

INDUSTRIAL PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The industrial pressure transmitter EPI 8287 features the extremely robust and stable thin-film-on-steel sensor element from its well-proven predecessor EPI 8297. In combination with the new inhouse developed ASIC TX it offers a wide temperature range up to 125°C and triple overpressure safety which makes it the perfect solution for a wide range of demanding applications.



Applications

- Machine tools
- Hydraulics
- Industrial applications

Features

- Excellent long-term stability
- High resistance to over pressure
- Completely welded steel sensor system without additional seals
- Compact design
- Different accuracy classes

Technical Data

Measuring principle	Thin film on steel	Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.
Measuring range	0 ... 2.5 to 0 ... 600 bar 0 ... 30 to 0 ... 7500 psi	Media temperature	-40°C ... +125°C
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC	Ambient temperature	-40°C ... +125°C

03/2017

Data sheet H72317g

Subject to change

Ordering information/type code

				8287 . XX	XX	XX	XX	XX	XX
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]						
	0 ... 2.5	7.5	50	75					
	0 ... 4	12	60	76					
	0 ... 6	18	100	77					
	0 ... 10	30	200	78					
	0 ... 16	48	200	79					
	0 ... 25	75	300	80					
	0 ... 40	120	300	81					
	0 ... 60	180	400	82					
	0 ... 100	300	500	83					
	0 ... 160	480	750	85					
	0 ... 250	750	1000	74					
	0 ... 400	1000	2000	84					
	0 ... 600	1500	2500	86					
	Option 5P: Fivefold overpressure								
	0 ... 2.5	12.5	60	55					
	0 ... 4	20	100	56					
	0 ... 6	30	200	57					
	0 ... 10	50	200	58					
	0 ... 16	80	300	59					
	0 ... 25	125	300	60					
	0 ... 40	200	400	61					
	0 ... 60	300	500	62					
	0 ... 100	500	750	63					
	0 ... 160	800	1000	65					
	Pressure measurement range [psi]	Over pressure [psi]	Burst pressure [psi]						
	0 ... 30	90	700	G5					
	0 ... 50	150	850	G6					
	0 ... 100	300	1450	G7					
	0 ... 150	450	2500	G8					
	0 ... 200	600	2500	GA					
	0 ... 250	750	2500	G9					
	0 ... 300	900	4000	HA					
	0 ... 400	1200	4000	H0					
	0 ... 500	1500	4000	H1					
	0 ... 1000	3000	5000	H2					
	0 ... 1500	4500	7000	H3					
	0 ... 2000	6000	10000	H5					
	0 ... 3000	9000	14500	G4					
	0 ... 5000	12500	21750	H4					
	0 ... 7500	18750	29000	H6					
Sensor	Relative pressure, accuracy: 0.5 %; Material pressure connection and housing: 1.4542 (AISI630)				25				
	Relative pressure, accuracy: 0.5 %; Material pressure connection and housing: 1.4404 (AISI316L) ^{2) 3) 5)}				35				
	Relative pressure, accuracy: 0.3 %; Material pressure connection and housing: 1.4542 (AISI630)				23				
	Relative pressure, accuracy: 0.3 %; Material pressure connection and housing: 1.4404 (AISI316L) ^{2) 3) 5)}				33				
Pressure connection	G1/4" female ²⁾				10				
	G1/4" male (Seal)				17				
	R1/4" male, DIN3858 ²⁾				19				
	G1/2" male (Manometer) ²⁾				11				
	1/4" NPT male ²⁾				30				
	1/2" NPT male ²⁾				51				
	M14x1.5 male DIN6149-2 ²⁾				31				
	7/16"-20UNF male, DIN3866 ^{2) 6)}				18				
	7/16"-20UNF male SAE4 (J1926) ^{2) 7)}				42				
	7/16"-20UNF female SAE J512 with valve opener ^{2) 6)}				24				
Electrical connection	Male electrical plug EN 175301-803-A, Mat. PA					05			
	Male electrical plug M12x1, 5-pole, Mat. PBT					35			
	Male electrical plug Packard Metri Pack, Mat. PBT ⁴⁾					51			
	Male electrical plug industrial standard (contact distance 9.4mm) Mat. PBT					01			
Output signal	Signal output	Load resistance	I (supply)	U (supply)					
	4 ... 20 mA	(U _{supply} -9 V) / 20 mA		9 ... 32 VDC		19			
	0 ... 5 VDC	> 2.5 kΩ	< 10 mA	9 ... 32 VDC		14			
	1 ... 6 VDC	> 5.0 kΩ	< 10 mA	9 ... 32 VDC		16			
	0 ... 10 VDC	> 5.0 kΩ	< 10 mA	15 ... 32 VDC		17			

Accessories	Seal FPM, -18°C ... +125°C ³⁾	61
	Seal EPDM, -40°C ... +125°C ³⁾	63
	Seal NBR, -25°C ... +100°C ³⁾	83
	Pressure peak damping element ø 1.0 mm (for pressure connections 17, 19, 30, 31, 51)	40
	Pressure peak damping element ø 0.4 mm (for pressure connections 17, 19, 30, 31, 51)	44
	Female electrical connector EN 175301-803-A (DIN43650-A)	58
	Female electrical plug M12x1, 5-pole	33
	Female electrical connector industrial standard	34
	Special electrical connection: Pin 1 + , Pin 2 - (only for output signal 4 ... 20 mA and male electrical plug EN175301-803-A / DIN43650-A)	92
	Special electrical connection: Pin 1 Out , Pin 2 -, Pin 3 + (only for output 14, 16, 17 and male electrical plug EN175301-803-A / DIN43650-A)	98
	Special electrical connection: Pin 1 + , Pin 2 -, Pin 3 Out (only for output 14, 16, 17 and male electrical plug EN175301-803-A / DIN43650-A)	97
	Special electrical connection: Pin 1 + , Pin 3 - (only for output 4 ... 20 mA and male electrical plug Packard Metri Pack 3-poles)	E4
	Special electrical connection: Pin 1 + , Pin 2 out Pin 3 - (only for output signals 14, 16, 17 and male electrical plug Packard Metri Pack 3-poles)	99
	Housing nut for electrical connection EN175301-803-A (DIN43650-A) secured with Loctite (max. 85°C)	L9

¹⁾ Customized pressure ranges upon request

²⁾ Upon request

³⁾ Only with pressure connection 17 (G1/4")

⁴⁾ Pressure ranges > 16 bar (Pressure ranges ≤ 16 bar upon request)

⁵⁾ Only for pressure ranges ≥ 10 bar

⁶⁾ Max. allowable pressure range 60 bar at 120 bar overpressure

⁷⁾ According to norm J1926, max. 35 MPa

Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Signal output	Supply [VDC]
EPI4.0A	8287 76 2517 05 0000 0000 19 44 58 61	0 ... 4	12	4 ... 20 mA	9 ... 32
EPI6.0A	8287 77 2517 05 0000 0000 19 44 58 61	0 ... 6	18	4 ... 20 mA	9 ... 32
EPI10.0A	8287 78 2517 05 0000 0000 19 44 58 61	0 ... 10	30	4 ... 20 mA	9 ... 32
EPI16.0A	8287 79 2517 05 0000 0000 19 44 58 61	0 ... 16	48	4 ... 20 mA	9 ... 32
EPI25.0A	8287 80 2517 05 0000 0000 19 44 58 61	0 ... 25	75	4 ... 20 mA	9 ... 32
EPI40.0A	8287 81 2517 05 0000 0000 19 44 58 61	0 ... 40	120	4 ... 20 mA	9 ... 32
EPI60.0A	8287 82 2517 05 0000 0000 19 44 58 61	0 ... 60	180	4 ... 20 mA	9 ... 32
EPI100.0A	8287 83 2517 05 0000 0000 19 44 58 61	0 ... 100	300	4 ... 20 mA	9 ... 32
EPI250.0A	8287 74 2517 05 0000 0000 19 44 58 61	0 ... 250	750	4 ... 20 mA	9 ... 32
EPI400.0A	8287 84 2517 05 0000 0000 19 44 58 61	0 ... 400	1000	4 ... 20 mA	9 ... 32
EPI600.0A	8287 86 2517 05 0000 0000 19 44 58 61	0 ... 600	1500	4 ... 20 mA	9 ... 32
EPI4.0V	8287 76 2517 05 0000 0000 17 44 58 61	0 ... 4	12	0 ... 10 VDC	15 ... 32
EPI6.0V	8287 77 2517 05 0000 0000 17 44 58 61	0 ... 6	18	0 ... 10 VDC	15 ... 32
EPI10.0V	8287 78 2517 05 0000 0000 17 44 58 61	0 ... 10	30	0 ... 10 VDC	15 ... 32
EPI16.0V	8287 79 2517 05 0000 0000 17 44 58 61	0 ... 16	48	0 ... 10 VDC	15 ... 32
EPI25.0V	8287 80 2517 05 0000 0000 17 44 58 61	0 ... 25	75	0 ... 10 VDC	15 ... 32
EPI40.0V	8287 81 2517 05 0000 0000 17 44 58 61	0 ... 40	120	0 ... 10 VDC	15 ... 32
EPI60.0V	8287 82 2517 05 0000 0000 17 44 58 61	0 ... 60	180	0 ... 10 VDC	15 ... 32
EPI100.0V	8287 83 2517 05 0000 0000 17 44 58 61	0 ... 100	300	0 ... 10 VDC	15 ... 32
EPI250.0V	8287 74 2517 05 0000 0000 17 44 58 61	0 ... 250	750	0 ... 10 VDC	15 ... 32
EPI400.0V	8287 84 2517 05 0000 0000 17 44 58 61	0 ... 400	1000	0 ... 10 VDC	15 ... 32
EPI600.0V	8287 86 2517 05 0000 0000 17 44 58 61	0 ... 600	1500	0 ... 10 VDC	15 ... 32

Specifications

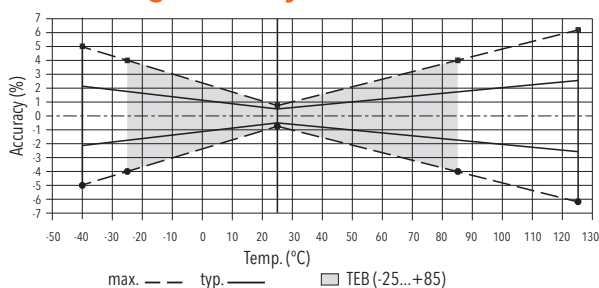
Electrical Data	Output / supply voltage	4 ... 20 mA: 24 (9...32) VDC 0 ... 5 VDC: 24 (9...32) VDC 1 ... 6 VDC: 24 (9...32) VDC 0 ... 10 VDC: 24 (15...32) VDC
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Switch-on-delay	100 ms
	Inverse-polarity protection, short-circuit strenght @ 25°C during 5 min.	4...20 mA: to $U_s = 32$ VDC 0...10 VDC, 0...5 VDC, 1...6 VDC: to $U_s = 28$ VDC
Environmental conditions	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C
	Protection ¹⁾	IP65, IP67
	Humidity	Max. 95 % relative
	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	500 g / 1 ms acc.to EN 60068-2-27
EMC Protection	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor (wetted parts)	1.4542 (AISI630)
	Pressure connection (wetted parts)	1.4542 (AISI630) or 1.4404 (AISI316L)
	Housing	1.4542 (AISI630) or 1.4404 (AISI316L)
	Sealing	FPM/EPDM/NBR
	Male electrical plug	See ordering information
	Weight	appr. 80 ... 110 g
	Mounting torque	25 Nm

¹⁾ See electrical connection

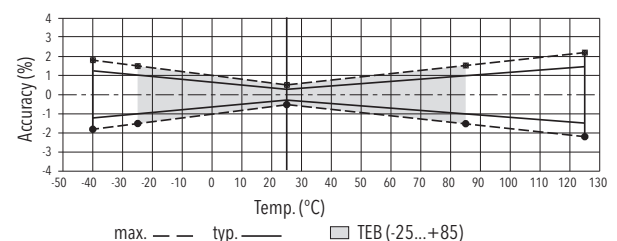
Accuracy

		Measuring accuracy 0.5 % Ordering No. 25/35	Measuring accuracy 0.3 % Ordering No. 23/33
TEB @ -25 ... +85°C	[% FS typ.]	± 1.75	± 1.0
Accuracy @ +25°C	[% FS typ.]	± 0.5	± 0.3
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.2
TC zero point and span	[% FS/K typ.]	± 0.03	± 0.01
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.1	± 0.2

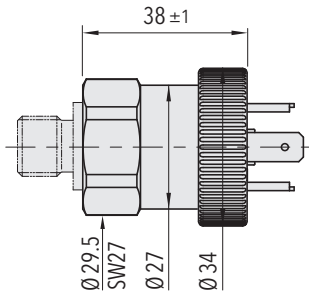
Measuring accuracy 0.5 %



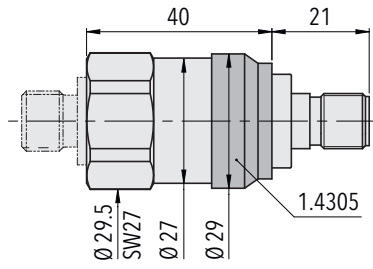
Measuring accuracy 0.3 %



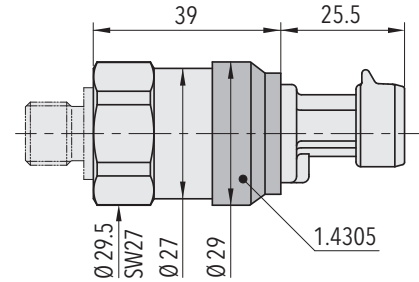
Dimensions



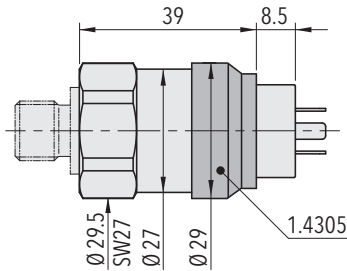
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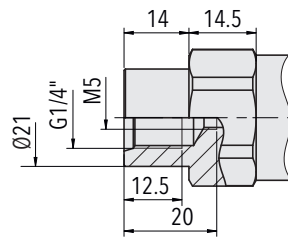
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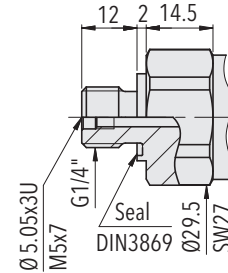
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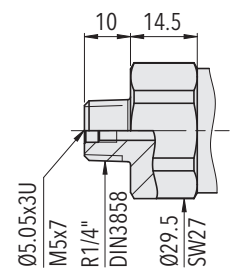
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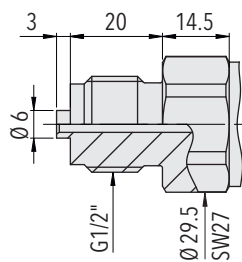
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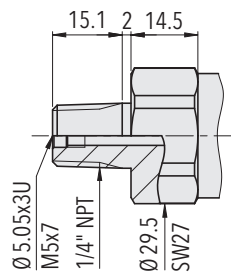
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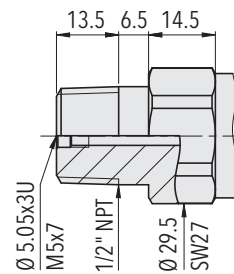
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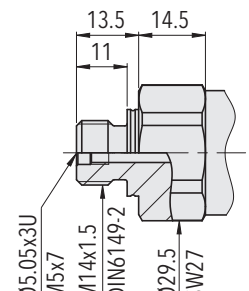
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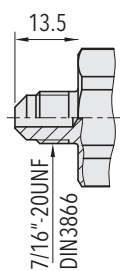
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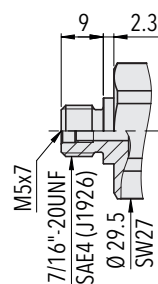
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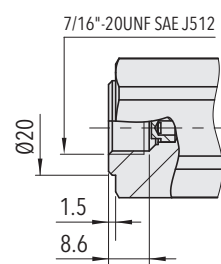
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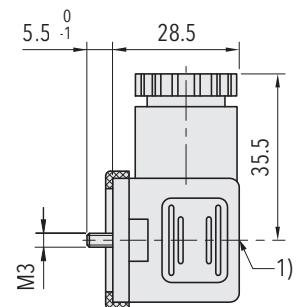
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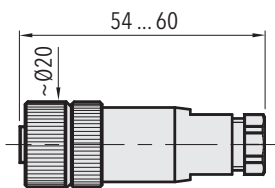


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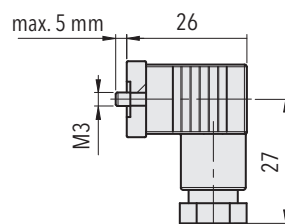


1) Tightening torque 50...60Ncm

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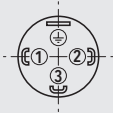
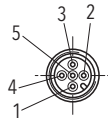
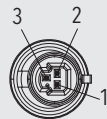
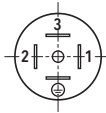
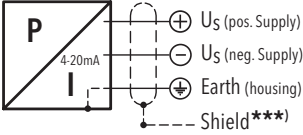
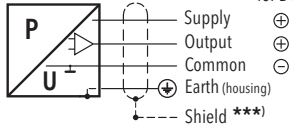


8287.XX.XXXX.XX.XX.33



8287.XX.XXXX.XX.XX.34

Electrical connection

Protection / electrical connection							
IP65*)		IP67*)		IP67*)		IP65	
Industrial standard EN175301-803A**)		M12x1 **)		Packard Metri Pack **)		Industrial standard Contact distance 9.4 mm **)	
05		35		51		01	
							
Output signal	 8287.XX.XXXX.XX.19	Standard	92			E4	
		2	1	4	1	1	2
		1	2	1	2	3	1
		⊕	⊕	5			⊕
Output signal	 8287.XX.XXXX.XX.14/16/17	Standard	98	97		99	
		2	3	1	2	1	1
		3	1	3	4	3	2
		1	2	2	3	2	3
		⊕	⊕	⊕	5	3	⊕

*) Provided female connector is mounted according to instructions

**) Ventilation via male electric plug/cable end

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

Additional information

Documents

Data sheet

www.trafag.com/H72317

Instructions

www.trafag.com/H73317

Flyer

www.trafag.com/H70692