

PIEZORESISTIVE LOW-COST LEVEL TRANSMITTER

SERIES 26 Y

ABSOLUTE AND RELATIVE PRESSURE / ERROR BAND 0,5% (0...50 °C)

The pressure transmitters Series 26 Y are used in water level measurements that are price-sensitive but still require considerable accuracy.

Technology

Y-series transmitters have an extremely small temperature error. This is achieved by means of digital compensation of an all-analogue signal path. The gain and the zero point of the gain circuit can be influenced by digital/analogue converters. These receive their numerical values from an EEPROM that is addressed depending on the temperature. A mathematical model for TC zero and TC gain with any order can therefore be determined in the calibration process and stored in the transmitter with a resolution of 1,5 K. The accuracy of the end product therefore essentially depends on the amount of testing and the linearity of the measuring cell.

With the Series 26 Y, the monocrystalline silicon measuring cell is reliably protected from the measuring medium by a stainless steel diaphragm. The steel diaphragm itself is protected from mechanical influence by a plastic cap, and has outstanding performance features with regard to accuracy and stability due to its large diameter of 17 mm.

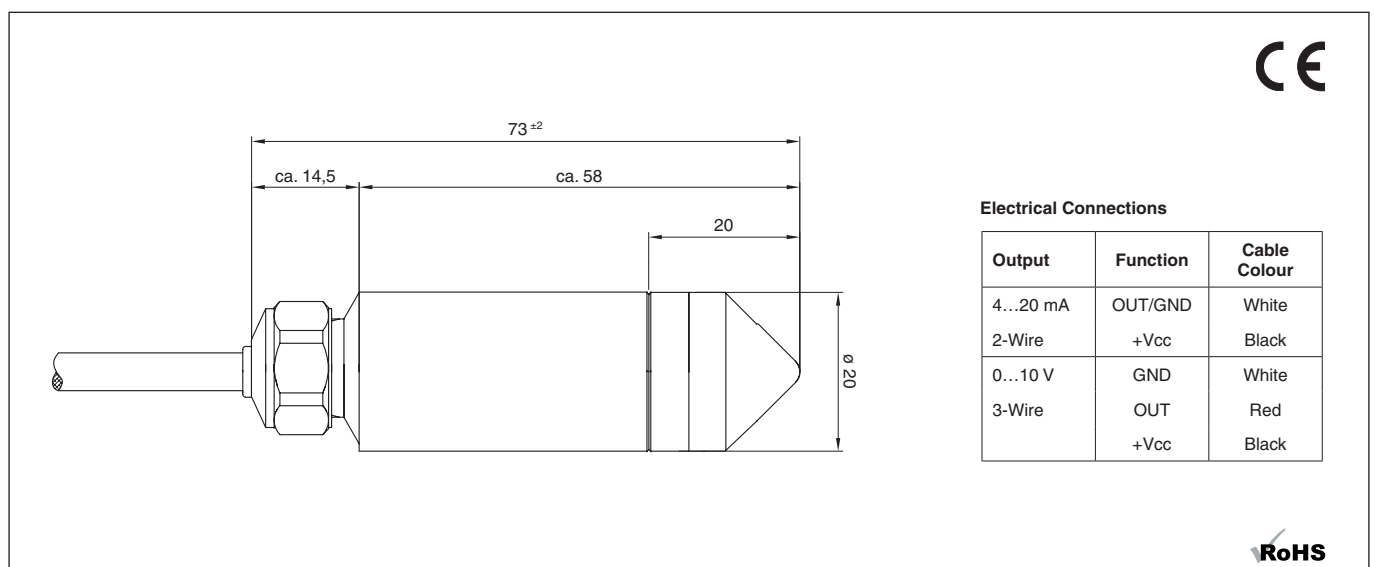
Performance Features

- Extremely accurate, excellent long-term stability, no pressure hysteresis
- Integrated overvoltage and polarity reversal protection
- Protection class: IP68
- Compact, robust housing made from stainless steel
- Pressure ranges of 200 mbar to 10 bar (corresponds to water column of 2 m to 100 m)
- Low-Cost

Analogue Interfaces

Because of the all-analogue signal path, a large bandwidth of 2 kHz can be achieved without a time lag. With a start-up time of just 5 ms, the Y-series is excellent for data logging applications.

- Current output: 4...20 mA (2-wire technology)
- Voltage output: 0...10 V, 0,5...4,5 V, etc. (non-ratiometric)





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Specifications

Pressure Ranges (FS) in bar	(all intermediate ranges possible)					
PA/PR-26 Y	0,2	0,5	1	2	5	10
Overpressure	2,5	2,5	3	4	10	20

PA: Sealed Gauge. Zero at 1000 mbar abs. PR: Vented Gauge. Zero at atmospheric pressure

Pressure range	Accuracy ¹⁾	Total Error Band ²⁾ @ 0...50 °C	
		Typ.	Max.
2...10 bar	±0,25 %FS	±0,3 %FS	±0,5 %FS
0,5...< 2 bar	±0,25 %FS	±0,6 %FS	±1,0 %FS
0,2...< 0,5 bar	±0,50 %FS	± 2 mbar	± 5 mbar

¹⁾ Linearity (best fitted straight line) + hysteresis + repeatability

²⁾ Accuracy + temperature error

Storage-/Operating Temperature	-20...100 °C		
Stability	Range > 2 bar	0,1 %FS typ.	0,2 %FS max.
	Range ≤ 2 bar	2 mbar typ.	4 mbar max.

Type	2-Wire	3-Wire	3-Wire	3-Wire
Signal Output	4...20 mA	0...10 V	0...5 V	0,5...4,5 V
Signal Output Limitation	3,2...22,3 mA	-1,2...11,2 V	-0,6...5,6 V	0,1...4,9 V
Supply	8...32 VDC	13...32 VDC	8...32 VDC	8...32 VDC
Load Resistance	< (U-8 V) / 0,025 A	> 5 kΩ	> 5 kΩ	> 5 kΩ
Limit Frequency	2 kHz	2 kHz	2 kHz	2 kHz
Power Consumption		max. 5 mA	max. 5 mA	max. 4 mA

Electrical Connection

- Reference cable PE sheath Ø 5,8 / Ø 7,3
- Absolute cable PUR double sheath Ø 4,7
- Cable length: Standard 5 m

Response Time (Supply ON) (0...99%) < 5 ms
Isolation > 10 MΩ@300 V
EMC EN 61000-6-2 / EN 61000-6-3 / EN 61326-2-3
Dead Volume Change < 0,1 mm³
Material in Media Contact

- Stainless Steel AISI 316L (DIN 1.4404/1.4435)
- Viton® O-ring
- Cap in POM

Protection Class IP68

Options

Temperature Range Other compensated temperature ranges on request. Maximum range: -40...+80 °C
Pressure Ranges Intermediate ranges on request
Pressure Connection, Electrical Connection Others on request
Extended lightning protection

Subject to alterations

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Companies approved to ISO 9001

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