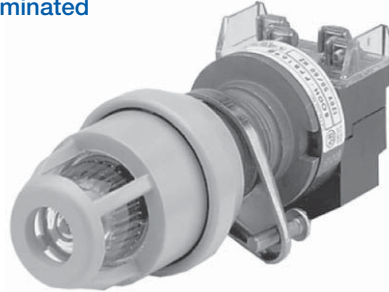


Momentary Contact Push Button Units, Illuminated



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.

Table with 3 columns: Image of push buttons, Bulletin 800H/Hazardous Location Push Buttons specifications, and Table of Contents.

TABLE OF CONTENTS

Table with 2 columns: Description and Page. Includes sections for Specifications, Push Buttons (Momentary, Push-Pull), Selector Switches, Pilot Light Units, Ordering Information, Covers, Bases, Modifications and Accessories, and Approximate Dimensions.

Description

Application

When properly mounted in a Type 7 & 9 enclosure, Bulletin 800H Type 7 & 9 operators are designed to meet the requirements of the National Electrical Code for Class I, Divisions 1 & 2, Groups B, C & D Hazardous Gas; Class II, Divisions 1 & 2, Groups E, F and G Hazardous Dust; and, Class III Hazardous Fiber Locations. In addition, the single gang shallow base, Cat. No. 800H-IHZX7, meets Class I, Group B requirements. This Type 7 & 9 equipment is listed by Underwriters Laboratories, Inc.

Per National Electrical Code:

Zone 1. In Class I, Zone 1 locations, all wiring methods permitted for Class I, Division 1 locations and Class I, Zone 0 or Zone 1 locations, including requirements for sealing, shall be permitted.
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.

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Operator Construction

The Allen-Bradley line of hazardous location devices features copper-free (less than 0.4 of 1% copper content) die cast aluminum bushings and mounting rings, Type #316 stainless steel operating shafts and an O-ring seal for added corrosion resistance. These components mount into a threaded hole (3/4 in.-14 NPSM) in a suitable enclosure.
Bulletin 800H Type 7 & 9 components are available in two basic formats: standard barrel (Bulletin 800H) and long barrel (Bulletin 800HL). Standard barrel devices are suitable for mounting in panel thickness up to 1 in.; Long barrel devices are suitable for mounting in panel thickness greater than 1 in. and no thicker than 2-1/2 in. Both style operators offer a unique locking bracket which provides an anti-turn feature to guard against loosening. The mounting rings in front of the panel are knurled to provide a second means of tightening each unit into the panel.

Outdoor Use

Bulletin 800H Type 7 & 9 stations and enclosures are not configured for outdoor use as standard. A Type 3 rating is available, while maintaining Type 7 & 9 integrity of the enclosure, by the addition of a Type 3 sealing flange and an approved drain. The sealing flange shown below may be purchased as an option or as an accessory. A Type 4 rating can be achieved by using sealing nuts to seal the push button operators in addition to using the sealing flange. Sealing nuts are available as accessories (see page 10-179.)

Elimination of Conduit Seal Off Requirement

Bulletin 800H Type 7 & 9 units may be installed with a variety of sealing options. By utilizing either a sealing well or flanged sealing well, these stations may be installed without a conduit seal off in most applications (subject to applicable codes and laws). The sealing wells shown below may be purchased as an option or as an accessory. Sealing wells are also available with an integral Type 3 flange seal for outdoor applications.
Sealed switch contact blocks are another way to eliminate the need for conduit seal fittings in most applications (subject to applicable codes and laws). Sealed switch contact blocks may be purchased as an option on assembled stations by changing the Bulletin No. from 800H to 800R. Sealed switch contact blocks can be ordered as an accessory (see page 10-175). A push button station with a sealed switch contact block is shown below.



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

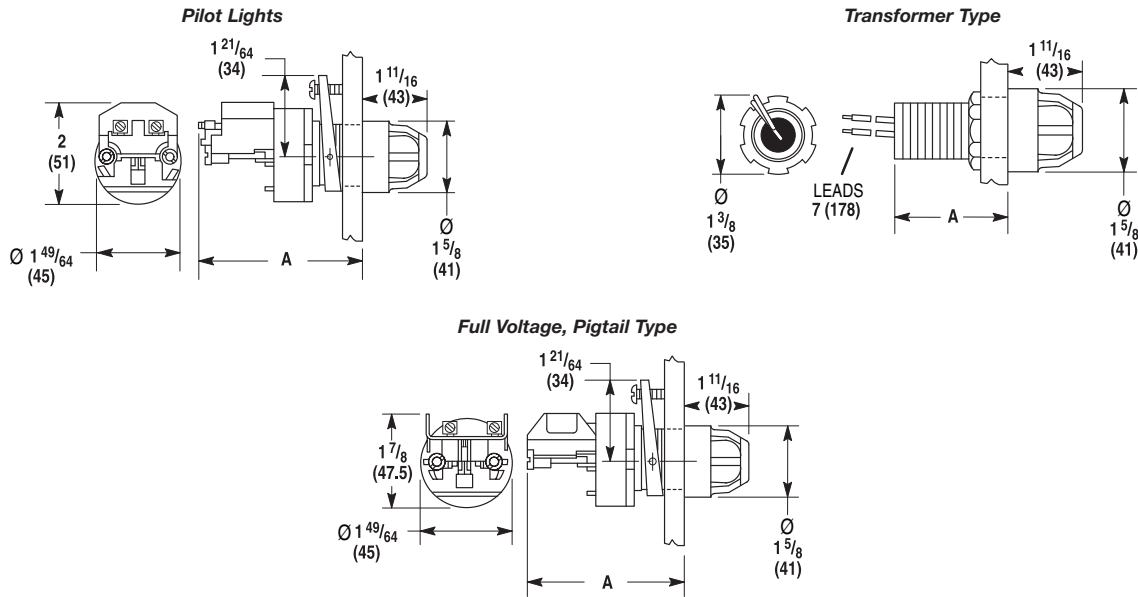
Maximum thermal continuous current I_{th} 2.5 A AC/1.0 A DC.

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 | |

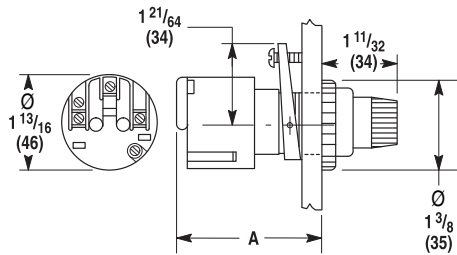
Approximate Dimensions and Shipping Weights, Continued

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



| Description | Style | A | Ship. Wt. [oz (kg)] |
|---|-----------------|----------------|---------------------|
| Transformer type and dual input transformer type pilot lights | Standard Barrel | 3-5/32 (80) | 8-9/16 (0.24) |
| | Long Barrel | 4-9/16 (115.9) | 30-1/4 (0.85) |
| Full voltage, neon or dual input diode and resistor type pilot lights | Standard Barrel | 3-1/32 (77) | 5-13/16 (0.17) |
| | Long Barrel | 4-7/16 (112.7) | 27-1/2 (0.77) |
| Full voltage pigtail type pilot lights | Standard Barrel | 2-3/16 (55.5) | 5-5/8 (0.16) |
| | Long Barrel | 3-43/64 (94) | 8-5/16 (0.24) |

Potentiometer Units



| Style | A | Ship. Wt. [oz (kg)] |
|-----------------|---------------|---------------------|
| Standard barrel | 3-1/8 (79.5) | 5-3/8 (0.16) |
| Long barrel | 4-1/2 (114.3) | 8 (0.23) |