DATASHEET

Pressure Level

Submersible Level Transmitter For Flood & River Water

Model PWP413

Applications

- Flood level monitoring and alarm
- Muddy liquid level measurement
- Wastewater and sewage treatment
- Water channels, canals, dams monitor
- Reservoir level measurement
- Irrigation and agricultural systems
- Hydraulic monitoring

Features

- Range 0~1m...200mH2O
- Accuracy ±0.25%FS, ±0.5%FS
- Sediment-proof
- Reverse polarity protection
- Robust and cost-effective
- IP68 water-proof
- OEM &ODM

Submersible Level Sensor PWP413

Description

PWP413 is a submersible level transmitter with special structure. It's special sediment filter to prevent from the tiny impurities clogging issue. Have excellent performance in river and flood water. 316L stainless steel diaphragm and welded 316L body construction make it robust from shock and erosion.

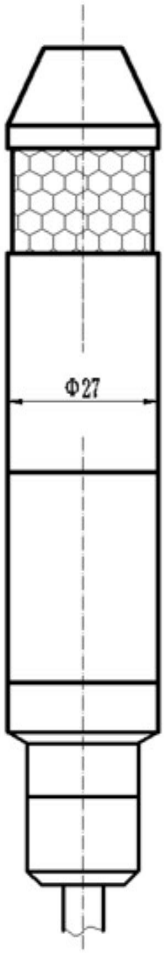
With high quality Germany imported piezoresistive sensor core it has high accuracy and stability. Widely used in sewage, river and lake treatment, as well as channels, large rivers, reservoirs and coastline monitoring.

A probe with cable makes it easy installation, commissioning and operation. A ventilation tube in the cable automatically compensates for changes in atmospheric pressure above the water, to assure the measurement accuracy. Model PWP413 integrates with surge protection and reverse connection protection, to prevent damage of sensors.

Specifications

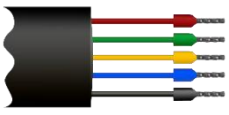
Model	PWP413		
Pressure Type	Relative (gauge) /Absolute pressure		
Pressure Range	0m~0.5m...200m H2O/0-0.05 bar...20bar		
Safe Overload	≤150%FS		
Burst Pressure	500%FS		
Electrical Connection	Directly outlet cable		
IP Rating	IP68		
Accuracy	±0.5%FS(Typical), ±0.25%FS, ±0.1%FS(optional) @25℃		
Signal Output & Power Supply	4-20mA(2 wires) 12-30VDC 0.5-4.5V(3 wires) 5VDC 0-5V(3 wires) 8-24VDC 0-10V(3 wires) 12-30VDC --- I^2C 3.3 or 5VDC RS485 Modbus 5-30VDC HART 15-30VDC		
Response Time	≤3ms (10%~90%)		
Medium Compatible	Liquid compatible with SS316L or ceramic material		
Load Resistance(2 wires)	R≤(U-10)/0.02-RD (U: Power supply, RD: Internal resistance in the cable)		
Total current consumption	Current signal(2wires): Max about 23mA Voltage signal(3wires): <5mA I^2C(4wires): <1.3mA (Available to customize low consumption <5 μA) RS485(4wires): <5mA (Available to customize low consumption <1.1mA)		
Accuracy&Performance	0.1% Accuracy Class	0.25% Accuracy Class	0.5% Accuracy Class
Non-linear (%FS)	≤0.1	≤0.2	≤0.4
Hysteresis (%FS)	≤0.05	≤0.05	≤0.1
Repeatability (%FS)	≤0.05	≤0.05	≤0.1
Long-term Stability (%FS/year)	≤0.1	≤0.2	≤0.5
Zero Temp Drift (%FS/℃)	≤0.01	≤0.03	≤0.05
Compensation Temp.	0℃~+50℃(typical), -10℃~+60℃(optional)		
Working Temp.	Media -30℃~+65℃, environmental -40℃~+70℃		
Storage Temp.	-40℃~+70℃		
Vibration Environment	10g (@10Hz~2000Hz)		
Impact Resistance	100g/11ms		
Service Life	>10 million load cycles (within measurement range)		
Explosion Proof	Exia II CT6(Optional)		
EMC Standard	EN IEC 61326-1:2021; EN IEC 61326-2:2021		
Cable material	3 choices according to applications: PE cable, PU cable or FEP cable		

Dimensions and Drawings



*Unit is mm. Above is typical structures. Other structures and dimensions can be customized.

Electrical Connection

Directly outlet cable					
	Wire Color	Current (2wires)	Voltage (3wires)	IIC (4wires)	RS485 (4wires)
	Red	Vcc	Vcc	Vcc	Vcc
	Green	Iout	GND	GND	GND
	Yellow	/	Vout	SCL	RS485A
	Blue	/	/	SDA	RS485B
	Black	PE	PE	PE	PE

How to Order

Example Part Number: 413[5]HGT1S2A1M1N005

Model No.	PWP413	413
Measuring Range & Units	H=mH2O (0m~1m … 200m) B=bar (0~0.1bar ...Max 20bar P=Psi (0~1.45psi...Max 290psi) I=inWC (0~40inWC...Max 7800inWC) Directly write range in [] and mention the code, for example: [5]H=5m H2O	[5]H
Pressure Type	G= Gauge/Relative A=Absolute	G
Signal Output	T1=4-20mA(2wires) T2=0-5V(3wires) T3=1-5V(3wires) T4=0-10V(3wires) T5=0.5-4.5V(3wires) T6=I^2C(4wires) T7=RS485(4 wires) T8=4-20mA+HART T9=Dual 4-20mA(Pressure/Level + Temp.) T0=Customized	T1
Power Supply	S1=8-24VDC S2=12-30VDC S3=5VDC S4=3.3VDC S5=5-30VDC S0=Customized	S2
Accuracy	A1=0.5%F.S. A2=0.25%F.S. A3=0.1%F.S.	A1
Housing Material	M1=316L(Typical) M0=Customized	M1
Others	N=Standard type TI=Titanium alloy wetted part AD=Additional weight	N
Cable Length	001= 1m cable 002= 2m cable 003= 3m cable ...	005

*Means to order: Level transmitter PWP413, range 0~5 meters water Gauge, 4-20mA, 12-30VDC, 0.5%FS accuracy, 316L housing material, standard type, cable length is 5 meters.

You may also Need

Reference Picture	Description	Model and Product
	To connect with pressure transmitter and to have a site indicator of the measured value, have high&low value alarms, record and control.	PWD Series Display/indicator/controller
	Cast aluminum material with IP67 protection level for submersible pressure transmitter. Moisture-proof sealing design, insulation protection against electric shock. To be placed in dry environment or in a cabinet.	0010 Terminal box
	To lock transmitter's cable on the top of tank, stainless steel material.	0001 Cable Locking Part
	The additional weight increases the dead weight of the submersible level transmitter. It helps operation of lower down the sensor into narrow spaces like deep wells, tubes, boreholes. To reduce negative environmental influences on the measuring result. Material stainless steel 316L, dimension differs according to measuring range.	0002 Additional Weight

***Tell us medium / which application / measuring range / working temperature / signal output / what you wanna to realize, our sales engineer will recommend suitable model for you.*