

## Intrinsically safe flange pressure transmitters

# ATM/F/Ex

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Version: 07.01.2016

# Technical Specifications

## Pressure measuring range (bar)

	0.1 ... 0.5	> 0.5 ... 2	> 2 ... 25
<b>Overpressure</b>	3 bar	3 x FS ( $\geq 3$ bar)	3 x FS
<b>Burst pressure</b>	> 200 bar	> 200 bar	> 200 bar
<b>Accuracy, (1), (<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	$\leq 0.06$	$\leq 0.03$	$\leq 0.015$
Zero point -25 ... 85 $^{\circ}$ C	$\leq 0.08$	$\leq 0.04$	$\leq 0.02$
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>Long term stability, (2)</b>	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

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

(2) 1 year (typ. / max.)

## Temperature range

<b>Operating temperature</b>	-25 ... 85 $^{\circ}$ C
<b>Process temperatur</b>	-25 ... 100 $^{\circ}$ C
<b>Storage temperatur</b>	-25 ... 85 $^{\circ}$ C

## Electrical specifications

	4 ... 20 mA
<b>Power supply</b>	10 ... 33 VDC
Supply influence	< 0.1% FS
<b>Circuit diagram</b>	
<b>Load resistance</b>	
Load influence	< 0.1% FS

## ATEX Approval

<b>Certificate, (1)</b>	SEV 11 ATEX 0142		
<b>Gas</b>	II 1G Ex ia IIC T3 ... T6	EN 60079-0 / -11 / -26	
<b>Dust</b>	II 1D Ex iaD 20 IP6x T125 $^{\circ}$ C ... T80 $^{\circ}$ C	EN 61241-0 / -11	
<b>Mining</b>	I M1 Ex ia I	EN 50303	
<b>Temperature class, (2)</b>	T6	T4	T3
Ambient temperature	-25 ... 55 $^{\circ}$ C	-25 ... 85 $^{\circ}$ C	-25 ... 85 $^{\circ}$ C
Process temperature	-25...55 $^{\circ}$ C	-25...100 $^{\circ}$ C	-25...100 $^{\circ}$ C
<b>Maximum values of the intrinsically safe circuit</b>	30V / 100 mA / 1W		

(1) For detailed Ex specifications see certificate and operating an safety instructions

(2) Without any information about temperature class the transmitter will be delivered for T4

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### Additional approvals

<b>FM</b>	3027351
<b>CSA</b>	2012692

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### 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)	Radio sets, wireless phones
<b>EN 61000-4-4</b>	Transients (burst)	2 kV	Motors, valves
<b>EN 61000-4-5</b>	Surge	10 kA (8 / 20 µs), (1)	Overvoltage
<b>EN 61000-4-6</b>	Conducted RF	10 V (0.15 ... 80 MHz)	Frequency converters

(1) Only with optional surge (lightning) protection

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### Physical specifications

<b>Materials</b>	
Transducer	Stainless steel (316L / 1.4435)
Housing	Stainless steel (316L / 1.4404)
Cable	PUR, FEP

## Accessories

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### Overview

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

## Additional documents

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### Operating and safety instructions

	Article number
<b>10.88.0092</b>	DMM029

## Ordering information

		X. XXXX.	XXXX.	XX.	XXX
<b>Type</b>					
	ATM/F/Ex	35			
<b>Pressure type</b>					
	Gauge	1			
	Absolute pressure (vacuum)	2			
	Sealed gauge	3			
<b>Pressure measuring range</b>					
	100 mbar ... 25 bar	XX			
<b>Process connection</b>					
	Milk flange DN 25 - DIN-118511 (Fig. 1), (1)	30			
	Milk flange DN 40 - DIN-11851 (Fig. 2), (1)	31			
	Milk flange DN 50 - DIN-11851 (1)	32			
	Clamp 1", DN 25 (Fig. 3)	40			
	Clamp 1 1/2", DN 25 (Fig. 3)	41			
	DIN flange DN 25	45			
	DIN flange DN 40	46			
	DIN-flange DN 50	47			
	Customized	99			
<b>Electrical connection</b>					
	DIN-43650, with metal threaded part, demountable, IP 65 (Fig. 10), (2)		01		
	Binder 723, 5 pins		03		
	Binder 723, 5 pins, demountable, IP 67 (Fig. 12), (2)		43		
	MIL C26482, 10-6, IP 40 (Fig. 13), (2)		06		
	Lumberg RSF4, 4 pins (Fig. 15), (2)		07		
	Customized		99		
<b>Output signal</b>					
	4 ... 20 mA		05		
	4 ... 20 mA with surge overvoltage protection		08		
<b>Accuracy</b>					
	≤ ± 0.5 % FS			0	
	≤ ± 0.25 % FS			1	
	≤ ± 0.1 % FS			2	
<b>Temperature range</b>					
	T6 (Ta:-25 ... 55°C) 0 ... 70°C compensated (allowed process temperature: -25 ... 55°C)			0	
	T4 (Ta:-25 ... 85°C) -25 ... 85°C compensated (allowed process temperature: -25 ... 100°C)			1	
	T3 (Ta:-25 ... 85°C) -25 ... 85°C compensated (allowed process temperature: -25 ... 150°C), with cooling fins			2	
<b>Option 1</b>					
	Special oil filling: Anderol Food (for food applications)				G
	Special oil filling: AS100 (suitable in media temp. -55 ... 150°C)				J
	Special oil filling: PAO4 (silicone free)				Q
<b>Option 2</b>					
<b>Option 3</b>					
	Dichtungen: Viton (Standard)				U

(1) Nut included

(2) Cable socket connector not included

- (3) Please specify the required cable length and medium
- (4) For operating temperature > 50°C, FEP cable must be used
- (5) min. Medium temperature -25 ° C
- (6) Standard, no special cleaning. Special cleaning must be requested.

# Technical drawings

## Pressure connection

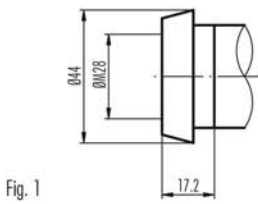
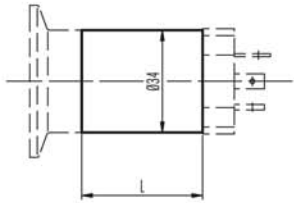


Fig. 1

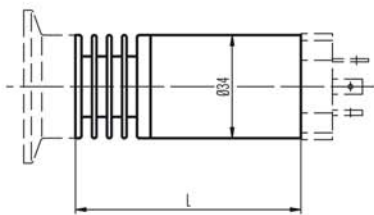
## Dimensions

Version for media temperature up to 100°C



L = 90 mm for version with surge (lightning) protection  
L = 40 mm for all other versions

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



L = 125 mm for version with surge (lightning) protection  
L = 75 mm for all other versions

## Electrical connections

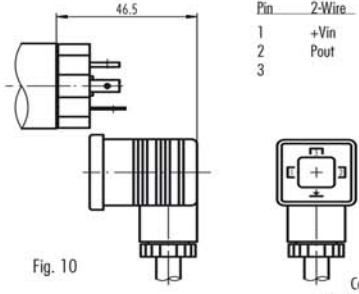


Fig. 10

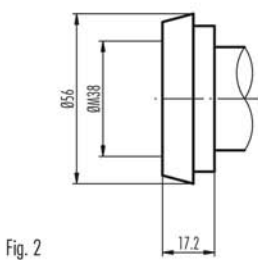
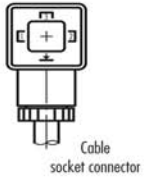


Fig. 2

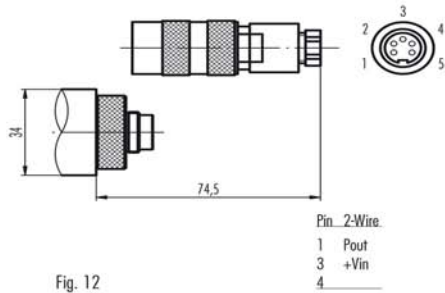


Fig. 12

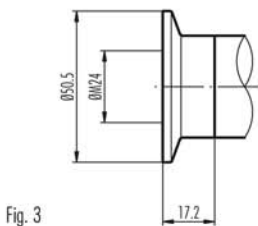
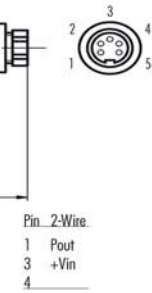


Fig. 3

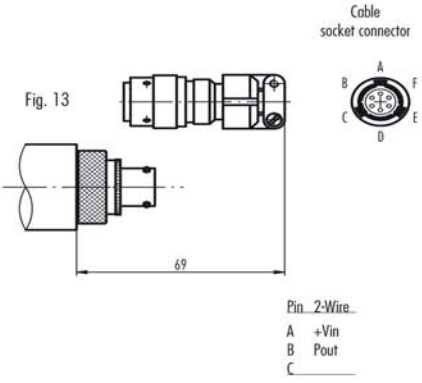


Fig. 13

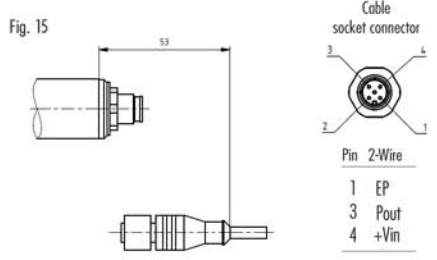
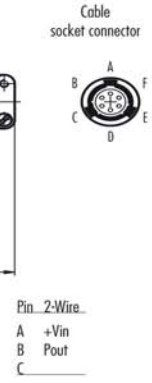
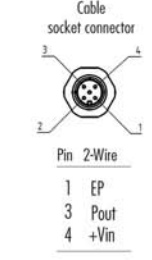


Fig. 15



Specifications may change without notice.

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