

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.		

01/2017

Data sheet H723120

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...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...20mA 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 request

²⁾ For Ranges ≤ 600 bar

³⁾ For ranges > 600 bar

⁴⁾ Only with electrical connection 04

⁵⁾ Please ask us

⁶⁾ Cable length see accessories

⁷⁾ Only with electrical connections 25 and 78

⁸⁾ For pressure ranges < 40 bar upon request

Standard products (extra short lead time)

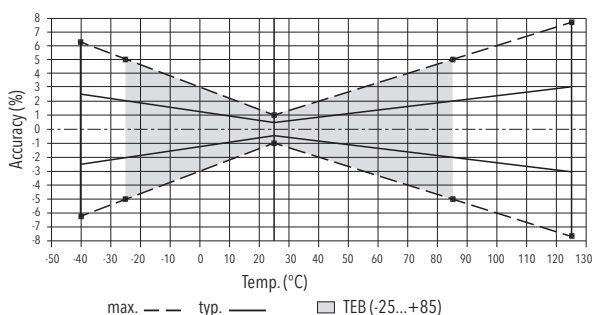
Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Supply [VDC]	Accuracy @ 25°C typ. [%]
EPN4.0A	8298 76 2517 04 0000 0000 19 43 58	0 ... 4	8	9 ... 32	± 0.5
EPN6.0A	8298 77 2517 04 0000 0000 19 43 58	0 ... 6	12	9 ... 32	± 0.5
EPN10.0A	8298 78 2517 04 0000 0000 19 43 58	0 ... 10	20	9 ... 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

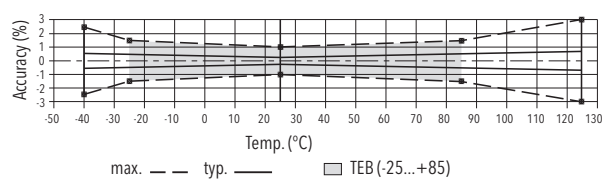
¹⁾ See electrical connection

Accuracy			
		Measuring accuracy 0.5%	Measuring accuracy 0.3%
		Ordering No. 25	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

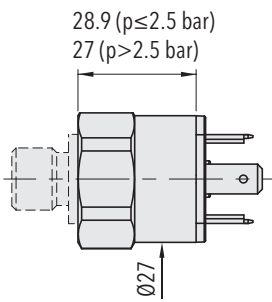
Measuring accuracy 0.5 %



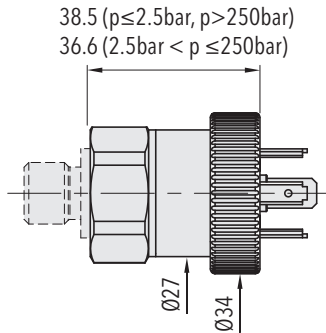
Measuring accuracy 0.3 %



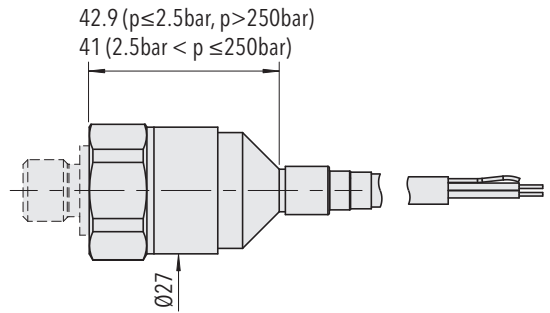
Dimensions



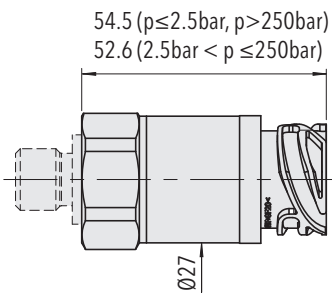
8298.XX.XXXX.04.XX.XX



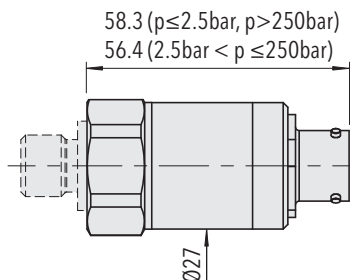
8298.XX.XXXX.05.XX.XX



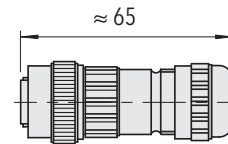
8298.XX.XXXX.78.XX.XX



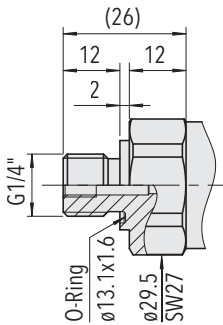
8298.XX.XXXX.25.XX.XX



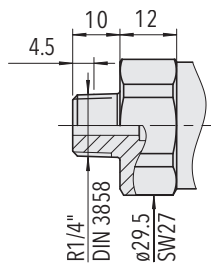
8298.XX.XXXX.02.XX.XX



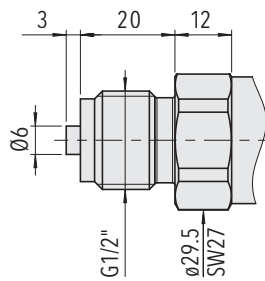
8298.XX.XXXX.02.XX.32



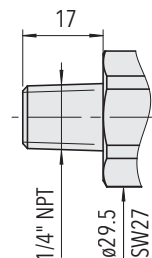
8298.XX.XX17.XX.XX.XX
Pressure ranges: ≤ 600 bar



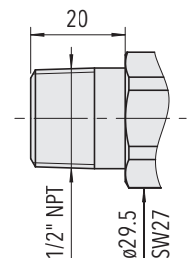
8298.XX.XX19.XX.XX.XX
Pressure ranges: ≤ 600 bar



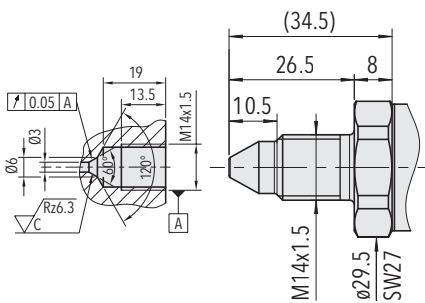
8298.XX.XX11.XX.XX.XX
Pressure ranges: ≤ 600 bar



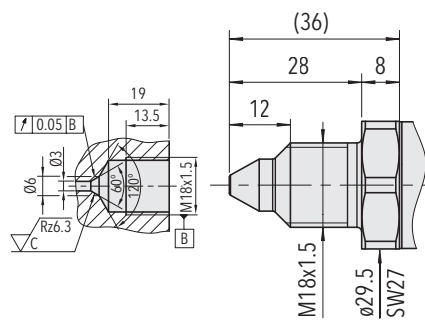
8298.XX.XX30.XX.XX.XX



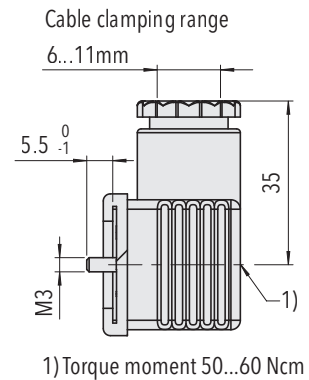
8298.XX.XX51.XX.XX.XX



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

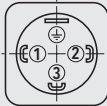
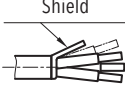
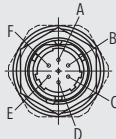

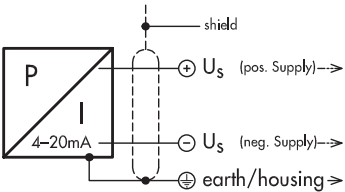
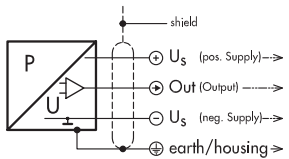


8298.XX.XX29.XX.XX.XX
Pressure ranges: ≤ 2500 bar



8298.XX.XXXX.XX.XX.58

Electrical connection

		Protection / electrical connection				
		IP65 ^{*)}	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 C F	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