

INTRINSICALLY SAFE FLANGE PRESSURE TRANSMITTER ATM/F/Ex



35



II 1G EEx ia IIC T3...T6

Features

- Compact and robust stainless steel assembly 1.4435 (316L)
- Piezoresistive measuring element
- Gauge or absolute
- Standard DIN pressure ranges from 0...100 mbar to 0...25 bar
- Calibration available for all common pressure units
- Complies with the EMC directive 89/336/EEC
- High reliability
- Short delivery time
- Customized versions due to modular assembly
- Reverse polarity and short circuit protected
- Media temperature up to 150°C (optional)
- Surge (lightning) protection according to EN 61000-4-5 as an option

Typical applications

- In hazardous areas
- Chemical
 - Pharmaceutical industry
 - Environmental industry
 - Food processing

Specifications

Pressure range	[bar]	0.1 ... 0.5	> 0.5 ... 2	> 2 ... 25
Overpressure		3 bar	3 x FS (min. 3 bar)	3 x FS
Burst pressure	[bar]	> 200	> 200	> 200
Accuracy¹⁾	[± % FS]	≤ 0.5 (optional ≤ 0.25)	≤ 0.5 (optional ≤ 0.25, ≤ 0.1)	≤ 0.5 (optional ≤ 0.25, ≤ 0.1)
Thermal shift	[± % FS/°C]			
Zero	0...70°C	0.06	0.03	0.015
	-25...85°C	0.08	0.04	0.02
Span	0...70°C	0.015	0.015	0.015
	-25...85°C	0.02	0.02	0.02
Long term stability (1 year)		< 4 mbar	< 4 mbar	< 0.2% FS

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

Electrical connection

Type	4...20 mA Two wire current transmitter	Load resistance	
Supply voltage	10...30 V DC	Supply voltage influence	
Circuit diagram			Load resistance influence
			< 0.1% FS

Ex-Approval

Type of protection Standards	intrinsic safety II 1G EEx ia IIC T3...T6 EN 50 014: 1992 EN 50 020: 1994 EN 50 284: 1997	SEE Certificate SEE 99 ATEX 2640 general requirements intrinsic safety "i" special requirements zone 0 zener barrier	
Max. values for supply/output circuit	30V / 100mA / 1W		
Temperature class	T6	T4	T3
Ambient temperature Ta	[°C] -25...55	-25...85	-25...85
Process temperature	[°C] -25...55	-25...100	-25...150
Without any information about temperature class the transmitter will be labelled T4. Ex-Approval for dust on request.			

Materials

Process connection, diaphragm, housing	Stainless steel 1.4435 (316L)	(other materials on request)
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Electromagnetic compatibility

Standard	Level	Typical interferences	
Emission:			
EN 50081-1:1992	Generic emission standard		
EN 55022:1994	Emission, class B		
Immunity:			
EN 50082-2:1995	Generic immunity		
EN 61000-4-2:1995	Electrostatic discharge	4kV contact, 8kV air	
ENV 50140:1993	Radiated electro-magnetic field	10V/m, 80-1000 MHz, 80% AM 1kHz	Cellular phones, radio sets
ENV 50204:1995	Radiated electro-magnetic field (GSM)	10V/m, 950 MHz, 200Hz on/off	Digital portable phones
EN 61000-4-4:1995	Fast transients (burst)	2 kV	Motors, valves
ENV 50141:1993	Conducted radio-frequency	10V, 0.15-80 MHz, 80% AM 1kHz	Cellular phones, radio sets
EN 61000-4-5:1995 ²⁾	Surge	10 kA (8/20 μs)	Lightning strikes

²⁾ Only with optional surge (lightning) protection



The pressure transmitter ATM fulfill the emission and immunity requirements described in the EMC directive 89/336/EEC.

Ordering Information

35 X . XXXX . XXXX . XX . XXX

Type	ATM/F/Ex	35				
Pressure type	Gauge	1				
	Absolute	2				
Pressure range	0...100 mbar		00			
	0...160 mbar		01			
	0...250 mbar		02			
	0...400 mbar		03			
	0...600 mbar		04			
	0...1.0 bar		05			
	0...1.6 bar		06			
	0...2.5 bar		07			
	0...4.0 bar		08			
	0...6.0 bar		09			
	0...10 bar		10			
	0...16 bar		11			
	0...25 bar		12			
Special calibration		99				
Process connection	Milk flange	DN 25 – DIN 11851 ³⁾	(Fig. 1)		30	
	Milk flange	DN 40 – DIN 11851 ³⁾	(Fig. 2)		31	
	Milk flange	DN 50 – DIN 11851 ³⁾			32	
	Clamp 1"		(Fig. 3)		40	
	Clamp 1 1/2"		(Fig. 3)		41	
	Clamp 2"				42	
	DIN flange	DN 25, PN 16			45	
	DIN flange	DN 40			46	
	DIN flange	DN 50			47	
Special process connection				99		
Electrical connection	Connector DIN 43650 (screwed on ²⁾) ⁴⁾	(Fig. 10)	IP 65		01	
	Connector Binder 723, 5-pin (screwed on ²⁾) ⁴⁾	(Fig. 12)	IP 67		43	
	Connector MIL C26482, (10-6) ⁴⁾	(Fig. 13)	IP 40		06	
	PUR cable, blue ¹⁾	(Fig. 14)	IP 67		17	
	Teflon cable, blue ¹⁾	(Fig. 14)	IP 67		22	
	Special electrical connection				99	
Output signal	4...20 mA				05	
	4...20 mA surge (lightning) protection				08	
Accuracy	≤±0.5 % FS				0	
	≤±0.25 % FS				1	
	≤±0.1 % FS (on request)				2	
Temperature class	T6	(Ta: -25...55°C comp.)			0	
	T4	(Ta: -25...85°C comp.)			1	
	T3	(Ta: -25...85°C comp., max. media temp. 150°C)			2	
Options	Special oil filling:	ASEOL Food				G
		Halocarbon				H
	Special options					Z

¹⁾ Please specify the required cable length

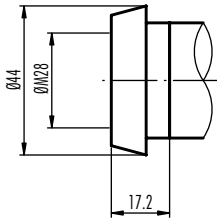
⁴⁾ Cable socket connector not included

²⁾ Zero offset and span adjustable

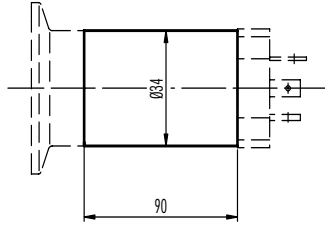
³⁾ Coupling nut included

Pressure Connection

Fig. 1



Version for temperature class T4...T6



Version for temperature class T3

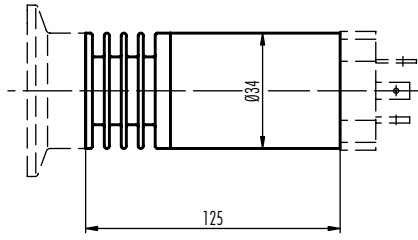


Fig. 2

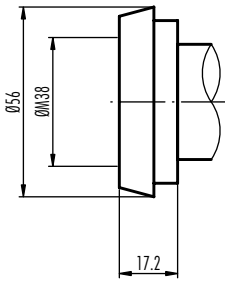
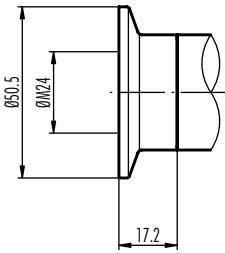


Fig. 3



Electrical Connection

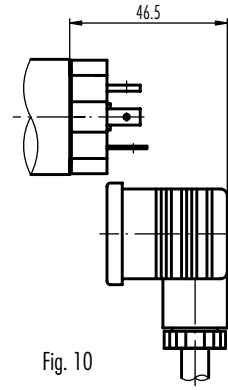
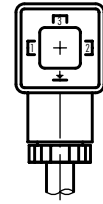


Fig. 10

Pin	2-Wire
1	+Vin
2	Pout
⊥	EP



Cable socket connector

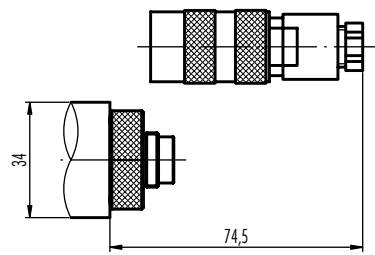
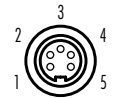


Fig. 12

Pin	2-Wire
1	Pout
3	+Vin
5	EP



Cable socket connector

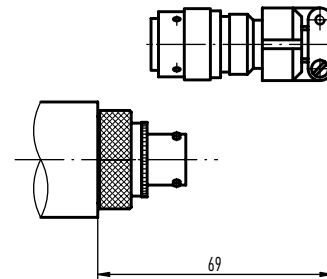


Fig. 13

Pin	2-Wire
A	+Vin
C	Pout
F	EP

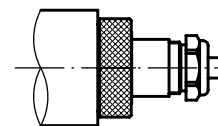


Fig. 14

Colour	2-Wire
white	+Vin
yellow	Pout
grey	EP

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