

Digital submersible level transmitters

DTM.OCS.S/N



Version: 28.07.2015

Technical Specifications

Pressure measuring range (mH₂O)

	2 ... 5	> 5 ... 20	> 20 ... 250
Overpressure	3 bar	3 x FS	3 x FS
Burst pressure, (1)	> 200 bar	> 200 bar	> 200 bar
Accuracy, (1), (± % FS)	≤ 0.15	≤ 0.05	≤ 0.03
Total Error (2)(3) (± % FS)			
-5...50°C (typ. / max.)	≤ 0.2 / 0.4	≤ 0.1 / 0.2	≤ 0.05 / 0.1
-5...80°C (typ. / max.)	≤ 0.5 / 1.0	≤ 0.1 / 0.2	≤ 0.1 / 0.2
Long term stability, (4)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

(1) Transducer

(2) Total error including accuracy, hysteresis, repeatability and temperature influences

(3) The error values are valid within the corresponding temperature range

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

Temperature measuring range, (1) (°C)

	-5 ... 50	-5 ... 80
Accuracy (2)	≤ ± 0.5 °C	≤ ± 1.5 °C
Response time, (3), (4)		
T 0.50	9 s	9 s
T 0.63	15 s	15 s
T 0.90	27 s	27 s

(1) Temperature measurement included

(2) Accuracy of the equipment ± 2 °C

(3) Time in seconds that the sensor needs to carry out eg 63% of a temperature change

(4) Time of measurement for liquid medium

Temperature range

Operating temperature	-5...80 °C
Process temperature	-5...80 °C
Storage temperature	-40...85 °C

Electrical specifications

Power supply (1)	9...30 VDC
Current consumption (typ.)	3 mA @ 24VDC
Resolution	
Pressure	21 Bit
Temperature	21 Bit
Output	
Baudrate	9600 bps
Interface	RS485
Protocol	Modbus RTU, 8n2
Cable length	max. 300m

(1) Power supply at the sensor

Qualifications (1)

	Description	Level	Typical interferences
IEC 60068-2-27	Shock	500g (3ms)	
IEC 60068-2-64	Vibration	10g rms (5 ... 2000 Hz)	
EN 55011 EN 55022 EN 61326-1	Emission, class B	0.03...6 GHz	
EN 61000-4-2 EN 61326-1	Electrostatic discharge	8 kV contact 15 kV air	
EN 61000-4-3 EN 61326-1	Radiated Immunity	10V/m (0.08...6 GHz)	Radio sets, wireless phones, Wi-Fi
EN 61000-4-4 EN 61326-1	Transients (burst)	4 kV	Motors, valves
EN 61000-4-6 EN 61326-1	Conducted RF	10 V (0.15 ... 80 MHz)	Frequency converters
EN 61000-4-5 EN 61326-1	Surge	2 kV	Overvoltage

(1) Only with connected shield

Physical specifications

Materials	
Transducer	Stainless steel (316L / 1.4435), titanium (Gr. 2)
Housing	Stainless steel (316L / 1.4404), titanium (Gr. 2)
Seals	Viton (Standard), EPDM, Kalrez
Cable	PUR, FEP, PE

Cable specification

	Pressure	Temperature
FEP	≤ 25 bar	-5 ... 80°C
PE	≤ 25 bar	-5 ... 80°C
PUR	≤ 25 bar	-5 ... 50°C

Equipment

Overview

10.00.0091	Accessories overview
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Additional documents

Operating manual

10.00.0430	Operating manual
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Ordering information

		X. XXXX.	XXXX.	XX.	XXX
Type	DTM.OCS.S/N				
Pressure type	Gauge	1			
	Absolute (vacuum)	2			
Pressure measuring range	2mH2O ... 250mH2O	XX			
	Offset, special adjustment	99			
Process connection	Closed (Fig. 1),(Fig. 2)	55			
	Open (Fig. 3)	56			
	G 1/4 M	11			
	G 1/2 M	13			
	Customized connections available	99			
Electrical connection	PUR cable, IP 68, black (6)		15		
	PE cable, IP 68, black (6)		13		
	FEP cable, IP 68, black (6)		21		
	PUR cable, Connectable version, IP 68 (2)		07		
	Customized connection available		99		
Output signal	RS485, Modbus		62		
Accuracy	According to datasheet			3	
Temperature range	-5...50 °C compensated (allowed process temperature: -5...50 °C)			4	
	-5...80 °C compensated (allowed process temperature: -5...80 °C) (5)			5	
Option 1	Special oil filling: Anderol Food (for food applications)				G
	Ballast weight 1.4435				B
	Cutting ring connection G 1/2 M				
	Strain relief				
Option 2	Version titanium (without ballast weight)				K
Option 3	Seals: Viton (standard)				U
	Seals: EPDM				S
	Seals: Kalrez (Level) (8)				T

(2) Demountable version

(5) Cable type PE & FEP, pressure range < 10 bar

(6) Specify type and length of cable

(8) Only with FEP cable available

Technical drawings

Dimensions

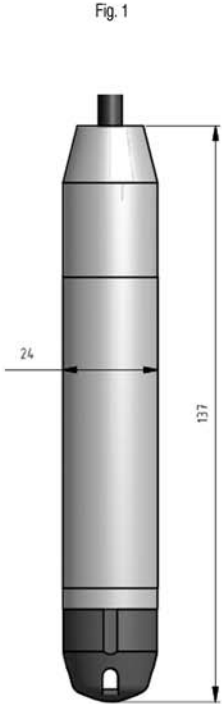


Fig. 2



Fig. 3



Specifications may change without notice.

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