Product Manual
Wireless temperature transmitter

The integrated temperature transmitter belongs to the accessory product of the oil and water well wireless monitoring system, and is suitable for temperature monitoring of the production, storage and transportation process of petroleum oil and water wells. It adopts micro-power wireless communication mode, which does not require wiring, and is quicker, safer and more convenient to install. It also has a matching wireless switching device, which can convert many wireless temperature signals into MODBUS standard signals and transmit them through Ethernet or serial port. The access measurement and control system has a wide range of applications.
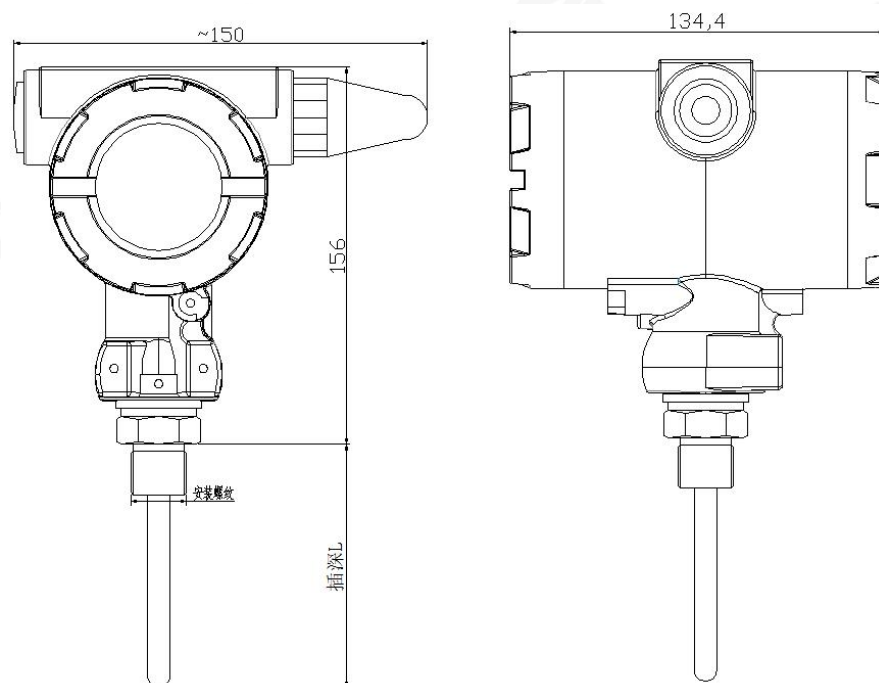
I.Product Features

1. Temperature integrated wireless test, typically applied to oil wellhead temperature monitoring;

2. Explosion-proof design: explosion-proof aluminum shell, the circuit board system is intrinsically safe;

3. Protection grade: IP66, fully sealed waterproof design;

4. Zigbee communication, which can be configured and tested with a hand-held device;

5.LCD display: -40~75°C wide temperature working range, can display a variety of information such as temperature data, battery voltage, wireless channel;

6. LED indication: reset indication, configuration mode indication, network access indication, data acquisition indication;

7. The installation direction is adjustable: the live pipe valve can be connected through the joint or adapter to adjust the direction.

8.38Ah high-energy lithium-ion battery, long working life.

9. High-gain antenna, wireless transmission distance of more than 200m.

10. Customized cable guard to prevent cable joint breakage.

II. Technical Specification

1. Measured medium: liquid, gas

2. Temperature range: -50~250°C Customizable

3. Temperature measurement accuracy: 0.5%F.S

4. Reporting period: 1 minute to 1 hour can be set

5. Decimal places: 0~3 digits can be set

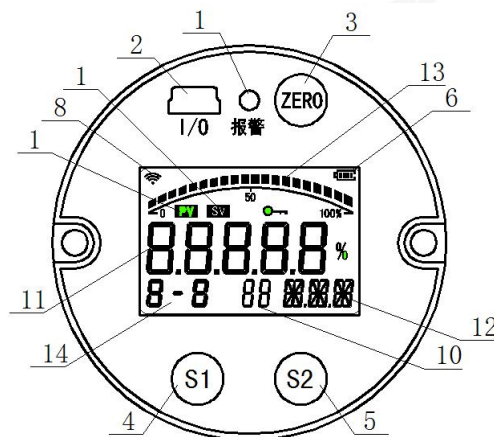6. Signal transmission: Zigbee wireless transmission power: ≤40mW

7. Communication distance: ≥200m

8. Working power: 3.6V lithium battery

9. Explosion-proof grade: Exib IIB T4 Gb

10. Shell protection: IP66

11. Process interface: customized by customer

12. Working environment temperature: -40 ° C ~ 75 ° C

13. Working environment humidity: ≤97% RH

14. Product weight: 2000g (net weight)

III.Dimension

IV. Display Instructions

The wireless integrated temperature transmitter display panel is shown in Figure 2:

The various parts of the display panel are described as follows:

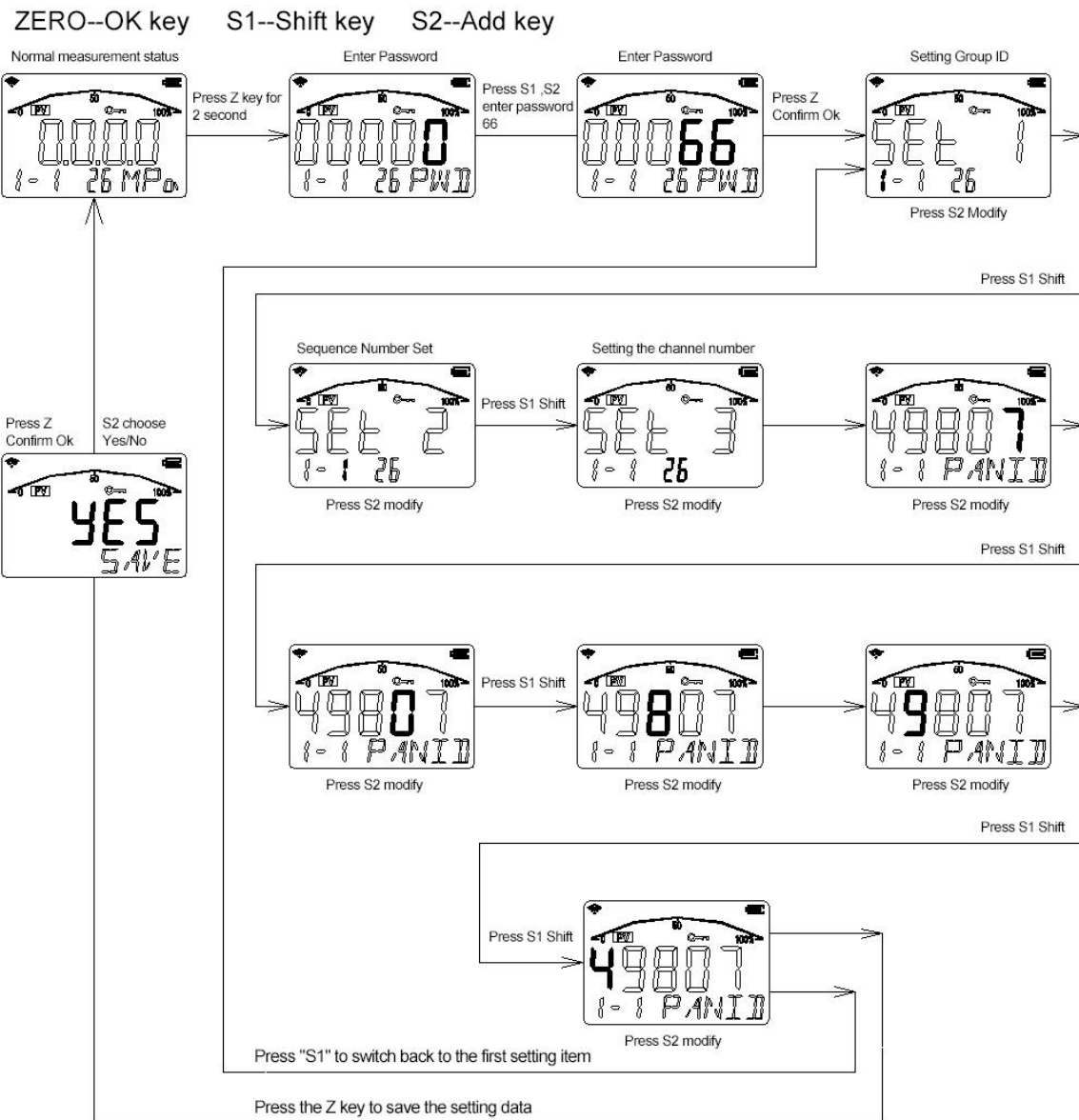| Code	Description	Code	Description
1	Over-limit alarm indicator, flashing when temperature exceeds limit	8	Zigbee signal indication
2	Debug interface	9	
3	Clear button	10	Zigbee channel indication
4	Calibration button 1	11	Temperature value
5	Calibration button 2	12	Temperature unit
6	Battery indicator	13	Full scale indication
7		14	Group number and number

V. Installation

1. Determine the measurement range required by the process to be consistent with the transmitter range to be installed.

2. The joint thread size of the process installation must be matched with the transmitter.

3. Install temperature sensor on the pipeline

(1) Pre-set temperature sensor insertion device on the pipeline, such as welding blind sleeve;

(2) The temperature sensor probe is inserted into the blind sleeve and tightened with a wrench.

VI. Parameter Setting

1.Place the magnet in the magnetic sensing area of the transmitter for 6 seconds, reset the transmitter and obtain the parameters from the hand-held device.

2.In the dialog box that pops up on the hand-held device, enter the wireless channel, network, group number, and number to be set, and press the "Settings" button to save.

3.Through the computer software to set up, software and operating instructions, please ask our company.

4.Through the panel buttons, you can set the channel number, network number, group number, and serial number. The setup process is as follows: Set the password to 00066.

The black filled portion of the figure is the blinking modified position. The software will restart automatically after the data is saved.

In the normal working mode, press and hold the Z button for two seconds, you can call out the setup password menu, enter the password 00066, and set the communication information of the transmitter according to the following procedure.

The software is compiled into a loopback menu. So if you miss this setting item, you can continue to press S1 to continue switching back to the current setting item.

The Z key is the confirmation parameter button. After confirming, you need to confirm it again. There are YES and NO options. Selecting the YES transmitter will restart and enable the current setup parameters. Selecting NO will discard the current setting data and continue to use the data stored in the original transmitter.

ZERO--OK key   S1--Shift key   S2--Add key

VII. Model Selection Guide

P/N Selection	PGW	T1	150	P	G	G	2	0	S5	003
Model	PZW wireless level transmitter PZW wireless pressure sensor PGW wireless pressure &Temperature sensor PGW wireless Temperature sensor									
Temp range	T1= -50～250℃ T0=Just measuring pressure									
Pressure Range	0～60MPa									
Pressure unit	M=Mpa B=Bar K=Kpa P=PSI H=mH2O									
Pressure type	G=Gauge A=Absolut									
Output	G=GPRS B=NB-IOT L=Lora F=Wifi Z=Zigbee X=customized									
Accuracy	1=0.15%F.S 2=0.25%F.S 3=0.5%F.S									
Pressure interface	0=M20*1.5 1=G1/2 2=G1/4 3=Submersible type x=customized									
Power supply	S3=12-30V S5=3.6V S7=12-30V and 3.6V									
Cable lenght	001=1m 002=2m 003=3m XXX=XXXm									

VIII.Common troubleshooting

When the meter is not working properly, the user can refer to the following table for simple maintenance. If the fault cannot be eliminated, please contact the manufacturer.

phenomenon	Cause Analysis	Approach
Meter no display	Battery is dead	Replace the battery
The host computer does not receive data.	Inconsistent wireless parameters	Set the wireless channel and ID of the meter to be consistent with the host computer.

IX. After-sales service

This product is warranted for one year under the conditions that the user fully complies with the requirements of the instructions, the method of use is correct, and no one is damaged.

After-sales service mail:info@macsensor.com

X. Packing List

Product complete equipment and accessories (standard configuration)

Serial number	name	Quantity
1	Temperature Transmitter	1
2	user's manual	1
3	Factory verification certificate	1
4	Certificate	1