

ENGINE PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The EPN pressure transmitter offers reliable and accurate pressure measurement over a wide temperature range. Its excellent long-term stability is based on the leading thin-film-on-steel sensor technology from Trafag. Its robust design makes the EPN the perfect choice for demanding applications such as marine and rail industries.



Applications

- Shipbuilding
- Engine manufacturing
- Machine tools
- Hydraulics



Features

- Nominal pressure up to 2500 bar (Common Rail) with high pressure threaded connection
- High vibration resistance
- Good temperature resistance
- Different accuracy classes
- Completely welded steel sensor system without additional seals

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 ... 2500 bar	Media temperature	-40°C ... +125°C
Output signal	4 ... 20 mA 0.5 ... 4.5 VDC ratiometric	Ambient temperature	-40°C ... +125°C
NLH @ 25°C (BSL) typ.	± 0.2 % FS typ. ± 0.1 % FS typ.	Approval / conformity	ABS, BV, CCS, DNV-GL, KRS, LRS, NKK, RINA, RMRS

12/2019

Data sheet H72312s

Subject to change

Ordering information/type code

				8298 . XX	XX	XX	XX	XX	XX
Measuring range ¹⁾	Pressure measurement range	Over pressure	Burst pressure						
	[bar]	[bar]	[bar]						
	0 ... 2.5	5	100	75					
	0 ... 4	8	100	76					
	0 ... 6	12	100	77					
	0 ... 10	20	200	78					
	0 ... 16	32	200	79					
	0 ... 25	50	300	80					
	0 ... 40	80	300	81					
	0 ... 60	120	500	82					
	0 ... 100	200	500	83					
	0 ... 160	320	1000	85					
	0 ... 250	500	1000	74					
	0 ... 400	800	1500	84					
	0 ... 600	1000	2000	86					
	0 ... 1600	3000	4000	89					
	0 ... 2000	3000	4000	90					
0 ... 2500 ¹⁰⁾	3000	4000	91						
Sensor	Relative pressure, accuracy: 0.3 %			23					
	Relative pressure, accuracy: 0.5 %			25					
Pressure connection	G1/4" male (Seal) ²⁾				17				
	R1/4" male, DIN3858 ^{2) 4)}				19				
	G1/2" male (Manometer) EN 837 ²⁾				11				
	1/4" NPT male ^{2) 5)}				30				
	1/2" NPT male ^{2) 5)}				51				
	M14x1.5 male (conical seal: 58°) ³⁾				28				
	M18x1.5 male (conical seal: 58°) ³⁾				29				
Electrical connection	Male electrical connector EN 175301-803-A (DIN43650-A), Mat. PA, normal vibration resistance ≤ 600 bar							04	
	Male electrical connector EN 175301-803-A (DIN43650-A), Mat. PA, extended vibration resistance							05	
	Male electrical connector: DIN72585 Code 1, Mat.: PBT (Contacts Mat.: Sn)							25	
	Male electrical connector MIL-C 26482, 6-pole, metal ⁸⁾							02	
	Cable with shield: Material: FDR 25 (Raychem) 4 x 0.5mm ² ⁶⁾							78	
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 ... 4.5 VDC ⁷⁾	≥ 15.0 kΩ	≤ 12 mA	5 VDC ± 0.25 VDC ratiom.				23	
Accessories	Pressure peak damping element ø 1.0 mm								40
	Pressure peak damping element ø 0.3 mm								43
	Pressure peak damping element ø 0.5 mm								45
	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 (DIN43650-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 ⁹⁾								58
	Female electrical plug MIL-C 26482, 6-pole, metal								32
	Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 4 ... 20 mA and male electrical connector EN175301-803-A/ DIN43650-A)								92
	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⁾ For Ranges ≤ 600 bar

³⁾ For ranges > 600 bar

⁴⁾ Only with electrical connection 04

⁵⁾ Upon request

⁶⁾ Cable length see accessories

⁷⁾ Only with electrical connections 25 and 78

⁸⁾ For pressure ranges < 40 bar upon request

⁹⁾ Without ship approval DNV-GL

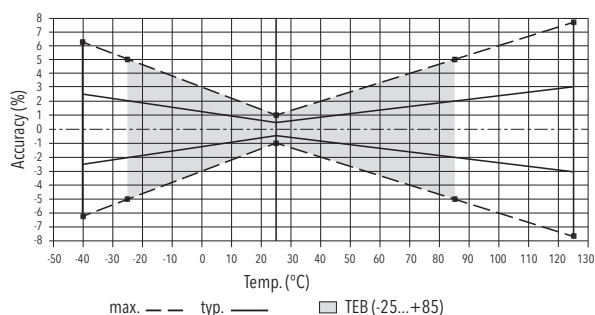
¹⁰⁾ Without ship approvals

Specifications		
Electrical Data	Output / supply voltage	4 ... 20 mA: 24 (9 ... 32) VDC 0.5 ... 4.5 VDC: 5 VDC ratiom.
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
Environmental conditions	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C
	Protection ¹⁾	IP65, IP67, IP69K
	Humidity	Max. 95 % relative
	Vibration	Electrical connection 04/02: 10 g (50...2000 Hz) Electrical connection 05: 15 g (50...2000 Hz) Electrical connection 25: 15 g RMS Electrical connection 78: 20 g RMS
	Shock	50 g / 3 ms
EMC Protection	Emission	EN/IEC 61000-6-4
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor (wetted parts)	1.4542 (AISI630)
	Pressure connection (wetted parts)	1.4542 (AISI630)
	Housing	1.4301 (AISI304) except male electrical plug 04 and 2.5...250bar: 1.4542 (AISI630)
	Sealing	FKM 70 Sh
	Male electrical plug	See ordering information
	Weight	~ 80...110 g
	Mounting torque	25 Nm Pressure connection 28/29: 30 Nm

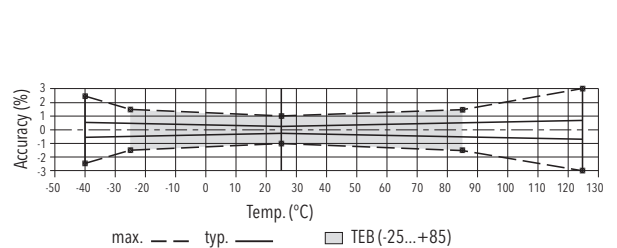
¹⁾ See electrical connection

Accuracy			
		Measuring accuracy 0.5% Ordering No. 25	Measuring accuracy 0.3% Ordering No. 23
TEB @ -25...+85°C	[% FS typ.]	± 2.0	± 0.5
Accuracy @ +25°C	[% FS typ.]	± 0.5	± 0.3
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.1
TC zero point and span	[% FS/K typ.]	± 0.03	± 0.005
Long term stability 1 year @ +25°C	[% FS typ.]	± 0.2	± 0.2

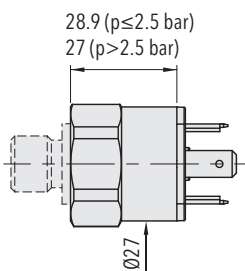
Measuring accuracy 0.5 %



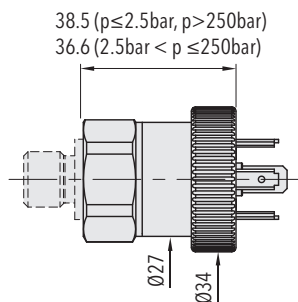
Measuring accuracy 0.3 %



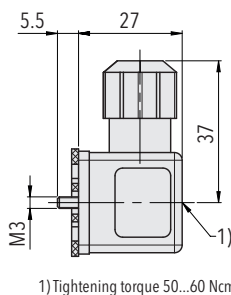
Dimensions



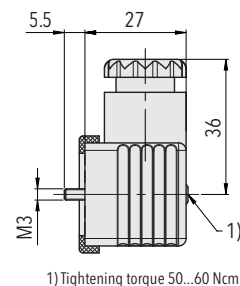
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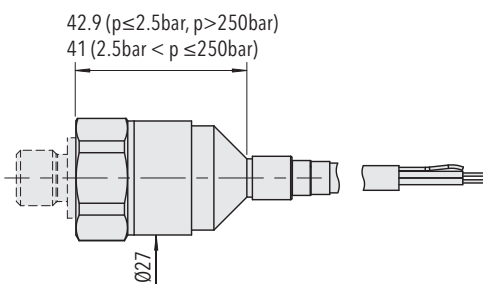
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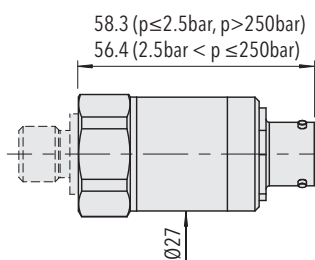
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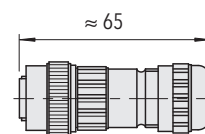
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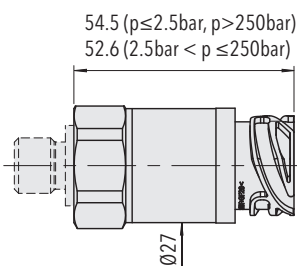
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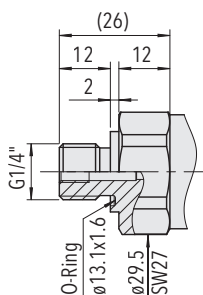
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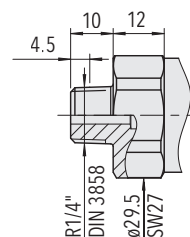
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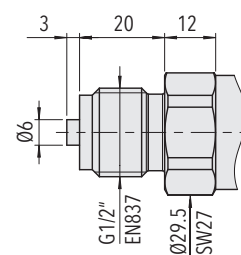
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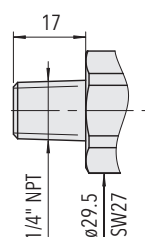
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Pressure ranges: ≤ 600 bar



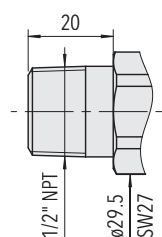
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Pressure ranges: ≤ 600 bar



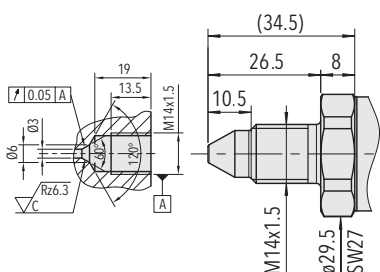
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Pressure ranges: ≤ 600 bar



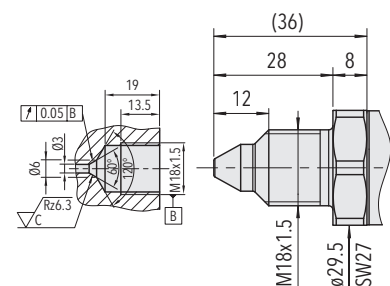
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8298.XX.XX51.XX.XX.XX

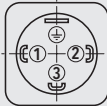
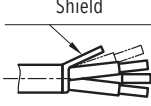
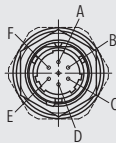

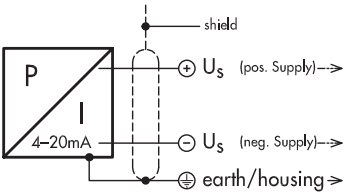
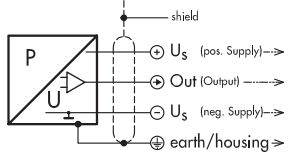


8298.XX.XX28.XX.XX.XX
Pressure ranges: ≤ 2500 bar



8298.XX.XX29.XX.XX.XX
Pressure ranges: ≤ 2500 bar

Electrical connection

		Protection / electrical connection				
		IP65 ^{*)}	IP69K	IP67 ^{*)}	IP69K ^{*)}	
		Industrial standard EN175301-803A 04/05 	Cable **) 78 Shield 	MIL-C 26482 02 	DIN 72585 ^{**)} Code 1 25 	
Output signal	 8298.xx.xxxx.xx.19	Standard 2 1 ⊕	with accessory 92 1 2 ⊕	brown black yellow / green	A B E	1 4 3
	 8298.xx.xxxx.xx.23			brown blue black yellow / green		1 2 4 3

^{*)} Provided female connector is mounted according to instructions

^{**)} Ventilation via cable end

Additional information

Documents

Data sheet	www.trafag.com/H72312
Instructions	www.trafag.com/H73311
Flyer	www.trafag.com/H70669