

Digital pressure transmitters

DTM



Version: 28.03.2012

Technical Specifications

Pressure measuring range (bar)

	0.1 ... 0.5	> 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, (3), (\pm % FS)	≤ 0.25	≤ 0.1	≤ 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, (4)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

	> 25 ... 600, (1), (2)	> 600 ... 1000, (1)
Overpressure	3 x FS (≤ 850 / ≤ 1500 bar)	1500 bar
Burst pressure	> 850 / ≤ 1500 bar	> 1500 bar
Accuracy, (3), (\pm % FS)	≤ 0.1	≤ 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, (4)	< 0.1% FS / < 0.2% FS	< 0.1% FS / < 0.2% FS

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

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

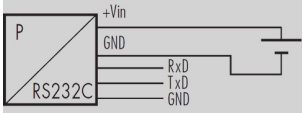
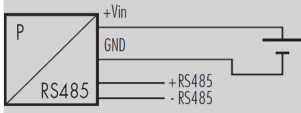
(3) Zero based accuracy according to DIN16086, incl. hysteresis and repeatability at ambient temperature

(4) 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

	RS232C	RS485
Resolution	0.01% FS	0.01% FS
Circuit diagram		
Power supply	5...30 V DC	5...30 V DC
Current consumption	< 7 mA	< 7 mA
Integration time	1 ms...20 s, adjustable	1 ms...20 s, adjustable
Identification	Each DTM has a unique serial number, as well as a user-definable description	Each DTM has a unique serial number, as well as a user-definable description

Qualifications

	Description	Level	Typical interferences
EN 61000-4-2	Electrostatic discharge	4 kV contact 8 kV air	
EN 61000-4-3	Irradiated RF	10V/m (0.08...1 GHz)	Radio sets, wireless phones
EN 61000-4-4	Transients (burst)	2 kV	Motors, valves
EN 61000-4-6	Conducted RF	10 V (0.15...80 MHz)	Frequency converters

Physical specifications

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

(1) Hastelloy (C-276) on request

Accessories

Overview

10.00.0091	Accessories overview

Additional documents

Operating manual

	Article number
10.00.0124	DEB013

Ordering information

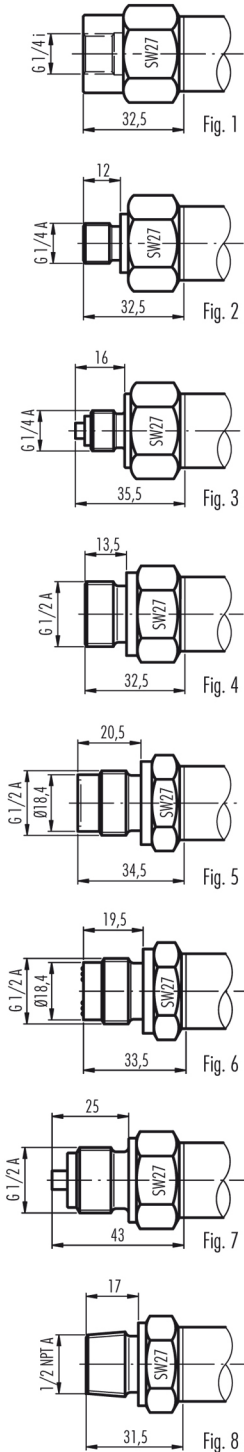
		X. XXXX.	XXXX.	XX.	XXX
Type					
	DTM	28			
Pressure type					
	Gauge	1			
	Absolute (vacuum)	2			
	Sealed gauge	3			
Pressure measuring range					
	Any pressure measuring ranges between 0...100 mbar and 0...1000 bar available, (1), (2)	XX			
Process connection					
	G 1/4 F, (Fig. 1)	00			
	G 1/4 M, (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			
	1/4 NPT M	10			
	1/2 NPT M, (Fig. 8)	19			
	Customized connection available	XX			
Electrical connection					
	DIN 43650, demountable, IP 65, (Fig. 10), (2)		01		
	Binder 723, 5-pin, IP 67, (Fig. 11), (2)		03		
	MIL C26482, 10-6, IP 40, (Fig. 13), (2)		06		
	PE cable, IP 67, (Fig. 14), (3), (4)		13		
	PUR cable, IP 67, (Fig. 14), (3), (5)		15		
	PTFE cable, IP 67, (Fig. 14), (3)		21		
	Customized connection available		XX		
Output signal					
	RS232C		61		
	RS485		62		
Accuracy					
	$\leq \pm 0.25\%$ FS (≤ 500 mbar / > 600 bar)			1	
	$\leq \pm 0.10\%$ FS (> 500 mbar... ≤ 600 bar)			2	
Temperature range					
	0...70 °C compensated (allowed process temperature: -25...85 °C)			0	
	-25...85 °C compensated (allowed process temperature: -25...100 °C)			1	
	-25...85 °C compensated (allowed process temperature: -25...150 °C)			2	
Option 1					
	Throttle, (6)				A
	Special oil filling: ASEOL Food (for food applications)				G
	Special oil filling: Halocarbon (for oxygen applications), (7), (8)				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					T
Ageing					Z

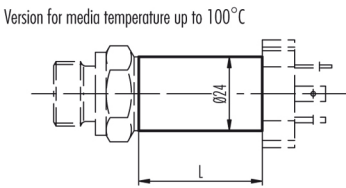
- (1) Titanium available \leq 400 bar (burst pressure > 550 bar)
- (2) Cable socket connector not included
- (3) Please specify the required cable length and medium
- (4) Suitable for drinking water (food approved)
- (5) For operating temperature > 50°C, PE or PTFE cable must be used
- (6) Only with pressure connection Fig. 2, Fig. 3, Fig. 4, Fig. 7 and Fig. 8
- (7) Maximum pressure measuring range \leq 270 bar (burst pressure > 400 bar)
- (8) min. Medium temperature -25 ° C

Technical drawings

Pressure Connection

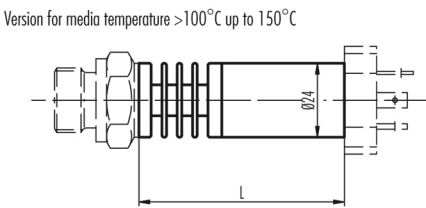


Dimensions



Version for media temperature up to 100°C

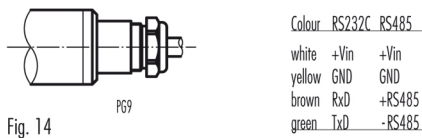
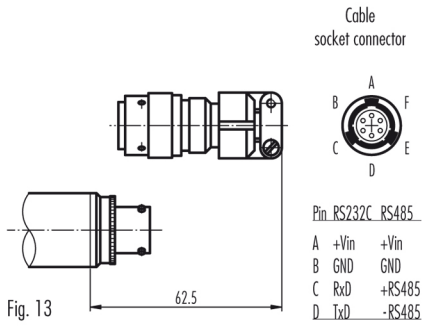
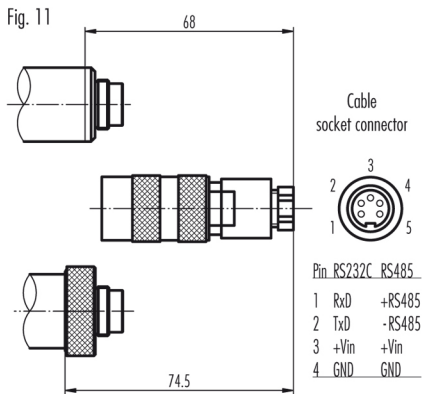
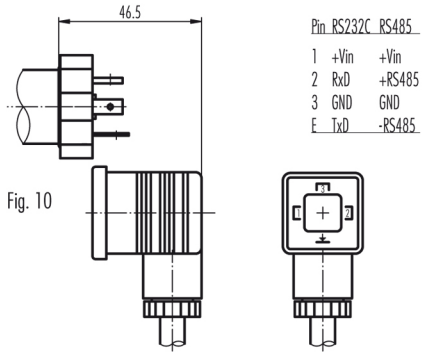
L = 94 mm for connector DIN 43650 (Fig. 10)



Version for media temperature >100°C up to 150°C

L = 121 mm for connector DIN 43650 (Fig. 10)

Electrical Connection



Specifications may change without notice.

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