



TRODEKS

Datasheet

Submersible level transmitter

PX78

## Datasheet

### Submersible pressure transmitter for level measurement Model PX78 , standard version

This series submersible level transmitters are manufactured for years of trouble free service in the harshest applications. The transmitters consist of a piezoresistive sensing element, encased in a 316 SS housing.

Compensation for atmospheric pressure changes is accomplished through a vent tube in the cable, Units come equipped with a tensile strength shielded and vented cable. Ventilation tube in the cable automatically compensates for changes in atmospheric pressure above the tank. The vent is protected with a maintenance free filter eliminating particulate or water droplets from entering the transducers, and the cable construction for aggressive media.

#### Application

- Rivers and lakes
- Vessel and storage systems
- Control of sewage lift and pumping stations
- Well monitoring
- Ground water monitoring
- Environmental remediation
- Surface water monitoring
- Down hole
- Water Tanks

#### Characteristics

- Wide measuring ranges
- IP68 for permanent submersion
- The cable construction for aggressive media
- 316SS case available for aggressive media
- Analog output signal, RS485
- High precision and excellent long term stability
- Bullet nose protects the diaphragm from damage.
- Ventilation tube to ensure automatically compensates
- Lightning protection available



**Submersible level transmitter**

#### Principle

Pressure  $P(\text{liq})$  on any surface and container walls at depth  $h$ , by the liquid of density  $d$ ,  

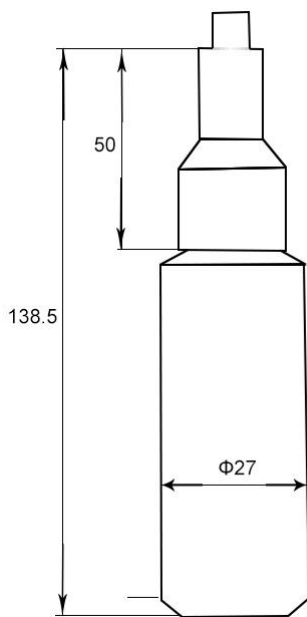
$$P(\text{liq}) = d \times g \times h + P(\text{air})$$

Measuring range	
Bar	0 - 0.05 ... ..0 - 50
inWC	0 - 20 ... ..0 - 20000
Psi	0 - 1.0 ... ..0 - 725
mH2O	0 - 0.5 ... ..0 - 500

When choosing the PTFE cable, only measuring ranges up to 0...10 bar,0..150 psi and 0...100 mH2O are available. The given measuring ranges are also available in mbar, kPA and MPa

Materials		
Watted parts	Standard	Option
Case and sensor	Stainless steel 316	Ceramic Capacitor
Protection cap	Stainless steel 304	316/PTFE/PVC
Cable	PUR	PTFE

Overload	200% F.S.					
Burst pressure	300% F.S.					
Accuracy: (Linearity Hysteresis Repeatability)	≤ ±0.1% F. S	≤ ±0.15% F. S	≤ ±0.25% F. S	≤ ±0.5% F.S	(Optional) Including non-lin., rep. and hys.	
Long Stability	≤ ±0.2% of span/year					
Working Temp	-30°C-80°C or-40°C-100°C(Customized)					
Storage Temp	- 40°C~125°C					
Temperature Compensation	Standard:-10°C~60°C or by Customized					
Medium compatible	Compatible with 316L Stainless Steel					
Electronic Wire	2 Wires / 3 Wires / 4 Wires					
Output	4-20mA	1-5V 0-5V	0-10V	0.5-4.5V	0-100 mV/V	Rs485 Modbus RTU
Power Supply	12-30VDC (7-30Vdc optional)		15-30Vdc	5Vdct5%	10Vdc	10~30 Vdc (2.7-5.5 Vdc optional)
Polarity protection	yes	yes	yes	yes	yes	yes
Insulate resistance	>100MQ@100V					
Zero Temp. Drift	0.03% FS/PC(≤100kPa);0.02% FS/C(>100kPa)					
FS Temp. Drift	0.003% FS/C(s100kPa)					
Electronic connection	Fixed cable and water proof IP68					
Response time	s4 to 10 ms (standard) ; s1 ms (Customized)					
Pressure Type	Gage pressure; Sealed gage and absolute optional.					
Lighting Protection	Air conduction more than 8000V; external sensor more than 4000 Voltage protection.					
Cable optional	Cable materials are optional according request,we offer 3 type special cable as follow: PE Cable(Water Proof );PUR Cable(Oil Proof );PTFE Cable(Anti-Corrosive)					
Weight	Net weight is about 0.35KG,Full Packing weight is about 1.0KG (Not include cable)					

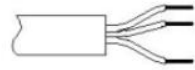


Dimension

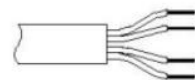


Directly sealed cable

Current	Red	Vcc+
	Green	S+ (0Vcc)
	Black	Shield Wire



Voltage	Red	Vcc+
	Green	Vcc-&S-(GND)
	Yellow	S+
	Black	Shield Wire



RS485 RTU Modbus	Red	Vcc+
	Green	Vcc-&S-(GND)
	Yellow	RS485A
	Black	RS485B

Wiring

Ordering code: PX78 - R(XX-XX) - J1 - O1 - D1 - V1 - AT1 - CS5-P1

Model								PX78
Measuring range	R(XX - XX)							0-0.5...-60m
Accuracy	J1							0.5% F.S
	J2							0.25% F.S
	J3							0.1% F.S
	J4							0.15% F.S
Analog output	O0							No analog output
	O1							4 - 20mA output
	O2							1 - 5V output
	O3							0 - 5V output
	OZ							Others
Communication output	D0							No communication output
	D1							RS485
Power supply	V1							24VDC
	V2							12VDC
Spare part	AT0							No
	AT1							Filter
Cable length	CS5							5m (Standard)
	CSXX							XX m (Custom length)
Pressure type	P1							Gauge pressure
	P2							Absolute pressure

