

## Explosion Proof Bourdon Tube

**Series B1X, B2X**

### Features

- ▶ High accuracy, high proof
- ▶ Explosion-proof housing for hazardous location
- ▶ Hermetically sealed
- ▶ Tamper-proof setpoint adjustment
- ▶ Dual set point capability
- ▶ UL, CSA, ATEX approved
- ▶ NEMA 4, 7, 9

### Applications

- ▶ Power plants
- ▶ Water pumps
- ▶ Blow out preventers (BOP)
- ▶ Pneumatic devices
- ▶ General industrial applications
- ▶ Oil and gas

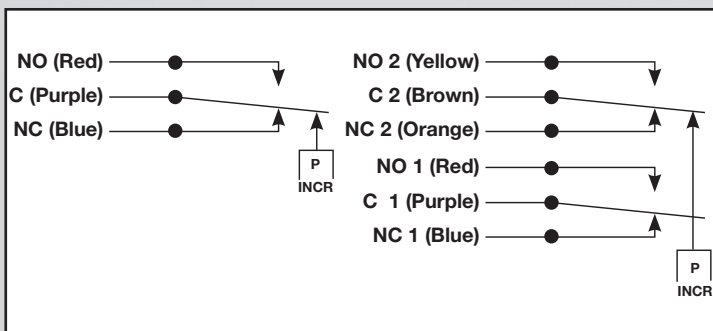


### General Specifications\*

<b>Electrical Characteristics:</b>	All models incorporate Underwriters Laboratories, Inc. and CSA Listed single pole double throw snap-action switching elements.
<b>Accuracy<sup>1</sup>:</b>	± 1% of the adjustable range
<b>Switch:</b> Type:	Single pole double throw (SPDT) snap action; single or dual circuit
Rating:	3 amps @ 480 VAC (standard)
<b>Wetted Parts:</b> Process Fitting & Bourdon Tube:	316 series stainless steel
Enclosure:	Die-cast aluminum
<b>Electrical Connection:</b>	Internal terminal strip via conduit connection (1/2" NPT on B1X models, 3/4" NPT on B2X models)
<b>Enclosure Ratings:</b>	NEMA 4, 7, 9
<b>Pressure Connection:</b>	Models with proof pressures up to 7,200 psi: 1/4" NPT Female; Models with higher pressure ranges: Superpressure Fitting for 1/4" O.D. tube
<b>Approvals:</b> UL/CSA (standard):	UL File No.#E37043; CSA File No. #LR22354 Hazardous Locations, Class I Division I, Groups B, C, & D; Class II Groups E, F, & G
ATEX (optional):	Ex models are ATEX marked as follows: CE 0081, ISSeP 08 ATEX024X II 2G D, Ex d IIC T6Gb Ex tb IIIC T80°C Db IP65 -40°C ≤ Tamb ≤ +75°C

<b>Temperature Range:</b> Operating:	-40° to +165°F (-40° to +74°C)
<b>Adjustment Instructions:</b>	Remove protective hex cap to remove adjustment screw. Turn main unit adjustment screw clockwise to lower setpoint, counterclockwise to raise setpoint. For optional adjustable actuation value (deadband) models, set the desired DECREASING setpoint first and then turn microswitch adjustment wheel counterclockwise to increase the amount of deadband until the desired INCREASING setpoint is achieved.
<b>Options:</b>	- Gold contact Limit switch; 1 A @ 125 VAC - 1/2" NPT female process connection - Cleaned for oxygen service – consult factory for details - Adjustable deadband - Temperature compensation and pre-cycle - Hermetically sealed limit switch
<b>Shipping Weight:</b>	Single - approximate 6.0 lbs. Double - approximate 6.5 lbs.

### Wiring Diagram



\* See product configurator for additional options.

<sup>1</sup> ±1% for 32-110°F; ±2% for > 110°F; -2/+3°F for <32°F

**Barksdale®**

CONTROL PRODUCTS

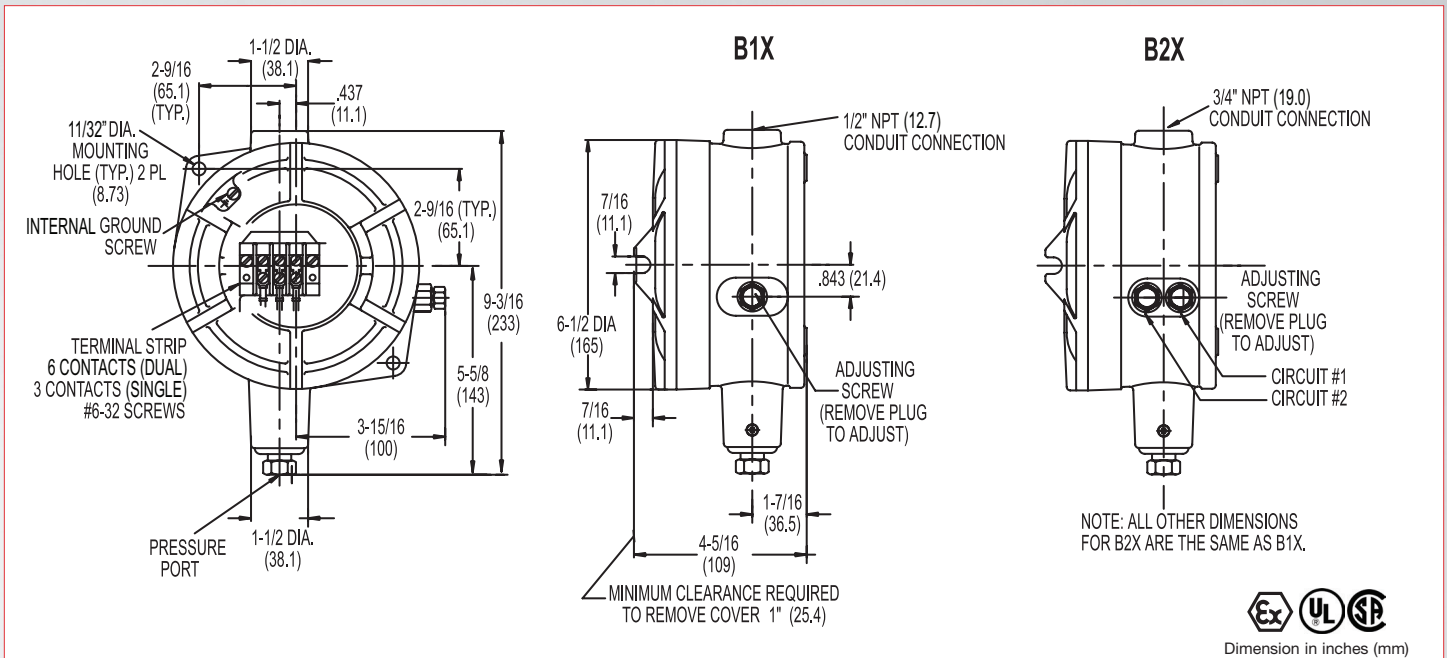
Barksdale, Inc./Barksdale GmbH  
A Subsidiary of Crane Co.



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# Series B1X, B2X

## Technical Drawing



## Product Configurator

Example	B1X	-H	32	SS	-P2	-UL
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### Prefix

**H** Hermetically sealed limit switch option - Class I, Division II (requires AA, CC or HH limit switch)

### Series

B1X	Single setpoint
B2X	Dual setpoint

### Limit Switch<sup>1</sup>

-A	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 12, 32, 48 and 72)
-B	10 amps @ 125/250/480 VAC; 0.05 amps @ 125 VDC; 0.03 amps @ 250 VDC
-C	10 amps @ 125/250/480 VAC; 0.1 amps @ 125VDC; 0.05 amps @ 250 VDC
-H	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard with pressure range 20)
-M	10 amps @ 125/250 VAC; 3 amps @ 480 VAC; 0.5 amps @ 125 VDC; 0.25 amps @ 250 VDC
-S	15 amps @ 125/250/480 VAC; 0.05 amps @ 125 VDC; 0.03 amps @ 250 VDC (adjustable deadband)
-GH	1 amp @ 125 VAC with gold contacts
-AA	Hermetically sealed; 4 amps @ 125/250 VAC
-CC	Hermetically sealed; 10 amps @ 125/250 VAC
-HH	Hermetically sealed; 5 amps @ 125/250 VAC

### Option

-EX	ATEX certified, -EX in place of -UL for ATEX only
-UL	UL & CSA approval (standard)
-Sxxx	Factory preset (consult factory)

### Process Connection

Blank	1/4" NPT for 12, 20 & 32 pressure ranges & 1/4" tube for 48 - 72 pressure ranges (standard)
-P2 <sup>4</sup>	1/2" NPT female pressure fitting

**SS** Stainless steel bourdon tube (standard)

### Pressure Range<sup>2</sup>

	Adjustable Range				Approx. Deadband <sup>3</sup> (Actuation Value)	Proof Pressure
	Decreasing - psi (bar)		Increasing - psi (bar)			
	Min	Max	Min	Max		
12	50 (3.3)	1173 (78)	77 (5.1)	1200 (80)	11 - 27 (.7 - 1.8)	1800 (120)
20	160 (10.6)	1961 (131)	199 (13)	2000 (133)	16 - 39 (1.1 - 2.6)	4800 (320)
32	240 (16)	3115 (208)	325 (22)	3200 (213)	40 - 85 (2.7 - 5.7)	7200 (480)
48	325 (22.4)	4715 (321)	325 (22)	4800 (327)	40 - 85 (2.7 - 5.7)	7200 (480)
72	600 (40)	6650 (443)	1150 (77)	7200 (480)	275 - 550 (18 - 37)	18000 (1200)

<sup>1</sup> Consult sales drawings for specific deadband values

<sup>2</sup> Pressure range subject to change

<sup>3</sup> Deadband values indicated when used with the "standard" limit switch

<sup>4</sup> Consult sales drawings for dimensions