DATASHEET

Pressure Level

Submersible Level Transmitter For Anti-clog Liquid Application

Model PWP416

Applications

- Wastewater, sewage
- Sludge, slurry, muddy liquids
- Dam, river, reservoir, pond, well, channel
- Coal & Mine industry
- City water supply and drainage
- Lift station and pumping stations monitoring
- Septic level monitor

Submersible Level Sensor PWP416

Features

- Flush diaphragm design anti-clogging
- Double flange structure increases dead weight
- Protection from physical damage and turbulence
- Fully 316L material construction more durable
- Wide measuring range up to 300m
- Robust and cost-effective
- IP68 water-proof

Description

PWP416 is a submersible level transmitter with special structure. It is with high quality Germany imported piezoresistive sensor core and 316L stainless steel housing&flange, more durable and can be immersed for a long time in industrial sewage and wastewater.

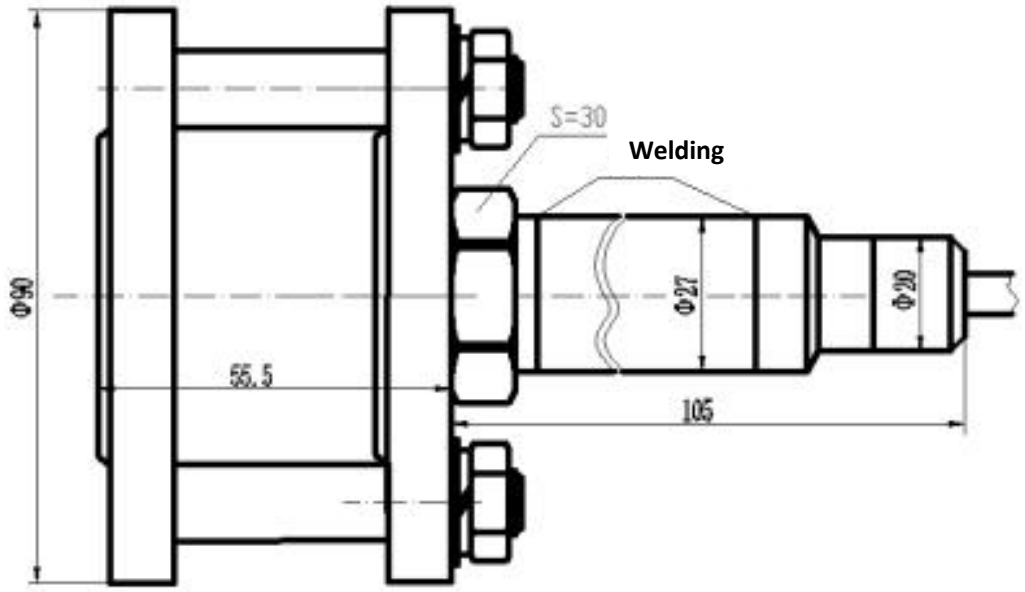
The flush diaphragm design makes it anti-clogging in viscous, slurry and muddy liquids. Double flange design protect the sensor to be damaged from stones or obstacles in the water. The open distance between two flanges allows liquids flowing normally and at the same time can keep 316L flush diaphragm to be away from sands and mud. All those features make PWP416 a excellent choice for sewage, wastewater, slurry, storm water applications.

It's robust construction for durable long-term services. A probe with cable makes it easy installation, commissioning and operation. Welcome your inquiry.

Specifications

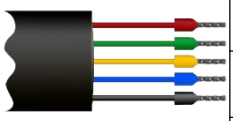
Model	PWP416		
Pressure Type	Relative (gauge) /Absolute pressure		
Pressure Range	0m~0.5m...300m H2O/0-0.05 bar...30bar		
Safe Overload	≤150%FS		
Burst Pressure	500%FS		
Electrical Connection	Directly outlet cable		
IP Rating	IP68		
Accuracy	±0.5%FS(Typical), ±0.25%FS, ±0.1%FS(optional) @25℃		
Signal 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		
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)**	Dual Current (3wires)	**Voltage (3wires)**	Dual Voltages (4wires)	**IIC (4wires)**	**RS485 (4wires)**
	Red	**Vcc**	Vcc	**Vcc**	Vcc	**Vcc**	**Vcc**
	Green	**Iout**	Plout	**GND**	GND	**GND**	**GND**
	Yellow	**/**	Tlout	**Vout**	PVout	**SCL**	**RS485A**
	Blue	**/**	/	**/**	TVout	**SDA**	**RS485B**
	Black	**PE**	PE	**PE**	PE	**PE**	**PE**

How to Order

Example Part Number: 416[5]HGT1S2A1M1C1005

Model No.	PWP416	416
Measuring Range & Units	H=mH2O (0m~0.5m … 300m) B=bar (0~0.05bar ...Max 30bar P=Psi (0~1psi...Max 435psi) I=inWC (0~20inWC...Max 11800inWC) Directly write range in [] and mention the code, for example: [50]H=50m 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
Flange	C1=Double Φ88 flange(typical) C0=Customized	C1
Cable Length	001= 1m cable 002= 2m cable 003= 3m cable ...	005

*Means to order: Level transmitter PWP416, range 0~5 meters water Gauge, 4-20mA, 12-30VDC, 0.5%FS accuracy, 316L housing material, double Φ88 flange, 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.*