

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 engine and shipbuilding pressure transmitter NAE 8256 features the extremely robust and stable thin-film-on-steel sensor element. The NAE 8256 is the smallest pressure transmitter of its kind with ship approvals. The wide temperature range from -40°C up to +125°C and triple overpressure safety makes it the first choice in rough environments such as marine applications.



Applications

- Shipbuilding
- Engine manufacturing
- Hydraulics

Features

- Measuring accuracy 0.3 %, 0.5 %
- Completely welded steel sensor system without additional seals
- Smallest design
- High resistance to over pressure
- Excellent long-term stability

Technical Data

Measuring principle	Thin film on steel	Media temperature	-40°C ... +125°C
Measuring range	0 ... 6 to 0 ... 600 bar 0 ... 100 to 0 ... 7500 psi	Ambient temperature	-40°C ... +125°C
Output signal	4 ... 20 mA	Approval / conformity	ABS, BV, DNV-GL, KRS, LRS, NKK, RINA, RMRS
Accuracy @ 25°C typ.	0.5 %: ± 0.5 % FS typ. 0.3 %: ± 0.3 % FS typ.		

04/2019

Data sheet H72305i

Subject to change

Ordering information/type code

				8256 . XX				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 ... 6 ^{5) 6)}	18	100	77	0 ... 100 ^{5) 6)}	300	1450	G7					
	0 ... 10	30	200	78	0 ... 150	450	2500	G8					
	0 ... 16	48	200	79	0 ... 200	600	2500	GA					
	0 ... 25	75	300	80	0 ... 250	750	2500	G9					
	0 ... 40	120	300	81	0 ... 300	900	4000	HA					
	0 ... 60	180	400	82	0 ... 400	1200	4000	H0					
	0 ... 100	300	500	83	0 ... 500	1200	4000	H1					
	0 ... 160	480	750	85	0 ... 1000	3000	5000	H2					
	0 ... 250	750	1000	74	0 ... 1500	4500	7000	H3					
	0 ... 400	1000	2000	84	0 ... 2000	6000	10000	H5					
	0 ... 600	1500	2500	86	0 ... 3000	9000	14500	G4					
					0 ... 5000	12500	21750	H4					
					0 ... 7500	18750	29000	H6					
Sensor	Relative pressure, accuracy: 0.5 %								25				
	Relative pressure, accuracy: 0.3 %								23				
Pressure connection	G1/4" male, seal: DIN 3869 (accessories 61/63/83)								17				
	G1/4" male (Manometer) EN 837 ⁶⁾								53				
	1/4" NPT male								30				
	M10x1 male								32				
Electrical connection	Male electrical plug, industrial standard, contact distance 9.4 mm, Mat. PA								01				
	Male electrical plug M12x1, 4-pole, Mat. PA, IEC 61076-2-101								32				
	Male electrical plug M12x1, 5-pole, Mat. PA, IEC 61076-2-101								35				
Output signal	Signal output	Load resistance	I (supply)	U (supply)									
	4 ... 20 mA 	See graphic		24 (9 ... 32) VDC									
Accessories	Female electrical plug M12x1, 5-pole ²⁾								33				
	Female electrical connector industrial standard ³⁾								34				
	Pressure peak damping element ø 0.4 mm								44				
	Seal FPM, -18°C ... +125°C ⁴⁾								61				
	Seal EPDM, -40°C ... +125°C ⁴⁾								63				
	Seal NBR, -25°C ... +100°C ⁴⁾								83				
	Special electrical connection: Pin 2 +, Pin 3 ground, Pin 4 - (only for male electrical plug 01, industrial standard)								90				
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 4 ground (only for output signal 19 and male electrical plug 32, M12x1, 4-pole)								E1				

¹⁾ Customized pressure ranges upon request

²⁾ For electrical connections 32 and 35

³⁾ For electrical connection 01

⁴⁾ Only with pressure connection 17 (G1/4")

⁵⁾ Only with sensor 23 (accuracy 0.3 %)

⁶⁾ Only with ship approval DNV-GL

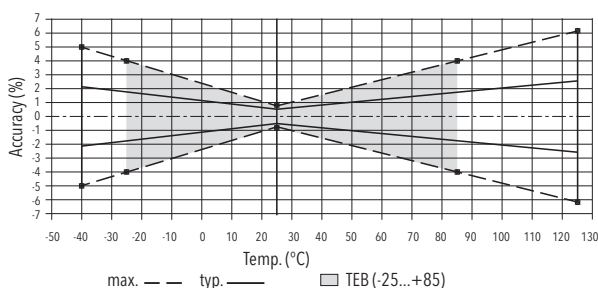
Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Supply [VDC]	Accuracy @ 25°C typ. [%]
NAE6.0A	8256 77 2317 32 0000 0000 19 33 44 61	0 ... 6	18	9 ... 32	± 0.3
NAE10.0A	8256 78 2317 32 0000 0000 19 33 44 61	0 ... 10	30	9 ... 32	± 0.3
NAE16.0A	8256 79 2317 32 0000 0000 19 33 44 61	0 ... 16	48	9 ... 32	± 0.3
NAE25.0A	8256 80 2317 32 0000 0000 19 33 44 61	0 ... 25	75	9 ... 32	± 0.3
NAE40.0A	8256 81 2317 32 0000 0000 19 33 44 61	0 ... 40	120	9 ... 32	± 0.3
NAE100.0A	8256 83 2317 32 0000 0000 19 33 44 61	0 ... 100	300	9 ... 32	± 0.3
NAE250.0A	8256 74 2317 32 0000 0000 19 33 44 61	0 ... 250	750	9 ... 32	± 0.3
NAE400.0A	8256 84 2317 32 0000 0000 19 33 44 61	0 ... 400	1000	9 ... 32	± 0.3
NAE600.0A	8256 86 2317 32 0000 0000 19 33 44 61	0 ... 600	1500	9 ... 32	± 0.3

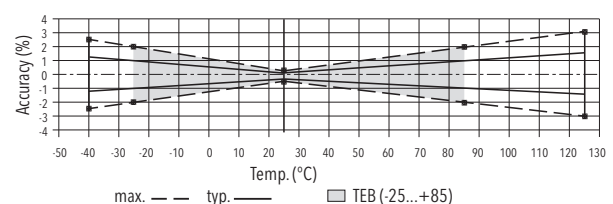
Specifications		
Accuracy	TEB typ. @ -25 ... +85°C	0.5 %: ± 1.75 % FS typ. 0.3 %: ± 1.0 % FS typ.
	Accuracy @ 25°C typ.	0.5 %: ± 0.5 % FS typ. 0.3 %: ± 0.3 % FS typ.
	NLH @ 25°C (BSL) typ.	0.5 %: ± 0.2 % FS typ. 0.3 %: ± 0.2 % FS typ.
	TC zero point and span typ.	0.5 %: ± 0.03 % FS/K typ. 0.3 %: ± 0.01 % FS/K typ.
	Long term stability 1 year typ.	± 0.1 % FS typ.
Electrical Data	Output / supply voltage	4 ... 20 mA: 24 (9...32) VDC
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Switch-on-delay	100 ms
	Inverse-polarity protection, short-circuit strength @ 25°C during 5 min.	4 ... 20 mA: to $U_{\text{supply}} = 32$ V
Environmental conditions	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C
	Protection ¹⁾	IP65, IP67
	Humidity	IEC 60068-2-30 (damp heat cyclic, 100 % RH @ +55°C)
	Vibration	15 g RMS (20...2000 Hz) 25 g sin (80...2000 Hz), 1 oct./min, (1x @ 25°C)
	Shock	50 g / 11 ms
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)
	Housing	1.4301 (AISI304)
	Sealing	FPM/NBR/EPDM
	Male electrical plug	See ordering information
	Weight	~ 50 g
	Mounting torque	25 Nm

¹⁾ See electrical connection

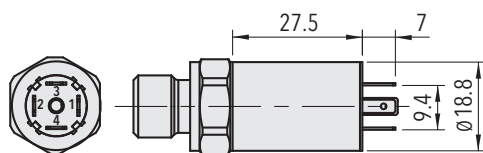
Measuring accuracy 0.5 %



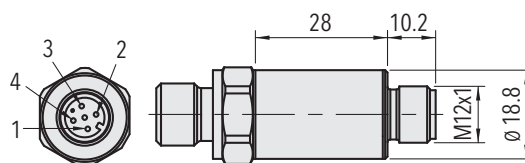
Measuring accuracy 0.3 %



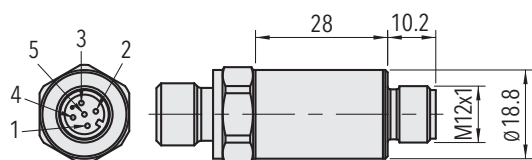
Dimensions



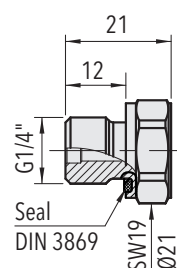
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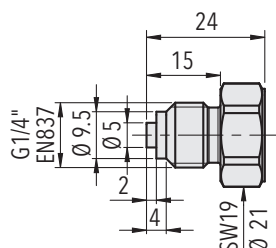
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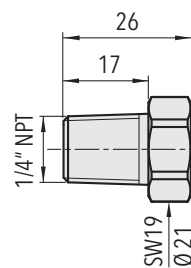
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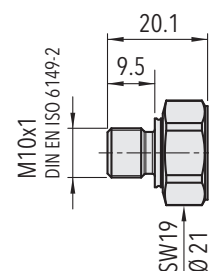
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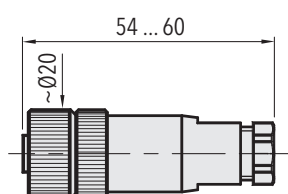
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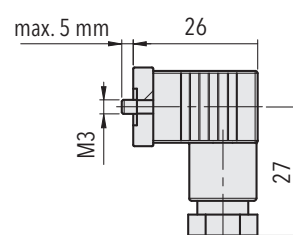
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8256.XX.XX32.XX.XX.XX

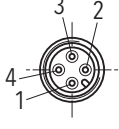
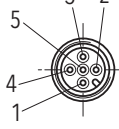
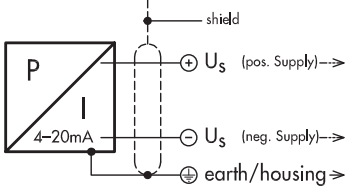


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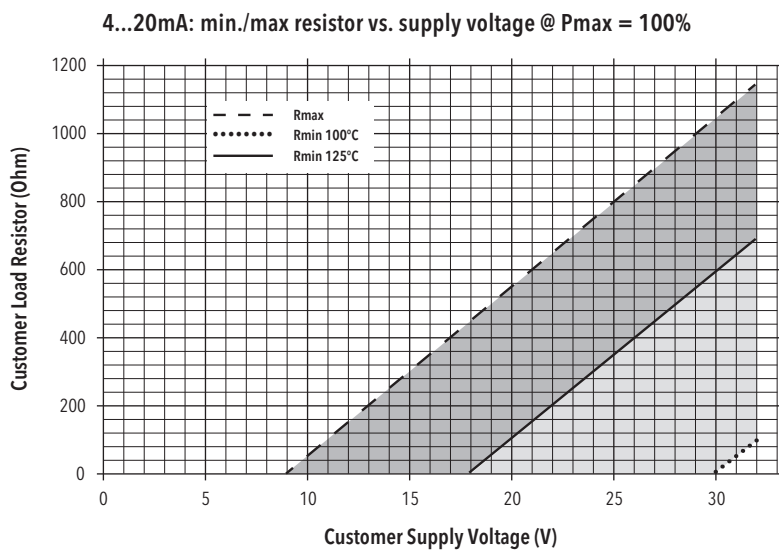


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Electrical connection

		Protection / electrical connection			
		IP65*)	IP67*)		
		Industrial standard Contact distance 9.4 mm	M12x1		
		01	4-pôle 32	5-pôle 35	
					
Output signal		90	E1		
	2	2	1	1	4
	1	4	3	2	1
	4	3	4	4	5
8256.XX.XXXX.XX.19					

*) Provided female connector is mounted according to instructions



Additional information

Documents

Data sheet	www.trafag.com/H72305
Instructions	www.trafag.com/H73303
Flyer	www.trafag.com/H70684