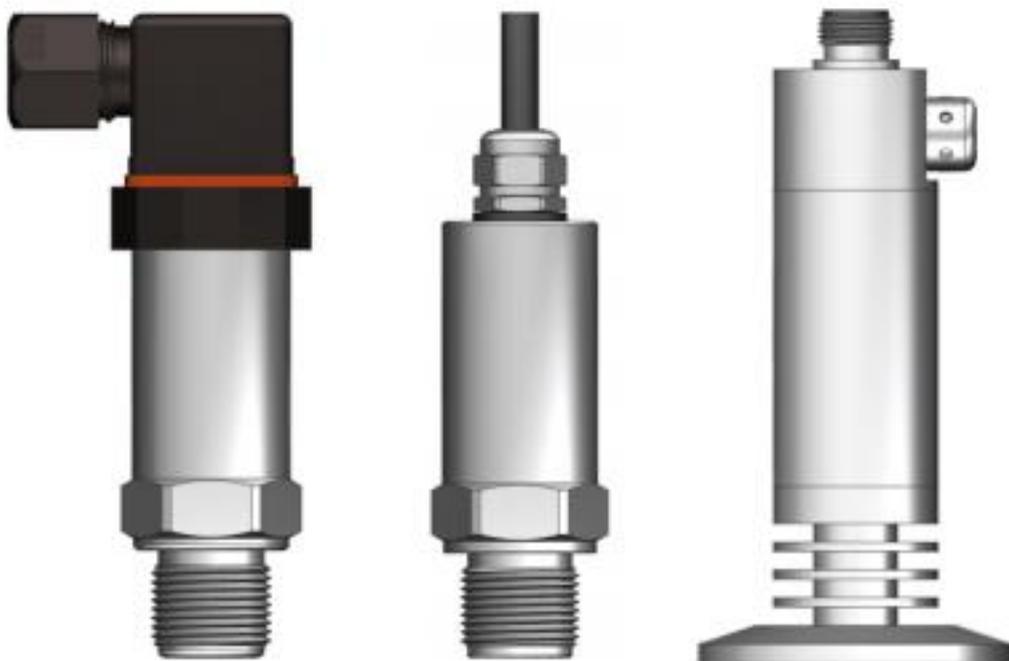


HPM180 Intrinsically Safe Pressure Transmitter



Nanjing Hangjia Electronic Technology Co., Ltd.

Overview

HPM180 intrinsic safety pressure transmitter adopts high precision and high stability diffused silicon pressure core as the sensitive element, and the built-in signal conditioning circuit converts the sensor signal to the standard current signal output, which can be directly connected with the computer, control instrument, display instrument, etc. The product adopts stainless steel structure, excellent overall performance, easy installation, good shock resistance and impact resistance, and can be used for a long time in harsh environments.

This pressure transmitter conforms to the national standard GB3836.1-2010 "Explosive environment Part 1: General Requirements for Equipment" and GB 3836.4-2010 "Explosive environment Part 4: intrinsically safe" i ", and by the national designated inspection unit review, inspection passed, obtained explosion-proof certificate.

Features

- Intrinsic safety explosion-proof Ex ia IIC T6 Ga
- Wide range, gauge pressure, absolute pressure and sealed gauge pressure can be measured
- Oil, water and gas are common
- Various pressure interfaces are available
- Wide temperature zone compensation, small temperature drift
- Good long-term stability

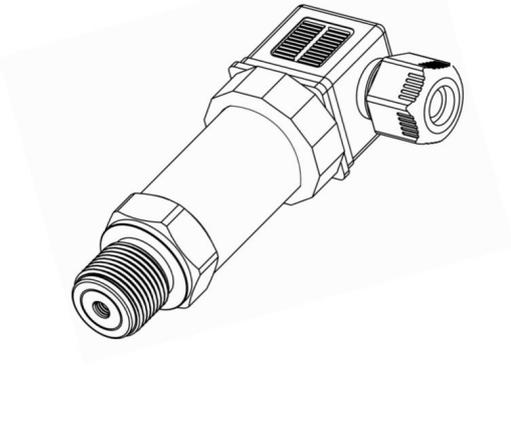
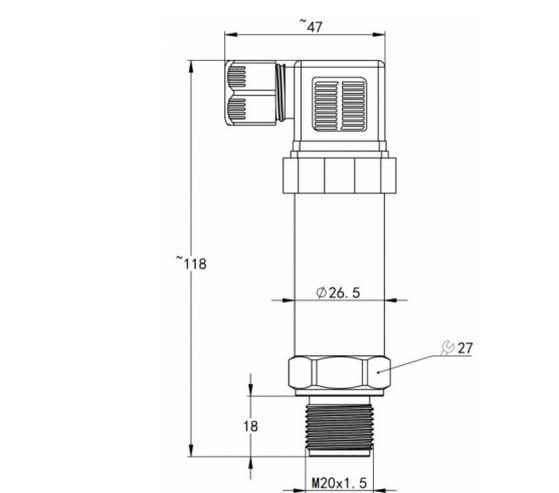
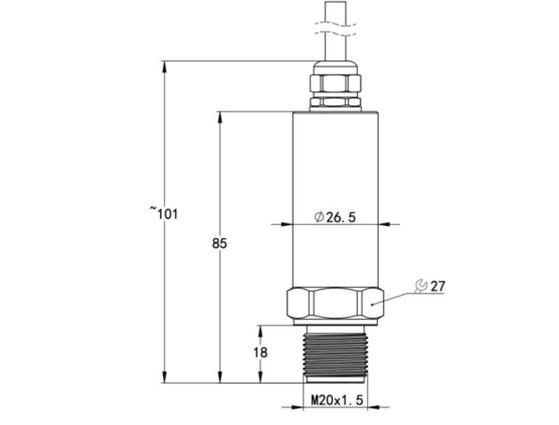
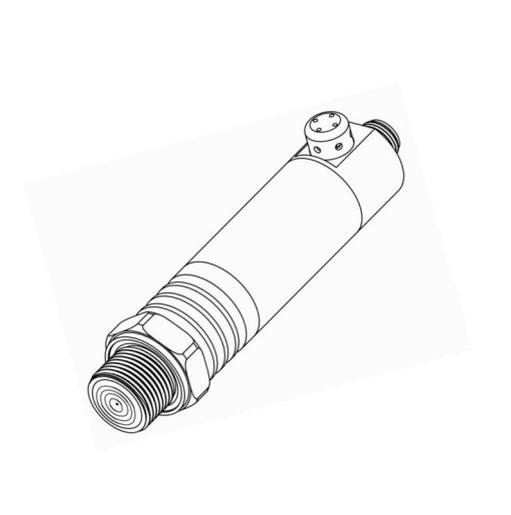
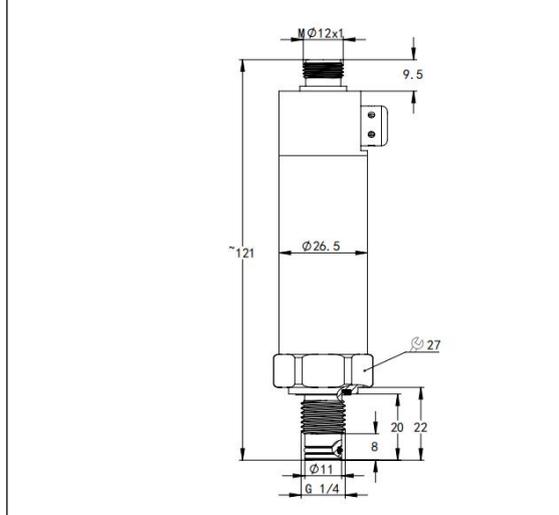
Application

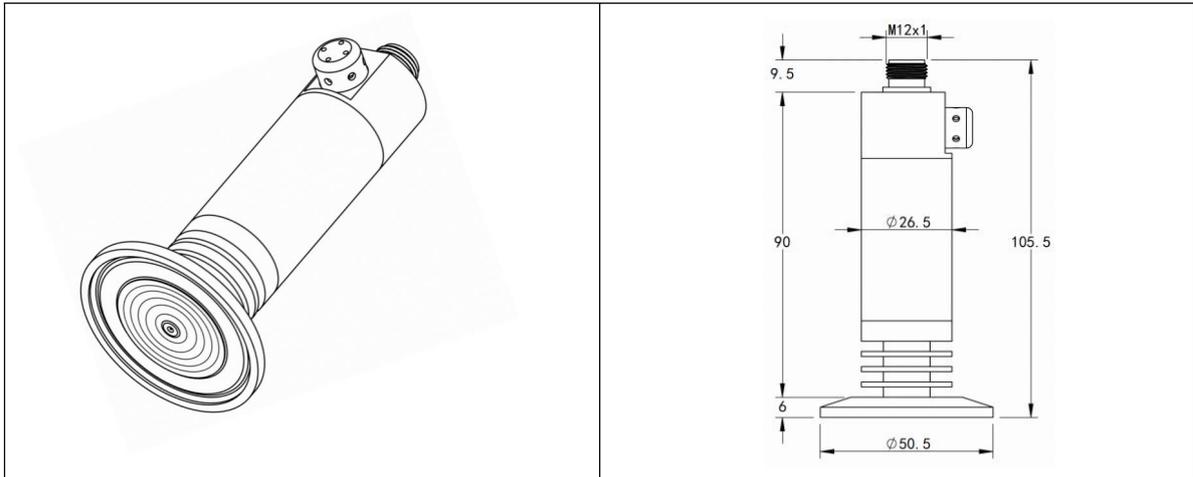
- The altitude does not exceed 2000m
- Ambient temperature: -40℃ ~ +60℃
- Maximum relative humidity of ambient air is not more than 80%(+25℃)
- There are IIA, IIB, IIC, T1-T6 groups of flammable gases, vapors and air formed by mixing explosive mixtures
- Zone 1, Zone 2 venues
- Where there is no significant shaking or shock vibration
- In a place where there is no water or liquid intrusion

Technical Parameters

Pressure Range(Gauge pressure)	-100kPa...0 ~ 10kPa...100MPa
Pressure Range(Absolute pressure)	0 ~ 10kPa...10MPa
Overload	1.5x of full scale
Measuring medium	various liquid, gas or steam compatible with 304 or 316L stainless steel
Output Signal	4~20mA two wires/ Vs=24VDC (12~28VDC)
Accuracy	±0.5%FS(default) ±0.2%FS (Customized) ±0.1%FS (advanced)
Long-term Stability	±0.25%FS/year
Current resolution	≤0.01%
Response time	about 1ms
Boot time	≤200ms
Compensation temperature range	0~70℃ (0.5%FS default accurate) -10~80℃ (0.2%FS Customized accurate) -20~85℃ (0.1%FS advanced accurate)
Temperature Coefficient of Zero	±1.0%FS/℃ (Reference 25℃)
Temperature Coefficient of Full Scale	±1.0%FS/℃ (Reference 25℃)
Ambient Temperature	-40~100℃
Media Temperature	-40~85℃
Storage Temperature	-40~85℃
Protection Grade	IP65(DIN43650); IP66(M12×1); IP67(Cable outlet)
Vibration	10g(20~2000Hz)
Impact resistance	100g(11ms)
Insulation resistance	>20MΩ @500VDC
Dielectric strength	<5mA @ 500VAC 1min
Explosion proof	Ex ia IIC T6 Ga
Intrinsic safety parameter	Ui=28VDC li=93mA Pi=0.65W Ci=0.04μF Li=0

Structure Drawing (unit:mm)

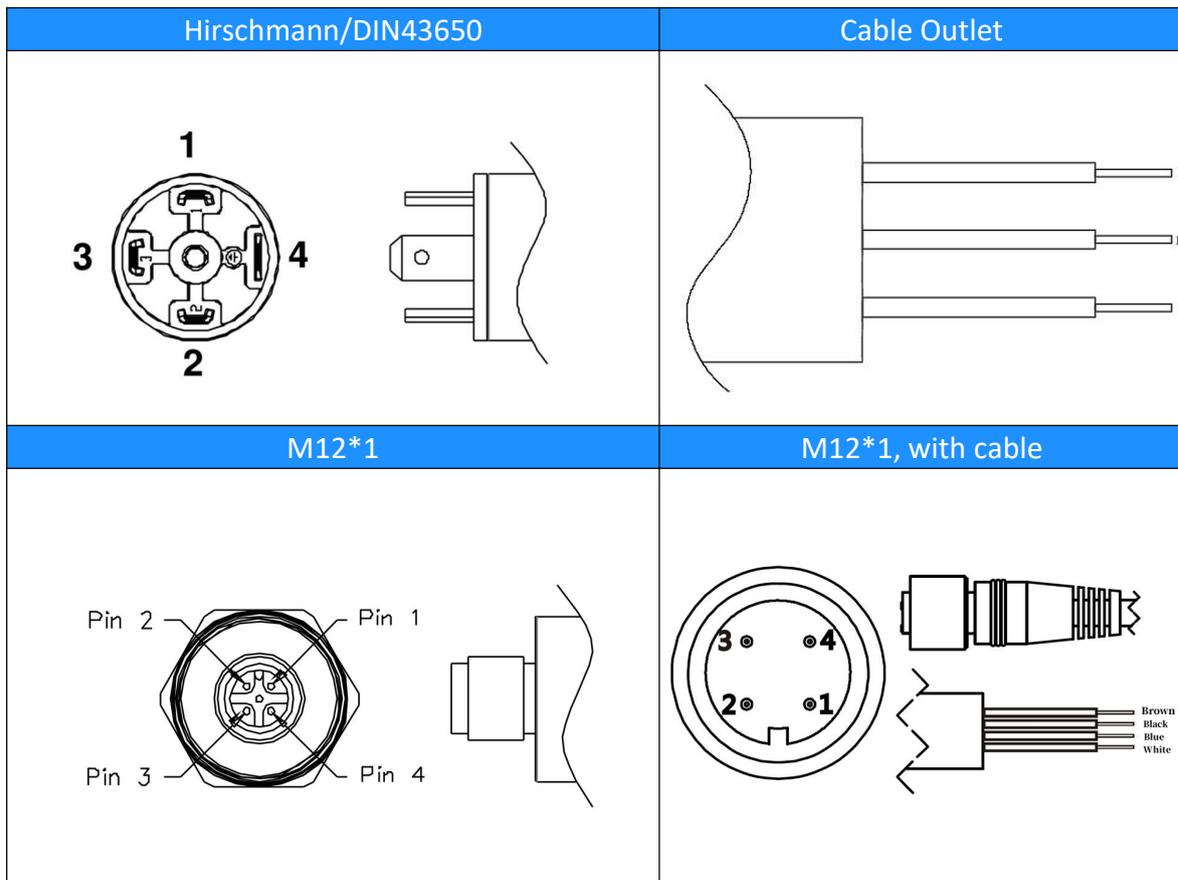
Hirschmann/DIN43650 Thread Type	
	
Cable outlet Thread Type	
	
M12x1 Flush Film Type	
	
M12x1 Tri-clamp Type	



Process connection

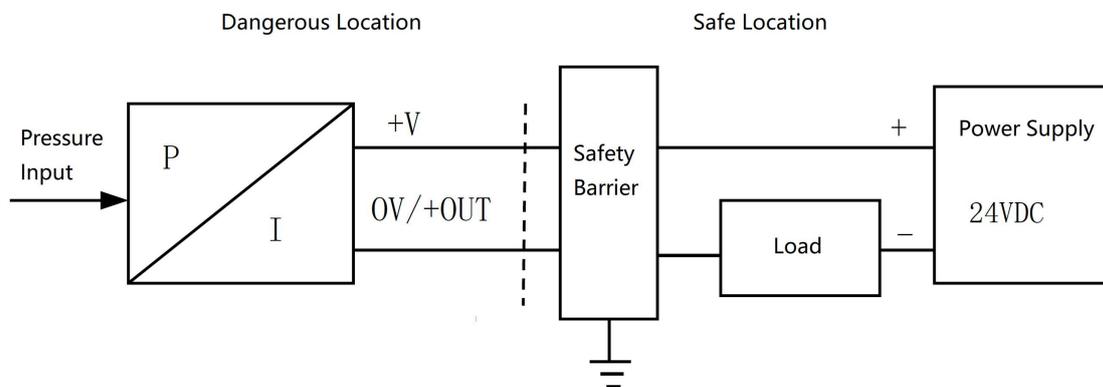
M20*1.5 Thread				G1/2 Thread		
G1/2 Flush film Thread				G1/4		
G1/2 Flush film Thread				G1/4		
Standard	Size	Dimension	Code	Standard	Size	Code
Tri-clamp	1-1/2"	50.5mm	K505	ANSI Flange	DN25-DN80	KF**
Tri-clamp	2"	64mm	K640	DIN Flange	DN25-DN80	KF**

Electrical Connection(4-20mA two wires)



Definition	Power +(+V)	Power - /Signal+(0V/+OUT)
DIN43650	1	2
Cable outlet	Red	Black
M12×1	1	2
M12×1 with cable	Brown	Black

Wiring Diagram



Note: Pressure Transmitter explosion proof spec: $U_i=28VDC$ $I_i=93mA$ $P_i=0.65W$ $C_i=0.04\mu F$ $L_i=0$

Safety barrier explosion proof spec: $U_o=28VDC$ $I_o=93mA$ $P_o=0.65W$

Ordering Guide

Item NO.	Type	Measuring Range	Code	Output Signal	Thread Spec	Electrical Connection	Diaphragm	Connector	Additional Functions	
HPM180	Intrinsic Safety Pressure Transmitter	Pressure Range	Fill out X directly	B1	(4~20)mA					
		(0~X)kPa								
				P1	M20×1.5					
				P3	G1/4					
				P4	G1/2					
				KG12	G1/2 flush film					
				KG14	G1/4 flush film					
				K505	1.5" 50.5 tri-clamp					
				K640	2" 64 tri-clamp					
				KF20	DN20 flange					
	Sample:	(0~100)kPa	B1	KG14	C3	M1	S4	GNB		

Certification Information

ISO Certification	
Certification body	CQM
Quality Management System	SO 9001:2015
Scope of certification	Development and manufacture of pressure transmitter
Certificate number	00223Q21711R1S

Explosion Proof Certification	
Certification body	CNEX
Explosion-proof mark	Ex ia IIC T6 Ga
Scope of certification	HPM180 Series Pressure Transmitter
Certificate number	CNEX21.4326X

CE Certification	
Certification body	ECM
Scope of certification	Pressure Transmitter
Standard	EN61326-1:2013
	EN61326-2-3:2013
	EN61000-6-2:2005/AC:2005
	EN61000-6-4:2007+A1:2011
Register Number	3Z200408.NHET098