HPM711 Flush Diaphragm Pressure Transmitter

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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$_{DC}$/ Vs=8~30 V$_{DC}$ 0 ~ 10V$_{DC}$ /Vs=12~30 V$_{DC}$ 0 ~ 5V$_{DC}$ /Vs=8.5~30V or 3.1~8 V$_{DC}$ (Higher than max output voltage 0.4V as least) 4~20mA$_{DC}$ + HART / Vs =12~32 V$_{DC}$
Accuracy	±0.5%FS (Standard) ±0.25%FS (option)

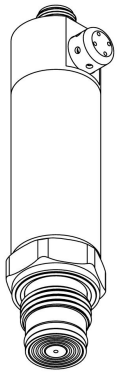
Long-term Stability	±0.50%FS/year， ≤100kPa ±0.25%FS/year， >100kPa
Compensation temperature range	-5～60℃
Temperature Coefficient of Zero	±0.4%FS/10℃(in compensation range,≤100kPa） ±0.3%FS/10℃(in compensation range,>100kPa)
Temperature Coefficient of Full Scale	±0.3%FS/10℃(in compensation range)
Operation Temperature	-40 ~ 80℃
Medium Temperature	-40 ~ 100℃(without cooling element) -40 ~ 150℃(with cooling element)
Storage Temperature	-40 ~ 100℃
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
Vibration	20g(20~5000Hz)
Shock resistance	50g(11ms)
Insulation resistance	>200MΩ @500VDC
Dielectric strength	<2mA @500VAC 1min

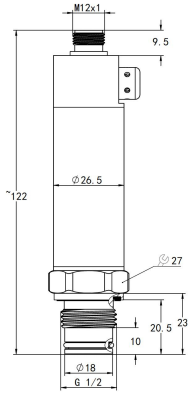
Housing Material

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

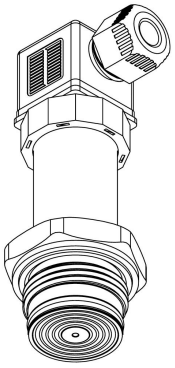
Structure Drawing(unit:mm)

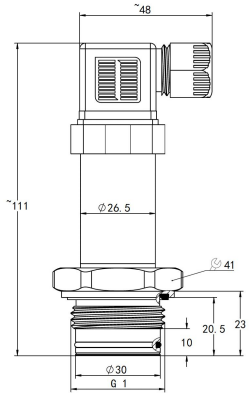
M12×1， G1/2， without cooling element



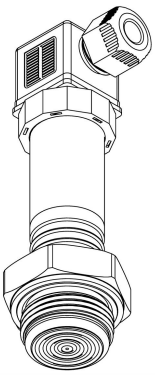


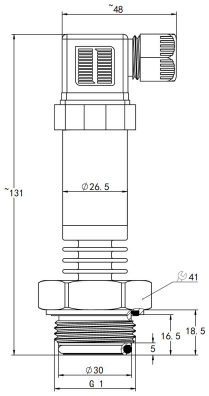
Hirschmann， G1， without cooling element



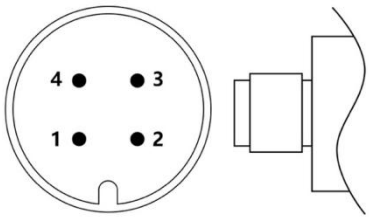
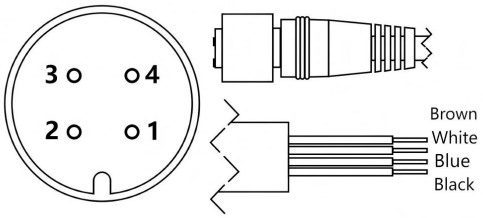
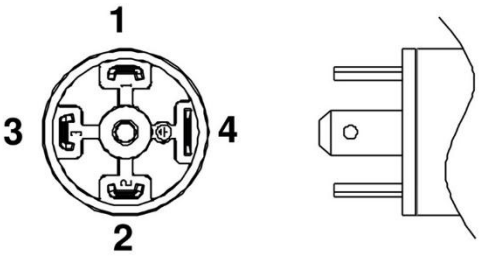
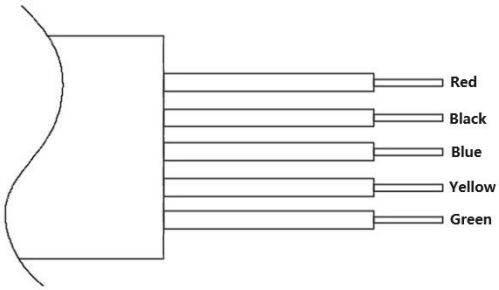


Hirschmann， G1 Hygienic type， with cooling element





Electrical Connection

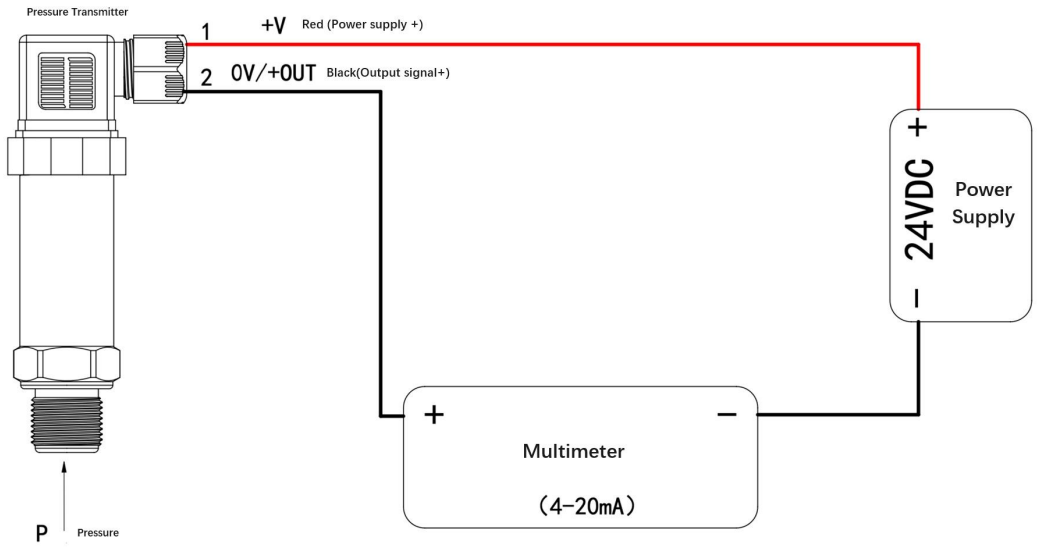
M12×1（Code: C5）	M12×1 with cable（Code: C5X）
	
Hirschmann DIN43650 （Code: C1 or C1.1）	Cable outlet（Code: C2）
	

2 wires 4 ~ 20mA output		
Definition	Power supply+（+V）	Power supply-（0V/+OUT）
M12×1-4P	1	3
M12×1-4P, with cable	Brown	Blue
Hirschmann	1	2
Cable outlet	Red	Black

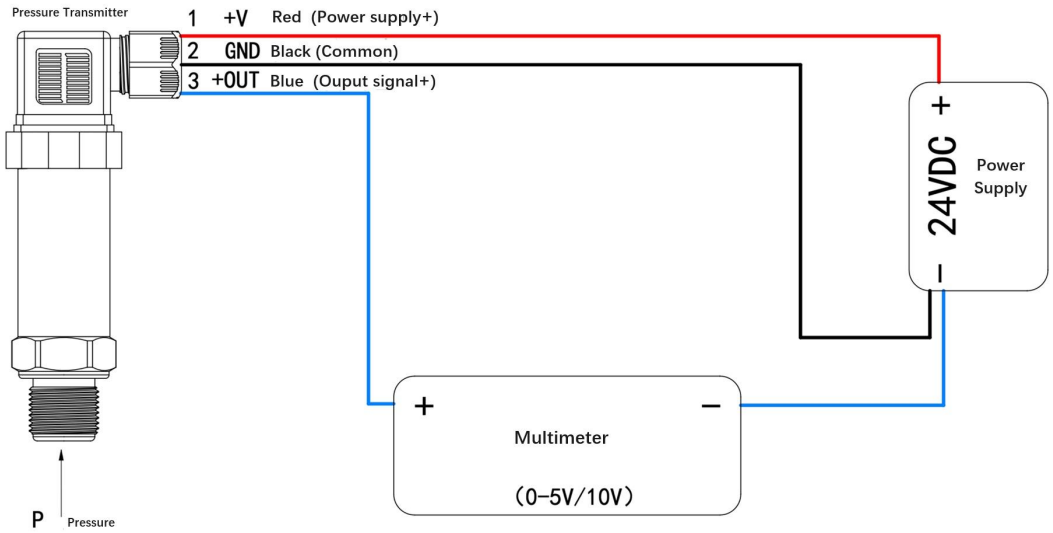
3 wires 0~5V/10V output			
Definition	Power supply+（+V）	Power supply-（GND）	Signal+（+OUT）
M12×1-4P	1	3	2
M12×1-4P, with cable	Brown	Blue	White
Hirschmann	1	2	3
Cable outlet	Red	Black	Blue

Wiring Diagram

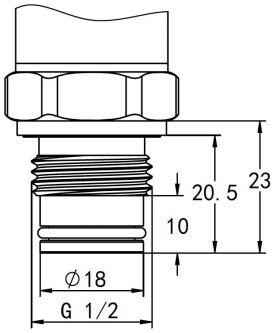
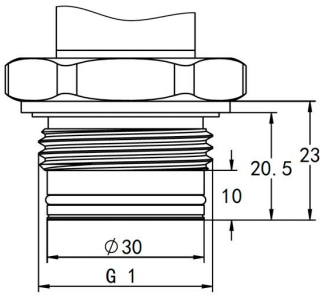
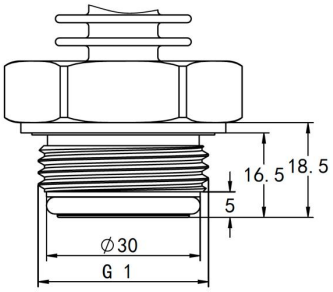
2 -wire currency output



3 -wire voltage output

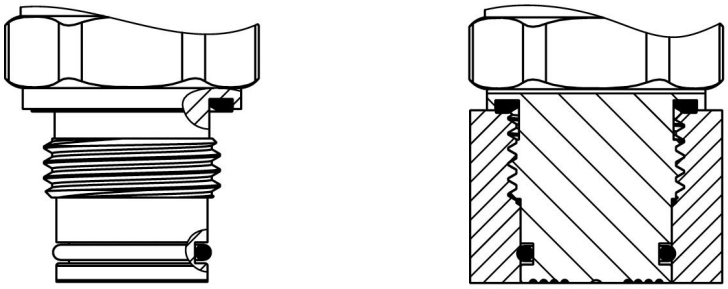


Process Connections

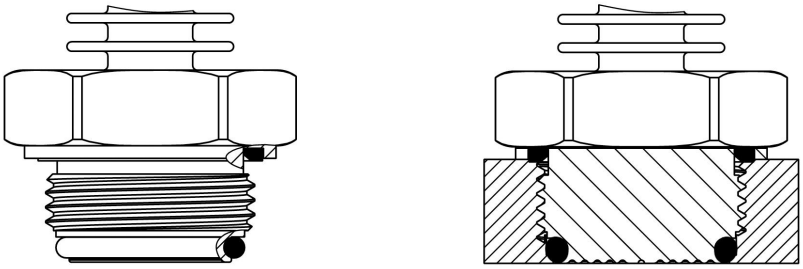
G1/2 Flush diaphragm (Code: KG12)	G1 Flush diaphragm (Code: KG1)	G1 Hygienic (Code: KHG1)
Measuring range： 0 ~ 2.5…600bar	Measuring range： 0 ~ 0.1…25bar	Measuring range： 0 ~ 0.1…25bar
		

Installation Diagram

G1/2 Flush diaphragm,G1 Flush diaphragm

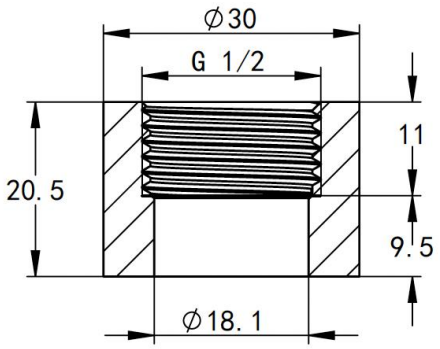


G1 Hygienic

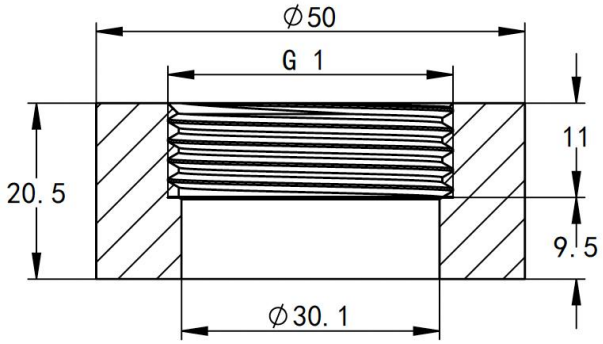


Installation Accessories

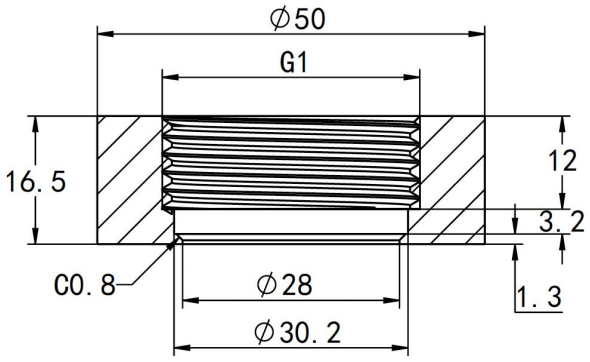
Welding socket SS 316L（G1/2 Flush diaphragm）



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	M12×1
C5X	M12×1 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