

## 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.

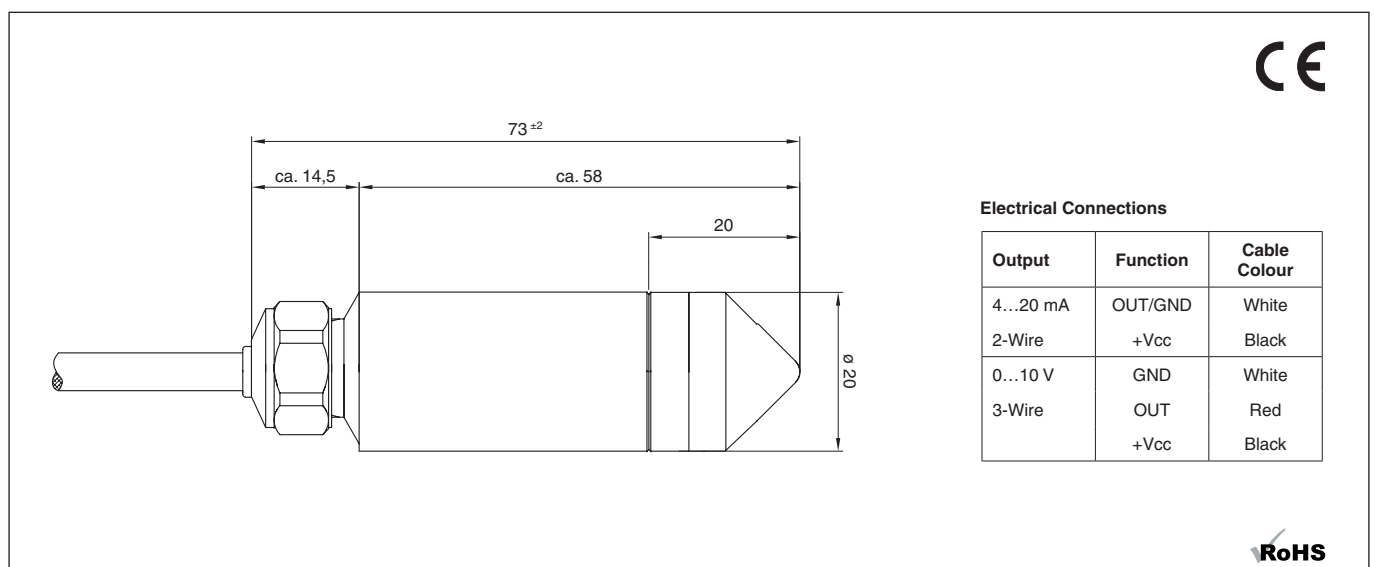
### Performance Features

- 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)



Subject to alterations

11/2009

KELLER AG für Druckmesstechnik  
KELLER Ges. für Druckmesstechnik mbH

St. Gallerstrasse 119  
Schwarzwaldstrasse 17

CH-8404 Winterthur  
D-79798 Jestetten

Tel. +41 (0)52 - 235 25 25  
Tel. +49 (0)7745 - 9214 - 0

Fax +41 (0)52 - 235 25 00  
Fax +49 (0)7745 - 9214 - 80



# KELLER

## 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 <sup>1)</sup>	Total Error Band <sup>2)</sup> @ 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

<sup>1)</sup> Linearity (best fitted straight line) + hysteresis + repeatability

<sup>2)</sup> 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	<b>4...20 mA</b>	<b>0...10 V</b>	<b>0...5 V</b>	<b>0,5...4,5 V</b>
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 mm<sup>3</sup>  
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

11/2009

KELLER AG für Druckmesstechnik	St. Gallerstrasse 119	CH-8404 Winterthur	Tel. +41 (0)52 - 235 25 25	Fax +41 (0)52 - 235 25 00
KELLER Ges. für Druckmesstechnik mbH	Schwarzwaldstrasse 17	D-79798 Jestetten	Tel. +49 (0)7745 - 9214 - 0	Fax +49 (0)7745 - 9214 - 60

Companies approved to ISO 9001

www.keller-druck.com