

HYDRAULIC PRESSURE TRANSMITTER

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The hydraulic pressure transmitter NAH 8254 features the extremely robust and stable thin-film-on-steel sensor element from its well-proven predecessor NAH 8253. The enhanced accuracy of 0.3%, the wide temperature range from -40°C up to 125°C and triple overpressure safety makes it the first choice for a wide range of demanding applications.



Applications

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

Features

- Measuring accuracy 0.3 %
- Completely welded steel sensor system without additional seals
- Smallest design
- High resistance to over pressure
- Excellent long-term stability

Technical Data

Measuring principle	Thin film on steel	Accuracy @ 25°C typ.	± 0.3 % FS typ.
Measuring range	0 ... 2.5 to 0 ... 600 bar 0 ... 30 to 0 ... 7500 psi	Media temperature	-40 ... +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 ... +125°C (Cable PVC 22: -5 ... +60°C) (Cable PUR 24: -40 ... +70°C)

06/2015

Data sheet H72304a

Subject to change

Ordering information/type code

				8254 .	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 ... 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 ... 5000	12500	21750	H4	
					0 ... 7500	18750	29000	H6	
Sensor	Relative pressure, accuracy: 0.3%				23				
Pressure connection	G1/4" male, seal: DIN 3869 (accessory 61/63/83)				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				
	Cable IP67, Mat.: PVC ⁷⁾				22				
	Cable IP67, Mat.: PUR ⁷⁾				24				
	Cable IP67, Mat.: EPD ⁷⁾				08				
Output	Output	Load resistance	I (supply)	U (supply)					
	4 ... 20mA	See graphic		24 (9 ... 32) VDC	19				
	0 ... 5 VDC	≥ 5.0 kΩ to U _s	≤ 20 mA	24 (9 ... 32) VDC	14				
	1 ... 6 VDC	≥ 5.0 kΩ to U _s	≤ 20 mA	24 (9 ... 32) VDC	16				
	0 ... 10 VDC	≥ 5.0 kΩ to U _s	≤ 15 mA	24 (15 ... 32) VDC	17				
	0.5 ... 4.5 VDC ratiom.	≥ 5.0 kΩ to U _s	≤ 10 mA	5 (4.75 ... 5.25) VDC	23				

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Accessories	Female electrical plug M12x1, 5-pole ²⁾	33
	Female electrical connector industrial standard ³⁾	34
	Pressure peak damping element ø 1.0 mm ⁶⁾	40
	Pressure peak damping element ø 0.4 mm ⁶⁾	44
	Seal FPM, -18...+125°C ⁸⁾	61
	Seal EPDM, -40...+125°C ⁸⁾	63
	Seal NBR, -25...+100°C ⁸⁾	83
	Special pin configuration: Pin 2: +, Pin 3: Ground, Pin 4: - (Only for output signal 19 and male electrical plug 01, industrial standard)	90
	Special pin configuration: Pin 1: Out, Pin 2: +, Pin 3: Ground, Pin 4: - (Only for output signals 14, 16, 17, 23 and male electrical plug 01, industrial standard)	91
	Special pin configuration: 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
	Special pin configuration: Pin 1: +, Pin 2: -, Pin 4: Ground (Only for output signal 19 and male electrical plug 32, M12x1, 4-pole)	E1
	Special pin configuration: Pin 1: +, Pin 2: -, Pin 3: Out, Pin 4: Ground (Only for output signals 14, 16, 17, 23 and male electrical plug 32, M12x1, 4-pole)	E2
	Cable length 0.5 m	EM
	Cable length 1.0 m	1M
	Cable length 2.0 m	2M

¹⁾ Customized pressure ranges upon request

²⁾ For electrical connections 32 and 35

³⁾ For electrical connection 01

⁴⁾ Max. allowable overpressure 120 bar

⁵⁾ Max. allowable overpressure 500 bar

⁶⁾ Only for pressure connections 17, 30, 32

⁷⁾ Cable length see accessories

⁸⁾ Only for pressure connection 17

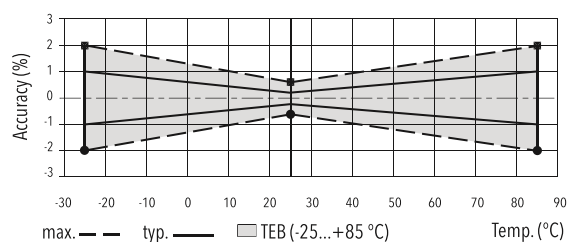
Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Supply [VDC]	Accuracy @ 25°C typ. [%]
NAH2.5A	8254 75 2317 32 0000 0000 19 33 44 61	0...2.5	7.5	9...32	± 0.3
NAH4.0A	8254 76 2317 32 0000 0000 19 33 44 61	0...4.0	12	9...32	± 0.3
NAH6.0A	8254 77 2317 32 0000 0000 19 33 44 61	0...6.0	18	9...32	± 0.3
NAH10.0A	8254 78 2317 32 0000 0000 19 33 44 61	0...10	30	9...32	± 0.3
NAH16.0A	8254 79 2317 32 0000 0000 19 33 44 61	0...16	48	9...32	± 0.3
NAH25.0A	8254 80 2317 32 0000 0000 19 33 44 61	0...25	75	9...32	± 0.3
NAH40.0A	8254 81 2317 32 0000 0000 19 33 44 61	0...40	120	9...32	± 0.3
NAH100.0A	8254 83 2317 32 0000 0000 19 33 44 61	0...100	300	9...32	± 0.3
NAH250.0A	8254 74 2317 32 0000 0000 19 33 44 61	0...250	750	9...32	± 0.3
NAH400.0A	8254 84 2317 32 0000 0000 19 33 44 61	0...400	1000	9...32	± 0.3
NAH600.0A	8254 86 2317 32 0000 0000 19 33 44 61	0...600	1500	9...32	± 0.3

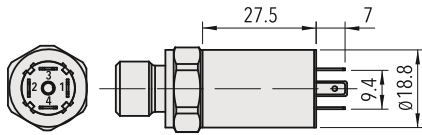
Specifications		
Accuracy	TEB typ. @ -25 ... +85°C	± 1.0 % FS typ.
	Accuracy @ 25°C typ.	± 0.3 % FS typ.
	NLH @ 25°C (BSL) typ.	± 0.2 % FS typ.
	TC zero point and span typ.	± 0.01 % FS/K typ.
	Long term stability 1 year typ.	< ± 0.2 % FS typ.
Electrical Data	Output / supply voltage	4 ... 20 mA: 24 (9...32) 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 ratiom., 10 ... 90% U _{supply} : 5 ± 0.25 VDC
	Rise time	typ. 1 ms/10...90 % nominal pressure
	Switch-on-delay	100 ms
	Inverse-polarity protection, short-circuit strenght @ 25°C during 5 min.	4...20 mA: to U _{supply} = 32 V 0...10 VDC, 0...5 VDC, 1...6 VDC: to U _{supply} = 28 V 0.5...4.5 VDC ratiometrisch: to U _{supply} = 14 V
Environmental conditions	Media temperature	-40 ... +125°C
	Ambient temperature	-40 ... +125°C (Cable PVC 22: -5 ... +60°C) (Cable PUR 24: -40 ... +70°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 61000-6-3
	Immunity	EN/IEC 61000-6-2
Mechanical Data	Sensor	1.4542 (AISI630)
	Housing / Pressure connection	1.4301 (AISI304)
	Sealing	FPM/EPDM/NBR
	Male electrical plug	see ordering information
	Weight	appr. 50 g
	Mounting torque	25 Nm

¹⁾ Provided female connector is mounted according to instructions

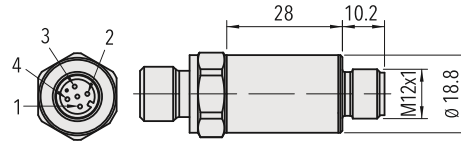
Measuring accuracy



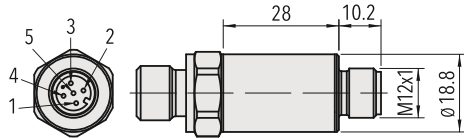
Dimensions



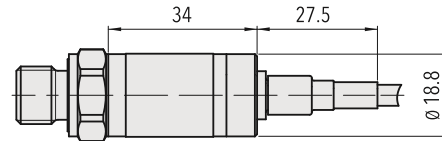
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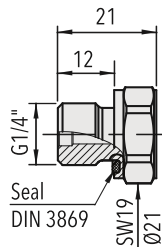
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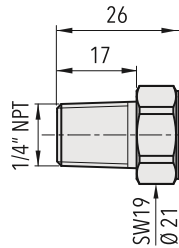
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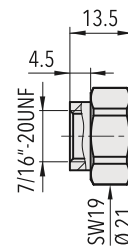
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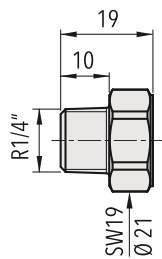
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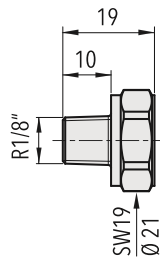
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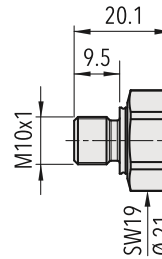
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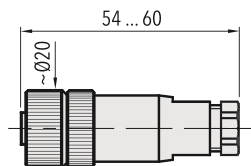
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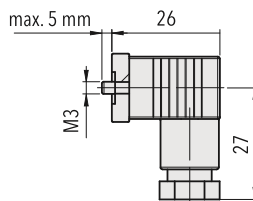
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8254.XX.XX32.XX.XX.XX



8254.XX.XXXX.XX.XX.33



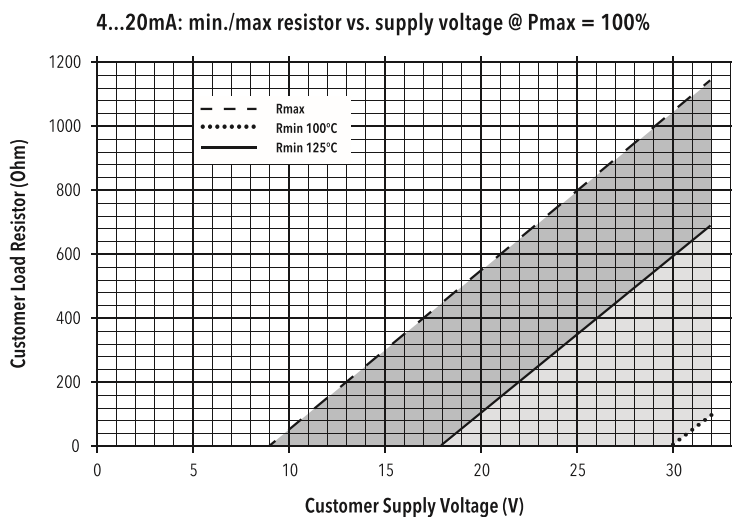
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Electrical connection

		Protection / electrical connection							
		IP65 *)**)	IP67 *)**)				IP67**)	IP67**)	
		Industrial standard Contact distance 9.4 mm 01	M12x1 4-pole 32			5-pole 35	Cable 22/24	Cable 08	
Output signal			90		E1				
		2	2	1	1	4	white	red	
		1	4	3	2	1	brown	black	
		4	3	4	4	5	yellow	green	
			91		96	E2			
		1	2	1	1	1	2	white	red
		2	1	2	4	3	4	green	white
		3	4	3	3	2	3	brown	black
		4	3	4	2	4	5	yellow	green
		8254.XX.XXXX.XX.19							
		8254.XX.XXXX.XX.14/16/17/23							

*) Provided female connector is mounted according to instructions

**) Ventilation via male electric plug/cable end



Additional information

Documents

Data sheet	www.trafag.com/H72304
Instructions	www.trafag.com/H73303
Flyer	www.trafag.com/H70682