

# HPM710 Flat Film Hygienic Pressure Transmitter



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## Overview

HPM710 Flat Film Hygienic Pressure Transmitter adopts flat film which can directly receive the pressure signal and adopts the silicon pressure core as sensitive element and the standard silicon oil or olive oil as pressure transmission medium. The measuring terminal of product uses 316L stainless steel with compact structure, corrosion resistance, vibration resistance and wide range of temperature compensation. Because the exposed stress diaphragm at the end of thread can directly receive the pressure, it can solve the problems like scale formation, insanitation and blocking of viscous pressure, especially suitable for the measurement of viscous fluid and liquid level with hygienic requirements in the fields of medicine and food.

Application: medicine, food, wine making, dairy products, drinks and other viscous easily blocked sanitary requirements for easy cleaning occasions; Environmental protection chemical coating, polyurethane equipment, paint detection system

## Features

- .pressure interface adopts 316L flat film structure
- .hygienic type, scale formation resistance
- .short-circuit protection and reverse polarity protection
- .with cooling fin design optional, excellent application performance for high temperature mediums
- .optional various output signal , can be customized according to requirements

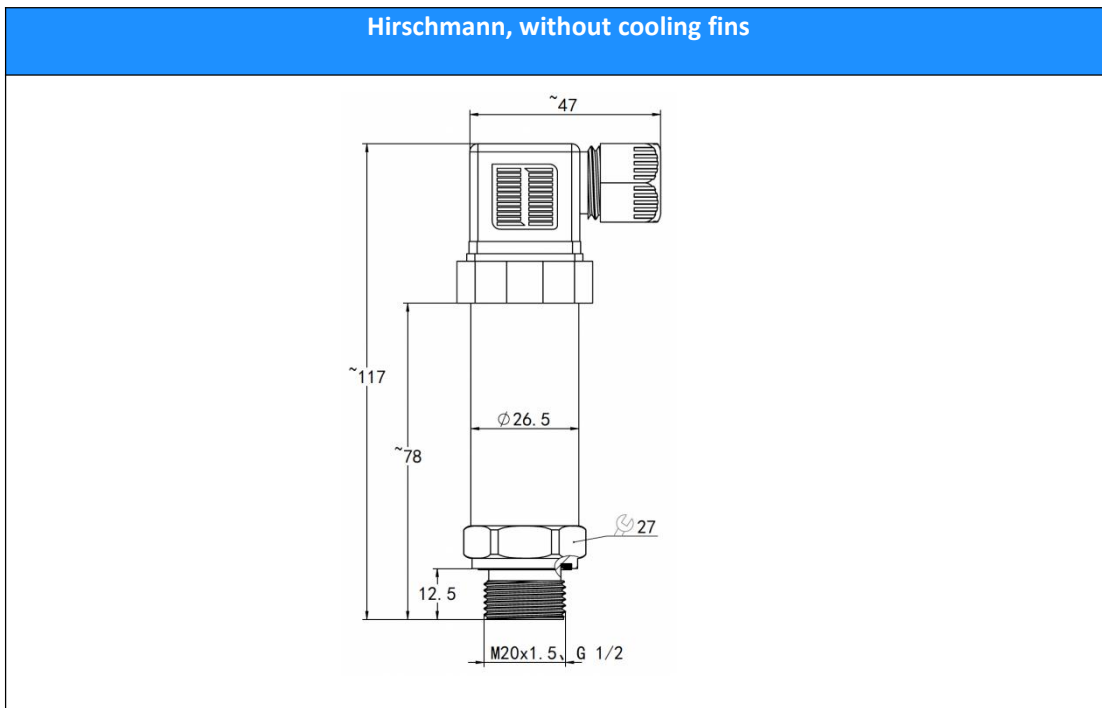
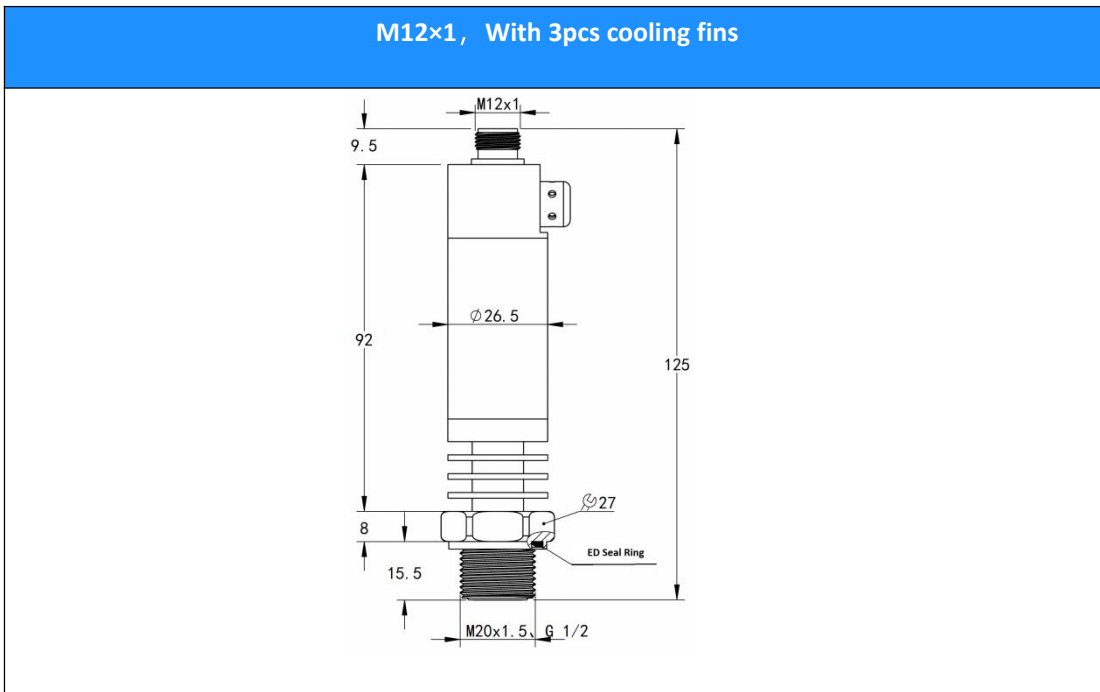
## Technical Parameters

Measuring Medium	Various liquid and gas compatible with 316L stainless steel
Pressure Range	-100kPa...0~20kPa...40MPa
Overload	1.5 times pressure range of full scale
Pressure Type	Gauge pressure, absolute pressure or sealed gauge pressure
Accuracy	0.5%FS
Long-Term Stability	$\pm 0.50\%$ FS/Year, $\leq 100\text{kPa}$ $\pm 0.25\%$ FS/Year, $> 100\text{kPa}$ (includes linearity, hysteresis, and repeatability)*

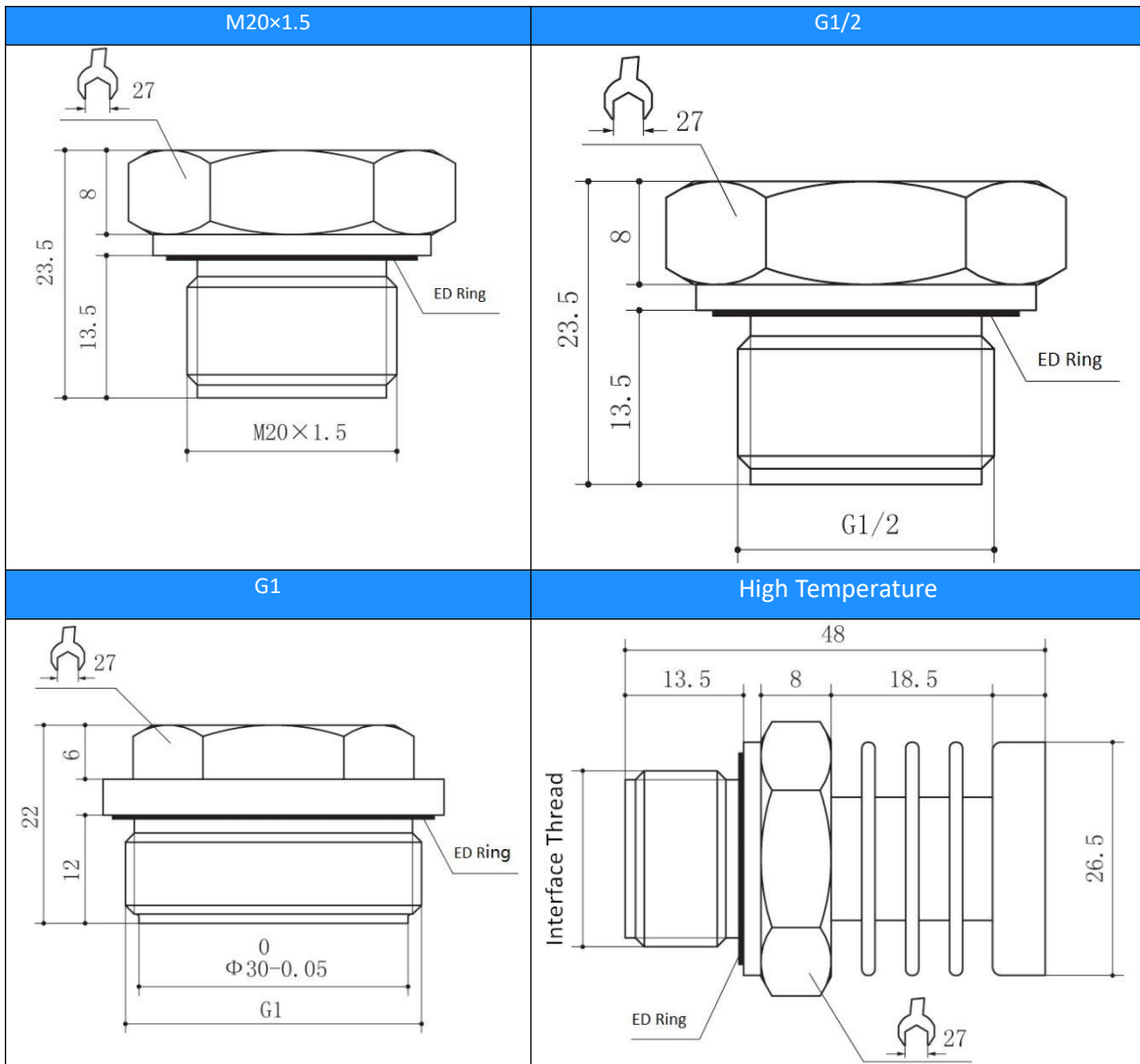
Output Signal /Power Supply	Two wire, 4~20mA / Vs=8~30V Two wire, 4~20mA+HART / Vs=12~32V Three wire: 0 ~ 5V / Vs=8.5~30V or Vs=3.1~8V(Also need to be higher than the maximum output voltage 0.4V) Three wire: 0~10V / Vs=12~30V
Temperature Coefficient of Zero	0.4%FS/10°C
Temperature Coefficient of Full Scale	0.3%FS/10°C
Medium Temperature	-40 ~ 80°C -Without cooling fins  -40 ~ 140°C -With 3pcs cooling fins  -40 ~ 180°C -With 5pcs cooling fins
Ambient Temperature	-40 ~ 80°C
Storage Temperature	-40 ~ 100°C
Ingress Protection of Shell	IP65, Hirschmann IP65, Cable outlet IP69K, M12×1

Electrical protection	
Short circuit protection	Permanent
Reverse polarity protection	No damage, circuit does not work
Electromagnetic compatibility	Electromagnetic compatibility according to EN 61326
Mechanical stability	
Vibration	20g (20~5000Hz)
Impact resistance	50g(11ms)

Structure Drawings



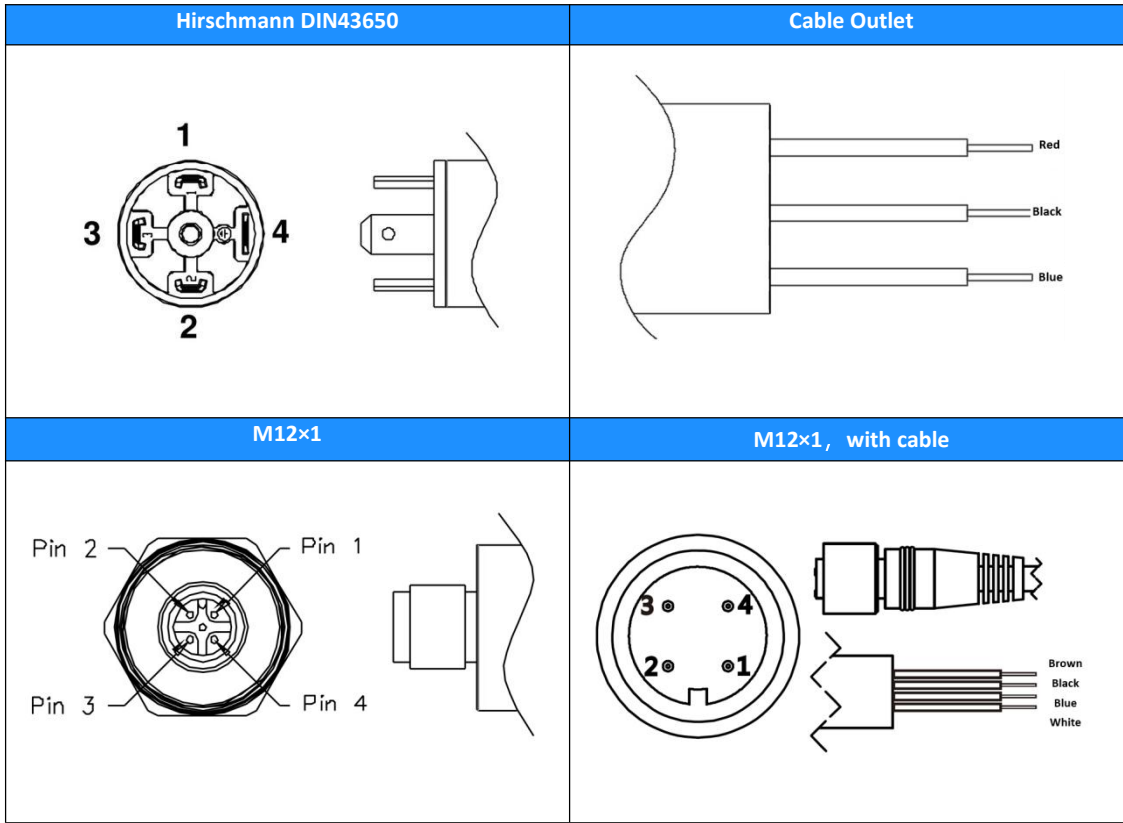
**Pressure Port**



**Note:**

1. The dimensions listed in the picture may change as the technology is updated.
2. For other shapes, please consult us.

**Electrical Connection**

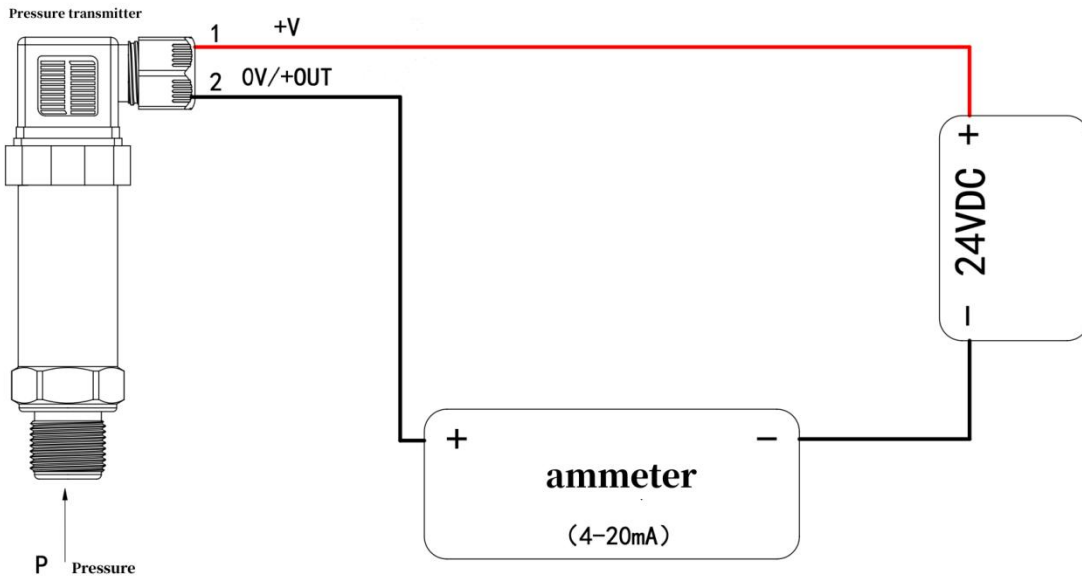


Two wire 4 ~ 20mA current output		
Signal Definition	Power Supply+(+V)	Power Supply-(0V/+OUT)
Hirschmann DIN43650	1	2
Cable outlet	red	black
M12×1	1	2
M12×1 with cable	brown	black

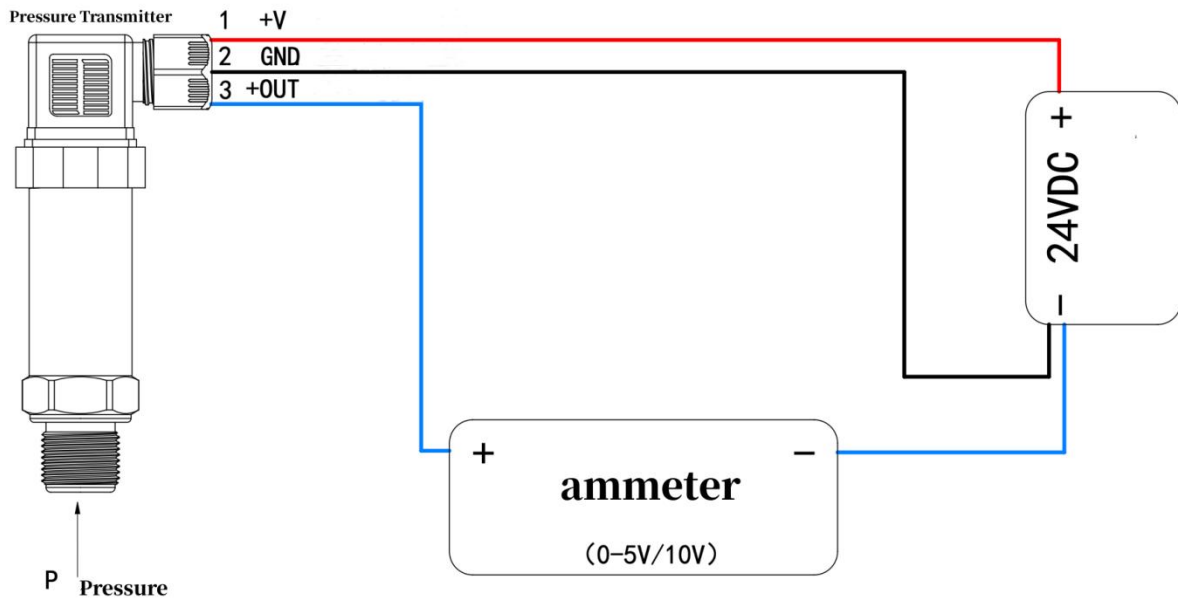
Three wire 0~5V/10V voltage output			
Signal Definition	Power Supply+(+V)	Power Supply-(GND)	Signal+(+OUT)
Hirschmann DIN43650	1	2	3
Cable outlet	red	black	blue
M12×1	1	2	3
M12×1 with cable	brown	black	blue

Wiring Diagram

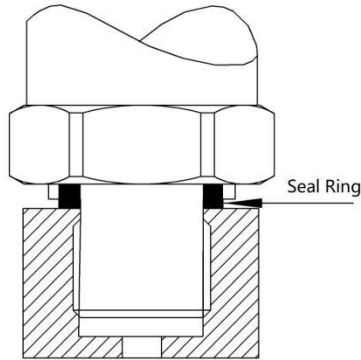
A: Two wire 4 ~ 20mA current output



B: Three wire voltage output



**Process Connection**



Tips:

- 1.The thread length of the pressure transmitter must be less than the depth of the base thread to ensure the effective seal of the root gasket
- 2.Flush film pressure transmitter front diaphragm can not touch the bottom of the base

**Ordering Code**

Item NO.	Type							
HPM710	Flat Film Hygienic Pressure Transmitter	Pressure Range	Measuring Range					
		(0~X)kPa	Fill out X directly					
			Code	Output Signal				
			B1	(4~20)mA				
			B3	(0~10)V				
			B4	(0~5)V				
			B5	(1~5)V				
			Code	Thread Spec				
			KG12	G1/2				
			KG1	G1				
			KP1	M20×1.5				
			Code	Electrical Connection				
			C1	DIN43650				
			C2	Cable Outlet				
			C5	M12*1				
	C5X	M12*1 with cable						
	Code	Pressure Port						
	S6	316L						
	Code	Housing Material						
	S4	304						
	S6	316L						
	Code	Cooling Fins						



							T3	3pcs	
							T5	5pcs	
							NT	without	
								Code	Additional Functions
								G	Gauge
								S	Sealed Gauge
								A	Absolute
								NB	NBR Nitrile Seals
								FK	FKM Fluorine Rubber Seals
								ED	EPDM Seals
								FF	Perfluoroelastomer FFKM seals
HPM710	(0~1)Bar	B1	KG12	C1	S6	S4	T3	G NB	