



**Product model:** HPM410LV Lower Power Consumption Level Transmitter

**Manufacturer:** Nanjing Hangjia Electronic Technology Co., LTD.

**Product Category:** Level Transmitter

**Application:** IoT, Water Treatment Industry,

Groundwater, rivers, lakes, Ship

## Overview

HPM410LV low power consumption level transmitter uses high quality stable pressure sensor as the measurement element, it measures the static level pressure accurately which has direct ratio with liquid depth. Then converting the measurement value into standard voltage signal through the signal conditioning circuit to achieve the measurement of liquid depth. This product has extremely low power consumption and long service life, it can use lithium-ion battery as power supply. And can connect wireless module, implement data wireless transport.

With long-term aging and stability testing, the product is suitable for harsh outdoor environment and can be widely used for groundwater, rivers, lakes, surface water tanks, and inventory water tanks. It is also suitable for kinds of level measurement in IOT.

## Feature

- ◆ Low Power Consumption
- ◆ Easy adapted with wireless module
- ◆ Can equip lithium battery outside as supply.
- ◆ Common regular profile, easy to install.
- ◆ Special Anti-condensation design
- ◆ Customized requests supported.

## Technical Parameters

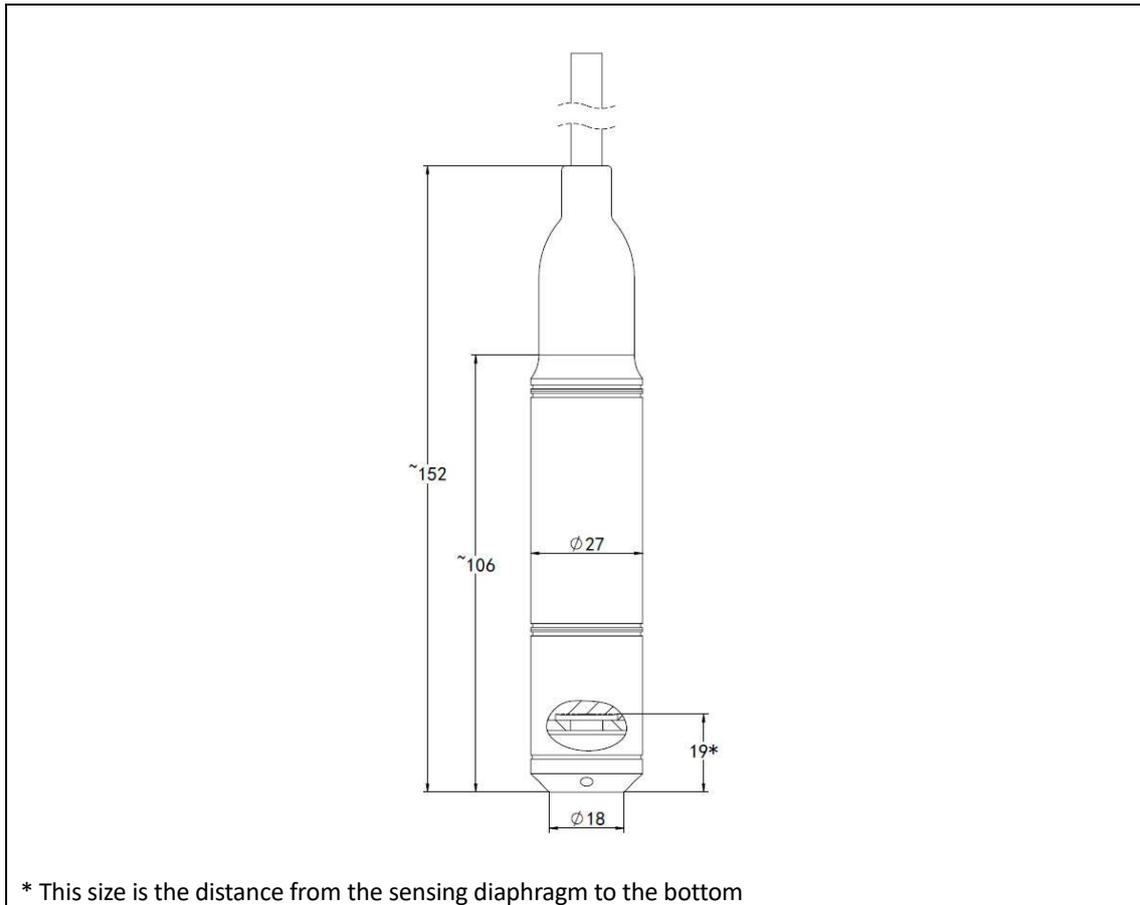
<b>Level Range</b>	0~0.5~10mH <sub>2</sub> O Notes: Can also use mH <sub>2</sub> O、inH <sub>2</sub> O、m、mm, etc. as unit Need to highlight the density of liquid to be measured when use length unit such as m、mm etc.
<b>Overload</b>	1.5 times of Full scale
<b>Measuring Medium</b>	Liquid which applicable with the contact material
<b>Output Signal</b>	0.25~1.25、0.25~2.25、0.5~2.5V or other voltage
<b>Power Supply</b>	3.1~8 VDC
<b>Power consumption</b>	Working currenry <2.5mA
<b>Accuracy</b>	±0.5%FS
<b>Long term stability</b>	±0.25%FS/year
<b>Medium temperature</b>	-40~85℃
<b>Ambient Temperature</b>	-40~85℃
<b>Storage Temperature</b>	-40~85℃
<b>Protection grade</b>	IP68
<b>Compensated Temperature</b>	-10~70℃ (Other measurement range); 0~60℃ (Range ≤ 1mH <sub>2</sub> O)
<b>Zero-point temperature drift</b>	±1.5%FS(reference 30℃, within compensated temperature range); ±2.0%FS(Measurement Range ≤ 1mH <sub>2</sub> O)
<b>Full scale point temperature drift</b>	±1.5%FS(reference 30℃, within compensated temperature range); ±2.0%FS(Measurement Range ≤ 1mH <sub>2</sub> O)
<b>Reverse polarity protection</b>	No damage. Product will not work.
<b>EMC</b>	Compliance EN 61326
<b>Vibration</b>	20g(20~5000Hz)
<b>Shock</b>	20g(11ms)
<b>Insulation resistance</b>	>100MΩ @500VDC
<b>Insulation strength</b>	Apply 500VAC 50Hz test voltage, no breakdown or arcing for 1 minute.

## Material

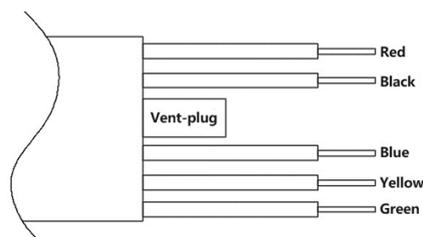
Code	Part	Note
S4	Probe shell material	304
S6		316L
TI		titanium alloy
M1	Pressure sensor	Silicon Piezoresistive, 316L
FK	Pressure sensor	FKM (working temperature: -20 ~ 200℃)
NB	sealing ring	NBR (working temperature: -40 ~ 120℃)

C2U	Cable	PU, external diameter (7.2±0.2) mm
C2N		NBR, external diameter (7.2±0.2) mm
C2F		Fluoroplastic cable, external diameter (7.2±0.2) mm
M	Filter cap	Metal Material
P		Plastic material

## Structure Drawings (Unit: mm)



## Electrical Interface



**!** Gauge product needs to take atmosphere pressure as reference, please keep vent-plug dry and do not take down it.

## Electrical Connection

Output signal	Three wires 0.25~1.25、0.25~2.25、0.5~2.5V or other voltage		
Definition	Supply+(+V)	Supply-(GND)	Supply+(+OUT)
Color	Red	Black	Blue

## Ordering Guide

Model No.	Type						
HPM410LV	Low Power Consumption Level Transmitter						
	Range (0 ~ X)mH <sub>2</sub> O (Ln)	Measurement Range X is the level range Ln is the cable length					
		Code	Output Signal				
		B16	(0.25 ~ 1.25)V				
		B17	(0.25 ~ 2.25)V				
		B18	(0.5 ~ 2.5)V				
		Code	Cable				
		C2N	NBR cable				
		C2U	PU cable				
		C2F	Fuoroplastics cable				
		Code	Pressure Sensor				
		M1	silicon piezoresistive, 316L				
		X	Other customized requests				
		Code	Probe Material				
		S4	304				
		S6	316L				
		T1	titanium alloy				
		Code	Others				
		NB	NBR sealing ring				
		FK	FKM sealing ring				
		QF	Factory report				
			Other customized requests				
eg:HPM410LV	(0 ~ 1)mH <sub>2</sub> O (L2)	B16	C2N	M1	S4	NB	

## 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