

Chemical Resistant Submersible Level Transmitters

ATM/NC/Ex



CUSTOMER BENEFITS

- Certificate: ATEX
- Chemical resistant level transmitter made of PVDF
- This transmitter has an excellent resistance to most aggressive chemicals
- Optional overvoltage protection
- Reverse polarity and short circuit protected

Technical Specifications

PRESSURE MEASURING RANGE (MH2O)

	1 ... 5	> 5 ... 20	> 20 ... 250
Overpressure	3 bar	3 x FS (≥ 3 bar)	3 x FS
Burst pressure, (1)	> 200 bar	> 200 bar	> 200 bar
Accuracy, (2), ($\pm$ % FS)	≤ 2.0	≤ 1.0	≤ 0.5
Accuracy, (2), (3), ($\pm$ % FS)	< 0.5%	< 0.5%	< 0.5%
Thermal shift, ($\pm$ % FS/ $^{\circ}$ C)			
Zero point 0...70 $^{\circ}$ C	≤ 0.06	≤ 0.03	≤ 0.015
Zero point -25...85 $^{\circ}$ C	≤ 0.08	≤ 0.04	≤ 0.02
Span 0...70 $^{\circ}$ C	≤ 0.015	≤ 0.015	≤ 0.015
Span -25...85 $^{\circ}$ C	≤ 0.02	≤ 0.02	≤ 0.02
Long term stability, (4)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

(1) Transducer

(2) Zero based accuracy according to DIN16086, incl. hysteresis and repeatability at ambient temperature

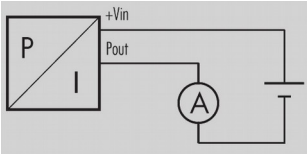
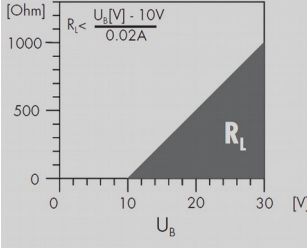
(3) Only if diaphragm is made in titanium

(4) 1 year (typ. / max.)

TEMPERATURE RANGE

Operating temperature	-5...80 $^{\circ}$ C
Process temperature	-5...80 $^{\circ}$ C
Storage temperature	-10...80 $^{\circ}$ C

ELECTRICAL SPECIFICATIONS

	4 ... 20 mA
Power supply	10...30 V DC
Supply influence	< 0.1% FS
Circuit diagram	
Load resistance	
Load influence	< 0.1% FS

ATEX APPROVAL

Certificate, (1)	SEV 11 ATEX 0142	
Gas	II 2G Ex ia IIB T3 ... T6	EN 60079-0 / -11 / -26
Dust	II 1D Ex ia IIIC IP6x T125°C ... T80°C	EN 61241-0 / -11
Mining	I M2 Ex ia I	EN 50303
Temperature class, (2)	T6	T4
Ambient temperature	-5...50 °C	-5...80 °C
Process temperature	-25...55 °C	-25...85 °C
Maximum values of the intrinsically safe circuit	30 V / 100 mA / 1 W	

(1) For detailed Ex specifications see certificate and operating and safety instructions

(2) Without any information about temperature class the transmitter will be delivered for T4

QUALIFICATIONS

	Description	Level	Typical interferences
EN 61000-4-2	Electrostatic discharge	4 kV contact / 8 kV air	
EN 61000-4-3	Irradiated RF	10V/m (0.08...1 GHz)	Radio sets, wireless phones
EN 61000-4-4	Transients (burst)	2 kV	Motors, valves
EN 61000-4-6	Conducted RF	10 V (0.15...80 MHz, 3 s)	Frequency converters

PHYSICAL SPECIFICATIONS

Materials	
Transducer	Stainless steel (316L / 1.4435) with teflon protection, titanium (Gr. 2)
Housing	PVDF
Seals	Viton (standard), EPDM, Kalrez
Cable	PUR, FEP
Weight (1)	150 g

(1) Specification for a ATM/NC/Ex, copen, without cable

Equipment

OVERVIEW

10.00.0091	Accessories overview

Additional documents

OPERATING AND SAFETY INSTRUCTIONS

Article number	
10.88.0092	DMM029

Ordering information

	X	XXXX	XXXX	XX	XXX
Type					
ATM/NC/Ex	36				
Pressure type					
Gauge	1				
Absolute (vacuum)	2				
Pressure measuring range					
100 mbar...25 bar	XX				
Process connection					
Open, TD in titanium (Fig. 1)	90				
Open, TD with FEP foil (Fig. 1)	91				
Electrical connection					
PUR cable, blue, IP 68 (2), (3)	17				
FEP cable, blue, IP 68 (2)	22				
Output signal					
4...20 mA	05				
4...20mA with surge protection	08				
Customized	99				
Accuracy					
$\leq \pm 2.0 \% \text{ FS for } p < 500 \text{ mbar (4)}$	6				
$\leq \pm 1.0 \% \text{ FS for } p \leq 2 \text{ bar}$	5				
$\leq \pm 0.5 \% \text{ FS for } p > 2 \text{ bar}$	0				
Temperature range					
T6 (Ta: -5...50 °C) -5...50 °C compensated (allowed process temperature: -5...50°C)	3				
T4 (Ta: -5...50 °C) -5...50 °C compensated (allowed process temperature: -5...50°C)	4				
T4 (Ta: -5...80 °C) -5...80 °C compensated (allowed process temperature: -5...80 °C) (5), (6)	5				
Option 1					
Option 2					
Option 3					
Seals: Viton (standard)					U
Seals: EPDM					S
Seals: Kalrez, (6)					T
Protective cap in brass					W
Protective cap in POM					W
Humidity filter element for gauge versions (only for PUR and PE cable)					Z

(2) Please specify the required cable length and medium

(3) For operating temperature > 50°C, FEP cable must be used

(4) $< \pm 0.5 \% \text{ FS}$ if diaphragm is made in titanium

(5) Only if diaphragm is made in titanium

(6) Available only with FEP cable

Technical drawings

Dimensions

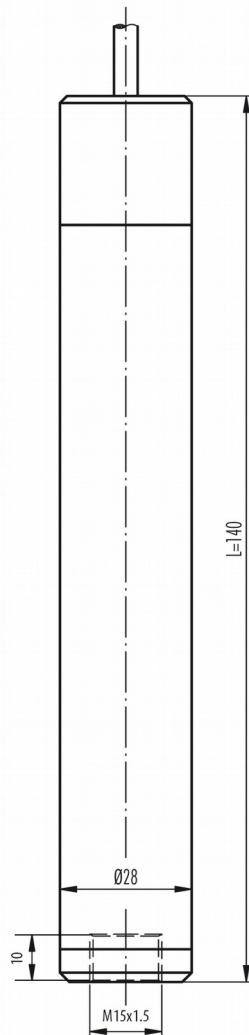


Fig. 1

Colour 2-Wire
white +Vin
yellow Pout
brown