

## DIGITAL PRESSURE TRANSMITTER DTM

**28**

### Features

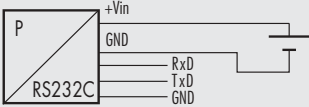
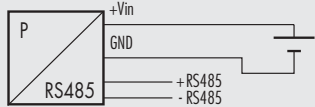
- Compact and robust stainless steel assembly 1.4435 (316L)
- Piezoresistive measuring element
- Gauge, absolute or sealed gauge
- All pressure ranges between 0...50 mbar and -1...1000 bar available
- Calibration available for all common pressure units
- High reliability
- Customized versions due to modular assembly
- Reverse polarity and short circuit protected
- Media temperature up to 150°C (option)
- Interface RS232C or RS485

### Typical applications

- Machine installations
- Industrial process control
- Heating and ventilation
- Environmental monitoring
- Food industry
- Mobile hydraulics
- Test and calibration systems
- Gas density control

## Specifications

Pressure range	[bar]	0.05 ... 0.5	> 0.5 ... 2	> 2 ... 25	> 25 ... 600	> 600 ... 1000
<b>Overpressure</b>		3bar	3 x FS (min. 3bar)	3 x FS	3 x FS (max. 850bar, optional 1500bar)	1500bar
<b>Burst pressure</b>	[bar]	> 200	> 200	> 200	> 850 (optional 1500bar)	1500
<b>Accuracy</b> <sup>1)</sup>	[± % FS]	≤ 0.25	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1
<b>Thermal shift</b>	[± % FS/°C]					
Zero	0...70°C	≤ 0.06 <sup>2)</sup>	≤ 0.03	≤ 0.015	≤ 0.015	≤ 0.015
	-25...85°C	≤ 0.08 <sup>3)</sup>	≤ 0.04	≤ 0.02	≤ 0.02	≤ 0.02
Span	0...70°C	≤ 0.015	≤ 0.015	≤ 0.015	≤ 0.015	≤ 0.015
	-25...85°C	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02
<b>Long term stability</b> (1 year)		< 4mbar	< 4mbar	< 0.2% FS	< 0.2% FS	< 0.2% FS

Interface	RS232C	RS485
<b>Power supply</b>	5...30V DC	5...30V DC
<b>Current consumption</b>	< 7mA	< 7mA
<b>Circuit diagram</b>		
<b>Resolution</b>	< 0.01% FS	< 0.01% FS
<b>Integration time</b>	1µs ... 20s, adjustable	1µs ... 20s, adjustable
<b>Identification</b>	Each DTM has a serial number and a customer programmable mark	

## Materials

**Process connection, diaphragm, housing** Stainless steel 1.4435 (316L), other materials (e.g. titanium) on request  
**Seals** (standard) Viton (other materials see ordering information)

## Electromagnetic compatibility

Standard	Level	Typical interferences
<b>Emission:</b>		
EN 61000-6-3 EN 55022	Generic emission standard Emission, class B	
<b>Immunity:</b>		
EN 61000-6-2	Generic immunity	
EN 61000-4-2	Electrostatic discharge	4kV contact, 8kV air
EN 61000-4-3	Radiated electro-magnetic field	10V/m, 80-1000MHz, 80% AM 1kHz
EN 61000-4-3	Radiated electro-magnetic field (GSM)	10V/m, 950MHz, 200Hz on/off
EN 61000-4-4	Fast transients (burst)	2kV
EN 61000-4-6	Conducted radio-frequency	10V, 0.15-80MHz, 80% AM 1kHz
EN 61000-4-5	Surge	Cellular phones, radio sets Digital portable phones Motors, valves Cellular phones, radio sets

<sup>1)</sup> Zero based non-conformity according to DIN 16086, including hysteresis and repeatability

<sup>2)</sup> 50 - 99mbar: ≤ 0.12

<sup>3)</sup> 50 - 99mbar: ≤ 0.16

## Ordering Information

		28	X	.XXXX	.XXXX	.XX	.XXX
<b>Type</b>	DTM	28					
<b>Pressure type</b>	Gauge	1					
	Absolute	2					
	Sealed gauge	3					
<b>Pressure range</b>	All pressure ranges between 0...50 mbar and -1...1000 bar available		XX				
<b>Process connection</b>	G 1/4 female (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		
	Other process connector available				XX		
<b>Electrical connection</b>	Connector DIN 43650 (screwed on) <sup>2)</sup> (Fig. 10) IP 65				01		
	Connector Binder 723, 5-pin <sup>2)</sup> (Fig. 11) IP 67				03		
	Connector MIL C26482, (10-6) <sup>2)</sup> (Fig. 13) IP 40				06		
	PE cable <sup>3)4)</sup> (Fig. 14) IP 67				13		
	PUR cable <sup>3)</sup> (Fig. 14) IP 67				15		
	Teflon cable <sup>3)</sup> (Fig. 14) IP 67				21		
	Other connector available				XX		
<b>Interface</b>	RS232C				61		
	RS485				62		
<b>Accuray</b>	≤ ± 0.25% FS (for pressure ranges ≤ 500mbar)				1		
	≤ ± 0.1 % FS (for pressure ranges > 500mbar)				2		
<b>Temperature range</b>	Compensated 0...70°C (media temperature 0... 80°C)				0		
	Compensated -25...85°C (media temperature -25...100°C)				1		
	Compensated -25...85°C (media temperature -25...150°C)				2		
	Special temperature range				9		
<b>Options</b>	Throttle <sup>1)</sup>						A
	Electronics packed in gel: Gauge pressure						C
	Absolute and sealed gauge pressure						D
	Temperature measurement (ambient temperature)						E
	Special oil filling in the TD: ASEOL Food						G
	Halocarbon						H
	Seals: EPDM						S
	Kalrez						T
Special options						Z	

<sup>2)</sup> Available only with fig. 2, fig. 4 or fig. 7

<sup>3)</sup> Cable socket connector not included

<sup>4)</sup> Please specify the required cable length

<sup>5)</sup> Suitable for drinking water (food approved)

## Process Connection

## Dimensions

## Electrical Connection

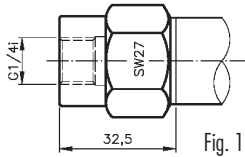


Fig. 1

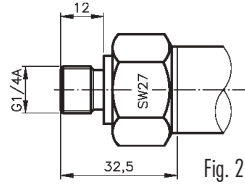


Fig. 2

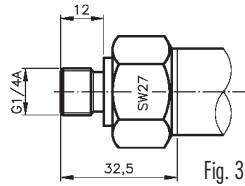


Fig. 3

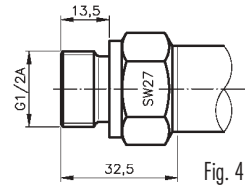


Fig. 4

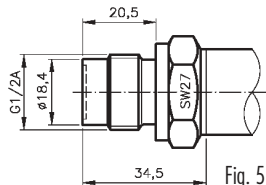


Fig. 5

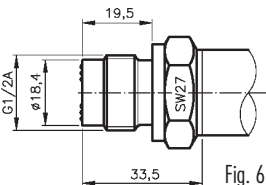


Fig. 6

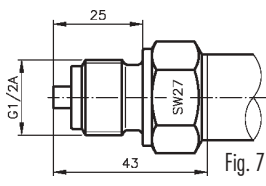


Fig. 7

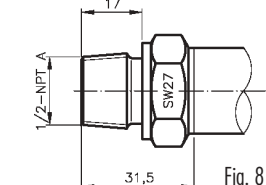
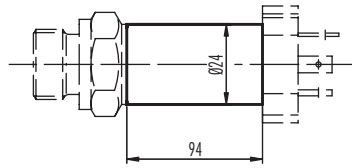


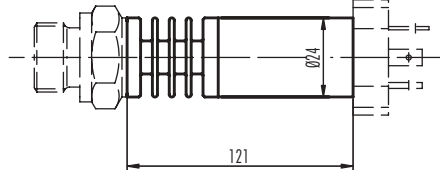
Fig. 8

Version for media temperature up to 100°C



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

Version for media temperature up to 150°C



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

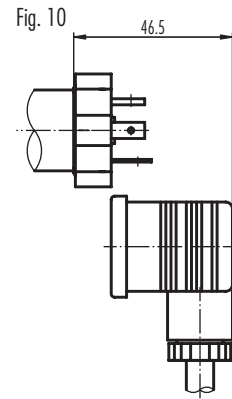


Fig. 10

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

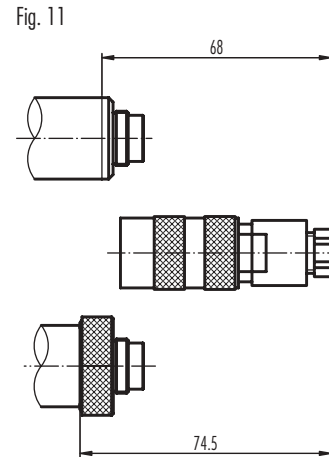


Fig. 11

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

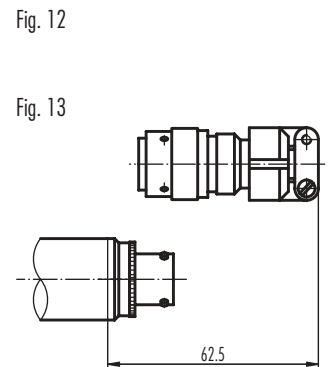


Fig. 12

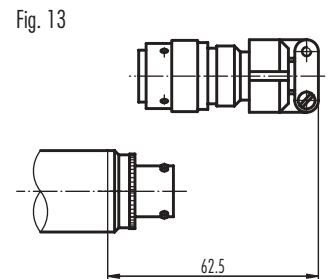


Fig. 13

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

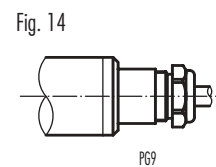


Fig. 14

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

Specifications may change without notice.

DED016A

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