

# Intrinsically safe submersible level transmitters for corrosive media

## **ATM/NC/Ex**

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Version: 25.06.2014

# Technical Specifications

## Pressure measuring range (mH2O)

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

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

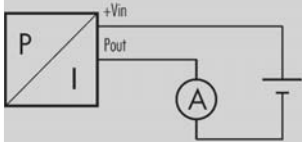
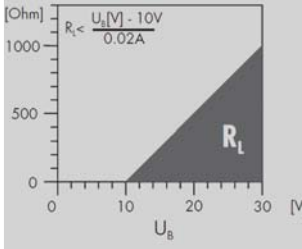
(2) 1 year (typ. / max.)

(3) Only if diaphragm is made in titanium

## Temperature range

<b>Operating temperature</b>	-5...80 °C
<b>Process temperature</b>	-5...80 °C
<b>Storage temperature</b>	-10...80 °C

## Electrical specifications

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

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## ATEX Approval

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

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

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

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## Qualifications

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

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## Physical specifications

<b>Materials</b>	
Transducer	Stainless steel (316L / 1.4435) with teflon protection, titanium (Gr. 2)
Housing	PVDF
Seals	Viton (Standard), EPDM, Kalrez
Cable	PUR, FEP

## Equipment

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### Overview

<b>10.00.0091</b>	Accessories overview
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## Additional documents

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### Operating and safety instructions

	Article number
<b>10.88.0092</b>	DMM029

## Ordering information

		X. XXXX.	XXXX.	XX.	XXX
<b>Type</b>	ATM/NC/Ex	36			
<b>Pressure type</b>	Gauge	1			
	Absolute (vacuum)	2			
<b>Pressure measuring range</b>	100 mbar...25 bar	XX			
<b>Process connection</b>	Open, TD in titanium (Fig. 1)	90			
	Open, TD with FEP foil (Fig. 1)	91			
<b>Electrical connection</b>	PUR cable, blue, IP 68 (2), (3)		17		
	FEP cable, blue, IP 68 (2)		22		
<b>Output signal</b>	4...20 mA		05		
	4...20mA with surge protection		08		
	Customized		99		
<b>Accuracy</b>	$\leq \pm 2.0$ % FS for $p < 500$ mbar (4)			6	
	$\leq \pm 1.0$ % FS for $p \leq 2$ bar			5	
	$\leq \pm 0.5$ % FS for $p > 2$ bar			0	
<b>Temperature range</b>	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)			5	
<b>Option 1</b>					
<b>Option 2</b>					
<b>Option 3</b>	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

(1) mH<sub>2</sub>O, mWS, mWC etc. available

(2) Please specify the required cable length and medium

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

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

(5) Only if diaphragm is made in titanium

(6) Available only with FEP cable

# Technical drawings

## Dimensions

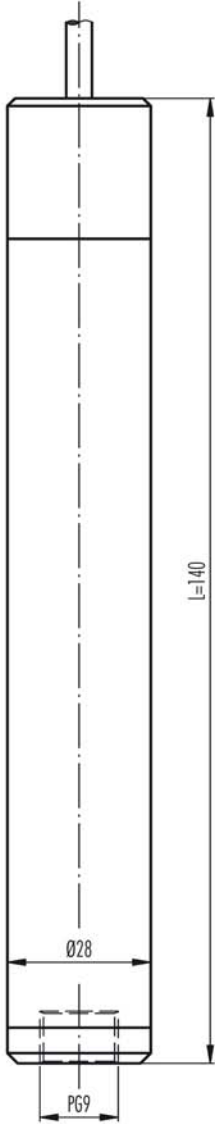


Fig. 1

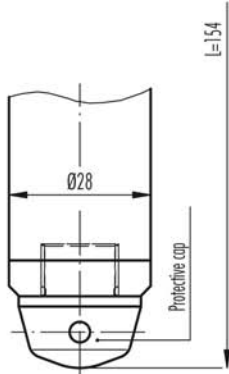


Fig. 2

Colour	2-Wire
white	+Vin
yellow	Pout
brown	

Specifications may change without notice.

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