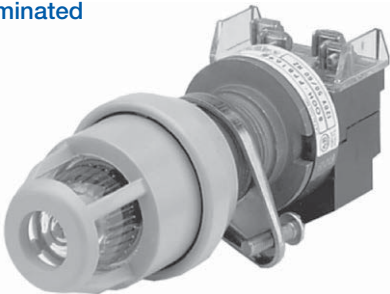


Momentary Contact Push Button Units, Illuminated



Extended Head with Guard
Cat. No. 800H-PPB16M

Type	Lamp	Supply Voltage	Lens Color🌈	Extended Head with Guard
				Cat. No.🔌🌈
Operator only➤				800H-QPB00XX
Full Voltage	Incandescent	24V AC/DC	Multi-color kit	800H-QPB24M
		120V AC/DC		800H-QPB10M
	No lamp	0...250V AC/DC	No lens	800H-QPBN25
Universal	LED	12...130V AC/DC	Multi-color kit	800H-QPBH2M
Transformer	Incandescent	120V AC 50/60 Hz	Multi-color kit	800H-PPB16M
	LED			800H-PPBH16M
	No lamp		No lens	800H-PPBN16

- ⚡ Units ship with multi-color insert packet including amber, blue, green, red, and white.
§ For long barrel versions, add an **L** to the cat. no. **Example:** Cat. No. 800HL-QPB2M.
❖ Includes as standard one Cat. No. 800T-XA (1 N.O./1 N.C.) contact block.
➤ Operator only supplied without power module, lamp, lens cap, or contact blocks.

Potentiometer Units‡



Potentiometer Unit
Cat. No. 800H-UP24

Resistance	Potentiometer*	Resistance	Potentiometer*
	Cat. No.⚡		Cat. No.⚡
Operator Only (without Resistive Element)	800H-NP37⚡	2.5 kΩ	800H-UP19
		5 kΩ	800H-UP24
1 kΩ	800H-UP13	10 kΩ	800H-UP29

- * Rated for 300V AC/DC, 2W maximum.
⚡ 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).
‡ Single-turn operation with 312° rotation.
⚡ For long barrel versions, add an **L** to the cat. no. **Example:** Cat. No. 800HL-UP13.

Specifications*

Electrical Ratings	
Contact Ratings	Refer to the contact ratings tables below.
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 7 & 9 Explosion Proof (Type 3 and Type 4 ratings available with accessories)
Mechanical Design Life Cycles	
Push Buttons	250 000 minimum
Potentiometers	100 000 minimum
All other devices	200 000 minimum
Contact Operation	Shallow and mini contact blocks: slow double make and break Logic Reed & sealed switch contact blocks: snap-action
Wire Gauge/Terminal Screw Torque	# 18...12 AWG/6...8 lb•in
Typical Operating Forces	
Operators without contact blocks:	Flush, extended, standard mushroom, jumbo mushroom: 2.9 lb max. Jumbo and extended aluminum mushroom head: 3.95 lb maximum Maintained selector switch: 4.0 in•lb maximum
Spring Return Selector Switches:	5 in•lb to stop, 0.2 in•lb to return
Illuminated Push Buttons and Push-to-Test Pilot Lights	5.6 lb maximum
2-Position Push-Pull	9 lb maximum push or pull
3-Position Push-Pull	12 lb maximum push to in position or pull to center position (15 lb maximum pull to out position)
Contact Blocks:	
800T-XA	1 lb
Logic Reed	1 lb maximum
Sealed Switch	3 lb maximum at 0.205 in. plunger travel
Stackable Sealed Switch	1 lb maximum
Environment	
Temperature Range	Operating: -4...+13 °F (-20...+55 °C) Storage: -40...+185 °F (-40...+85 °C)
Note: Operating temperatures below freezing are based on the absence of freezing moisture and liquids.	
Humidity	50% at +104 °F (+40 °C)

* Performance Data — See page Important-3.

* External thread major diameter: 1.034 in. max., 1.024 in. min. Internal thread minor diameter: 0.958 in. min., 0.970 in. max.

Standard Contact Ratings

Maximum thermal continuous current I_{th} 10 A AC/2.5 A DC.
 Bulletin 800H Type 7 & 9 units with 800T-XA contacts have ratings as follows:

Max. Oprtnl. Volts U_e	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts U_e	Make	Break
AC 600	AC-15	A600	120...600	7200VA	720VA
			72...120	60 A	720VA
			24...28*	60 A	10 A
DC 600	DC-13	Q600	28...600	69VA	
			24...28*	2.5 A	

* For applications below 24V and 24 mA, PenTUFF™, Logic Reed or stackable sealed switch contacts are recommended.

Sealed Switch Contact Ratings

Maximum continuous current I_{th} 5 A.

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

Stackable Sealed Switch Contact Ratings

Maximum continuous current I_{th} 3 A. Bulletin 800T units have control circuit ratings with sealed switch contact blocks as follows:

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

Logic Reed Contact Ratings

Maximum: 150V AC, 0.15 A, 8 VA and 30V DC, 0.06 A, 1.8 VA.

Should only be used with resistive loads.

PenTUFF™ (Low Voltage) Contact Ratings

Minimum DC: 5V, 1 mA

Maximum thermal continuous current I_{th} 2.5 A AC/1.0 A DC.

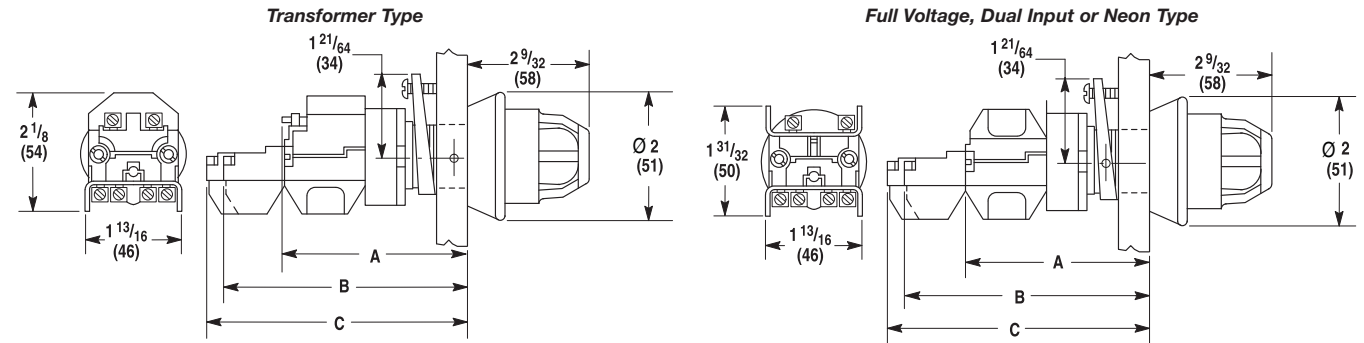
Bulletin 800H units with 800T-XAV contacts have ratings as follows:

Max. Oprtnl. Volts U_e	Utilization Category		Rated Operational Currents		
	IEC	NEMA	Volts U_e	Make	Break
AC 300	AC-15	C300	120...300	1800VA	180VA
			0...120	15 A	1.5 A
DC 150	DC-13	R150	24...150	28VA	
			0...24	1.0 A	

Approximate Dimensions and Shipping Weights, Continued

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

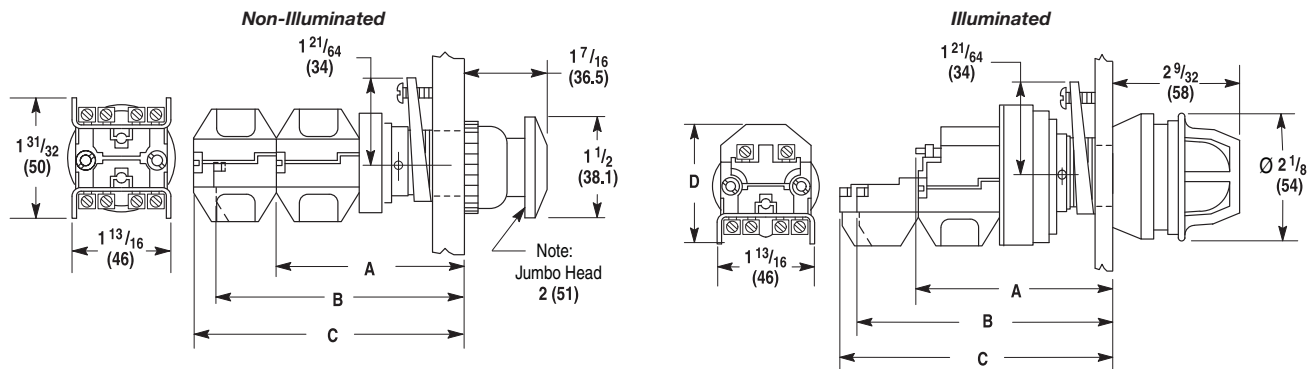
Illuminated Push Buttons or Push-to-Test Pilot Lights



Illuminated Push Buttons, Push-to-Test Pilot Lights

Description	Style	A *	B	C	Ship. Wt. [oz (kg)]
Transformer Type	Standard Barrel	3-5/32 (80.2)	3-29/32 (99)	4-1/8 (105)	14 (0.40)
	Long Barrel	5-1/16 (128.6)	5-13/16 (147.6)	6-1/16 (154)	16-3/16 (0.45)
Full Voltage Dual Input or Neon Type	Standard Barrel	3-1/32 (77)	3-29/32 (99)	4-1/8 (105)	11-5/8 (0.33)
	Long Barrel	4-15/16 (125.4)	5-13/16 (147.6)	6-1/16 (154)	13-7/16 (0.38)

Push-Pull Units



Push-Pull Units

Description	Style	A *	B	C	D	Ship. Wt. [oz (kg)]
Illuminated Transformer Type	Standard Barrel	3-9/16 (90.5)	4-9/16 (115.9)	4-5/8 (117.5)	2-1/8 (54)	15-1/2 (0.44)
	Long Barrel	4-21/32 (118.3)	5-13/32 (137)	5-21/32 (143.7)	2-1/8 (54)	17-7/16 (0.49)
Illuminated Full Voltage Type	Standard Barrel	3-7/16 (87.3)	4-9/16 (115.9)	4-5/8 (117.5)	1-31/32 (50)	12-13/16 (0.33)
	Long Barrel	4-17/32 (115.1)	5-13/32 (137)	5-21/32 (143.7)	1-31/32 (50)	14-3/4 (0.41)
Non-Illuminated Push-Pull Units	Standard Barrel	3-1/2 (88.9)	4-3/8 (111.1)	4-5/8 (117.5)	—	11-1/8 (0.32)
	Long Barrel	4-17/32 (115.1)	5-13/32 (137)	5-21/32 (143.7)	—	12-5/16 (0.34)

* When using sealed switch contact block add 7/8 in. (22.2 mm) to the listed dimension.