

Submersible Capacitive Transmitters

For water level measurements

Series 46X

Series 46X-Ei

The Series 46X combines the ceramic measuring cell for low pressure ranges with the μ P-electronics of the digital Series 30 pressure transmitters. The signal values of the pressure- and temperature sensors are determined by a polynomial compensation¹⁾. The values can be shown and stored on a PC and can be reprogrammed. A reference tube integrated in the cable connects the referential chamber of the sensor with the ambient pressure.

Specifications

Pressure Ranges (FS)*	30	100	300	mbar
Overpressure	300	1000	1500	mbar

* Intermediate ranges for the analog output are realizable with no surcharge by spreading the standard ranges (note that the error band will then increase proportionally)

Type	2-Wire	3-Wire
Supply (U_B) 46X	8...28 VDC	13...28 VDC
Supply (U_B) 46X-Ei	10...30 VDC	15...30 VDC
Signal Output (scaleable)	4...20 mA	0...10 V
Load ($k\Omega$)	$<(U_B - U_{Bmin}) / 20 \text{ mA}$	≥ 100
Error Band typ.**	$\pm 0,1 \%FS$	$\pm 0,2 \%FS$
Error Band max.**	$\pm 0,2 \%FS$	$\pm 0,3 \%FS$

** Within the compensated temperature range

Stability	FS $\geq 100 \text{ mbar}$: $\pm 0,1 \%FS$	FS $\leq 100 \text{ mbar}$: $\pm 0,1 \text{ mbar}$
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Operating Temperature	0...80 °C (icing not permitted)
Compensated Range	10...50 °C

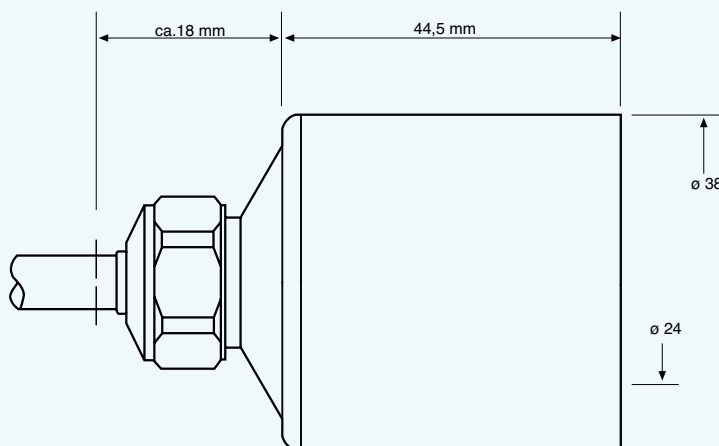
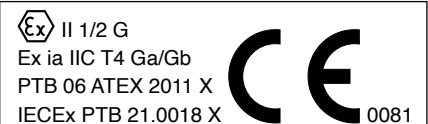
Electrical Connection	- Reference cable PE sheath $\varnothing 5,8$ - Absolute cable PUR double sheath $\varnothing 4,7$ - Cable length: Standard 5 m
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Materials Contact with Media	- Housing: Stainless steel (type AISI 316L) - Diaphragm: Ceramic, gold plated - Nitrile O-ring
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Protection	IP68
Weight	$\approx 400 \text{ g}$ with 5 m cable
Options	Programmable, other versions

This pressure transmitter is also available as an intrinsically safe version (Series 41X-Ei) and can be used as a partition wall device at the border of Zone 0 and Zone 1. Pressure transmitters in the 41X-Ei series may only be used in conjunction with proven intrinsically safe equipment.

¹⁾ More information about the polynomial compensation and associated software you will find in the Series 41X datasheet.



Electrical Connections

	2-Wire	3-Wire
Black	+VCC	+VCC
White	OUT/GND	GND
Red		+OUT
Blue	RS 485 A	
Yellow	RS 485 B	