

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 9K4 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
- Hydraulics



Features

- Compact design
- Rugged housing
- Protection IP65 (with plug connector)
- Any mounting position possible

Technical Data


Measuring principle	Piston	Repeatability	± 1.0 % FS typ.
Measuring range	1 ... 10 to 40 ... 400 bar 14 ... 150 to 580 ... 5800 psi	Media temperature	-25°C ... +125°C
Output signal	1 Floating change-over contact (SPDT)	Ambient temperature	-25°C ... +85°C
Switching differential	Not adjustable	Approval / conformity	ABS, BV, CCS, DNV, GL, KRS, LRS, RINA, EN60730-1/ EN60730-2-6: Typ 2.B.H

02/2017

Data sheet H72369h

Subject to change

Ordering information/type code

				9K4 .	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]				
	1 ... 10	100	78	14 ... 150	1450		G8		
	1 ... 16	100	79	14 ... 250	1450		G9		
	2 ... 25	100	80	30 ... 400	1450		H0		
	4 ... 40	100	81	60 ... 500	1450		H1		
	6 ... 60	200	82	85 ... 850	2900		H2		
	10 ... 100	200	83	150 ... 1500	2900		H3		
	16 ... 160	400	84	250 ... 2500	5800		H4		
	25 ... 250	400	85	350 ... 3500	5800		H5		
40 ... 400	600	86	580 ... 5800	8700		H6			
Sensor	Sensor material	Sensor housing material		Range					
	Piston 1.4035, sealing PTFE ²⁾	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		78, 79			756		
	Piston 1.4035, sealing PTFE ²⁾	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		80, 81			757		
	Piston 1.4035, sealing PTFE	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		82, 83			758		
	Piston 1.4035, sealing PTFE	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		84, 85, 86			759		
Pressure connection	G1/8" female							02	
	G1/4" female							04	
	M10x1 female ²⁾							03	
Accessories	Flange with O-Ring ³⁾								11
	Female electrical connector EN 175301-803-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⁾ Please ask us

³⁾ Only with pressure connection 04 (G1/4"), others upon request

Standard products (extra short lead time)

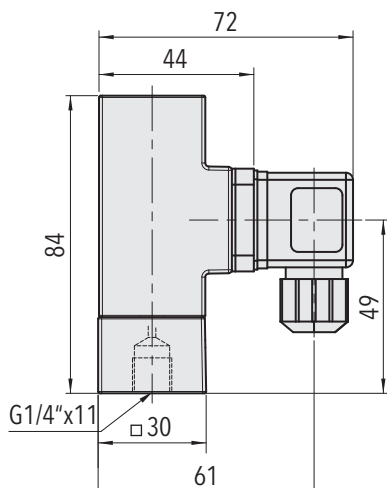
Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Switching differential [bar]
PST4K164	9K4 4279 756 04 0000 0000 15 46 V3	1 ... 16	100	0.4 ... 2.4 (fixed)
PST4K404	9K4 4281 757 04 0000 0000 15 46 V3	4 ... 40	100	1 ... 6 (fixed)
PST4K1004	9K4 4283 758 04 0000 0000 15 46 V3	10 ... 100	200	5 ... 15 (fixed)
PST4K2504	9K4 4285 759 04 0000 0000 15 46 V3	25 ... 250	400	12 ... 40 (fixed)
PST4K4004	9K4 4286 759 04 0000 0000 15 46 V3	40 ... 400	600	15 ... 50 (fixed)
PST4K16F4	9K4 4279 756 04 0000 0000 11 15 46 74 V3	1 ... 16	100	0.4 ... 2.4 (fixed)
PST4K40F4	9K4 4281 757 04 0000 0000 11 15 46 74 V3	4 ... 40	100	1 ... 6 (fixed)
PST4K100F4	9K4 4283 758 04 0000 0000 11 15 46 74 V3	10 ... 100	200	5 ... 15 (fixed)
PST4K250F4	9K4 4285 759 04 0000 0000 11 15 46 74 V3	25 ... 250	400	12 ... 40 (fixed)
PST4K400F4	9K4 4286 759 04 0000 0000 11 15 46 74 V3	40 ... 400	600	15 ... 50 (fixed)

Specifications		
Accuracy	Repeatability	± 1.0 % FS typ.
	Switching differential	See table
	Adjustment range switchpoint ²⁾	10 % ... 90 % FS
	Temperature dependence switching point	approx. + 0.1% FS/°C typ.
Environmental conditions	Ambient temperature	-25°C ... +85°C
	Media temperature	-25°C ... +125°C
	Storage temperature	-40°C ... +85°C
	Protection ¹⁾	IP65
	Humidity	Max. 95 % relative
	Vibration	Switch IEC/EN 60068-2-6: 10...59 Hz: ±0.75 mm Ampl. 59...500 Hz: 5 g
	Shock	50 g / 3 ms
Mechanical Data	Sensor	See ordering information
	Housing	Aluminium EN AW-6026 AlMgSiPb0.4 anodized
	Sealing	PTFE
	Housing seal	EPDM 75 Sh
	Male electrical plug	Polyamide (PA)
	Mounting torque	G 1/4": M _A = 32 ... 40 Nm
	Installation	any position
	Weight	~ 200 g
Microswitch	Rating	See table
	Resistance of insulation	500 VDC > 10 MΩ
	Dielectric strength	(IEC/EN 60730-1) >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

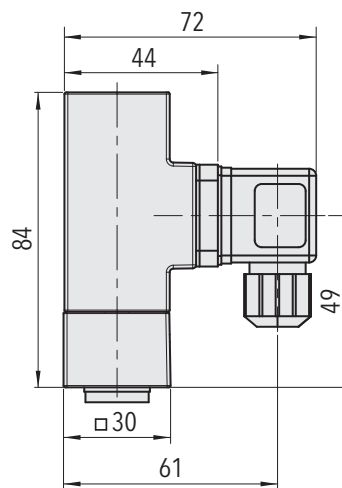
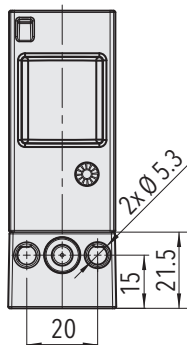
¹⁾ Provided female connector is mounted according to instructions

²⁾ Other adjustment ranges upon request

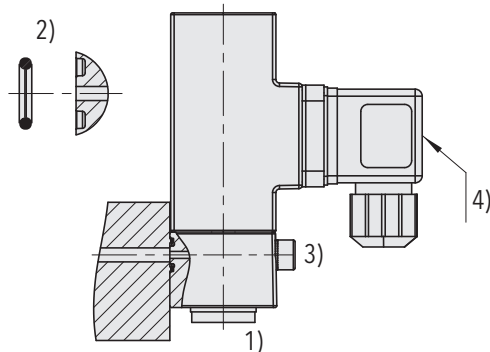
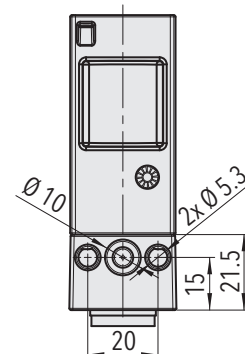
Dimensions



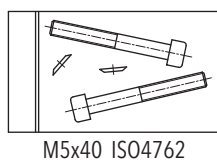
9K4.XXXX.7XX.04.46.V3



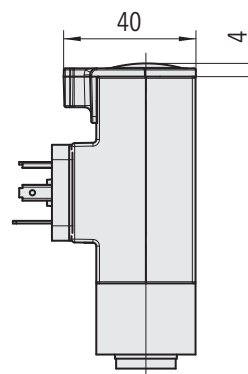
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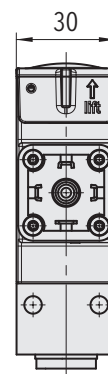
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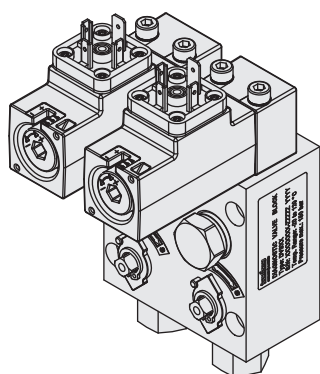
9K4.XXXX.XXX.XX.V3



9K4.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

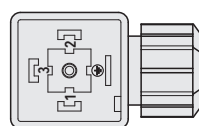
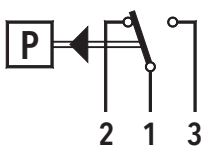
Switching differential typ. @ 25°C

Measuring range piston sensor	[bar]	1 ... 10	1 ... 16	2 ... 25	4 ... 40	6 ... 60
	[psi]	14 ... 150	14 ... 250	30 ... 400	60 ... 500	85 ... 850
Microswitch 42/84/33: Switching differential not adjustable	[bar]	0.4 ... 2.4	0.4 ... 2.4	1 ... 6	1 ... 6	5 ... 15
	[psi]	6 ... 35	6 ... 35	14.5 ... 88	14.5 ... 88	73 ... 218
Measuring range piston sensor	[bar]	10 ... 100	16 ... 160	25 ... 250	40 ... 400	
	[psi]	150 ... 1500	250 ... 2500	350 ... 3500	580 ... 5800	
Microswitch 42/84/33: Switching differential not adjustable	[bar]	5 ... 15	12 ... 40	12 ... 40	15 ... 50	
	[psi]	73 ... 218	174 ... 580	174 ... 580	218 ... 725	

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/H72369
	Instructions	www.trafag.com/H73367
	Flyer	www.trafag.com/H70667