

FLUSH MEMBRANE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The FPT 8236 pressure transmitter impresses with an absolutely smooth and robust flush-mounted measuring diaphragm made of corrosion-resistant duplex steel. Trafag's proprietary thin-film-on-steel sensor technology ensures a wide temperature range and excellent long-term stability.



Applications

- Machine tools
- Food Industry
- Process technology
- Water treatment
- Hydraulics

Features

- Flush membrane with smooth and plain surface
- Membrane in Duplex steel 1.4462
- Completely welded sensor system
- Excellent long-term stability

06/2023

Data sheet H72343d

Technical Data

Measuring principle	Thin-film-on-steel	Accuracy @ 25°C typ.	± 0.5 % FS typ.
Measuring range	-0.5 ... 0.5 to 0 ... 100 bar -5 ... 10 to 0 ... 1500 psi	Media temperature	-10°C ... +125°C
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiometric	Ambient temperature	-10°C ... +125°C Cable PUR: -10°C ... +70°C
NLH @ 25°C (BSL) typ.	± 0.1 % FS typ.		

Subject to change

Ordering information/type code

				8236 . XX				XX	XX	XX	XX	XX	
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]		Pressure measurement range [psi]	Over pressure [psi]	Burst pressure [psi]						
	-0.4 ... 0.6	5	7.5	A6	-5 ... 10	60	90	F5					
	-0.5 ... 0.5	5	7.5	A7									
	-1 ... 0	5	7.5	D4									
	-1 ... 1	5	7.5	B1									
	-1 ... 1.6	5	7.5	B3									
	0 ... 1	5	7.5	71	0 ... 15	60	90	G1					
	0 ... 2.5	5	7.5	75	0 ... 30	60	90	G5					
	0 ... 4	8	12	76	0 ... 50	100	150	G6					
	0 ... 6	12	15	77	0 ... 100	200	250	G7					
	0 ... 10	20	25	78	0 ... 150	300	375	G8					
	0 ... 16	32	40	79	0 ... 250	500	625	G9					
	0 ... 25	50	75	80	0 ... 400	800	1200	H0					
	0 ... 40	80	100	81	0 ... 500	1000	1250	H1					
	0 ... 100	200	300	83	0 ... 1500	3000	4500	H3					
Sensor	Relative pressure							23					
Pressure connection	G1/2" male, flush membrane							93					
Electrical connection	Male electrical connector EN 175301-803-A (DIN 43650-A), Mat. PA							05					
	Male electrical connector M12x1, 5-pol., Mat. PA							35					
	Male electrical connector Packard Metri Pack							51					
	Cable PUR (Screwed cable gland PA 6-3), -10°C ... +70°C ^{3) 4)}							24					
Output signal	Signal output	Load resistance	I (supply)		U (supply)								
	4 ... 20 mA	(U _{supply} -9 V) / 20 mA	(= signal output)		9 ... 32 VDC							19	
	0 ... 5 VDC	> 2.5 kΩ	≤ 20 mA		9 ... 32 VDC							14	
	1 ... 6 VDC	> 5.0 kΩ	≤ 20 mA		9 ... 32 VDC							16	
	0 ... 10 VDC	> 5.0 kΩ	≤ 20 mA		15 ... 32 VDC							17	
0.5 ... 4.5 VDC ratiometric	> 5.0 kΩ	≤ 20 mA		5 (4.75 ... 5.25) VDC							23		
Accessories	Seal FKM											61	
	Female electrical plug EN 175301-803-A (DIN43650-A)/NBR, -40°C ... +90°C, for cable diameter 4 ... 9 mm, flammability standard UL94-V0												46
	Female electrical plug EN 175301-803-A (DIN 43650-A)/silicone, -40°C ... +125°C, for cable diameter 4 ... 9 mm, flammability standard UL94-V0												56
	Female electrical plug EN 175301-803-A (DIN43650-A)/NBR, -40°C ... +90°C, for cable diameter 4 ... 9.5 mm, flammability standard UL94-V2												58
	Female electrical plug M12x1, 5-pole												33
	Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 4 ... 20 mA and male electrical connector EN175301-803-A / DIN43650-A) ²⁾												92
	Special electrical connection: Pin 1 Out, Pin 2 -, Pin 3 + (only for output 14, 16, 17, 23 and male electrical connector EN175301-803-A / DIN43650-A) ²⁾												98
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 3 Out (only for output signals 14, 16, 17, 23 and male electrical connector EN 175301-803-A / DIN 43650-A) ²⁾												97
	Special electrical connection: Pin 1 +, Pin 3 -, Pin 5 GR (only for output 4...20mA and male electrical connector M12x1, 5-pol.) ²⁾												94
	Special electrical connection: Pin 1 +, Pin 3 - (only for output 4 ... 20 mA and male electrical connector Packard Metri Pack 3-poles)												E4
	Special electrical connection: Pin 1 +, Pin 3 - (only for male electrical connector Packard Metri Pack 3-poles) ²⁾												99
	Housing nut for electrical connection EN175301-803-A (DIN43650-A) secured with Loctite (max. 85°C)												L9
	Cable length 1.5 m												1M
	Cable length 3.0 m												3M
	Cable length 5.0 m												5M

¹⁾ Extended overpressure as well as customized pressure ranges upon request

²⁾ Details see electrical connection

³⁾ Cable length see accessories (max. length 50 m, in 5-meter sections)

⁴⁾ IP68, max. 3 m, Media +10°C ... +35°C

Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Signal output	Accuracy @ 25°C typ. [%]
FPT1.0A	8236 71 2393 05 0000 0000 19 58 61	0 ... 1	5	4 ... 20 mA	± 1.0
FPT2.5A	8236 75 2393 05 0000 0000 19 58 61	0 ... 2.5	5	4 ... 20 mA	± 0.5
FPT4.0A	8236 76 2393 05 0000 0000 19 58 61	0 ... 4	8	4 ... 20 mA	± 0.5
FPT6.0A	8236 77 2393 05 0000 0000 19 58 61	0 ... 6	12	4 ... 20 mA	± 0.5
FPT10.0A	8236 78 2393 05 0000 0000 19 58 61	0 ... 10	20	4 ... 20 mA	± 0.5
FPT16.0A	8236 79 2393 05 0000 0000 19 58 61	0 ... 16	32	4 ... 20 mA	± 0.5
FPT25.0A	8236 80 2393 05 0000 0000 19 58 61	0 ... 25	50	4 ... 20 mA	± 0.5
FPT40.0A	8236 81 2393 05 0000 0000 19 58 61	0 ... 40	80	4 ... 20 mA	± 0.5
FPT100.0A	8236 83 2393 05 0000 0000 19 58 61	0 ... 100	200	4 ... 20 mA	± 0.5
FPT1.0M	8236 71 2393 35 0000 0000 19 33 61	0 ... 1	5	4 ... 20 mA	± 1.0
FPT2.5M	8236 75 2393 35 0000 0000 19 33 61	0 ... 2.5	5	4 ... 20 mA	± 0.5
FPT4.0M	8236 76 2393 35 0000 0000 19 33 61	0 ... 4	8	4 ... 20 mA	± 0.5
FPT6.0M	8236 77 2393 35 0000 0000 19 33 61	0 ... 6	12	4 ... 20 mA	± 0.5
FPT10.0M	8236 78 2393 35 0000 0000 19 33 61	0 ... 10	20	4 ... 20 mA	± 0.5
FPT16.0M	8236 79 2393 35 0000 0000 19 33 61	0 ... 16	32	4 ... 20 mA	± 0.5
FPT25.0M	8236 80 2393 35 0000 0000 19 33 61	0 ... 25	50	4 ... 20 mA	± 0.5
FPT40.0M	8236 81 2393 35 0000 0000 19 33 61	0 ... 40	80	4 ... 20 mA	± 0.5
FPT100.0M	8236 83 2393 35 0000 0000 19 33 61	0 ... 100	200	4 ... 20 mA	± 0.5

Accuracy

Pressure measuring span		≥ 2.5 bar ≥ 30 psi	< 2.5 bar < 30 psi
TEB @ -25 ... +85°C	[% FS typ.]	± 1.5	± 3.0
Accuracy @ +25°C	[% FS typ.]	± 0.5 ¹⁾	± 1.0 ²⁾
Additional mounting torque offset	[% FS typ.]	± 0.2	± 0.5
NLH @ +25°C (BSL)	[% FS typ.]	± 0.1	± 0.2
TC zero point and span	[% FS/K typ.]	± 0.01	± 0.025
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.2	± 0.5

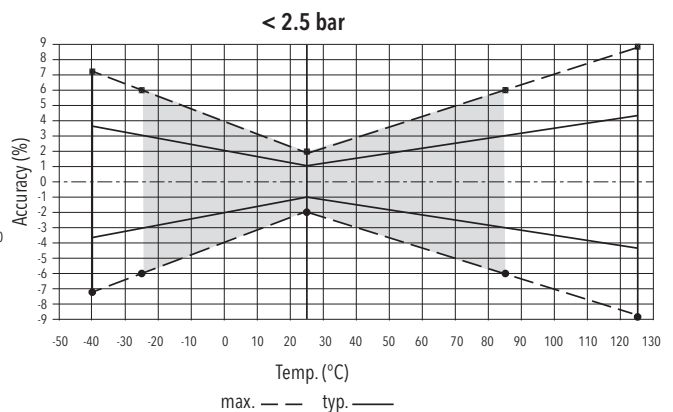
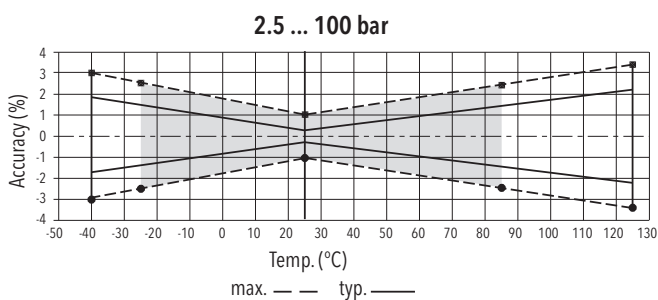
¹⁾ Additional mounting torque offset 0.2 %

²⁾ Additional mounting torque offset 0.5 %

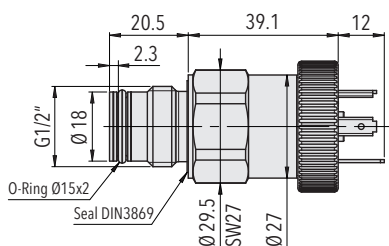
Specifications		
Electrical data	Output / supply voltage	4 ... 20 mA: 24 (9...32) VDC 0 ... 5 VDC: 24 (9...32) VDC 1 ... 6 VDC: 24 (9...32) VDC 0 ... 10 VDC: 24 (15...32) VDC 0.5 ... 4.5 VDC ratiometric 10 ... 90 % U_{supply} : 5 ± 0.25 VDC
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Power-on delay time	100 ms
	Inverse-polarity protection, short-circuit strength @ 25°C during 5 min.	4 ... 20 mA: to $U_s = 32$ VDC 0 ... 10 VDC, 0 ... 5 VDC, 1 ... 6 VDC: to $U_s = 28$ VDC 0.5 ... 4.5 VDC ratiometric: to $U_s = 14$ VDC
	Environmental conditions	
	Media temperature	-10°C ... +125°C
	Ambient temperature	-10°C ... +125°C Cable PUR: -10°C ... +70°C
	Protection ¹⁾	IP65, IP67, IP68
	Vibration	15 g RMS (20...2000 Hz) acc.to EN 60068-2-64 25 g sin (80...2000 Hz), 1 oct./min, (1x @ 25°C) acc.to EN 60068-2-6
	Shock	50 g / 11 ms
EMC protection	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
Mechanical data	Sensor (wetted parts)	1.4462 (AISI318 LN)
	Pressure connection (wetted parts)	1.4462 (AISI318 LN), 1.4542
	Housing	1.4542
	Sealing	FPM (FKM)
	Weight	~ 80 ... 110 g (without cable)
	Mounting torque	20 ... 25 Nm not lubricated 15 ... 20 Nm lubricated

¹⁾ See electrical connection

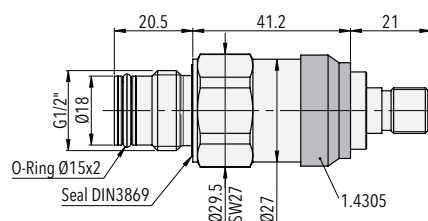
Measuring accuracy



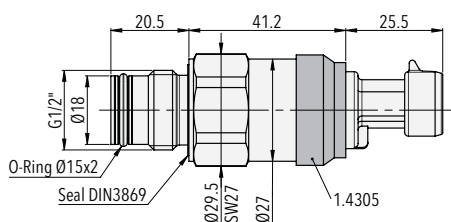
Dimensions



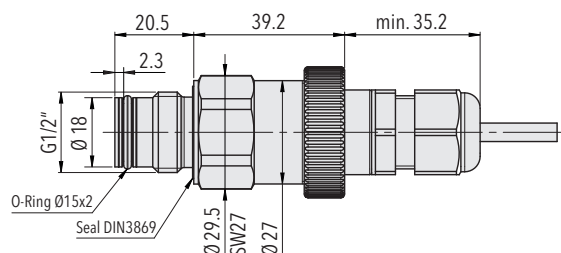
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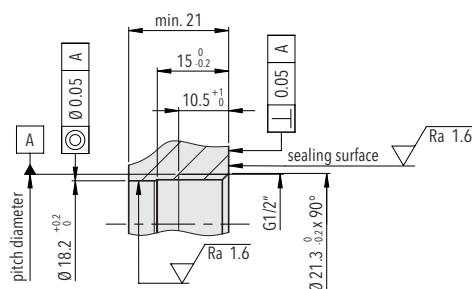
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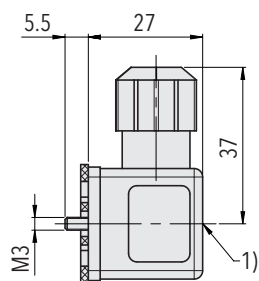
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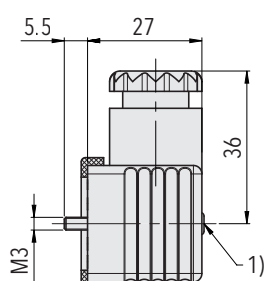


Mounting thread G1/2"
DIN EN ISO 1179-1



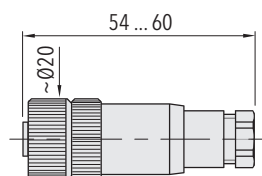
1) Tightening torque 50...60 Ncm

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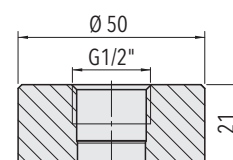


1) Tightening torque 50...60 Ncm

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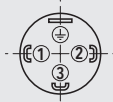
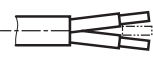
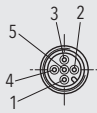
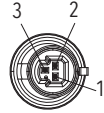
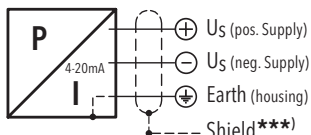
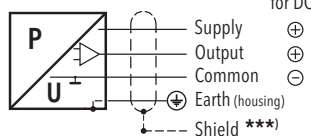


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Welding flange for G1/2"
AISI 316L (1.4404/1.4435)
Ordering No. F82060

Electrical connection

		Protection / electrical connection							
		IP65*) **)		IP67/IP68 **) max. 3m		IP67*) **)		IP67*) **)	
		Industrial standard EN175301-803A 05 		Cable 24 		M12x1 5-pole 35 		Packard Metri Pack 3-pole 51 	
Output signal	 8236.xx.xxxx.xx.19	Standard	92			Standard	94		E4
		2 1 ⊖	1 2 ⊖	white brown yellow		4 1 5	1 3 5	1 2	1 3
	 8236.xx.xxxx.xx.14/16/17/23	Standard	98	97				99	
		2 3 1 ⊖	3 1 2 ⊖	white green brown yellow		2 4 3 5		1 3 2	1 2 3

*) Electrical connections 05/35/51: provided female electrical plug is mounted according to instructions

**) Ventilation via male electric plug/cable end

***) Only cable versions or female electrical plug with shield connection

Additional information

Documents

Data sheet	www.trafag.com/H72343
Instructions	www.trafag.com/H73343
Flyer	www.trafag.com/H70612