

DIFFERENTIAL PRESSURE 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



09/2014

Data sheet H722530

Technical Data			
Measuring principle	Bellow	Switching differential	Not adjustable
Measuring range	-1 ... 6 to -1 ... 18 bar	Repeatability	± 1.0 % FS typ.
Differential pressure	-0.6 ... 3.4 to 1 ... 16 bar	Media temperature	-40°C ... 150°C
Output signal	Floating change-over contact	Approval	ABS, BV, CCS, DNV, GL, KRS, LRS, RINA EN60730-1/ EN60730-2-6: Typ 2.B.H

Subject to change

Ordering information/type code

				XXX	XX	XX	XXX	XX	XX
Custom build code	With display and adjusting screw			920					
	Without display, with adjusting screw			924					
	With display and adjusting knob			932					
Microswitch	Fixed small switching differential, standard vibration resistance ^{1) 2)}				10				
	Fixed average switching differential, standard vibration resistance ¹⁾				11				
	Fixed average switching differential, improved vibration resistance  ¹⁾				23				
	Fixed large switching differential, high vibration resistance  ¹⁾				26				
	Fixed average switching differential, with gold plated contacts, standard vibration resistance ¹⁾				21				
Range	Range [bar]	Differential pressure [bar]	Over pressure [bar]	Burst pressure [bar]					
	-1 ... 6	-0.6 ... 3.4	12	26				74	
	-1 ... 6	0 ... 4	12	26				76	
	-1 ... 8	0 ... 6	12	26				77	
	-1 ... 12	1 ... 10	24	36				78	
	-1 ... 18	1 ... 16	24	36				79	
Sensor	Sensor material	Sensor housing material	Range	Thread					
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	74	G1/4" female				830	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	74	G1/8" female				831	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	74	G1/2" male				832	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	76, 77	G1/8" female				833	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	76, 77	G1/2" male				834	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	76, 77	G1/4" female				837	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	78, 79	G1/8" female				835	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	78, 79	G1/2" male				836	
	Bellows: 1.4435, medium contact. parts 1.4435	Brass nickel plated	78, 79	G1/4" female				838	
	Bronze	Brass	74	G1/4" female				930	
	Bronze	Brass	74	G1/8" female				931	
	Bronze	Brass	74	G1/2" male				932	
	Bronze	Brass	76, 77	G1/8" female				933	
	Bronze	Brass	76, 77	G1/2" male				934	
	Bronze	Brass	76, 77	G1/4" female				937	
	Bronze	Brass	78, 79	G1/8" female				935	
	Bronze	Brass	78, 79	G1/2" male				936	
	Bronze	Brass	78, 79	G1/4" female				938	
	Bronze	Brass chemically nickel plated	74	G1/4" female				980	
	Bronze	Brass chemically nickel plated	74	G1/8" female				981	
	Bronze	Brass chemically nickel plated	74	G1/2" male				982	
	Bronze	Brass chemically nickel plated	76, 77	G1/8" female				983	
	Bronze	Brass chemically nickel plated	76, 77	G1/2" male				984	
	Bronze	Brass chemically nickel plated	76, 77	G1/4" female				987	
	Bronze	Brass chemically nickel plated	78, 79	G1/8" female				985	
	Bronze	Brass chemically nickel plated	78, 79	G1/2" male				986	
Bronze	Brass chemically nickel plated	78, 79	G1/4" female				988		
Fixing	Direct on sensor or housing							00	
	By mounting bracket							31	

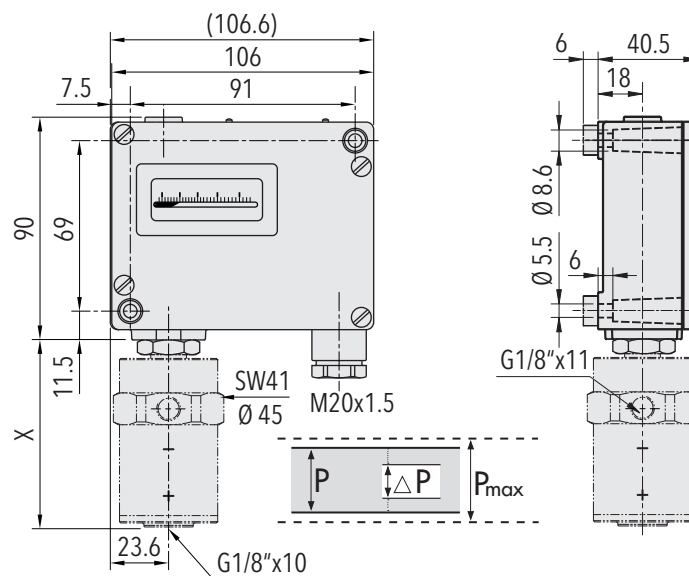
Accessories		
Lead seal (manipulation protection)		16
Screwed cable gland M20x1.5 (EN50262)		07
Screwed cable gland M24x1.5 (DIN89280)		27
Screwed cable gland M18x1.5 (DIN89280)		40
Adapter G1/8" male - G1/2" male, Brass		A6
Adapter G1/8" male - G1/2" male, Brass nickel plated		B6
Adapter G1/8" male - G1/2" male, Stainless steel 1.4435		D6
Adapter G1/8" male - G1/4" female, Brass		A5
Adapter G1/8" male - G1/4" female, Brass nickel plated		B5
Adapter G1/8" male - G1/4" female, Stainless steel 1.4435		D5
Damping elements and snubber see data sheet H72258		

¹⁾ Switching differential not adjustable

²⁾ Not suitable for applications under vibration

Standard products (extra short lead time)

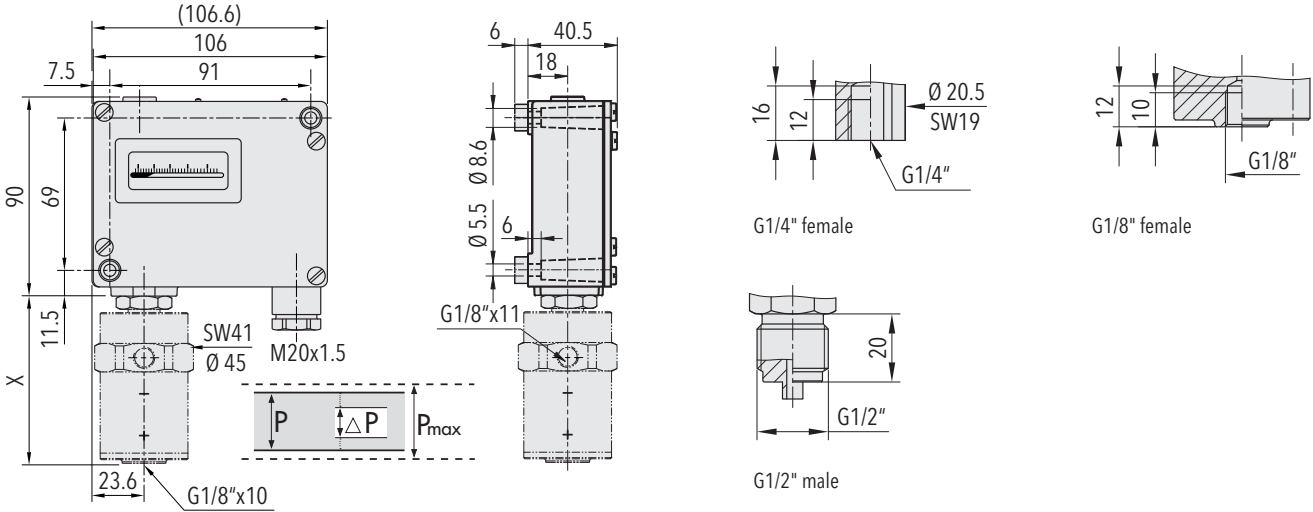
Product No.	Type Code	Pressure range [bar]	Differential pressure [bar]	Over pressure max. [bar]	Switching differential [bar]	Length X [mm]
PD3.4	920 2374 931	-1 ... +6	-0.6 ... +3.4	12	0.16 (fix)	77
PD6	920 2377 933	-1 ... +8	0 ... 6	12	0.16 (fix)	77
PD16	920 2379 935	-1 ... 18	1 ... 16	24	0.4 (fix)	87



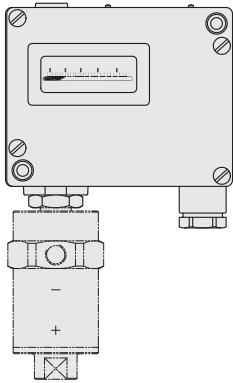
Specifications		
Accuracy	Repeatability	± 1.0 % FS typ.
	Scale accuracy typ.	± 2.0 % FS typ.
	Switching differential	See table
Environmental Conditions	Ambient temperature	-25°C ... 70°C
	Media temperature	-40°C ... 150°C
	Storage temperature	-25°C ... 85°C
	Protection	IP65
	Humidity	Max.95 % relative
	Vibration	Switch 23/26: 5...25 Hz: ±1.6 mm 25...100 Hz: 4g
	Shock	50g/ 11ms
Mechanical Data	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	~ 610 g
Microswitch	Rating	See table
	Resistance of insulation	> 2 MΩ
	Dielectric strength	U ≤ 250V: 1.45 kV/ U ≤ 500V: 2 kV terminal ground
	Life time (mechanical)	Microswitch 10/11: 20 Mio. cycles Microswitch 21: 0.5 Mio. cycles Microswitch 23/26: 0.3 Mio. cycles
Electrical connection	Cable gland	M20x1.5 Cable-Ø 6...13 mm
	Terminal screw	3 x 1.5...4 mm ²

Additional information		
Documents	Data sheet	www.trafag.com/H72253
	Instructions	www.trafag.com/H73256
	Flyer	www.trafag.com/H70914

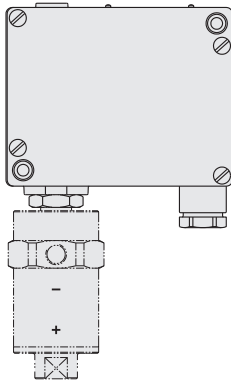
Dimensions



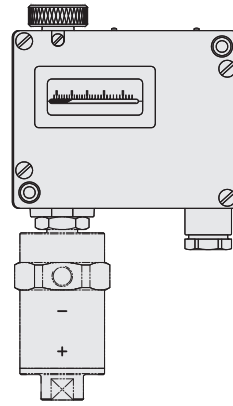
Dimension X and Y see data sheet H72271



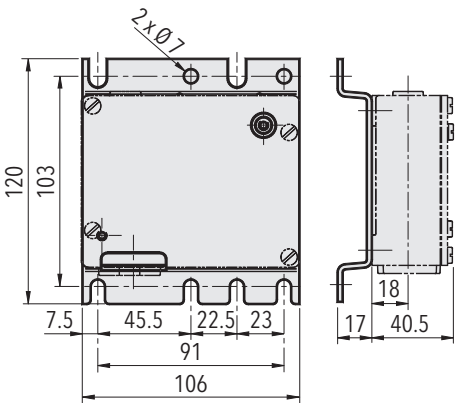
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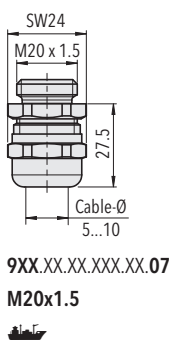
924.XX.XX.XXX.XX.XX



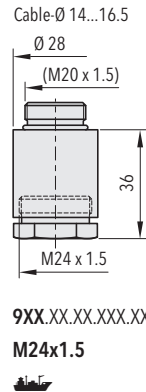
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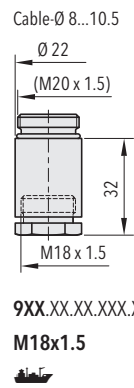
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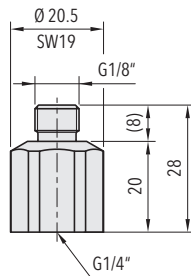
9XX.XX.XX.XXX.XX.07
M20x1.5



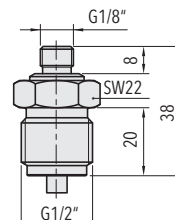
9XX.XX.XX.XXX.XX.27
M24x1.5



9XX.XX.XX.XXX.XX.40
M18x1.5



A5 / B5 / D5





A6 / B6 / D6

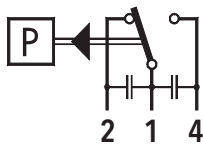
Switching differential typ.

Range of piston sensor	[bar]	-1 ... 6 -1 ... 8	-1 ... 12 -1 ... 18
P max.	[bar]	12	24
Microswitch 10 Switching differential fix, not adjustable	[bar]	0.08	0.2
Microswitch 11/21/23 Switching differential fix, not adjustable	[bar]	0.16	0.4
Microswitch 26 Switching differential fix, not adjustable	[bar]	0.25	0.5

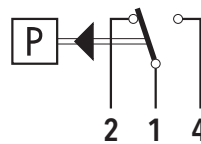
Electrical data switch

Type	Features	Rating	
		Resistive Load (Inductive Load)	
		AC	DC
10	Small switching differential (not recommended for applications under vibrations)	125 V, 10 (1.5) A 250 V, 10 (1.25) A	250 V, 0.2 (0.02) A 125 V, 0.4 (0.03) A 30 V, 2 (1) A 14 V, 15 (2.5) A
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
23 	Improved 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 (0.05) A 125 V, 0.6 (0.1) A 30 V, 15 (1.5) A 14 V, 15 (1.5) A
26 	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
21	Gold plated contacts	24 V, 0.1 (0.1) A 12 V, 1.0 (1.0) A 5 V, 2.0 (2.0) A	24 V, 0.1 (0.1) A 12 V, 1.0 (1.0) A 5 V, 2.0 (2.0) A

Electrical Connection



Switch 10/11/23



Switch 21/26

Modifications

Index	Date	Description
d	11/2003	Redesigned data sheet
e	06/2004	Page 4: changing of electrical connection from 2 -1-3 to 2-1-4, new ratings of microswitch 11/23/26
f	11/2004	Standard screwed cable gland, changed from PG13.5 to M20x1.5 (PG13.5 is no longer available); Screwed cable gland PG16 (Accessories 32) is no longer available. DIN-Nr. from screwed cable gland acc. 27 and 40 changed from DIN8280 to DIN89280.
g	04/2006	Page 5: added dimension of the second pressure connection (G1/8"x11)
h	07/2008	Page 2 and 5: Accessory 07 added, screwed cable gland M20x1.5
i	04/2009	Page 3: Operating temperature adapted from -20...+70°C to -25...+70°C
k	06/2010	Page 1: Ship approval CCS added Page 4: contact rating of microswitch 21 increased from 0.01A to 0.1A (24 AC & 24 DC) Page 4: Switch 21: advise „suitable for intrinsically safe control circuit“ removed, because „simple apparatus“ devices are available
l	09/2010	Page 3: Vibration specified for switch No. 23/26 Page 4: Switch No. 10: remark added: not suitable for use under vibrations
m	10/2011	Page 3: Dielectric strength changed to $U \leq 250 \text{ V}: 1.45\text{kV}/U \leq 500\text{V}: 2\text{kV}$
n	03/2013	Page 5: Mounting accessory 31 replaced by 900-053 (900-005 was incorrectly dimensioned)
o	09/2014	New layout Switch 11: Rating DC 14V, 15(2.5)A corrected to 14V, 15(1.5)A Switch 23: Rating DC 125 V, 0.75(0.1)A corrected to 125V 0.6(0.1)A