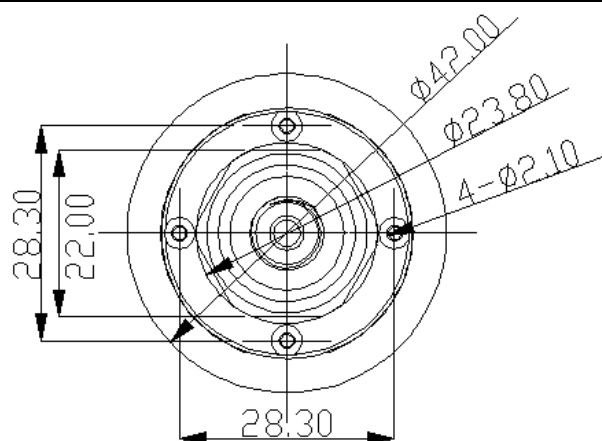
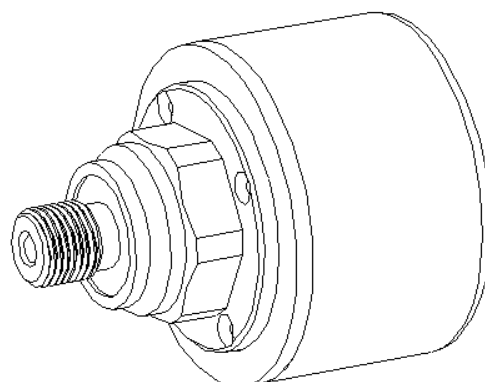
EST378 wireless pressure transmitter is kind of LoRa communication product designed for the IoT industry. It features flexibility, high stability, compatibility, interoperability, compact size, and affordability, making it ideal for various industrial applications. Its uses span multiple sectors, including smart communities, intelligent fire protection, smart homes and buildings, smart metering, smart agriculture, and intelligent logistics.

Specification & Drawings/ Dimension

Battery Powered (3VDC 1500mAh) 0-25bar LoRaWAN Protocol		
Specification		Drawing/Dimension
Pressure Range		0-25bar
Proof-Pressure		200%
Process Connection		G1/8
Accuracy (in all)		0.5% 1.0%
Accuracy	Non-linearity	0.2%-0.4%/FS
	Hysteresis	0.15%-0.3%/FS
	Repeatability	0.15%-0.3%/FS
	Stability	±0.3%/FS/Year
Temperature Compensation		-10℃～70℃
Working Temperature		-40℃～85℃
Storage Temperature		-40℃～125℃
Power Supply		Battery (3VDC-1500mAh)



Current Consumption	10uA
Communication	LoRa
Communication Protocol	LoRa WAN
Wireless Band	470-510MHz
Communication Frequency	Once a day (on setting)
Ratio Frequency	60s each time (on setting)
Ingress Protection	IP65
Wetted Medium	Compatible with SS304/SS306
Vibration	10gRMS, (20~2000)Hz
Shock	100g, 11ms
Insulation	>100MΩ @250VDC
Response Time	<1ms (@ 90%FS)



LoRaWAN (Long Range Wide Area Network) is an innovative wireless communication protocol that has significantly transformed the landscape of industrial and IoT (Internet of Things) applications, there are some key areas as below that users should pay close attention to:

Network Planning and Coverage:

LoRa WAN is a wide-area network technology, so the coverage and placement of the gateway(s) are crucial for ensuring reliable connectivity. Users should carefully assess the site conditions, obstacles, and potential interference sources to determine the optimal locations for the LoRa WAN gateway(s) to achieve the desired coverage and performance.

Proper network planning and site surveys are essential to minimize dead spots and ensure seamless communication between the pressure transmitters and the central monitoring system.

Power Management and Battery Life:

One of the primary advantages of LoRa WAN is its low power consumption, but users still need to consider the power requirements and battery life of the pressure transmitters.

Users should carefully select pressure transmitters with power-efficient designs and ensure that the battery capacity is sufficient for the intended deployment duration.

Monitoring and managing the battery status of the pressure transmitters is crucial to avoid unexpected downtime or data loss due to power depletion.

Data Security and Integrity:

As with any industrial communication system, data security and integrity are of utmost importance when using LoRa WAN-enabled pressure transmitters.

Users should ensure that the pressure transmitters and the overall LoRa WAN network are configured with the appropriate security measures, such as end-to-end encryption, secure authentication, and access control.

Regular monitoring and auditing of the system's security posture are essential to identify and mitigate any potential vulnerabilities or cyber threats.