APPLIED MEASUREMENTS LTD.
3 Mercury House, Calleva Park, Aldermaston, Berkshire, RG7 8PN
Tel: +44 (0) 1189 817339 | Web: www.appmeas.co.uk
Fax: +44 (0) 1189 819121 | Email: info@appmeas.co.uk

Digital pressure transmitters

PiD600 Series

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), (± % FS)	≤ 0.25	≤ 0.1	≤ 0.1
Thermal shift, (± % FS/°C)			
Zero point 0...70°C	≤ 0.06	≤ 0.03	≤ 0.015
Zero point -25...85°C	≤ 0.08	≤ 0.04	≤ 0.02
Span 0…70°C	≤ 0.015	≤ 0.015	≤ 0.015
Span -25…85°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

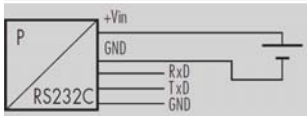
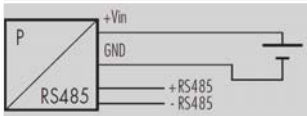
	> 25 ... 600, (1), (2)	> 600 ... 1000, (1)
Overpressure	3 x FS (≤ 850 / ≤ 1500 bar)	1500 bar
Burst pressure	> 850 / ≤ 1500 bar	> 1500 bar
Accuracy, (3), (± % FS)	≤ 0.1	≤ 0.25
Thermal shift, (± % FS/°C)		
Zero point 0...70°C	≤ 0.015	≤ 0.015
Zero point -25...85°C	≤ 0.02	≤ 0.02
Span 0…70°C	≤ 0.015	≤ 0.015
Span -25…85°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 °C
Process temperatur	-40...150 °C
Storage temperatur	-25...85 °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

Seals: Kalrez					T
Ageing					Z

(1) Titanium available ≤ 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 ≤ 270 bar (burst pressure > 400 bar)

Technical drawings

Pressure Connection

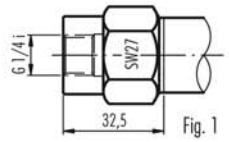


Fig. 1

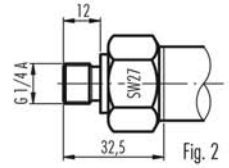


Fig. 2

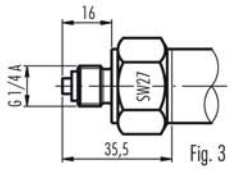


Fig. 3

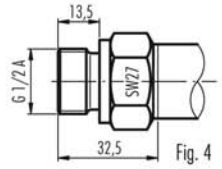


Fig. 4

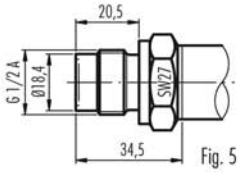


Fig. 5

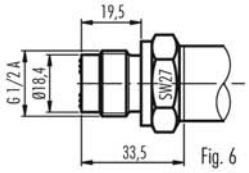


Fig. 6

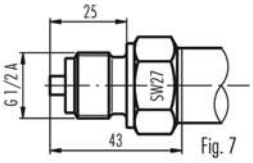


Fig. 7

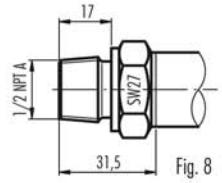
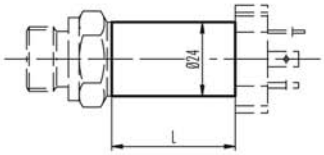


Fig. 8

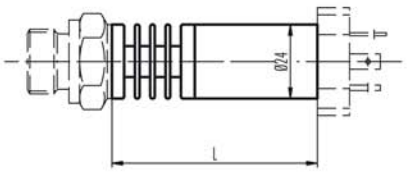
Dimensions

Version for media temperature up to 100°C



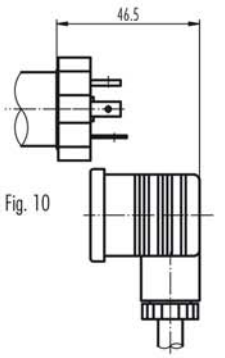
L = 94 mm for connector DIN 43650 (Fig. 10)

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



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

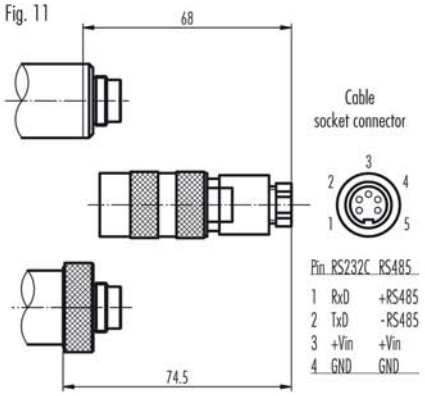
Electrical Connection



Pin	RS232C	RS485
1	+Vin	+Vin
2	RxD	+RS485
3	GND	GND
E	TxD	-RS485

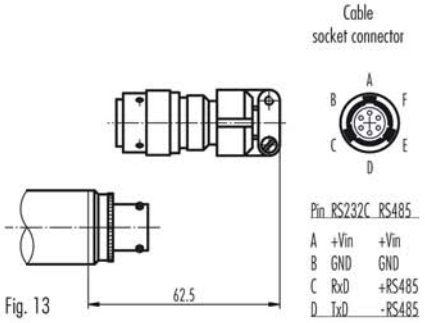
Fig. 10

Fig. 11



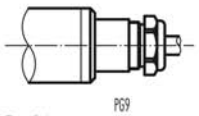
Pin	RS232C	RS485
1	RxD	+RS485
2	TxD	-RS485
3	+Vin	+Vin
4	GND	GND

Fig. 12



Pin	RS232C	RS485
A	+Vin	+Vin
B	GND	GND
C	RxD	+RS485
D	TxD	-RS485

Fig. 13



Colour	RS232C	RS485
white	+Vin	+Vin
yellow	GND	GND
brown	RxD	+RS485
green	TxD	-RS485

Fig. 14

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