Bulletin 800R — 30.5 mm Push Button Stations Hermetically Sealed for Division 2/Zone 2
• Hazardous location push button stations
• Classes I and II Division 2/Zone 2
• 30.5 mm mounting hole
• Types 4/13 and 4/4X/13

Table of Contents

Specifications∗

Electrical Ratings	
Contact Ratings	Refer to the contact ratings (page 10-190).
Dielectric Strength	2200V for one minute, 1300V for one minute (Logic Reed)
Electrical Design Life Cycles	1 000 000 at maximum rated load, 200 000 at maximum rated load (Logic Reed)
Mechanical Ratings	
Vibration	10…2000 Hz 1.52 mm displacement (peak-to-peak) Max./10 G Max. (except Logic Reed)
Shock	1/2 cycle sine wave for 11 ms ≥25 G (contact fragility) and no damage at 100 G
Degree of Protection	Type 4/4X/13, 4/13; Watertight/Corrosion-Resistant IEC 529 IP66/65
Mechanical Design Life Cycles	
Push Buttons (Momentary, Non-Illuminated) (Momentary, Illuminated) (Push-Pull/Twist-to-Release)	1 000 0000 min. 250 000 min. 250 000 min.
Selector Switches (Non-Illuminated) (Illuminated)	1 000 000 min. 200 000 min.
All other devices	200 000 min.
Contact Operation	Logic Reed and sealed switch contact blocks: single break magnetic
Typical Operating Forces	
Operators without contact blocks	Flush, extended, standard mushroom, jumbo plastic mushroom: 2 lb max. Maintained selector switch: 3.6 in•lb maximum
Spring Return Selector Switches	3.6 in•lb to stop
	0.2 in•lb to return
Illuminated Push Buttons and Push-to-Test Pilot Lights	5 lb maximum
3-Position Push-Pull	8 lb maximum push to in position or pull to center position (15 lb maximum pull to out position)
Push-Pull and Push-Pull/Twist	9 lb maximum push or pull
	30 in•oz maximum twist, 6 in•oz minimum return
Contact Blocks Logic Reed Sealed Switch Stackable Sealed Switch	1 lb maximum 3 lb maximum at 0.205 in. plunger travel 1 lb maximum
Environment	
Temperature Range Operating Storage	-40...+131 °F (-40...+55 °C) -40...+185 °F (-40...+85 °C)

Note: Operating temperatures below freezing are based on the absence of moisture and liquids. Consult your local Rockwell Automation sales office or Allen-Bradley distributor for use in lower temperature applications.

Humidity	50% at 104 °F (40 °C)

∗ Performance Data — See page Important-3.

Control Stations

Bulletin 800R control stations are designed for Division 2/Zone 2 hazardous locations. They consist of Bulletin 800H (Type 4/4X/13) or Bulletin 800T (Type 4/13) operators with sealed contact blocks. Bulletin 800R units are available as factory assembled stations or as components for field assembly.

Hazardous Locations

Since the contacts are enclosed in a hermetically sealed chamber, the contact block is suitable for use in Class I and II, Division 2/Zone 2 Groups A, B, C, D, F and G hazardous locations and is listed by Underwriters Laboratories for this class of service. Complete stations as shown on page 2-23 can be used for Class I and II Division 2/Zone 2 applications. The individual components shown in the 800T and 800H sections are also suitable for Class I and II Division 2/Zone 2 locations providing they are suitably mounted by the customer in an enclosure as required for the application and by applicable codes and laws.

Per National Electrical Code: Zone 2. In Class I, Zone 2 locations, all wiring methods permitted for Class I, Division 2, Class I, Division 1 or Division 2, and Class I, Zone 0 or Zone 1 locations, including requirements for sealing, shall be permitted.

Note: Allen-Bradley Logic Reed contact blocks are also listed by Underwriters Laboratories for the Division 2/Zone 2 hazardous locations listed above.

⚠ **CAUTION:**

The complete stations and individual components listed herein **are not suitable for use in Class I and II Division 1 hazardous locations**. For Class I and II Division 1 hazardous locations, order Bulletin 800H Type 7 & 9 stations and units.

Sealed Switch Contact Ratings

Maximum continuous current I_{th} 5 A. Bulletin 800T and 800H units have control circuit ratings with sealed switch contact blocks as follows:

Max. Opertnl. Volts U_e	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts U_e	Make	Break
AC 600	AC-15	B600	120…600 0…120	3600 VA 30 A	360 VA 3 A
DC 300	DC-13	P300	24…300 0…24	138 VA 5.0 A	

Stackable Sealed Switch Contact Ratings

Maximum continuous current I_{th} 2.5 A. Bulletin 800T and 800H units have control circuit ratings with sealed switch contact blocks as follows:

Max. Opertnl. Volts U_e	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts U_e	Make	Break
AC 300	AC-15	C300	120…300 0…120	1800 VA 15 A	180 VA 1.5 A
DC 150	DC-13	Q150	24…150 0…24	69 VA 2.5 A	

Logic Reed Contact Ratings

Maximum DC: 30V, 0.06 A Maximum AC: 150V, 0.15 A Should only be used with resistive loads.

Standards Compliance

• UL 1604
• CSA C22.2, No. 213

Certifications

• UL Listed (File No. E10314, Guide No. NOIV)
• CSA Certified (File No. LR11924)

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Complete Assembled Stations

Class I, Division 2/Zone 2

Push button operators for Class I, Division 2/Zone 2 are offered in Bulletin 800T/H, page 10-2.

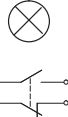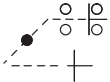|				
Surface Mount **Cat. No. 800R-1TA**	*Stainless Steel* *Booted Operator Station* **Cat. No. 800R-1HA4T**	*Stainless Steel* *Bootless Operator Station* **Cat. No. 800R-1HA4TL**	*Rosite* *Booted Operator Station* **Cat. No. 800R-1HA4R**	*Rosite* *Bootless Operator Station* **Cat. No. 800R-1HA4RL**

Operator	Contact Symbol	Contact Action	Button Type	Button Color	Legend Marking	Cast Aluminum Enclosures ✶ Surface Mount Cat. No.	Stainless Steel Enclosures ❋ Bootless Operator Station‡ Cat. No.	Rosite Glass Polyester Enclosures ❋ Bootless Operator Station‡ Cat. No.
One Push Button	1 N.O. - 1 N.C.	Momentary	Flush	Green	START	800R-1TB	800R-1HB4TL	800R-1HB4RL
			Extended	Red	STOP	800R-1TA	800R-1HA4TL	800R-1HA4RL
			Flush	Black	No Legend	800R-1TX	800R-1HX4TL	800R-1HX4RL
Two Push Buttons	1 N.O. - 1 N.C. Each Button	Momentary	Flush Extended	Green Red	START STOP	800R-2TA	800R-2HA4TL	800R-2HA4RL
			Flush Flush	Black Black	No Legend No Legend	800R-2TX	800R-2HX4TL	800R-2HX4RL
One Pilot Light, Two Push Buttons	1 N.O. - 1 N.C. Each Button	Momentary	120V AC Flush Extended	Red Green Red	No Legend START STOP	800R-2TAR	800R-2HAR4TL	800R-2HAR4RL
			120V AC Flush Flush	Red Black Black	No Legend No Legend No Legend	800R-2TXR	800R-2HXR4TL	800R-2HXR4RL
3-Position Selector Switch	1 N.O. - 1 N.C.	Maintained	Knob Lever	Black with white insert	HAND OFF AUTO	800R-R3TA	800R-R3HA4TL	**800R-R3HA4RL**
			Knob Lever	Black with white insert	No Legend	800R-R3TX	800R-R3HX4TL	800R-R3HX4RL
One Push Button	1 N.O. - 1 N.C.	Maintained	Push-Pull/Twist	Red	EMRG.STOP	**800R-1TAM**	800R-1HAM4TL	800R-1HAM4RL
Two Push Buttons	1 N.O. - 1 N.C. Each Button	Maintained	Flush Extended	Green Red	START STOP	800R-2TAM	800R-2HAM4TL	800R-2HAM4RL
			Flush Flush	Black Black	No Legend No Legend	800R-2TXM	800R-2HXM4TL	800R-2HXM4RL

✶ Type 4/13.

❋ Type 4/4X/13.

‡ To order a control station with booted operators, remove the **L** from the end of the catalog number.
Example: **Cat. No. 800R-1HA4TL** becomes **Cat. No. 800R-1HA4T**.

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Custom-Built Stations

Description
The tables on page 10-191 list the most commonly used push button stations. Stations not listed in the table may be ordered as custom-built stations.

Cat. No.
The cat. no. used to identify custom-built Bulletin 800R push button stations, which are built at the factory, will be cat. nos. listed for the enclosure only, except letter **W** will be substituted for the letter **Z** and with a station serial number.

Ordering Information
The following information is required when ordering custom built push button stations.

1. Cat. no. of enclosure.
2. Cat. no. of control units.
3. Legend plate cat. no. and/or marking for each unit.
4. Specify vertical or horizontal mounting.
5. Specify desired operator mounting sequence. Inclusion of a sketch is recommended. If no information is given, standard configuration will be used.

Enclosures Only

Die Cast
Cat. No. 800R-2TZ

Stainless Steel
Cat. No. 800R-2HZ4

Rosite Glass Polyester
Cat. No. 800R-2HZ4R

Units✱	Die Cast (Type 4/13) Cat. No.	Stainless Steel (Type 4/4X/13) Cat. No.	Rosite Glass Polyester (Type 4/4X/13) Cat. No.
1	**800R-1TZ**	**800R-1HZ4**	**800R-1HZ4R**
2	**800R-2TZ**	**800R-2HZ4**	**800R-2HZ4R**
3	**800R-3TZ**	**800R-3HZ4**	**800R-3HZ4R**
4	800R-4TZ	**800R-4HZ4**	800R-4HZ4R
5	—	800R-5HZ4	—
6	800R-6TZ	800R-6HZ4	800R-6HZ4R

✱ Number of units that can be mounted in enclosure.
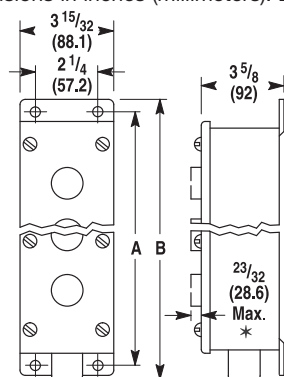❄ Extra deep. Accomodates two levels of stackable sealed switch contact blocks.
Note: Enclosure and conduit dimensions are detailed on page 10-193, except for the fiberglass enclosures, which are found on 10-64.
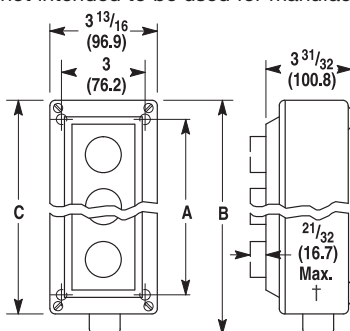
Approximate Dimensions and Shipping Weights

Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.
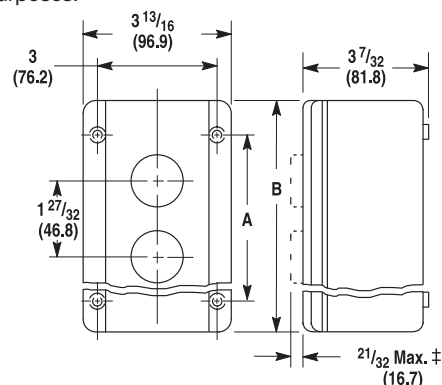

Type 4/4X/13
Stainless Steel
Watertight/Oiltight/Corrosion-Resistant Enclosure

Type 4/4X/13
Rosite Glass Polyester
Watertight/Oiltight/Corrosion-Resistant Enclosure

Type 4/13
Cast Aluminum Enclosure
Watertight/Oiltight

Dimension	Number of Units					
	1	2	3	4	5	6
Stainless Steel Type 4/4X/13						
A	5-5/32 (135)	7 (178)	8-27/32 (225)	10-11/16 (271)	12-17/32 (318)	14-3/8 (360)
B	6-13/32 (163)	8-1/4 (210)	10-1/8 (257)	11-31/32 (304)	14-1/32 (359)	15-7/8 (403)
Pipe Tap Size	3/4			1		
Glass Polyester Type 4/4X/13						
A	4-1/2 (114)	4-1/2 (114)	6-1/4 (159)	8 (203)	12-1/8 (308)	12-1/8 (308)
B	7-1/32 (181)	7-1/32 (181)	8-23/32 (221)	10-21/32 (271)	14-7/8 (378)	14-7/8 (378)
C	5-7/8 (149)	5-7/8 (149)	7-9/16 (192)	9-1/2 (241)	13-1/2 (343)	13-1/2 (343)
Pipe Tap Size	3/4			1		
Cast Aluminum Type 4/13						
A	2-3/4 (69.8)	4-1/2 (114)	6-1/4 (159)	8 (203)	—	12-1/8 (308)
B	4-3/16 (106)	5-7/8 (149)	7-9/16 (192)	9-1/2 (241)	—	13-1/2 (343)
Conduit Opening	3/4 in. 14 N.P.T.				—	1 in. 11-1/2 N.P.T.

Mounting Instructions (for Panel Mounting)
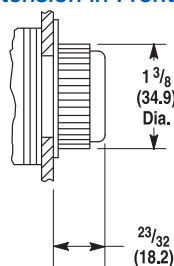

Mounting Instructions (for Panel Mounting)

✱ Selector switch is 1-5/32 (29.4) maximum; pilot light is 1-7/32 (31).
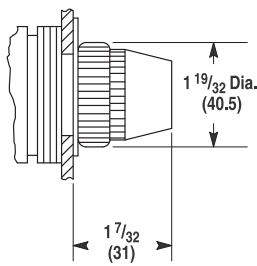❋ Selector switch is 1-3/32 (27.8) maximum; pilot light is 1-5/32 (29.4) maximum.
‡ Selector switch is 1-7/32 (30.9) maximum; pilot light is 1-9/32 (32.5).
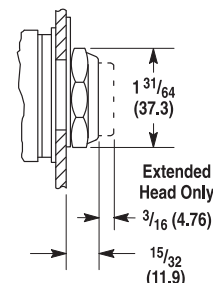§ Minimum vertical spacing dimension for jumbo legend plate is 2-15/32 (62.7).

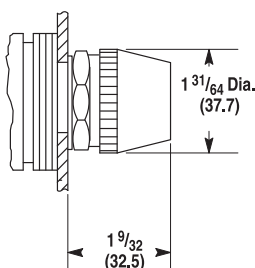## Operator Extension in Front of Panel♣

Type 4/4X/13
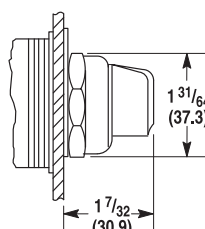**Booted Flush and Extended Head Push Button**

Type 4/4X/13
Pilot Light

Type 4/13 and Type 4/4X/13
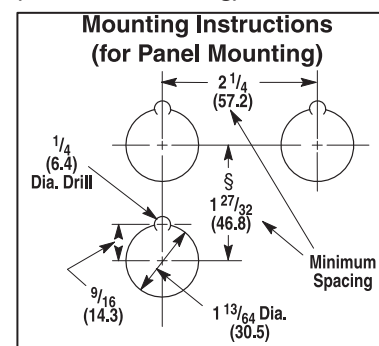**Bootless Flush and Extended Head Push Button**

Type 4/13
Pilot Light

Type 4/13 and Type 4/4X/13
Standard Knob Selector Switches

♣ See 10-49…10-56 for additional Type 4/13 outlines and for additional Type 4/4X/13 outlines.

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www.ab.com/catalogs   Preferred availability cat. nos. are **bold**.