

Model VMWL series Wireless Pressure transmitter

User Manual



- Thank you for purchasing the VOLLTEL Pressure Transmitter
- Please read this instruction manual thoroughly before using the device.
- Please keep for future reference.

1. Safety Instructions

- To avoid operator hazards and damages of the device, the following instructions have to be worked out by qualified technical personnel.
- By non-observance of the operating manual, inappropriate use, modification or damage, no liability is assumed and warranty claims will be excluded.
- Permissible media are liquids (no solids and frozen media), specified in the data sheet. In addition it has to be ensured, that this medium is compatible with the media wetted parts.
- Install the device only when depressurized and currentless.
- Handle this high-sensitive electronic precision measuring device with care, both in packed and unpacked condition.

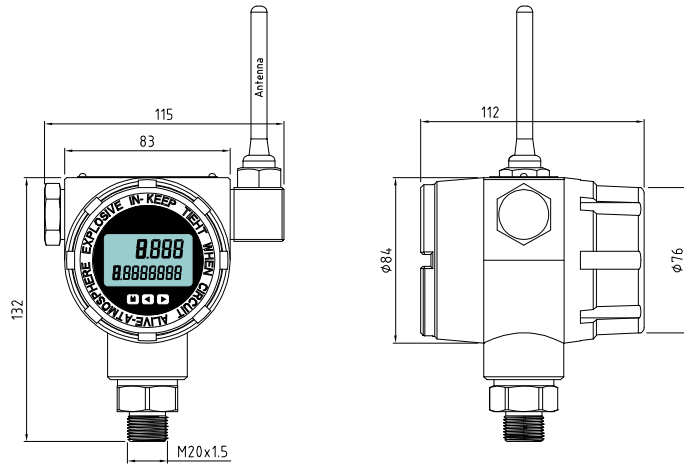
2. General information

OEM-VMWL-P is Wireless Pressure transmitter with wireless communication function. It uses isolated stainless steel piezo-resistive pressure sensor as sensing element, specific IC for temperature compensation of zero and FS thermal error, battery for exciting. Wireless signal transmission conforms to WSN (Wireless sensor network) & GPRS internet protocol. Multiple VMWL can make up of WSN & GPRS internet system. It can be used for monitoring the actual data in a large scale, such as gas tank water seal detection, oil tank detection and industrial automation control detection etc. It is mainly applied in fields like petroleum, coal, tap water and automation control etc.

3. Technical specifications

Measuring range	-1~0,...,0.1,...,1000bar
Output signal	WSN(Wireless sensor network),GPRS
RF Frequency	430 MHz/470 MHz
Maximum range in open area	1km (max.)
Wireless mode	GFSK, MAC Protocol: CSMA/CA
Transmit interval	1s-255s (User definable)
Accuracy	0.5%FS, 0.25%FS,0.1%FS
Power supply	3.6V battery/Battery life 1~2 year@ sampling time = 1s
Operating temperature	-20...+80°C
Materials,-wetted-parts	Stainless steel
Threaded-connection	G1/4, G1/2, 1/4NPT, 1/2 NPT, PT1/4,Flange DN50,DN80,DN100
Electrical Connection	M20x1.5 or 1/2" NPT, Direct cable(IP68)
Housing-material	Aluminum (IP67)
Display	LCD
Explosion Proof	Without approval / (Ex d IIC T6)/ (Ex ia IIC T6)

4. Dimensions in mm



5.1 Installation

Installation environment

- The transmitter should be installed at a dry and ventilated location, not at a location where it is easily flooded. For outdoor applications, install the transmitter in a box or under a shelter if possible to avoid direct sunshine or rain drops.
- Do not install the transmitter in a high temperature environment.
- The pipeline, to which the transmitter is connected, should not have large leakage current. In order to avoid the interference from electromagnetic fields, the transmitter should be installed as far as possible from any equipment with strong electromagnetic fields, such as large electromechanical equipments and big transformers.
- The pipe or the ground, on which the transmitter is installed, should be free of violent vibration. This is especially important for product with integrated display.
- If possible, install the product at locations where it can be conveniently accessed by the maintenance personnel

! ATTENTION

- The operating pressure of measuring medium is no more than the pressure range of transmitter;
- For convenient repair, we recommend to use valve to connect with the leading tube

5.2 Start up/Check

- Open the behind the cover of the pressure transmitter.
- Turn the 2-position power switch all the way from the **OFF** position to the **ON** position. The pressure transmitter will work on electricity and close the cover of the instrument again.
- If the meter shows a flickering or dark display, it indicates that the battery power is insufficient and the battery needs to be replaced.

[Caution]

- If the meter does not enter the normal working state after it is turned on, the meter can be restarted, that is, the power switch is turned to the OFF position. After a few seconds, it can be dialed back to the ON position.
- Battery replacement: Remove the 2-pin power connector on the battery board, loosen the battery board screws, remove the battery board, replace the newly purchased battery board, and re-plug the 2-pin power connector.

5.3 Settings

- Simultaneously press the **M+** key to enter the parameter setting interface. At this time, the set parameter items are displayed at the top of the screen, and the set values are displayed at the bottom.
- Press the **M** key to the parameter item to be changed, press the right arrow key to move the cursor to the digit to be changed, and then press the up arrow key to change the parameter setting. After setting, press the **M** key again to save the setting. The instrument will automatically jump to the parameter after saving the parameter. The next parameter, if you do not need to continue to modify the parameter value, press **M+** and exit the parameter setting interface.
- After the parameter setting is completed, the meter needs to be restarted, that is, after the meter is turned off, wait for a while (after seeing that the display screen has no digital display) to turn on the meter again.

(4) Parameter description

- P000 ~ P001:** The system does not need to change
P002: coefficient correction, range 1 ~ 255, default 100, increase or decrease 1 and coefficient increase or decrease 0.001
P003: zero correction, range 1 ~ 255, default 100, increase or decrease 1, zero Increase or decrease 0.1
P004: Receive host number, specify the receiver or gateway to which the transmitter's data is sent
P005: local address
P006: Band No. Factory setting 3 can be changed to 1 to 5 to avoid co-channel interference. The transmitter and receiver or gateway must have the same band number.
P007 ~ P008: System reserved Do not change
P010: Data sampling interval Set 0-255 seconds No less than 3 seconds recommended when wireless is turned on
P011 to P019: System Reserved Do Not Change P019: Data Transmission Period, That Is How Many Sample Periods to Send Data at a Time

6. Warranty conditions

The warranty conditions are subject to the legal warranty period of 12 months for the date of delivery. In case of improper use, modifications of or damages to the device, we do not accept warranty claims. Damaged diaphragms will also not be accepted. Furthermore, defects due to normal wear are not subject to warranty services.

