

HPM711 Flush Diaphragm Pressure Transmitter



Nanjing Hangjia Electronic Technology Co., Ltd.

Overview

HPM711 flush diaphragm sanitary pressure transmitter uses a flush diaphragm to directly sense the pressure signal, uses a silicon pressure chip as the sensitive element, and uses standard silicone oil or sanitary oil as the pressure transmission medium.

HPM711 with flat diaphragm is specially designed for measuring viscous, pasty, viscous, crystallized, particle-containing media that can block the pressure channels of conventional process connections. For high-temperature media up to 150°C, this product also has models with integrated radiators to choose from. At the same time, the HPM711 flush diaphragm sanitary pressure transmitter directly feels the pressure due to the exposed diaphragm on the thread end face, which is especially suitable for medical, food industry which has hygienic requirements, and viscous fluid pressure and level measurement and without problems such as scaling, blockage, and sanitation.

Features

- Flush diaphragm structure
- Hygienic pressure interface
- Various electrical interfaces
- Various process connections

Technical Parameters

Measuring Medium	Various liquid, gas, or steam compatible with contact material
Measuring Range	-100kPa...0~10kPa...60MPa(G) 0~25kPa...10MPa(A)
Overload	1.5 times of full scale
Output Signal/Power supply	4 ~ 20mA _{DC} / V _S =8~30 V _{DC} 0 ~ 10V _{DC} / V _S =12~30 V _{DC} 0 ~ 5V _{DC} / V _S =8.5~30V or 3.1~8 V _{DC} (Higher than max output voltage 0.4V as least) 4~20mA _{DC} + HART / V _S =12~32 V _{DC}
Accuracy	±0.5%FS (Standard) ±0.25%FS (option)

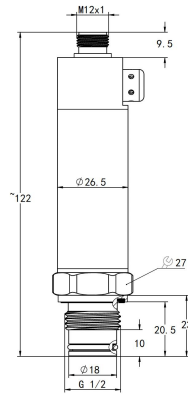
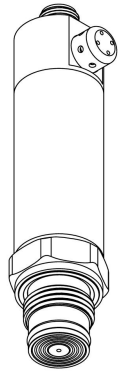
Long-term Stability	$\pm 0.50\%FS/year$, $\leq 100kPa$ $\pm 0.25\%FS/year$, $> 100kPa$
Compensation temperature range	$-5 \sim 60^{\circ}C$
Temperature Coefficient of Zero	$\pm 0.4\%FS/10^{\circ}C$ (in compensation range, $\leq 100kPa$) $\pm 0.3\%FS/10^{\circ}C$ (in compensation range, $> 100kPa$)
Temperature Coefficient of Full Scale	$\pm 0.3\%FS/10^{\circ}C$ (in compensation range)
Operation Temperature	$-40 \sim 80^{\circ}C$
Medium Temperature	$-40 \sim 100^{\circ}C$ (without cooling element) $-40 \sim 150^{\circ}C$ (with cooling element)
Storage Temperature	$-40 \sim 100^{\circ}C$
Protection Grade	IP65 for Hirschmann electrical connection (code: C1) IP69K for M12*1 electrical connection (code C5) IP67 for cable outlet (code C2)
Short circuit protection	Always
Reverse polarity protection	No damage, will not work if reverse
Electromagnetic Compatibility	EN 61326
Vibration	20g(20~5000Hz)
Shock resistance	50g(11ms)
Insulation resistance	$> 200M\Omega$ @500VDC
Dielectric strength	$< 2mA$ @500VAC 1min

Housing Material

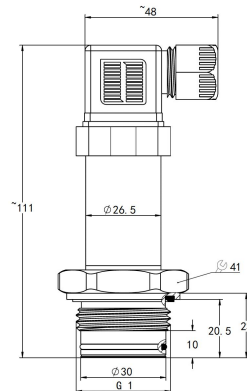
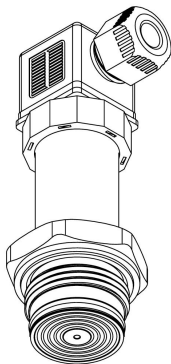
Code	Part	Material
S4	Shell	304
S6		316L
S6	Pressure interface	316L
HC		C276
NB	Sealing ring	NBR
FK		FKM
FF		FFKM
ED		EPDM

Structure Drawing(unit:mm)

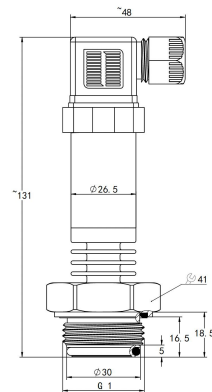
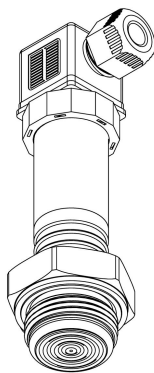
M12×1, G1/2, without cooling element



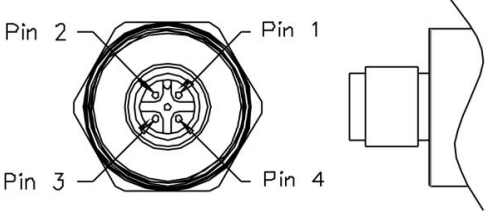
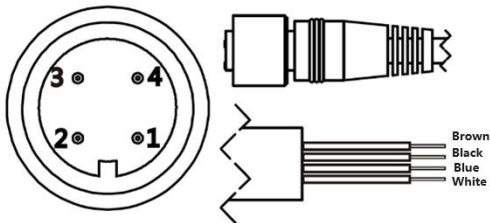
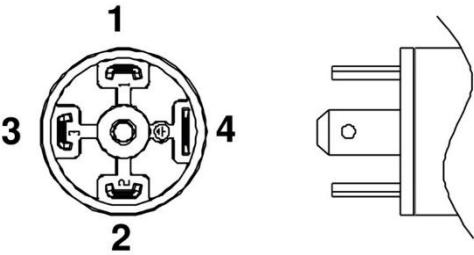
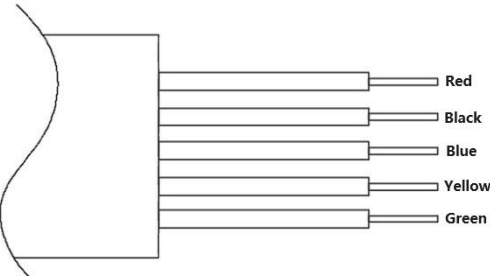
Hirschmann, G1, without cooling element



Hirschmann, G1 Hygienic type, with cooling element



Electrical Connection

M12×1 (Code: C5)	M12×1 with cable (Code: C5X)
	
Hirschmann DIN43650 (Code: C1 or C1.1)	Cable outlet (Code: C2)
	

2 wires 4 ~ 20mA output

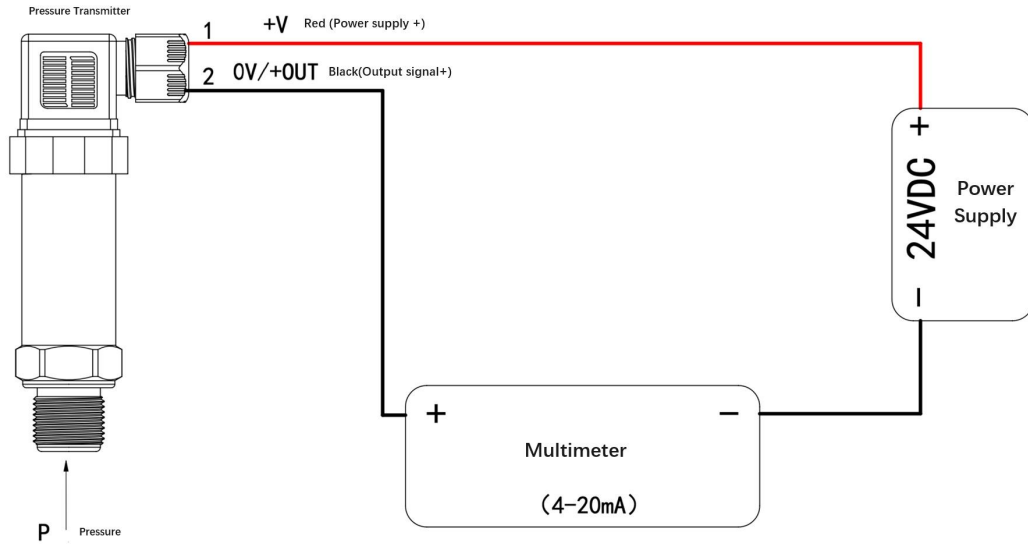
Definition	Power supply+ (+V)	Power supply- (0V/+OUT)
M12×1	1	2
M12×1, with cable	Brown	Black
Hirschmann	1	2
Cable outlet	Red	Black

3 wires 0~5V/10V output

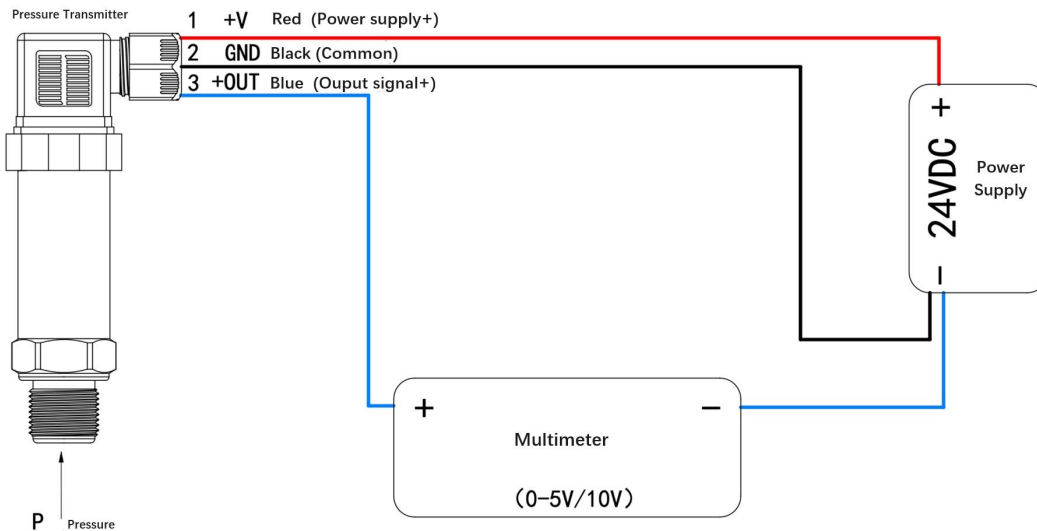
Definition	Power supply+ (+V)	Power supply- (GND)	Signal+ (+OUT)
M12×1	1	2	3
M12×1, with cable	Brown	Black	Blue
Hirschmann	1	2	3
Cable outlet	Red	Black	Blue

Wiring Diagram

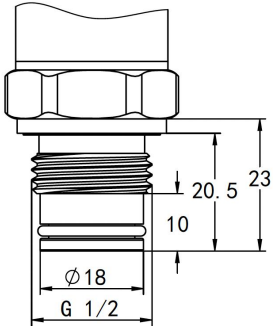
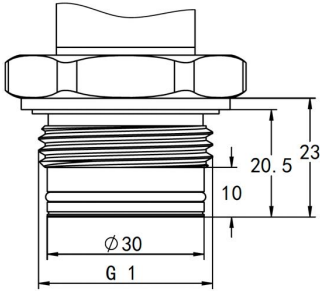
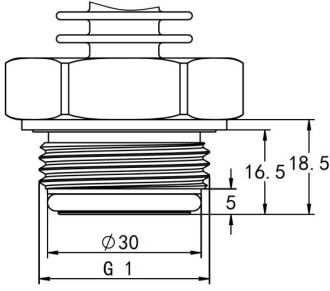
2-wire current output



3-wire voltage output

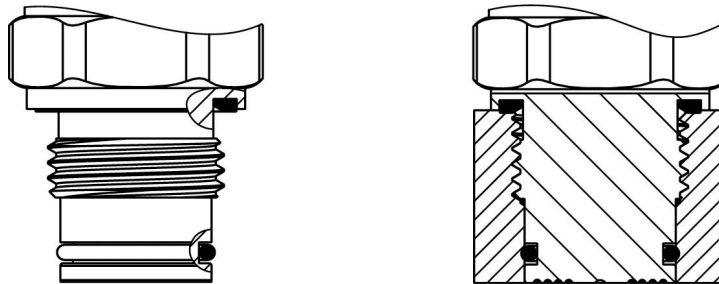


Process Connections

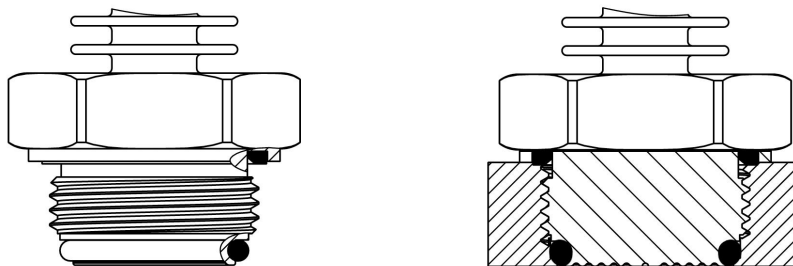
<p>G1/2 Flush diaphragm (Code: KG12)</p>	<p>G1 Flush diaphragm (Code: KG1)</p>	<p>G1 Hygienic (Code: KHG1)</p>
<p>Measuring range : 0 ~ 2.5...600bar</p>	<p>Measuring range : 0 ~ 0.1...25bar</p>	<p>Measuring range : 0 ~ 0.1...25bar</p>
		

Installation Diagram

G1/2 Flush diaphragm, G1 Flush diaphragm

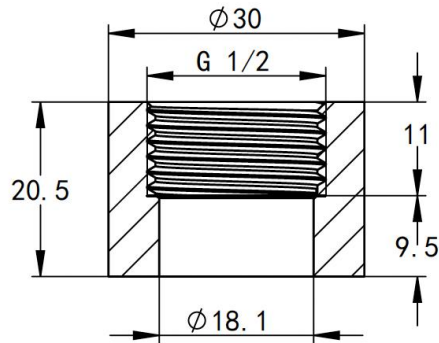


G1 Hygienic

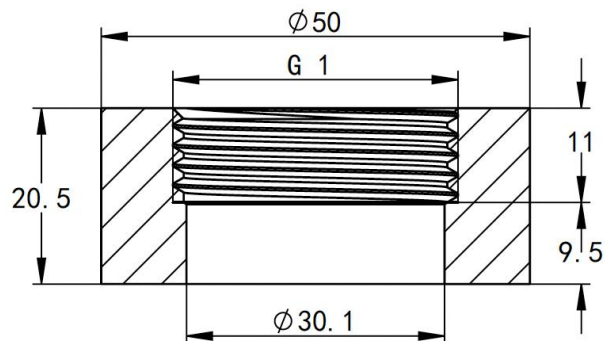


Installation Accessories

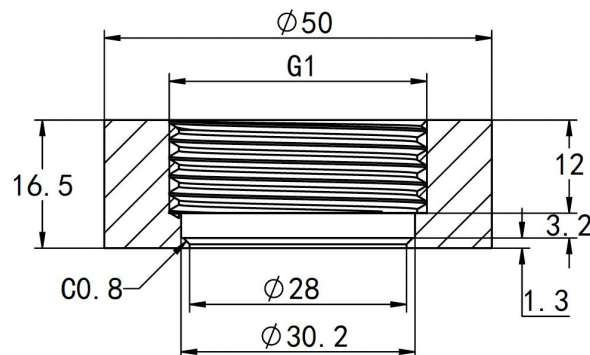
Welding socket SS 316L (G1/2 Flush diaphragm)



Welding socket SS 316L (G1 Flush diaphragm)



Welding socket SS 316L (G1 Hygienic)



Ordering Guide

Code	Type							
HPM711	flush diaphragm pressure transmitter							
	Range	Measuring Range						
	(X ₁ - X ₂)bar	X ₁ is the lowest value X ₂ is the highest value						
		Code	Output Signal					
		B1	(4 - 20)mA					
		B3	(0 - 10)V					
		B4	(0 - 5)V					
		B5	(1 - 5)V					
		B15	(1 - 10)V					
		Code	Process Connection					
		KG12	G1/2					
		KG1	G1					
		KHG1	G1 Hygienic					
		Code	Electrical Connection					
		C1	Hirschmann					
		C2	Cable outlet					
		C5	M12x1					
		C5X	M12x1 with cable					
		Code	Pressure interface material					
		S6	316L					
		X	Customized					
		Code	Shell material					
		S4	304					
		S6	316L					
		Code	Cooling Element					
		Y	With					
		N	Without					
		Code	Others					
		G	Gauge					
		S	Sealed gauge					
		A	Absolute					
		J25	0.25G accuracy					
		J5	0.5G accuracy					
		NB	NBR sealing ring					
		FK	FKM sealing ring					
		ED	EPDM sealing ring					
		FF	FFKM sealing ring					
		QF	With factory report					
eg:HPM711	(0 - 1)bar	B1	KG1	C1	S6	S4	Y	G J5 NB