web sensor CS-iWPT302 Wireless Bluetooth Pressure Transmitter Owner's Manual

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web sensor

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Product Specifications

- **Transmission mode:** Bluetooth 5.1
- **Pressure range:** 0-50 bar
- **Pressure accuracy:** 1.5X Typ.
- **Overload pressure:** 2.5X Typ.
- **Pressure connector:** NPT 1/4
- **Measuring medium:** Compatible with SS and fluororubbers for liquids or gases
- **Temperature range:** -40°C to 85°C
- **Power mode:** 3.6VDC Disposable lithium battery
- **Battery life:** 5 years
- **Shell material:** 304SS, ABS+PC
- **IP Rating:** IP65
- **Operating temperature:** -40°C to 85°C
- **Storage temperature:** -40°C to 85°C
- **ATEX certification:** TBD

Product Usage Instructions

Product Activation

After delivery, the product needs to be activated. Use a magnetic steel close to the top and remove it to activate. Turn on the Bluetooth of your mobile phone or other Bluetooth devices to scan the Bluetooth broadcast information (product Bluetooth broadcast name: CS-IWPT) to obtain pressure value.

Communication Protocol

Refer to CS-iWPT302-XY Bluetooth Pressure Transmitter Communication Protocol for detailed communication protocol information.

Modify Parameters

Refer to CS-iWPT302-XY Bluetooth Pressure Transmitter Communication Protocol for instructions on how to modify parameters.

Applications

- Wireless pressure measurement

- Pipeline pressure monitoring
- Inspection and collection

Description

CS-iWPT302 wireless Bluetooth pressure transmitter uses lithium battery power supply, built-in disposable lithium battery, adopts the international first-class transmitter core, transmitter ASIC and accessories, supports Bluetooth communication, parameters can be configured. The main application areas include pressure collection of oil, gas, heating, and other transmission pipelines and other facilities, and transmission through Bluetooth, with the Bluetooth host receiving and using, can monitor and collect data through the mobile APP.

Features

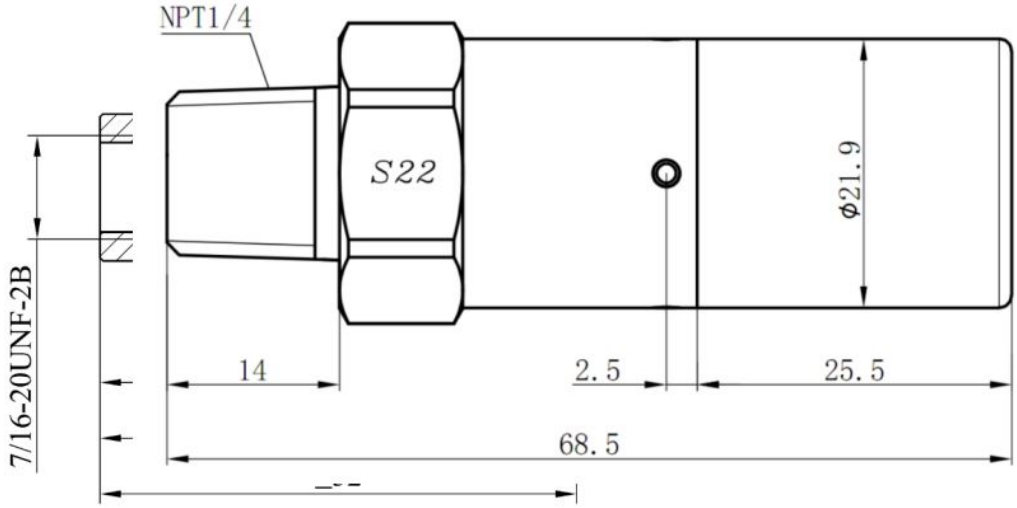
- Built-in disposable lithium battery
- High measurement accuracy
- Parameters can be configured
- High measurement accuracy
- Small size, easy to install
- Low power design, long battery life

Performance Specifications

Item	Technical parameter	Remark
Transmission mode	Bluetooth 5.1	
Pressure range	0 50bar	Customized The default gauge pressure is 50 bar
Pressure accuracy	±0.5%FS @25°C ±1.0%FS @-20~80°C	
Overload pressure	1.5X Typ.	
Burst pressure	2.5X Typ.	
Pressure connector	NPT 1/4	Customized
Insulate Resistance	100MΩ@100VDC	
Measuring medium	Compatible with SS and fluororubbers for liquids or gases	
Core compensated temperature	(-20 +80)℃	
Temperature range	-40 85℃	The internal ambient temperature of the product
Temperature accuracy	±2℃	Typical value
Power mode	3.6VDC	ER14250 Disposable lithium battery
Max working current	6mA	
Battery life	> 5 Years	@25℃ 60 seconds sampling interval 10 second broadcast interval
Shell material	304SS, ABS+PC	
IP Rating	IP65	
Operating temperature	(-40 +85)℃	
Storage temperature	(-40 +85)℃	Recommended that the storage temperature not exceed 30℃
ATEX certification	TBD	

- **Note 1:** The sampling interval ranges from 2 to 180s (60s by default), and the Bluetooth broadcast interval ranges from 1 to 10s (10s by default).
- **Note 2:** The default unit of pressure value is Bar. Optional units are kPa and Psi. Conversion relationship: 1Bar = 14.5Psi, 1Bar = 100kPa.

Structure and Dimension (mm)



Instructions

Product Activation
After delivery, the product is in a deep hibernation state (no broadcast, no sampling) and needs to be activated. Activation method: Use a magnetic steel close to the top and remove it. After successful activation, the unconnected broadcast is automatically sent. Turn on the Bluetooth of the mobile phone or other Bluetooth devices to scan the Bluetooth broadcast information (product Bluetooth broadcast name: “CS-IWPT”), analyze the Bluetooth broadcast data to obtain the pressure value.

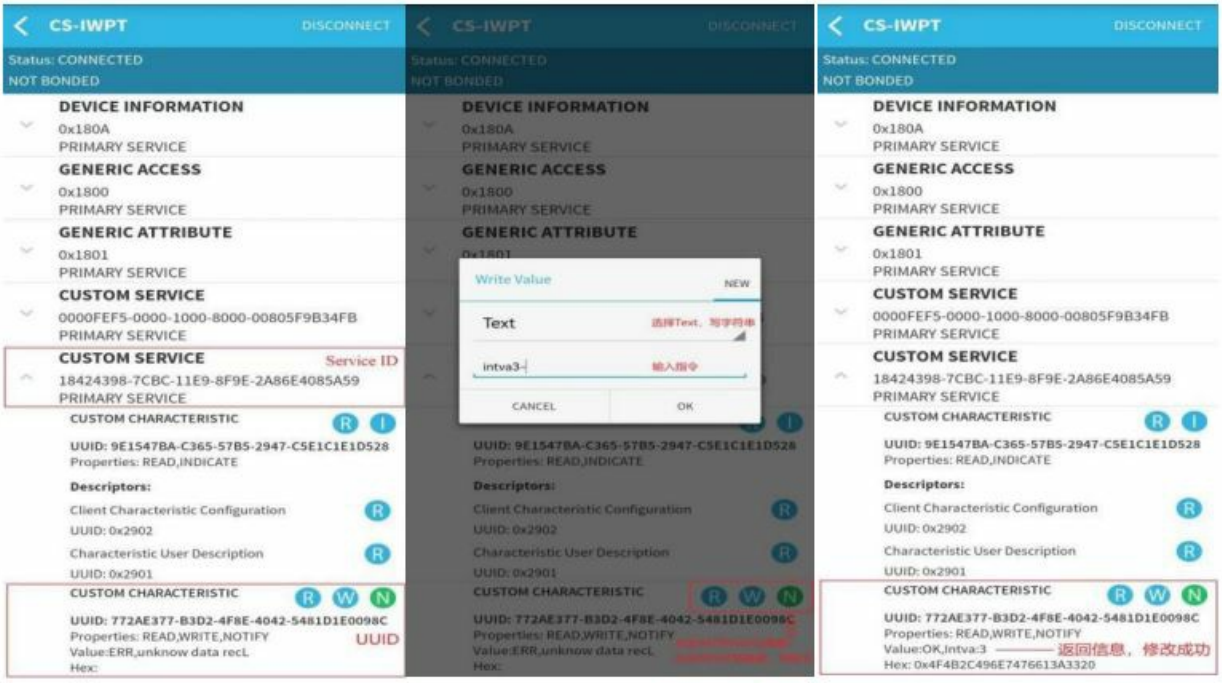
Communication Protocol
Refer to (CS-iWPT302-XY Bluetooth Pressure Transmitter Communication Protocol)

Modify Parameters
Refer to (CS-iWPT302-XY Bluetooth Pressure Transmitter Communication Protocol).

Example for modifying the broadcast interval:
Use the magnetic steel close to the top and remove it, switch the device to the connectable broadcast mode, turn on Bluetooth on the mobile phone and use Bluetooth debugging software to connect the device, and find the following information after successful connection: Service ID and UUID

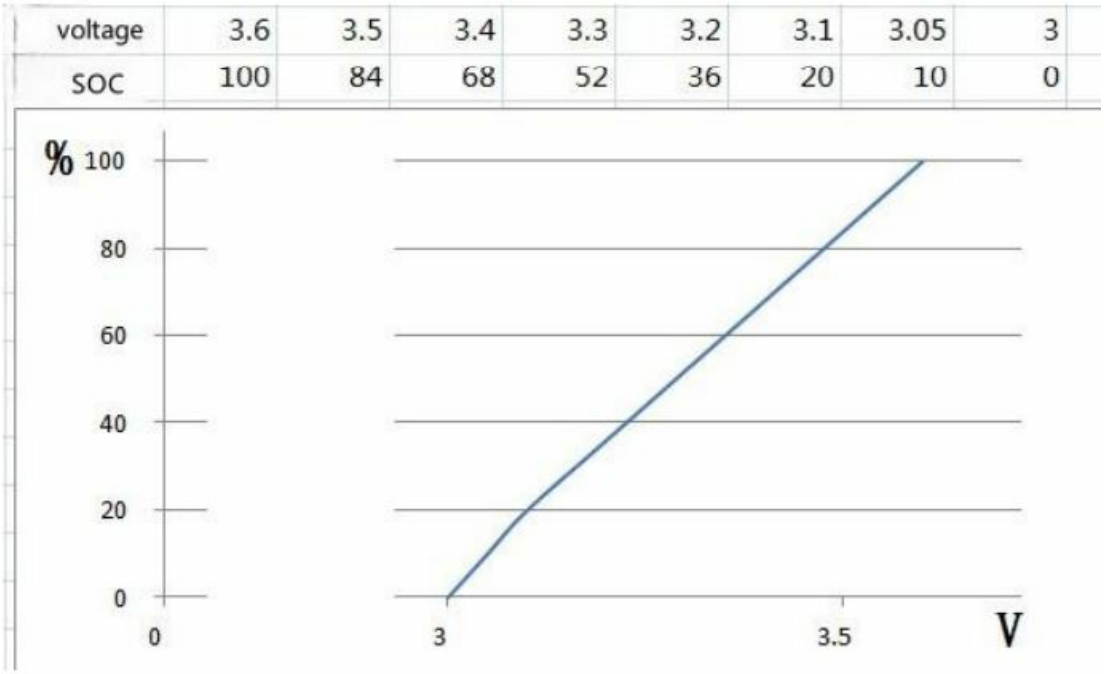
- **Service ID:** 18424398-7cbc-11e9-8f9e-2a86e4085a59
- **UUID:** 772ae377-b3d2-4f8e-4042-5481d1e0098c

  Open the Notify channel under this UUID, and enter the command intva3- in the write channel to change the broadcast interval. After the change is successful, the command is returned in the Notify channel OK, Intva:3



Battery Level

The relationship between voltage and remaining power is shown below:



Disposal methods of hazardous wastes such as waste circuit boards and their components after the end of product life

- After the end of the product life, each part shall be distinguished according to the “National hazardous waste list” to determine whether it is hazardous waste. Among them, the waste lithium battery not disassembled is not hazardous waste, and the waste circuit board (including components, chips, plug-ins, pins, etc. attached to the waste circuit board) belongs to hazardous waste.
- The part that is not hazardous waste shall be treated as general industrial solid waste, and the lithium battery shall be handed over to the nearby renewable resource recovery department or sent to the product manufacturer for recycling.

- Hazardous wastes must be handed over to legally qualified departments for disposal by national regulations, and shall not be dumped or stacked without authorization. If it is necessary to store temporarily, protective measures meeting the national environmental protection standards must be taken, and the storage period shall not exceed one year. At the same time, the time and place of temporary storage and the protective measures taken shall be reported to the competent environmental protection department. Hazardous waste transfer activities can be arranged according to the actual production situation. The system shall be strictly implemented in the transfer process.

Statement
The company reserves the right to modify the specifications and contents of this manual. Subject to modification without notice. Due to the update of the product, the individual details of this document may not match the product, please refer to the actual product. The interpretation right of this document belongs to our company.

FCC

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, under Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used by the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with a minimum distance of 20cm between the radiator & your body.

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ABOUT COMPANY

- www.websensor.com
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FAQ

The following table lists possible problems with sensor terminals and solutions. If your problem is not listed or the solution does not address your problem, please contact us.

Fault analysis and elimination

Num	Fault	Case analysis	Method
1	Broadcast data except ion	There are too many Bluetooth broadcast sig nals on site, and the received information is interfered. with	Calculate and compare the bro adcast data CRC to exclude ab normal data
2	Hard to scan the broa dcast signal	The Bluetooth broadcast interval is too large .	Modify broadcast interval
3	The pressure changes , but the broadcast pre ssure does not change.	Excessive sampling interval	Modified sampling interval

Documents / Resources

	web sensor CS-iWPT302 Wireless Bluetooth Pressure Transmitter [pdf] Owner's Manual CS-iWPT302 Wireless Bluetooth Pressure Transmitter, CS-iWPT302, Wireless Bluetooth Press ure Transmitter, Bluetooth Pressure Transmitter, Pressure Transmitter, Transmitter

References

- pressure sensor,pressure transmitter,smart sensors-Xi'an Chinastar M&C LTD
- User Manual