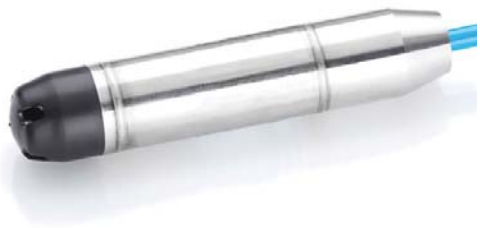
Pi99EX ATEX Level Sensor

Key Features:



- Ranges 0-1mWG up to 0-250mWG
- Outputs: 4-20mA
- ATEX Certified: II 1G EEx ia IIC T4...T6
- Environmental Protection: IP68 to 250 metres
- Accuracy: <±0.5%/FS (Optional 0.25% & 0.1% Versions)
- Stainless Steel Body (Titanium Optional)
- Gauge or Absolute
- Lightning (Surge) Protection
- Piezoresistive Measuring Element
- PUR or Teflon Cables Available
- 3 Year Warranty

The Pi99EX ATEX level sensors are designed for use in a wide range of hazardous area applications such as fuel and oil tank measurement, sewage monitoring and leachate level measurement on landfill sites.

The Pi99EX ATEX level sensor is constructed from 316 stainless steel as standard but can be constructed in titanium for use if the pressure media is particularly aggressive. In addition, the Polyurethane (PUR) cable is provided as standard but the Teflon (PTFE) cable is available as an option if demanded by harsh media.

The standard output is a 2-wire 4-20mA signal has a surge protection circuit to protect against the effects of electrical transients created by nearby lightning strikes and power fluctuations.

Options:

- Titanium Construction Material
- Gauge or Absolute
- Accuracy 0.25% and 0.1% Versions Available
- PUR Cable or Teflon Cable
- Surge Lightning Protection According to EN 61000-4-5 as an Option.
- Calibration Available for all Common Pressure Units mH2O, mWS, mWC etc.

Applications:

- Wells
- Bore Holes
- Waste Water
- Reservoirs
- Lakes, Rivers
- Sewage Treatment Plant
- Fuel, Diesel Oil

Specification:

Pressure Range		0.1 - 0.5	>0.5 - 2	>2 - 25	Bar
Overpressure		3	3 x FS (min. 3 bar)	3 x FS	bar
Burst Pressure		>200	>200	>200	bar
Accuracy[1]		≤0.5 (optional ≤0.25)	≤0.5 (optional ≤0.25, ≤0.1)	≤0.5 (optional ≤0.25, ≤0.1)	±%FS
Temperature Error Zero	0 to +70˚C	0.06	0.03	0.015	±%FS/˚C
	-25 to +85˚C	0.08	0.04	0.02	±%FS/˚C
Temperature Error Span	0 to +70˚C	0.015	0.015	0.015	±%FS/˚C
	-25 to +85˚C	0.02	0.02	0.02	±%FS/˚C
Operating Temperature		0 to +70˚C			
Storage Temperature		-25 to +85˚C			
Long-Term Stability (1 year) (typ./max.)		<4 mbar	<4 mbar	<0.2%FS	

[1)] Zero based non-conformity according to DIN 16086, including hysteresis and repeatability.

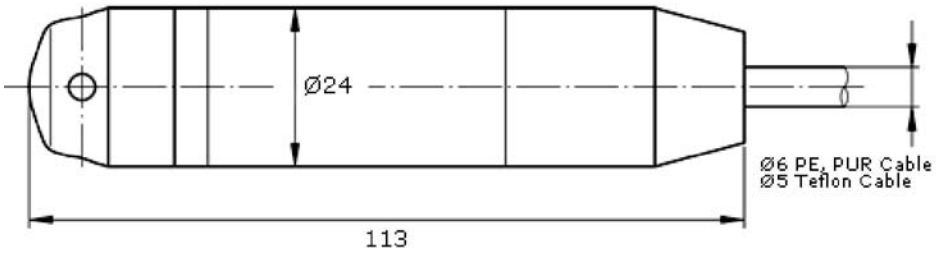
Electrical Connections	4-20mA (2 wire)
Supply Voltage	10 - 30 Vdc
Supply Voltage Influence	<0.1%FS
Load Resistance Influence	<0.1%FS
Materials	
Pressure Connection, Diaphragm, Housing	Stainless Steel 1.4435 (316L) or titanium (optional)
Seals (standard)	Viton (other materials see ordering information)

Ex-Approval		
Type of Protection	Intrinsic safety II 1G EEx ia IIC T4...T6	SEE Certificate SEE 99 ATEX 2640
Standards	EN 50 014: 1992 EN 50 020:1994 EN 50 284: 1997	general requirements intrinsic safety "i" special requirements zone 0
Max. values for supply/output circuit	30V / 100mA / 1W	zener barrier
Temperature Class	T6	T4
Ambient Temperature Ta ˚C	-25 to +55	-25 to +85
Process Temperature ˚C	-25 to +55	-25 to +85
Without any information about temperature class the transmitter will be labelled T4.		
Ex-Approval for dust on request.		

Electromagnety Compability	Norm	Level	Typical Interferences
Emission:			
EN 50081-1:1992	Generic Emission Standard		
EN 55022: 1994	Emission, Class B		
Immunity:			
EN 50082-2: 1995	Generic Immunity		
EN 61000-4-2: 1995	Electrostatic Discharge	4kV contact, 8kV air	
ENV 50140: 1993	Radiated Electro-magnetic Field	10V/m, 80-1000 MHz, 80% AM 1kHz	Cellular Phones, Radio Sets
ENV 50204: 1995	Radiated Electro-magnetic Field (GSM)	10V/m, 950 MHz, 200 Hz on/off	Digital Portable Phones
EN 61000-4-4: 1995	Fast Transients (burst)	2kV	Motors, Valves
ENV 50141: 1993	Conducted Radio Frequency	10 V, 0.15-80 MHz, 80% AM 1 kHz	Cellular phones, radio sets
EN 61000-4-5: 1995 [2)]	Surge	10 kA (8/20 µs)	Lightning Strikes

[2)] Only with optional surge (lightning) protection

Dimensions (mm):



Standard	A (mm)	B (mm)	C (mm)	D (mm)	Weight (g)
Without Ballast Weight	113	109	on request	on request	approx. 160
With Ballast Weight	200	196	on request	on request	approx. 420

Version with Surge (Lightning) Protection	A (mm)	B (mm)	C (mm)	D (mm)	Weight (g)
Without Ballast Weight	157	153	on request	on request	approx. 200
With Ballast Weight	244	240	on request	on request	approx. 460

Wiring Diagram:

Wire		Designation
	White	+ve supply
	Brown	-ve supply
	Green/Yellow	Case/Earth