

# 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	Media temperature	-40°C ... +125°C
Measuring range	0 ... 2.5 to 0 ... 2500 bar	Ambient temperature	-40°C ... +125°C
Output signal	4 ... 20 mA 0.5 ... 4.5 VDC ratiometric	Approval / conformity	ABS, BV, CCS, DNV, GL, KRS, LRS, NKK, RINA, RMRS
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.		

01/2019

Data sheet H72312q

Subject to change

## Ordering information/type code

				8298 . XX	XX	XX	XX	XX	XX
<b>Measuring range <sup>1)</sup></b>	<b>Pressure measurement range [bar]</b>	<b>Over pressure [bar]</b>	<b>Burst pressure [bar]</b>						
	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	3000	4000	91						
<b>Sensor</b>	Relative pressure, accuracy: 0.3 %			23					
	Relative pressure, accuracy: 0.5 %			25					
<b>Pressure connection</b>	G1/4" male (Seal) <sup>2)</sup>				17				
	R1/4" male DIN3858 <sup>2) 4)</sup>				19				
	G1/2" male (Manometer) <sup>2)</sup>				11				
	1/4" NPT male <sup>2) 5)</sup>				30				
	1/2" NPT male <sup>2) 5)</sup>				51				
	M14x1.5 male (conical seal: 58°) <sup>3)</sup>				28				
M18x1.5 male (conical seal: 58°) <sup>3)</sup>				29					
<b>Electrical connection</b>	Male electrical plug EN 175301-803-A (DIN43650-A), Mat. PA, normal vibration resistance ≤ 600 bar				04				
	Male electrical plug EN 175301-803-A (DIN43650-A), Mat. PA, extended vibration resistance				05				
	Male electrical plug: DIN72585 Code 1, Mat.: PBT (Contacts Mat.: Sn)				25				
	Male electrical plug MIL-C 26482, 6-pole, metal <sup>8)</sup>				02				
	Cable with shield: Material: FDR 25 (Raychem) 4 x 0.5mm <sup>2</sup> <sup>6)</sup>				78				
<b>Output signal</b>	<b>Signal output</b>	<b>Load resistance</b>	<b>I (supply)</b>	<b>U (supply)</b>					
	4 ... 20mA	(U <sub>supply</sub> -9 V) / 20 mA		9 ... 32 VDC				19	
	0.5 ... 4.5 VDC <sup>7)</sup>	≥ 15.0 kΩ	≤ 12 mA	5 VDC ± 0.25 VDC ratiom.				23	
<b>Accessories</b>	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 connector EN 175301-803-A (DIN43650-A)/NBR, -40°C ... +90°C				58				
	Female electrical connector MIL-C 26482, 6-pole, metal				32				
	Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 4 ... 20 mA and male electrical plug EN175301-803-A / DIN43650-A)				92				
	Cable length 1.5 m				1M				
	Cable length 3.0 m				3M				
	Cable length 5.0 m				5M				

<sup>1)</sup> Extended overpressure as well as customized pressure ranges upon request

<sup>2)</sup> For Ranges ≤ 600 bar

<sup>3)</sup> For ranges > 600 bar

<sup>4)</sup> Only with electrical connection 04

<sup>5)</sup> Please ask us

<sup>6)</sup> Cable length see accessories

<sup>7)</sup> Only with electrical connections 25 and 78

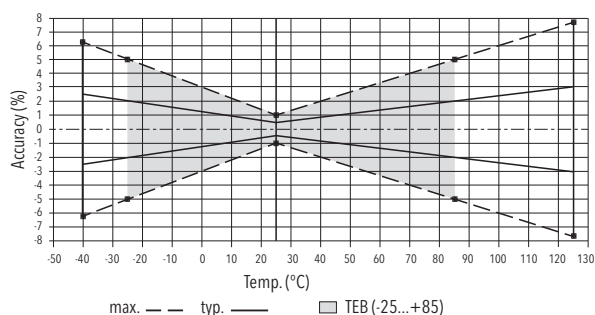
<sup>8)</sup> For pressure ranges < 40 bar upon request

Specifications		
<b>Electrical Data</b>	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
<b>Environmental conditions</b>	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C
	Protection <sup>1)</sup>	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
<b>EMC Protection</b>	Emission	EN/IEC 61000-6-4
	Immunity	EN/IEC 61000-6-2
<b>Mechanical Data</b>	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

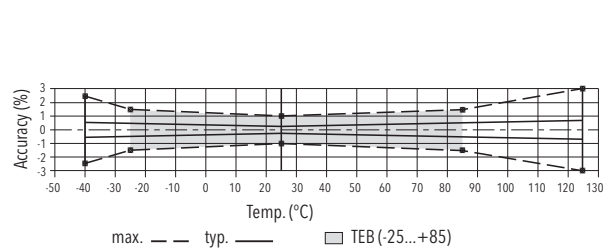
<sup>1)</sup> See electrical connection

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

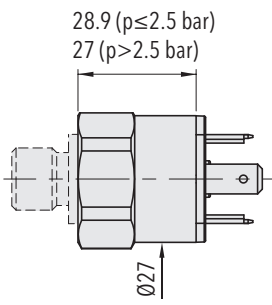
## Measuring accuracy 0.5 %



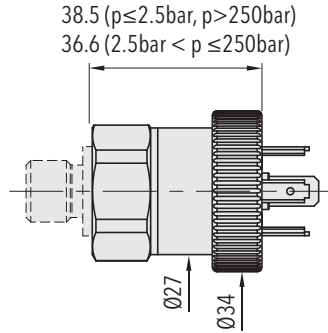
## Measuring accuracy 0.3 %



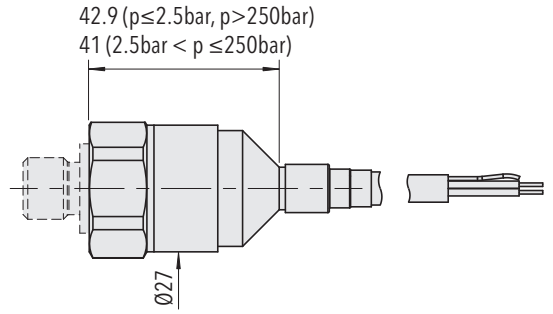
## Dimensions



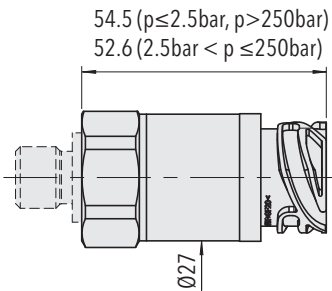
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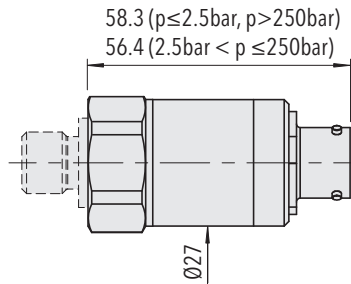
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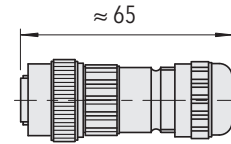
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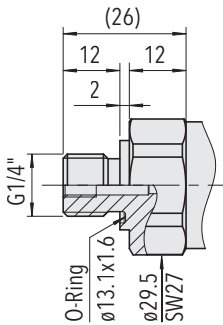
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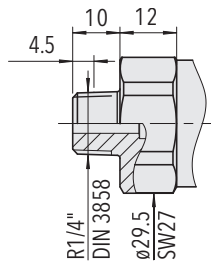
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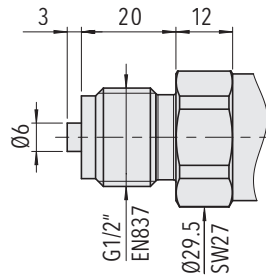
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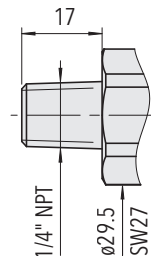
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Pressure ranges: ≤ 600 bar



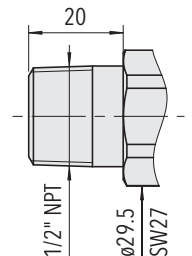
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Pressure ranges: ≤ 600 bar



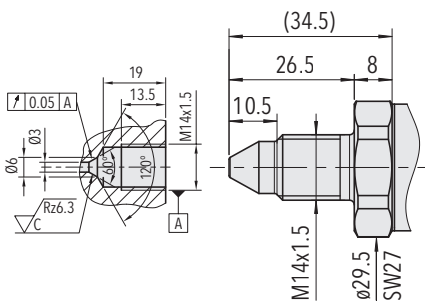
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Pressure ranges: ≤ 600 bar



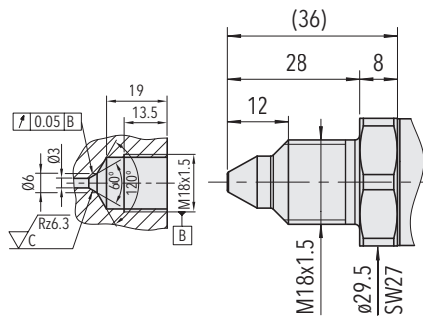
8298.XX.XX30.XX.XX.XX



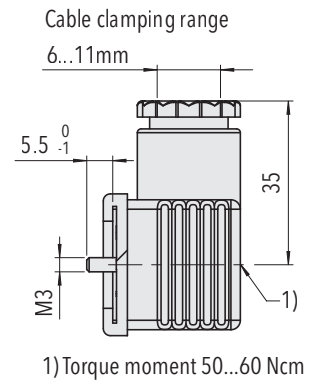
8298.XX.XX51.XX.XX.XX



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

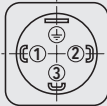
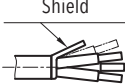
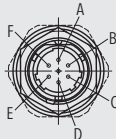

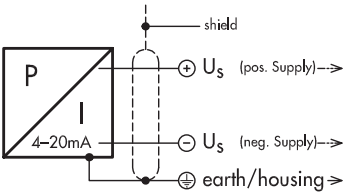
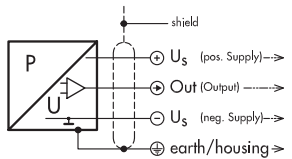


8298.XX.XX29.XX.XX.XX  
Pressure ranges: ≤ 2500 bar



8298.XX.XXXX.XX.XX.58

## Electrical connection

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

<sup>\*)</sup> Provided female connector is mounted according to instructions

<sup>\*\*)</sup> Ventilation via cable end

### Additional information

#### Documents

Data sheet	<a href="http://www.trafag.com/H72312">www.trafag.com/H72312</a>
Instructions	<a href="http://www.trafag.com/H73311">www.trafag.com/H73311</a>
Flyer	<a href="http://www.trafag.com/H70669">www.trafag.com/H70669</a>