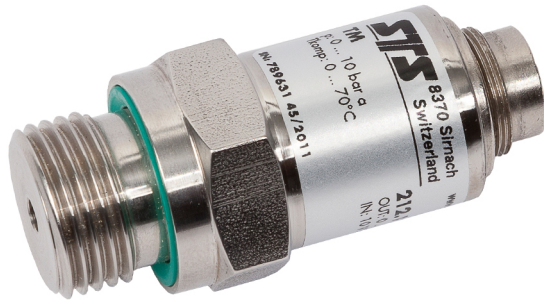


Passive pressure transmitters

TM



Technical Specifications

Pressure measuring range (bar)

	0.1 ... 0.5, (1)	> 0.5 ... 2	> 2 ... 25
Overpressure	3 bar	3 x FS (≥ 3 bar)	3 x FS
Burst pressure	> 200 bar	> 200 bar	> 200 bar
Accuracy, (4), (\pm % FS)	≤ 0.5	$\leq 0.5 / \leq 0.25$	$\leq 0.5 / \leq 0.25$
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.)	< 1ms / 10...90% FS	< 1ms / 10...90% FS	< 1ms / 10...90% FS
Long term stability, (5)	< 0.5% FS/< 4 mbar	< 0.2% FS/< 4 mbar	< 0.1% FS/< 0.2% FS

	> 25 ... 600, (2), (3)	> 600 ... 1000, (2)
Overpressure	3 x FS ($\leq 850 / \leq 1500$ bar)	1500 bar
Burst pressure	> 850 / ≤ 1500 bar	> 1500 bar
Accuracy, (4), (\pm % FS)	$\leq 0.5 / \leq 0.25$	$\leq 1 / \leq 0.5$
Thermal shift, (\pm % FS/$^{\circ}$C)		
Zero point 0...70 $^{\circ}$ C	≤ 0.015	≤ 0.015
Zero point -25...85 $^{\circ}$ C	≤ 0.02	≤ 0.02
Span 0...70 $^{\circ}$ C	≤ 0.015	≤ 0.015
Span -25...85 $^{\circ}$ C	≤ 0.02	≤ 0.02
Response time, (typ.)	< 1ms / 10...90% FS	< 1ms / 10...90% FS
Long term stability, (5)	< 0.1% FS/< 0.2% FS	< 0.1% FS/< 0.2% FS

(1) 50 mbar on request

(2) Titanium available ≤ 400 bar (burst pressure > 550 bar)

(3) Overpressure and burst pressure 1500 bar (stainless steel) optional

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

(5) 1 year (typ. / max.), the long term stability can be improved by ageing (burn-in) the sensor

Temperature range

Operating temperature	-40...125 $^{\circ}$ C
Process temperatur	-40...150 $^{\circ}$ C
Storage temperatur	-40...125 $^{\circ}$ C

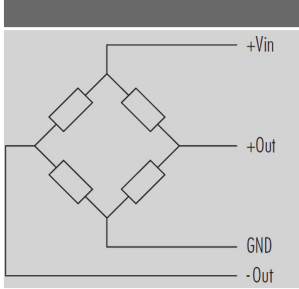
Typical output signal (bar)

	≤ 0.25	> 0.25 ... 0.6	> 0.6 ... 1
Output signal, (1), (mV)	15	25	35

	> 1 ... 2.5	> 2.5
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

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, PTFE, PE

(1) Hastelloy (C-276) on request

Accessories

Overview

10.00.0091	Accessories overview
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Additional documents

Operating and safety instructions

10.88.0369	Article number DMM030
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Ordering information

		X. XXXX.	XXXX.	XX.	XXX
Type					
	TM	21			
Pressure type					
	Gauge	1			
	Absolute (vacuum)	2			
	Sealed gauge	3			
Pressure measuring range					
	Any pressure measuring ranges between 0...100 mbar and 0...1000 bar available, (1), (2), (3)	XX			
Process connection					
	G 1/4 F, (Fig. 1)	00			
	G 1/4 M, (Fig. 2)	11			
	G 1/4 M, manometer DIN 16288, (Fig. 3)	12			
	G 1/2 M, (Fig. 4)	13			
	G 1/2 M, frontal diaphragm, (Fig. 5)	14			
	G 1/2 M, flush diaphragm, (Fig. 6)	15			
	G 1/2 M, manometer DIN 16288, (Fig. 7)	16			
	1/2 NPT M, (Fig. 8)	19			
	1/4 NPT M, (Fig. 9)	10			
	Customized connection available	XX			
Electrical connection					
	DIN 43650, demountable, IP 65, (Fig. 10), (4)		01		
	Binder 723, 5-pin, IP 67, (Fig. 11), (4)		03		
	Binder 723, 5-pin, demountable, IP 67, (Fig. 12), (4)		43		
	MIL C26482, 10-6, IP 40, (Fig. 13), (4)		06		
	PE cable, IP 67, (Fig. 14), (5), (6)		13		
	PUR cable, IP 67, (Fig. 14), (5), (7)		15		
	PTFE cable, IP 67, (Fig. 14), (5)		21		
	Customized connection available		XX		
Output signal					
	0...mV (specified by the customer)		XX		
Accuracy					
	≤ ± 0.5 % FS			0	
	≤ ± 0.25 % FS (on request)			1	
Temperature range					
	0...70 °C compensated (allowed process temperature: -25...85 °C)			0	
	-25...85 °C compensated (allowed process temperature: -25...100 °C)			7	
	-25...85 °C compensated (allowed process temperature: -25...150 °C)			1	
Option 1					
	Throttle, (8)				A
	Special oil filling: ASEOL Food (for food applications)				G
	Special oil filling: Halocarbon (for oxygen applications), (9)				H
Option 2					
	Electronics packed in gel: Gauge pressure				C
	Electronics packed in gel: Absolute pressure				D
Option 3					
	Version titanium				K
	Seals: Viton (standard)				U
	Seals: EPDM				S

Seals: Kalrez

Aging

				T
				Z

- (1) 50 mbar on request
- (2) Titanium available \leq 400 bar (burst pressure > 550 bar)
- (3) mbar, PSI, kPa etc. disponible
- (4) Cable socket connector not included
- (5) Please specify the required cable length and medium
- (6) Suitable for drinking water (food approved)
- (7) For operating temperature > 50°C, PE or PTFE cable must be used
- (8) Only with pressure connection Fig. 2, Fig. 4, Fig. 7, Fig. 8 and Fig. 9
- (9) Maximum pressure measuring range \leq 270 bar (Berstdruck > 400 bar)

Technical drawings

Pressure Connections

Fig. 1

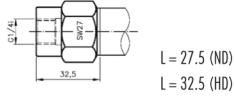


Fig. 2

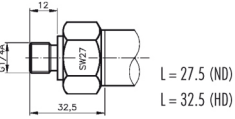


Fig. 3

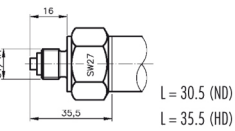


Fig. 4

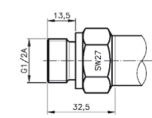


Fig. 5

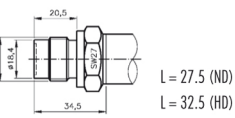


Fig. 6

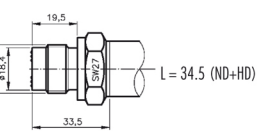


Fig. 7

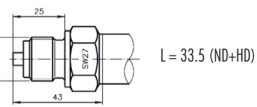


Fig. 8

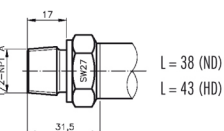
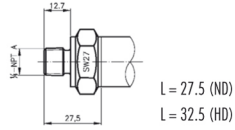


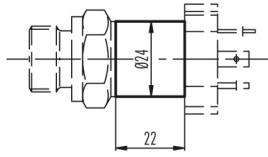
Fig. 9



L = 31.5 (ND)
L = 36.5 (HD)

Dimensions

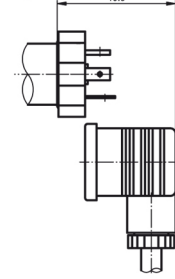
Version for media temperature up to 150°C



ND = low pressure ≤ 30 bar
HD = high pressure > 30 bar

Electrical Connections

Fig. 10



Pin	TM
1	+Vin
2	+Out
3	GND
Earth	-Out

Fig. 11

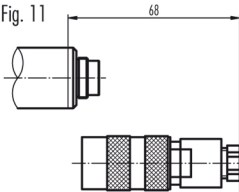
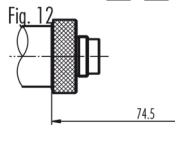
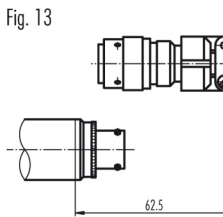


Fig. 12



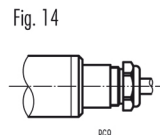
Pin	TM	TM/Ex
1	+Out	+Out
2	-Out	-Out
3	+Vin	+Vin
4	GND	GND
5		EP

Fig. 13



Pin	TM	TM/Ex
A	+Vin	+Vin
B	GND	GND
C	+Out	+Out
D	-Out	-Out
E		EP

Fig. 14



Colour	TM	TM/Ex
white	+Vin	+Vin
yellow	GND	GND
brown	+Out	+Out
green	-Out	-Out
gray		EP

Specifications may change without notice.

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