



SUBMERSIBLE CAPACITIVE TRANSMITTERS

FOR WATER LEVEL MEASUREMENTS

SERIES 46 X SERIES 46 X Ei

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

** Within the compensated temperature range

Stability	FS ≥ 100 mbar: $\pm 0,1 \text{ \%FS}$	FS ≤ 100 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

- Materials Contact with Media
- Housing: Stainless steel (type AISI 316L)
 - Diaphragm: Ceramic, gold plated
 - Nitrile O-ring

- Protection
- IP 68
- Weight
- ≈ 400 g with 5 m cable
- Options
- Programmable, other versions

This pressure transmitter is also available as intrinsically safe version (Series 46 X Ei). It is used in explosion exposed areas, where the categories 1 and 2 are required and must only be used in combination with certified intrinsically safe equipment!



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

Electrical Connections

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