

# PCM9865 Wireless Pressure Transmitter

## Key features and user value

- Supporting NB-IoT/4G/LoRaWAN wireless communication standards, suitable for various scenarios
- Supporting keypad, local and remote parameter adjustment, support magnetic rod wake-up function; convenient 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, 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

PCM9865 Wireless Pressure Transmitter is a low-power consumption IoT product developed by Wotian Technology, supporting various IoT standards including NB IoT, LoraWAN, 4G, etc.

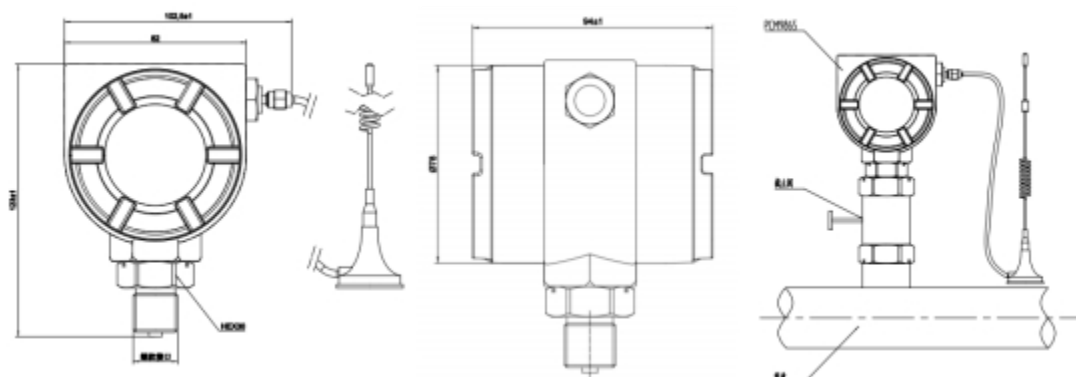
The product is widely used for pressure monitoring in indoor, outdoor, or environments with inconvenient power supply, such as fire protection, municipal, water affairs, heating, oil and gas pipelines. It sends the pressure condition of monitoring points to the monitoring center through IoT cycle or 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 monitoring points of the pipe network.

This product uses a 19Ah large capacity lithium sub-battery for power supply, which is compact, light in weight, and easy to install, use, and maintain, suitable for various harsh environments.

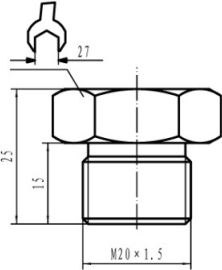
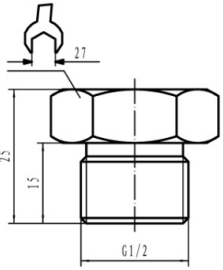
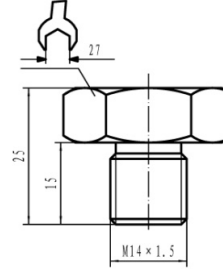
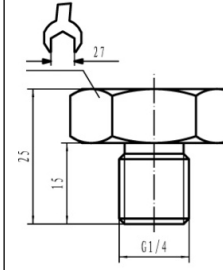
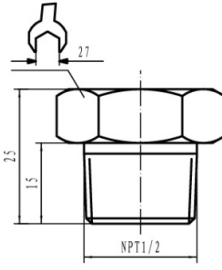
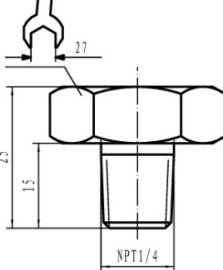
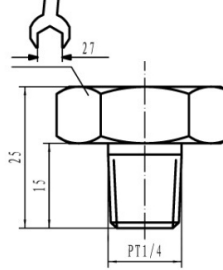
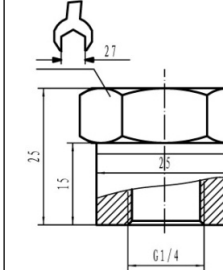
### Performance parameters

Pressure range	0kPa~35kPa...25MPa
Pressure reference	Gauge pressure, Absolute pressure, Sealed gauge pressure
Power supply & output signal	Power supply: lithium sub-battery (19Ah) Output signal: NB-IoT/4G/LoRaWAN
Operating temp.	-20℃~70℃ (The low temperature below zero has great influence on the performance of the lithium sub-battery.)
Medium temp.	-20℃~85℃
Storage temp.	-40℃~125℃ (Except the batteries)
Temp.effect on offset	±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)
Overall accuracy	0.5%FS
Operation mode	Regular active report, the reporting cycle can be set at will
Automatic detection	Built-in monitoring module to monitor the equipment operation
Parameter setting	Remote setting, which allows setting the reporting cycle and threshold alert
Sampling accuracy	24bit
Long-term stability	±0.2%FS/year
Protection	Gauge head part: IP66/67
Material	Housing: stainless steel; internal sensor: 316L
Medium compatibility	All media compatible with stainless steel 316L
ESD	Meet GB/T 17626.2 Chapter 5 Severity Level: Level 4
RFEMS	Meet GB/T 17626.3 Chapter 5 Severity Level: Level 3
PFMF	Meet GB/T 17626.4 Chapter 5 Severity Level: Level 5

### Structural dimension (Unit: mm) and installation instruction



### Pressure port selection

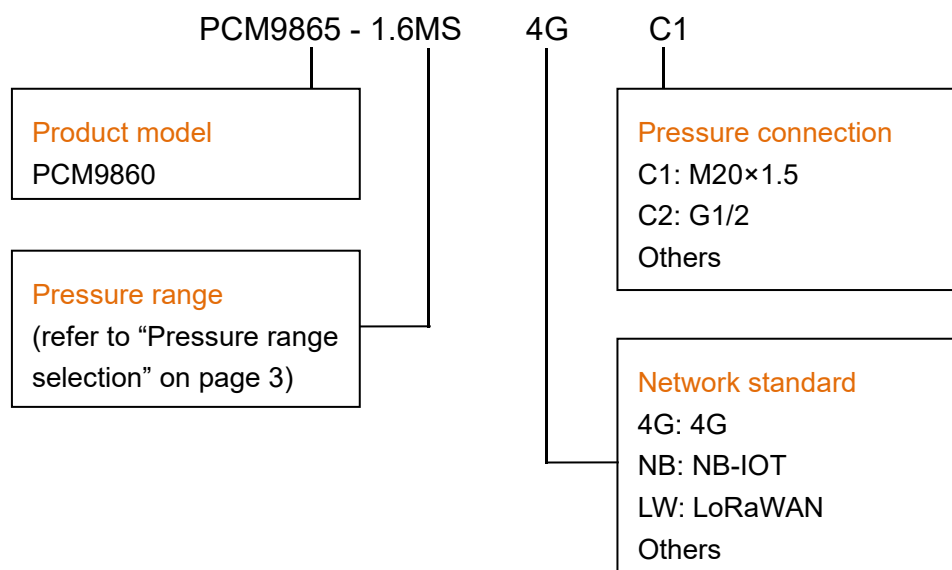
Thread	C1: M20×1.5	C2: G1/2	C3: M14×1.5	C4: G1/4
Dimension In mm				
Thread	C5: NPT1/2	C8: NPT1/4	C10: PT1/4	C20: G1/4 female
Dimension In mm				

### Pressure range selection

Range code	Pressure reference	Pressure range	Overpressure	Burst pressure	Note
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	
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: PCM9865-1.6MS4GC1

Product model PCM9865, pressure range 0~1.6MPa, sealed gauge pressure, network standard 4G, pressure port M20×1.5.

## Ordering tips

It takes three steps to select the product: network standard, pressure range, and pressure port.

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.

## Contact us

Nanjing Wotian Technology Co.,Ltd.

Website: [www.wtsensor.com](http://www.wtsensor.com)

Add: 5 Wenying Road, Binjiang Development Zone, Nanjing, 211161, China

E-Mail: [dr@wtsensor.com](mailto:dr@wtsensor.com)