

# VARI PRESSOSTAT

Swiss based Trafag is a leading international supplier of high quality sensors and monitoring instruments for measurement of pressure and temperature.



## Applications

- Shipbuilding
- Engine manufacturing
- Railways
- Machine tools
- Hydraulics

## Features

- Rugged aluminium housing
- Protection IP65
- Any mounting position possible


02/2017

Data sheet H72257r

Technical Data			
Measuring principle	Bellow	Repeatability	± 1.0 % FS typ.
Measuring range	-0.9 ... 1.5 to 4 ... 40 bar 5 ... 50 to 50 ... 500 psi	Media temperature	-40°C ... +150°C
Output signal	1 Floating change-over contact (SPDT)	Ambient temperature	-25°C ... +70°C
Switching differential	Adjustable	Approval / conformity	ABS, BV, DNV, GL, KRS, LRS, RINA EN60730-1/ EN60730-2-6: Typ 2.B.H
Switching point	Calibration for decreasing pressure		

Subject to change




## Ordering information/type code

		XXX	XX	XX	XXXXXX	XX	XX
<b>Custom build code</b>	Large adjustable switching differential, with display and internal adjustment screw	<b>903</b>					
	Large adjustable switching differential, without display, with internal adjustment screw	<b>907</b>					
	Large adjustable switching differential, with display and external adjustment screw	<b>915</b>					
	Small adjustable switching differential, with display and internal adjustment screw	<b>940</b>					
	Small adjustable switching differential, without display, with internal adjustment screw	<b>941</b>					
	Small adjustable switching differential, with display and external adjustment screw	<b>942</b>					
<b>Microswitch</b>	Standard vibration resistance <sup>1) 3)</sup>					<b>11</b>	
	High vibration resistance <sup>3)</sup>					<b>12</b>	
	Increased vibration resistance  <sup>3)</sup>					<b>23</b>	

<b>Range</b>	<b>Range [bar]</b>	<b>Over pressure [bar]</b>	<b>Burst pressure [bar]</b>	<b>Range [psi]</b>	<b>Over pressure [psi]</b>	<b>Burst pressure [psi]</b>		
		-0.9 ... 1.5	10	13	72	5 ... 50	175	350
	0.2 ... 1.6	10	13	<b>73</b>	10 ... 100	350	500	<b>G8</b>
	0.2 ... 2.5	10	13	<b>75</b>	25 ... 200	350	500	<b>G9</b>
	0 ... 4	12	26	<b>76</b>	50 ... 500	500	1000	<b>H1</b>
	0 ... 6	12	26	<b>77</b>				
	1 ... 10	24	36	<b>78</b>				
	1 ... 16	24	36	<b>79</b>				
	2 ... 25	40	75	<b>80</b>				
	4 ... 40	40	75	<b>81</b>				

<b>Sensor</b>	<b>Sensor material</b>	<b>Sensor housing material</b>	<b>Thread</b>	<b>Range</b>		<b>Sensor material</b>	<b>Sensor housing material</b>	<b>Thread</b>	<b>Range</b>	
		Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/4" female	72	<b>900</b>	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/4" female	78, 79
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/4" female	73, 75	<b>901</b>	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/4" female	80, 81	<b>957</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/4" female	76, 77	<b>903</b>	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/2" male	72	<b>959</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/4" female	78, 79	<b>905</b>	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/2" male	73, 75	<b>952</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/4" female	80, 81	<b>907</b>	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/2" male	76, 77	<b>954</b>
	Bellow stainless steel 1.4435	Brass (CuZn39Pb3)	G1/4" female	82, 83	<b>940</b>	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/2" male	78, 79	<b>956</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/2" male	72	<b>909</b>	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/2" male	80, 81	<b>958</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/2" male	73, 75	<b>902</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/4" female	72	<b>800</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/2" male	76, 77	<b>904</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/4" female	73, 75	<b>801</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/2" male	78, 79	<b>906</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/4" female	76, 77	<b>803</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	G1/2" male	80, 81	<b>908</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/4" female	78, 79	<b>805</b>
	Bellow stainless steel 1.4435	Brass (CuZn39Pb3)	G1/2" male	82, 83	<b>941</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/4" female	80, 81	<b>807</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	1/4" NPT female	G6	<b>G6.103</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/4" female	82, 83	<b>840</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	1/4" NPT female	G8	<b>G8.105</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/2" male	72	<b>809</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	1/4" NPT female	G9	<b>G9.105</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/2" male	73, 75	<b>802</b>
	Bronze bellow (CuSn6)	Brass (CuZn39Pb3)	1/4" NPT female	H1	<b>H1.107</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/2" male	76, 77	<b>804</b>
	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/4" female	72	<b>950</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/2" male	78, 79	<b>806</b>
	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/4" female	73, 75	<b>951</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/2" male	80, 81	<b>808</b>
	Bronze bellow (CuSn6)	Brass chemically nickel plated	G1/4" female	76, 77	<b>953</b>	Bellows stainless steel 1.4435 <sup>2)</sup>	Brass nickel plated	G1/2" male	82, 83	<b>841</b>

# PV/PVF 903/907/915/940/941/942

	XXX	XX	XX	XXXXXX	XX	XX
<b>Fixing</b>	Direct on sensor or housing					00
	With mounting bracket					31
<b>Accessories</b>	Lead seal (manipulation protection)					16
	Screwed cable gland M20x1.5 (EN50262) 					07
	Screwed cable gland M24x1.5 (DIN89280) 					27
	Screwed cable gland M18x1.5 (DIN89280) 					40
	Damping elements and snubber see data sheet H72258					

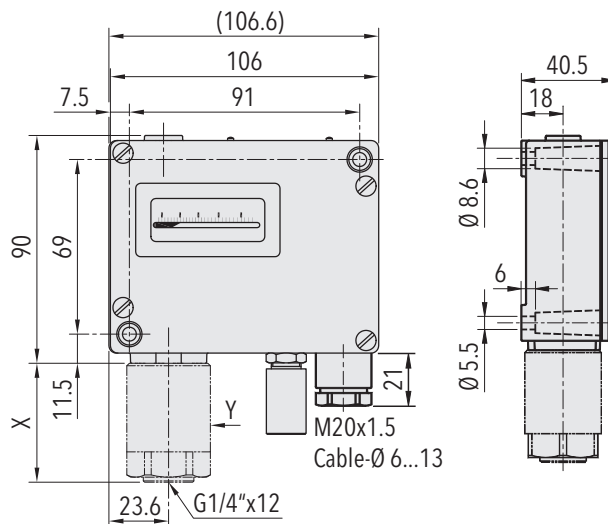
<sup>1)</sup> Switch 11 only with typ No. 940, 941, 942

<sup>2)</sup> Material with medium contact: 1.4435

<sup>3)</sup> Switching differential adjustable

## Standard products (extra short lead time)

Product No.	Type Code	Pressure range [bar]	Over pressure max. [bar]	Switching differential [bar]	Diameter Y [mm]	Length X [mm]
PV6	903 2377 903	0 ... 6	12	0.4 ... 3.2 (adjustable)	33	47
PV16	903 2379 905	1 ... 16	24	1 ... 7.5 (adjustable)	27	42.5
PV40	903 2381 907	4 ... 40	40	3 ... 18 (adjustable)	27	42.5
PVF1.5	940 2372 900	-0.9 ... 1.5	10	0.06 ... 0.2 (adjustable)	45	56.5
PVF2.5	940 2375 901	0.2 ... 2.5	10	0.06 ... 0.2 (adjustable)	45	56.5
PVF6	940 2377 903	0 ... 6	12	0.2 ... 0.6 (adjustable)	33	47
PVF16	940 2379 905	1 ... 16	24	0.5 ... 1.6 (adjustable)	27	42.5

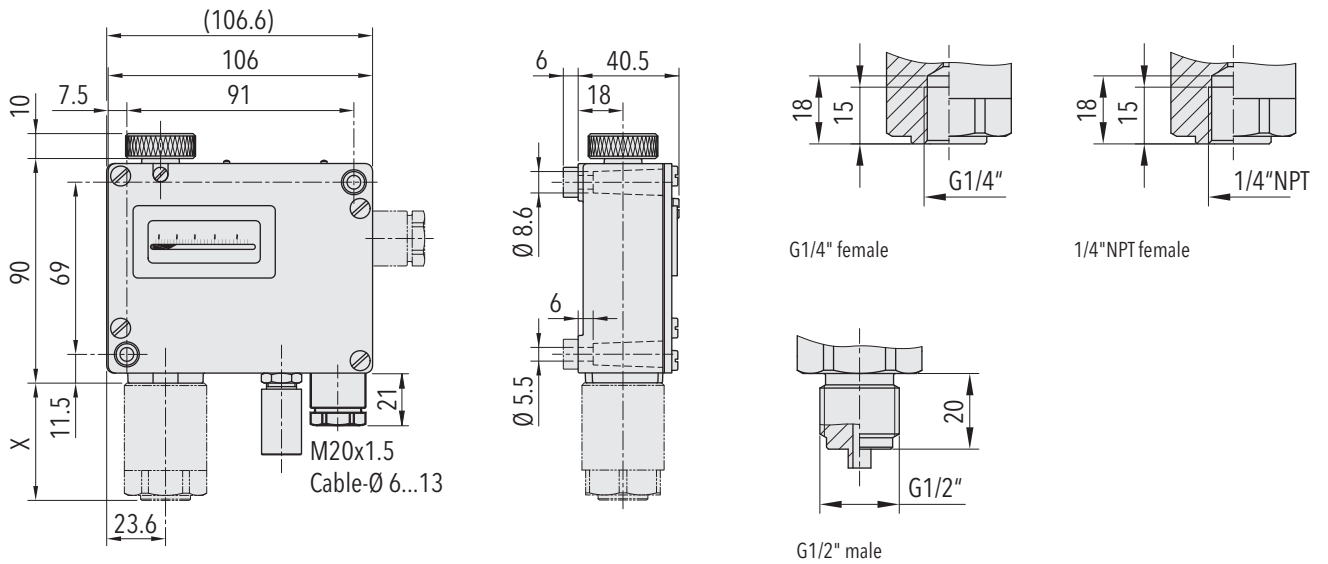


Specifications		
<b>Accuracy</b>	Repeatability	± 1.0 % FS typ.
	Scale accuracy typ.	± 2.0 % FS typ.
	Switching differential	See table
	Adjustment range switchpoint <sup>1)</sup>	10% ... 90% FS
<b>Environmental conditions</b>	Ambient temperature	-25°C ... +70°C
	Media temperature	-40°C ... +150°C
	Storage temperature	-25°C ... +85°C
	Protection	IP65
	Humidity	Max.95 % relative
	Vibration	5...25 Hz: ±1.6 mm 25...100 Hz: 4g Ranges 72, 73, 75 5...50 Hz: 20 mm/sec.
	Shock	50g/ 11ms
<b>Mechanical Data</b>	Sensor	See ordering information
	Housing	AlSi10Mg/ Epoxy coated
	Sealing	NBR
	Screwed cable gland	Brass nickel plated
	Mounting torque	Max. 25 Nm
	Installation	any position
	Weight	~ 710 g
<b>Microswitch</b>	Rating	See table
	Resistance of insulation	500 VDC/100 MΩ
	Dielectric strength	2 kV terminal ground
	Life time (mechanical)	Microswitch 11: 20 Mio. cycles Microswitch 12/23: 0.3 Mio. cycles
<b>Electrical connection</b>	Electrical connections	Terminal screw
	Cable gland	M20x1.5 Cable-Ø 6...13 mm
	Terminal screw	3 x 1.5...4 mm <sup>2</sup>

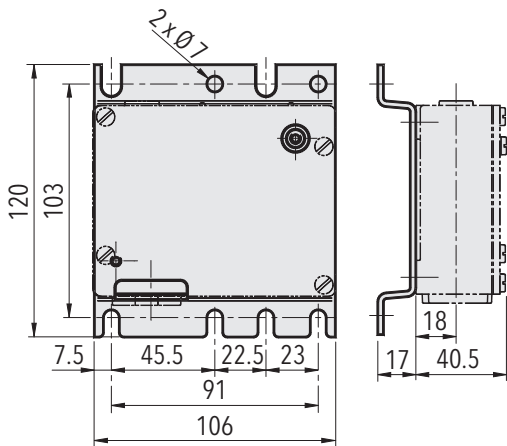
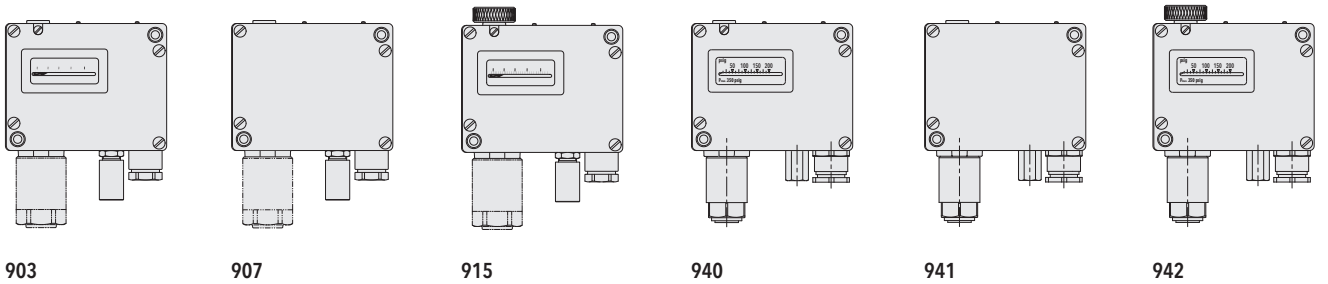
<sup>1)</sup> Other adjustment ranges upon request

Additional information		
<b>Documents</b>	Data sheet	<a href="http://www.trafag.com/H72257">www.trafag.com/H72257</a>
	Instructions	<a href="http://www.trafag.com/H71261">www.trafag.com/H71261</a>
	Flyer	<a href="http://www.trafag.com/H70910">www.trafag.com/H70910</a>

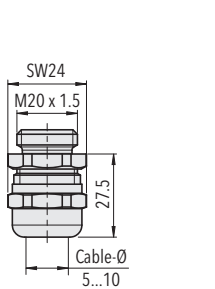
## Dimensions



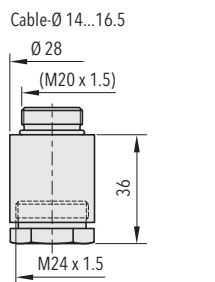
Dimension X and Y see data sheet H72271



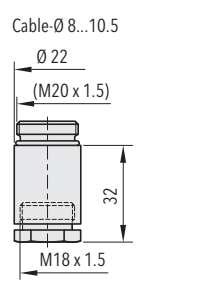
9XX.XX.XX.XXX.31.XX



9XX.XX.XX.XXX.XX.07



9XX.XX.XX.XXX.XX.27



9XX.XX.XX.XXX.XX.40

## Switching differential typ. @ 25°C

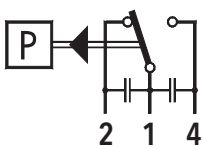
Measuring range of bellows sensor	[bar]	-0.9 ... 1.5	0 ... 4	1 ... 10	2 ... 25
		0.2 ... 1.6	0 ... 6	1 ... 16	4 ... 40
		0.2 ... 2.5			
Adjustable range of switching differential Microswitch 12, 23 (Type 903/907/915)	[bar]	0.1 ... 1.3	0.4 ... 3.2	1 ... 7.5	3 ... 18
Adjustable range of switching differential Microswitch 11, 12, 23 (Type 940/941/942)	[bar]	0.06 ... 0.2	0.2 ... 0.6	0.5 ... 1.6	1 ... 4
Measuring range of bellows sensor	[psi]	5 ... 50	10 ... 100 25 ... 200	50 ... 500	
Adjustable range of switching differential Microswitch 12, 23 (Type 903/907/915)	[psi]	6 ... 40	15 ... 105	45 ... 260	
Adjustable range of switching differential Microswitch 11, 12, 23 (Type 940/941/942)	[psi]	3 ... 8	8 ... 20	15 ... 55	

## Electrical data switch

Type	Features	Rating	
		Resistive Load (Inductive Load)	
		AC	DC
11*)	Average switching differential	125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A	250 V, 0.25 (0.03) A 125 V, 0.5 (0.05) A 30 V, 6 (1.5) A 14 V, 15 (1.5) A
12	High vibration resistance; average switching differential	125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A	250 V, 0.3 (0.2) A 125 V, 0.75 (0.4) A 30 V, 15 (1.5) A 14 V, 15 (1.5) A
23	Increased vibration resistance; average switching differential	125 V, 15 (1.5) A 250 V, 15 (1.25) A 500 V, 10 (0.75) A	250 V, 0.3 (0.2) A 125 V, 0.6 (0.4) A 30 V, 15 (1.5) A 14 V, 15 (1.5) A

\*1) Switch 11 only with type No. 940, 941, 942

## Electrical Connection



Switch 11/12/23