

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 ... 700 bar 0 ... 30 to 0 ... 10000 psi	Media temperature	-40°C ... +125°C
Output signal	4 ... 20 mA, 0 ... 5 VDC, 0.5 ... 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
NLH @ 25°C (BSL) typ.	± 0.2 % FS typ.		

01/2024

Data sheet H72317ac

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	0 ... 30	90	700	G5			
	0 ... 4	12	60	0 ... 50	150	850	G6			
	0 ... 6	18	100	0 ... 100	300	1450	G7			
	0 ... 10	30	200	0 ... 150	450	2500	G8			
	0 ... 16	48	200	0 ... 200	600	2500	GA			
	0 ... 25	75	300	0 ... 250	750	2500	G9			
	0 ... 40	120	300	0 ... 300	900	4000	HA			
	0 ... 60	180	400	0 ... 400	1200	4000	HO			
	0 ... 100	300	500	0 ... 500	1500	4000	H1			
	0 ... 160	480	750	0 ... 1000	3000	5000	H2			
	0 ... 250	750	1000	0 ... 1500	4500	7000	H3			
	0 ... 400	1000	2000	0 ... 2000	6000	10000	H5			
	0 ... 600	1500	2500	0 ... 3000	9000	14500	G4			
	0 ... 700 ¹⁵⁾	1500	2500	0 ... 5000	12500	21750	H4			
				0 ... 7500	18750	29000	H6			
				0 ... 10000 ¹⁵⁾	18750	29000	H7			
	Option 5P:	Fivefold overpressure			Option:	Maximum Overpressure				
	0 ... 2.5	12.5	60	0 ... 30	150	1450	E5			
	0 ... 4	20	100	0 ... 50	180	1450	E6			
	0 ... 6	30	200	0 ... 100	450	3500	E7			
	0 ... 10	50	200	0 ... 150	700	4250	E8			
	0 ... 16	80	300	0 ... 200	700	4250	EA			
	0 ... 25	125	300	0 ... 250	1150	5750	E9			
	0 ... 40	200	400	0 ... 300	1150	5750	FA			
	0 ... 60	300	500	0 ... 400	1800	8500	F0			
	0 ... 100	500	750	0 ... 500	1800	8500	F1			
0 ... 160	800	1000	0 ... 1000	4600	19000	F2				
Sensor	Relative pressure, accuracy class: 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 class: 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	10	R1/4" male, DIN3858 ²⁾	19						
	G1/4" male, Seal: DIN 3869	17	M14x1.5 male DIN EN ISO 6149-2 ²⁾	31						
	G1/4" male, with integrated damping Ø 0.5 mm, Seal: DIN 3869 ¹⁴⁾	15	7/16"-20UNF male, DIN3866 ^{2) 6)}	18						
	G1/4" male (Manometer) EN 837 ²⁾	53	7/16"-20UNF-2A male, SAE J1926-3 (Light Duty) ^{2) 16)}	42						
	G1/2" male (Manometer) EN 837 ⁷⁾	11	7/16"-20UNF-2A male, SAE J1926-2 (Heavy Duty) ¹⁷⁾	69						
	1/4" NPT male	30	7/16"-20UNF female, SAE J512 with valve opener ⁶⁾	24						
	1/4"- 18 NPT female ²⁾	13	9/16"-18UNF-2A male, SAE J1926-3 (Light Duty) ^{2) 16)}	61						
	1/2" NPT male ²⁾	51	9/16"-18UNF-2A male, SAE J1926-2 (Heavy Duty) ¹⁷⁾	67						

Electrical connection	Male electrical connector EN 175301-803-A (DIN 43650-A), Mat. PA				05
	Male electrical connector M12x1, 5-pole, Mat. PBT				35
	Male electrical connector Packard Metri Pack, Mat. PBT ¹⁸⁾				51
	Male electrical connector MIL-C 26482, 6-pole, metal ¹²⁾				02
	Male electrical connector: DIN72585 Code 1, Mat.: PBT (Contacts Mat.: Sn) ¹³⁾				25
	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
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
	0.5 ... 5 VDC	> 5.0 kΩ	≤ 20 mA	9 ... 32 VDC	22
	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 FPM, -18°C ... +125°C				61
	Seal EPDM, -40°C ... +125°C				63
	Seal NBR, -25°C ... +100°C				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 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)				92
	Special electrical connection: Pin 1 Out, Pin 2 -, Pin 3 + (only for output 14, 16, 17 and male electrical connector 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 connector EN175301-803-A / DIN43650-A)				97
	Special electrical connection: Pin 1 +, Pin 3 -, Pin 5 GR (only for output 4...20mA and male electrical connector M12x1, 5-pol.)				94
	Special electrical connection: Pin 1 +, Pin 3 -, Pin 4 Ground (only for output signals 19 and male electrical connector 35, M12x1, 5-pole)				G9
	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 2 out Pin 3 - (only for output signals 14, 16, 17 and male electrical connector 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
Enhanced condensation protection				CP	
Multiple packaging ¹¹⁾				VM	

¹⁾ Customized pressure ranges upon request

²⁾ Upon request

³⁾ Only with pressure connection 17 (G1/4") or 11 (G1/2")

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 180 bar overpressure

⁷⁾ Max. allowable pressure range 160 bar at 480 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, 53, only for output signal 4 ... 20 mA (code 19)

¹³⁾ Only for sensors 23 and 25, only for pressure connections 13, 17, 19, 53, only for output signal 0.5 ... 4.5 VDC ratiometric (code 23)

¹⁴⁾ Only for sensors 23 and 25

¹⁵⁾ Only for pressure connections 13, 30, 31 and 51

¹⁶⁾ Measuring range max. 350 bar according to SAE J1926-3 (Light Duty). Do not use for new designs, will be replaced by design according to SAE J1926-2 (Heavy Duty) in 2023

¹⁷⁾ Measuring range max. 630 bar according to SAE J1926-2 (Heavy Duty)

¹⁸⁾ Do not use for new designs as this option will be phased out soon. Only limited quantities available.

Code	Pressure connection	Seal FPM (Code 61)	Seal EPDM (Code 63)	Seal NBR (Code 83)
10	G1/4" female			
17	G1/4" male, Seal: DIN 3869	✓	✓	✓
15	G1/4" male, with integrated damping Ø 0.5 mm, Seal: DIN 3869	✓	✓	✓
53	G1/4" male (Manometer) EN 837			
11	G1/2" male (Manometer) EN 837			
30	1/4" NPT female			
13	1/4"- 18 NPT female			
51	1/2" NPT male			
19	R1/4" male, DIN3858			
31	M14x1.5 male DIN EN ISO 6149-2	✓		
18	7/16"-20UNF male, DIN3866			
42	7/16"-20UNF male, SAE4 (J1926)	✓		
24	7/16"-20UNF female, SAE J512 with valve opener			
61	9/16"-18UNF male, SAE6 (J1926)	✓		

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

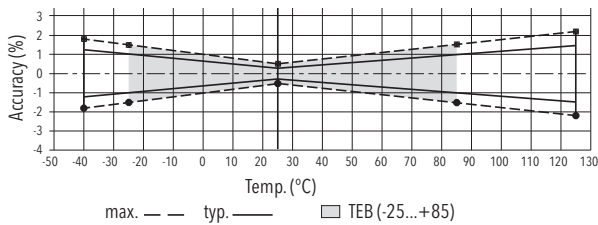
Specifications		
Electrical data	Output / supply voltage	4 ... 20 mA: 24 (9...32) VDC 0 ... 5 VDC: 24 (9...32) VDC 0.5 ... 5 VDC: 24 (9...32) VDC 1 ... 6 VDC: 24 (9...32) VDC 0 ... 10 VDC: 24 (15...32) VDC 0.5 ... 4.5 VDC ratiometric 10 ... 90 % U_{supply} : 5 ± 0.25 VDC
	Rise time	Typ. 1 ms / 10 ... 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	-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 connector	See ordering information
	Weight	appr. 80 ... 110 g
	Mounting torque	25 Nm

¹⁾ See electrical connection

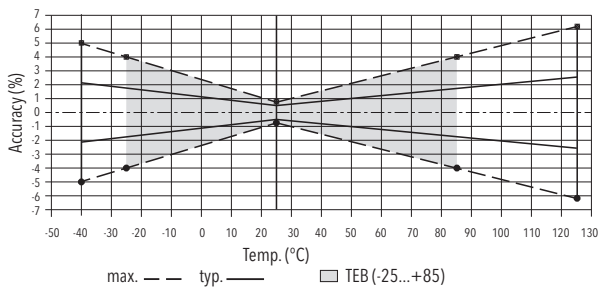
Accuracy

		Measuring accuracy 0.3 % Ordering no. 23/33	Measuring accuracy 0.5 % Ordering No. 25/35
TEB @ -25 ... +85°C	[% FS typ.]	± 1.0	± 1.75
Accuracy @ +25°C	[% FS typ.]	± 0.3	± 0.5
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.2
TC zero point and span	[% FS/K typ.]	± 0.01	± 0.03
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.1	± 0.1
Mounting dependency with 180° rotation (vibration and shock)	[% FS max.]	0.5 mbar	0.5 mbar

Accuracy class 0.3 %



Accuracy class 0.5 %

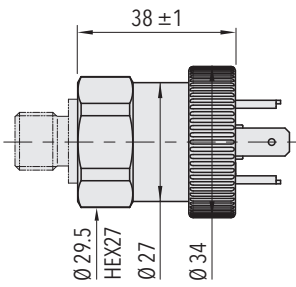


Additional information

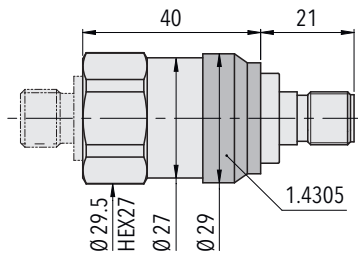
Documents

Data sheet	www.trafag.com/H72317
Instructions	www.trafag.com/H73317
Flyer	www.trafag.com/H70692

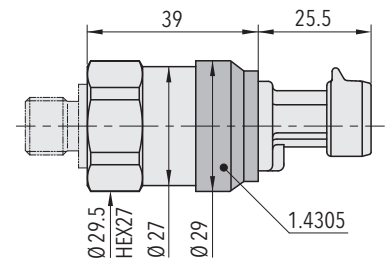
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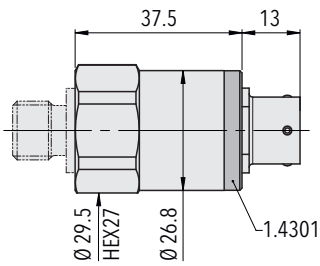
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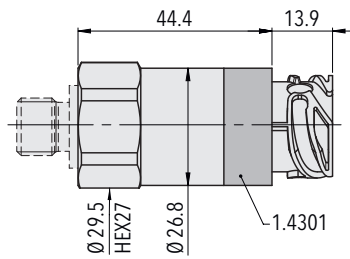
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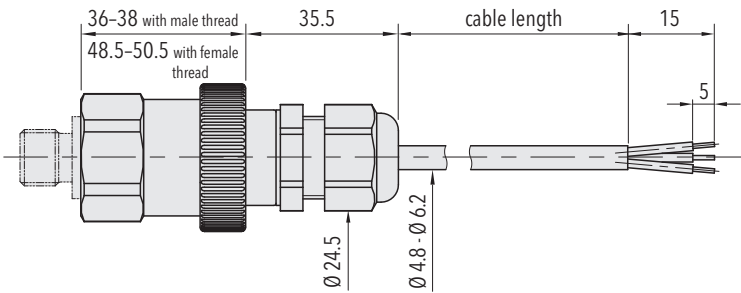
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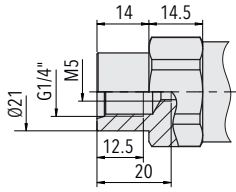


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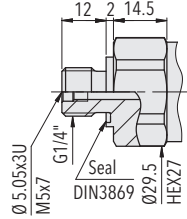


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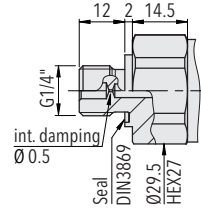
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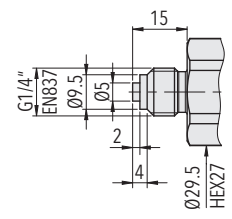
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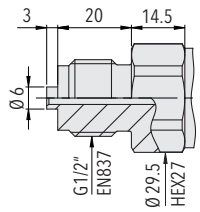
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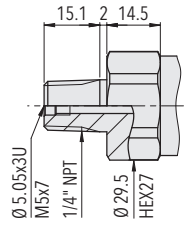
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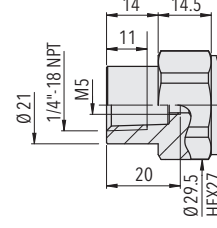
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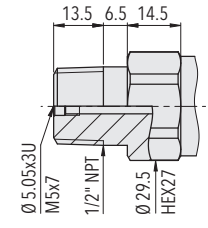
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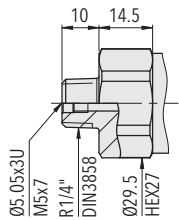
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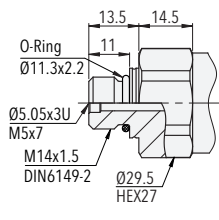
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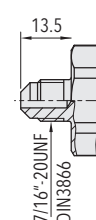
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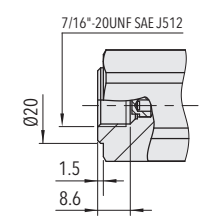
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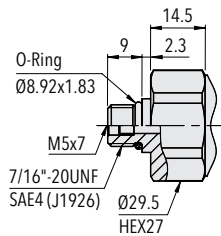
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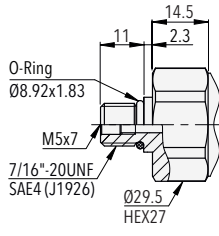
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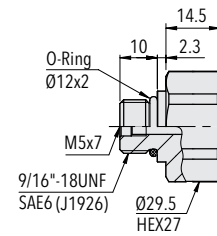
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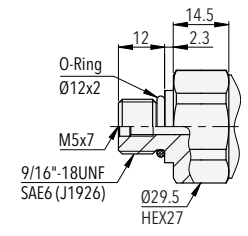
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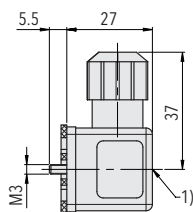
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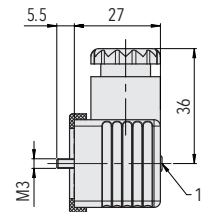


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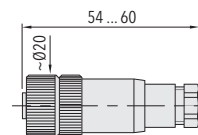
1) Tightening torque 50...60 Ncm

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1) Tightening torque 50...60 Ncm

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8287.XX.XXXX.XX.XX.33

Electrical connection

		Protection / electrical connection																												
		IP65*) **)	IP67*) **)	IP67*) **)	IP67*) **)	IP69K*)																								
		Industrial standard EN175301-803A	M12x1 5-pole	Packard Metri Pack 3-pole	MIL-C 26482	DIN 72585**) Code 1																								
		05	35	51	02	25 1)																								
Output signal	<p>8287.xx.xxxx.xx. 19</p>	<table border="1"> <thead> <tr> <th>Standard</th> <th>92</th> <th>94</th> <th>69</th> <th>E4</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>1</td> <td>4</td> <td>1</td> <td>1</td> </tr> <tr> <td>1</td> <td>2</td> <td>1</td> <td>3</td> <td>3</td> </tr> <tr> <td>⊕</td> <td>⊕</td> <td>5</td> <td>5</td> <td>4</td> </tr> </tbody> </table>	Standard	92	94	69	E4	2	1	4	1	1	1	2	1	3	3	⊕	⊕	5	5	4			A					
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1	2	1	3	3																										
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<p>8287.xx.xxxx.xx. 14/16/17/22/23</p>	<table border="1"> <thead> <tr> <th>Standard</th> <th>98</th> <th>97</th> <th></th> <th>99</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>3</td> <td>1</td> <td>2</td> <td>1</td> </tr> <tr> <td>3</td> <td>1</td> <td>3</td> <td>4</td> <td>3</td> </tr> <tr> <td>1</td> <td>2</td> <td>2</td> <td>3</td> <td>2</td> </tr> <tr> <td>⊖</td> <td>⊖</td> <td>⊖</td> <td>5</td> <td>3</td> </tr> </tbody> </table>	Standard	98	97		99	2	3	1	2	1	3	1	3	4	3	1	2	2	3	2	⊖	⊖	⊖	5	3				1 2 4 3
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1	2	2	3	2																										
⊖	⊖	⊖	5	3																										

1) Only for output signal 23

*) 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

		Protection / electrical connection	
		IP68 max. 3 m	IP68 max. 3 m
		Cable**) 24/22	Cable**) 08
Output signal	<p>8287.xx.xxxx.xx. 19</p>	white brown yellow	red black green
	<p>8287.xx.xxxx.xx. 14/16/17/22/23</p>	white green brown yellow	red white black green