

PCM9880W Submersible Wireless Pressure Transmitter

Key features and user value

- Supporting NB-IoT/4G/LoRaWAN wireless communication standard, suitable for various scenarios
- Support local and remote parameter adjustment, support magnetic rod wake-up function; more convenient for users' daily use and maintenance
- Hardware: high resistance to vibration, shock, and interference; software: built-in watchdog, ensuring zero crashes; high reliability and good repeatability
- Real-time active report on alarm information, such as abnormal fluctuation and exceeded threshold value of the monitoring point pressure
- Optimized ultra-low power consumption design; reducing battery replacement frequency and significantly lowering users' maintenance costs
- Accessible to the third-party monitoring platform; supporting Telecom AEP platform, Alibaba Cloud platform, and customer private platforms

Typical application industries

- Fire protection, municipal administration, water affairs, environmental protection, petrochemical, gas, and other industries

Notes:

1 Do not misuse the document. This document is a product selection guide. Do not use this document as a product installation guide.

2 Complete installation, operation, and maintenance information is provided in the instructions of the product.

3 Do not touch the diaphragm with hard objects, which may cause damage to the diaphragm.

4 Misuse of the product may cause danger or personal injury.



Product overview

The PCM9880W Submersible Wireless Pressure Transmitter is a product specially designed by Wotian Technology to meet the IP68 protection level requirement for pressure monitoring points, such as underground pipelines and deep wells.

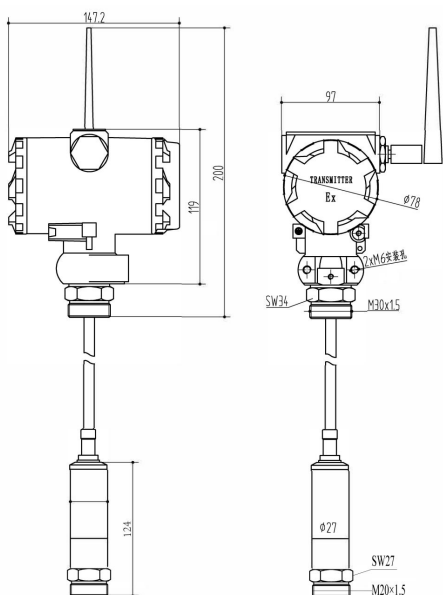
This product has an IP68 sensor protection grade. It can be directly immersed in the measured liquid and support pipeline mounting or submersible mounting. It is small in size, light in weight, and easy to install, use, and maintain, suitable for many harsh environments.

PCM9880W uses a 38Ah large-capacity lithium sub-battery for power supply and supports various IoT standards, including NB-IoT, LoRaWAN, and 4G. The product is widely used for pressure monitoring in outdoor areas or environments with inconvenient power supply, such as fire protection, municipal, water affairs, heating, oil pipelines, and gas pipelines. It sends the pressure condition of monitoring points to the monitoring center through IoT periodically or in real time, and then the monitoring center stores, analyzes, searches data, and processes alarm information, realizing wireless signal transmission and information interaction without on-site wiring, saving a lot of human and material resources, and significantly reducing construction costs and maintenance costs, which helps users achieve timely and efficient supervision on the pressure at the pipeline network monitoring points.

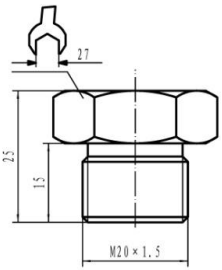
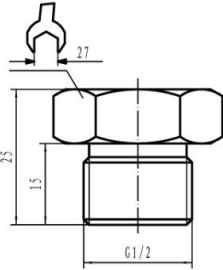
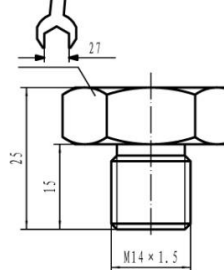
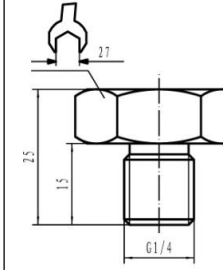
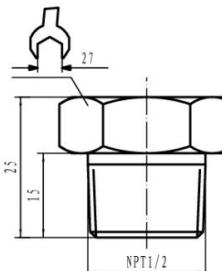
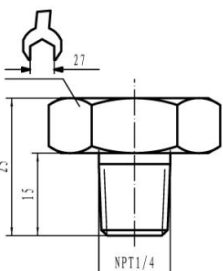
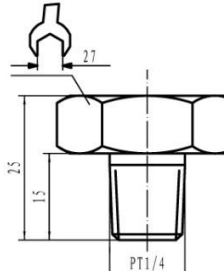
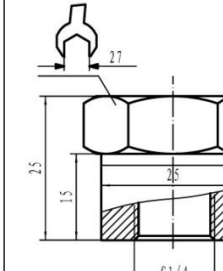
Performance parameters

Pressure range	10kPa~20kPa...60MPa
Pressure reference	Gauge pressure, absolute pressure, sealed gauge pressure
Supply & output signal	Power supply: lithium sub-battery (38Ah) or solar energy Output signal: NB-IoT/4G/LoRaWAN
Operating temp.	-20℃~70℃ (The low temperature below zero has great influence on the performance of lithium sub-battery.)
Medium temp.	-20℃~85℃
Storage temp.	-40℃~125℃
Zero temp. drift	±1.5%FS (-20℃~85℃)
Sensitivity temp. drift	±1.5%FS (-20℃~85℃)
Overload pressure	150%FS
Mechanical vibration	20g (20~5000Hz)
Shock	100g (11ms)
Accuracy	0.5%
Operation mode	Regular active report; the reporting cycle can be set arbitrarily
Auto Detection	Built-in monitoring module to monitor the operation of equipment
Parameter setting	Remote setting, which allows setting the reporting cycle and threshold alert
Sampling accuracy	24bit
Long-term stability	±0.2%FS/year
Protection grade	Gauge head part: IP66/67; Submersible sensor part: IP68
Material	Housing: stainless steel; internal sensor: 316L
Media Compatibility	All kinds of media compatible with SS316L
ESD	Meeting GB/T 17626.2 Chapter 5 Severity Level: Level 4
RFEMS	Meeting GB/T 17626.3 Chapter 5 Severity Level: Level 3
PFMF	Meeting GB/T 17626.4 Chapter 5 Severity Level: Level 5

Structural dimension (Unit: mm) and L-type bracket installation instruction



Pressure connection

Type	C1: M20×1.5	C2: G1/2	C3: M14×1.5	C4: G1/4
Dimension In mm				
Type	C5: NPT1/2	C8: NPT1/4	C10: PT1/4	C20: G1/4 female
Dimension In mm				

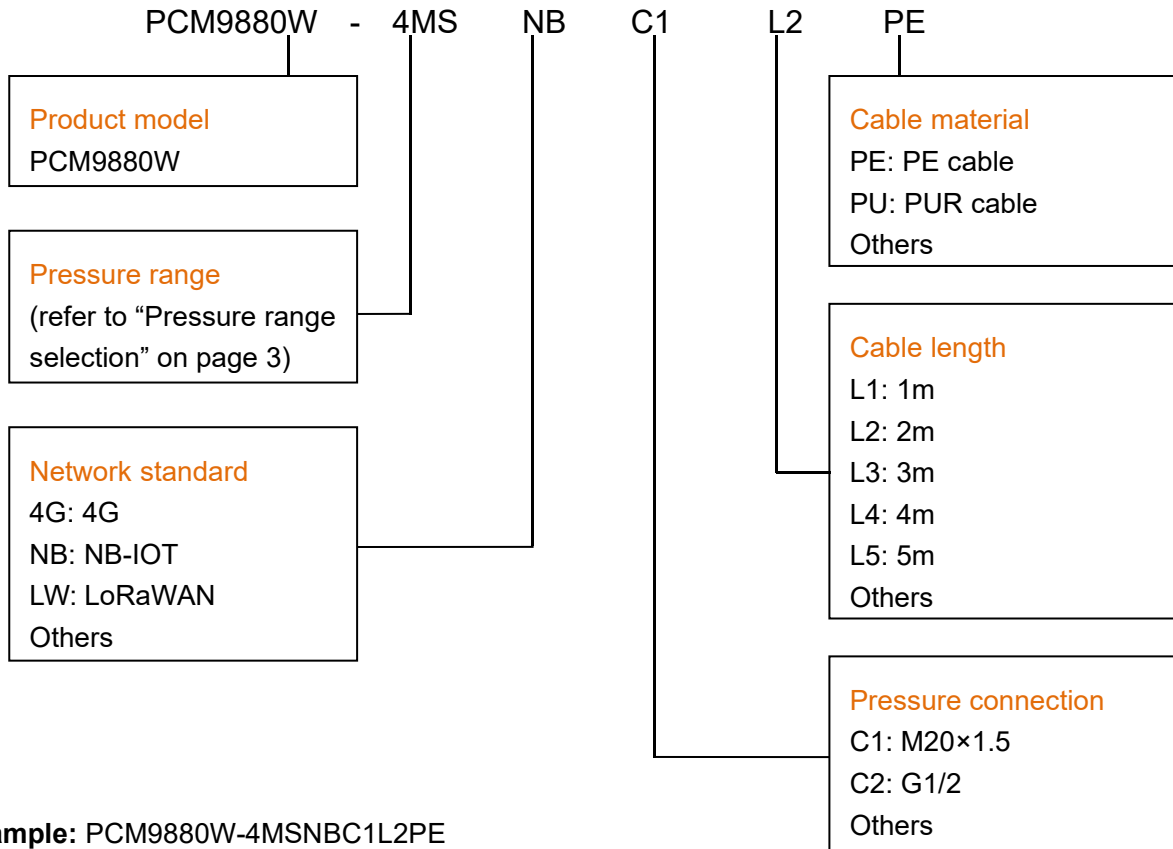
Pressure range selection

Code	Pressure reference	Pressure range	Overpressure	Burst pressure	Notes
10kG	G	0~10kPa	150%FS	600%FS	
20kG	G	0~20kPa	150%FS	600%FS	
35kG	G	0~35kPa	150%FS	600%FS	
70kG	G	0~70kPa	150%FS	600%FS	
100kG	G	0~100kPa	150%FS	500%FS	
160kG	G	0~160kPa	150%FS	500%FS	
250kG	G	0~250kPa	150%FS	500%FS	
400kG	G	0~400kPa	150%FS	500%FS	
600kG	G	0~600kPa	150%FS	500%FS	
1MG	G	0~1MPa	150%FS	500%FS	
35kA	A	0~35kPa	150%FS	500%FS	
100kA	A	0~100kPa	150%FS	500%FS	
160kA	A	0~160kPa	150%FS	500%FS	
250kA	A	0~250kPa	150%FS	500%FS	
400kA	A	0~400kPa	150%FS	500%FS	
600kA	A	0~600kPa	150%FS	500%FS	
1.6MS	S	0~1.6MPa	150%FS	500%FS	
2.5MS	S	0~2.5MPa	150%FS	500%FS	
4MS	S	0~4MPa	150%FS	400%FS	
6MS	S	0~6MPa	150%FS	400%FS	
10MS	S	0~10MPa	150%FS	400%FS	
16MS	S	0~16MPa	150%FS	400%FS	
25MS	S	0~25MPa	150%FS	400%FS	

40MS	S	0~40MPa	150%FS	150%FS	
60MS	S	0~60MPa	150%FS	150%FS	

Note: G: Gauge pressure, A: Absolute pressure, S: sealed gauge pressure

How to order



Example: PCM9880W-4MSNBC1L2PE

Product model PCM9880W, pressure range 0~4MPa, sealed gauge pressure, network standard NB-IOT, pressure connection M20×1.5, 2m PE cable.

Ordering tips

- 1 It takes several steps to select the product: wireless system, pressure range, cable length, cable material, and pressure port.
- 2 The standard PE cable is 2 meters. The cable length is no more than 5 meters.

Wotian reserves the right to make any change in this publication without notice. The information provided is believed to be accurate and reliable as of this product sheet.

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