

HPM410-F Integrated Submersible Level Transmitter



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Overview

HPM410-F flange cage level transmitter is a fully sealed submersible structure, using high quality and high stability pressure sensor as the sensing element. The product is designed with an oversized flat membrane pressure sensing structure and a robust flange cage protection structure, making it suitable for level measurement in situations where there is silt, mud and sedimentation, etc. In addition, it can provide good protection against solid floaters and suspended debris, and the product is not easy to be clogged.

The product shell adopts all-welding technology, and at the same time in all aspects of the connection are multi-designed reliable sealing, the internal potting process, to ensure that the product has a very good service life. The upper part of the product is equipped with NPT threads, which can be flexibly fixed on pipes or ducts, and the whole product can also be conveniently moved through the lifting ring.

It is widely used to measure the level and depth of all types of water and wastewater, and has a wide range of applications in sludge pits, slurry tanks, clarifiers, digesters, lime slurries, wet wells, and storm canals.

Application

- Sludge pits, slurry tanks
- Clarifiers, digesters
- Alum tanks, lime slurry
- Lift stations
- Wet wells, storm canals

Features

- ◆ Pure flat membrane and large diaphragm sensing design
- ◆ Rugged flange cage type protection structure
- ◆ Anti-clogging design
- ◆ Multiple protection and sealing structure design to IP68 rating
- ◆ Dual anti-condensation and condensation process
- ◆ Wide temperature zone digital compensation, good stability
- ◆ Intrinsically safe and explosion proof for choice

Technical Parameters

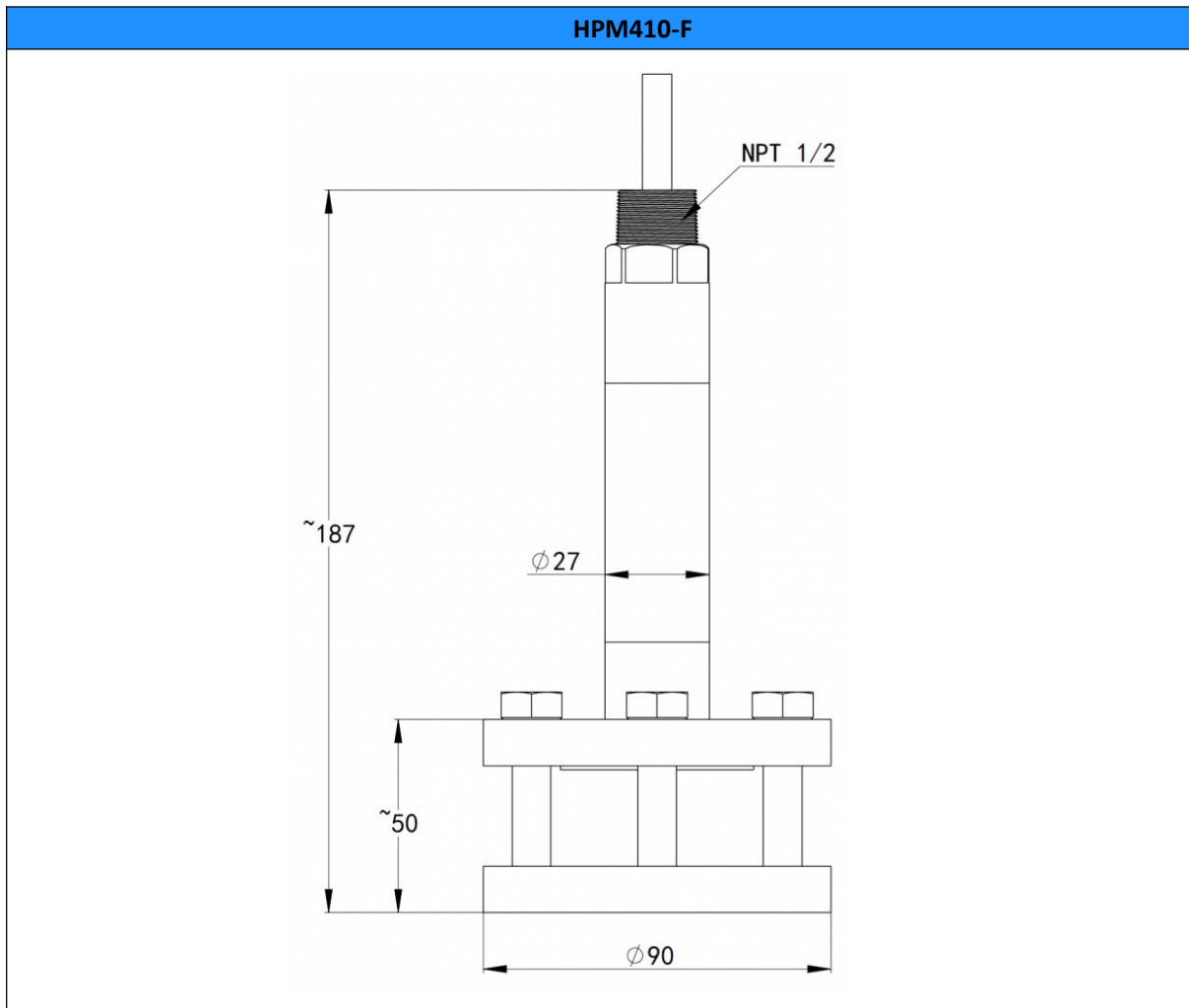
Measuring Medium	Compatible liquids
Measuring Range	0~1...200mH ₂ O/0~10kPa...2MPa
Overload	1.5 times of full range scale
Output Signal	4~20 mA DC, 2-wires. 0~5VDC, 1~10VDC 3-wires, etc,
Power Supply	10~30 VDC, 4~20 mA DC 2-wires.

	12~30 VDC, voltage output 3-wires.
Accuracy	±0.5% FS (typical) ±0.25% FS (optional) *Accuracy conforms to IEC 60770 (non-linear error, hysteresis, repeatability)
Long term stability	±0.2%FS/year
Response Time	About 1ms
Compensation temperature range	0~70°C
Temperature Coefficient of Zero	±0.03%FS/°C (Reference 35°C)
Temperature Coefficient of Full Scale	±0.03%FS/°C (Reference 35°C)
Working Temperature	-20~85°C
Storage Temperature	-20~85°C
Electrical Protection	Reverse polarity protection Electromagnetic compatibility.
Vibration	20g(20~5000Hz)
Shock resistance	20g(11ms)
Protection Grade	IP68
Insulation resistance	>20MΩ, 500VDC
Dielectric strength	500VAC 50Hz voltage, 1min

Structure Material

Ordering Code	Description	Material
S4	Probe Housing Material	304
S6		316L
S4	Flange Material	304
S6		316L
M1L	Sensor	Integral type, welded connection, pure flat film and large film structure, diaphragm 316L material
M1N		Split type, threaded connection, small diaphragm structure, diaphragm 316L material
C2U	Cable	PU/Polyurethane, outer diameter (7.2±0.2) mm
C2F		PTFE, outer diameter (7.2±0.2) mm

Structure Drawings(Unit:mm)



Note:

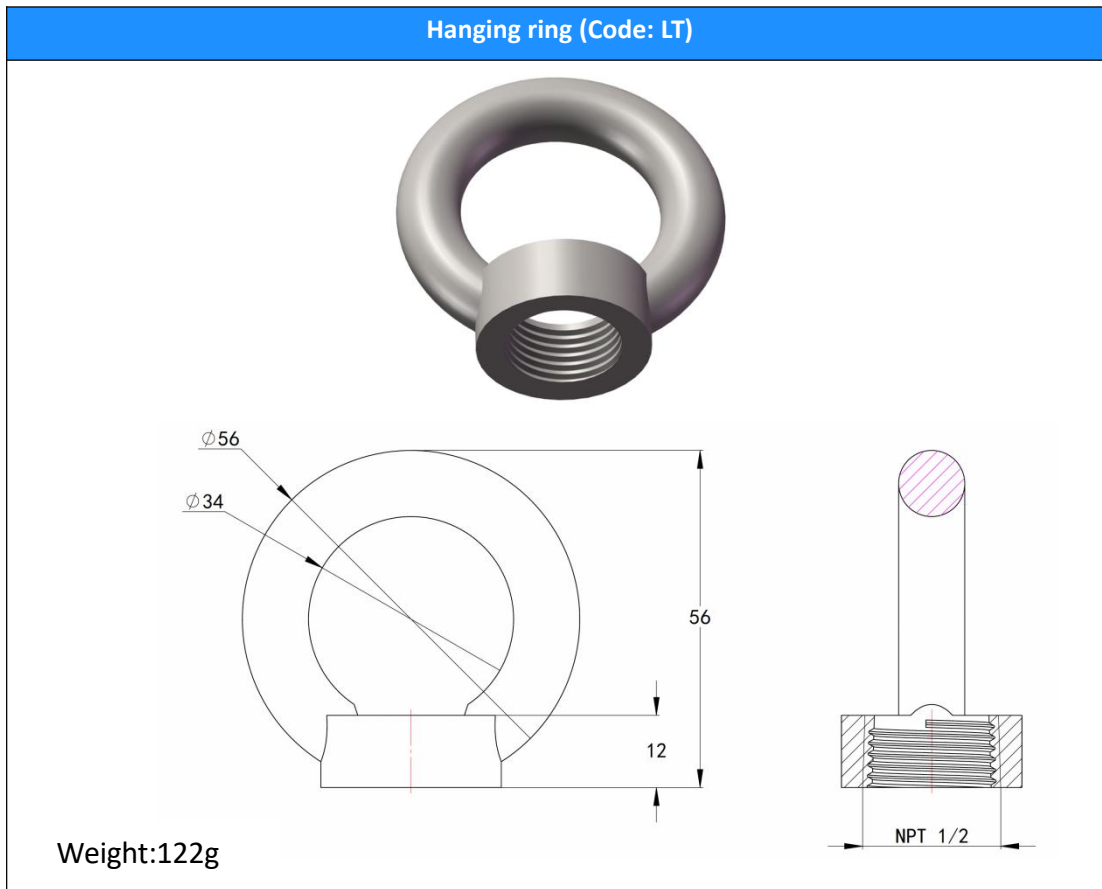
- 1.The dimensions listed in the picture may be changed with the update of the process.
2. Please contact us for other shapes and sizes.

Weight (unit: g)

Probe Housing and Flange		
Material	304	316L
Weight(w/o cable)	~1800	~1900

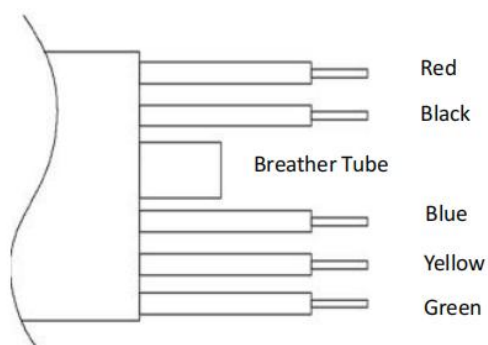
Cable		
Material	PTFE	PU
Weight(1m)	~60	~50

Accessory



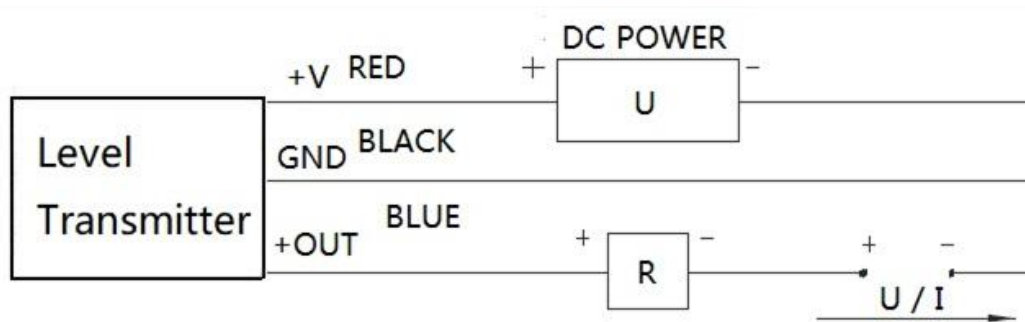
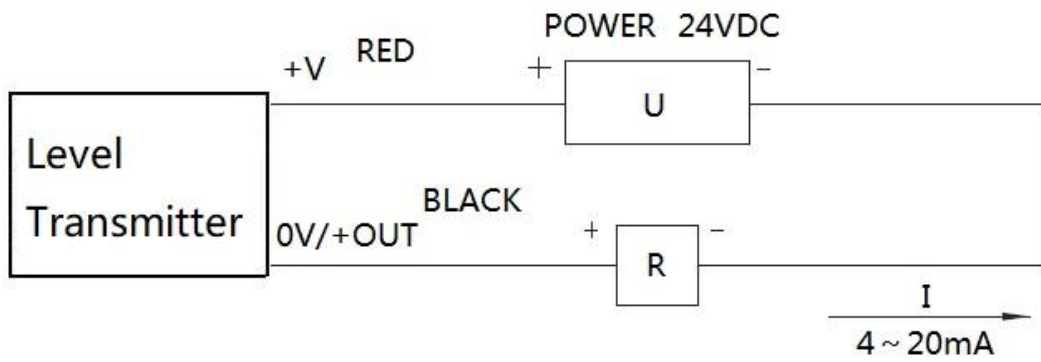
1. The hanger is used to install and move the whole product.
2. Other thread types can be customized according to requirements.

Electrical Connection



Wire color	4~20mA two wires	Voltage three wires
Red	Power supply+ (+V)	Power supply+ (+V)
Black	Power supply- (0V/+OUT)	Common (GND)
Blue	-	Output+ (+OUT)
Yellow	-	-
Green	-	-

⚠ Gauge pressure products should refer to the current atmospheric pressure, and the breathable plug must be kept dry and prevented from falling off.



Ordering Guide

Model No.	Type							
HPM410-F	Submersible level transmitter							
	Code	Type						
	F	Flange type						
		Range	Measuring Range					
		[0 - X]mH ₂ O (Ln)	X=Measuring Range Ln=Cable Length					
			Code	Output Signal				
			B1	(4 - 20)mA				
			B4	(0 - 5)V				
			B15	(1 - 10)V				
			Code	Cable Material				
			C2F	PTFE				
			C2U	PU				
			Code	Sensor Connection Type				
			M1L	Integral type, welded connection, flat and large diaphragm				
			M1N	Split type, threaded connection, small diaphragm				
			Code	Flange Material				
			S4	304				
			S6	316L				
			Code	Housing Material				
			S4	304				
			S6	316L				
			Code	Additional Parts				
			LT	Hanger				
			i	Exia II CT6				
E.g.: HPM410W	F	[0 - 5]mH ₂ O (L7)	B1	C2F	M1L	S4	S4	LT

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