

Pressure Transmitter - FM / FM-C certified

ATM/F/IS - Hygienic Pressure Transmitter



CUSTOMER BENEFITS

- Certificate: FM & FM-C
- Welded and compact design for washdowns without residuals
- Surface roughness of flush process connection $R_a \leq 0.4$ for highest hygienic standards
- Demountable electrical connector option allow adjustment of zero and span setting in the field
- Fast customization thanks to configurable product design
- Short response times suitable for dynamic pressure measurements

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, (1)	> 200 bar	> 200 bar	> 200 bar
Accuracy, (2), (3) ($\pm$ % FS)	≤ 0.5 / ≤ 0.25	≤ 0.5 / ≤ 0.25 / ≤ 0.1	≤ 0.5 / ≤ 0.25 / ≤ 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

(1) Transducer

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

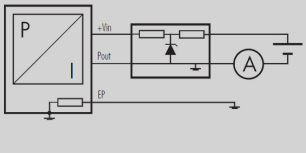
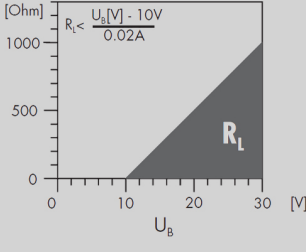
(3) Offset error due to installation not included

(4) 1 year (typ. / max.)

TEMPERATURE RANGE

Operating temperature	-25 ... 85 $^{\circ}$ C
Process temperatur	-25 ... 150 $^{\circ}$ C
Storage temperatur	-25 ... 85 $^{\circ}$ C

ELECTRICAL SPECIFICATIONS

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

APPROVAL

FM	3027351
FM-C	3027351C

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 61000-4-5, (1)	Surge	10 kA (8 / 20 µs), (1)	Overvoltage
EN 61000-4-6	Conducted RF	10 V (0.15 ... 80 MHz)	Frequency converters

(1) Only with optional surge (lightning) protection

PHYSICAL SPECIFICATIONS

Materials	
Transducer	Stainless steel (316L / 1.4435)
Housing	Stainless steel (316L / 1.4404)
Cable	PUR, FEP
Seals	Viton
Surface roughness of the flush (Ra)	0.4 - 0.8

Accessories

OVERVIEW

10.00.0091	Accessories overview
HART001	Cable Socket Connector DIN43650

Additional documents

OPERATING AND SAFETY INSTRUCTIONS

Article number	
10.88.0437	DMM042

Ordering information

		X.	XXXX.	XXXX.	XX.	XXX
Type						
	ATM/F/IS	35				
Pressure type						
	Gauge	1				
	Absolute pressure (vacuum)	2				
	Sealed gauge	3				
Pressure measuring range						
	100 mbar ... 25 bar		XX			
Process connection						
	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			
Electrical connection						
	DIN-43650, with metal threaded part, demountable, IP 65 (Fig. 10), (2), (16)			01		
	M16 (Binder 723), 5 pins (2)			03		
	M16 (Binder 723), 5 pins, demountable, IP 67 (Fig. 12), (2)			43		
	MIL C26482, 10-6, IP 40 (Fig. 13), (2)			06		
	Connectable version, IP 68, M12x1, (Fig. 15), (2)			47		
	Customized			99		
Output signal						
	4 ... 20 mA			05		
	4 ... 20 mA with surge overvoltage protection			08		
Accuracy						
	$\leq \pm 0.5 \% \text{ FS}$				0	
	$\leq \pm 0.25 \% \text{ FS}$				1	
	$\leq \pm 0.1 \% \text{ FS}$				2	
Temperature range						
	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	
Option 1						
	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

Option 2				
Seal: Viton (Standard)				U
Option 3				

(1) Nut included

(2) Cable socket connector not included

(16) Connector side not to be used in Zone 0 or Ex ia IIC, explosion risk

Pressure connection

Fig. 1

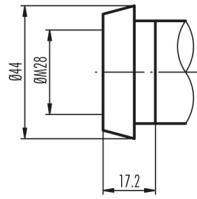


Fig. 2

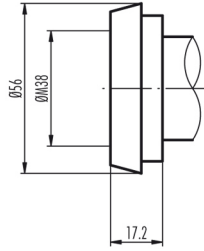
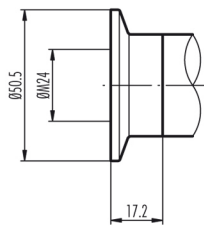
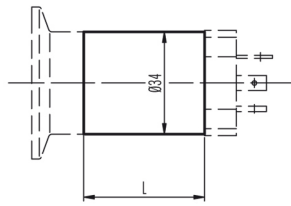


Fig. 3



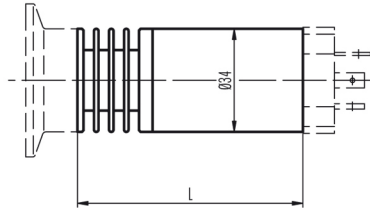
Dimensions

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

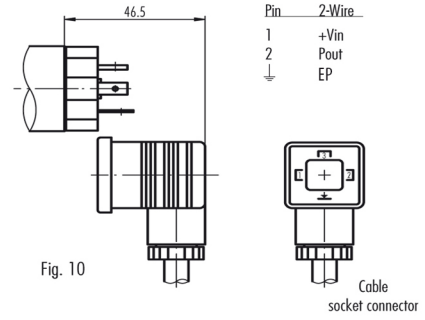


Fig. 12

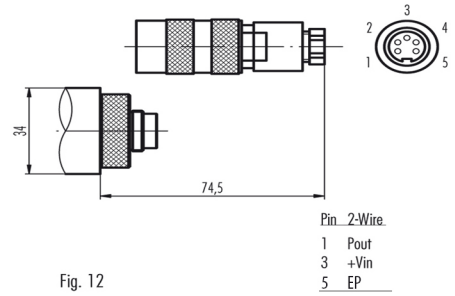


Fig. 13

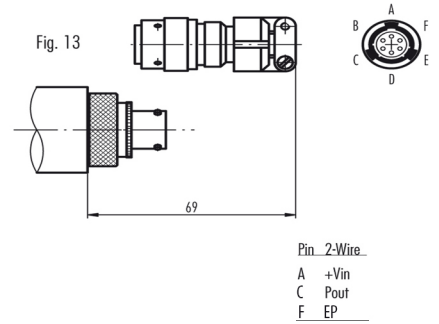


Fig. 15

