


ATEX PRESSURE SWITCH EXPK 944/947/953



Applications

-  II 2G / D

Features

- Rugged aluminium housing, option: housing stainless steel
- Protection IP66
- Any mounting position possible
- Ex db eb IIC T6 Gb
- Ex tb IIIC T80°C Db

Technical Data

Measuring principle	Piston	Media temperature	NBR: -30°C ... +100°C FKM: -15°C ... +150°C
Measuring range	1 ... 10 to 60 ... 600 bar	Ambient temperature	-50°C ... +65°C
Output signal	1 Floating change-over contact (SPDT)	Approval / conformity	SEV 15 ATEX 0157 X IECEX SEV 17.0013X
Switching differential	Not adjustable	Type of protection	Areas with gas explosion hazards: II 2G Ex db eb IIC T6 Gb; Areas with dust explosion hazards: II 2D Ex tb IIIC T80°C Db
Repeatability	± 1.0 % FS typ.		

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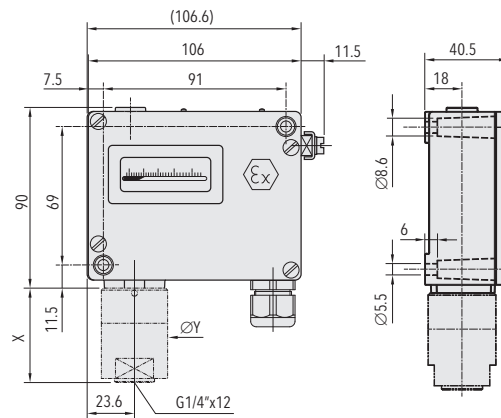
Ordering information/type code

		XXX	XX	XX	XXX	XX	XX			
Custom build code	With display and adjusting screw	944								
	Without display, with adjusting screw	947								
	With display and adjusting knob	953								
Microswitch	Standard, switching differential not adjustable		91							
Range	Range [bar]	Over pressure [bar]	Burst pressure [bar]							
	1 ... 10	100	200				78			
	4 ... 40	200	400				81			
	6 ... 60	200	400				82			
	10 ... 100	200	400				83			
	16 ... 160	400	600				84			
	25 ... 250	400	600				85			
	40 ... 400	800	1000				86			
60 ... 600	800	1000				87				
Sensor	Sensor material	Sensor housing material	Thread	Range	Sensor material	Sensor housing material	Thread	Range		
	Piston 1.4435, O-Ring NBR	1.4435	G1/4" female	78	700	Piston 1.4435, O-Ring FKM	1.4435	G1/4" female	82, 83	709
	Piston 1.4435, O-Ring NBR	1.4435	G1/2" male	78	702	Piston 1.4435, O-Ring FKM	1.4435	G1/2" male	82, 83	711
	Piston 1.4435, O-Ring FKM	1.4435	G1/4" female	78	701	Piston 1.4435, O-Ring NBR	1.4435	G1/4" female	84, 85	712
	Piston 1.4435, O-Ring FKM	1.4435	G1/2" male	78	703	Piston 1.4435, O-Ring NBR	1.4435	G1/2" male	84, 85	714
	Piston 1.4435, O-Ring NBR	1.4435	G1/4" female	81	704	Piston 1.4435, O-Ring FKM	1.4435	G1/4" female	84, 85	713
	Piston 1.4435, O-Ring NBR	1.4435	G1/2" male	81	706	Piston 1.4435, O-Ring FKM	1.4435	G1/2" male	84, 85	715
	Piston 1.4435, O-Ring FKM	1.4435	G1/4" female	81	705	Piston 1.4435, O-Ring NBR	1.4435	G1/4" female	86, 87	722
	Piston 1.4435, O-Ring FKM	1.4435	G1/2" male	81	707	Piston 1.4435, O-Ring NBR	1.4435	G1/2" male	86, 87	724
	Piston 1.4435, O-Ring NBR	1.4435	G1/4" female	82, 83	708	Piston 1.4435, O-Ring FKM	1.4435	G1/4" female	86, 87	723
	Piston 1.4435, O-Ring NBR	1.4435	G1/2" male	82, 83	710	Piston 1.4435, O-Ring FKM	1.4435	G1/2" male	86, 87	725
	Fixation	Direct on sensor or housing								00
		With mounting bracket								31
	Accessories	Housing stainless steel								06
		Damping elements and snubber see data sheet H72258								

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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]
EXPK10	944 9178 700 00 0000 0000 02	1 ... 10	100	0.4 ... 0.8 (fixed)	33	47
EXPK40	944 9181 704 00 0000 0000 02	4 ... 40	200	2 ... 5 (fixed)	27	42.5
EXPK100	944 9183 708 00 0000 0000 02	10 ... 100	200	4 ... 11 (fixed)	27	42.5
EXPK250	944 9185 712 00 0000 0000 02	25 ... 250	400	8 ... 26 (fixed)	27	42.5



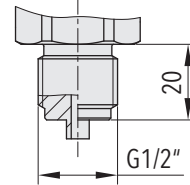
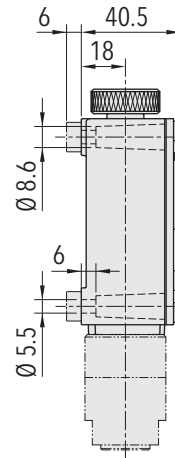
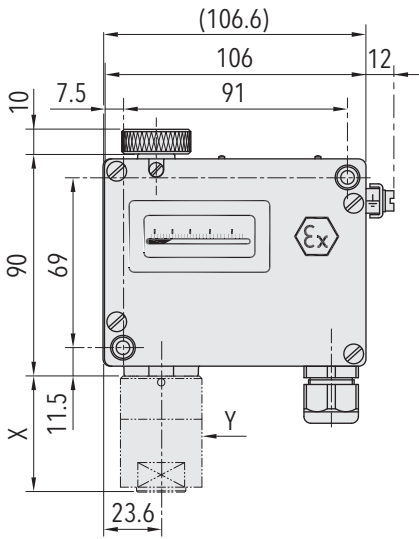
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Specifications		
Accuracy	Repeatability	± 1.0 % FS typ.
	Scale accuracy typ.	± 2.0 % FS typ.
	Switching differential	See table
	Adjustment range switchpoint ¹⁾	10% ... 90% FS
Environmental conditions	Ambient temperature	-50°C ... +65°C
	Media temperature	NBR: -30°C ... +100°C FKM: -15°C ... +150°C
	Storage temperature	-50°C ... +65°C
	Protection	IP66 Accessory 06: IP66
	Humidity	Max. 95 % relative
	Vibration	5...25 Hz: ±1.6 mm 25...100 Hz: 4g
	Shock	50g/ 11ms
Mechanical Data	Sensor	See ordering information
	Housing	AlSi10Mg/ Epoxy coated Accessory 06: 1.4301 (AISI 304)
	Sealing	NBR / FKM
	Screwed cable gland	Polyamide
	Mounting torque	Max. 25 Nm
	Installation	any position
	Weight	~ 710 g
Microswitch	Rating	See table
	Resistance of insulation	> 2 MΩ
	Dielectric strength	1.5 kV
	Life time (mechanical)	1 Mio. cycles
Electrical connection	Electrical connections	Terminal screw
	Cable gland	M20x1.5/SW24 Cable-Ø 5.5...13 mm Approval: PTB 99 ATEX 3128 X
	Terminal screw	3 x 0.5...1.5 mm ²

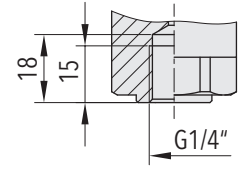
¹⁾ Other adjustment ranges upon request

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Dimensions

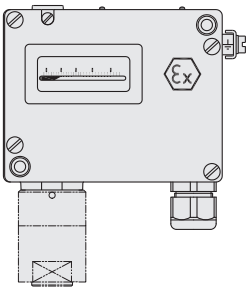


G1/2" male

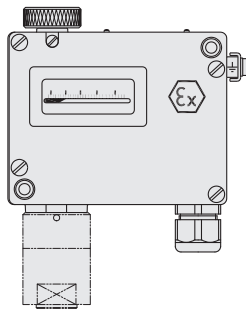


G1/4" female

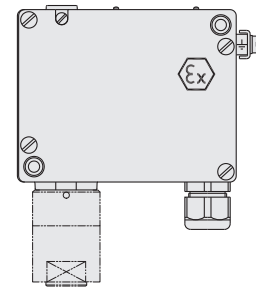
Dimension X and Y see data sheet H72271



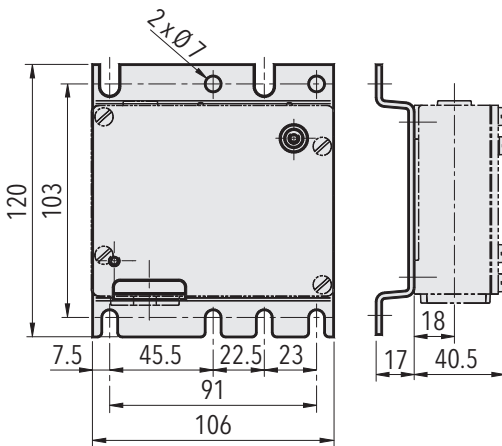
944



953



947



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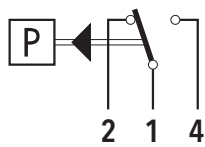
Switching differential typ. @ 25°C

Measuring range of piston sensor	[bar]	1 ... 10	4 ... 40	6 ... 60	10 ... 100
Microswitch 91	[bar]	0.4 ... 0.8	2 ... 5	3 ... 8	4 ... 11
Switching differential: Variable according to set point (not adjustable)					
Measuring range of piston sensor	[bar]	16 ... 160	25 ... 250	40 ... 400	60 ... 600
Microswitch 91	[bar]	6 ... 18	8 ... 26	14 ... 42	24 ... 65
Switching differential: Variable according to set point (not adjustable)					

Electrical data switch

Type	Features	Rating	
		Resistive Load (Inductive Load)	
		AC	DC
91	Standard Ex	250V 5(5) A 125V 5(5) A	250 V 0.25 (0.03) A 125 V 0.5 (0.06) A 75 V 0.75 (0.25) A 50 V 1 (1) A 30 V 5 (3) A 15 V 5 (3) A

Electrical connection



Switch 91