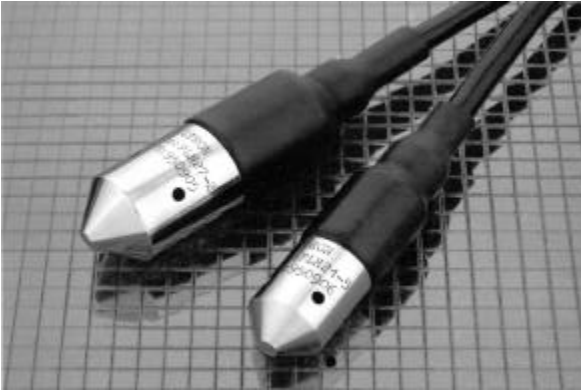


**PRODUCTION AND TRADE COMPANY**

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**LEVEL PROBES  
PL SERIES****APPROPRIATION**

Level probes of the PL Series are appropriated to a permanent liquid level measurement in open tanks, like wells, reservoirs, sewage pumping stations and similar waterworks, purification plants and sewers objects.

**CHARACTERIZATION**

- High stability and accuracy
- Dimensions conformity to different purposes
- High reliability and durability

**CONSTRUCTION**

The main part of the probe is a measurement head having a piezoresistive pressure sensor separated from a medium by a diaphragm. The diaphragm is prevented before a possibility of damage by a acid resisting cover. The thread connection makes possible – if needed - the cover removing and diaphragm cleaning. PLH level probes can cooperate 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 the atmospheric pressure. PLX level probes in the measurement head have 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 of this bridge is proportionally depending from 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 coming to the MPC meter.

## TECHNICAL DATA

PARAMETERS		UNITS							
Measurement range		m H <sub>2</sub> O	1	2	5	10	20	50	100
Allowable overpressure		m H <sub>2</sub> 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:

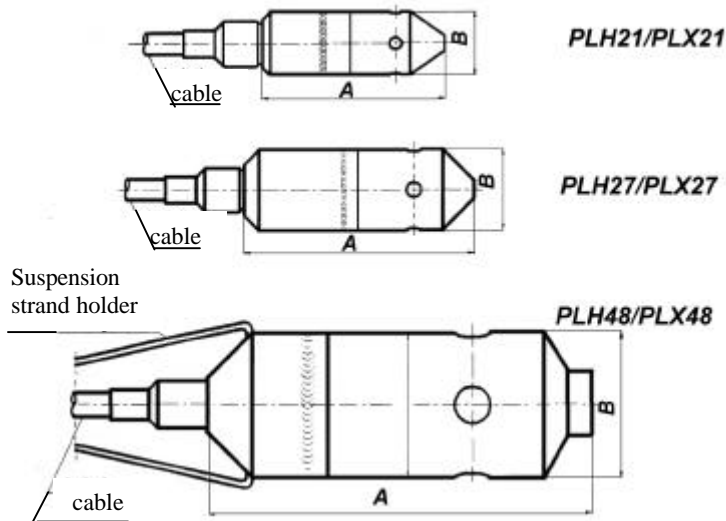
- separating diaphragm

316Lss, option Hastelloy C

- measurement head and the cover

1H18N9T, option 316Lss

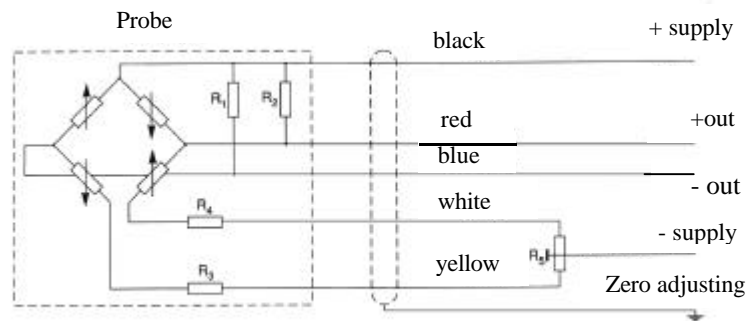
## DIMENSIONS



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

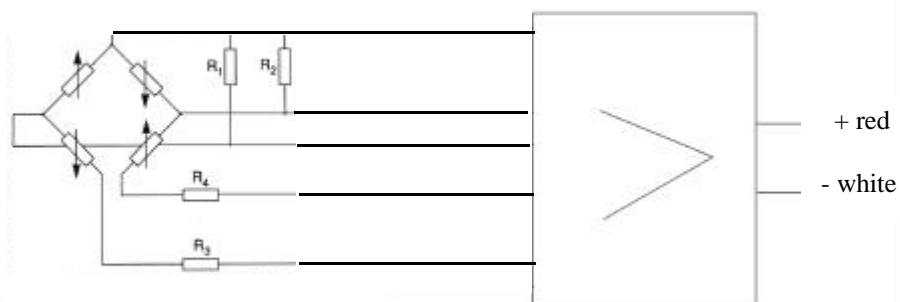
## ELECTRICAL CONNECTION CIRCUIT DIAGRAM

### PLH Probes



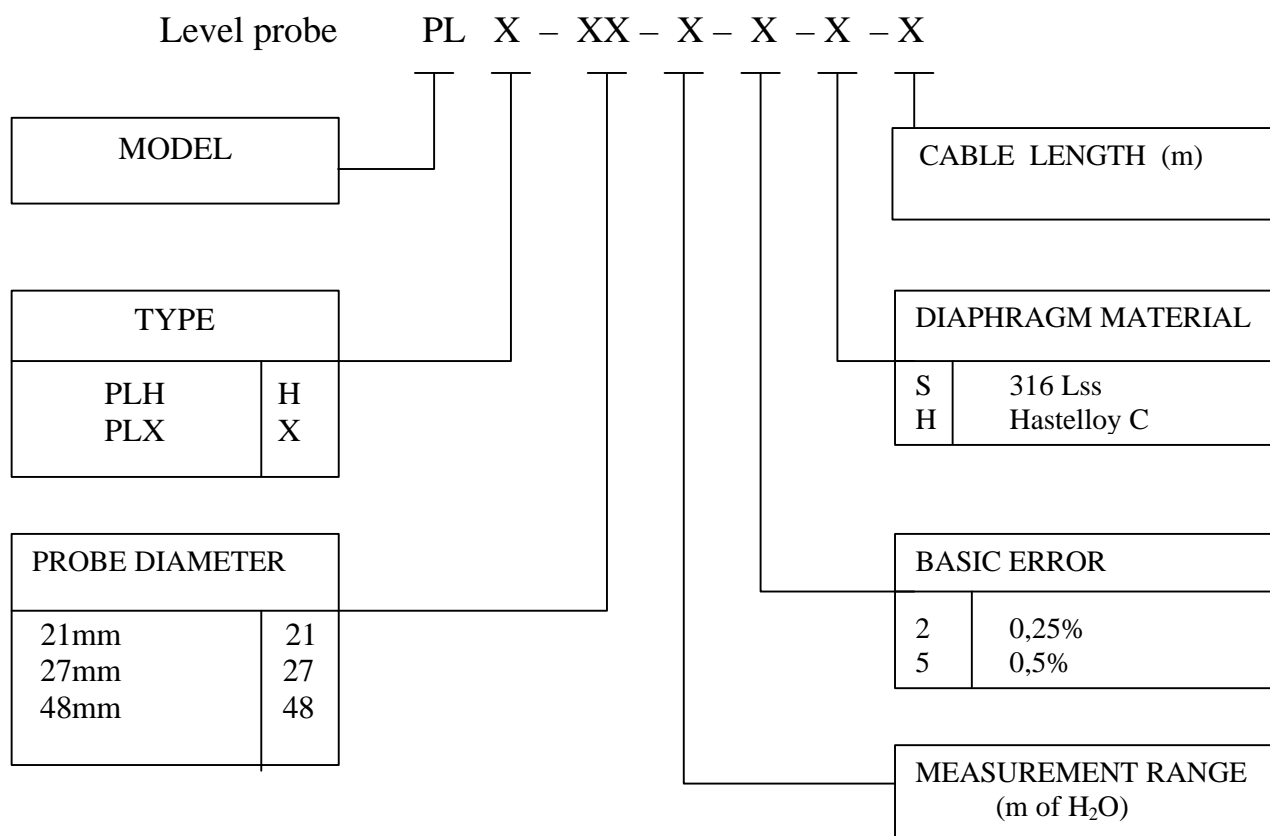
Zero adjusting potentiometer R5 assembled by user

### PLX Probes



## 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 H<sub>2</sub>O  
 5             – Basic error 0,5%  
 S             – Diaphragm material 316 Lss  
 50            – Length of the cable 50m

### NOTES:

1. In the special order is possible the construction and making of non typical probes.
2. In the order write please additionally: the type and temperature of the medium , like in the order example.

**PELTRON**® Ltd

PRODUCTION AND TRADE COMPANY

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