

HPM5100 Intelligent Pressure Switch



Nanjing Hangjia Electronic Technology Co., Ltd.

Overview

HPM5100 intelligent pressure switch is a fully electronic structure. The front end uses high-precision and high-stable silicon piezoresistive sensors coupled with a dedicated electronic conditioning circuit and is assembled and produced through strict technological processes. This product has an on-site display and can output one channel of 4~20mA analog value and can also output two channels of electronic switching value or one channel of relay switching value. This product has various process interfaces and supports thread installation or chuck installation interfaces.

This product integrates pressure measurement, display, output and control. It is flexible to use, simple to operate, safe and reliable. It is widely used in various types of automated machinery and equipment, environmental protection, petrochemical, water treatment and other industries.

Features

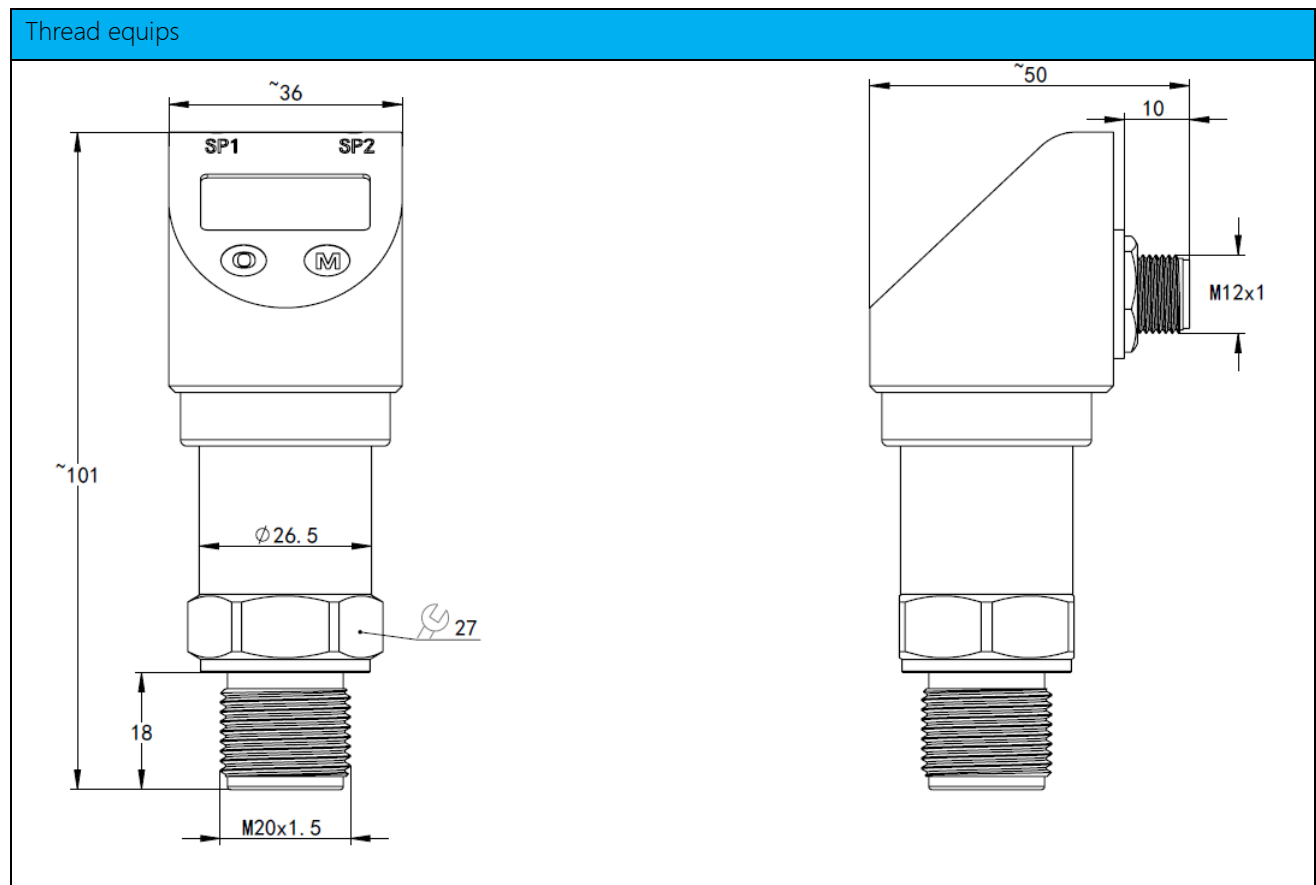
- ◆ 4-digit LED or LCD display
- ◆ Supporting kinds of switch signal
- ◆ Button adjustment and on-site setting of various parameters, easy to operate.
- ◆ Shell is equipped with led for easy observation.
- ◆ Supports various process connections such as threads and clamps.

Technical Parameters

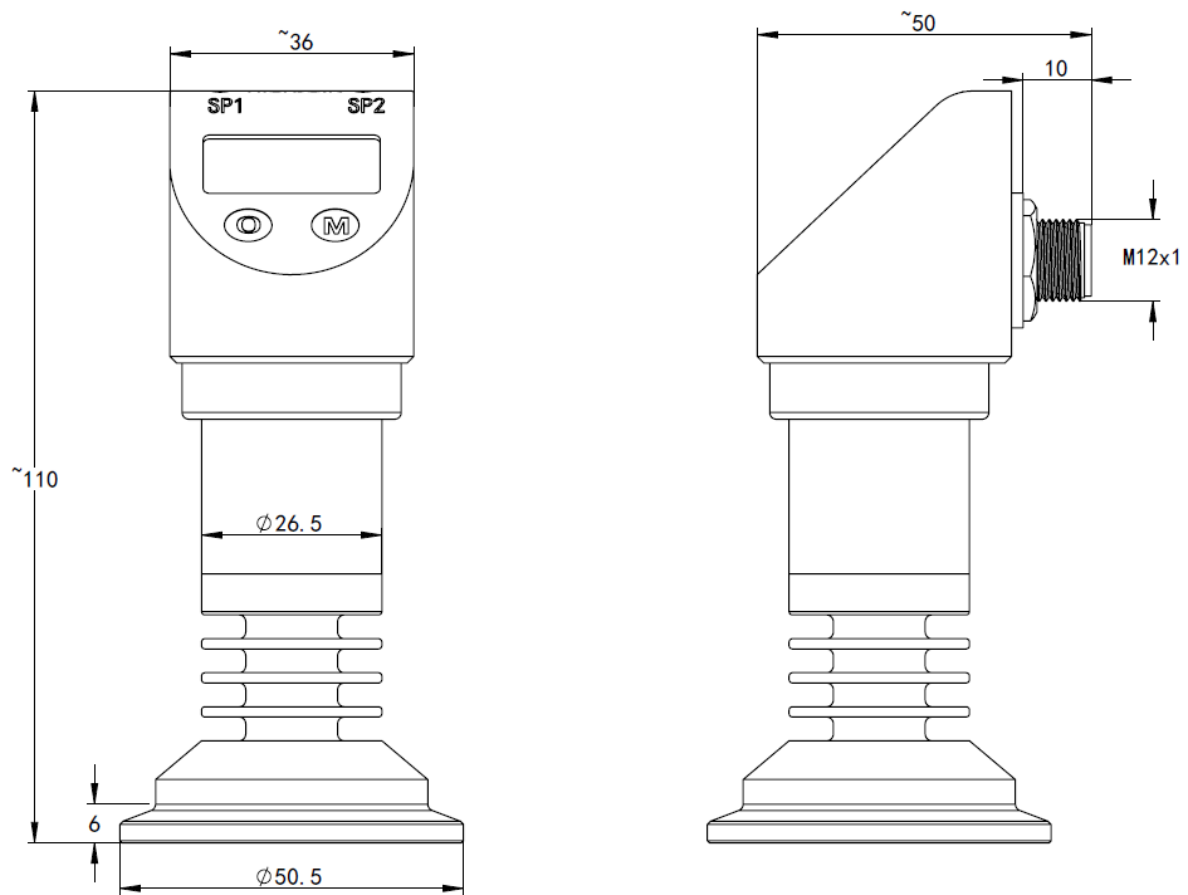
Measuring range	-100kPa...0~10kPa...60MPa (Gauge), 0~10kPa...10MPa (Absolute) Note: Maximum pressure is 2MPa for clamp connection.
Overload	1.5 times of full scale
Measuring medium	various liquid gas compatible with contact materials
Output Signal	4~20mADC / Vs=12~32VDC 4~20mADC + Two ways electronic switch outputs / Vs=12~32VDC 4~20mADC + One way relay switch output / Vs=18~32VDC
Accuracy	±0.5%FS
Long term stability	±0.3%FS/Year
Transistor switch alarm	Switch type: NPN or PNP load capacity: ≤300mADC 24VDC Switch life: >1 million times
Relay switch alarm	Switch type: Relay load capacity: ≤1ADC 24VDC Switch life: Approximately 100,000 times
LED display	4-digit Digital Tube Display range: -1999~9999

LCD display	Simulation progress bar display; pressure unit display. Display range: -1999~9999
Compensation Temperature range	0~70°C
Temperature Coefficient of Zero	±1.0%FS (Reference 25°C, in Compensation Temperature range). (For 10kPa range, ±2.0%FS, 0~60°C)
Temperature Coefficient of Full Scale	±1.0%FS (Reference 25°C, in Compensation Temperature range). (For 10kPa range, ±2.0%FS, 0~60°C)
Temperature range	Ambient temperature: -40~70°C (LED display). -20~60°C (LCD display). Medium temperature: -40~125°C Storage temperature: -30~70°C
Protection Grade	IP65

Structure Drawing (unit: mm)



Clamp equips

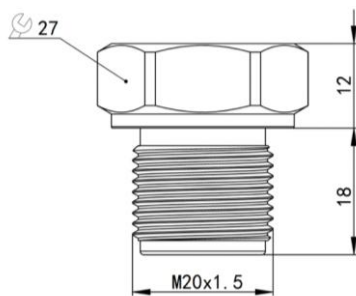


Note:

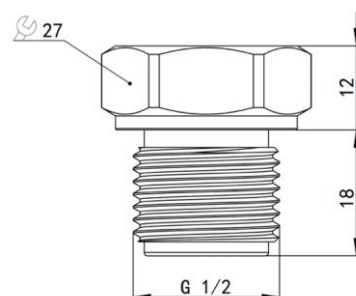
1. The dimensions listed in the picture may change as the technology is updated.
2. For other shapes and sizes, please consult the sales.

Pressure interface

Code P1

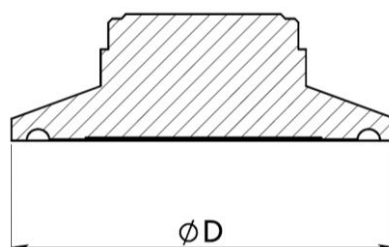


Code G12

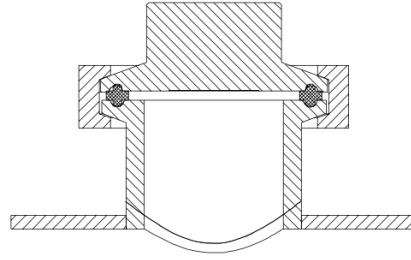


Code K505、K640

Dimension



Installation diagram



Standard	Specification	Size(ϕ D) (unit: mm)	Pressure resistant	Code
Tri-Clamp	1-1/2"	50.5	2MPa	K505
Tri-Clamp	2"	64	2MPa	K640
ISO 2852	DN38	50.5	2MPa	K505
ISO 2852	DN40-51	64	2MPa	K640
DIN 32676	DN32-40	50.5	1.6MPa	K505
DIN 32676	DN50	64	1.6MPa	K640

Housing materials

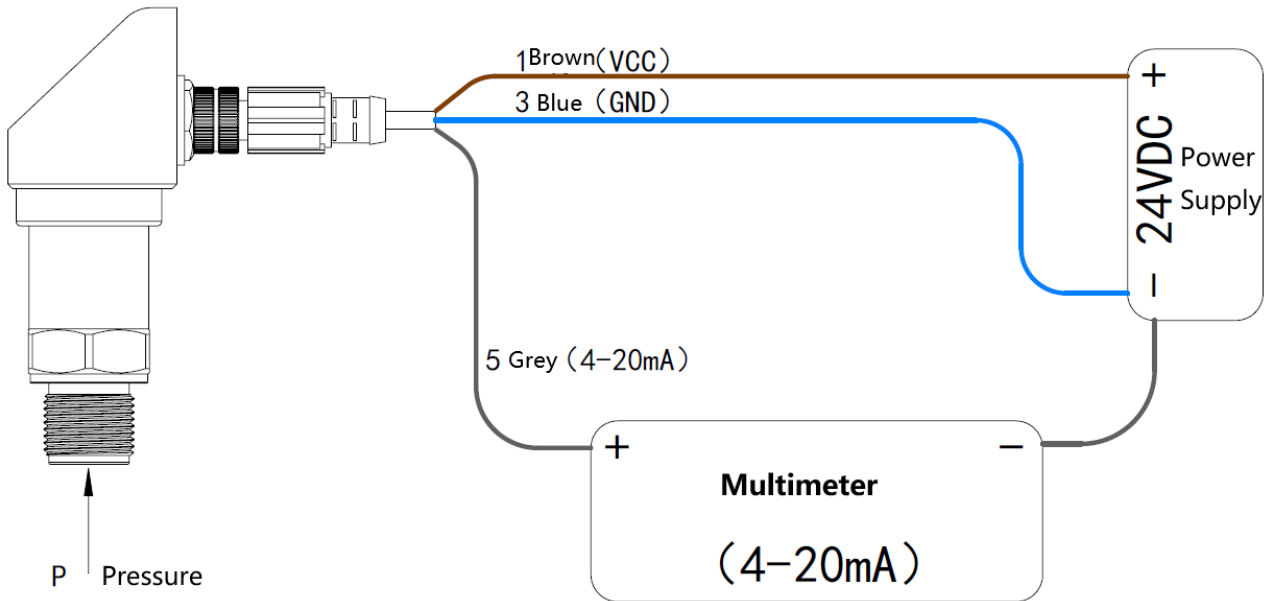
Code	Part	Note
S4	Pressure interface	Stainless steel 304
S6		Stainless steel 316L
M1	Pressure sensor	316L
M2		TA1 diaphragm and TC4 shell
M3		Ta diaphragm
M4		C-276 diaphragm
NB	O ring	NBR(for temperature -40~120°C)
FK		FKM(for temperature -20~120°C)
ED		EPDM(for temperature -55~150°C)

Electrical Interface

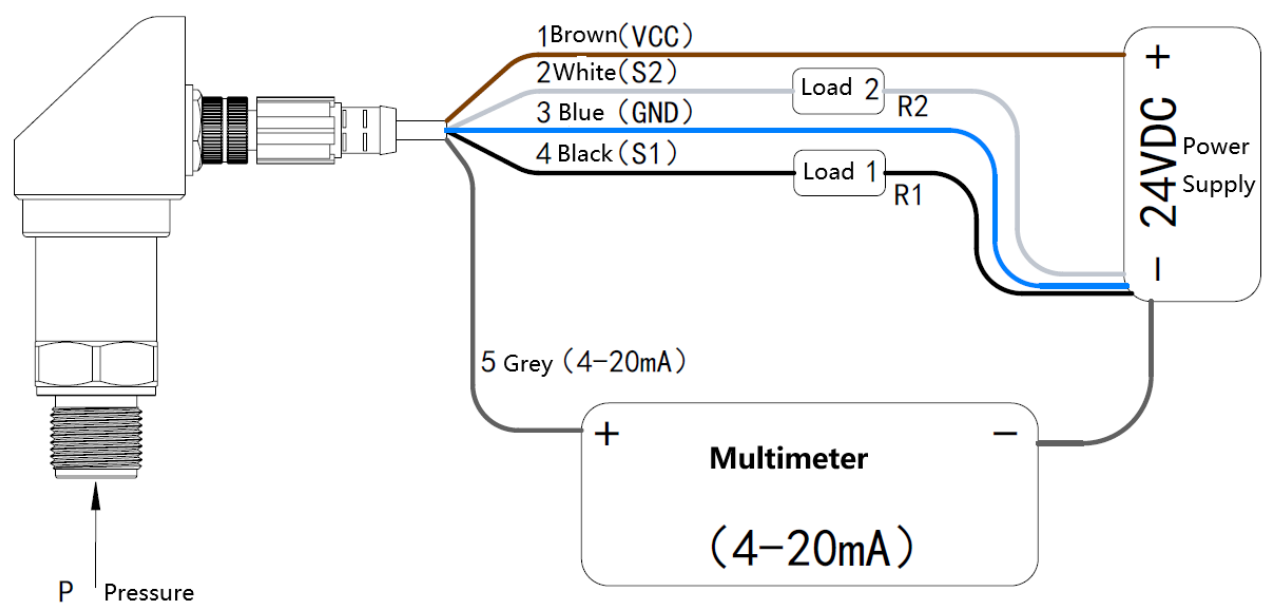
M12×1-5P (Code: C6)	M12×1-5P, with cable (Code: C6X)
1: VCC	Brown: VCC
2: S2	White: S2
3: GND	Blue: GND
4: S1	Black: S1
5: 4~20mA	Grey: 4~20mA

Electrical Connection

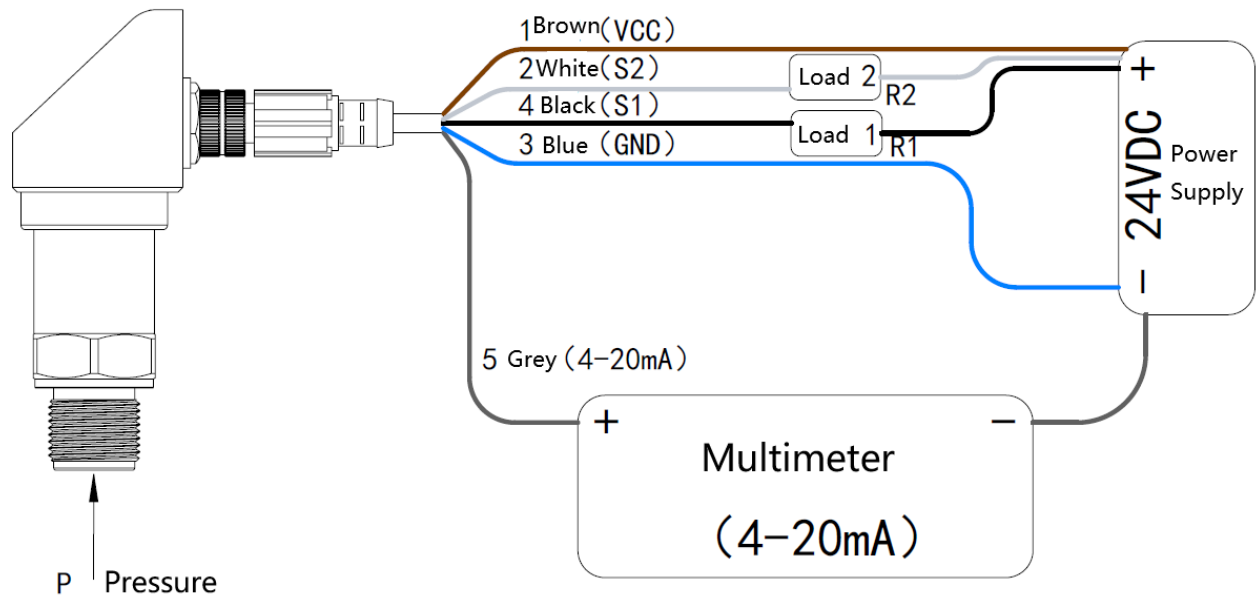
4~20mA



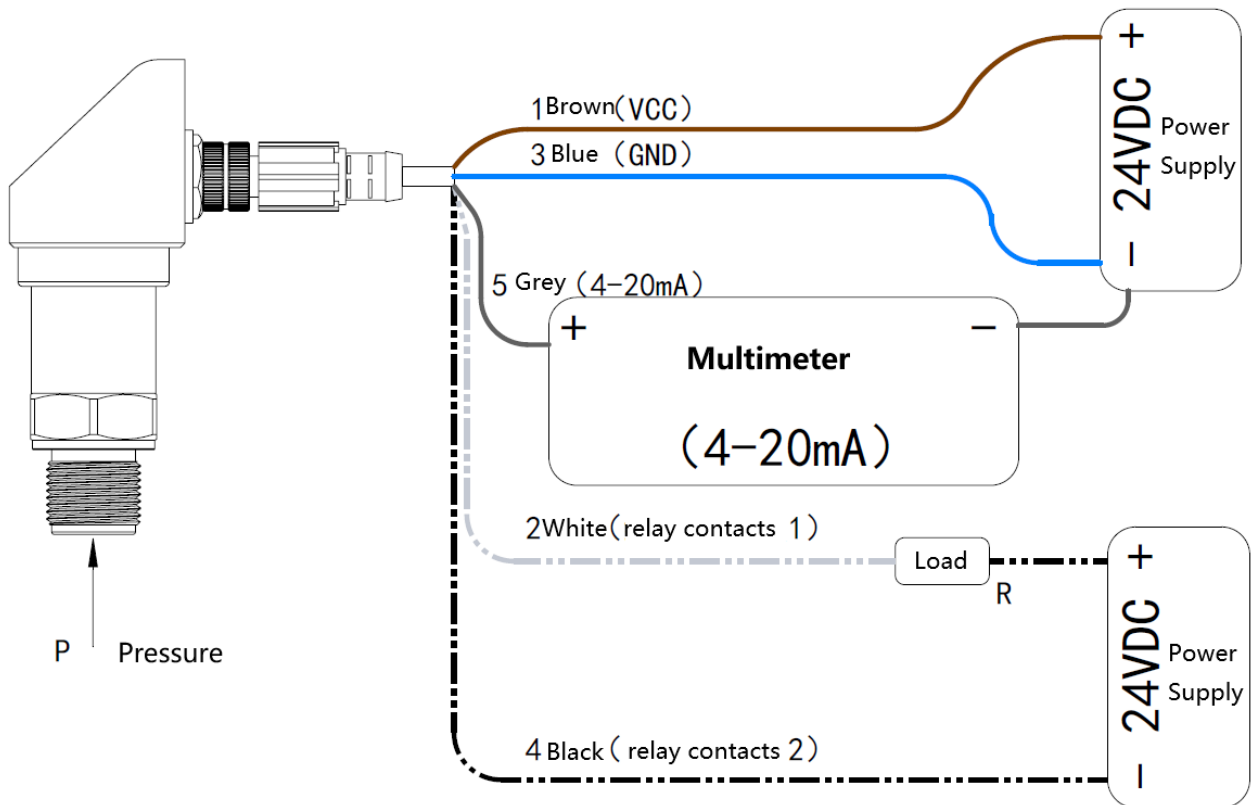
4~20mA + two PNP outputs



4~20mA + two NPN outputs



4~20mA + one relay output



Ordering Guide

Code	Type							
HPM5100	Pressure Switch							
eg: HPM5100	(0~X)bar	Range	Measuring temperature					
		Input X directly						
		Code	Output Signal					
		B1	(4~20)mA					
		B9	relay					
		B10	NPN					
		B11	PNP					
			Code	Process connection				
			P1	M20×1.5				
			G12	G1/2				
			K505	Tri-Clamp 1-1/2"				
				ISO 2852 DN38				
				DIN 32676 DN32-40				
			K640	Tri-Clamp 2"				
				ISO 2852 DN40-51				
				DIN 32676 DN50				
			Code	Electronic connection				
			C6	M12×1 5P				
			C6X	M12×1 5P with cable				
			Code	Process connection Material				
			S4	304				
			S6	316L				
			Code	Sensor				
			M1	316L				
			M2	TA1 diaphragm and TC4 shell				
			M3	Ta diaphragm				
			M4	C-276 diaphragm				
			Code	Others				
			G	Gauge pressure (Default)				
			A	Absolute pressure				
			NB	NBR O-ring				
			FK	FKM O-ring				
			ED	EPDM O-ring				
			QF	Factory report				
				Other requests				
eg: HPM5100	(0~2)bar	B1 B11	P1	C6	S4	M1	G NB	

Tips for ordering:

- 1、When ordering products with pressure point control, please indicate the pressure value controlled; if it is a relay output, please indicate whether the switch point is normally open or normally closed.
- 2、Only one type of output signals B9, B10, and B11 can be selected, and B1 can be selected along with alarm switch.
- 3、For other special requirements, please discuss with our company and indicate them in the order.

Certification Information

Certification organization	CQM
Quality management system	ISO 9001:2015
Certification scope	Research, development and manufacture of pressure transmitter and temperature transmitter
Certificate No.	00223Q21711R1S