

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









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°C ... +125°C with sensor 789/790/791: -40°C ... +125°C
Output signal	1 Floating change-over contact (SPDT)	Ambient temperature	Standard: -25°C ... +125°C with sensor 789/790/791: -40°C ... +125°C
Switching differential	Not adjustable	Approval	ABS, BV, CCS, DNV, GL, KRS, LRS, NKK, RINA, RMRS, EN60730-1/ EN60730-2-6: Typ 2.B.H

05/2016

Data sheet H72367m

Subject to change

Ordering information/type code

		9B4 .	XX	XX	XXX	XX	XX
Microswitch	Standard ¹⁾		42				
	Standard  ¹⁾		33				
	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⁾	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		74			769
	Bronze bellows CuSn6  ²⁾	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		76, 77			770
	Bronze bellows CuSn6  ²⁾	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		78, 79			771
	Bronze bellows CuSn6  ²⁾	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		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)

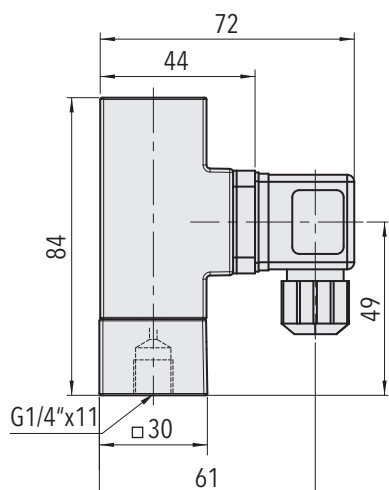
Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Switching differential [bar]
PST4B3.44	9B4 4274 769 04 0000 0000 15 46 V3	-0.6 ... 3.4	12	0.2 ± 0.1 (fixed)
PST4B64	9B4 4277 770 04 0000 0000 15 46 V3	0 ... 6	12	0.2 ± 0.1 (fixed)
PST4B164	9B4 4279 771 04 0000 0000 15 46 V3	1 ... 16	24	0.4 ± 0.2 (fixed)
PST4B254	9B4 4280 772 04 0000 0000 15 46 V3	2 ... 25	40	1.0 ± 0.6 (fixed)
PST4B404	9B4 4281 772 04 0000 0000 15 46 V3	4 ... 40	50	1.2 ± 0.8 (fixed)
PST4B3.4F4	9B4 4274 769 04 0000 0000 11 15 46 74 V3	-0.6 ... 3.4	12	0.2 ± 0.1 (fixed)
PST4B6F4	9B4 4277 770 04 0000 0000 11 15 46 74 V3	0 ... 6	12	0.2 ± 0.1 (fixed)
PST4B16F4	9B4 4279 771 04 0000 0000 11 15 46 74 V3	1 ... 16	24	0.4 ± 0.2 (fixed)
PST4B25F4	9B4 4280 772 04 0000 0000 11 15 46 74 V3	2 ... 25	40	1.0 ± 0.6 (fixed)
PST4B40F4	9B4 4281 772 04 0000 0000 11 15 46 74 V3	4 ... 40	50	1.2 ± 0.8 (fixed)
PST4B6S4	9B4 4277 753 04 0000 0000 15 46 V3	0 ... 6	12	0.2 ± 0.1 (fixed)
PST4B16S4	9B4 4279 754 04 0000 0000 15 46 V3	1 ... 16	24	0.4 ± 0.2 (fixed)

Specifications		
Accuracy	Repeatability	± 0.5 % FS typ.
	Switching differential	See table
	Adjustment range switchpoint ²⁾	10% ... 90% FS
	Temperature dependence switching point	-25°C ... +125°C: ca. -0.1% FS/°C typ. < -25°C: ca. -0.25% FS/°C typ.
Environmental conditions	Ambient temperature	Standard: -25°C ... +125°C with sensor 789/790/791: -40°C ... +125°C
	Media temperature	Standard: -25°C ... +125°C with sensor 789/790/791: -40°C ... +125°C
	Storage temperature	Standard: -30°C ... +125°C with sensor 789/790/791: -45°C ... +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	Aluminium EN AW-6026 AlMgSiPb0.4 anodized
	Sealing	HNBR 75 Sh
	Housing seal	EPDM 75 Sh
	Male electrical plug	PA, Polyamide
	Mounting torque	G 1/4": M _A = 32 ... 40 Nm
	Installation	any position
	Weight	~ 160 g
Microswitch	Rating	See table
	Resistance of insulation	500 VDC > 10 MΩ
	Dielectric strength	>1.5 kV AC/60 s terminal ground >500 VAC/60 s via open contacts
Electrical connection	Electrical connections	EN175301-803-A (DIN43650-A)
	Female electrical connector	Cable-Ø: 4 ... 9 mm Terminal screw: 4 x 0.5...1.5 mm ²

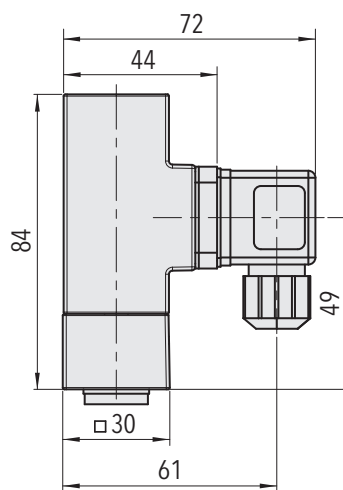
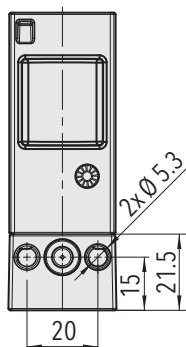
¹⁾ Provided female connector is mounted according to instructions

²⁾ Other adjustment ranges upon request

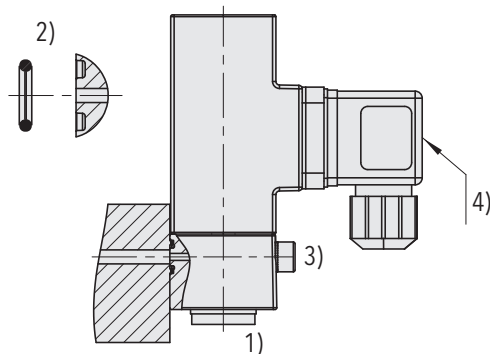
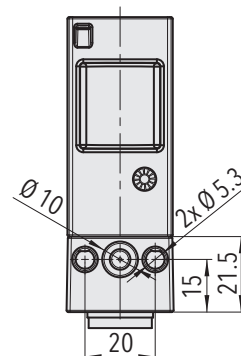
Dimensions



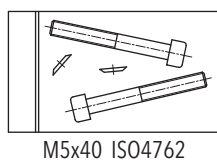
9B4.XXXX.7XX.04.46.V3



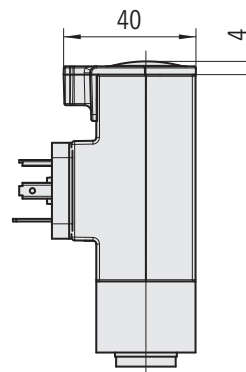
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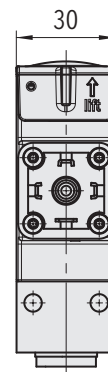
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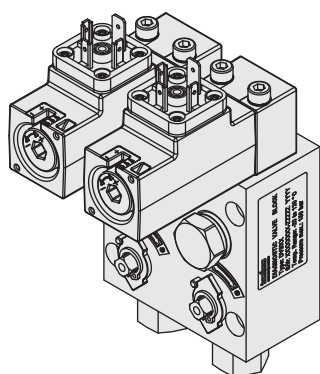
9B4.XXXX.XXX.XX.V3



9B4.XXXX.XXX.XX.15



- 1) Torque: G 1/4": $M_A = 32 \dots 40 \text{ Nm}$
- 2) O-Ring: $\varnothing 6.75 \times 1.78 \text{ NBR } 90 \text{ Sh}$
- 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

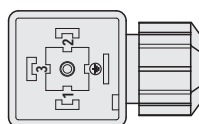
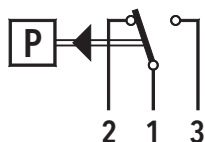
Switching differential typ. @ 25°C

Measuring 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
Microswitch 42/84/33	[bar]	0.2 ± 0.1	0.2 ± 0.1	0.2 ± 0.1	0.4 ± 0.2	0.4 ± 0.2	1.0 ± 0.6	1.2 ± 0.8
Switching differential (not adjustable)	[psi]	4.5	4.5	4.5	9	9	22	26

Electrical data switch

Type	Features	Rating	
		Resistive Load (Inductive Load)	
		AC	DC
42/33 (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