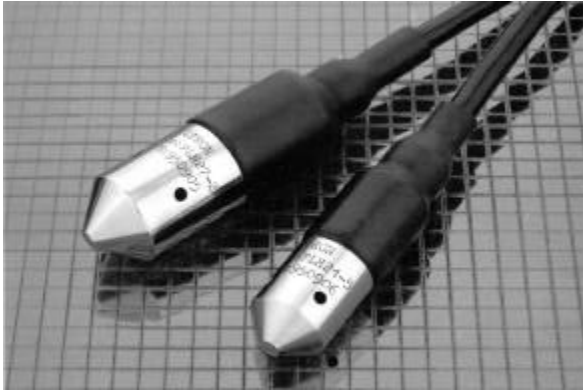


VYDAS

INTERNATIONAL MARKETING

Specialist Sensors & Instruments for Industry



LEVEL PROBES PL SERIES

APPLICATIONS

Level probes of the PL Series are suitable for permanent liquid level measurement in open tanks, such as wells, reservoirs, sewage pumping stations and similar waterworks, purification plants and sewers.

FEATURES

- High stability and accuracy
- Dimensions conformity for different applications
- High reliability and durability

CONSTRUCTION

The main part of the probe is a measurement head having a piezoresistive pressure sensor separated from the medium by a diaphragm. The diaphragm is protected from the possibility of damage by an acid resisting cover. The thread connection makes it possible – if needed - for removal of the cover for diaphragm cleaning. PLH level probes can be used with PELTRON meters of the MPC series having current or voltage standard output signals and threshold outputs. Probes have an integral 5 wire polyurethane shielded cable with a capillary, to connect the sensor with atmospheric pressure. PLX level probes in the measurement head contain the sensor and the electronic measurement circuit. Probes have an integral 2 wire polyurethane shielded cable with a capillary.

PRINCIPLE OF OPERATION

The hydrostatic pressure acts through the separating diaphragm and silicon oil to the silicon sensor consisting of diffusion resistors connected as a Wheatstone bridge. The output signal from this bridge is proportional to the acting pressure. In PLX probes the electronic circuit converts this voltage signal to the standard current or voltage output signal in the 2 wire or 3 wire connection system. From PLH probes the bridge output signal is passed to the MPC meter.

The continual development of our products may cause the necessity of specification changes which can not be published in this document

TECHNICAL DATA

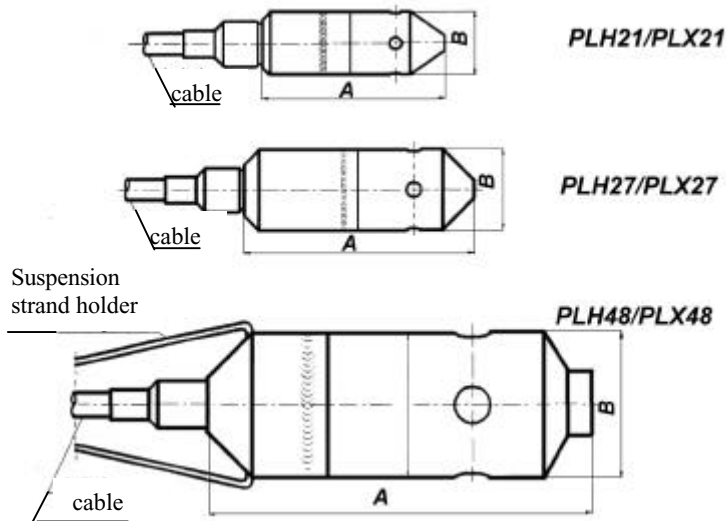
PARAMETERS		UNITS							
Measurement range		m H ₂ O	1	2	5	10	20	50	100
Allowable overpressure		m H ₂ O	25	25	25	25	30	75	150
Output signal	PLH	mV*	70	110	230	360	540	900	900
	PLX	mA	4...20mA						

* Output voltage values are approximate only and are based on the 4mA DC supply current

Power supply	PLX	U = 12.2...36V DC
	PLH	I = 0.5...5mA DC
Bridge resistance (for PLH)		about 3500Ω
Load resistance (R)		$R \leq \frac{U - 12.2V}{20mA} \times 10^3 [\Omega]$
Nonlinearity		≤ 0,5%; option < 0,25%
Ambient temperature range		- 20...+ 70°C
Medium temperature		10...+ 70°C
Compens. temp. range		0... + 70°C (standard) - 20...+ 85°C (option)
Temp. errors in compens. temp. range		
	Zero error	for PLH ≤ 0,05mV/1°C for PLX ≤ 0,25%/10°C
	range error	for PLH ≤ 0,25mV/1°C for PLX ≤ 0,25%/10°C
Weight	for PLH	21/27/48 – 0.15/0.20/1.00 kG
	for PLX	21/27/48 – 0.20/0.25/1.05 kG
Materials:		
- separating diaphragm		316Lss, option Hastelloy C
- measurement head and the cover		1H18N9T, option 316Lss

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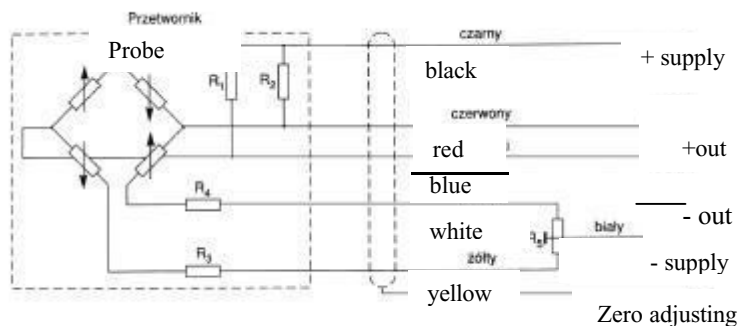
DIMENSIONS



Type	PLH21	PLH27	PLH48	PLX21	PLX27	PLX48
A (mm)	60	76	127	100	116	129
B (mm)	21	27	48	21	27	48

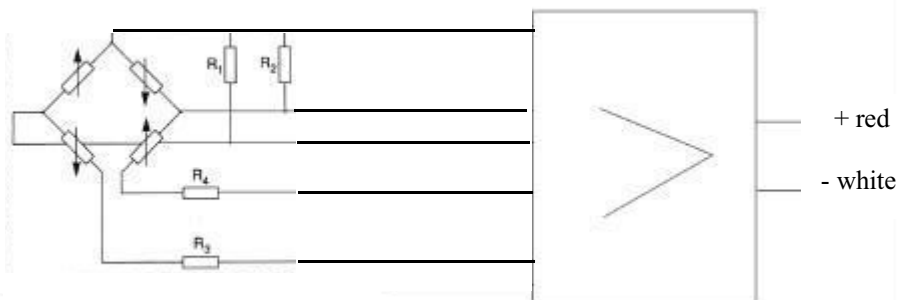
ELECTRICAL CONNECTION CIRCUIT DIAGRAM

PLH Probes



Zero adjusting potentiometer R5 assembled by user

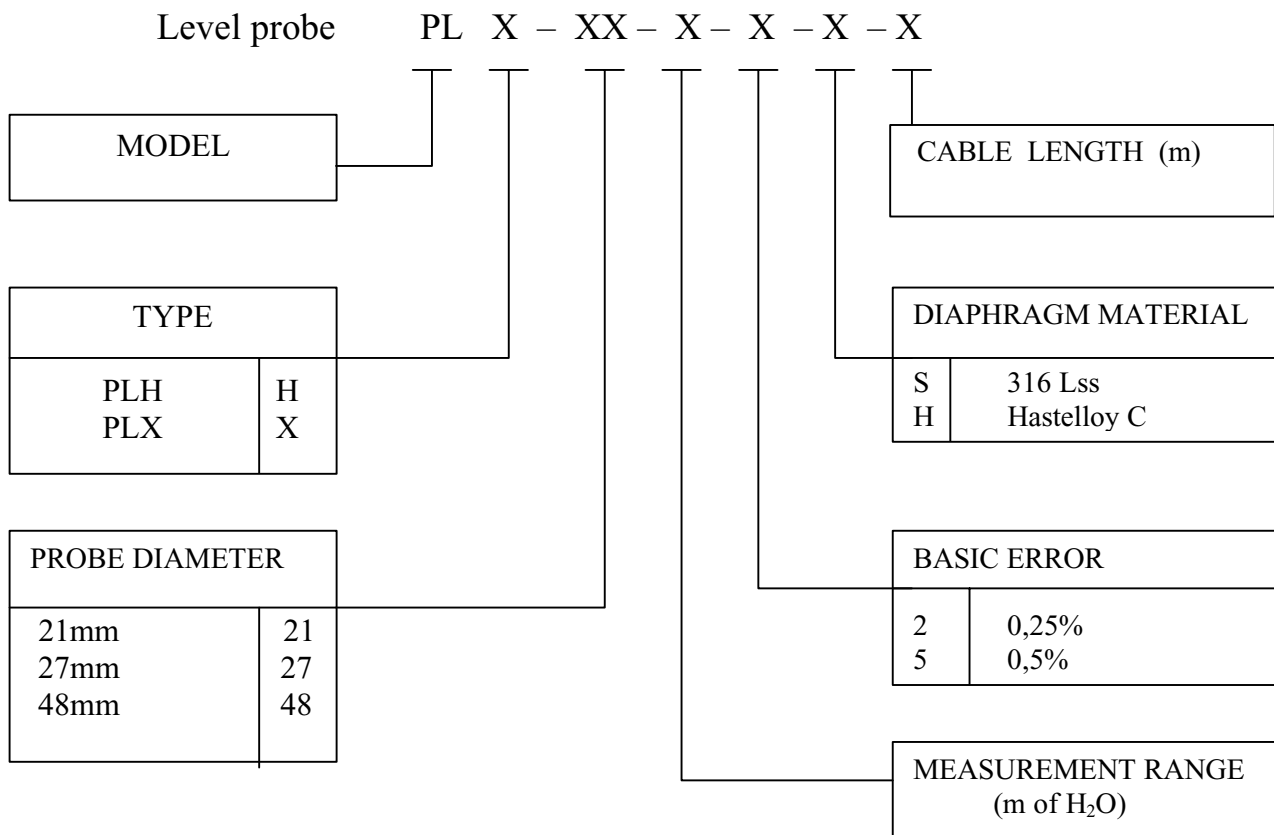
PLX Probes



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ORDERING INFORMATION

Specify the model according to the ordering code:



Ordering example:

PLX-27-15-5-S-50 medium: the water, temp.10... 50°C

- PLX – X level probe type
- 27 – Probe diameter 27mm
- 15 – Measurement range 15m of H₂O
- 5 – Basic error 0,5%
- S – Diaphragm material 316 Lss
- 50 – Length of the cable 50m

NOTES:

1. With special order it is possible to manufacture non standard probes.
2. When ordering please specify additionally: the type and temperature of the medium , as in the order example.

PELIRON® Ltd



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