

EST375 Wireless Communication Pressure Transmitter



Product Introduction

The solution of EST375 series is a wireless transmitter designed for field use without point-to-point wiring. Utilizing a low-power wireless communication mode, it enables quicker, safer, and more convenient installation. Complementary wireless adapter devices can convert wireless signals into MODBUS standard signals for transmission via Ethernet or serial port, facilitating seamless integration into measurement and control systems.

EST375 Wireless Pressure Transmitter can be deployed for Oil-water well where the remote-control process is requested, it can be also deployed to remotely monitor the pressure/level (0-1000bar) of petroleum oil-water well production, and storage process, with remote distance from 200m(ZigBee) to 1000m(LoRa).

Work with the remote-control device (wireless gateway ES-WG01), the Wireless Communication Protocol can be made with: Zigbee, LoRa, NB-IoT, 4G to meet customers specific wireless communication requirement.

No sim card, no cable involved, easy installation, easy operation. The optional wireless transfer device can turn different kinds of signal into standard Modbus protocol, and transfer via Ethernet or serial port.

Highlight Features

- **Wireless:** Zigbee, LoRa, NB-IoT, 4G
- **Power Supply:** 3.6V Lithium Battery
- **LCD Display:** For Pressure/Temperature/Battery value
- **LED Indicator:** For Resetting/Setting/Network/Data Collection
- **Field Installation:** Connecting via connector/adaptor with Pipeline Valve
- **Direction Adjusting:** Available
- **Ingress Protection:** IP66-68
- **Waterproof:** Fully sealed waterproofing
- **Ex-Proof:** Intrinsically Safe Circuit

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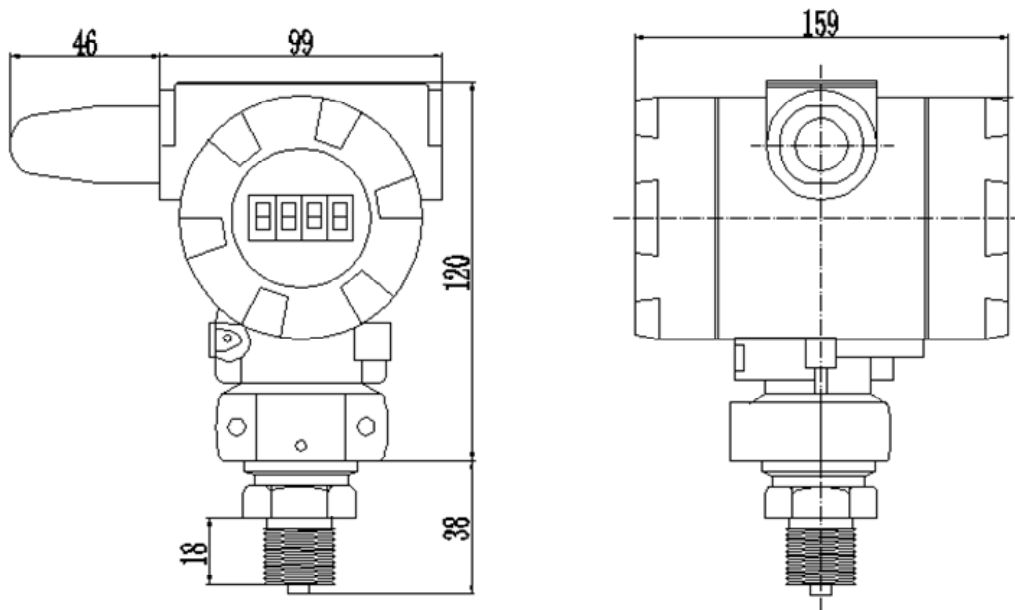
Applications

- Oil-water well
- Gasoline Monitor
- Petroleum
- Environment
- Pharmacy
- Health
- Protection
- Dairy

Technical Specification

Measure Medium	Liquid/Gas /Oil Liquid	Distance	200m(ZigBee)~1000m(LoRa)
Wireless Protocol	Zigbee, LoRa, NB-IoT, 4G	Frequency	2.5GHz-2.485GHz
Pressure Range	-0.1MPa~0~10KPa ~ 100 MPa	Power Consumption	Current ≤160mA;
Accuracy	0.1% (Customized); 0.25%; 0.5%	Power Supply	3.6V Lithium Battery
Overpressure	150%/FS	Ingress Protection	IP66-IP68
Upload Period	Between 1min to 1h	Ex-Proof	Ex d IIC T5 Gb
Signal Transfer	As per protocol	Working Temperature	-40℃~75℃
Transmitting Power	≤40mW	Working Humidity	≤97% RH
Intensive Collection	Cycle ≥10s	Battery	3.6V/19,000mAh Lithium battery
Process connection	R1/2 ", G1/2, NPT1/2 ", M20 * 1.5	Net Weight	900g-2000g

Outline Drawing




Note for installation:

- Please turn off the valve on the tube where the pressure transmitter will be installed,
- Two ways are available for installation: ① connection the pressure transmitter via thread directly; ② use union joint or adapter to connect valve and pressure transmitter, the direction can be adjusted in case of this way.
- Please make sure there was no leakage when turn the value on again.


LCD Display Instruction -in case of ZigBee

1	Pressure overload alarming, LED indicator
2	I/O interface
3	Zero resetting, press and hold 2 second to erase the drift
4	Calibration button 1
5	Calibration button 2
6	Battery capacity indicator
7	Battery voltage indicator
8	ZigBee signal indicator
9	ZigBee signal strength indicator
10	ZigBee signal channel indicator
11	Pressure value
12	Pressure unit
13	Pressure scale indicator
14	Networking setup number







Pressure Range
0-100 bar; 0-210 bar; 0-410 bar;



Accuracy & Wetted Medium
0.5%/FS & Liquid and Gas;



Wireless
ZigBee network+HART



Power Supply
3.6V Lithium Battery

Note for calibration:

- The calibration supports the connection with HART device, choose the initialization/reset button on HART, and input wireless signal channel, network, setup number, and save.
- A piece of magnet can be put aside the pressure transmitter for at least 6 second, wait to finish the reset process, record the data from HART.
- A "BEE" tone from HART means the calibration finished successfully
- Please check the battery to make sure the capacity is enough to drive the pressure transmitter
- Please check the signal channel and networking setup ID and make sure they are matched with other devices which connected with pressure transmitter
- Please check the impulse process connection parts, to make sure they are not blocked, a necessary cleaning can be considered if the pressure value is obvious smaller than expected.

Ordering Procedure

EST375		In-Line Smart Pressure Transmitter				
Code		Wireless Communication Protocol				
ZB		Zigbee Wireless				
LR		LoRa				
NB		NB-IoT				
4G		4G				
Code		Rang of Pressure				
1	0-3.5~35kPa	6	0-1.0~10MPa			
2	0-10~100kPa	7	0-2.1~21MPa			
3	0-35~350kPa	8	0- 4.1~41Mpa			
4	0-0.1~1.0MPa	9	0- 6.0~60MPa			
5	0-0.35~3.5MPa	0	Others			
Cod		Accuracy				
A0		0.1% (Customized)				
A1		0.25% (70kPa~60Mpa)				
A2		0.5% (5kPa~35Mpa)				
Code		Construction Materials				
		Cast	Diaphragm Isolating	Fill		
12	CS	SS304	SS316L	Silicone		
14	CS	Cast Aluminium	SS316L			
22	SS316L	SS316L	SS316L			
23	SS316L	SS304	Hastelloy Alloy C			
24	SS316L	Cast Aluminium	Monel			
25	SS316L	SS304	Tantalum			
Code		Process Connection				
M		M20*1.5				
G2		G1/2				
R2		R1/2				
N2		NPT1/2				
Code		Options				
M4		LCD Digital Meter				
M5		LED Digital Meter				
Da		Explosion-Proof ExdsII BT5				
Fa		Intrinsically Safe ExialI CT5				
EST375	ZB	6	A2	22	M	M4 Da Fa

Note:

- Do not use the USB interface for debugging during battery operation.
- Consult the manufacturer for compatibility of sealing ring materials with the measured medium.
- To improve data transmission reliability, please install the antenna in an open area.
- When installing outdoors, ensure secondary protection; tighten and seal the front and back covers and sealing screws.
- For high-temperature models in ETT375 series, ensure proper ventilation around the heat sink.
- The EST375 series pressure gauge products with a range up to 3MPa have ventilation holes or cables; keep them clear to maintain testing accuracy.