

Series 8000

Series 8000

Compact Pressure Switches

► Pressure



- Modular System
- Compact Design
- Measuring ranges 0.6...600 bar
- Approvals: GL, ATEX, Exi, cULus

Barksdale
CONTROL PRODUCTS
CRANE Barksdale, Inc./Barksdale GmbH
A Subsidiary of Crane Co.

Compact Pressure Switch

Type Series 8000

Series 8000 - mechanical pressure switches in diaphragm or piston design. The successors of the product lines XTM, XTK, X1T and 96200 have the additional advantage of very low and precise switching point settings.

Features

modular construction,
versatile,
high-quality materials,
100% checks,

Applications

OEM applications
Mobile- and industrial-hydraulics and pneumatics,
test bed and apparatus engineering,
heavy industry

Technical Data

medium-contact. parts:	
Standard:	NBR, PTFE with bronze and stainless steel 1.4301; pistons: steel, galvanized
optional:	FKM, EPDM, CR instead of NBR
Repeatability:	±1% type, piston pressure switch ±2% type, diaphragm pressure switch
Switching rate:	max. 60/min piston pressure switch max. 30/min diaphragm pressure switch
Temperature range:	
Piston switch:	-40 °C ... +80 °C (-40 °F ... +176 °F)
Diaphragm switch:	-20 °C ... +80 °C (-4 °F ... +176 °F)
System of protection:	
Standard:	IP65 (plug connector), IP68 (cable) UL
optional:	Intrinsically safe  II 1GD EExia IIB T6 (DIN-plug) - EXI EExia IIC T6 (cable version) - EXI UL, Type 4, for indoor and outdoor use
Housing:	
standard:	Aluminium diecast 230
optional:	Stainless steel 1.4305/SS 304, Version - VA
Process connection:	Options, see Dimensions
Electrical connection:	Options, see Dimensions
Weight:	
Total:	400 g (0.88 lbs)
CETOP flange version:	350 g (0.77 lbs)
Adapter version straight:	620 g (1.36 lbs)
Adapter version 90° offset:	675 g (1.48 lbs)
Adapter version X1T compatible:	730 g (1.61 lbs)
Microswitch:	Change-over contact (SPDT)
Set screw:	Stainless steel 1.4305/SS304 (SW5)
Approvals:	GL, ATEX, Exi, cULus, further upon request



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Specifications are subject to changes without notice.

Pressure

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Pressure stages and test pressures

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Code		Adjustment ranges (falling pressure)		Adjustment ranges (rising pressure)		Max. hysteresis (end of range)	Test pressure	
Pressure range		bar	(psi)	bar	(psi)		bar	(psi)
		Diaphragm		Diaphragm		≤ 15%		
1	A	0.4...5.7	(5.8...82)	0.6...6.0	(8.7...87)		80 *	(1,200)
2	b	2.0...17.0	(29...246)	3.0...20.0	(45.0...250)		80 *	(1,200)
3	c	3.0...41.0	(43...600)	4.0...45.0	(60.0...650)		80 *	(1,200)
		Piston		Piston		≤ 15%		
4	D	3.0...160	(43...2,320)	5.0...180	(75...2,600)		600	(8,700)
5	E	30.0...300	(430...4,300)	50.0...350	(750...5,000)		600	(8,700)
6	F	55.0...520	(800...7,550)	80.0...600	(1,200...8,700)		900	(15,000)

* Test pressure 200 bar (2,900 psi) upon request, results in less lifetime of the switch.

Load capacity

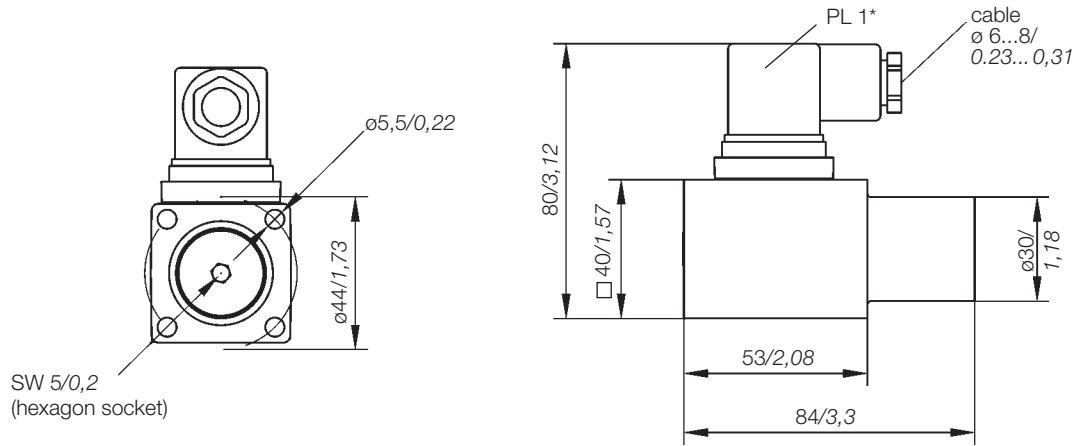
silver contacts	inductive load	resistance load	gold coated contacts	resistance load
30 V =	3.0 A	4.0 A	30 V =	0.1 A
250 V =	0.2 A	0.2 A	125 V ~	0.1 A
250 V ~	2.0 A	3.0 A	Intrinsically safe EExia	
125 V ~	3.0 A	5.0 A	U _{max} = 28 V	I _{max} = 50 mA
Minimum load values: 160 mA at 5 V DC			Minimum load values: 0.1 mA at 5 V DC	

Switching- and connection diagram (pressureless)

	PL1	PL2
c	1	1
NC	2	2
NO	3	4
PE	---	3

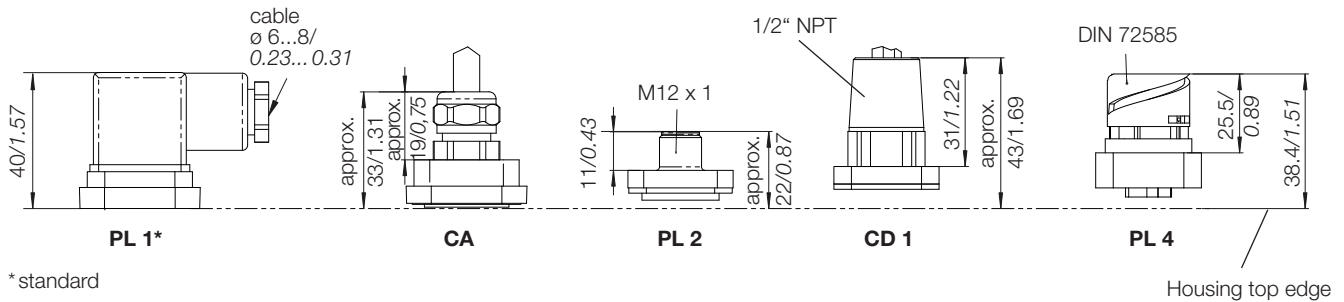
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Dimensions (in mm / inch)



* standard

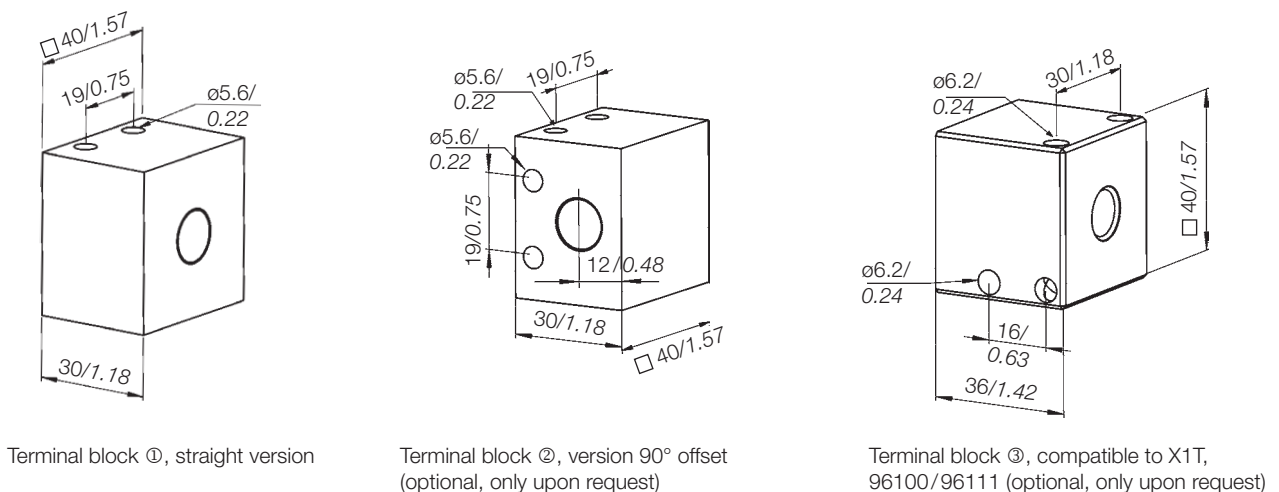
Electrical connections (PL1 = standard, all others optional - only on request)



* standard

Process connections

Complete assembly with pressure switch only upon request



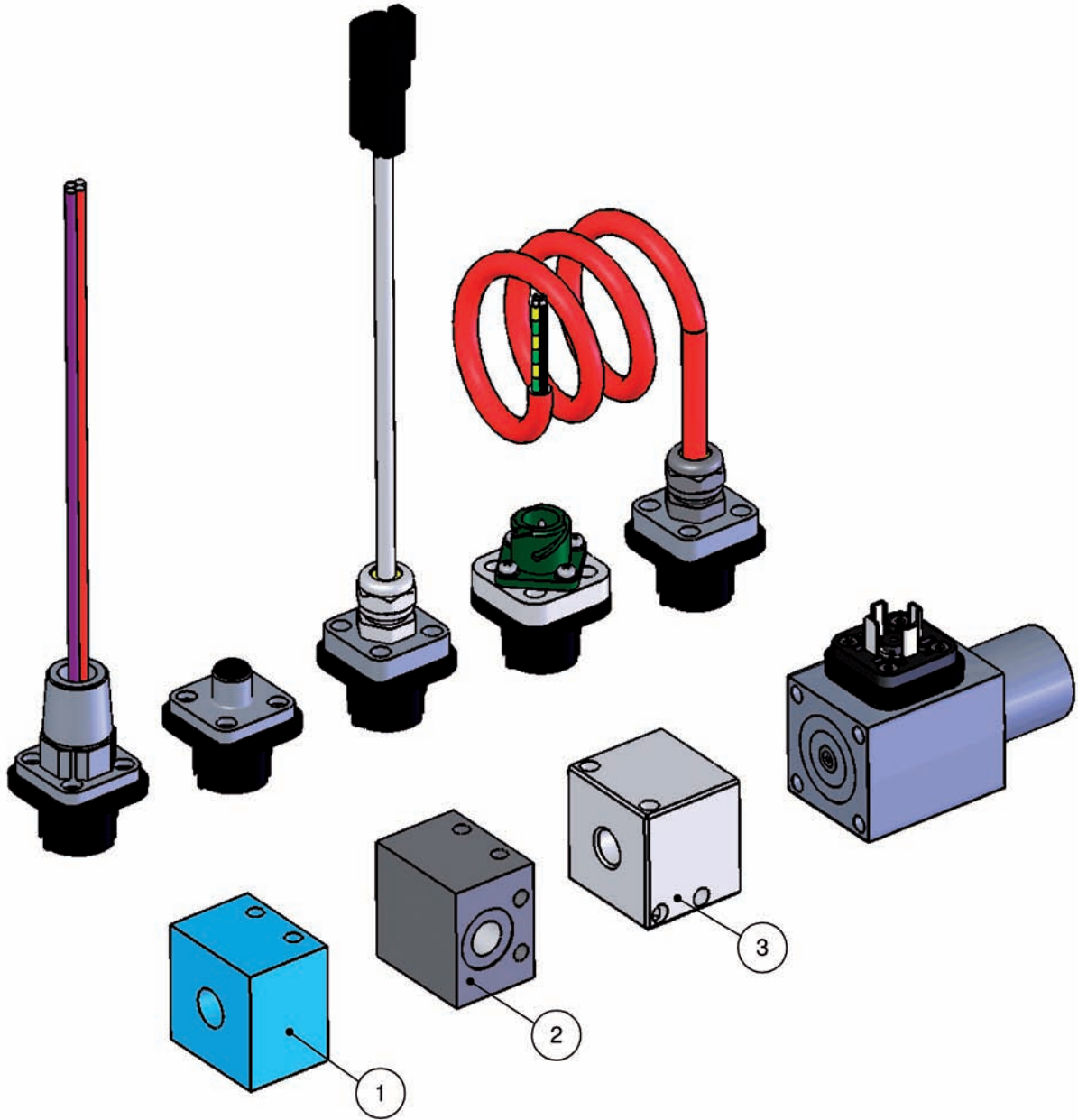
Pressure

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Representation of the standard units and options

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Accessories

Terminal block No.	Order No.	Process connection	Designation	Material
1	906-0953	1/4" NPT female	straight	St passivated
1	906-0954	G 1/4" female	straight	St passivated
1	906-0946	1/4" NPT female	straight	1.4305
1	906-0947	G 1/4" female	straight	1.4305
2	906-0927	1/4" NPT female	90° offset	1.4305
2	906-0926	G 1/4" female	90° offset	1.4305
3	906-0919	G 1/4" female	straight	AlMg4,5Mn0,7

Order code for standard units (more versions upon request)

8	1	2	1	-	P	L	1	-	b	-	E	X	I			
											Options					
											E	X	I	ATEX (Ex ia)		
											G	L		Germanischer Lloyd (shipbuilding)		
											U	L		Underwriter's Laboratories		
											Sealing material					
											b	NBR nitrile-rubber				
											V	FPM/FKM flour rubber				
											Electrical connection					
											P	L	1	Cube plug DIN EN 175301-803 A (former DIN 43650)		
											P	L	2	Plug M12x1 mm, 4-pin		
											Microswitch contact					
											1	Microswitch with silver contact				
											2	Microswitch with gold contact (e.g. used for PLC's)				
											Pressure stages					
											1	0.6...	6 bar	A	8...	85 psi
											2	3.0...	20 bar	b	45...	250 psi
											3	4.0...	45 bar	c	60...	650 psi
											4	5.0...	180 bar	D	75...	2,600 psi
											5	50.0...	350 bar	E	750...	5,000 psi
											6	80.0...	600 bar	F	1,200...	8,700 psi
											Process connection					
											1	CETOP - flange □ 40 x 40 mm				

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Order data for standard units

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Housing:	Aluminium diecast
Process connection:	CETOP-flange (□ 40 x 40 mm), stainless steel 1.4301
Diaphragm:	NBR
Piston:	Steel, chemically nickel-plated and heat treated
Piston sealing:	PTFE with bronze and NBR
Set screw:	Stainless steel 1.4305 with hexagonal socket (SW 5)

Order data for pressure switches with microswitch contacts made of fine silver and

cube plug (DIN EN 175301-803A)		Plug M12x1 mm, 4-pin	
Order code	Order No.	Order code	Order No.
8111-PL1-B	0417-011	8111-PL2-B	0417-029
8121-PL1-B	0417-012	8121-PL2-B	0417-186
8131-PL1-B	0417-013	8131-PL2-B	0417-094
8141-PL1-B	0417-014	8141-PL2-B	0417-187
8151-PL1-B	0417-015	8151-PL2-B	0417-095
8161-PL1-B	0417-016	8161-PL2-B	0417-188

Order data for pressure switches with microswitch contacts made of gold and

cube plug (DIN EN 175301-803A)		Plug M12x1 mm, 4-pin	
Order code	Order No.	Order code	Order No.
8112-PL1-B	0417-189	8112-PL2-B	0417-194
8122-PL1-B	0417-190	8122-PL2-B	0417-195
8132-PL1-B	0417-191	8132-PL2-B	0417-196
8142-PL1-B	0417-184	8142-PL2-B	0417-197
8152-PL1-B	0417-192	8152-PL2-B	0417-091
8162-PL1-B	0417-193	8162-PL2-B	0417-198

Specifications are subject to changes without notice.

Experts

Specialists for monitoring and control of:

- ▶ Pressure
- ▶ Temperature
- ▶ Level
- ▶ Flow

Almost sixty years of experience in the area of mechanical and electronic control of liquid media and responding to customers needs have resulted in an extensive range of products to meet a wide range of applications. Barksdale's priority is clear. It is our commitment to quality instrumentation and exceptional customer service that has remained the cornerstone of our success. Based on our innovative and market-focused technologies in the areas of pressure, level, flow and temperature measuring processes we provide solutions that fit.



Global Presence



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