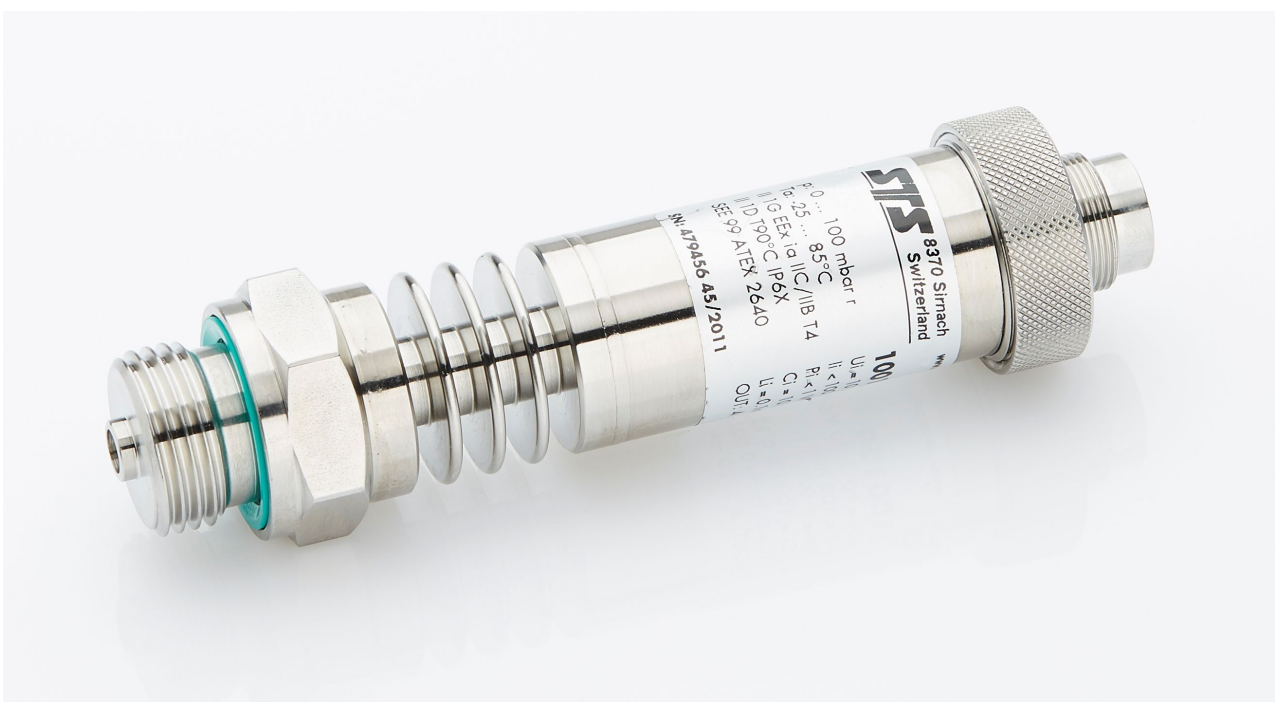


Electronic Pressure Switch

ATM/GR



Customer benefits

- 2 limit switches adjustable over 0 - 100% of the pressure range
- Reverse polarity and short circuit protected
- Fast customization thanks to modular product design
- Pressure switch and analog transmitter in one device
- Demountable electrical connector option allow adjustment of zero and span setting in the field
- Stainless steel and titanium version for use in acidic or otherwise aggressive media

Version: 25.04.2016

Technical Specifications

Pressure measuring range (bar)

	0.1 ... 0.5, (1)	> 0.5 ... 2	> 2 ... 25
Overpressure	3 bar	3 x FS (min. 3 bar)	3 x FS
Burst pressure, (5)	> 200 bar	> 200 bar	> 200 bar
Accuracy, (6) (\pm % FS)	$\leq 0.5 / \leq 0.25$	$\leq 0.5 / \leq 0.25 / \leq 0.1$	$\leq 0.5 / \leq 0.25 / \leq 0.1$
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
Long term stability, (7)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

	> 25 ... 600, (2), (3), (4)	> 600 ... 1000, (2)
Overpressure	3 x FS ($\leq 850 / \leq 1500$ bar)	1500 bar
Burst pressure, (5)	> 850 / ≤ 1500 bar	> 1500 bar
Accuracy, (6) (\pm % FS)	$\leq 0.5 / \leq 0.25 / \leq 0.1$	$\leq 1 / \leq 0.5 / \leq 0.25$
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
Long term stability, (7)	< 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) Process connection frontal and flush diaphragm available ≤ 600 bar

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

(5) Transducer

(6) Zero based accuracy according to DIN-16086, incl. hysteresis and repeatability at ambient temperature

(7) 1 year (typ. / max.), the long term stability can be improved by ageing (burn-in) the sensor

Temperature range

Operating temperature	-25 ... 85 $^{\circ}$ C
Process temperatur	-40 ... 150 $^{\circ}$ C
Storage temperatur	-25 ... 85 $^{\circ}$ C

Electrical specifications

Analog output	0 ... 20 mA / 4 ... 20 mA		
Power supply	10 ... 33 VDC		
Current consumption, (1)			
Circuit diagram			
Load resistance			
Switches			
Number of switches	2 (independent)		
Type	SPDT (Relais)		
Adjustment	Potentiometer		
Setting range	0 ... 100% FS		
Switching voltage, (max.)	48 VDC		
Switching current, (max.)	2 A		
Switching power, (max.)	60 W		
Switching functions			
Description	Pressure is below both set points: both relays are selected.	Pressure is over the set point 1 (relay 1 is released), but below the set point 2 (relay 2 is selected).	Pressure is over both set points: both relays are released or the supply voltage is missing.

(1) Both switches activated, without current output

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	PVC

(1) Hastelloy (C-276) on request

Equipment

Overview

10.00.0091	Accessories overview

Additional documents

Operating and safety instructions

	Article number
10.88.0092	DMM029

Ordering information

		X. XXXX.	XXXX.	XX.	XXX
Type					
	ATM/GR	27			
Pressure type					
	Gauge	1			
	Absolute (vacuum)	2			
	Sealed gauge	3			
Pressure measuring range					
	50 mbar ... <100 mbar	XX			
	100 mbar ... 600 bar	XX			
	> 600 bar	XX			
	Negative ranges, offset, special adjustment	99			
Process connection					
	G 1/4 F (Fig. 1)	00			
	1/4 NPT M	10			
	1/2 NPT M (Fig. 8)	19			
	G 1/4 M (Fig. 2)	11			
	G 1/4 flush diaphragm	21			
	G 1/4 M, manometer DIN 16288 (Fig. 3)	12			
	G 1/2 M, (Fig. 4)	13			
	G 1/2 M Hastelloy C-276	98			
	G 1/2 M, frontal diaphragm (Fig. 5), (4)	14			
	G 1/2 M, frontal diaphragm	37			
	G 1/2 M, flush diaphragm (Fig. 6), (4)	15			
	G 1/2 M, manometer DIN 16288 (Fig. 7)	16			
	G 1/2 male with bore Ø 14 mm	17			
	Customized	99			
Electrical connection					
	M16 (Binder 723), 12 pins, IP 67 (Fig. 10), (5)		45		
	PVC cable, grey, IP 67 (Fig. 11), (6)		10		
	Customized		99		
Output signal					
	0...20 mA, 2 relays		14		
	4...20 mA, 2 relays		15		
	Customized				
Accuracy					
	≤ 600 bar ≤ ± 0.5 % FS			0	
	≤ 600 bar ≤ ± 0.25 % FS			1	
	≤ 600 bar ± 0.1 % FS			2	
	> 600 bar ≤ ± 1 % FS			5	
	> 600 bar ≤ ± 0.5 % FS			0	
	> 600 bar ≤ ± 0.25 % FS			1	
Temperature range					
	0 ... 70°C compensated (allowed process temperature: -25 ... 100°C)			0	
	-25 ... 100°C compensated (allowed process temperature: -25 ... 100°C)			7	
	-25 ... 85°C compensated (allowed process temperature: -25 ... 100°C)			1	
	-25 ... 85°C compensated (allowed process temperature: -25 ... 150°C) with cooling fins			2	
	-20 ... 100°C compensated (allowed process temperature: -25 ... 150°C) with cooling fins			6	

	Customized				9
Option 1					
	Throttle, (7)				A
	Special oil filling: Anderol Food (for food applications)				G
	Special oil filling: AS100 (suitable for meda temp -55...150°C)				J
	Special oil filling: PAO4 (silicone free)				Q
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				T

(4) Process connection available ≤ 600 bar

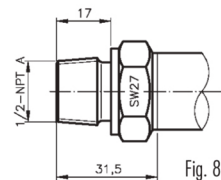
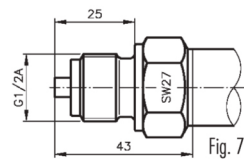
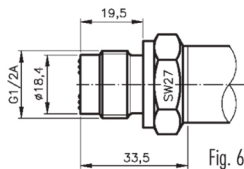
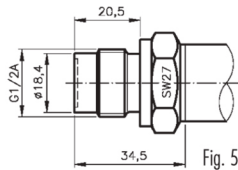
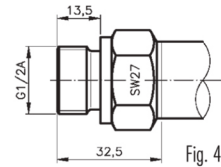
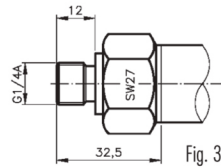
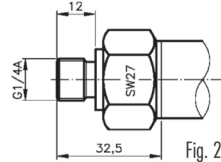
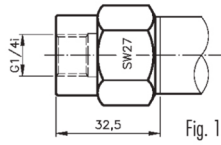
(5) Cable socket connector not included

(6) Please specify the required cable length and medium

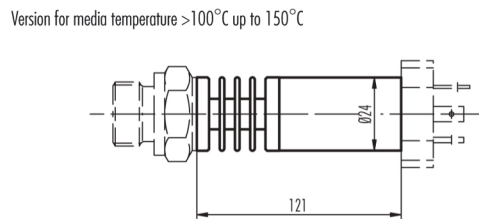
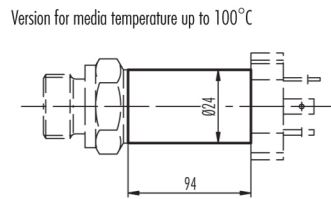
(7) Only with pressure connection Fig. 2, Fig. 3, Fig. 4, Fig. 7 and Fig. 8

Technical drawings

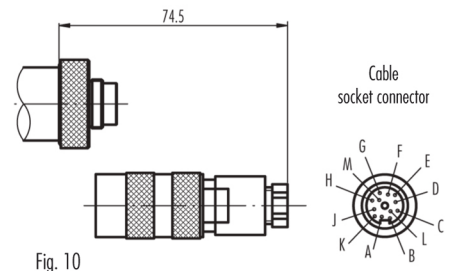
Pressure connection



Dimensions

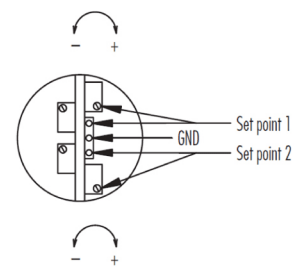
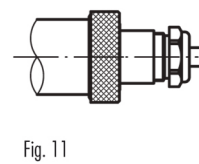


Electrical connection



Pin	
A	+Vin
L	Pout
B	GND
E	NC1
D	COM1
F	NO1
H	NC2
G	COM2
J	NO2

Colour	
white	+Vin
brown	Pout
yellow	GND
green	NC1
orange	COM1
violet	NO1
red	NC2
blue	COM2
black	NO2



Connector side

Specifications may change without notice.

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