



**Model:** HPM5100 Intelligent pressure switch

**Manufacturer:** 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 temperature 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

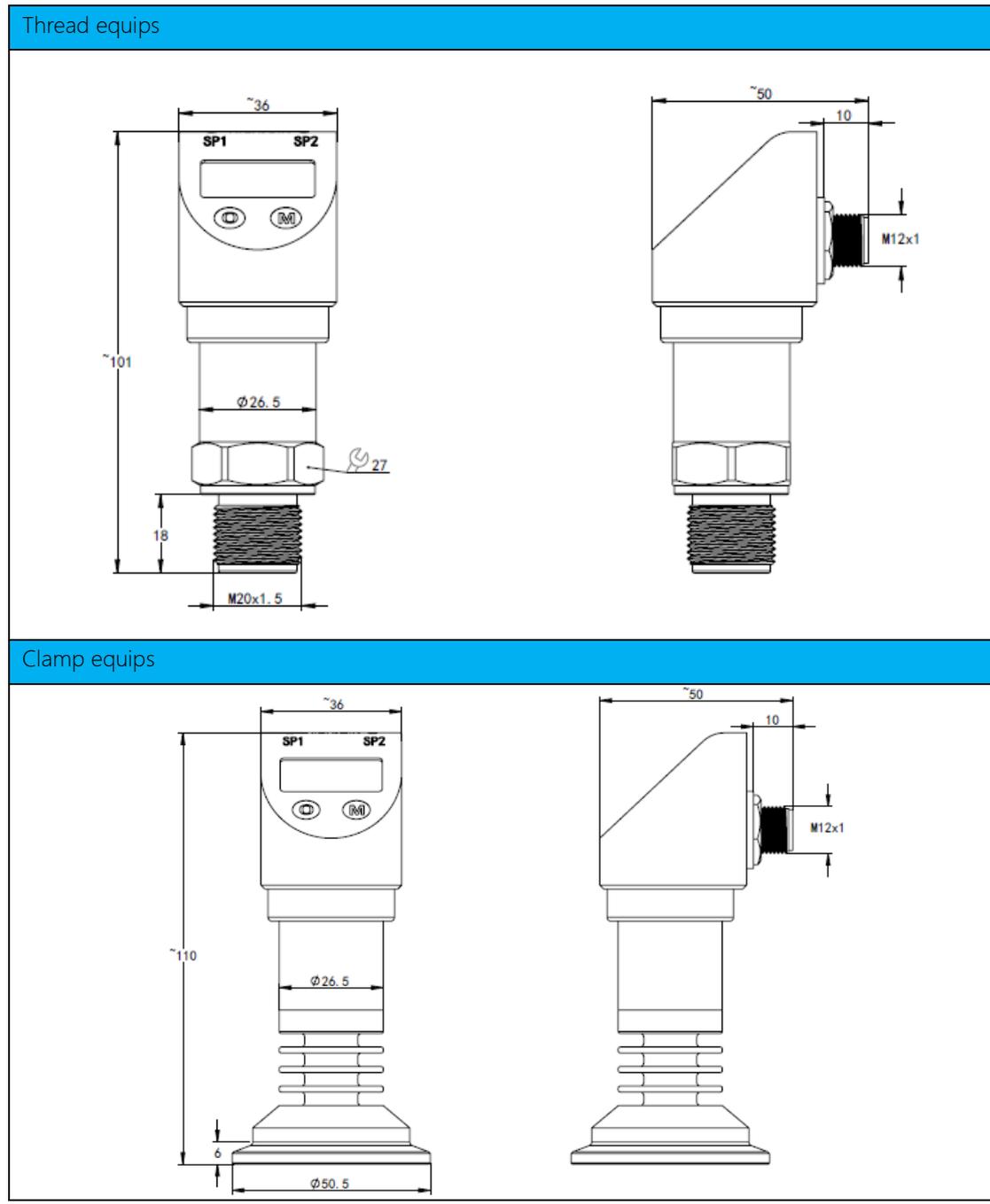
- ◆ 4-digit LED or LCD display
- ◆ Supports kinds of switch signal
- ◆ Button adjustment and on-site setting of various parameters, easy to operate.
- ◆ Shell is equipped with led for easy observation.
- ◆ Supports various process connections such as threads and clamps.

## Technical Parameters

<b>Measuring range</b>	-100kPa...0 ~ 10kPa...60MPa(Gauge), 0 ~ 10kPa...10MPa(Absolute) <b>Note:</b> Maximum pressure is 2MPa for clamp connection.
<b>Overload</b>	1.5 times of full scale
<b>Measuring medium</b>	various liquid, gas compatible with contact materials
<b>Output Signal</b>	4~20mA <sub>DC</sub> / V <sub>S</sub> =12 ~ 32V <sub>DC</sub> 4~20mA <sub>DC</sub> + Two electronic switch outputs / V <sub>S</sub> =12 ~ 32V <sub>DC</sub> 4~20mA <sub>DC</sub> + One way relay switch output / V <sub>S</sub> =18 ~ 32V <sub>DC</sub>
<b>Accuracy</b>	±0.5%FS
<b>Long term stability</b>	±0.3%FS/Year
<b>Transistor switch alarm</b>	Switch type: NPN or PNP load capacity: ≤300mA <sub>DC</sub> 24V <sub>DC</sub> Switch life: > 100 Thousands of times
<b>Relay switch alarm</b>	Switch type: Relay load capacity: ≤1A <sub>DC</sub> 24V <sub>DC</sub> Switch life: about 10 thousands of times
<b>LED display</b>	4-digit Digital Tube Display range: -1999 ~ 9999
<b>LCD display</b>	Simulation progress bar display; pressure unit display. Display range: -1999 ~ 9999
<b>Compensation Temperature range</b>	0 ~ 70°C
<b>Temperature Coefficient of Zero</b>	±1.0%FS(Reference 25°C,in Compensation Temperature range ); (For 10kPa range, ±2.0%FS, 0 ~ 60°C)
<b>Temperature Coefficient of Full Scale</b>	±1.0%FS(Reference 25°C,in Compensation Temperature range ); (For 10kPa range, ±2.0%FS, 0 ~ 60°C)

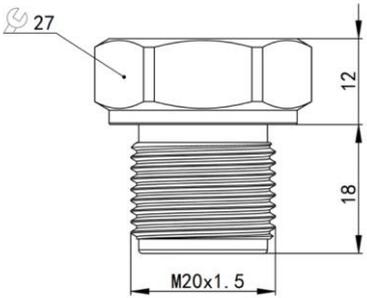
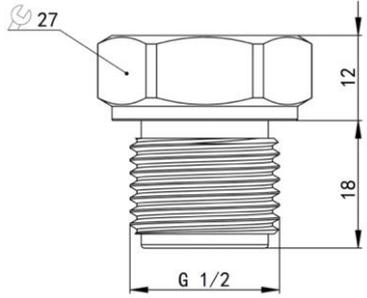
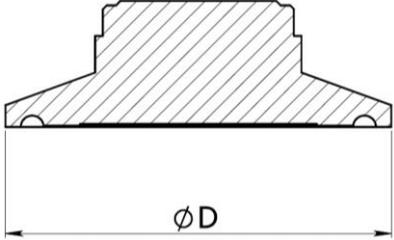
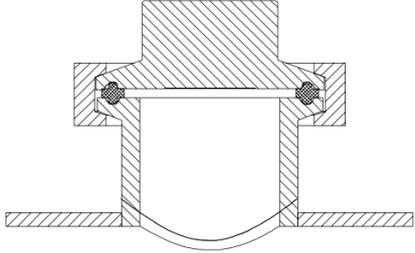
<p><b>Temperature range</b></p>	<p>Working temperature: -40 ~ 70°C (LED display); -20 ~ 60°C (LCD display);                  Medium temperature: -40 ~ 125°C                  Storage temperature: -30 ~ 70°C</p>
<p><b>Protection Grade</b></p>	<p>IP65</p>

**Structure Drawing (unit: mm)**



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.

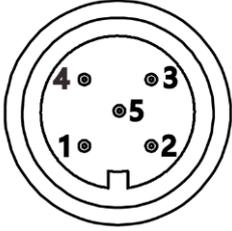
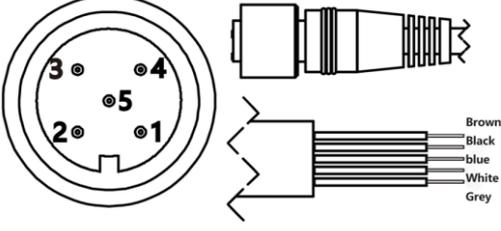
Pressure interface				
Code P1		Code G12		
				
Code K505、K640				
Dimension				
				
Installation diagram				
				
Standard	Specification	Size(φD)	Pressure resistant	Code
Tri-Clamp	1-1/2"	50.5	2MPa	K505
Tri-Clamp	2"	64	2MPa	K640
ISO 2852	DN38	50.5	2MPa	K505
ISO 2852	DN40-51	64	2MPa	K640
DIN 32676	DN32-40	50.5	1.6MPa	K505
DIN 32676	DN50	64	1.6MPa	K640

**Housing materials**

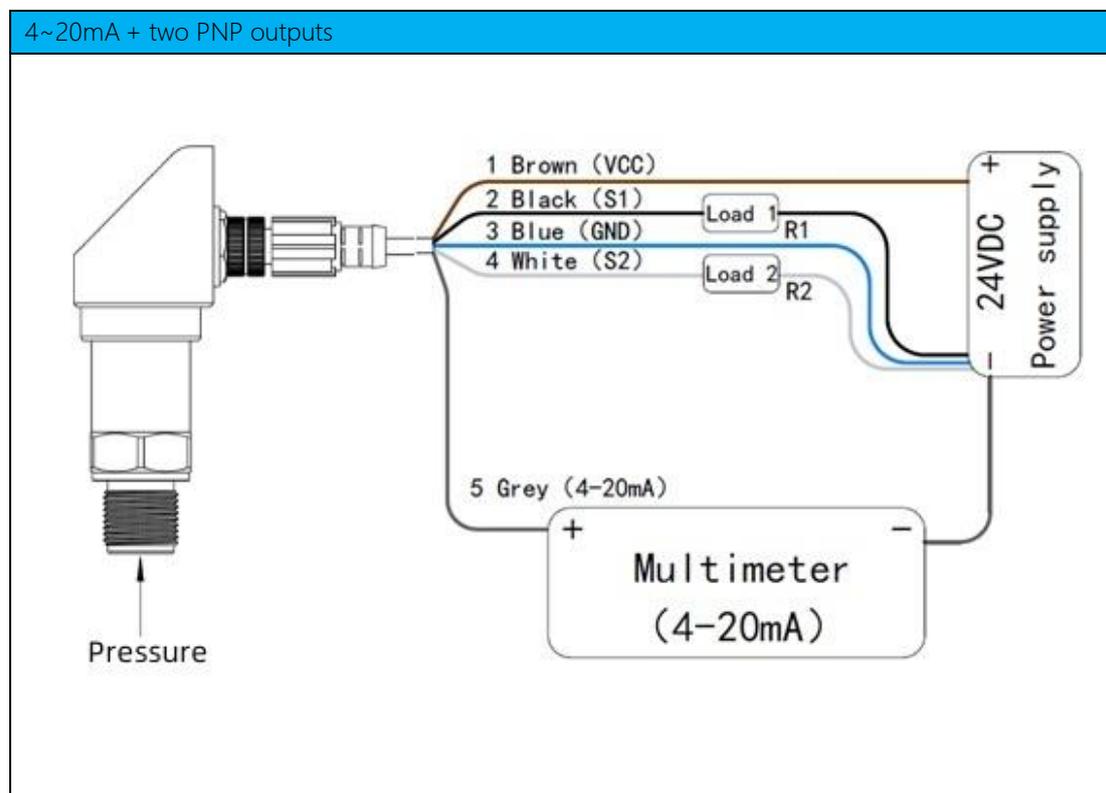
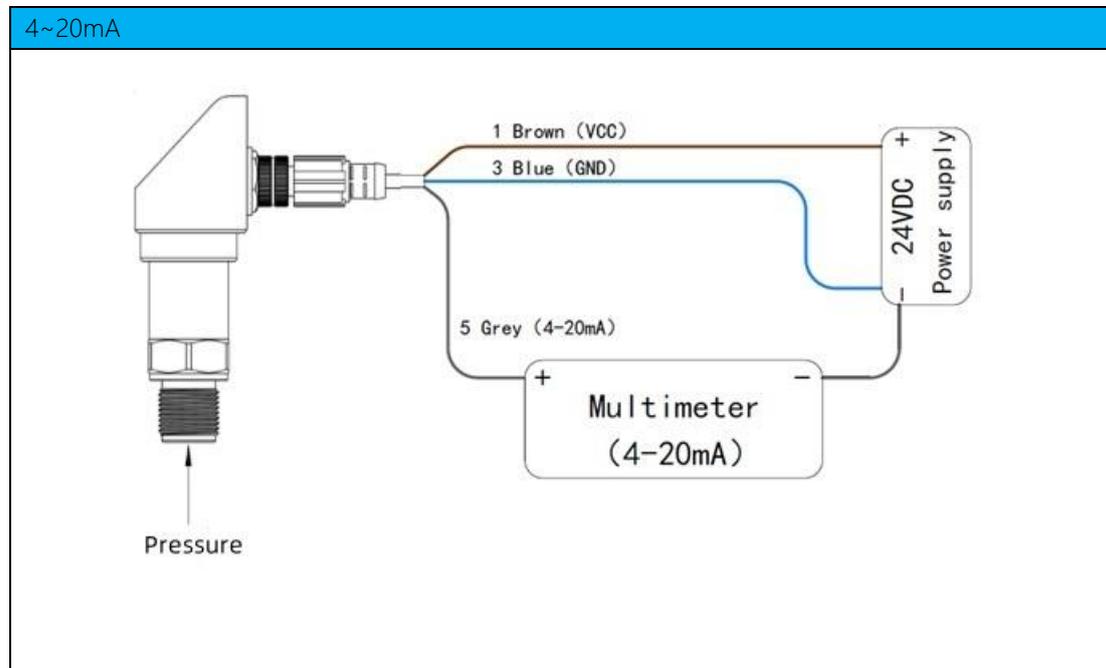
Code	Part	Note
S4	Pressure interface	Stainless steel 304
S6		Stainless steel 316L

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)

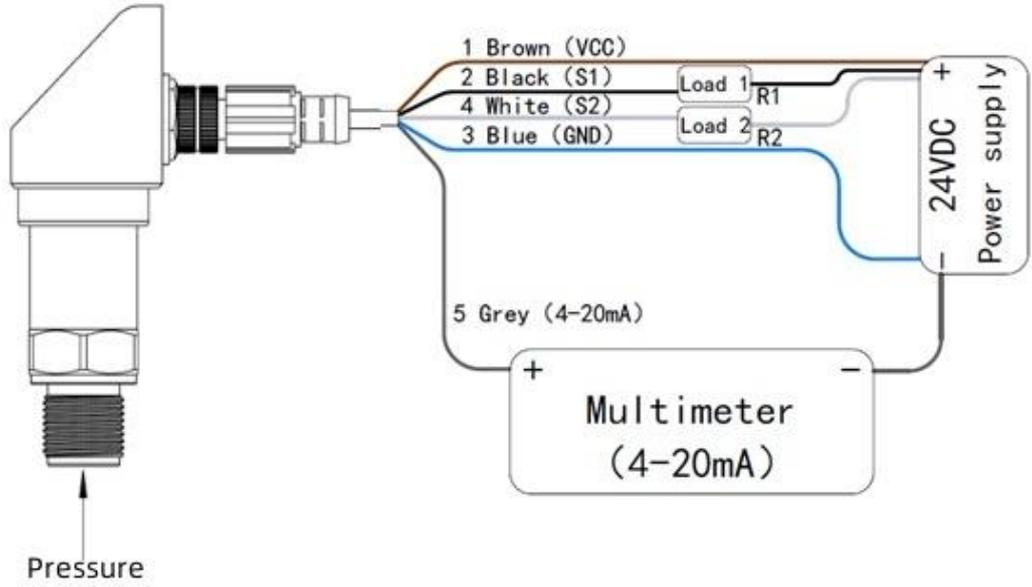
### Electrical Interface

M12×1-5P (Code: C6)	M12×1-5P, with cable (Code: C6X)
	
1: VCC	Brown: VCC
2: SP1	Black: SP1
3: GND	Blue: GND
4: S2	White: S2
5: 4~20mA	Grey: 4~20mA

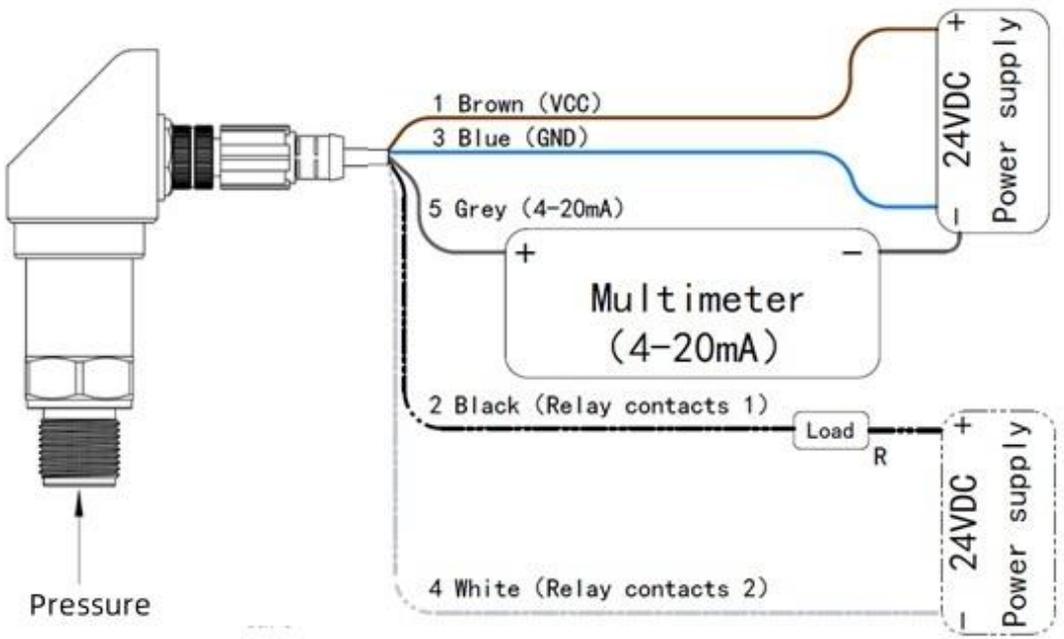
## Electrical Connection



4~20mA + two NPN outputs



4~20mA + one relay output



## Ordering Guide

Code	Type		
HPM5100	Pressure Switch		
	Range	Measuring temperature	
	(0 - X)bar	Input X directly	
		Code	Output signal
		B1	(4 - 20)mA
		B9	relay
		B10	NPN
		B11	PNP
		Code	Process connection
		P1	M20x1.5
		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	M12x1.5P
		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