HPM1300 Micro Pressure Transmitter

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Overview

The HPM1300 micro pressure transmitter is designed with a unique ultra-compact structure and is manufactured using a high performance silicon piezoresistive sensor with a high precision electronic conditioning circuit, assembled and manufactured through a rigorous process. It features an all stainless steel exterior, multiple electrical outlets, standard 4~20mA, 2-wire current output, wide temperature range compensation and high overall accuracy. The product is laser welded and internally potted for moisture and shock resistance, and has a higher overall protection level. In addition, the internal pressure sensor adopts an isolated diaphragm structure and is capable of measuring and controlling the pressure of various media such as gases, liquids and steam.

The design of the product is not only compact, but also has excellent performance and is ideal for applications where installation space is limited.

Features

- Micro structure, suitable for small installation space
- All stainless steel appearance, better corrosion resistance
- Multiple electrical cable outlet modes are available
- Standard 4 ~ 20mA two-wire system current output
- -20~80℃ wide temperature range compensation
- High accuracy, 0.25 class room temperature nonlinear accuracy
- Low temperature drift, 0.5 % accuracy within the compensated temperature range
- The highest protection level is IP67

Technical Parameters

Measuring medium: Various liquids and gases compatible with contact materials

Pressure Range: 0 ~ 10kPa... 10MPa(Gauge pressure); 0 ~ 20kPa... 10MPa(Absolute pressure).

Overload: 1.5 times pressure range of full scale

Accuracy: ±0.25%FS Reference 25ºC

Long-term stability: ±0.4%FS/year

Ambient temperature: -40～85℃

Medium temperature:-40~100℃

Storage temperature:-40～85℃

Compensation temperature: -20 ~ 80℃;0-60℃（when pressure range <50kPa）

Temperature Coefficient of Zero: ≤±0.5%FS;≤±1.5%FS(when pressure range <50kPa)

Temperature Coefficient of Full Scale: ≤±0.5%FS; ≤±1.5%FS(when pressire range <50kPa)

Power supply:4~20mADC(10~30V)

Output signal: 2-wire 4 ~ 20mADC; If the range is ≤5MPa, other types of output signals are supported, such as voltage, RS485, etc.

Protection grade: IP67- side direct cable outlet, top direct cable outlet; [Sealed gauge and absolute pressure types only]

IP65-Hirschmann DIN43650;

IP66-M12 x 1;

Insulation resistance:>20MΩ @500VDC

Insulation strength:<2mA @ 500VAC 1min

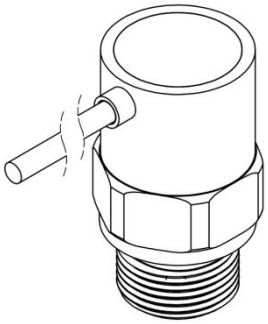
Material

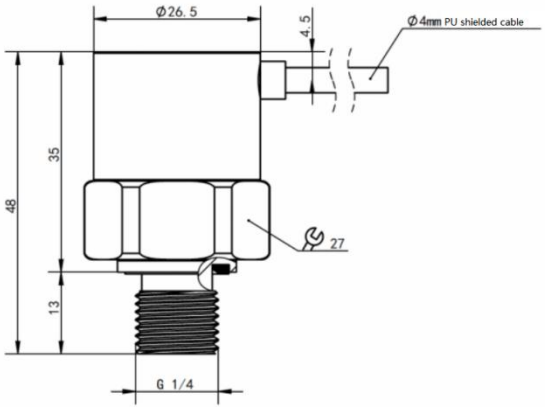
Shell Material：304, 316L

Cable: Polyurethane shielded cable

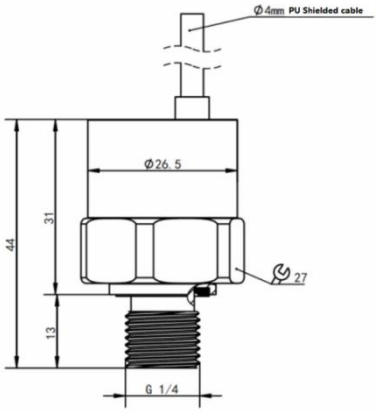
Structural drawings（unit:mm）

Side direct cable outlet

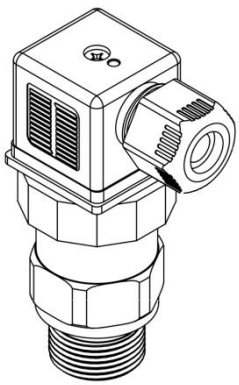


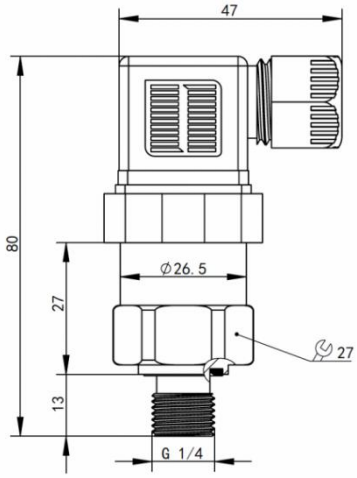


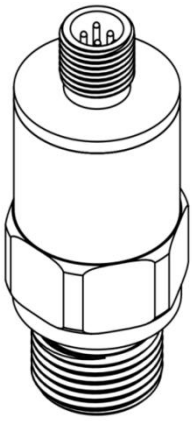
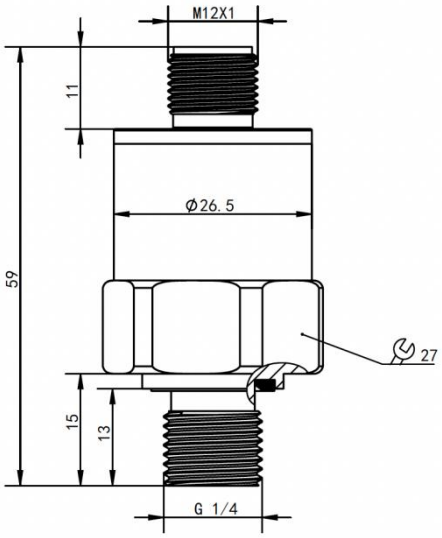
Top direct cable outlet



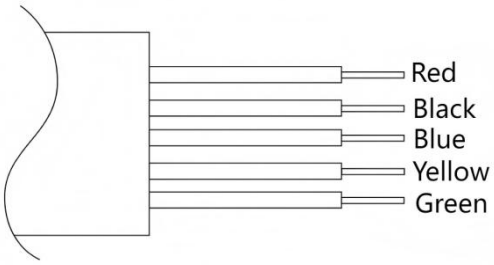
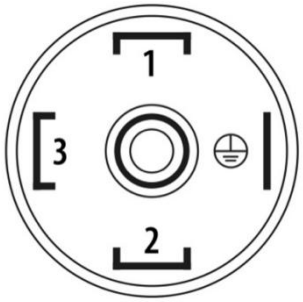
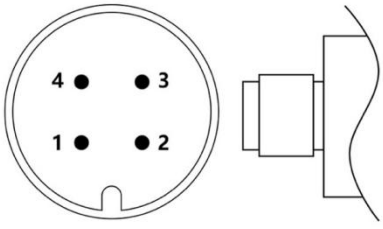
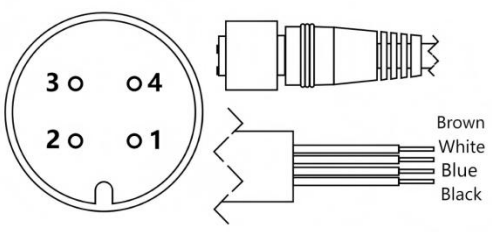
Hirschmann DIN43650





M12 x 1
 

Electrical Connection

Side cable outlet (ordering code C2C) Top cable outlet (ordering code C2D)	Hirschmann DIN43650 (ordering code C1)
	
M12×1 (ordering code C5)	M12×1, with cable (ordering code C5X)
	

Two-wire 4 ~ 20mA current output		
Signal definition	Power+ （+V）	Power- (0V/+OUT）
Cable outlet	Red	Black
Hirschmann/DIN43650	1	2
M12×1-4P	1	3
M12×1-4P,with cable	Brown	Blue

Three-wire, voltage output			
Signal definition	Power+ （+V）	Power- (GND）	Signal+(+OUT)
Cable outlet	Red	Black	Blue
Hirschmann/ DIN43650	1	2	3
M12×1-4P	1	3	2
M12×1-4P,with cable	Brown	Blue	White

Four-Wire, Modbus-RTU/RS485				
Signal definition	Powe+r(+V)	Power-(-V)	RS485A	RS485B
Cable outlet	1	2	3	4
Hirschmann/ DIN43650	Red	Black	Yellow	Green
M12×1-4P	1	3	2	4
M12×1-4P,with cable	Brown	Blue	White	Black

Ordering Guide

Item No.	Type						
HPM1300	Micro Pressure Transmitter						
	Pressure Range	Measuring Range					
	(0～X)MPa	Fill out X directly					
		Code	Output Signal				
		B1	(4～20)mA				
		B3	(0-10) V				
		B4	(0-5)V				
		B7	RS485				
			Code	Thread Spec			
			P2	M20*1.5			
			P3	G1/4			
			P4	G1/2			
			P8	NPT1/4			
			M8	M8*1			
			PD	Customized			
				Code	Electrical Connection		
				C1	DIN43650		
				C2C	side cable outlet		
				C2D	top cable outlet		
				C5	M12*1		
				C5X	M12*1 with cable		
					Code	Material	
					S4	304	
					S6	316L	
						Code	Sensor
						M1	diffusion silicon diaphram
							Code / Additional Functions
							G / Gauge Pressure(Default)
							A / Absolute Pressure
HPM1300	(0~10)Mpa	B1	P3	C2C	S4	M1	G