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

02/2019
Data sheet H72317i
Subject to change

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

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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 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**

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	Signal output	Load resistance	I (supply)	U (supply)	
Output signal	4 ... 20 mA	(Usupply-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

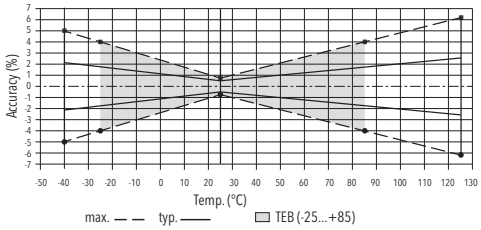
Specifications		
Electrical Data	Output / supply voltage	4 ... 20 mA: 24 (9...32) VDC 0 ... 5 VDC: 24 (9...32) VDC 1 ... 6 VDC: 24 (9...32) VDC 0 ... 10 VDC: 24 (15...32) VDC 0.5 ... 4.5 VDC ratiometric 10 ... 90 % U_{supply}: 5 ± 0.25 VDC
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Switch-on-delay	100 ms
	Inverse-polarity protection, short-circuit 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 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

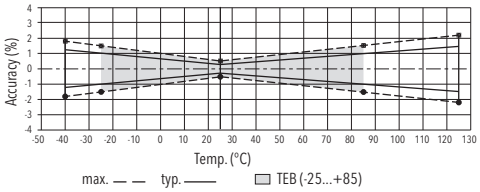
Accuracy

		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

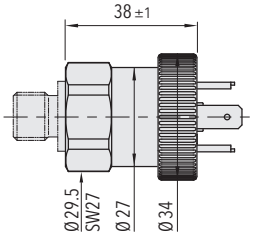
Measuring accuracy 0.5 %



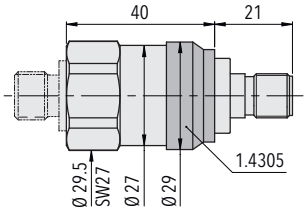
Measuring accuracy 0.3 %



Dimensions



8287.XX.XXXX.**05**.XX.XX



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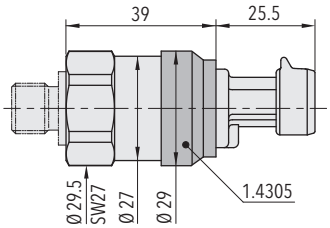

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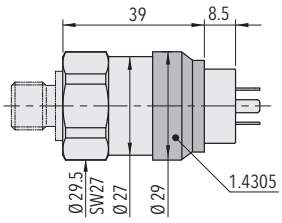

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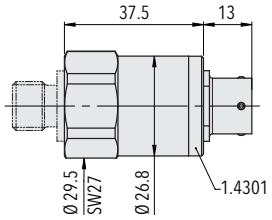

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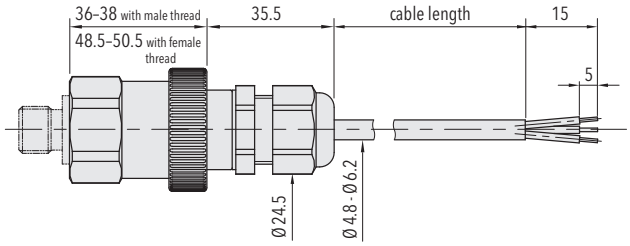

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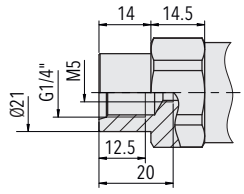

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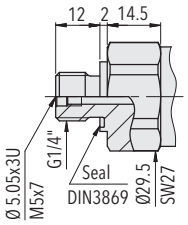
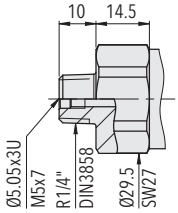


8287.XX.XX**17**.XX.XX.XX



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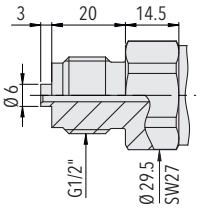
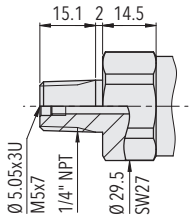


8287.XX.XX**11**.XX.XX.XX



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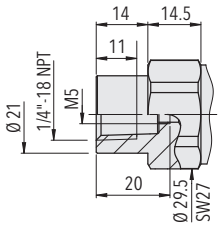

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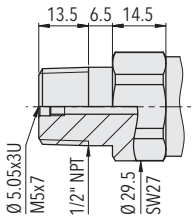
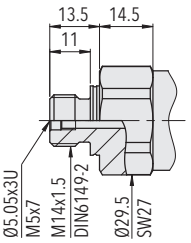
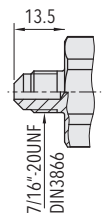


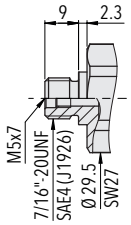
8287.XX.XX**51**.XX.XX.XX



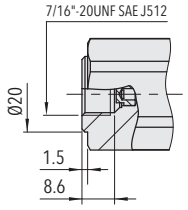
8287.XX.XX**31**.XX.XX.XX



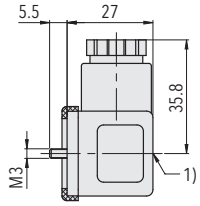
8287.XX.XX**18**.XX.XX.XX



8287.XX.XX**42**.XX.XX.XX

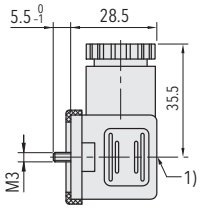


8287.XX.XX**24**.XX.XX.XX



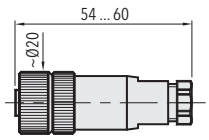
1) Tightening torque 50...60 Ncm

8287.XX.XXXX.XX.XX.**56**

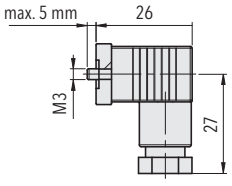


1) Tightening torque 50...60 Ncm

8287.XX.XXXX.XX.XX.**58**

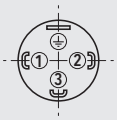
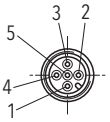
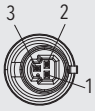
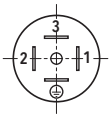
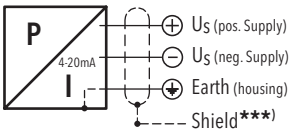
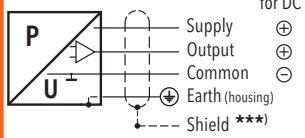


8287.XX.XXXX.XX.XX.**33**



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	 **8287**.xx.xxxx.xx.**19**	Standard 2 1 ⏚	**92** 1 2 ⏚		**E4** 1 3	2 1 ⏚	A B E	white brown yellow	red black green
	 **8287**.xx.xxxx.xx.**14/16/17/23**	Standard 2 3 1 ⏚	**98** 3 1 2 ⏚	**97** 1 3 2 ⏚	**99** 1 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