

# 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	Floating change-over contact	Ambient temperature	-25°C ... +85°C
Switching differential	Not adjustable	Approval	ABS, BV, CCS, DNV, GL, KRS, LRS, RINA, EN60730-1/ EN60730-2-6: Typ 2.B.H

01/2016

Data sheet H72369f

Subject to change

## Ordering information/type code

				9K4 .	XX	XX	XXX	XX	XX
<b>Microswitch</b>	Standard <sup>1)</sup>				42				
	Standard  <sup>1)</sup>				33				
	Gold plated contacts <sup>1)</sup>				84				
<b>Range</b>	<b>Range [bar]</b>	<b>Over pressure [bar]</b>		<b>Range [psi]</b>	<b>Over pressure [psi]</b>				
	1 ... 10	100	<b>78</b>	14 ... 150	1450		<b>G8</b>		
	1 ... 16	100	<b>79</b>	14 ... 250	1450		<b>G9</b>		
	2 ... 25	100	<b>80</b>	30 ... 400	1450		<b>H0</b>		
	4 ... 40	100	<b>81</b>	60 ... 500	1450		<b>H1</b>		
	6 ... 60	200	<b>82</b>	85 ... 850	2900		<b>H2</b>		
	10 ... 100	200	<b>83</b>	150 ... 1500	2900		<b>H3</b>		
	16 ... 160	400	<b>84</b>	250 ... 2500	5800		<b>H4</b>		
	25 ... 250	400	<b>85</b>	350 ... 3500	5800		<b>H5</b>		
40 ... 400	600	<b>86</b>	580 ... 5800	8700		<b>H6</b>			
<b>Sensor</b>	<b>Sensor material</b>	<b>Sensor housing material</b>		<b>Range</b>					
	Piston 1.4035, sealing PTFE <sup>2)</sup>	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		78, 79			<b>756</b>		
	Piston 1.4035, sealing PTFE <sup>2)</sup>	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		80, 81			<b>757</b>		
	Piston 1.4035, sealing PTFE	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		82, 83			<b>758</b>		
Piston 1.4035, sealing PTFE	Aluminium EN AW-6026 AlMgSiPb0.4 anodized		84, 85, 86			<b>759</b>			
<b>Pressure connection</b>	G1/8" female							<b>02</b>	
	G1/4" female							<b>04</b>	
	M10x1.0" female <sup>2)</sup>							<b>03</b>	
<b>Accessories</b>	Flange with O-Ring <sup>3)</sup>								<b>11</b>
	Female electrical connector EN175301-803-A (DIN43650-A)								<b>46</b>
	Welsh plug G1/4"								<b>74</b>
	Fixing set								<b>V3</b>
	Covering cap								<b>15</b>
	Sealing switchpoint (manipulation protection)								<b>16</b>
	Switch point adjustment on customers request								
	Please indicate when ordering:								
	- Switchpoint including measurement unit (kPa, bar, MPa, psi, abs. or rel.)								<b>88</b>
- Increasing or decreasing									
Damping elements and snubber see data sheet H72258									

<sup>1)</sup> Switching differential not adjustable

<sup>2)</sup> Please ask us

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

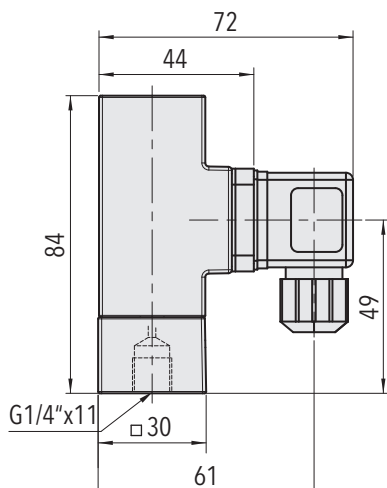
## Standard products (extra short lead time)

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)

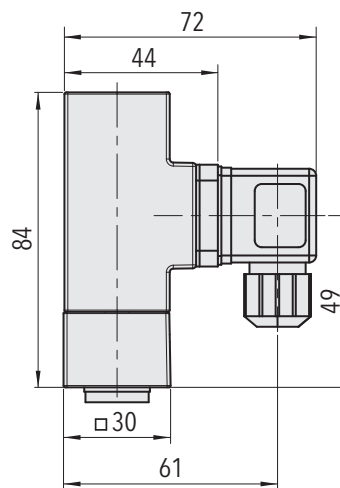
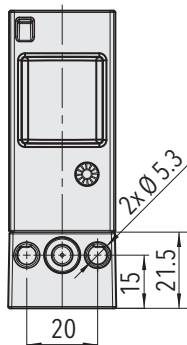
Specifications		
<b>Accuracy</b>	Repeatability	± 1.0 % FS typ.
	Switching differential	See table
	Adjustment range switchpoint	10% ... 90% FS
	Temperature dependence switching point	approx. + 0.1% FS/°C typ.
<b>Environmental conditions</b>	Ambient temperature	-25°C ... +85°C
	Media temperature	-25°C ... +125°C
	Storage temperature	-40°C ... +85°C
	Protection <sup>1)</sup>	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
<b>Mechanical Data</b>	Sensor	See ordering information
	Housing	Aluminium EN AW-6026 AlMgSiPb0.4 anodized
	Sealing	PTFE
	Housing seal	EPDM 75 Sh
	Male electrical plug	PA, Polyamide
	Mounting torque	G 1/4": M <sub>A</sub> = 32 ... 40 Nm
	Installation	any position
	Weight	~ 200 g
<b>Microswitch</b>	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
<b>Electrical connection</b>	Electrical connections	EN175301-803-A (DIN43650-A)
	Female electrical connector	Cable-Ø: 4...9 mm Terminal screw: 4 x 0.5...1.5 mm <sup>2</sup>

<sup>1)</sup> Provided female connector is mounted according to instructions

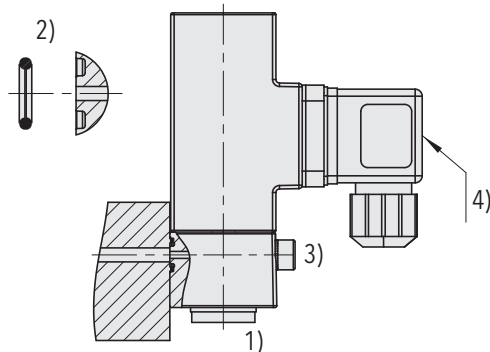
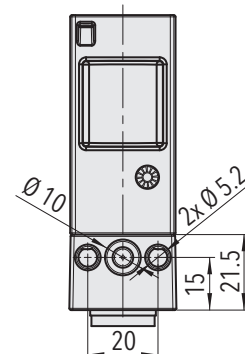
## Dimensions



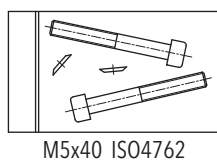
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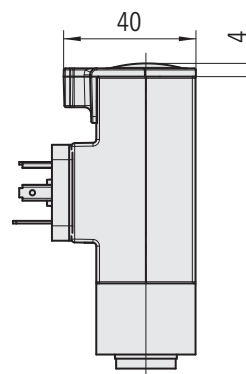
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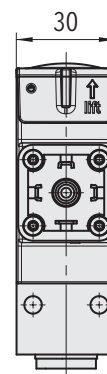
9K4.XXXX.XXX.XX.11



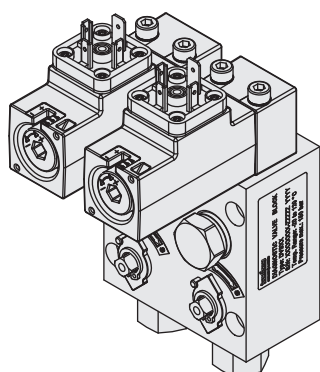
9K4.XXXX.XXX.XX.V3



9K4.XXXX.XXX.XX.15



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



Diagnostic Valve Bloc (DVB)  
see specification sheet H72361

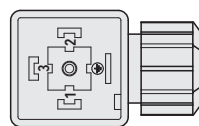
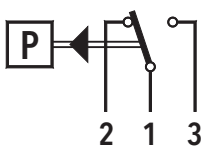
## Switching differential typ. @ 25°C

<b>Measuring range of piston sensor</b>	[bar]	1 ... 10	1 ... 16	2 ... 25	4 ... 40	6 ... 60
	[psi]	14 ... 150	14 ... 250	30 ... 400	60 ... 500	85 ... 850
<b>Microswitch 42/84/33</b> 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
<b>Measuring range of piston sensor</b>	[bar]	10 ... 100	16 ... 160	25 ... 250	40 ... 400	
	[psi]	150 ... 1500	250 ... 2500	350 ... 3500	580 ... 5800	
<b>Microswitch 42/84/33</b> 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
<b>42/33</b> (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
<b>84</b>	Gold plated contacts	max. 30 V, 0.1 (0.1) A min. 5 V, 5 mA	

## Electrical Connection



EN175301-803-A

## Additional information

<b>Documents</b>	Data sheet	<a href="http://www.trafag.com/H72369">www.trafag.com/H72369</a>
	Instructions	<a href="http://www.trafag.com/H73367">www.trafag.com/H73367</a>
	Flyer	<a href="http://www.trafag.com/H70667">www.trafag.com/H70667</a>