

PICOSTAT PRESSURE SWITCH

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature. The 9B4 of the Picostat series is based on our long lasting experience in the shipbuilding and railway sector. This further improved version offers high vibration resistance within a compact body and is suitable for a wide temperature range.



Applications

- Shipbuilding
- Engine manufacturing
- Railways
- Machine tools



Features

- Improved vibration resistance
- Compact design
- Rugged housing
- Protection IP65
- Any mounting position possible

04/2014

Data sheet H72367g

Technical Data

Measuring principle	Bellow	Repeatability	± 0.5 % FS typ.
Measuring range	-0.6 ... 3.4 to 4 ... 40 bar -8 ... 45 to 60 ... 500 psi	Media temperature	Standard: -25 ... +125°C with sensor 789/790/791: -40 ... +125°C
Output signal	Floating change-over contact	Approval	ABS, BV, CCS, DNV, GL, KRS, LRS, NKK, RINA, RMRS, EN60730-1/ EN60730-2-6: Typ 2.B.H
Switching differential	Not adjustable		

Subject to change

Ordering information/type code

					9B4	XX	XX	XXX	XX	XX
Microswitch	Standard ¹⁾				42					
	Gold plated contacts ¹⁾				84					
Range	Range [bar]	Over pressure [bar]		Range [psi]	Over pressure [psi]					
	-0.6 ... 3.4	12	74	-8 ... 45	174	G4				
	0 ... 4	12	76	0 ... 50	174	G6				
	0 ... 6	12	77	0 ... 100	174	G7				
	1 ... 10	24	78	14 ... 150	348	G8				
	1 ... 16	24	79	14 ... 250	348	G9				
	2 ... 25	40	80	30 ... 400	580	H0				
	4 ... 40	50	81	60 ... 500	725	H1				
Sensor	Sensor material	Sensor housing material		Range						
	Bronze bellows CuSn6  ²⁾	EN AC-AISI10Mg (A360) chemically nickel plated		74		769				
	Bronze bellows CuSn6  ²⁾	EN AC-AISI10Mg (A360) chemically nickel plated		76, 77		770				
	Bronze bellows CuSn6  ²⁾	EN AC-AISI10Mg (A360) chemically nickel plated		78, 79		771				
	Bronze bellows CuSn6  ²⁾	EN AC-AISI10Mg (A360) chemically nickel plated		80, 81		772				
	Bronze bellows (CuSn6)  ^{3) 4)}	Brass (CuZn39Pb3)		74		789				
	Bronze bellows CuSn6  ^{3) 4)}	Brass (CuZn39Pb3)		76, 77		790				
	Bronze bellows (CuSn6)  ^{3) 4)}	Brass (CuZn39Pb3)		78, 79		791				
	Bellows stainless steel (1.4404/AISI316L) ⁴⁾	Stainless steel		76, 77		753				
	Bellows stainless steel (1.4404/AISI316L) ⁴⁾	Stainless steel		78, 79		754				
Pressure connection	G1/8" female								02	
	G1/4" female								04	
	M10x1.0" female ⁵⁾								03	
Accessories	Flange with O-Ring ⁴⁾									11
	Female electrical connector EN175301-803-A (DIN43650-A)									46
	Welsh plug G1/4"									74
	Fixing set									V3
	Covering cap									15
	Lead seal (manipulation protection)									16
	Switch point adjustment on customers request									
	Please indicate when ordering:									
	- Switchpoint including measurement unit (kPa, bar, MPa, psi, abs. or rel.)									88
	- Increasing or decreasing									
	Damping elements and snubber see data sheet H72258									

¹⁾ Switching differential not adjustable

²⁾ Media contacting O-Ring

³⁾ O-Ring not media contacting

⁴⁾ Only with pressure connection 04 (G1/4") others upon request

⁵⁾ Please ask us

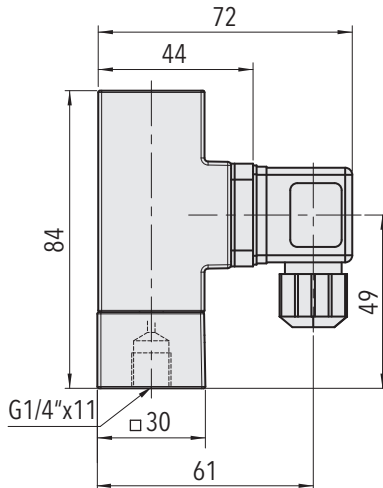
Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Switching differential [bar]
*PST4B64	9B4 4277 770 04 0000 0000 15 46 V3	0...6	12	0.3
*PST4B164	9B4 4279 771 04 0000 0000 15 46 V3	1...16	24	0.6
PST4B254	9B4 4280 772 04 0000 0000 15 46 V3	2...25	40	1.5
*PST4B404	9B4 4281 772 04 0000 0000 15 46 V3	4...40	50	1.8
*PST4B3.4F4	9B4 4274 769 04 0000 0000 11 15 46 74 V3	0.6...3.4	12	0.3
PST4B3.44	9B4 4274 769 04 0000 0000 15 46 V3	0.6...3.4	12	0.3
*PST4B6F4	9B4 4277 770 04 0000 0000 11 15 46 74 V3	0...6	12	0.3
*PST4B16F4	9B4 4279 771 04 0000 0000 11 15 46 74 V3	1...16	24	0.6
*PST4B25F4	9B4 4280 772 04 0000 0000 11 15 46 74 V3	2...25	40	1.5
*PST4B40F4	9B4 4281 772 04 0000 0000 11 15 46 74 V3	4...40	50	1.8

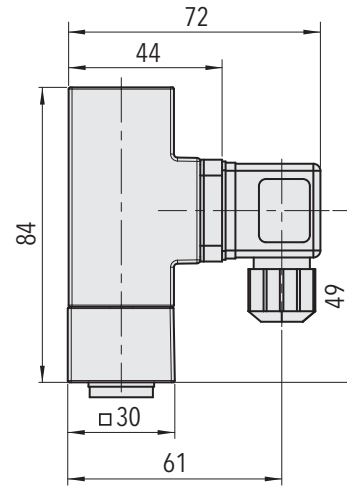
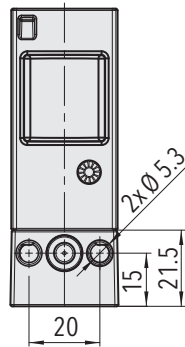
Specifications		
Accuracy	Repeatability	± 0.5 % FS typ.
	Switching differential	See table
	Temperature dependence switching point	-25 ... +125°C: ca. -0.1% FS/°C typ. < -25°C: ca. -0.25% FS/°C typ.
Environmental Conditions	Ambient temperature	Standard: -25 ... +125°C with sensor 789/790/791: -40 ... +125°C
	Media temperature	Standard: -25 ... +125°C with sensor 789/790/791: -40 ... +125°C
	Storage temperature	Standard: -30 ... +125°C with sensor 789/790/791: -45 ... +125°C
	Protection ¹⁾	IP65
	Humidity	Max. 95% relative
	Vibration	Switch: IEC/EN 60068-2-6 10...59 Hz: ±0.75mm Ampl. 59...500 Hz: 5g
	Shock	50g/ 3 ms
Mechanical Data	Sensor	See ordering information
	Housing	EN AC-ALSi10Mg (A360) chemically nickel plated
	Sealing	HNBR 75 Sh
	Housing seal	EPDM 75 Sh
	Male electrical plug	PA, Polyamid
	Mounting torque	G 1/4": M _A = 32 ... 40 Nm
	Installation	Any position
Microswitch	Weight	~ 160 g
	Rating	See table
	Resistance of insulation	500 VDC > 10 MΩ
Electrical connection	Dielectric strength	>1.5 kV AC/60 s terminal ground >500 V AC/60 s via open contacts
	Electrical connection	EN175301-803-A (DIN43650-A)
	Female electrical connector	Cable-Ø: 4...9 mm Terminal screw: 4 x 0.5...1.5 mm ²

¹⁾ Provided female connector is mounted according to instructions

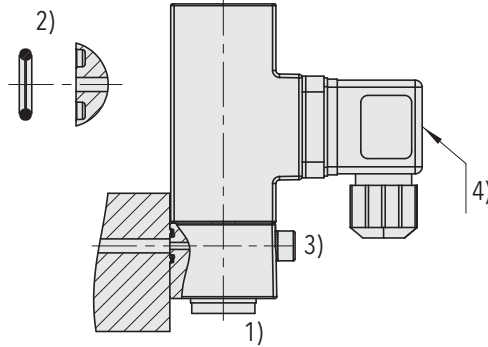
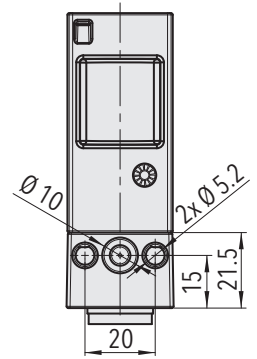
Dimensions



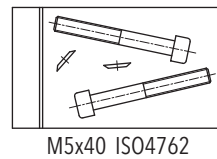
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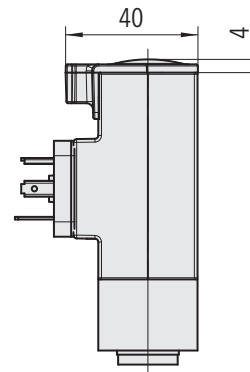
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9B4.XXXX.XXX.XX.11

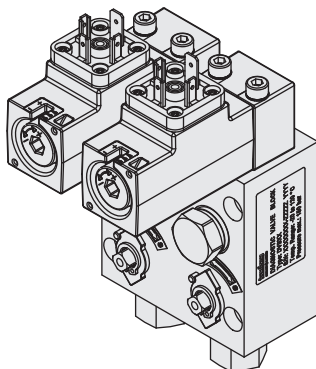


9B4.XXXX.XXX.XX.V3



9B4.XXXX.XXX.XX.15

- 1) Torque: G 1/4": $M_A = 32 \dots 40 \text{ Nm}$
- 2) O-Ring: $\varnothing 6.75 \times 1.78 \text{ NBR 90 Sh}$
- 3) Fixing screw: M5; property class: 8.8; torque: $4.5 \dots 6 \text{ Nm}$
- 4) Torque connector center screw: max. 0.4 Nm



Diagnostic Valve Bloc (DVB)
see specification sheet H72361

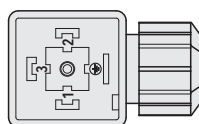
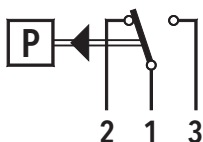
Switching differential typ.

Range of bellows sensor	[bar] [psi]	-0.6 ... 3.4 -8 ... 45	0 ... 4 0 ... 50	0 ... 6 0 ... 100	1 ... 10 14 ... 150	1 ... 16 14 ... 250	2 ... 25 30 ... 400	4 ... 40 60 ... 500
P max.	[bar] [psi]	12 174	12 174	12 174	24 348	24 348	40 580	50 725
Microswitch 42/84 Switching differential (fixed value, not adjustable)	[bar] [psi]	0.3 4.5	0.3 4.5	0.3 4.5	0.6 9	0.6 9	1.5 22	1.8 26

Electrical data switch

		Rating Resistive Load (Inductive Load)	
Type	Features	AC	DC
42 (Standard)	Silver contacts	250 V, 6 (1) A	220 V, 0.25 (0.1) A 110 V, 0.5 (0.2) A 60 V, 1(0.5) A 24 V, 3 (2) A 12 V, 6 (6) A
84	Gold plated contacts, suitable for intrinsically safe control circuits	max. 30 V, 0.1 (0.1) A min. 5 V, 5 mA	

Electrical Connection



EN175301-803-A

Additional information

Documents	Data sheet	www.trafag.com/H72367
	Instructions	www.trafag.com/H73367
	Flyer	www.trafag.com/H70655