

# PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature.



## Applications

- Test benches
- Railways
- Machine tools
- Hydraulics
- Process technology

## Features

- Smallest design
- Accuracy classes 0.1 %, 0.15 %, 0.3 %
- Excellent temperature resistance
- Relative and absolute pressure measurement
- Optional: Dielectrical strength 500 VAC, meets EN 50155 (Railways)

Technical Data			
Measuring principle	Thin-film-on-steel	Accuracy @ 25°C typ.	± 0.3 % FS typ. ± 0.15 % FS typ. ± 0.1 % FS typ.
Measuring range	0 ... 2.5 to 0 ... 600 bar 0 ... 30 to 0 ... 7500 psi	Media temperature	-40°C ... +125°C
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiometric	Ambient temperature	-40°C ... +125°C
NLH @ 25°C (BSL) typ.	± 0.2 % FS typ. ± 0.1 % FS typ.		

03/2024

Data sheet H72300ab

Subject to change

## Ordering information/type code

				8253 . XX				XX	XX	XX	XX	XX
Measuring range <sup>1)</sup>	Pressure measurement range [bar]	Over pressure [bar]	Burst pressure [bar]	Pressure measurement range [psi]	Over pressure [psi]	Burst pressure [psi]						
		0 ... 2.5 <sup>2)</sup>	5	50	0 ... 30 <sup>2)</sup>	60	700	G5				
	0 ... 4	8	60	0 ... 50	100	850	G6					
	0 ... 6	12	100	0 ... 100	200	1450	G7					
	0 ... 10	20	200	0 ... 150	300	2500	G8					
	0 ... 16	32	200	0 ... 200	400	2500	GA					
	0 ... 25	50	300	0 ... 250	500	2500	G9					
	0 ... 40	80	300	0 ... 300	600	4000	HA					
	0 ... 60	120	400	0 ... 400	800	4000	H0					
	0 ... 100	200	500	0 ... 500	1000	4000	H1					
	0 ... 160	320	750	0 ... 1000	2000	5000	H2					
	0 ... 250	500	1000	0 ... 1500	3000	7000	H3					
	0 ... 400	800	1500	0 ... 2000	4000	10000	H5					
	0 ... 600	1000	2000	0 ... 3000	6000	14500	G4					
				0 ... 5000	10000	21750	H4					
				0 ... 7500	15000	29000	H6					
Sensor	Relative pressure, accuracy: 0.3 % <sup>8)</sup>						23					
	Relative pressure, accuracy: 0.15 %						21					
	Relative pressure, accuracy: 0.1 %						24					
	Absolute pressure, accuracy: 0.3 % <sup>4)</sup>						43					
	Absolute pressure, accuracy: 0.15 % <sup>4)</sup>						41					
	Absolute pressure, accuracy: 0.1 % <sup>4)</sup>						44					
Pressure connection	G1/4" male (Seal)						17					
	1/4" NPT male						30					
	1/4" NPT female <sup>7)</sup>						13					
	7/16"-20UNF male <sup>3) 4)</sup>						18					
	7/16"-20UNF female, DIN3866 (valve opener) <sup>3) 4)</sup>						24					
	7/16"-20UNF-2A male, SAE J1926-2 (Heavy Duty) <sup>10)</sup>						69					
	9/16"-18UNF-2A male, SAE J1926-2 (Heavy Duty) <sup>10)</sup>						67					
	3/8"-24UNF SAE3 male (J514) <sup>3) 7)</sup>						66					
	R1/4" male, DIN2999 <sup>3) 7)</sup>						20					
M14x1.5 male DIN EN ISO 6149-2 <sup>3) 7)</sup>						31						
Electrical connection	Male electrical connector, industrial standard (contact distance 9.4 mm), Mat. PBT						01					
	Male electrical connector M12x1, 4-pole, Mat. PBT						32					
	Male electrical connector M12x1, 5-pole, Mat. PBT						35					
	Male electrical connector MIL-C 26482, 6-pole, metal						02					
	Cable Mat. EPD Raychem FDR25, IP67, 4 x 0.2 mm <sup>2</sup> <sup>7)</sup>						08					
Output signal	Signal output	Load resistance	I (supply)	U (supply)								
	4 ... 20 mA	≤ (U <sub>supply</sub> -9 V) / 20 mA		24 (9 ... 32) VDC							19	
	0 ... 5 VDC	≥ 2.0 kΩ	≤ 10 mA	24 (9 ... 32) VDC							14	
	1 ... 6 VDC	≥ 2.0 kΩ	≤ 10 mA	24 (9 ... 32) VDC							16	
	0 ... 10 VDC	≥ 5.0 kΩ	≤ 10 mA	24 (15 ... 32) VDC							17	
	0.5 ... 4.5 VDC	≥ 2.0 kΩ	≤ 10 mA	5 (4.5 ... 5.5) VDC ratiom.							23	

Accessories		
Female electrical plug M12x1, 5-pole, for electrical connections 32 and 35		33
Female electrical plug industrial standard		34
Meets EN 50155 (railways) dielectric strength: 500 VAC, 50 Hz <sup>5)</sup>		11
Pressure peak damping element ø 1.0 mm <sup>6)</sup>		40
Pressure peak damping element ø 0.3 mm <sup>6)</sup>		43
Pressure peak damping element ø 0.5 mm <sup>6)</sup>		45
Special electrical connection: Pin 1 + , Pin 2 Ground, Pin 3 -, Pin 4 Out (only for output signals 14, 16, 17, 23 and male electrical connector 32, M12x1, 4-pole)		96
Special electrical connection: Pin A +, Pin C Out, Pin B/D -, Pin E Ground (Pin B and D are connected) (only for output signals 14, 16, 17, 23 and male electrical connector MIL-C 26482)		F3
Cable length 0.5 m		EM
Cable length 1.0 m		1M
Cable length 2.0 m		2M

<sup>1)</sup> Extended overpressure as well as customized pressure ranges upon request

<sup>2)</sup> Measuring accuracy 0.3 %

<sup>3)</sup> Only for relative pressure

<sup>4)</sup> Max. allowable pressure range 40 bar

<sup>5)</sup> Only with output 19

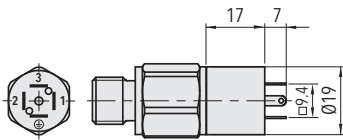
<sup>6)</sup> Only for pressure connections 17, 20, 30, 31, 42 and 61

<sup>7)</sup> Upon request

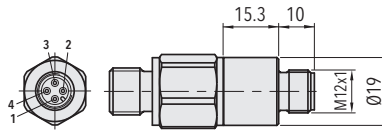
<sup>8)</sup> Please use the successor product NAH 8254 for accuracy 0.3% and NAR 8258 for railway applications

<sup>10)</sup> Measuring range max. 630 bar according to SAE J1926-2 (Heavy Duty)

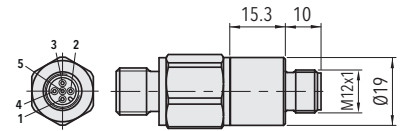
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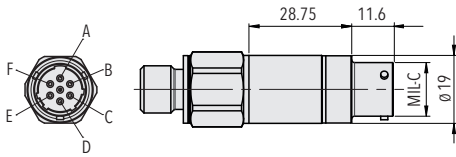
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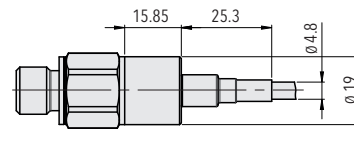
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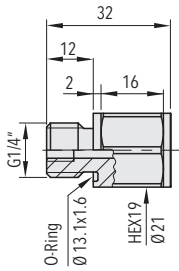
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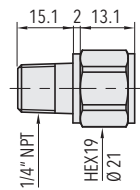
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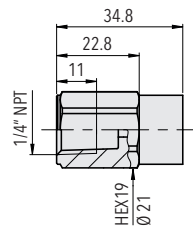
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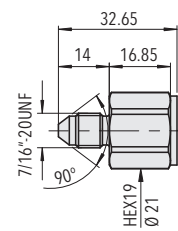
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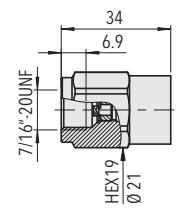
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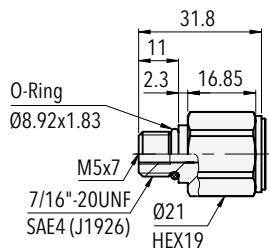
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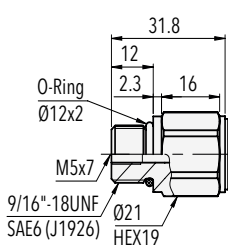
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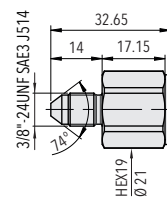
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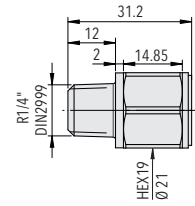
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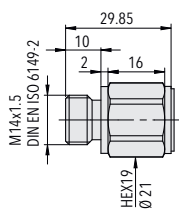
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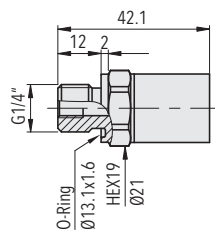
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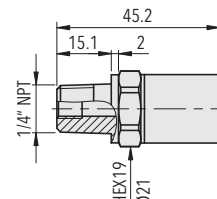
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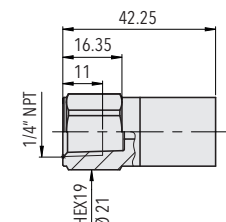
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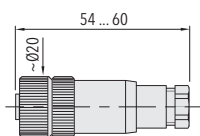
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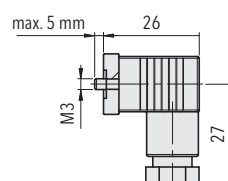
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8253.XX.XXXX.XX.XX.33



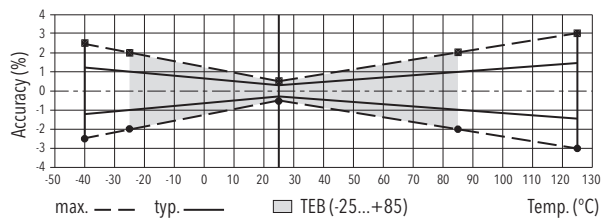
8253.XX.XXXX.XX.XX.34

Specifications		
<b>Electrical Data</b>	Output / supply voltage	4 ... 20 mA: 24 (9 ... 32) VDC 0 ... 5 VDC: 24 (9 ... 32) VDC 1 ... 6 VDC: 24 (9 ... 32) VDC 0 ... 10 VDC: 24 (15 ... 32) VDC 0.5 ... 4.5 VDC: 5 VDC ratiom.
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Power-on delay time	1 s
<b>Environmental conditions</b>	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C
	Protection <sup>1)</sup>	Min. IP65
	Humidity	Max. 95 % relative
	Vibration	40 g (20...2000 Hz)
	Shock	100 g / 11 ms
<b>EMC Protection</b>	Emission	EN/IEC 61000-6-3
	Immunity	EN/IEC 61000-6-2
<b>Mechanical Data</b>	Sensor (wetted parts)	1.4542 (AISI630)
	Pressure connection (wetted parts)	Pressure ranges ≤ 250 bar: 1.4542 (AISI630) Pressure ranges > 250 bar: 1.4301 (AISI304)
	Housing	1.4301 (AISI304)
	Sealing	FKM 70 Sh
	Male electrical connector	See ordering information
	Weight	~ 50 g
	Mounting torque	25 Nm

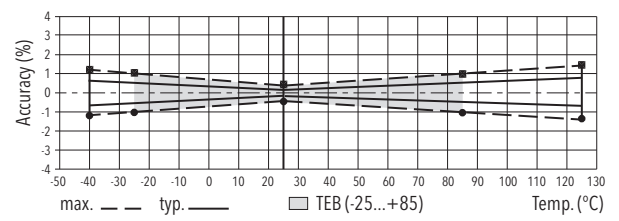
<sup>1)</sup> See electrical connection

Accuracy				
		Measuring accuracy 0.3 % Ordering No. 23/43	Measuring accuracy 0.15 % Ordering No. 21/41	Measuring accuracy 0.1 % Ordering No. 24/44
TEB @ -25...+85°C	[% FS typ.]	± 1.0	± 0.5	± 0.4 (0 ... 65°C)
TEB @ -25...+85°C; 0...4 to 0...100 bar	[% FS typ.]	-	-	± 0.4
TEB @ 0...+65°C; 0...4 to 0...100 bar	[% FS typ.]	-	-	± 0.25
Accuracy @ +25°C	[% FS typ.]	± 0.3	± 0.15	± 0.1
NLH @ +25°C (BSL)	[% FS typ.]	± 0.2	± 0.1	± 0.1
TC zero point and span	[% FS/K typ.]	± 0.01	± 0.002	± 0.002
Long term stability 1 year @ +25°C	[% FS typ.]	< ± 0.1	< ± 0.1	< ± 0.1

## Measuring accuracy 0.3 %



## Measuring accuracy 0.15 %



## Electrical connection

		Protection / electrical connection				
		IP65 *)**)	IP67 *)		IP67 *) **)	IP67 **)
		Industrial standard EN175301-803A	M12x1		MIL-C 26482	Cable
		<b>01</b>	4-pole <b>32</b>	5-pole <b>35</b>	<b>02</b>	<b>08</b>
Output signal	<p><b>8253.XX.XXXX.XX.19</b></p>	2 1 ⊕	1 3 4	4 1 5		red black -
	<p><b>8253.XX.XXXX.XX.14/16/17/23</b></p>	1 2 3 ⊕	1 2 3 4	<b>96</b> 1 4 3 2	A B C/D E	<b>F3</b> A C B/D E red green black -

\*) Provided female connector is mounted according to instructions

\*\*\*) Ventilation via male electric plug/cable end

### Additional information

#### Documents

Data sheet  
Instructions

[www.trafrag.com/H72300](http://www.trafrag.com/H72300)  
[www.trafrag.com/H73250](http://www.trafrag.com/H73250)