

## Potentiometer Devices\*



**Cat. No. 800T-U24**



**Cat. No. 800H-UR4**

Resistance	Type 4/13	Type 4/4X/13	Resistance	Type 4/13	Type 4/4X/13
	Potentiometer†	Potentiometer†		Potentiometer†	Potentiometer†
	Cat. No.	Cat. No.		Cat. No.	Cat. No.
Operator Only without Resistive Element	<b>800T-N37§</b>	<b>800H-N102§</b>	25 kΩ	<b>800T-U37</b>	800H-UR37
150 Ω	<b>800T-U4</b>	<b>800H-UR4</b>	50 kΩ	<b>800T-U41</b>	<b>800H-UR41</b>
500 Ω	<b>800T-U12</b>	<b>800H-UR12</b>	75 kΩ	800T-U46	800H-UR46
1000 Ω	<b>800T-U13</b>	<b>800H-UR13</b>	100 kΩ	<b>800T-U49</b>	<b>800H-UR49</b>
1500 Ω	<b>800T-U16</b>	<b>800H-UR16</b>	150 kΩ	<b>800T-U50</b>	800H-UR50
2500 Ω	<b>800T-U19</b>	<b>800H-UR19</b>	400 kΩ	800T-U54	800H-UR54
5000 Ω	<b>800T-U24</b>	<b>800H-UR24</b>	500 kΩ	<b>800T-U55</b>	800H-UR55
10 kΩ	<b>800T-U29</b>	<b>800H-UR29</b>	1 MΩ	<b>800T-U57</b>	<b>800H-UR57</b>
15 kΩ	<b>800T-U34</b>	800H-UR34	2 MΩ	800T-U59	800H-UR59
20 kΩ	<b>800T-U35</b>	<b>800H-UR35</b>	3 MΩ	800T-U62	800H-UR62
			4 MΩ	800T-U64	800H-UR64

\* Single turn operation with 312° rotation.

† Does not meet Class 1 Div. 2 applications.

‡ Rated for 300V AC/DC, 2 W maximum (6V DC minimum). Specify Bulletin 800TC or 800HC for finger-safe potentiometers. Example: **Cat. No. 800T-U29** becomes **Cat. No. 800TC-U29**.

§ For use with Type J potentiometers having a shaft length of 7/8 in. (22.2 mm) and a shaft diameter of 1/4 in. (6.3 mm).

## Mechanically Interlocked Maintained Push Button Devices



**Cat. No. 800T-FA22A**



**Cat. No. 800T-FB16A**



**Cat. No. 800T-FC16F**



**Cat. No. 800H-CRA22A**

Contact Arrangement		Type 4/13			Type 4/4X/13	
		Button Position: Button Type/Color➤			Bootless♣	
Contact Type	Configuration/Position	Upper: Flush/Black Lower: Flush/Black Cat. No.	Upper: Flush/Green Lower: Extended/Red Cat. No.	Upper: Flush/Green Lower: Mushroom/Red Cat. No.	Upper: Flush/Green Lower: Extended/Red Cat. No.	Upper: Flush/Black Lower: Flush/Black Cat. No.
1 N.O. - 1 N.C.		<b>800T-FA22A</b>	<b>800T-FB16A</b>	<b>800T-FC16A</b>	800H-CRB16A	800H-CRA22A
2 N.O. - 2 N.C.		800T-FA22F	<b>800T-FB16F</b>	<b>800T-FC16F</b>	800H-CRB16F	800H-CRA22F
No Contact	—	800T-FA22	800T-FB16	800T-FC16	800H-CRB16	800H-CRA22

➤ Consult your local Rockwell Automation sales office or Allen-Bradley distributor for other operator types and combinations.

♣ If booted operators are desired, refer to page 10-39 to order boots separately.



Bulletin 800T/800H 30.5 mm Push Buttons

- 30.5 mm mounting hole
- Type 4/13 watertight/oiltight (Bul. 800T)
- Type 4/4X/13 corrosion-resistant/watertight/oiltight (Bul. 800H)
- Heavy industrial stations and operators

Description

The Allen-Bradley Bulletin 800T and 800H 30.5 mm push button product lines are in a class by themselves. They are designed and constructed to perform in the most demanding industrial environments. In terms of sealing and switching performance, you will not find a more dependable push button offering. Allen-Bradley delivers more styles and options of operator types and contact blocks, offering flexibility to meet the most demanding specifications in the world's toughest industrial environments.

Design innovation is key to the performance advantage provided in the Bulletin 800T and 800H offerings. New in this catalog are the **Trigger Action E-Stop** operators, the new standard bearer in a tamper-resistant design. Also new is the **Universal LED Illumination** option that accepts a wide 12...130V AC/DC voltage input. This is compatible with all illuminated operator types, allows retrofitting in existing installations, and incorporates super bright LED technology.

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See below.

Standards Compliance

UL 508

CCC

Certifications

UL Listed  
(File No. E14840, E10314  
Guide No. NKCR, NOIV)

CSA Certified  
(File No. LR1234, LR11924)

CSA C22.2, No. 14

EN/IEC: 60947-5-1

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**Specifications\***

Electrical Ratings		
Contact ratings	Refer to the contact ratings tables on page 10-4.	
Dielectric strength	2200V for one minute, 1300V for one minute (Logic Reed)	
Electrical design life cycles	1 000 000 at max. rated load, 200 000 at max. 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 1/4/12/13 (800T); Type 1/4/4X/12/13 (800H); EN/IEC 60529 IP66/65	
Mechanical design life cycles		
Push buttons	(Momentary, non-illuminated)	10 000 000 min.
	(Momentary, illuminated)	250 000 min.
	(Push-pull/twist-to-release)	250 000 min.
Selector switches	(Non-illuminated)	1 000 000 min.
	(Illuminated, key-operated)	200 000 min.
Potentiometers	25 000 min.	
All other devices	200 000 min.	
Contact operation	Shallow, mini, and low-voltage contact blocks: Slow, double make and break Logic Reed and sealed switch contact blocks: Single break magnetic	
Wire gauge/Terminal screw torque	#18...14 AWG (#18...10 Max Duty) / 6...8 lb•in	
Typical operating forces		
Operators without contact blocks	Flush, extended button, standard mushroom, jumbo plastic mushroom: 2 lbs max. Jumbo and extended aluminum mushroom head: 3.95 lbs max. Maintained selector switch: 3.6 in•lb max.	
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 max.	
2-position push-pull	8.0 lb max. push or pull	
3-position push-pull	8 lb max. push to in position or pull to center position (15 lb max. pull to out position)	
Twist-to-release or push-pull	9 lbs max. push or pull 30 in•oz max. twist, 6 in•oz minimum return	
Potentiometer	Rotational torque 3...12 in•oz; stopping torque 12 in•lb (minimum)	
Contact blocks	Standard	1 lb
	Logic Reed	1 lb max.
	Sealed switch	3 lb max. at 0.205 in. plunger travel
	Stackable sealed switch	1 lb max.
	MaxDuty	1.4 lb max.
	PenTUFF	1.4 lb max.
	Self Monitoring	1.6 lb
Environment		
Temperature range	Operating	-40...+131 °F (-40...+55 °C)
	Storage	-40...+185 °F (-40...+85 °C)
<b>Note:</b> 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...95% RH from 77...140 °F (25...60 °C) per Procedure IV of MIL-STD-810C, Method 507.1 cycling test	

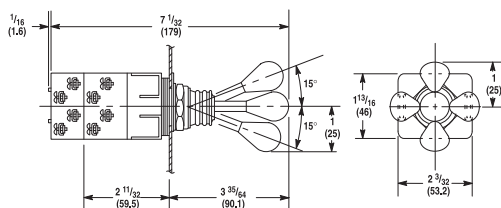
\* Performance Data — See Important- 3.

# 30.5 mm Push Buttons

## Approximate Dimensions

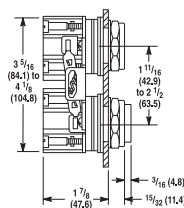
Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

### Push Buttons and Switches (Bul. 800T Only)



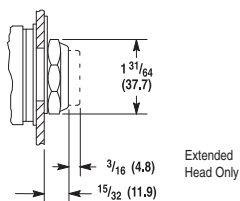
2-3-4 Way Switch

Shipping Wt. with 2 Contact Blocks 6 oz (0.17 kg)  
Shipping Wt. with 4 Contact Blocks 8-1/2 oz (0.24 kg)



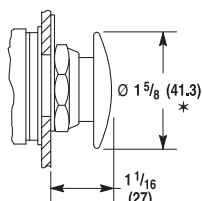
Mechanically Interlocked  
Maintained Contact Push Button  
Shipping Wt. 1 lb (0.45 kg)

### Push Buttons and Pilot Lights

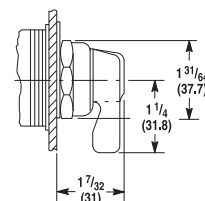


Flush and Extended  
Head Push Button

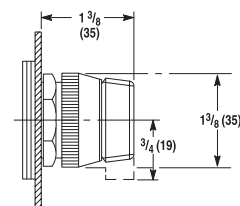
Shipping Wt. 5-1/2 oz (0.15 kg)



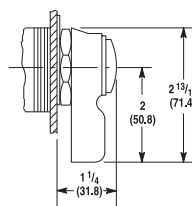
Mushroom Head Push Button  
Shipping Wt. 7-1/2 oz (0.21 kg)



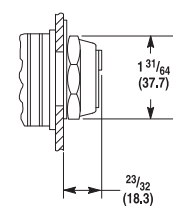
Non-Illuminated Knob Lever and  
Standard Knob Selector Switch  
Shipping Wt. 6 oz (0.17 kg)



Illuminated Knob Lever and  
Standard Knob Selector Switch  
Shipping Wt. 6 oz (0.17 kg)



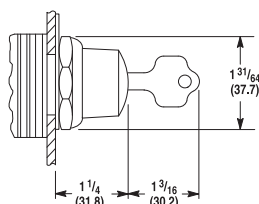
Wing Lever Selector Switch  
Shipping Wt. 8 oz (0.22 kg)



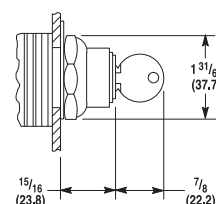
Coin Slot Selector Switch  
Shipping Wt. 6 oz (0.17 kg)

\* Except jumbo which is 2-1/4 (57.2).

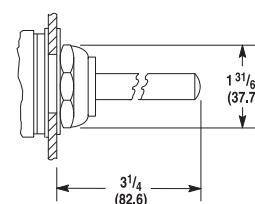
### Operator Extension in Front of Panel (Bul. 800T Only)



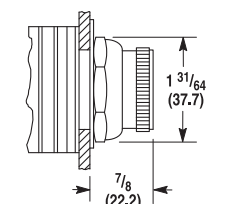
Key Operated Selector Switch  
Shipping Wt. 12 oz (0.34 kg)



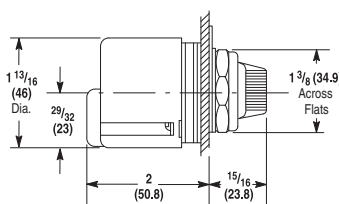
Push Button with Cylinder Lock  
Shipping Wt. 12 oz (0.34 kg)



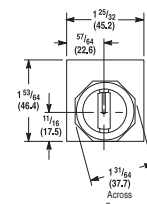
Wobble Stick  
Shipping Wt. 9 oz (0.25 kg)



Selector Push Button  
Shipping Wt. 6 oz (0.17 kg)

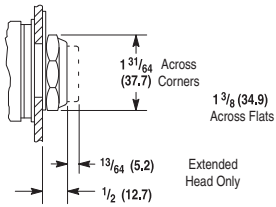


Type J Potentiometer Unit  
Shipping Wt. 4 oz (0.11 kg)

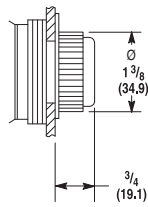


Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

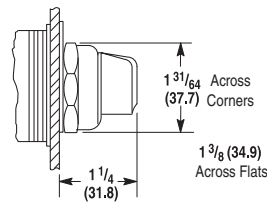
**Push Buttons and Switches (Bul. 800H Only)**



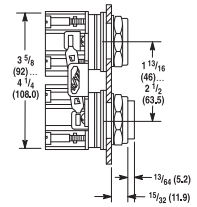
*Bootless Flush and Extended Head  
Momentary Contact Push Button*  
**Shipping Weight. 5-1/2 oz (0.16 kg)**



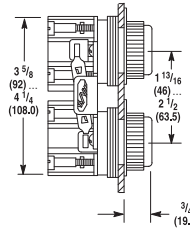
*Booted Flush and Extended Head  
Momentary Contact Push Button*  
**Shipping Weight. 5-1/2 oz (0.16 kg)**



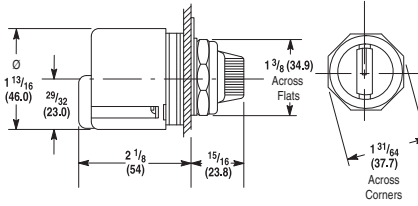
*Standard Knob Selector  
Switch Non-Illuminated*  
**Shipping Weight. 6 oz (0.17 kg)**



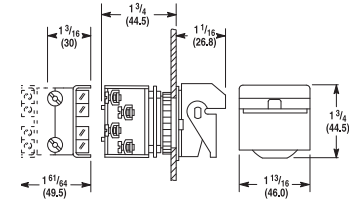
*Bootless Maintained Contact  
Push Buttons*



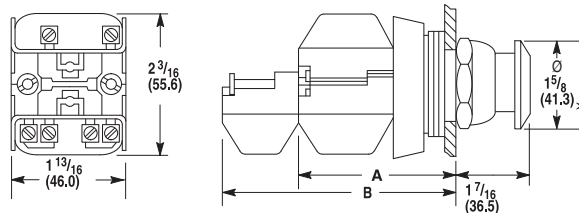
*Booted Maintained Contact  
Push Buttons*  
**Shipping Weight. 1 lb (0.45 kg)**



*Type J Potentiometer Unit*  
**Shipping Weight. 7 oz (0.20 kg)**



*Type 4 Flip Lever*  
**Shipping Weight. 8 oz (0.14 kg)**



**Mushroom Head — Maintained and Momentary**

Non-Illuminated Mushroom and Push-Pull Push Buttons				
Cat. No. Suffix	Description	Dimensions		Shipping Weights
D4	One Shallow Block	A	2-1/32 (51.6)	5 oz (0.14 kg)
A1, A5 and A7	Two Shallow blocks	A	2-1/32 (51.6)	6 oz (0.17 kg)
B6	Two Shallow Blocks and Two Mini Blocks	B	2-7/8 (73.0)	8 oz (0.22 kg)

\* Jumbo versions are 2-1/4 (57.2).