

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 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.



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 transistors

Technical Data			
Measuring principle	Thin-film-on-steel	Accuracy @ 25°C typ.	± 0.5 % FS typ.
Measuring range	0 ... 2.5 to 0 ... 700 bar 0 ... 30 to 0 ... 10000 psi	Media temperature	-40°C ... +125°C
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 transistors	Ambient temperature	-40°C ... +125°C (Cable PVC 22: -5°C ... +60°C) (Cable PUR 24: -40°C ... +70°C) (Cable Radox Tenuis 88: -40°C ... +100°C)
NLH @ 25°C (BSL) typ.	± 0.2 % FS typ.		

09/2021

Data sheet H72303aa

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]		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 ... 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							25				
Pressure connection	G1/4" male, seal: DIN 3869 (accessories 61/63/83)	17	7/16"-20UNF SAE4 male (J1926), seal: accessory 61	42								
	G1/4" male, with integrated damping Ø 0.5 mm, Seal: DIN 3869 (accessories 61/63/83)	15	9/16"-18UNF male, SAE6 (J1926), seal: accessory 61	61								
	G1/4" male (Manometer) EN 837	53	R1/4" male, DIN3858	19								
	G1/8" male DIN3852-E, seal: accessory 61 ⁵⁾	54	R1/4" male, DIN2999 ⁹⁾	20								
	1/4" NPT male	30	R1/8" male, DIN3858 ⁵⁾	16								
	1/4" NPT female ⁵⁾	13	M10x1 male, DIN EN ISO 6149-2, seal: accessory 61	32								
	1/8" NPT male ⁵⁾	43	M12x1 male, seal: accessory 61 ¹¹⁾	64								
	7/16"-20UNF female, SAE J512 with valve opener ⁴⁾	24	M12x1.25 male, seal: accessory 61 ¹¹⁾	65								
	7/16"-20UNF female, SAE J512 without valve opener ⁴⁾	44	M12x1.5 male, DIN EN ISO 9974-2, seal: accessory 61	49								
	7/16"-20UNF male, DIN3866 ⁴⁾	18	M14x1.5 male DIN EN ISO 6149-2, seal: accessory 61 ⁹⁾	31								

Electrical connection	Male electrical connector, industrial standard, contact distance 9.4 mm, Mat. PA, EN 175301-803C				01
	Male electrical connector M12x1, 4-pole, Mat. PA, IEC 61076-2-101				32
	Male electrical connector M12x1, 5-pole, Mat. 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
	Cable Mat. PVC, IP67/IP68, 2 x 2 x 0.14 mm ² , max. traction on cable: 2 N ⁷⁾				22
	Cable Mat. PUR, IP67/IP68, 4 x 0.25 mm ² , shielded ⁷⁾				24
	Cable Mat. EPD Raychem FDR25, IP67, 4 x 0.2 mm ² , shielded ⁷⁾				08
	Cable Mat. Radox Tenuis, IP67/IP68, 4 x 0.5 mm ² , shielded ⁷⁾				88
Output signal	Signal output	Load resistance	I (supply)	U (supply)	
	4 ... 20 mA	See graphic		24 (9 ... 32) VDC	19
	0.5 ... 4.5 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	20
	0 ... 5 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	14
	0.1 ... 4.1 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	28
	0.1 ... 5.1 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	29
	0.5 ... 5 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	22
	1 ... 5 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	25
	0.5 ... 5.5 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	24
	1 ... 6 VDC	≥ 5.0 kΩ to Us-	≤ 20 mA	24 (9 ... 32) VDC	16
	0 ... 10 VDC	≥ 5.0 kΩ to Us-	≤ 15 mA	24 (15 ... 32) VDC	17
	1 ... 10 VDC	≥ 5.0 kΩ to Us-	≤ 15 mA	24 (15 ... 32) VDC	26
	0.1 ... 10.1 VDC	≥ 5.0 kΩ to Us-	≤ 15 mA	24 (15 ... 32) VDC	13
	0.5 ... 4.5 VDC ratiometric	≥ 5.0 kΩ to Us-	≤ 10 mA	5 (4.75 ... 5.25) VDC	23
	2 PNP transistors ³⁾		≤ 10 mA	24 (9 ... 32) VDC	PS
	1 PNP transistor ¹⁰⁾		≤ 10 mA	24 (9 ... 32) VDC	T1

Accessories	Female electrical plug M12x1, 5-pole ²⁾	33
	Female electrical plug industrial standard (for electrical connection 01), EN 175301-803C	34
	Pressure peak damping element ø 1.0 mm ⁶⁾	40
	Pressure peak damping element ø 0.4 mm ⁶⁾	44
	Seal FPM, -18°C ... +125°C	61
	Seal EPDM, -40°C ... +125°C	63
	Seal NBR, -25°C ... +100°C	83
	Special electrical connection: Pin 2 +, Pin 3 Ground, Pin 4 - (only for output signal 19 and male electrical connector 01, industrial standard)	90
	Special electrical connection: Pin 1 Out, Pin 2 +, Pin 3 Ground, Pin 4 - (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 01, industrial standard)	91
	Special electrical connection: Pin 1 +, Pin 2 Ground, Pin 3 Out, Pin 4 - (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 32, M12x1, 4-pole)	95
	Special electrical connection: Pin 1 +, Pin 2 Ground, Pin 3 -, Pin 4 Out (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 32, M12x1, 4-pole)	96
	Special electrical connection: Pin 1 +, Pin 2 Ground, Pin 3 -, Pin 4 Out (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 32, M12x1, 4-pole)	G1
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 4 Ground (only for output signal 19 and male electrical connector 01, industrial standard)	92
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 4 Ground (only for output signal 19 and male electrical connector 32, M12x1, 4-pole)	E1
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 3 Out, Pin 4 Ground (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 32, M12x1, 4-pole)	E2
	Special electrical connection: Pin 1 Out, Pin 2 -, Pin 3 +, Pin 4 Ground (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 01, industrial standard)	E3
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 3 Out, Pin 4 Ground (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 01, industrial standard)	E9
	Special electrical connection: Pin 1 +, Pin 2 Ground, Pin 4 - (only for output signal 19 and male electrical connector 32, M12x1, 4-pole)	E6
	Special electrical connection: Pin A +, Pin C - (only for output signal 19 and male electrical connector Deutsch DT04-3P, 3-pole)	F0
	Special electrical connection: Pin A +, Pin B Out, Pin C - (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector Deutsch DT04-3P, 3-pole)	F1
	Special electrical connection: Pin A +, Pin C Out, Pin B/D -, Pin E Ground (Pin B and D are connected) (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 02, MIL-C 26482)	F3
	Special electrical connection: Pin 1 +, Pin 2 - (only for output signal 19 and male electrical connector 32, M12x1, 4-pole)	F4
	Special electrical connection: Pin 1 +, Pin 3 - (only for output signal 19 and male electrical connector 32, M12x1, 4-pole)	F5
	Special electrical connection: Pin 1 +, Pin 2 -, Pin 3 Out, Pin 4 Ground (only for output signals 19 and male electrical connector 32, M12x1, 4-pole)	G2
	Special electrical connection: Pin 1 +, Pin 2 Out, Pin 3 Ground, Pin 4 - (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 32, M12x1, 4-pole)	F6
	Special electrical connection: Pin 1 +, Pin 2 Out, Pin 3 - (only for output signals 13, 14, 16, 17, 20, 22, 23, 24, 25, 26, 28, 29 and male electrical connector 32, M12x1, 4-pole)	F7
	Cable length 0.5 m	EM
	Cable length 1.0 m	1M
	Cable length 2.0 m	2M
	Parameterization according to customer specification for output signal PS, T1 (see table "Parameters")	ZC
	Parameterization standard for output signal PS, T1 (see table "Parameters")	ZS
	Multiple packaging ⁸⁾	VM

¹⁾ Customized pressure ranges upon request

²⁾ For electrical connections 32 and 35

³⁾ Only with electrical connections 32, 22, 24, 08, 88

⁴⁾ Max. allowable pressure range 60 bar at 180 bar overpressure

⁵⁾ Max. allowable pressure range 160 bar at 480 bar overpressure

⁶⁾ Not for pressure connections 53, 24, 44, 18

⁷⁾ Cable length see accessories

⁸⁾ 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

⁹⁾ Upon request

¹⁰⁾ Only with electrical connections 32, 22, 24, 08, 88, D3

¹¹⁾ Without seal, use seal geometry according DIN EN ISO 6149-2

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
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 products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure 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				
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 \geq 1 % FS	SP1	
Reset point RP1 (hysteresis mode) Lower switch point FL1 (window mode)	25 % Measuring range	< SP1, FH1 (1 ... 98 %) Hysteresis \geq 1 % FS	RP1	
Switch point SP2 (hysteresis mode) Upper switch point FH2 (window mode)	75 % Measuring range	> RP2, FL2 (2 ... 99 %) Hysteresis \geq 1 % FS	SP2	
Reset point RP2 (hysteresis mode) Lower switch point FL2 (window mode)	25 % Measuring range	< SP2, FH2 (1 ... 98 %) Hysteresis \geq 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	

i Parameterization of switching points

The switching points, delay times and output functions can be parameterized via Smartphone app (Android). The SMI Sensor Master Interface required for the parameterization as well as the Smartphone are not part of the delivery. The Android App is available for free in the Google Play Store.

- Ordering No. SMI Sensor Master Interface: F90170
- Data sheet SMI Sensor Master Interface: H72618



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 ratiom., 10 ... 90% U_{supply} : 5 ± 0.25 VDC 1 or 2 PNP transistors: 24 (9...32) VDC
	Rise time	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: bis $U_s = 28$ VDC 0.5...4.5 VDC ratiometric: to $U_s = 14$ VDC 1 or 2 PNP transistors: to $U_s = 32$ VDC
Environmental conditions	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C (Cable PVC 22: -5°C ... +60°C) (Cable PUR 24: -40°C ... +70°C) (Cable Radox Tenuis 88: -40°C ... +100°C)
	Protection ¹⁾	IP65, IP67, IP68
	Humidity	Max. 95 % relative
	Vibration	15 g RMS (20...2000 Hz) (EN60068-2-64) 25 g sin (80...2000 Hz), 1 oct./min, (1x @ 25°C) (EN60068-2-6)
	Shock	50 g / 11 ms 100 g / 6 ms Male electrical plug M12x1 (EN60068-2-27) ²⁾
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/EPDM/NBR
	Male electrical connector	See ordering information
	Weight	appr. 50 g
	Mounting torque	25 Nm

¹⁾ See electrical connection

²⁾ For electrical connections 32 and 35

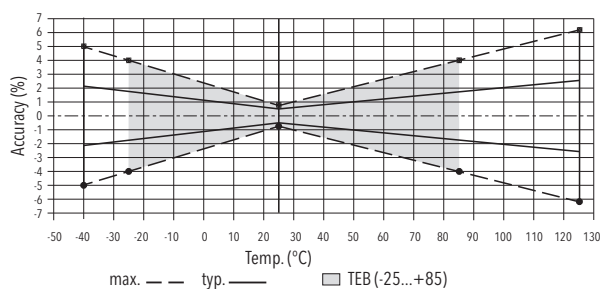
Analogue output

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
Rise time	Long term stability 1 year	[% FS typ.]	± 0.1
	Typ. 1 ms / 10 ... 90 % nominal pressure		

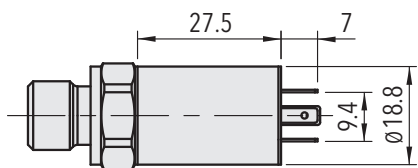
Switching output

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

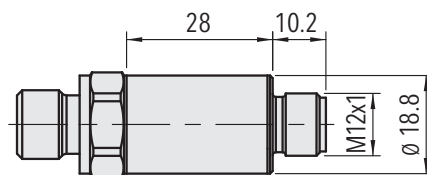
Measuring accuracy



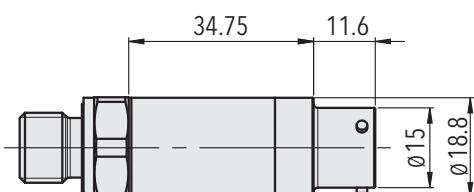
Dimensions



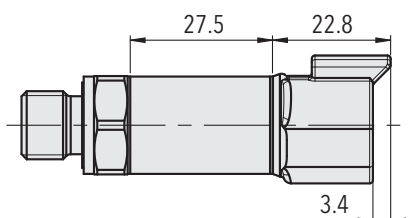
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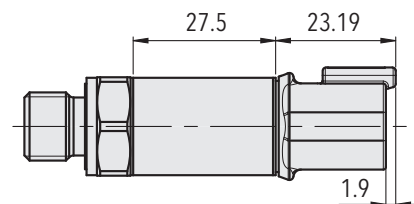
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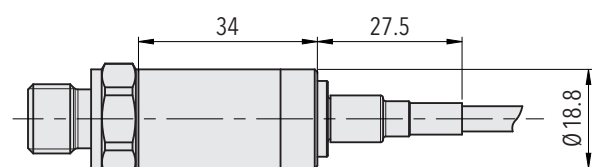
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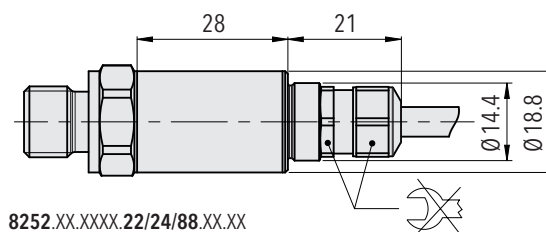
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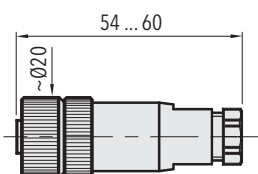
8252.XX.XXXX.D4.XX.XX



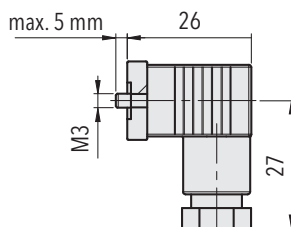
8252.XX.XXXX.08.XX.XX



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

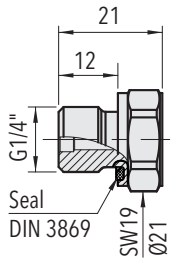


8252.XX.XXXX.XX.XX.33

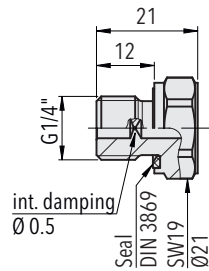


8252.XX.XXXX.XX.XX.34

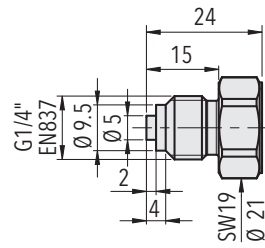
Dimensions



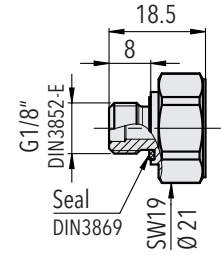
8252.XX.XX17.XX.XX.XX



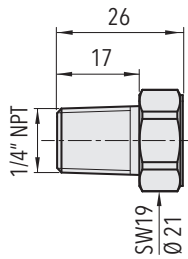
8252.XX.XX15.XX.XX.XX



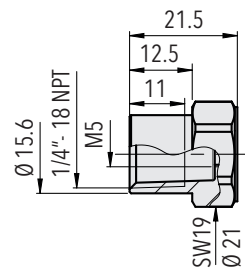
8252.XX.XX53.XX.XX.XX



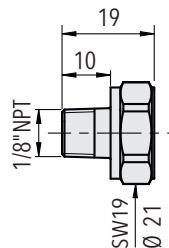
8252.XX.XX54.XX.XX.XX



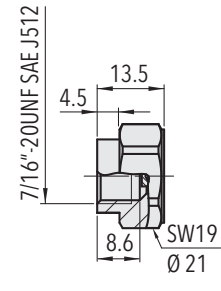
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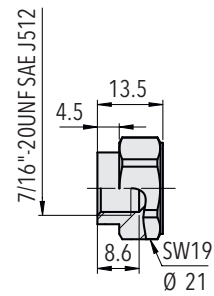
8252.XX.XX13.XX.XX.XX



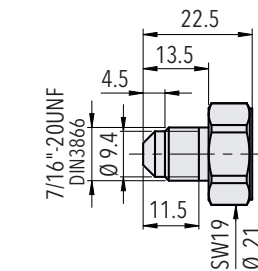
8252.XX.XX43.XX.XX.XX



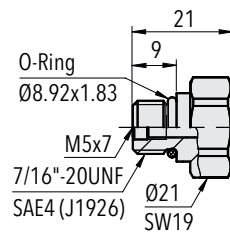
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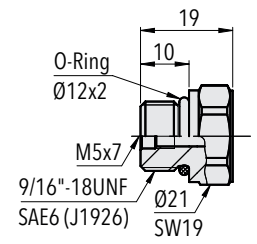
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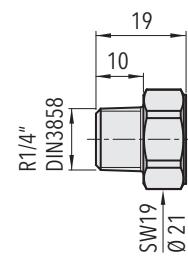
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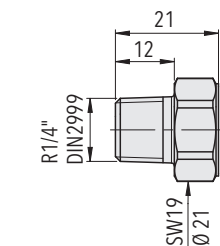
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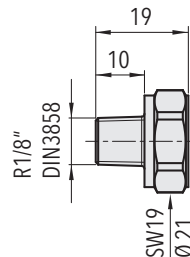
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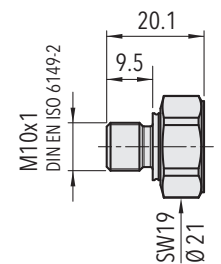
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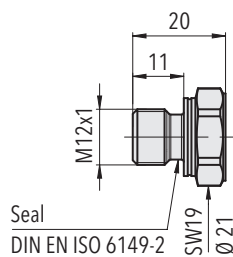
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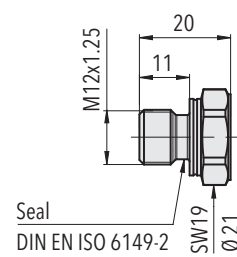
8252.XX.XX16.XX.XX.XX



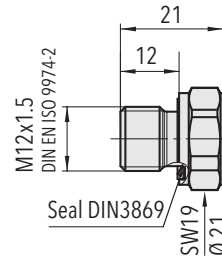
8252.XX.XX32.XX.XX.XX



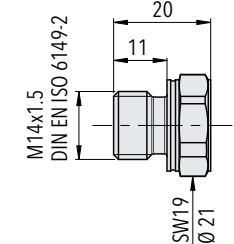
8252.XX.XX64.XX.XX.XX



8252.XX.XX65.XX.XX.XX



8252.XX.XX49.XX.XX.XX



8252.XX.XX31.XX.XX.XX

Electrical connection

		Protection / electrical connection													
		IP65 ^{1) 2)}		IP67 ^{1) 2)}					IP67 ^{1) 2)}	IP67, IP68 ^{1) 4)}		IP67, IP68 ^{1) 4)}			
		Industrial standard Contact distance 9.4 mm		M12x1					MIL-C 26482	DT04-3P 3-pole		DT04-4P 4-pole			
		01		32		35			02	D3		D4			
Output signal	<p>shield ⊕ U_s (pos. Supply) → ⊖ U_s (neg. Supply) → earth/housing → 8252.xx.XXXX.xx.19</p>	90	92	E1	E6	F4	F5	G2				F0			
		2	2	1	1	1	1	1	2/3	4	A	A	A	2	
	1	4	2	3	2	4	2	3	1	B	B	C	1		
	4	3	4	4	4	2		4	5	E			3		
Output signal	<p>shield ⊕ U_s (pos. Supply) → ⊕ Out (Output) → ⊖ U_s (neg. Supply) → earth/housing → 8252.xx.XXXX.xx.13/14/16/17/20/22/ 23/24/25/26/28/29</p>	91	E3	E9	95	96	E2	F6	F7	G1		F3		F1	
		1	2	3	1	1	1	1	1	1	2	A	A	A	2
	2	1	1	3	2	3	4	3	2	4	B	C	C	B	4
	3	4	2	2	3	4	3	2	4	3	C/D	B/D	B	C	1
	4	3	4	4	4	2	2	4	3	5	E	E		C	3

		Protection / electrical connection		
		IP67, IP68 ^{2) 3)}	IP67 ²⁾	IP67, IP68 ^{2) 3)}
		Cable	Cable	Cable
		22/24	08	88
Output signal	<p>shield ⊕ U_s (pos. Supply) → ⊖ U_s (neg. Supply) → earth/housing → 8252.xx.XXXX.xx.19</p>	white	red	brown
		brown yellow	black green	black yellow / green
Output signal	<p>shield ⊕ U_s (pos. Supply) → ⊕ Out (Output) → ⊖ U_s (neg. Supply) → earth/housing → 8252.xx.XXXX.xx.13/14/16/17/20/22/ 23/24/25/26/28/29</p>	white green brown yellow	red white black green	brown blue black yellow / green

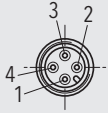
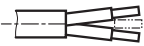
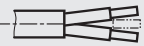
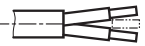
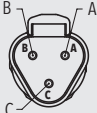
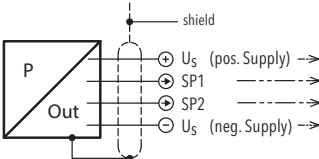
¹⁾ Provided female connector is mounted according to instructions

²⁾ Ventilation via male electric plug/cable end

³⁾ IP68, 20 bar, 30 min.

⁴⁾ IP68, 100 mbar, 4h

Electrical connection

		Protection / electrical connection								
		IP67 ^{1) 2)}		IP67, IP68 ^{2) 3)}		IP67 ²⁾		IP67, IP68 ^{2) 3)}		IP67, IP68 ^{1) 4)}
		M12x1 4-pole 32 		Cable 22/24 		Cable 08 		Cable 88 		DT04-3P 3-pole D3 
Output signal		PS	T1	PS	T1	PS	T1	PS	T1	T1
	8252.xx.xxxx.xx.PS/T1	1 4 2 3	1 4 - 3	white green yellow brown	white green - brown	red white green black	red white - black	brown blue yellow / green black	brown blue - black	A C - B

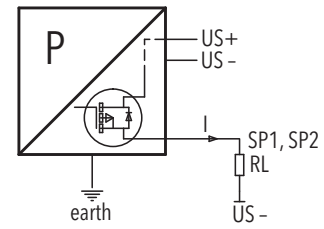
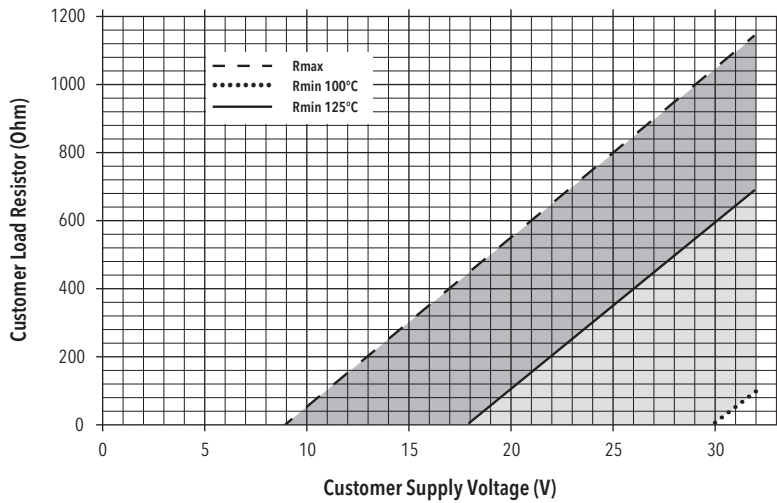
¹⁾ Provided female electrical plug is mounted according to instructions

²⁾ Ventilation via male electric plug/cable end

³⁾ IP68, 20 bar, 30 min.

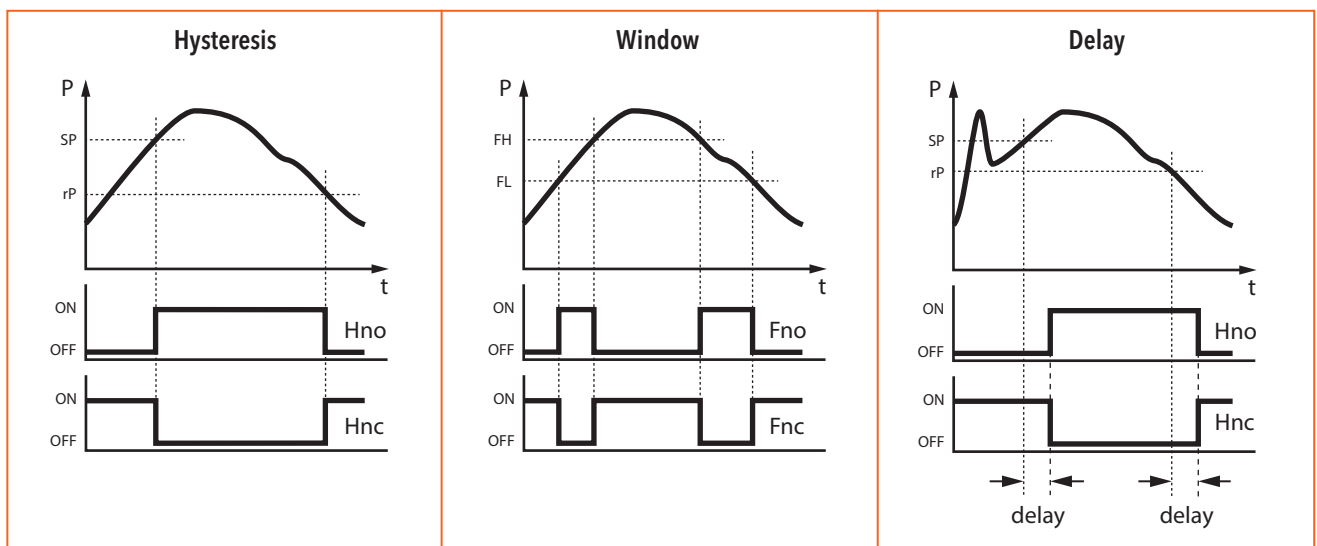
⁴⁾ IP68, 100 mbar, 4h

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



Connection of loads to switch contacts

Functions switching output



Additional information

Documents

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