

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
- Completely welded steel sensor system without additional seals
- Accuracy classes 0.3%, 0.5%
- Optional: 5-fold overpressure resistance
- Optionally with housing material AISI316L

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, 0.5 ... 4.5 VDC ratiometric	Ambient temperature	-40°C ... +125°C Cable PVC: -5°C ... +60°C Cable PUR: -20°C ... +70°C Cable Raychem: -20°C ... +100°C

02/2019

Data sheet H72317i

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]	Pressure measurement range [psi]	Over pressure [psi]	Burst pressure [psi]			
	0 ... 2.5	7.5	50	75	0 ... 30	90	700	G5	
	0 ... 4	12	60	76	0 ... 50	150	850	G6	
	0 ... 6	18	100	77	0 ... 100	300	1450	G7	
	0 ... 10	30	200	78	0 ... 150	450	2500	G8	
	0 ... 16	48	200	79	0 ... 200	600	2500	GA	
	0 ... 25	75	300	80	0 ... 250	750	2500	G9	
	0 ... 40	120	300	81	0 ... 300	900	4000	HA	
	0 ... 60	180	400	82	0 ... 400	1200	4000	H0	
	0 ... 100	300	500	83	0 ... 500	1500	4000	H1	
	0 ... 160	480	750	85	0 ... 1000	3000	5000	H2	
	0 ... 250	750	1000	74	0 ... 1500	4500	7000	H3	
	0 ... 400	1000	2000	84	0 ... 2000	6000	10000	H5	
	0 ... 600	1500	2500	86	0 ... 3000	9000	14500	G4	
	Option 5P:	Fivefold overpressure			0 ... 5000	12500	21750	H4	
	0 ... 2.5	12.5	60	55	0 ... 7500	18750	29000	H6	
	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					
Sensor	Relative pressure, accuracy: 0.5 %; Material pressure connection and housing: 1.4542 (AISI630)						25		
	Relative pressure, accuracy class: 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 class: 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						30		
	1/4" - 18 NPT female ²⁾						13		
	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⁾						42		
	7/16"-20UNF female SAE J512 with valve opener ⁶⁾						24		
Electrical connection	Male electrical plug EN 175301-803-A (DIN43650-A), Mat. PA						05		
	Male electrical plug M12x1, 5-pole, Mat. PBT						35		
	Male electrical plug Packard Metri Pack, Mat. PBT						51		
	Male electrical plug industrial standard (contact distance 9.4 mm), Mat. PBT						01		
	Male electrical plug MIL-C 26482, 6-pole, metal ¹²⁾						02		
	Cable PUR (Screwed cable gland PA 6-3), -20°C ... +70°C ^{8) 9)}						24		
	Cable PVC (Screwed cable gland PA 6-3), -5°C ... +60°C ^{8) 9) 10)}						22		
	Cable Raychem (Screwed cable gland PA 6-3), -20°C ... +100°C ^{8) 9) 10)}						08		

					8287 . XX	XX	XX	XX	XX	XX	
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	
	0.5 ... 4.5 VDC ratiometric	> 5.0 kΩ	< 10 mA	5 (4.75 ... 5.25) VDC						23	
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, material 1.4305 ⁴⁾									40	
	Pressure peak damping element ø 0.4 mm, material 1.4305 (sensors 23, 25) resp. 1.4404 (sensors 33, 35) ⁴⁾									44	
	Female electrical connector EN 175301-803-A (DIN43650-A)/NBR, -40°C ... +90°C										58
	Female electrical connector EN 175301-803-A (DIN43650-A)/Silicone, -40°C ... +125°C										56
	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
	Cable length 1.5 m										1M
	Cable length 3.0 m										3M
	Cable length 5.0 m										5M
	Multiple packaging ¹¹⁾										VM

¹⁾ Customized pressure ranges upon request

²⁾ Upon request

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

⁴⁾ Not for pressure connections 10, 11, 13, 18, 24

⁵⁾ Only for pressure ranges ≥ 10 bar

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

⁸⁾ Cable length see accessories (max. length 50 m, in 5-meter sections)

⁹⁾ IP68, max. 3 m, Media +10°C ... +35°C

¹⁰⁾ Cable length max. 3 m, for pressure ranges ≤ 16 bar

¹¹⁾ The order quantity must be a multiple of 50, only for electrical connections 05 and 35

¹²⁾ Only for sensors 23 and 25, only for pressure connections 13, 17, 19

Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Signal output	Supply [VDC]
EPI2.5A	8287 75 2517 05 0000 0000 19 44 58 61	0 ... 2.5	7.5	4 ... 20 mA	9 ... 32
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
EPI160.0A	8287 85 2517 05 0000 0000 19 44 58 61	0 ... 160	480	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
EPI2.5V	8287 75 2517 05 0000 0000 17 44 58 61	0 ... 2.5	7.5	0 ... 10 VDC	15 ... 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
EPI160.0V	8287 85 2517 05 0000 0000 17 44 58 61	0 ... 160	480	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

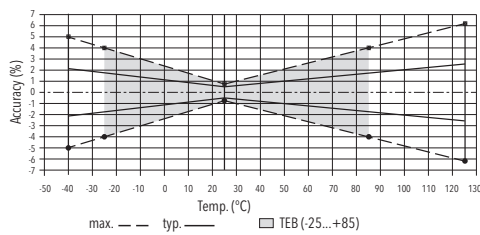
Specifications		
Electrical Data	Output / supply voltage	4 ... 20 mA: 24 (9...32) VDC 0 ... 5 VDC: 24 (9...32) VDC 1 ... 6 VDC: 24 (9...32) VDC 0 ... 10 VDC: 24 (15...32) VDC 0.5 ... 4.5 VDC ratiometric 10 ... 90 % U_{supply} : 5 ± 0.25 VDC
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Switch-on-delay	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	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C Cable PVC: -5°C ... +60°C Cable PUR: -20°C ... +70°C Cable Raychem: -20°C ... +100°C
	Protection ¹⁾	IP65, IP67, IP68
	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

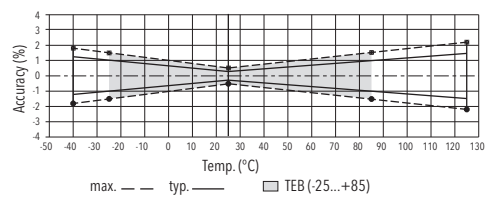
Accuracy

		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

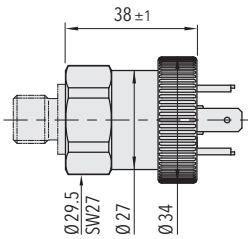
Measuring accuracy 0.5 %



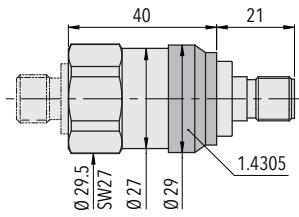
Measuring accuracy 0.3 %



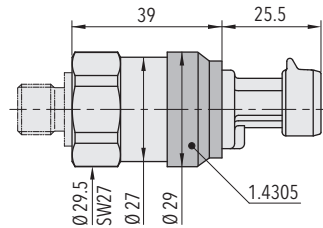
Dimensions



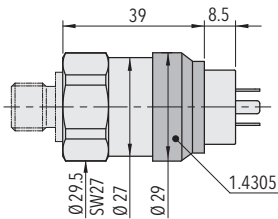
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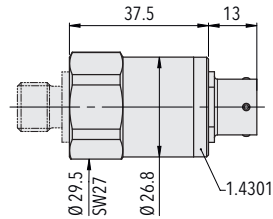
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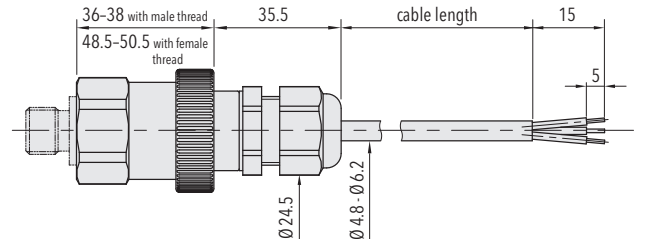
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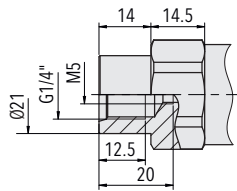
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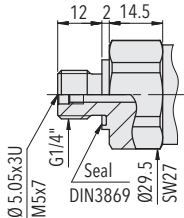
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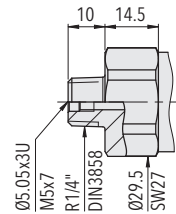
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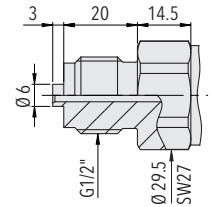
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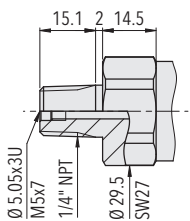
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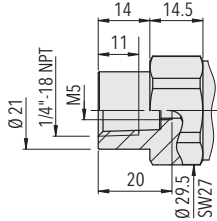
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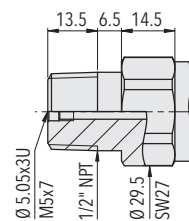
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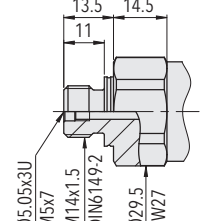
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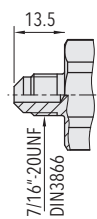
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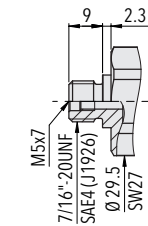
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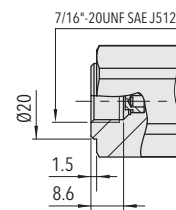
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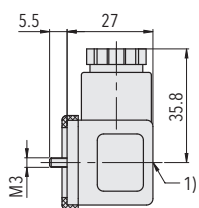
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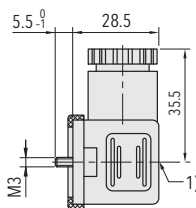


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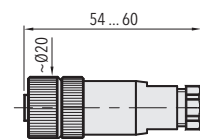
1) Tightening torque 50...60 Ncm

8287.XX.XXXX.XX.XX.56

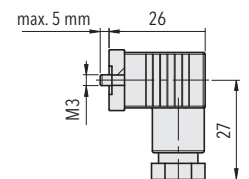


1) Tightening torque 50...60 Ncm

8287.XX.XXXX.XX.XX.58



8287.XX.XXXX.XX.XX.33



8287.XX.XXXX.XX.XX.34

Electrical connection

		Protection / electrical connection							
		IP65*) **)	IP67*) **)	IP67*) **)	IP65**)	IP67*) **)	IP68 max. 3 m	IP68 max. 3 m	
		Industrial standard EN175301-803A	M12x1 5-pole	Packard Metri Pack 3-pole	Industrial standard Contact distance 9.4 mm	MIL-C 26482	Cable**)	Cable**)	
		05	35	51	01	02	24/22	08	
Output signal	<p>8287 .XX.XXXX.XX.19</p>	Standard	92		E4				
	<p>8287 .XX.XXXX.XX.14/16/17/23</p>	Standard	98	97		99			
		2 1 ⊖	1 2 ⊖	4 1 5	1 2 3	2 1 ⊖	A B E	white brown yellow	red black green
		2 3 1 ⊖	3 1 2 ⊖	2 4 3 5	1 3 2 3	1 2 3 ⊖	white green brown yellow	red white black green	

- *) Provided female connector 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/H72317
Instructions	www.trafag.com/H73317
Flyer	www.trafag.com/H70692