

INDUSTRIAL PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The industrial pressure transmitter NAT 8252 features the extremely robust and stable thin-film-on-steel sensor element from its well-proven predecessor NAT 8251. In combination with the new inhouse developed ASIC TX it offers a wide temperature range up to 125°C and triple overpressure safety which makes it the perfect solution for a wide range of demanding applications.



Applications

- Machine tools
- Hydraulics
- HVAC
- Refrigeration
- Process technology
- Water treatment

Features

- Smallest design
- Completely welded steel sensor system without additional seals
- Excellent long-term stability
- High resistance to over pressure

Technical Data

Measuring principle	Thin film on steel	Accuracy @ 25°C typ.	± 0.5 % FS typ.
Measuring range	0 ... 2.5 to 0 ... 600 bar	Media temperature	-40 ... +125°C
Output signal	4 ... 20 mA 0 ... 10 VDC		

07/2014

Data sheet H72303e

Subject to change

Ordering information/type code

				8252 . XX	XX	XX	XX	XX	XX	
Measuring range ¹⁾	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]							
	0 ... 2.5	7.5	50	75						
	0 ... 4	12	60	76						
	0 ... 6	18	100	77						
	0 ... 10	30	200	78						
	0 ... 16	48	200	79						
	0 ... 25	75	300	80						
	0 ... 40	120	300	81						
	0 ... 60	180	400	82						
	0 ... 100	300	500	83						
	0 ... 160	480	750	85						
	0 ... 250	750	1000	74						
	0 ... 400	1000	2000	84						
	0 ... 600	1500	2500	86						
	Option 5P:	Fivefold overpressure								
	0 ... 2.5	12.5	60	55						
	0 ... 4	20	100	56						
	0 ... 6	30	200	57						
	0 ... 10	50	200	58						
	0 ... 16	80	300	59						
	0 ... 25	125	300	60						
	0 ... 40	200	400	61						
	0 ... 60	300	500	62						
0 ... 100	500	750	63							
0 ... 160	800	1000	65							
Sensor	Relative pressure				25					
Pressure connection	G1/4" male, seal: DIN 3869							17		
	1/4"NPT male								30	
	7/16"-20UNF female DIN 3866 (Valve opener) ⁴⁾								24	
	R1/4" male ISO 7-1 (DIN 2999) ⁵⁾								19	
	R1/8" male ISO 7-1 (DIN 2999) ⁵⁾								16	
	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								32	
	Male electrical plug M12x1, 5-pole, Mat. PA								35	
Output	Output	Load resistance	I (supply)	U (supply)						
	4 ... 20mA	See graphic		24 (9 ... 32) VDC					19	
	0 ... 10 VDC	≥ 5.0 kΩ to Us-	≤ 15 mA	24 (15 ... 32) VDC					17	
Accessories	Female electrical plug M12x1, 5-pole ²⁾								33	
	Female electrical connector industrial standard ³⁾								34	
	Pressure peak damping element ø 0.4 mm ⁶⁾								44	
	Seal FPM, -18...+125°C								61	
	Seal NBR, -25...+100°C								83	
	Special pin configuration: Pin 1: Out, Pin 2: +, Pin 3: Ground, Pin 4: - (Only for male electrical plug 01, Industrial Standard)								90	
	Special pin configuration: Pin 1: +, Pin 2: Ground, Pin 3: -, Pin 4: Out (Only for output signal 4...20 mA and male electrical plug 32, M12x1, 4-pole)								96	

¹⁾ Customized pressure ranges upon request

²⁾ For electrical connections 32 and 35

³⁾ For electrical connection 01

⁴⁾ Max. allowable pressure range 40 bar

⁵⁾ Max. allowable pressure range 160 bar

⁶⁾ Only for pressure connections 17, 30, 32

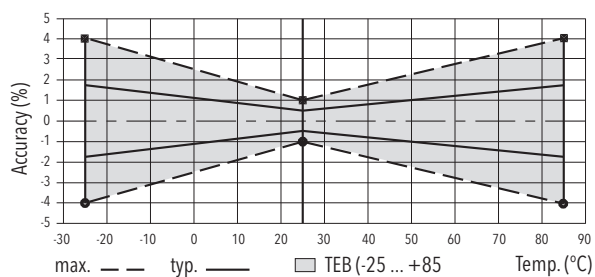
Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Supply [VDC]	Accuracy @ 25°C typ. [%]
NAT2.5A	8252 75 2517 01 0000 0000 19 34 44 61	0 ... 2.5	7.5	9 ... 32	±0.5
NAT4.0A	8252 76 2517 01 0000 0000 19 34 44 61	0 ... 4	12	9 ... 32	±0.5
NAT6.0A	8252 77 2517 01 0000 0000 19 34 44 61	0 ... 6	18	9 ... 32	±0.5
NAT10.0A	8252 78 2517 01 0000 0000 19 34 44 61	0 ... 10	30	9 ... 32	±0.5
NAT16.0A	8252 79 2517 01 0000 0000 19 34 44 61	0 ... 16	48	9 ... 32	±0.5
NAT25.0A	8252 80 2517 01 0000 0000 19 34 44 61	0 ... 25	75	9 ... 32	±0.5
NAT40.0A	8252 81 2517 01 0000 0000 19 34 44 61	0 ... 40	120	9 ... 32	±0.5
NAT100.0A	8252 83 2517 01 0000 0000 19 34 44 61	0 ... 100	300	9 ... 32	±0.5
NAT250.0A	8252 74 2517 01 0000 0000 19 34 44 61	0 ... 250	750	9 ... 32	±0.5
NAT400.0A	8252 84 2517 01 0000 0000 19 34 44 61	0 ... 400	1000	9 ... 32	±0.5
NAT600.0A	8252 86 2517 01 0000 0000 19 34 44 61	0 ... 600	1500	9 ... 32	±0.5
*NAT2.5V	8252 75 2517 01 0000 0000 17 34 44 61	0 ... 2.5	7.5	15 ... 32	±0.5
*NAT4.0V	8252 76 2517 01 0000 0000 17 34 44 61	0 ... 4	12	15 ... 32	±0.5
*NAT6.0V	8252 77 2517 01 0000 0000 17 34 44 61	0 ... 6	18	15 ... 32	±0.5
*NAT10.0V	8252 78 2517 01 0000 0000 17 34 44 61	0 ... 10	30	15 ... 32	±0.5
*NAT16.0V	8252 79 2517 01 0000 0000 17 34 44 61	0 ... 16	48	15 ... 32	±0.5
*NAT25.0V	8252 80 2517 01 0000 0000 17 34 44 61	0 ... 25	75	15 ... 32	±0.5
*NAT40.0V	8252 81 2517 01 0000 0000 17 34 44 61	0 ... 40	120	15 ... 32	±0.5
*NAT100.0V	8252 83 2517 01 0000 0000 17 34 44 61	0 ... 100	300	15 ... 32	±0.5
*NAT250.0V	8252 74 2517 01 0000 0000 17 34 44 61	0 ... 250	750	15 ... 32	±0.5
*NAT400.0V	8252 84 2517 01 0000 0000 17 34 44 61	0 ... 400	1000	15 ... 32	±0.5
*NAT600.0V	8252 86 2517 01 0000 0000 17 34 44 61	0 ... 600	1500	15 ... 32	±0.5

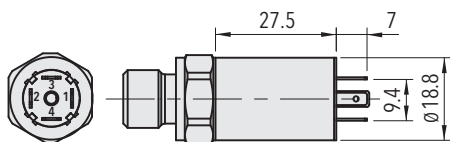
Specifications		
Accuracy	TEB typ. @ -25 ... +85°C	± 1.75 % FS typ.
	Accuracy @ 25°C typ.	± 0.5 % FS typ.
	NLH @ 25°C (BSL) typ.	± 0.2 % FS typ.
	TC zero point and span typ.	± 0.03 % .FS/K typ.
	Long term stability 1 year typ.	< ± 0.2 % FS typ.
Electrical Data	Output / supply voltage	4 ... 20mA: 24 (9...32) VDC 0 ... 10 VDC: 24 (15...32) VDC
	Rise time	typ. 1 ms/10...90% nominal pressure
	Switch-on-delay	100 ms
Environmental Conditions	Media temperature	-40 ... +125°C
	Ambient temperature	-40 ... +125°C
	Protection ¹⁾	Min. IP65
	Humidity	Max. 95% relative
	Vibration	15 g RMS (20...2000 Hz) 25 g sin (80...2000 Hz), 1 Okt./min, (1x @ 25°C)
	Shock	50 g / 11 ms
EMC Protection	Emission	EN/IEC 61000-6-4
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor	1.4542 (AISI630)
	Housing / Pressure connection	1.4301 (AISI304)
	Sealing	FPM/NBR
	Male electrical plug	see ordering information
	Weight	appr. 50 g
	Mounting torque	25 Nm

¹⁾ Provided female connector is mounted according to instructions

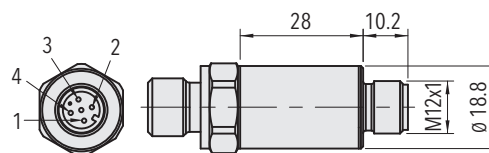
Measuring accuracy



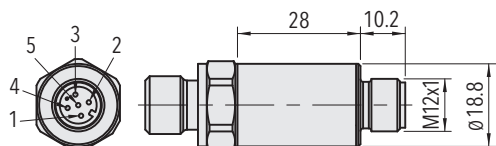
Dimensions



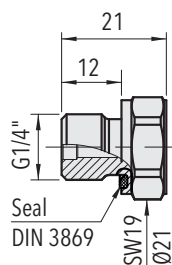
8252.XX.XXXX.01.XX.XX



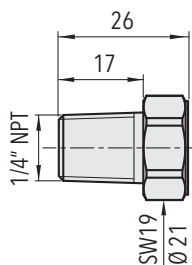
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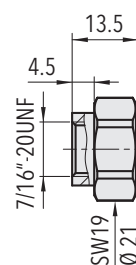
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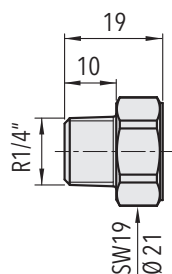
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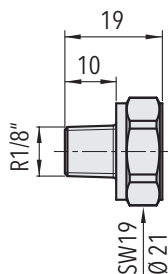
8252.XX.XX30.XX.XX.XX



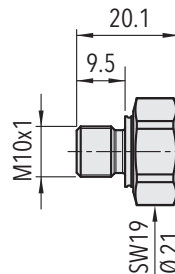
8252.XX.XX24.XX.XX.XX



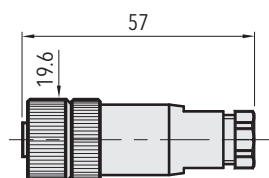
8252.XX.XX19.XX.XX.XX



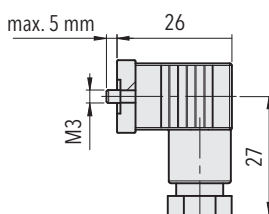
8252.XX.XX16.XX.XX.XX



8252.XX.XX32.XX.XX.XX


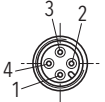
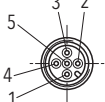
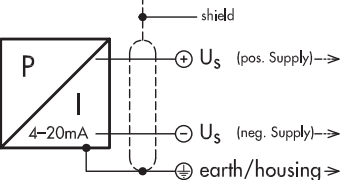
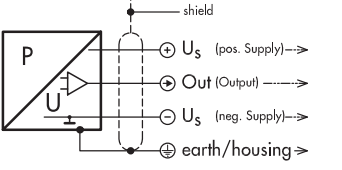


8252.XX.XXXX.XX.XX.33



8252.XX.XXXX.XX.XX.34

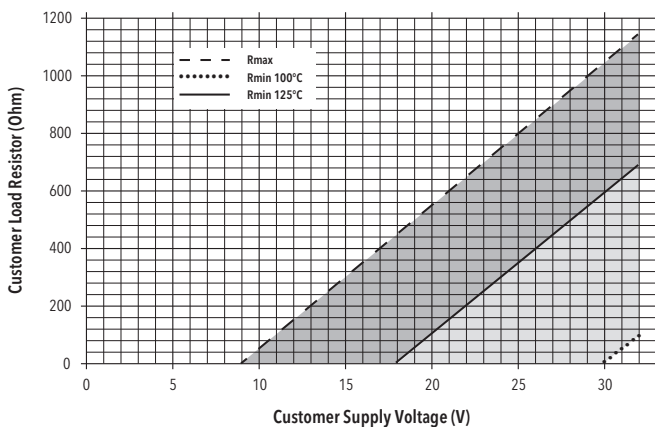
Electrical Connection

		Protection / electrical connection				
		IP65 *)**)		IP67 *)**)		
		Industrial standard	M12x1			
		01	4-pole 32		5-pole 35	
						
Output signal	 <p>8252.XX.XXXX.XX.19</p>		90	96		
	 <p>8252.XX.XXXX.XX.17</p>					
			2	1	4	
			1	3	1	
			4	4	5	
			1	1	2	
			2	4	4	
			3	3	3	
			4	2	5	

*) Provided female connector is mounted according to instructions

**) Ventilation via male electric plug

4...20mA: min./max resistor vs. supply voltage @ Pmax = 100%



Additional information

Documents

Data sheet	www.trafag.com/H72303
Instructions	www.trafag.com/H73303
Flyer	www.trafag.com/H70666