

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.		

02/2018

Data sheet H72312p

Subject to change

Ordering information/type code

					8298 . XX	XX	XX	XX	XX	XX
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [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	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) 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 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 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 ... 20mA	(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 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	

¹⁾ Extended overpressure as well as customized pressure ranges upon request²⁾ For Ranges ≤ 600 bar³⁾ For ranges > 600 bar⁴⁾ Only with electrical connection 04⁵⁾ Please ask us⁶⁾ Cable length see accessories⁷⁾ Only with electrical connections 25 and 78⁸⁾ For pressure ranges < 40 bar upon request

Standard products (extra short lead time)

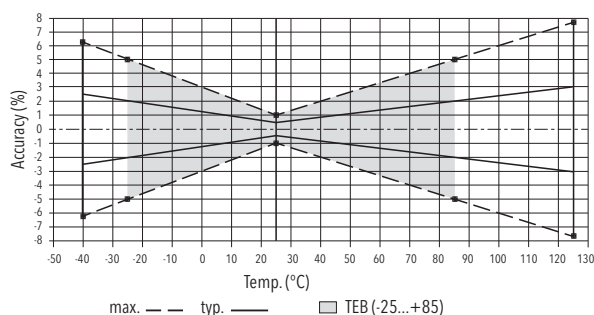
Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Supply [VDC]	Accuracy @ 25°C typ. [%]
EPN4.0A	8298 76 2517 04 0000 0000 19 43 58	0 ... 4	8	9 ... 32	± 0.5
EPN6.0A	8298 77 2517 04 0000 0000 19 43 58	0 ... 6	12	9 ... 32	± 0.5
EPN10.0A	8298 78 2517 04 0000 0000 19 43 58	0 ... 10	20	9 ... 32	± 0.5
EPN16.0A	8298 79 2517 04 0000 0000 19 43 58	0 ... 16	32	9 ... 32	± 0.5
EPN25.0A	8298 80 2517 04 0000 0000 19 43 58	0 ... 25	50	9 ... 32	± 0.5
EPN40.0A	8298 81 2517 04 0000 0000 19 43 58	0 ... 40	80	9 ... 32	± 0.5
EPN60.0A	8298 82 2517 04 0000 0000 19 43 58	0 ... 60	120	9 ... 32	± 0.5
EPN100.0A	8298 83 2517 04 0000 0000 19 43 58	0 ... 100	200	9 ... 32	± 0.5
EPN250.0A	8298 74 2517 04 0000 0000 19 43 58	0 ... 250	500	9 ... 32	± 0.5
EPN400.0A	8298 84 2517 04 0000 0000 19 43 58	0 ... 400	800	9 ... 32	± 0.5

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

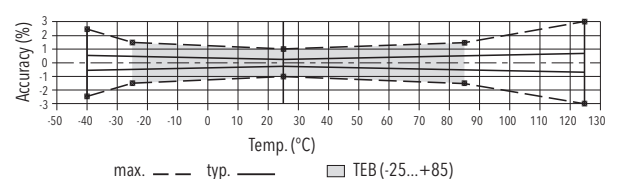
¹⁾ See electrical connection

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 %



Electrical connection

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