

Passive intrinsically safe submersible level transmitters

TM/N/Ex



Version: 24.06.2014

Technical Specifications

Pressure measuring range (mH2O)

	1 ... 5, (1)	> 5 ... 20	> 20 ... 250
Overpressure	3 bar	3 x FS (≥ 3 bar)	3 x FS
Burst pressure	> 200 bar	> 200 bar	> 200 bar
Accuracy, (2), (\pm % FS)	$\leq 0.5 / \leq 0.25$	$\leq 0.5 / \leq 0.25$	$\leq 0.5 / \leq 0.25$
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
Response time, (typ.)	< 0.1ms / 10...90% FS	< 0.1ms / 10...90% FS	< 0.1ms / 10...90% FS
Long term stability, (3)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

(1) 0.5 mH2O on request

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

(3) 1 year (typ. / max.), the long term stability can be improved by ageing (burn-in) the sensor


Typical output signal (mH2O)

	1 ... 2	> 2 ... 4	> 4 ... 10
Output signal, (1), (mV)	15	25	35

	> 10 ... 20	> 20 ... 250
Output signal, (1), (mV)	50	100

(1) At nominal pressure, 10 V DC

Electrical specifications

Circuit diagram	
Input impedance	> 10 kOhm
Bridge resistance, (typ.)	3 kOhm
Supply voltage, (typ. / max.)	10 / 15 V DC

ATEX Approval

Certificate, (1)	SEV 04 ATEX 0149		
Gas	II 1G Ex ia IIC T3 ... T6	EN 60079-0 / -11 / -26	
Dust	II 1D Ex iaD 20 I T135 $^{\circ}$ C...T90 $^{\circ}$ C IP6x	EN 61241-0 / -11	
Temperature class, (2)	T6	T4	
Ambient temperature	-5...50 $^{\circ}$ C	-5...50 $^{\circ}$ C	
Process temperature	-5...50 $^{\circ}$ C	-5...80 $^{\circ}$ C	
Maximum values of the connection circuit	20 V / 300 mA / 1.2 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

Physical specifications

Materials	
Transducer	Stainless steel (316L / 1.4435), titanium (Gr. 2), (1)
Housing	Stainless steel (316L / 1.4404), titanium (Gr. 2)
Seals	Viton (Standard), EPDM, Kalrez
Cable	PUR, FEP

(1) Hastelloy (C-276) on request

Equipment

Overview

10.00.0091	Accessories overview

Additional documents

Operating and safety instructions

	Article number
10.88.0369	DMM030

Ordering information

		X. XXXX.	XXXX.	XX.	XXX
Type					
	TM/N/Ex	19			
Pressure type					
	Gauge	1			
	Absolute (vacuum)	2			
Pressure measuring range					
	50 mbar ... < 100 mbar		XX		
	100 mbar ... 25 bar		XX		
	Offset, special adjustment		99		
Process connection					
	Closed, (Fig. 1)		55		
	Open, (Fig. 2)		56		
	G 1/4 M, (Fig. 3)		11		
	G 1/2 M, (Fig. 3)		13		
	Customized connections available		99		
Electrical connection					
	PUR cable, IP 68, blue (4), (6)			17	
	FEP cable, blue, IP 68, (4)			22	
	Connectable version, IP 68, Lumberg RSF4 (Fig. 4), (3)			07	
Output signal					
	0...10 mV			10	
	0...25 mV			11	
	0...35 mV			12	
	0...50 mV			13	
	0...100 mV			14	
	0...XXX mV (customized)			99	
Accuracy					
	≤ ± 0.5 % FS				0
	≤ ± 0.25 % FS (on request)				1
Temperature range					
	T6 (Ta: -5...55 °C) -5...50 °C compensated (allowed process temperature: -5...50°C)				4
	T4 (Ta: -5...50 °C) -5...50 °C compensated (allowed process temperature: -5...80°C)				3
Option 1					
	Special oil filling: Anderol Food (for food applications)				G
Option 2					
Option 3					
	Ballast weight 1.4435				B
	Version titanium (without ballast weight)				K
	Seals: Viton (standard)				U
	Seals: EPDM				S
	Seals: Kalrez (Level)				T
	Humidity filter element for gauge versions (only for PUR and PE cable)				Z
	Cutting ring connection G 1/2 male				
	Strain relief				

(1) 0.5 mH2O on request

(2) mH2O, mWS, mWC etc. available

(3) Connector with required cable has to be ordered separately (KART100)

- (4) Please specify the required cable length and medium
- (5) Suitable for drinking water (food approved)
- (6) For operating temperature > 50°C, PE or FEP cable must be used
- (7) min. Medium temperature -25 ° C
- (8) Standard, no special cleaning. Special cleaning must be requested.

Technical drawings

Dimensions

Fig. 1: Closed version

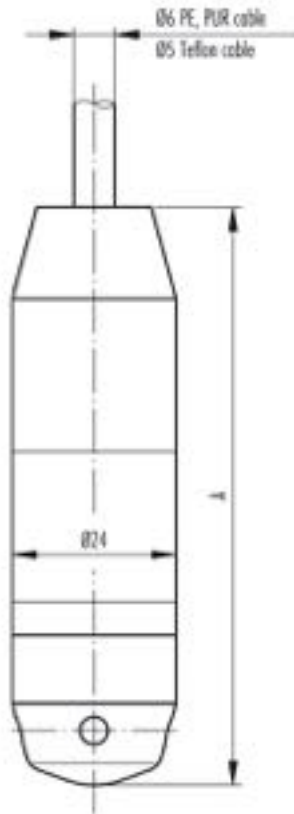


Fig. 2: Open version

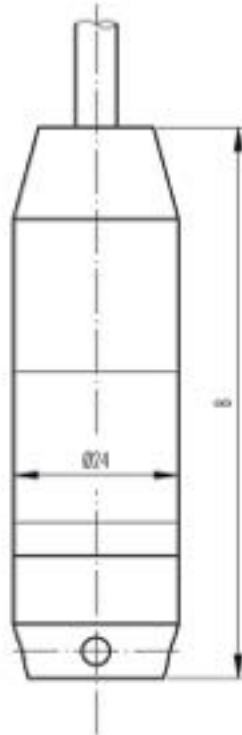


Fig. 3: with process connection

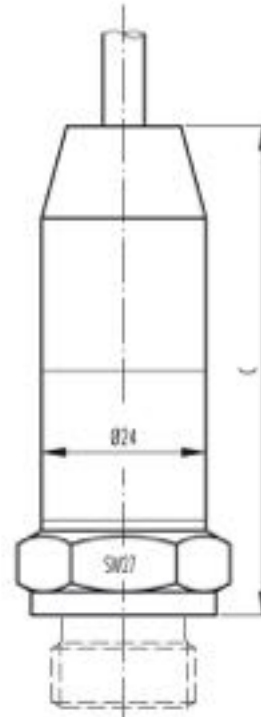
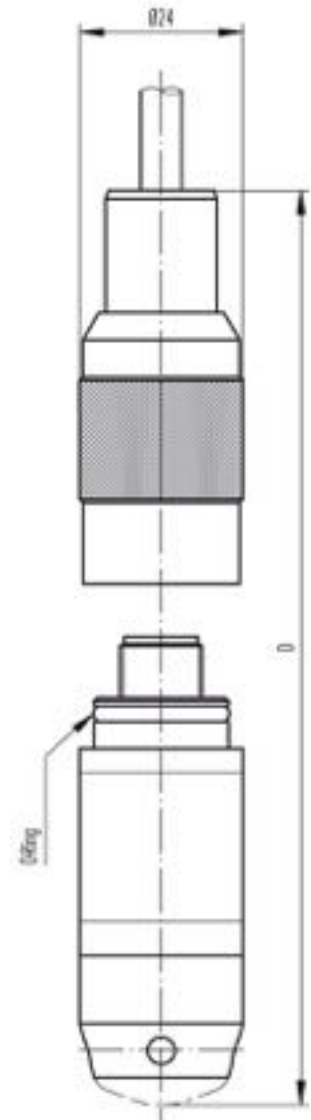


Fig. 4: Electrical connector, connectable



	A (mm)	B (mm)	C (mm)	D (mm)	Weight (g)
without ballast weight	85	81	on request	on request	approx. 200
with ballast weight	172	168	on request	on request	approx. 450

Colour

white	+Vin
yellow	GND
brown	+Out
green	-Out

Specifications may change without notice.

STS Headquarters, Switzerland
 STS Sensor Technik Simach AG
 Rütihofstrasse 8, 8370 Simach, Switzerland
 sales@stssensors.com | www.stssensors.com

STS France
 STS France
 844 Route de la Caillie, 74350 Allonzier-la-Caille, France
 info-fr@stssensors.com | www.stssensors.fr

STS Germany
 STS Sensoren Transmitter Systeme GmbH
 Poststrasse 7, 71063 Sindelfingen, Germany
 info-de@stssensors.com | www.stssensors.de

STS Great Britain
 STS Great Britain Ltd
 Box 2942 | Warwick | CV34 9AE, United Kingdom
 contact@stssensors.com | www.stssensors.co.uk

STS Italy
 STS Italia s.r.l.
 Via Gesù 5, 20090 Opera (Milano), Italy
 info-italia@stssensors.com | www.stssensors.it