

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 9M4 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
- Any mounting position possible

Technical Data


Measuring principle	Membrane	Repeatability	± 2.0 % FS typ.
Measuring range	1 ... 10 to 10 ... 100 bar 14 ... 150 to 150 ... 1500 psi	Media temperature	0°C ... +80°C
Output signal	1 Floating change-over contact (SPDT)	Ambient temperature	0°C ... +80°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 H72368h

Subject to change

Ordering information/type code

				9M4 .	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	200	78	14 ... 150	2900		G8		
	1 ... 16	200	79	14 ... 250	2900		G9		
	2 ... 25	200	80	30 ... 400	2900		H0		
	4 ... 40	200	81	60 ... 500	2900		H1		
	6 ... 60	200	82	85 ... 850	2900		H2		
	10 ... 100	200	83	150 ... 1500	2900		H3		
Sensor	Sensor material	Sensor housing material		Range					
	FKM Membrane	Aluminium EN AW-6082 AlMgSi1 anodized		78, 79			761		
	FKM Membrane	Aluminium EN AW-6082 AlMgSi1 anodized		80, 81			762		
	FKM Membrane	Aluminium EN AW-6082 AlMgSi1 anodized		82, 83			763		
Pressure connection	G1/8" female							02	
	G1/4" female							04	
	M10x1.0" female ²⁾							03	
Accessories	Flange with O-Ring ³⁾								11
	Female electrical connector EN175301-803-A (DIN43650-A)								46
	Welsh plug G1/4"								74
	Fixing set								V3
	Covering cap								15
	Sealing switchpoint (manipulation protection)								16
	Switch point adjustment on customers request								
	Please indicate when ordering: - Switchpoint including measurement unit (kPa, bar, MPa, psi, abs. or rel.) - Increasing or decreasing								88
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)

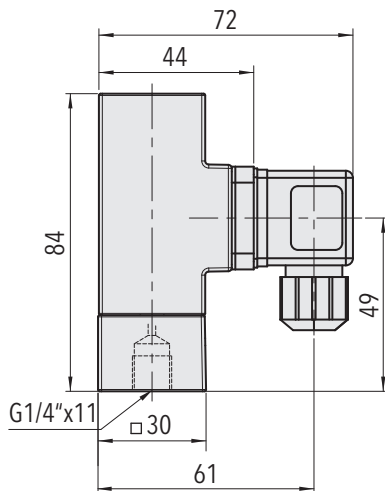
Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Switching differential [bar]
PST4M164	9M4 4279 761 04 0000 0000 15 46 V3	1 ... 16	200	0.2 ... 1.7 (fixed)
PST4M404	9M4 4281 762 04 0000 0000 15 46 V3	4 ... 40	200	1.2 ... 4.5 (fixed)
PST4M1004	9M4 4283 763 04 0000 0000 15 46 V3	10 ... 100	200	4 ... 16 (fixed)
PST4M16F4	9M4 4279 761 04 0000 0000 11 15 46 74 V3	1 ... 16	200	0.2 ... 1.7 (fixed)
PST4M40F4	9M4 4281 762 04 0000 0000 11 15 46 74 V3	4 ... 40	200	1.2 ... 4.5 (fixed)
PST4M100F4	9M4 4283 763 04 0000 0000 11 15 46 74 V3	10 ... 100	200	4 ... 16 (fixed)

Specifications		
Accuracy	Repeatability	± 2.0 % 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	0°C ... +80°C
	Media temperature	0°C ... +80°C
	Storage temperature	-40°C ... +85°C
	Protection ¹⁾	IP65
	Humidity	Max. 95 % relative
	Vibration	Switch (IEC/EN 60068-2-6): 10...59 Hz: ±0.75mm Ampl. 59...500 Hz: 5g
	Shock	50g/ 3 ms
Mechanical Data	Sensor	See ordering information
	Housing	Aluminium EN AW-6082 AlMgSi1 anodized
	Sealing	FKM
	Housing seal	EPDM 75 Sh
	Male electrical plug	PA, Polyamide
	Mounting torque	G 1/4": MA= 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

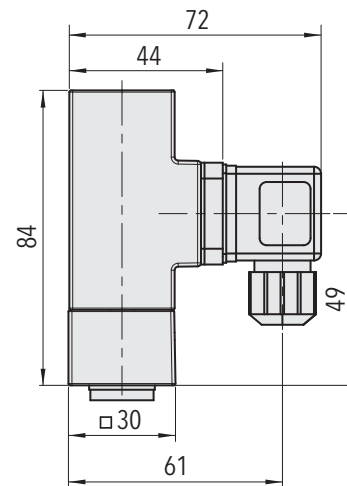
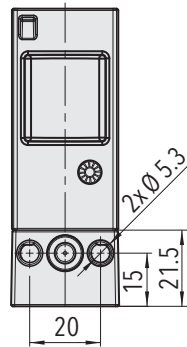
¹⁾ Provided female connector is mounted according to instructions

²⁾ Other adjustment ranges upon request

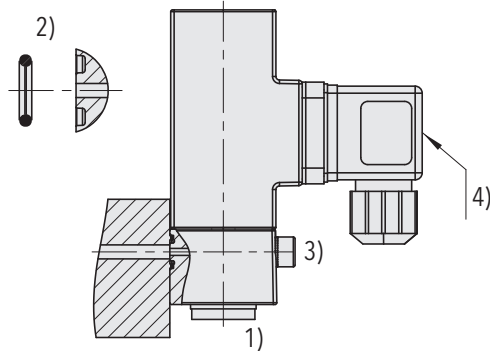
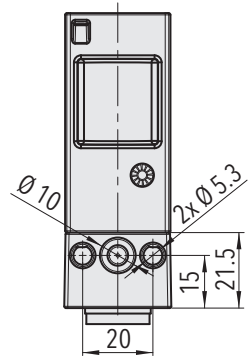
Dimensions



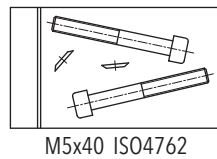
9M4.XXXX.7XX.04.46.V3



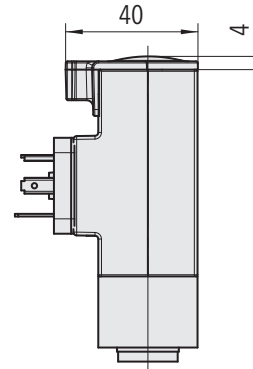
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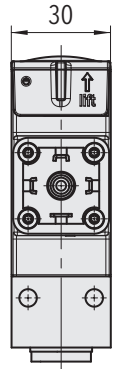
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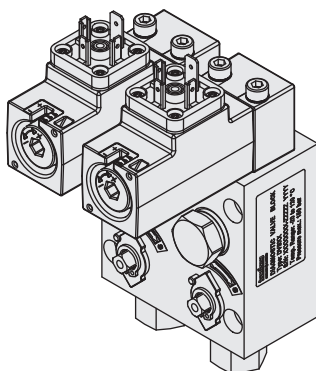
9M4.XXXX.XXX.XX.V3



9M4.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

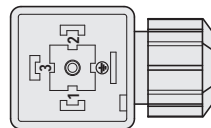
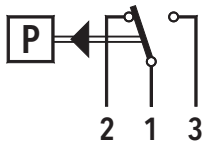
Switching differential typ. @ 25°C

Measuring range of membrane sensor	[bar] [psi]	1 ... 10 14 ... 150	1 ... 16 14 ... 250	2 ... 25 30 ... 400	4 ... 40 60 ... 500	6 ... 60 85 ... 850	10 ... 100 150 ... 1500
Microswitch 42/84/33	[bar]	0.2 ... 1.7	0.2 ... 1.7	1.2 ... 4.5	1.2 ... 4.5	4 ... 16	4 ... 16
Switching differential (not adjustable)	[psi]	3 ... 24.5	3 ... 24.5	18 ... 66	18 ... 66	58 ... 232	58 ... 232

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	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/H72368
Instructions	www.trafag.com/H73367
Flyer	www.trafag.com/H70668