

## Pressure and temperature transmitters

# ATM/T

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Version: 07.01.2016

# Technical Specifications

## Pressure measuring range (bar)

	0.1 ... 0.5, (1)	> 0.5 ... 2	> 2 ... 25
<b>Overpressure</b>	3 bar	3 x FS ( $\geq 3$ bar)	3 x FS
<b>Burst pressure</b>	$\geq 30$ bar	$\geq 30$ bar	3 x FS ( $\geq 25$ bar)
<b>Accuracy, (5), (<math>\pm</math> % FS)</b>	$\leq 0.5 / \leq 0.25$	$\leq 0.5 / \leq 0.25 / \leq 0.1$	$\leq 0.5 / \leq 0.25 / \leq 0.1$
<b>Thermal shift, (<math>\pm</math> % FS/<math>^{\circ}</math>C)</b>			
Zero point 0 ... 70 $^{\circ}$ C	$\leq 0.06$ , (5)	$\leq 0.03$	$\leq 0.015$
Zero point -25 ... 85 $^{\circ}$ C	$\leq 0.08$ , (6)	$\leq 0.04$	$\leq 0.02$
Span 0 ... 70 $^{\circ}$ C	$\leq 0.015$	$\leq 0.015$	$\leq 0.015$
Span -25 ... 85 $^{\circ}$ C	$\leq 0.02$	$\leq 0.02$	$\leq 0.02$
<b>Response time, (typ.)</b>	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS
<b>Long term stability, (6)</b>	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

	> 25 ... 600, (2), (3), (4)	> 600 ... 1000, (2)
<b>Overpressure</b>	3 x FS ( $\leq 850 / \leq 1500$ bar)	1500 bar
<b>Burst pressure</b>	> 850 / $\leq 1500$ bar	> 1500 bar
<b>Accuracy, (5), (<math>\pm</math> % FS)</b>	$\leq 0.5 / \leq 0.25 / \leq 0.1$	$\leq 1 / \leq 0.5 / \leq 0.25$
<b>Thermal shift, (<math>\pm</math> % FS/<math>^{\circ}</math>C)</b>		
Zero point 0 ... 70 $^{\circ}$ C	$\leq 0.015$	$\leq 0.015$
Zero point -25 ... 85 $^{\circ}$ C	$\leq 0.02$	$\leq 0.02$
Span 0 ... 70 $^{\circ}$ C	$\leq 0.015$	$\leq 0.015$
Span -25 ... 85 $^{\circ}$ C	$\leq 0.02$	$\leq 0.02$
<b>Response time, (typ.)</b>	< 1ms / 10 ... 90% FS	< 1ms / 10 ... 90% FS
<b>Long term stability, (6)</b>	< 0.1% FS / < 0.2% FS	< 0.1% FS / < 0.2% FS

(1) 50 mbar on request

(2) Titanium available  $\leq 400$  bar (burst pressure > 550 bar)

(3) Process connection frontal and flush diaphragm available  $\leq 600$  bar

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

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

(6) 1 year (typ. / max.), the long term stability can be improved by ageing (burn-in) the sensor

## Temperature measuring range

<b>Standard, (1)</b>	-25 ... 100 $^{\circ}$ C
Lower end of range	-40 $^{\circ}$ C
Upper end of range	150 $^{\circ}$ C
<b>Temperature span, (2)</b>	> 30 $^{\circ}$ C
<b>Accuracy, (3)</b>	
0...70 $^{\circ}$ C, (typ. / max.)	$\pm 0.5 / 1.0$ $^{\circ}$ C
-25...85 $^{\circ}$ C, (typ. / max.)	$\pm 1.0 / 1.5$ $^{\circ}$ C
-25...100 $^{\circ}$ C, (typ. / max.)	$\pm 2.0$ $^{\circ}$ C

(1) Other temperature measuring ranges on request

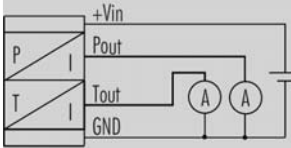
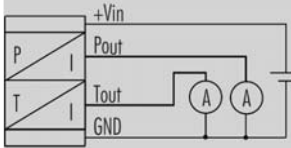
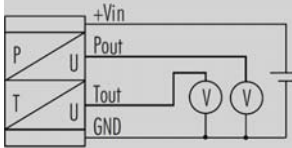
(2) Measuring range 15 ... 30 $^{\circ}$ C must be contained

(3) Probe, electronics, calibration

## Temperature range

<b>Operating temperature</b>	-25 ... 85 $^{\circ}$ C
<b>Process temperature</b>	-40 ... 150 $^{\circ}$ C
<b>Storage temperature</b>	-25 ... 85 $^{\circ}$ C

## Electrical specifications

	4 ... 20 mA	0 ... 20 mA	0 ... 5 V / 0 ... 10 V
<b>Power supply</b>	15 ... 30 VDC	15 ... 30 VDC	15 ... 30 VDC
Supply influence	< 0.1% FS	< 0.1% FS	< 0.1% FS
<b>Current consumption</b>			3 mA
<b>Circuit diagram</b>			
<b>Load resistance</b>	$(U_b - 5V) / 0.02A$	$(U_b - 5V) / 0.02A$	$R_L > 10k\Omega$
Load influence	< 0.1% FS	< 0.1% FS	< 0.1% FS

## Qualifications

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

## Physical specifications

<b>Materials</b>	
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, FEP, PE

(1) Hastelloy (C-276) on request

## Equipment

### Overview

<b>10.00.0091</b>	Accessories overview
<b>HART001</b>	Cable Socket Connector

## Additional documents

### Operating and safety instructions

	Article number
<b>10.88.0092</b>	DMM029

## Ordering information

		X. XXXX.	XXXX.	XX.	XXX
<b>Type</b>					
	ATM/T	26			
<b>Pressure type</b>					
	Gauge	1			
	Absolute (vacuum)	2			
	Sealed gauge	3			
<b>Pressure measuring range</b>					
	50 mbar ... < 100 mbar	XX			
	100 mbar ... 600 bar	XX			
	> 600 bar	XX			
	Negative ranges, offset, special adjustment	99			
<b>Process connection</b>					
	G 1/2 M, frontal diaphragm, (Fig. 5), (4)	14			
	G 1/2 M, with flush diaphragm, (Fig. 6), (4)	15			
	Customized	99			
<b>Electrical connection</b>					
	DIN 43650 with metal threaded part, demountable, IP 65 (Fig. 10), (5)		01		
	Binder 723, 5-pin, IP 67 (Fig. 11), (5)		03		
	Binder 723, 5-pin, demountable, IP 67 (Fig. 12), (5)		43		
	MIL C26482, 10-6, IP 40 (Fig. 13), (5)		06		
	PE cable, IP 67, black (Fig. 14), (6), (7)		13		
	PUR cable, IP 67, black (Fig. 14), (6), (8)		15		
	FEP cable, IP 67, black (Fig. 14), (6)		21		
	Customized connection available		99		
<b>Output signal</b>					
	0 ... 5 V DC		46		
	0 ... 10 V DC		47		
	0 ... 20 mA		00		
	4 ... 20 mA		05		
	Customized		99		
<b>Accuracy</b>					
	$\leq \pm 0.5$ % FS			0	
	$\leq \pm 0.25$ % FS			1	
	$\leq \pm 0.1$ % FS			2	
<b>Temperature range</b>					
	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	
<b>Option 1</b>					
	Special oil filling: Anderol Food (for food applications)				G
	Special oil filling: AS100 (suitable for process temperatures -55...150°C)				J
	Special oil filling: PA04 (silicone free)				Q

<b>Option 2</b>					
	Electronics packed in gel: Gauge pressure				D
	Titanium				K
	Seals: Viton (standard)				U
<b>Option 3</b>					

- (1) 50 mbar on request
- (2) Titanium available  $\leq$  400 bar (burst pressure > 550 bar)
- (3) mbar, PSI, kPa etc. available
- (4) Process connection available  $\leq$  600 bar
- (5) Cable socket connector not included
- (6) Please specify the required cable length and medium
- (7) Suitable for drinking water (food approved)
- (8) For operating temperature > 50°C, PE or FEP cable must be used

# Technical drawings

## Pressure Connections

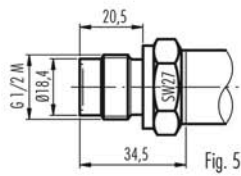


Fig. 5

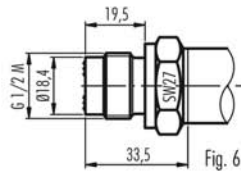
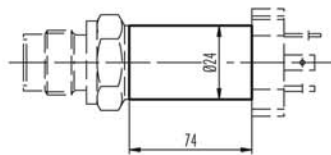


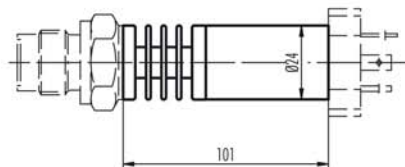
Fig. 6

## Dimensions

Version for media temperature up to 100°C



Version for media temperature up to 150°C



## Electrical Connections

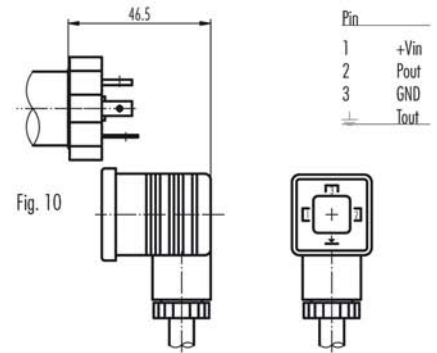


Fig. 10

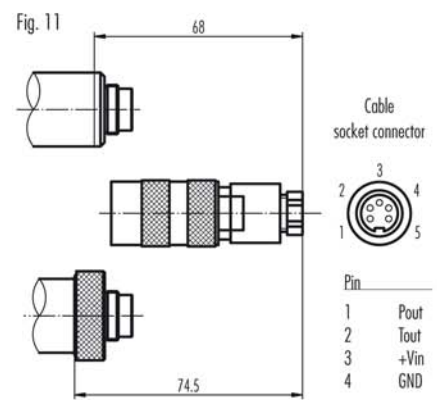


Fig. 12

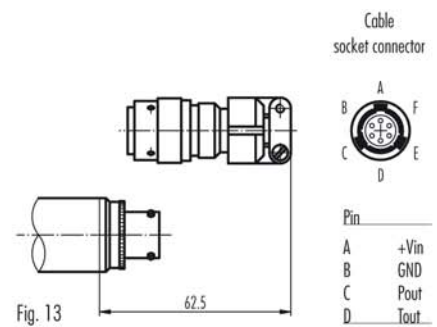


Fig. 13

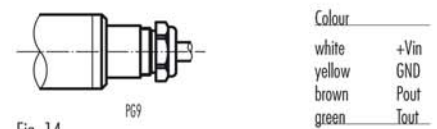


Fig. 14

Specifications may change without notice.

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