

FLANGE PRESSURE TRANSMITTER ATM/F



25

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

- Chemical
- Pharmaceutical industry
- Environmental industry
- Food processing

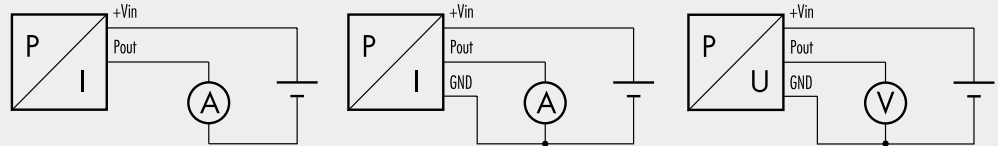
Specifications

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

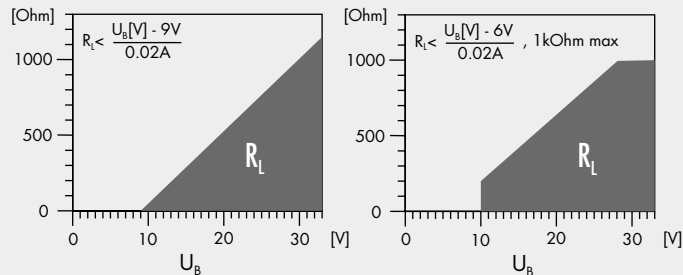
¹⁾ Zero based non-conformity according to DIN 16086, including hysteresis and repeatability

Output signal	4 ... 20 mA	0 ... 20 mA	0 ... 5 V / 0 ... 10 V
Type	Two wire current transmitter	Three wire current transmitter	Three wire voltage transmitter
Supply voltage	9...33 V DC	9...33 V DC	15...30 V DC
Supply voltage influence	< 0.1% FS	< 0.1% FS	< 0.1% FS

Circuit diagram



Load resistance



$R_L > 10k\Omega$

Load resistance influence

< 0.1% FS

< 0.1% FS

< 0.1% FS

Materials

Process connection, diaphragm, housing

Stainless steel 1.4435 (316L)

(other materials on request)

Electromagnetic compatibility

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

		25	X	XXXX	XXXX	XX	XXX
Type	ATM/F	25					
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	
	PE cable ^{1) 5)}		(Fig. 14)	IP 67		13	
	PUR cable ¹⁾		(Fig. 14)	IP 67		15	
	Teflon cable ¹⁾		(Fig. 14)	IP 67		21	
	Special electrical connection					99	
Output signal	0... 5 V DC					46	
	0... 10 V DC					47	
	0...20 mA					00	
	4...20 mA					05	
	4...20 mA surge (lightning) protection					08	
	0... 10 V DC surge (lightning) protection					49	
	Special output signal					99	
Accuracy	≤ ±0.5 % FS					0	
	≤ ±0.25 % FS					1	
	≤ ±0.1 % FS (on request)					2	
Temperature range	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	
Options	Electronics packed in gel:	Gauge pressure					C
		Absolute pressure					D
	Special oil filling:	ASEOL Food					G
		Halocarbon					H
Special options						Z	

¹⁾ Please specify the required cable length

²⁾ Zero offset and span adjustable

³⁾ Coupling nut included

⁴⁾ Cable socket connector not included

⁵⁾ Suitable for drinking water (food approved)

Pressure Connection

Fig. 1

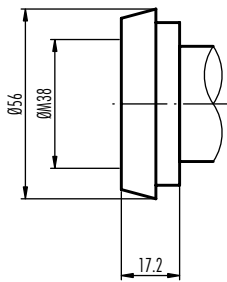
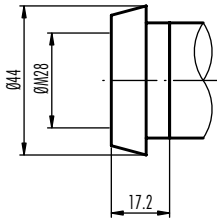


Fig. 2

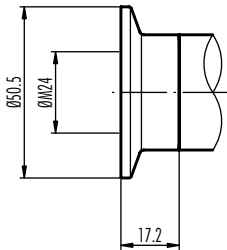
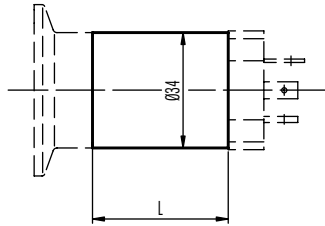


Fig. 3

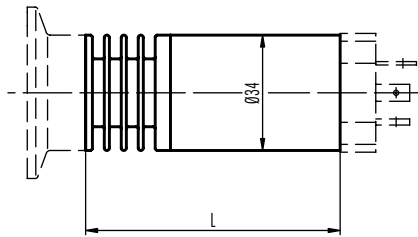
Dimensions

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 up to 150°C



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

Electrical Connection

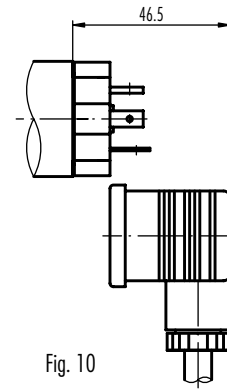
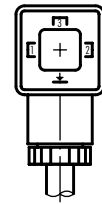


Fig. 10

Pin	2-Wire	3-Wire
1	+Vin	+Vin
2	Pout	Pout
3		GND



Cable socket connector

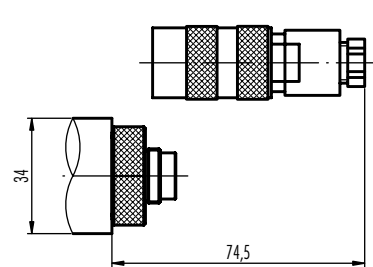
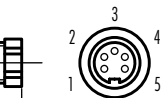


Fig. 12



Pin	2-Wire	3-Wire
1	Pout	Pout
3	+Vin	+Vin
4		GND

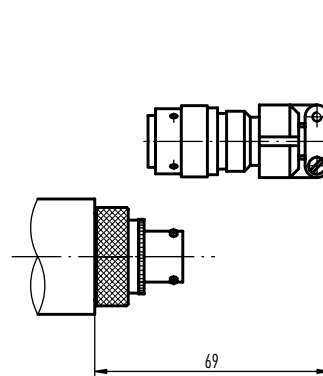


Fig. 13

Cable socket connector



Pin	2-Wire	3-Wire
A	+Vin	+Vin
B	Pout	Pout
C		GND

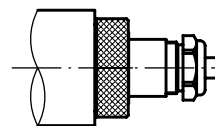


Fig. 14

Colour	2-Wire	3-Wire
white	+Vin	+Vin
yellow	Pout	GND
brown		Pout

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