

HYDRAULIC PRESSURE TRANSMITTER

New generation available - refer to www.trafag.com/H72304

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



Applications

- Machine tools
- Hydraulics
- Process technology
- Water treatment
- Test benches

Features

- Smallest design
- Accuracy classes 0.1%, 0.3%
- Excellent temperature resistance
- Improved vibration resistance
- Completely welded steel sensor system without additional seals

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

06/2018

Data sheet H72300q

Subject to change

Ordering information/type code

				8253 . 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 ²⁾	5	50	0 ... 30	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 %						23						
	Relative pressure, accuracy: 0.15 %						21						
	Relative pressure, accuracy: 0.1 %						24						
	Absolute pressure, accuracy: 0.3 % ⁴⁾						43						
	Absolute pressure, accuracy: 0.15 % ⁴⁾						41						
	Absolute pressure, accuracy: 0.1 % ⁴⁾						44						
Pressure connection	G1/4" male (Seal)						17						
	1/4" NPT male						30						
	7/16"-20UNF male ^{3) 4)}						18						
	7/16"-20UNF female, DIN3866 (valve opener) ^{3) 4)}						24						
	7/16"-20UNF male SAE4 ⁷⁾						42						
Electrical connection	Male electrical plug, industrial standard (contact distance 9.4 mm), Mat. PBT						01						
	Male electrical plug M12x1, 4-pole, Mat. PBT						32						
	Male electrical plug M12x1, 5-pole, Mat. PBT						35						
Output signal	Signal output	Load resistance		I (supply)		U (supply)							
	4 ... 20 mA	(U _{supply} -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 connector industrial standard												34
	Meets EN 50155 (railways) dielectrical strength: 500 VAC, 50 Hz ⁵⁾												11
	Pressure peak damping element ø 1.0 mm ⁶⁾												40
	Pressure peak damping element ø 0.3 mm ⁶⁾												43
	Pressure peak damping element ø 0.5 mm ⁶⁾												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 plug 32, M12x1, 4-pole)												96

¹⁾ Extended overpressure as well as customized pressure ranges upon request

²⁾ Measuring accuracy 0.3 %

³⁾ Relative pressure only

⁴⁾ Max. allowable pressure range 40 bar

⁵⁾ Only with output 19

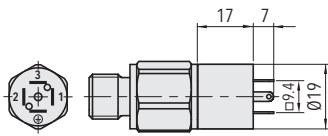
⁶⁾ Only for pressure connections 17 and 30

⁷⁾ According to norm J1926, max. 35 MPa

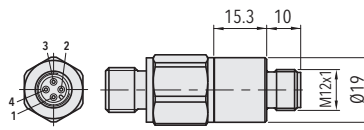


Identical construction with higher/lower specifications:
Data sheet No. H72250, H72301

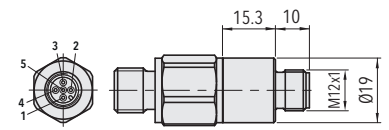
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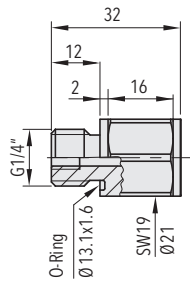
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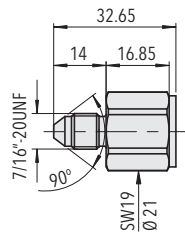
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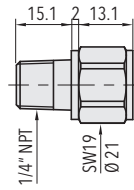
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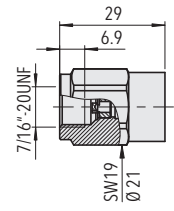
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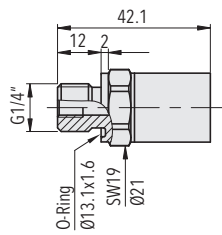
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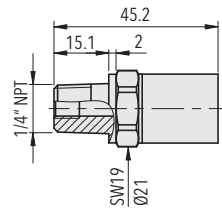
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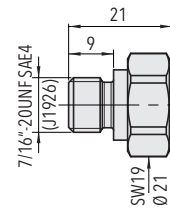
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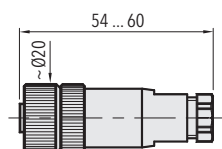
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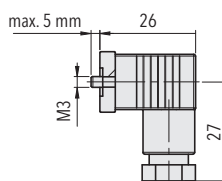
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8253.XX.XXXX.XX.XX.33



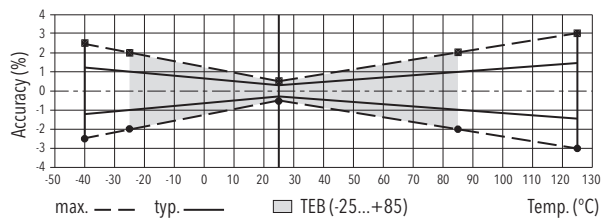
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Specifications		
Electrical Data	Output / supply voltage	4 ... 20 mA: 24 (9 ... 32) VDC 0 ... 5 VDC: 24 (9 ... 32) VDC 1 ... 6 VDC: 24 (9 ... 32) VDC 0 ... 10 VDC: 24 (15 ... 32) VDC 0.5 ... 4.5 VDC: 5 VDC ratiom.
	Rise time	Typ. 1 ms / 10 ... 90 % nominal pressure
	Switch-on-delay	1 s
Environmental conditions	Media temperature	-40°C ... +125°C
	Ambient temperature	-40°C ... +125°C
	Protection ¹⁾	Min. IP65
	Humidity	Max. 95 % relative
	Vibration	40 g (20...2000 Hz)
	Shock	100 g / 11 ms
EMC Protection	Emission	EN/IEC 61000-6-4
	Immunity	EN/IEC 61000-6-2
Mechanical Data	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 plug	See ordering information
	Weight	~ 50 g
	Mounting torque	25 Nm

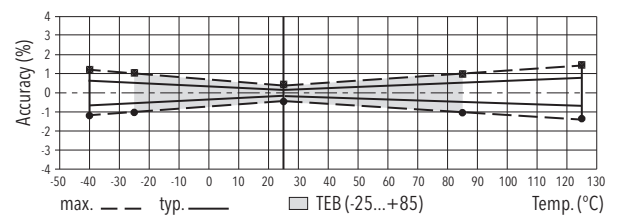
¹⁾ See electrical connection

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*)		
		Industrial standard EN175301-803A	M12x1		
		01	4-pole 32	96	5-pole 35
Output signal	<p>shield</p> <p>Us (pos. Supply) →</p> <p>Us (neg. Supply) →</p> <p>earth/housing →</p> <p>8253.XX.XXXX.XX.19</p>	2	1	-	4
	<p>shield</p> <p>Us (pos. Supply) →</p> <p>Out (Output) →</p> <p>Us (neg. Supply) →</p> <p>earth/housing →</p> <p>8253.XX.XXXX.XX.14/16/17/23</p>	1	1	1	2
		1	3	-	1
		⊕	4	-	5
			4	2	5

*) Provided female connector is mounted according to instructions

Additional information

Documents

Data sheet	www.trafag.com/H72300
Instructions	www.trafag.com/H73250
Flyer	www.trafag.com/H70670