

Submersible Transmitters

MTM/N 10 - Miniature Level Transmitter



Customer benefits

- Miniature submersible level transmitter with a diameter of 10mm
- Available in relative or absolute version
- Titanium version with PE cable for use in aggressive media
- Passive option for use in low power applications (logger)

Version: 25.04.2016

Technical specifications for passive version

Pressure measuring range (mH₂O)

	10 ... 20	> 20 ... 40	> 40 ... 100
Overpressure	3 x FS	3 x FS (≤ 12 bar)	12 bar
Accuracy, (1) (± % FS)	≤ 0.5 / ≤ 0.25	≤ 0.5 / ≤ 0.25	≤ 0.5 / ≤ 0.25
Setting accuracy			
Zero point	± 1mV	± 1mV	± 1mV
Span	± 2 %	± 2 %	± 2 %
Thermal shift, (± % FS/°C)			
Zero point -5...50°C	≤ 0.06	≤ 0.03	≤ 0.015
Span -5...50°C	≤ 0.015	≤ 0.015	≤ 0.015
Long term stability, (2)	≤ 0.2% FS / < 4 mbar	≤ 0.1% FS / < 0.2% FS	≤ 0.1% FS / < 0.2% FS

(1) Best Straight Line (BSL) at ambient temperature

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

Typical output signal (mH₂O)

	10 ... 20	> 20 ... 40	> 40 ... 100
Output signal, (1), (mV)	50	100	100

(1) At nominal pressure, 10 V DC

Technical specifications for active version, (1)

Pressure measuring range (mH₂O)

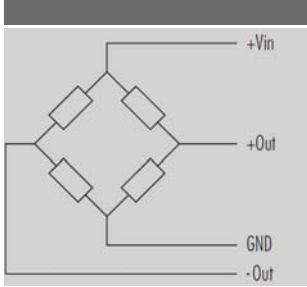
	10 ... 20	> 20 ... 40	> 40 ... 100
Accuracy, (2) (± % FS)	≤ 0.5 / ≤ 0.25 / ≤ 0.1	≤ 0.5 / ≤ 0.25 / ≤ 0.1	≤ 0.5 / ≤ 0.25 / ≤ 0.1
Thermal error (± % FS/°C)			
-5 ... 50°C compensated	0.075	0.045	0.03
Thermal shift, (± % FS/°C)			
Zero point -5...50°C	≤ 0.06	≤ 0.03	≤ 0.015
Span -5...50°C	≤ 0.015	≤ 0.015	≤ 0.015

(1) For further specifications see ATM/N

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

Electrical specifications for passive version

Pressure range

Circuit diagram	
Input impedance	> 10 kOhm
Bridge resistance, (typ.)	3 kOhm
Supply voltage, output signal 0...10VDC / 0...20mA / 4...20mA	15 ... 30 VDC
Supply voltage, output signal 0...5 VDC	10 ... 30 VDC
Cable length (max.)	200 m

Physical specifications, (1), (2)

Materials	
Transducer	Stainless steel (316L / 1.4435), Titanium (Gr. 2)
Housing	Stainless steel (316L / 1.4435), Titanium (Gr. 2)
Seals	NBR
Cable	PUR, PE
Weight (3)	150 g

(1) Only for level transmitter MTM/N10

(2) Stainless steel only in clean water applications

(3) Specification for a MTM/N10, closed, cable

Equipment

Overview

10.00.0091	Accessories overview
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Additional documents

Operating and safety instructions

	Article number
10.88.0369	DMM030

Ordering information

		X	XX	XXXX	XX	XXX
Type	MTM/N 10	15				
Pressure type	Gauge	1				
	Absolute (vacuum)	2				
Pressure measuring range (1)	1 bar ... 10 bar	XX				
	Offset, special adjustment	99				
Model	Standart passive, with mV output signal, (Fig. 1/2)	0				
	Active, with analog amplifier, (Fig. 3)	2				
Electrical connection	PUR cable, black IP 68, (2)	0				
	PE cable, black, IP 68, (2)	1				
Version	Closed, (Fig. 1)		55			
	Open, (Fig. 2)		56			
Connecting cable (4)	PE cable					1
	PUR cable					0
Output signal	0...mV (specified by the customer), (Fig. 1 / 2), (8)		13			
	0...100 mV		14			
	0...5 VDC, (Fig. 3), (9)		46			
	0...10 VDC, (Fig. 3), (9)		47			
	0...20 mA, (Fig. 3), (9)		00			
	4...20 mA, (Fig. 3), (9)		05			
	RS485, (Fig. 5), (6), (9)		62			
Accuracy	$\leq \pm 0.5$ % FS, BSL (passive version only) (7), (8)				0	
	$\leq \pm 0.5$ % FS, (with option separate electronic) (9)				0	
	$\leq \pm 0.25$ % FS, BSL (passive version only) (7), (8)				1	
	$\leq \pm 0.25$ % FS, (with option separate electronic) (9)				1	
	$\leq \pm 0.1$ % FS, (with option separate electronic) (9)				2	
Temperature range	-5...50 °C compensated (allowed process temperature: -5...50 °C)				4	
Option	Seals: NBR (Standard)					R
	Titanium					K
	Humidity filter element for gauge versions (only for PUR and PE cable)					Z

(2) Please specify the required cable length and medium

(7) BSL: Best Straight Line

(8) Passive version

(9) Active version

Technical drawings

Dimensions

Fig. 1: Passive version, closed

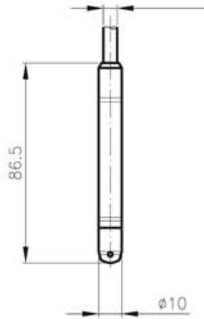
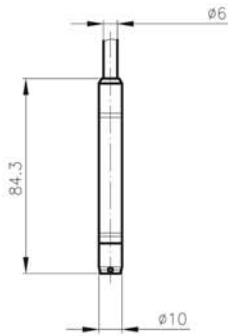


Fig. 3: Active version



Fig. 2: Passive version, open



Colour	Connection configuration
	Passive version
white	+Vin
yellow	GND
brown	+Out
green	- Out

Connection configuration with separate electronics, see datasheet ATM/N

Specifications may change without notice.

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