

# HPM130 Compact Pressure Transmitter

## Datasheet



Nanjing Hangjia Electronic Technology Co.,Ltd.

## Overview

HPM130 compact pressure transmitter adopts miniaturized structural design, small size, and uses high-performance silicon piezoresistive sensors, combined with high-precision electronic conditioning circuits, and is assembled and produced through strict process flow. This product has a solid stainless-steel shell, a variety of output signals to choose from, wide temperature range compensation, strong anti-interference, and good long-term stability. In addition, the pressure sensor inside the product adopts an isolated diaphragm structure, which can complete the pressure measurement and control of various media such as gas, liquid, and steam.

This product adopts a modular design and has a variety of electrical interfaces and pressure interface combinations. The diverse selection can meet most pressure measurement needs in the industrial field.

## Features

- ◆ Compact structure, suitable for installation in small space
- ◆ Wide measuring range, can measure gauge pressure, absolute pressure and sealed gauge pressure
- ◆ Universal for oil, water and gas
- ◆ Various pressure interfaces are available
- ◆ Various output signals are available
- ◆ Good long-term stability

## Applications

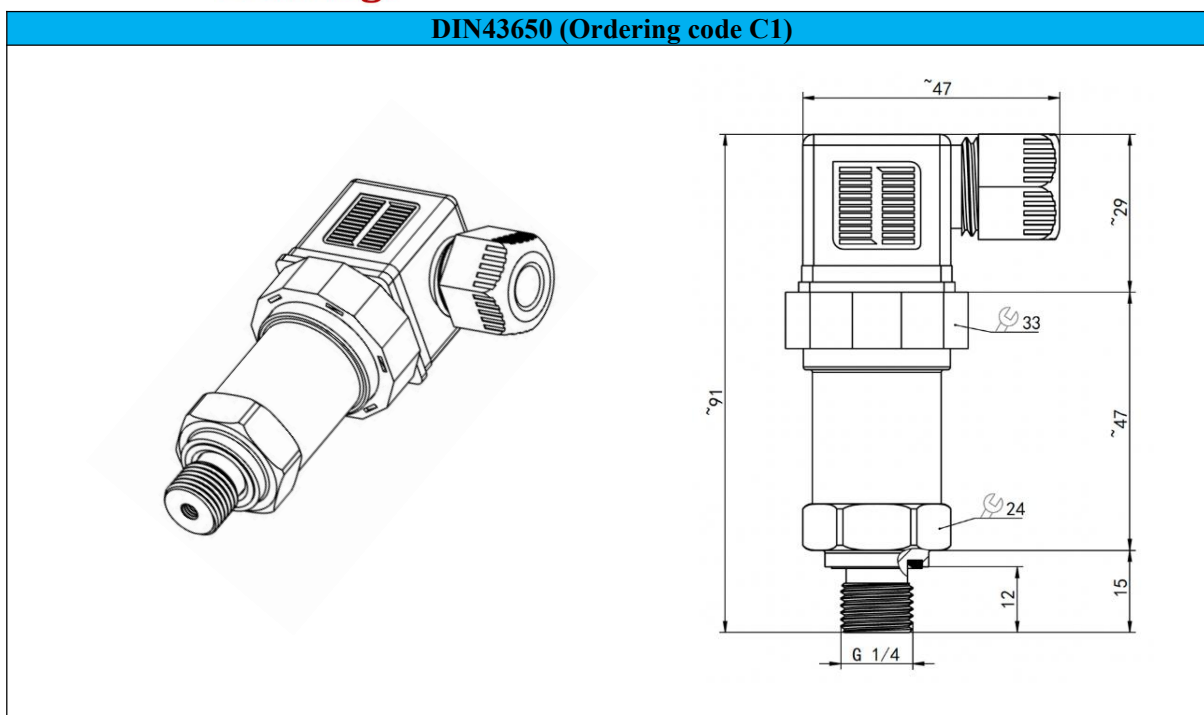
- ◆ Various occasions with narrow installation space
- ◆ Various types of automated machinery and equipment
- ◆ Industrial automation site

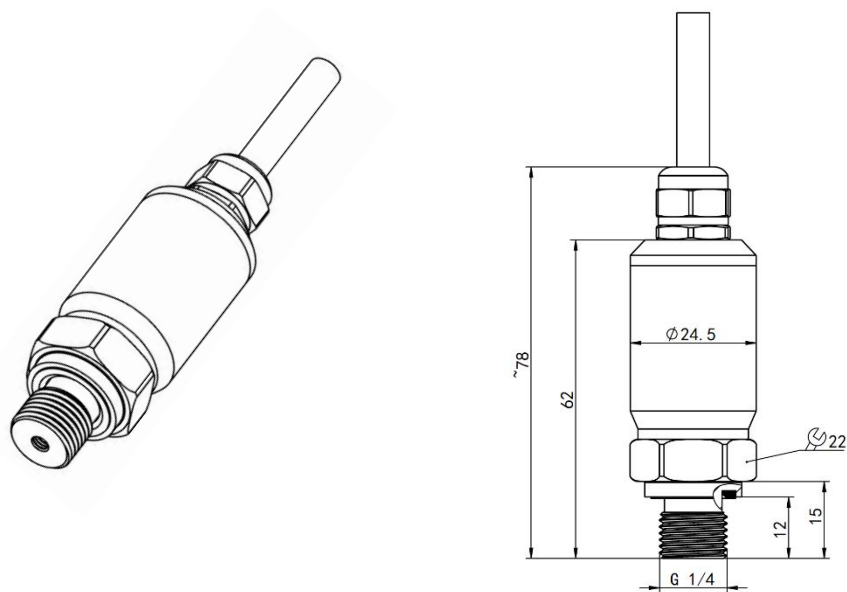
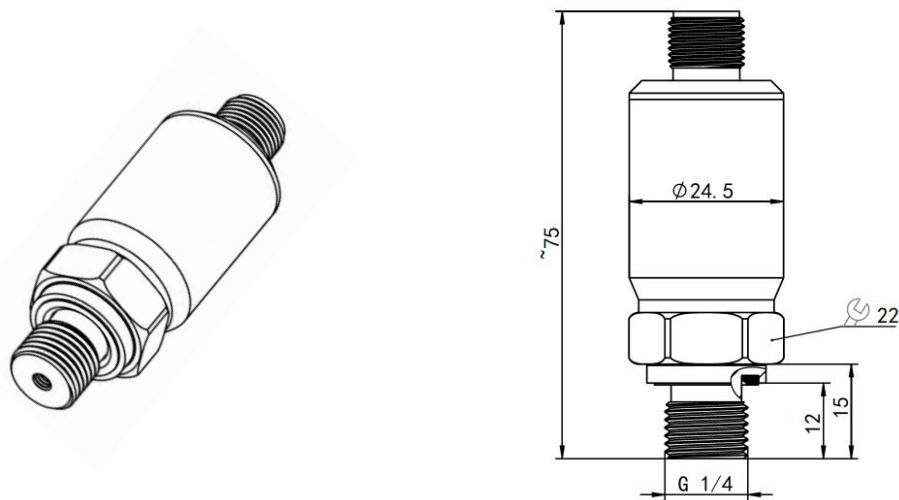
## Technical Parameters

<b>Measuring Medium</b>	Various liquids and gases compatible with contact materials
<b>Measuring Range</b>	-100kPa...0~2kPa...60MPa (Gauge pressure) 0~10kPa...10MPa (Absolute pressure)
<b>Overload</b>	1.5 times pressure range of full scale
<b>Pressure Type</b>	Gauge pressure, absolute pressure, or sealed gauge pressure
<b>Accuracy</b>	±0.5%FS (Typical) ±0.2%FS (Improved) ±0.1%FS (Excellent)
<b>Long-term Stability</b>	±0.25%FS/year (0.5G accuracy) ±0.2%FS/year (0.5G accuracy) ±0.1%FS/year (0.1G accuracy)
<b>Resolution</b>	Infinite, limited only by output noise level, typically $\leq 0.01\%$
<b>Response time</b>	About 1ms
<b>Boot time</b>	$\leq 200\text{ms}$
<b>Output Signal</b>	2-wire 4~20mA/ $V_s=8\sim 30\text{V}$ 3-wire 0~5V / $V_s=8.5\sim 30\text{V}$ or $V_s=3.1\sim 8\text{V}$ (Needs to be higher

	than the maximum output voltage of 0.4V at the same time) 3-wire 0~10V / Vs=12~30V 4-wire RS485 / Vs=6~30V
<b>Compensation Temperature Range</b>	0~70°C(0.5G accuracy) -10~80°C(0.2G accuracy) -20~85°C(0.1G accuracy)
<b>Temperature Coefficient of Zero</b>	±1.0%FS reference 25°C, within temperature compensation range (10kPa range temperature drift ±2.0%FS, 0~60°C)
<b>Temperature Coefficient of Full Scale</b>	±1.0%FS reference 25°C, within temperature compensation range (10kPa range temperature drift ±2.0%FS, 0~60°C)
<b>Ambient temperature</b>	-40~100°C
<b>Medium Temperature</b>	-40~125°C
<b>Storage Temperature</b>	-40~85°C
<b>Protection Grade</b>	IP65, DIN43650 connection (Ordering code C1) IP66, M12x1 connection (Ordering code C5) IP67, Cable outlet connection (Ordering code C2)
<b>Anti-Vibration</b>	10g (20~2000Hz)
<b>Anti-Shock</b>	100g (11ms)
<b>Insulation resistance</b>	>20MΩ @500VDC
<b>Dielectric strength</b>	<2mA @ 500VAC (apply 500VAC 50Hz test voltage for 1min without breakdown and arcing)

## Structure Drawings

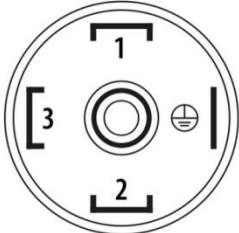
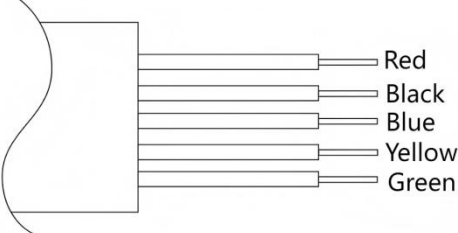
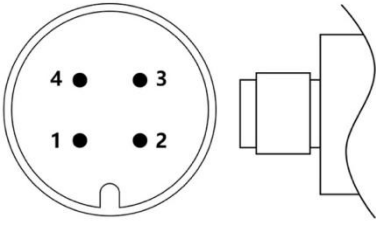
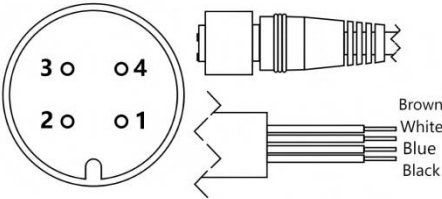


**Cable outlet (Ordering code C2)****M12x1 (Ordering code C5)****Structural Materials**

Ordering Code	Part	Note
S4	Pressure interface	Stainless steel 304 (By default)
S6		Stainless steel 316L
X		Customized
M1	Sensor	Stainless steel 316L
M2		Titanium diaphragm TA1 and titanium shell TC4
M3		Tantalum Diaphragm Ta
M4		Hastelloy C-276

NB	<b>Sealing ring</b>	NBR nitrile sealing ring (applicable temperature range -40~120°C)
FK		FKM fluor rubber sealing ring (applicable temperature range -20~200°C)
ED		EPDM sealing ring (applicable temperature range -55~150°C)
HB		HNBR hydrogenated nitrile sealing ring (applicable temperature range -40~150°C)

## Electrical Connection

DIN43650 (Ordering code C1)	Cable outlet (Ordering code C2)
	
M12×1 (Ordering code C5)	M12×1, with cable (Ordering code C5X)
	

2-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

3-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

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

## Ordering Guide

Item NO.	Type							
HPM130	Compact Pressure Transmitter							
		Pressure Range	Measuring Range					
		(X1 ~ X2)kPa	X1 is the lower limit of the range X2 is the upper limit of the range					
		Code	Output Signal					
HPM130	(0~500)kPa	B1	P1	C1	M1	S4	G	

## Certification Information

Factory certification	
Certification organization	CQM
Quality management system	ISO 9001:2015
Certification scope	Research, development and manufacture of pressure transmitter and temperature transmitter
Certificate No.	00223Q21711R1S