

Industrial Pressure Transmitter



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
- Optional: 5-fold overpressure resistance
- Optional: Switching output 1 or 2 PNP

Product description

The industrial pressure transmitter NAT 8252 features an exceptionally long-term stable thin-film-on-steel sensor cell with triple (optionally 5-fold) overpressure safety. Optionally, the NAT 8252 is available as a pressure switch with 1 or 2 switching outputs. The robust design and the wide temperature range from -40°C to +125°C qualify the NAT 8252 as the ideal solution for a wide range of demanding applications.

 EMC: 2014/30/EU

 S.I. 2016 No. 1091

 RoHS/Reach compliant

 UL-listed version

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 1000 bar 0 ... 30 to 0 ... 10000 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC and more, 0.5 ... 4.5 VDC ratiometric, Switching output: 1 or 2 PNP
Media temperature	-40°C ... +125°C
Ambient temperature	max. -40°C ... +125°C (UL-rated ambient temperature: -20°C ... +80°C) Details see section: Electrical Connection

Additional information

Data sheet www.trafag.com/H72303
 Instructions www.trafag.com/H73303
 Accessories www.trafag.com/H72258
 Video <https://youtu.be/GbFBrCBekvk>

Ordering information/Type code

				8252	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 ... 2.5	7.5	50	75	0 ... 30	90	700	G5		
	0 ... 4	12	60	76	0 ... 50	150	850	G6		
	0 ... 6	18	100	77	0 ... 100	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	1500	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 ... 700	1500	2500	87	0 ... 5000	12500	21750	H4		
	0 ... 1000	1500	2500	88	0 ... 7500	18750	29000	H6		
					0 ... 10000	18750	29000	H7		
	Option 5P:	Fivefold overpressure			Option:	Maximum Overpressure				
	0 ... 2.5	12.5	60	55	0 ... 30	150	1450	E5		
	0 ... 4	20	100	56	0 ... 50	180	1450	E6		
	0 ... 6	30	200	57	0 ... 100	450	3500	E7		
	0 ... 10	50	200	58	0 ... 150	700	4250	E8		
	0 ... 16	80	300	59	0 ... 200	700	4250	EA		
	0 ... 25	125	300	60	0 ... 250	1150	5750	E9		
	0 ... 40	200	400	61	0 ... 300	1150	5750	FA		
	0 ... 60	300	500	62	0 ... 400	1800	8500	F0		
	0 ... 100	500	750	63	0 ... 500	1800	8500	F1		
	0 ... 160	800	1000	65	0 ... 1000	4600	19000	F2		
Sensor	Relative pressure, accuracy: 0.5 %									25

	8252	XX	XX	XX	XX	XX	XX
Pressure connection	G1/4" male, Seal: DIN 3869			17			
	G1/4" male, with integrated damping Ø 0.5 mm, seal: DIN 3869 ²⁾			15			
	G1/4" male (Manometer) EN 837			53			
	G1/8" male DIN 3852-E ³⁾			54			
	1/4" NPT male			30			
	1/8" NPT male ⁴⁾			43			
	3/8"-24UNF-2A male, SAE J1926-2 (Heavy Duty) ⁵⁾			68			
	7/16"-20UNF female, SAE J512 with valve opener ⁶⁾			24			
	7/16"-20UNF female, SAE J512 without valve opener ⁶⁾			44			
	7/16"-20UNF male, DIN3866 ⁶⁾			18			
	7/16"-20UNF-2A male, SAE J1926-2 (Heavy Duty) ⁵⁾			69			
	9/16"-18UNF-2A male, SAE J1926-2 (Heavy Duty) ⁵⁾			67			
	R1/4" male, DIN 3858			19			
	R1/4" male, DIN 2999 ⁷⁾			20			
	R1/8" male, DIN 3858 ³⁾			16			
	M10x1 male, DIN EN ISO 6149-2 ⁸⁾			32			
	M10x1 male, ISO 9974-2 ⁹⁾			70			
	M12x1 male, DIN EN ISO 6149-2 ⁸⁾¹⁰⁾			64			
	M12x1.25 male, DIN EN ISO 6149-2 ⁸⁾¹⁰⁾			65			
	M12x1.5 male, DIN EN ISO 9974-2			49			
	M14x1.5 male DIN EN ISO 6149-2 ⁷⁾			31			
Electrical connection	Male electrical connector, industrial standard, contact distance 9.4 mm, Material PA, EN 175301-803C			01			
	Male electrical connector M12x1, 4-pole, Material PA, IEC 61076-2-101			32			
	Male electrical connector M12x1, 5-pole, Material PA, IEC 61076-2-101			35			
	Male electrical connector MIL-C 26482, 6-pole, Metal			02			
	Male electrical connector Deutsch DT04-3P, 3-pole			D3			
	Male electrical connector Deutsch DT04-4P, 4-pole			D4			
	3 Way M Delphi MetriPack 1.5 sealed connector, Material PA66 ¹⁷⁾			51			
	Cable material PVC, IP67/IP68, 2 x 2 x 0.14 mm ² , max. traction on cable: 2 N ¹¹⁾			22			
	Cable material PUR, IP67/IP68, 4 x 0.25 mm ² , shielded ¹¹⁾			24			
	Cable material EPD Raychem FDR25, IP67, 4 x 0.2 mm ² , shielded ¹¹⁾			08			
	Cable material Radox Tenuis, IP67/IP68, 4 x 0.5 mm ² , shielded ¹¹⁾			88			
	Compact design: Cable material PVC, IP40, 2 x 2 x 0.14 mm ² , shielded, max. traction on cable: 2 N ⁷⁾¹²⁾			A1			
	JST (or compatible) Board to Cable/Wire Disconnectable Crimp style connector, BM04B-SRSS-TB, IP20, 4-pole ⁷⁾			J4			

	8252	XX	XX	XX	XX	XX	XX
Output signal	Output signal	Load resistance	I (supply)	U (supply)			
	4 ... 20 mA	See graphic	(= signal output)	24 (9 ... 32) VDC	19		
	0.5 ... 4.5 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	20		
	0 ... 5 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	14		
	0.1 ... 4.1 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	28		
	0.1 ... 5.1 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	29		
	0.5 ... 5 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	22		
	1 ... 5 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	25		
	0.5 ... 5.5 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	24		
	1 ... 6 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 20 \text{ mA}$	24 (9 ... 32) VDC	16		
	0 ... 10 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 15 \text{ mA}$	24 (15 ... 32) VDC	17		
	1 ... 10 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 15 \text{ mA}$	24 (15 ... 32) VDC	26		
	0.1 ... 10.1 VDC	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 15 \text{ mA}$	24 (15 ... 32) VDC	13		
	0.5 ... 4.5 VDC ratiom.	$\geq 5.0 \text{ k}\Omega$ to U_s -	$\leq 10 \text{ mA}$	5 (4.75 ... 5.25) VDC	23		
	2 PNP transistors ¹³⁾		$\leq 10 \text{ mA}$	24 (9 ... 32) VDC	PS		
	1 PNP transistor ¹⁴⁾		$\leq 10 \text{ mA}$	24 (9 ... 32) VDC	T1		
Accessories	Female electrical plug M12x1, 5-pole ¹⁵⁾					33	
	Female electrical plug industrial standard (for electrical connection 01), EN 175301-803C					34	
	Pressure peak damping element $\varnothing$ 1.0 mm					40	
	Pressure peak damping element $\varnothing$ 0.4 mm					44	
	Seal FKM, -18°C ... +125°C					61	
	Seal EPDM, -40°C ... +125°C					63	
	Seal NBR, -25°C ... +100°C					83	
	Cable length 0.5 m					EM	
	Cable length 1.0 m					1M	
	Cable length 2.0 m					2M	
	Parametrisation according to customer specification for output signal PS, T1 (see table: Parameters)					ZC	
	Parametrisation standard for output signal PS, T1 (see table: Parameters)					ZS	
	Multiple packaging ¹⁶⁾					VM	
	UL-listed, see table: Possible combinations for UL-listed variants					UL	
	Pin configuration, see table: Electrical connection						

⁰¹⁾ Customized pressure ranges upon request

⁰²⁾ For measuring ranges ≥ 2 bar

⁰³⁾ max. allowable pressure range 160 bar (2320 psi) at 480 bar (6961 psi) overpressure

⁰⁴⁾ max. allowable pressure range 400 bar (5800 psi) at 600 bar (8700 psi) overpressure

⁰⁵⁾ Measuring range max. 630 bar according to SAE J1926-2 (Heavy Duty)

⁰⁶⁾ max. allowable pressure range 60 bar (870 psi) at 180 bar (2610 psi) overpressure

⁰⁷⁾ Upon request, whereas minimum order quantities may apply

⁰⁸⁾ max. allowable pressure range 250 bar (3626 psi) at 750 bar (10878 psi) overpressure

⁰⁹⁾ max. pressure range 0 .. 160 bar, overpressure 480 bar

¹⁰⁾ Without seal, use seal geometry according DIN EN ISO 6149-2

¹¹⁾ Cable length, see Accessories

¹²⁾ Cable length 2m only, with accessory 2M

¹³⁾ Only with electrical connections 32, 22, 24, 08, 88

¹⁴⁾ Only with electrical connections 32, 22, 24, 08, 88, D3

¹⁵⁾ For electrical connections 32 and 35

¹⁶⁾ The order quantity must be a multiple of 50, only for electrical connections 01, 32, 35, 02, D3, D4, not for pressure connection 30 with electrical connections 02, D3, D4

¹⁷⁾ Not available with switching output signals (codes PS / T1)

Compatibility matrix pressure connection and accessories

Code	Pressure connection	Damping		Seal		
		Ø 1.0 mm (Code 40)	Ø 0.4 mm (Code 44)	FKM (Code 61)	EPDM (Code 63)	NBR (Code 83)
17	G1/4" male, Seal: DIN 3869	✓	✓	✓	✓	✓
15	G1/4" male, with integrated damping Ø 0.5 mm, Seal: DIN 3869			✓	✓	✓
53	G1/4" male (Manometer) EN 837					
54	G1/8" male DIN 3852-E	✓	✓	✓	✓	
30	1/4" NPT male	✓	✓			
43	1/8" NPT male	✓	✓			
68	3/8"-24UNF-2A male, SAE J1926-2 (Heavy Duty)	✓	✓	✓	✓	
24	7/16"-20UNF female, SAE J512 with valve opener					
44	7/16"-20UNF female, SAE J512 without valve opener					
18	7/16"-20UNF male, DIN 3866					
69	7/16"-20UNF-2A male, SAE J1926-2 (Heavy Duty)	✓	✓	✓	✓	
67	9/16"-18UNF-2A male, SAE J1926-2 (Heavy Duty)	✓	✓	✓	✓	
19	R1/4" male, DIN 3858	✓	✓			
20	R1/4" male, DIN 2999	✓	✓			
16	R1/8" male, DIN 3858	✓	✓			
32	M10x1 male, DIN EN ISO 6149-2	✓	✓	✓		
70	M10x1 male, ISO 9974-2	✓	✓	✓		
64	M12x1 male, DIN EN ISO 6149-2	✓	✓			
65	M12x1.25 male, DIN EN ISO 6149-2	✓	✓			
49	M12x1.5 male, DIN EN ISO 9974-2	✓	✓	✓		
31	M14x1.5 male DIN EN ISO 6149-2	✓	✓	✓		

Ordering information: Possible type code combinations for UL-listed versions

	Combination with UL
Measuring range	All ranges on datasheet
Sensor	All codes on datasheet
Pressure connection	All codes on datasheet
Electrical connection	All codes on datasheet
Output signal	All codes on datasheet
Accessories	All codes except GA, GS and GU

Signal processing

Code	Cut-off frequency f_c	Rise time (10 ... 90 % nominal pressure)	Output signal			
			4 ... 20 mA	0.5 ... 4.5 VDC ratiometric	0 ... 6 VDC	0 ... 10 VDC
GA ¹⁾	11 Hz	32 ms	x	x	-	-
Standard specification	350 Hz	1 ms	x	x	x	x

¹⁾ Upon request

Standard configurations

Product No.	Type Code	Pressure range [bar]	Overpressure 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
NAT60.0A	8252 82 2517 01 0000 0000 19 34 44 61	0 ... 60	180	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
NAT 60.0V	8252 82 2517 01 0000 0000 19 34 44 61	0 ... 60	180	9 ... 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
NAT2.5AM	8252 75 2517 32 0000 0000 19 33 44 61	0 ... 2.5	7.5	9 ... 32	±0.5
NAT4.0AM	8252 76 2517 32 0000 0000 19 33 44 61	0 ... 4	12	9 ... 32	±0.5
NAT6.0AM	8252 77 2517 32 0000 0000 19 33 44 61	0 ... 6	18	9 ... 32	±0.5
NAT10.0AM	8252 78 2517 32 0000 0000 19 33 44 61	0 ... 10	30	9 ... 32	±0.5
NAT16.0AM	8252 79 2517 32 0000 0000 19 33 44 61	0 ... 16	48	9 ... 32	±0.5
NAT25.0AM	8252 80 2517 32 0000 0000 19 33 44 61	0 ... 25	75	9 ... 32	±0.5
NAT40.0AM	8252 81 2517 32 0000 0000 19 33 44 61	0 ... 40	120	9 ... 32	±0.5
NAT60.0AM	8252 82 2517 32 0000 0000 19 33 44 61	0 ... 60	180	9 ... 32	±0.5
NAT100.0AM	8252 83 2517 32 0000 0000 19 33 44 61	0 ... 100	300	9 ... 32	±0.5
NAT160.0AM	8252 85 2517 32 0000 0000 19 33 44 61	0 ... 160	480	9 ... 32	±0.5
NAT250.0AM	8252 74 2517 32 0000 0000 19 33 44 61	0 ... 250	750	9 ... 32	±0.5
NAT400.0AM	8252 84 2517 32 0000 0000 19 33 44 61	0 ... 400	1000	9 ... 32	±0.5
NAT600.0AM	8252 86 2517 32 0000 0000 19 33 44 61	0 ... 600	1500	9 ... 32	±0.5

Standard configurations

Product No.	Type Code	Pressure range [bar]	Overpressure max. [bar]	Supply [VDC]	Accuracy @ 25°C typ. [%]
NAT2.5PS	8252 75 2517 32 0000 0000 PS 44 61 ZS	0 ... 2.5	7.5	9 ... 32	±0.5
NAT4.0PS	8252 76 2517 32 0000 0000 PS 44 61 ZS	0 ... 4	12	9 ... 32	±0.5
NAT6.0PS	8252 77 2517 32 0000 0000 PS 44 61 ZS	0 ... 6	18	9 ... 32	±0.5
NAT10.0PS	8252 78 2517 32 0000 0000 PS 44 61 ZS	0 ... 10	30	9 ... 32	±0.5
NAT16.0PS	8252 79 2517 32 0000 0000 PS 44 61 ZS	0 ... 16	48	9 ... 32	±0.5
NAT25.0PS	8252 80 2517 32 0000 0000 PS 44 61 ZS	0 ... 25	75	9 ... 32	±0.5
NAT40.0PS	8252 81 2517 32 0000 0000 PS 44 61 ZS	0 ... 40	120	9 ... 32	±0.5
NAT60.0PS	8252 82 2517 32 0000 0000 PS 44 61 ZS	0 ... 60	180	9 ... 32	±0.5
NAT100.0PS	8252 83 2517 32 0000 0000 PS 44 61 ZS	0 ... 100	300	9 ... 32	±0.5
NAT160.0PS	8252 85 2517 32 0000 0000 PS 44 61 ZS	0 ... 160	480	9 ... 32	±0.5
NAT250.0PS	8252 74 2517 32 0000 0000 PS 44 61 ZS	0 ... 250	750	9 ... 32	±0.5
NAT400.0PS	8252 84 2517 32 0000 0000 PS 44 61 ZS	0 ... 400	1000	9 ... 32	±0.5
NAT600.0PS	8252 86 2517 32 0000 0000 PS 44 61 ZS	0 ... 600	1500	9 ... 32	±0.5

Parameters of switching output

Name	Standard setting (accessory ZS)	Value range	Short name	Customer adjustment (accessory ZC)
Switch point SP1 (hysteresis mode) Upper switch point FH1 (window mode)	75 % Measuring range	> RP1, FL1 (2 ... 99 %) Hysteresis ≥ 1 % FS	SP1	
Reset point RP1 (hysteresis mode) Lower switch point FL1 (window mode)	25 % Measuring range	< SP1, FH1 (1 ... 98 %) Hysteresis ≥ 1 % FS	RP1	
Switch point SP2 (hysteresis mode) Upper switch point FH2 (window mode)	75 % Measuring range	> RP2, FL2 (2 ... 99 %) Hysteresis ≥ 1 % FS	SP2	
Reset point RP2 (hysteresis mode) Lower switch point FL2 (window mode)	25 % Measuring range	< SP2, FH2 (1 ... 98 %) Hysteresis ≥ 1 % FS	RP2	
Switch point delay time SP1 / RP1 (hysteresis mode) Switch point delay time FH1 / FL1 (window mode)	0	0; approx. 2^x [ms], x = 3, 4 ... 16	dS1	
Switch point delay time SP2 / RP2 (hysteresis mode) Switch point delay time FH2 / FL2 (window mode)	0	0; approx. 2^x [ms], x = 3, 4 ... 16	dS2	
Functions switching output 1	Hysteresis, closer (Hno)	Hysteresis NO (Hno) Hysteresis NC (Hnc) Window NO (Fno) Window NC (Fnc)	ou1	
Functions switching output 2	Hysteresis, closer (Hno)	Hysteresis NO (Hno) Hysteresis NC (Hnc) Window NO (Fno) Window NC (Fnc) Device ready	ou2	

Specifications

Electrical data	Output / supply voltage	4 ... 20 mA: 24 (9 ... 32) VDC 0 ... 6 VDC ranges: 24 (9 ... 32) VDC 0 ... 10.1 VDC ranges: 24 (15 ... 32) VDC 0.5 ... 4.5 VDC ratiometric: 10 ... 90 % U_s : 5 ± 0.25 VDC 1 or 2 PNP transistors: 24 (9 ... 32) VDC
	Rise time of supply voltage	typ. 1 ms, 10 ... 90 % nominal pressure
	Power-on delay time pressure transmitters	100 ms
	Power-on delay time pressure switches	50 ms + switching delay time
	Inverse-polarity protection, short-circuit strength @ 25°C during 5 min.	4 ... 20 mA: to U_s = 32 VDC 0 ... 6 VDC ranges, 0 ... 10.1 VDC ranges: to U_s = 28 VDC 0.5 ... 4.5 VDC ratiometric: to U_s = 14 VDC 1 or 2 PNP transistors: to U_s = 32 VDC
	Resistance of insulation	> 10 M Ω , 50 VDC
	Dielectric strength	50 VAC, 50 Hz
	Current limiting output signal	4 ... 20 mA: 24 mA (Overload)
Environmental conditions	Media temperature	-40°C ... +125°C
	Ambient temperature	max. -40°C ... +125°C (UL-rated ambient temperature: -20°C ... +80°C) Details see section: Electrical Connection
	Storage temperature	-20°C ... +40°C
	Protection	IP20, IP40, IP65, IP67, IP68 Details see section: Electrical Connection
	Humidity	max. 95 % relative
	Vibration	15 g RMS (20 ... 2000 Hz) (EN 60068-2-64) 25 g sin (80 ... 2000 Hz), 1 oct./min, (1x @ 25°C) (EN 60068-2-6)
	Shock	50 g/11 ms 100 g/6 ms Male electrical plug M12x1 (EN 60068-2-27) ²⁾
EMC protection ¹	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
Mechanical data	Sensor (wetted parts)	1.4542 (AISI 630)
	Pressure connection (wetted parts)	1.4542 (AISI 630)
	Housing	1.4301 (AISI 304)
	Sealing	FPM, EPDM, NBR
	Male electrical connector	See ordering information
	Weight	~ 50 g
	Mounting torque	25 Nm

¹⁾ Electrical connection J4 not EMC tested

²⁾ For electrical connections 32 and 35

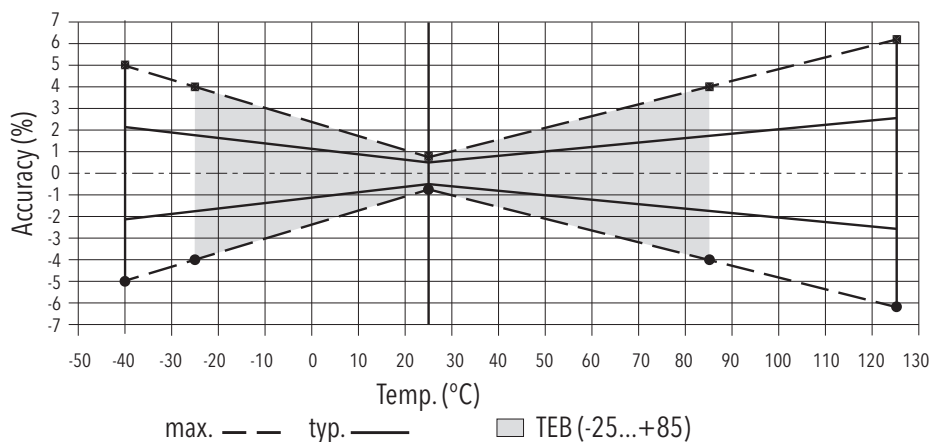
Analogue output

			$\geq 0 \text{ bar}$ $\leq 1000 \text{ bar}$
Accuracy	TEB @ -25 ... +85°C	[% FS typ.]	± 1.75
	Accuracy @ +25°C	[% FS typ.]	± 0.5
	NLH @ +25°C (BSL)	[% FS typ.]	± 0.2
	TC zero point and span	[% FS/K typ.]	± 0.03
	Long term stability 1 year @ +25°C	[% FS typ.]	± 0.1
Rise time	typ. 1 ms / 10 ... 90 % nominal pressure		

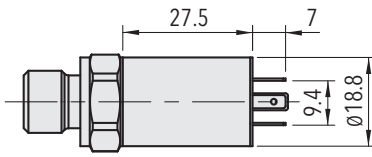
Switchpoint accuracy

Accuracy	TEB @ -25 ... +85°C	[% FS typ.]	± 1.75
	Accuracy @ +25°C	[% FS typ.]	± 0.5
	Long term stability 1 year @ +25°C	[% FS typ.]	± 0.1
Setting range of switchpoints	1 ... 99 % FS		
Distance switch point	$\geq 1.0 \text{ % FS}$		
Switch point > reset point	Switchpoint > reset point		
Switching resistance	$\leq 3 \Omega$		
Output function	Hysteresis, Window; normally closed (NO), normally open (NC)		
Switching current	-40°C ... +85°C	(Ambient and media temperature)	$\leq 400 \text{ mA}$, total of both switching outputs
	+85°C ... +125°C	(Ambient and media temperature)	$\leq 200 \text{ mA}$, total of both switching outputs
Current limiting	integrated		
Life time	$> 100 \times 10^6$ cycles		
Delay time	0; approx. $2^x [\text{ms}]$, $x = 3, 4 \dots 16$		
Switching frequency	max. 60 Hz (at switching delay time = 0)		

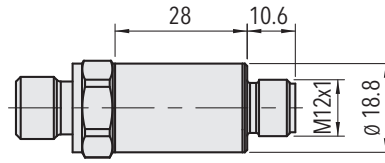
Measuring accuracy



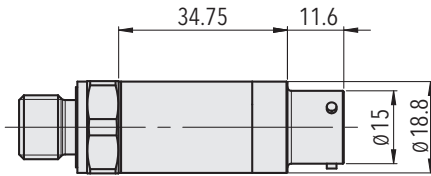
Dimensions



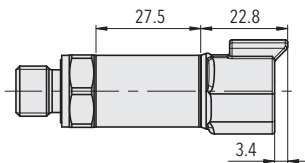
8252.XX.XXXX.01.XX.XX



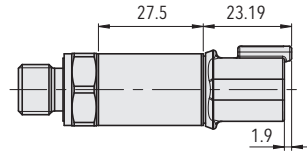
8252.XX.XXXX.32/35.XX.XX



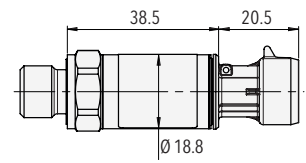
8252.XX.XXXX.02.XX.XX



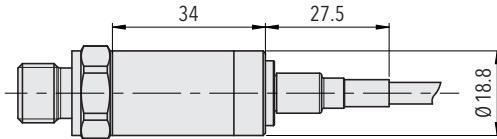
8252.XX.XXXX.D3.XX.XX



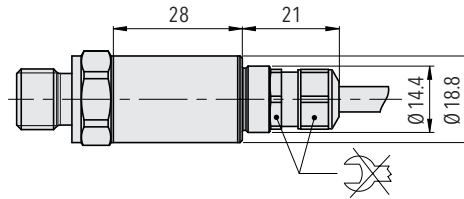
8252.XX.XXXX.D4.XX.XX



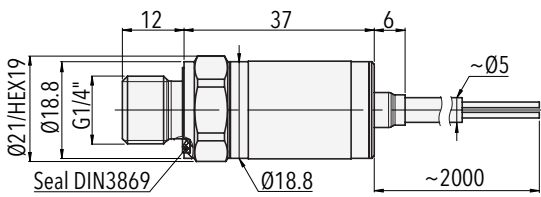
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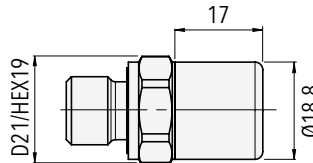
8252.XX.XXXX.08.XX.XX



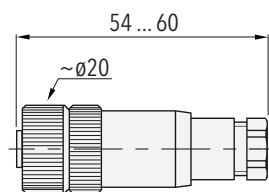
8252.XX.XXXX.22/24/88.XX.XX



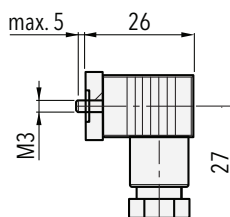
8252.XX.XXXX.A1.XX.XX



8252.XX.XXXX.J4.XX.XX

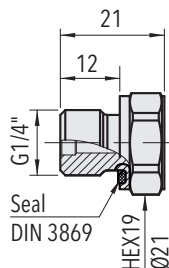


8252.XX.XXXX.XX.XX.33

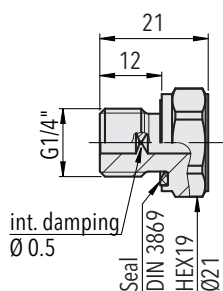


8252.XX.XXXX.XX.XX.34

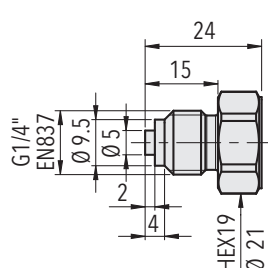
Dimensions



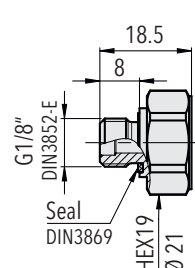
8252.XX.XX17.XX.XX.XX



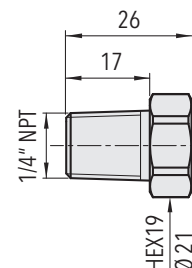
8252.XX.XX15.XX.XX.XX



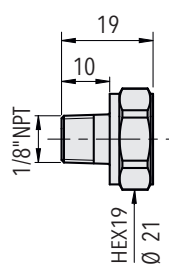
8252.XX.XX53.XX.XX.XX



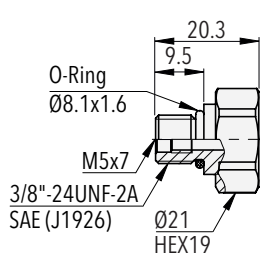
8252.XX.XX54.XX.XX.XX



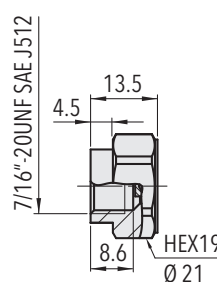
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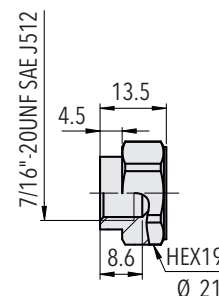
8252.XX.XX43.XX.XX.XX



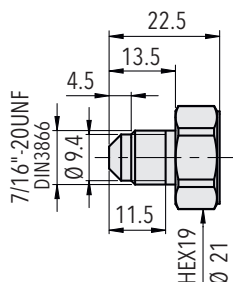
8252.XX.XXXX.68.XX.XX



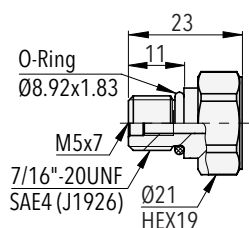
8252.XX.XX24.XX.XX.XX



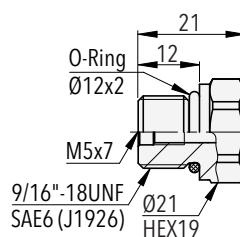
8252.XX.XX44.XX.XX.XX



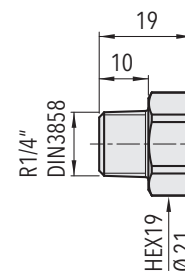
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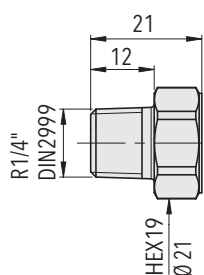
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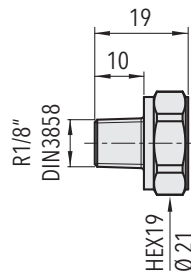
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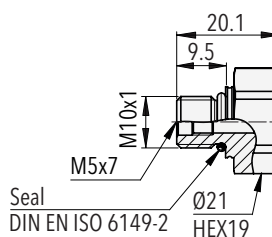
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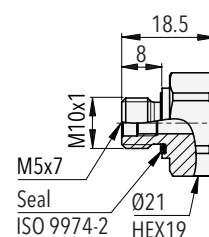
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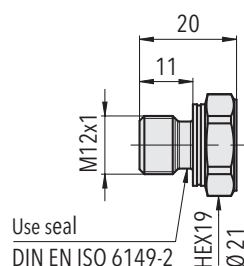
8252.XX.XX16.XX.XX.XX



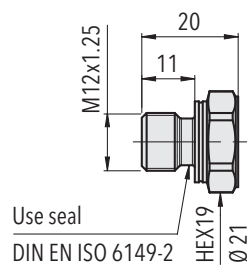
8252.XX.XX32.XX.XX.XX



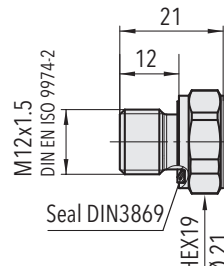
8252.XX.XX70.XX.XX.XX



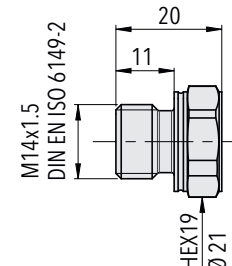
8252.XX.XX64.XX.XX.XX



8252.XX.XX65.XX.XX.XX

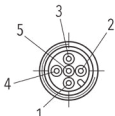
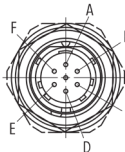
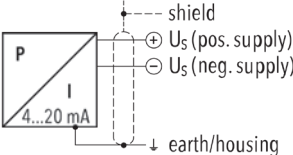
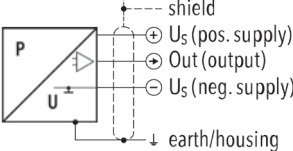


8252.XX.XX49.XX.XX.XX



8252.XX.XX31.XX.XX.XX

Electrical connection

	Industrial standard, contact distance 9.4 mm				M12x1, 4-pole				M12x1, 5-pole				MIL-C 26482			
																
Electrical connection type code	01				32				35				02			
IP protection	IP65 ^{1) 2)}				IP67 ^{1) 2)}				IP67 ^{1) 2)}				IP67 ^{1) 2)}			
Ambient temperature	-40°C ... +80°C				-40°C ... +125°C				-40°C ... +125°C				-40°C ... +125°C			
UL-rated ambient temperature	-20°C ... +80°C				-20°C ... +80°C				-20°C ... +80°C				-20°C ... +80°C			
Pin assignment type code	90		92		E1	E6	F4	F5	G2	G5	G8					
Output signal 8252.xx.xxxx.xx.19			2 1 4	2 4 3	1 2 4	1 2 4	1 2 4	1 2 3	1 2/3 4	1 4 2	3 2 4	4 1 5	A B E			
Pin assignment type code	91		E3	E9	95	96	E2	F6	F7	G1					F3	
Output signal 8252.xx.xxxx.xx.13/14/16/17/20/22/23/24/25/26/28/29			1 2 3 4	2 1 4 3	3 1 2 4	1 3 2 4	1 2 3 4	1 3 2 4	1 2 3 4	1 2 3 4	2 4 3 5	A B C/D E	A C B/D E			

¹⁾ Provided female electrical plug is mounted according to instructions

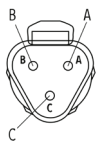
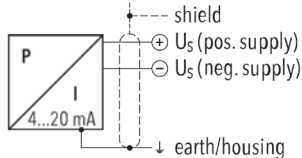
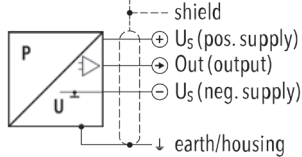
²⁾ Ventilation via male electric plug/cable end

³⁾ IP68, 20 bar, 30 min.

⁴⁾ IP68, 100 mbar, 4h

 Empty 'Pin Assignment Type Code' field: Default pinout

Electrical connection

	DT04-3P, 3-pole		DT04-4P, 4-pole		3 Way M MetriPack 1.5 sealed connector		Cable	Cable	
									
Electrical connection type code	D3		D4		51		22	24	
IP protection	IP67, IP68 ^{1) 4)}		IP67, IP68 ^{1) 4)}		IP67 ¹⁾		IP67, IP68 ^{2) 3)}	IP67, IP68 ^{2) 3)}	
Ambient temperature	-40°C ... +125°C		-40°C ... +125°C		-40°C ... +125°C		-30°C ... +80°C	-40°C ... +70°C	
UL-rated ambient temperature	-20°C ... +80°C		-20°C ... +80°C		-20°C ... +80°C		-20°C ... +80°C	-20°C ... +70°C	
Pin assignment type code		F0	G3			E4			
Output signal 8252.xx.xxxx.xx.19			A B	A C	2 3	2 1 3	1 2 3	White Brown Yellow	White Brown Yellow
Pin assignment type code		F1		G4		99			
Output signal 8252.xx.xxxx.xx.13/14/16/17/20/22/23/24/25/26/28/29			A C B	A B C	2 4 1 3	2 1 3 2	1 3 2 3	White Green Brown Yellow	White Green Brown Yellow

¹⁾ Provided female electrical plug is mounted according to instructions

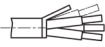
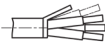
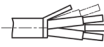
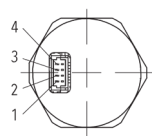
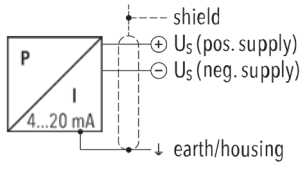
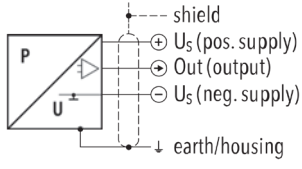
²⁾ Ventilation via male electric plug/cable end

³⁾ IP68, 20 bar, 30 min.

⁴⁾ IP68, 100 mbar, 4h

 Empty 'Pin Assignment Type Code' field: Default pinout

Electrical connection

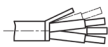
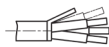
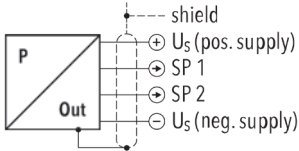
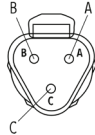
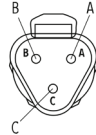
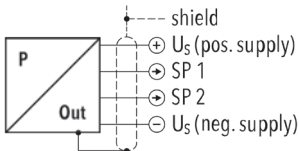
	Cable	Cable	Cable	JST SH Series
				
Electrical connection type code	08	88	A1	J4
IP protection	IP67 ²⁾	IP67, IP68 ^{2) 3)}	IP40	IP20
Ambient temperature	-40°C ... +125°C	-40°C ... +100°C	-30°C ... +80°C	-40°C ... +125°C
UL-rated ambient temperature	-20°C ... +80°C	-20°C ... +80°C	-20°C ... +80°C	-20°C ... +80°C
Pin assignment type code				
Output signal 8252.xx.xxxx.xx.19 	Red Black Green	Brown Black Yellow/Green	Brown White Yellow	1 2 4
Pin assignment type code				
Output signal 8252.xx.xxxx.xx.13/14/16/17/20/22/23/24/25/26/28/29 	Red White Black Green	Brown Blue Black Yellow/Green	Brown Green White Yellow	1 3 2 4

²⁾ Ventilation via male electric plug/cable end

³⁾ IP68, 20 bar, 30 min.

 Empty 'Pin Assignment Type Code' field: Default pinout

Electrical connection

	M12x1, 4-pole		Cable		Cable	
						
Electrical connection type code	32		22		24	
IP protection	IP67 ^{1) 2)}		IP67, IP68 ^{2) 3)}			
Ambient temperature	-40°C ... +125°C		-30°C ... +80°C		-40°C ... +70°C	
UL-rated ambient temperature	-20°C ... +80°C		-20°C ... +80°C		-20°C ... +70°C	
Pin assignment type code	PS	T1	PS	T1	PS	T1
Output signal 8252.xx.xxxx.xx.PS/T1			1 4 2 3 1 4 - 3 White Green Yellow Brown White Green - Brown		White Green Yellow Brown White Green - Brown	
	Cable		Cable		DT04-3P, 3-pole	
						
Electrical connection type code	08		88		D3	
IP protection	IP67 ²⁾				IP67, IP68 ^{1) 4)}	
Ambient temperature	-40°C ... +125°C		-40°C ... +100°C		-40°C ... +125°C	
UL-rated ambient temperature	-20°C ... +80°C		-20°C ... +80°C		-20°C ... +80°C	
Pin assignment type code	PS	T1	PS	T1	T1	
Output signal 8252.xx.xxxx.xx.PS/T1			Red White Green Black Red White - Black Brown Blue Yellow/Green Black Brown Blue - Black		A C - B	

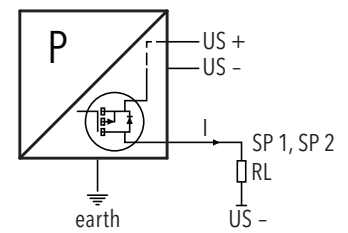
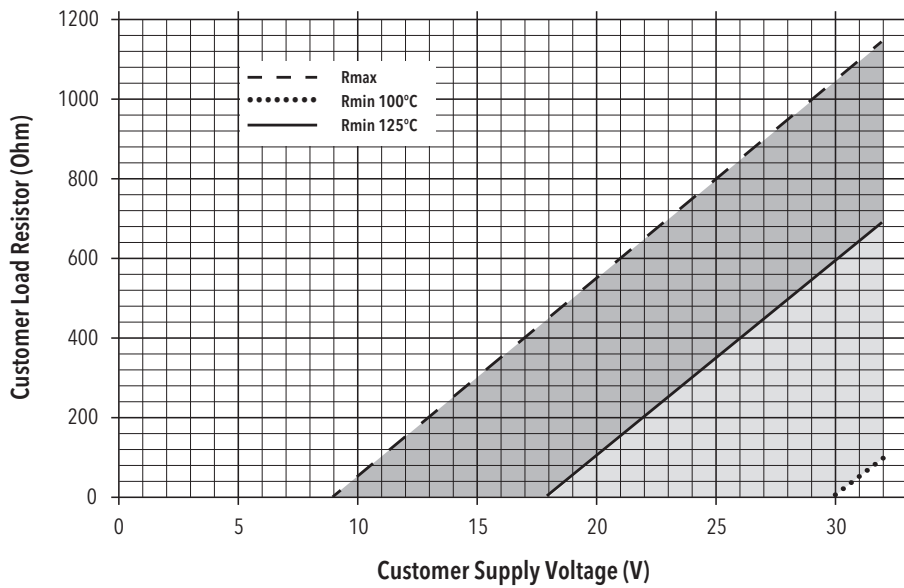
¹⁾ Provided female electrical plug is mounted according to instructions

²⁾ Ventilation via male electric plug/cable end

³⁾ IP68, 20 bar, 30 min.

⁴⁾ IP68, 100 mbar, 4h

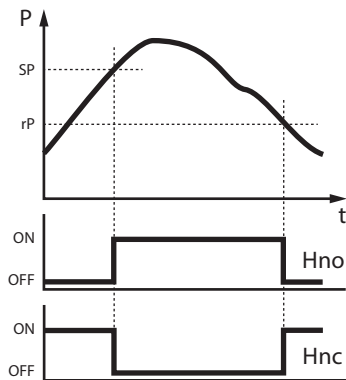
4...20mA: min./max resistor vs. supply voltage @ Pmax = 100%



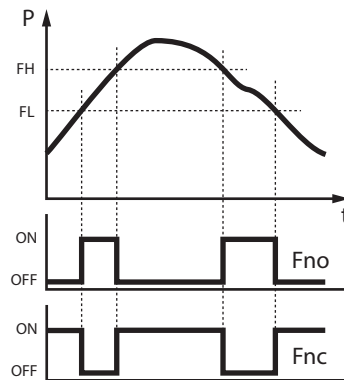
Connection of loads to switching contacts

Functions switching output

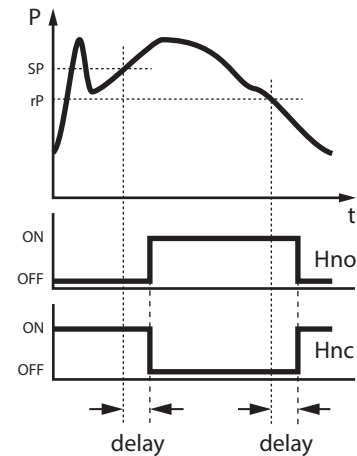
Hysteresis



Window



Delay



Reliable quality

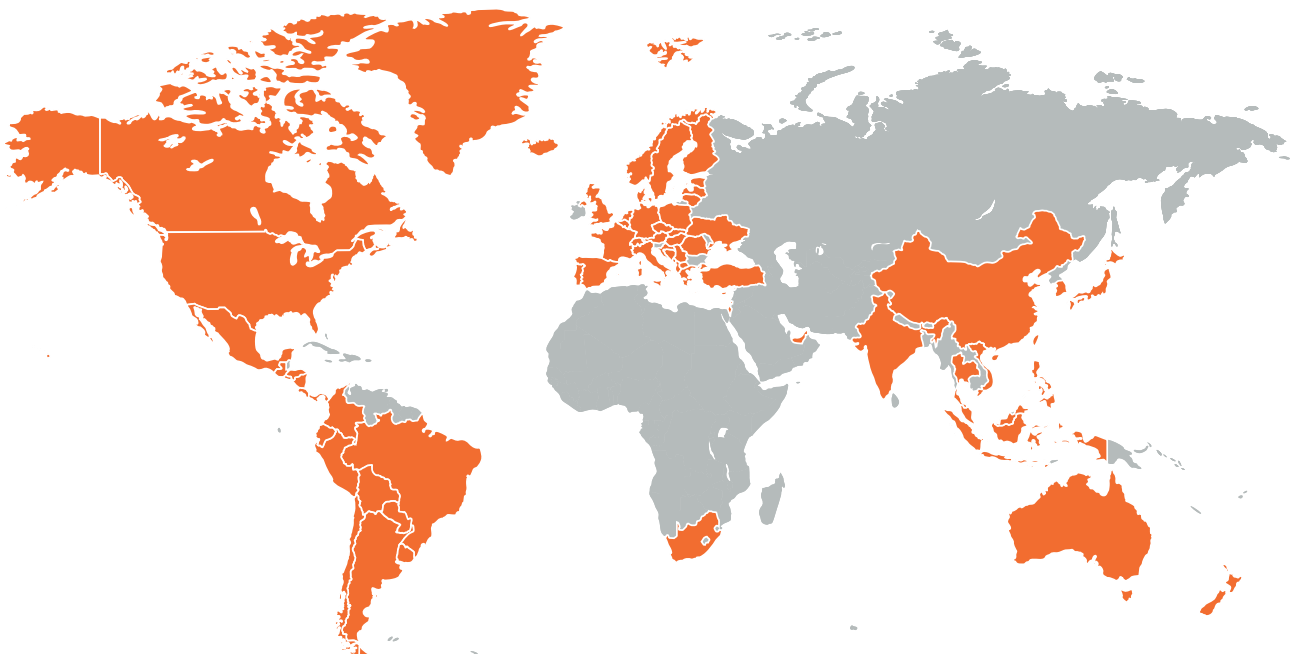
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Trafag develops, produces and distributes robust, reliable and precise instruments for monitoring pressure, temperature and gas density.

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Gas density