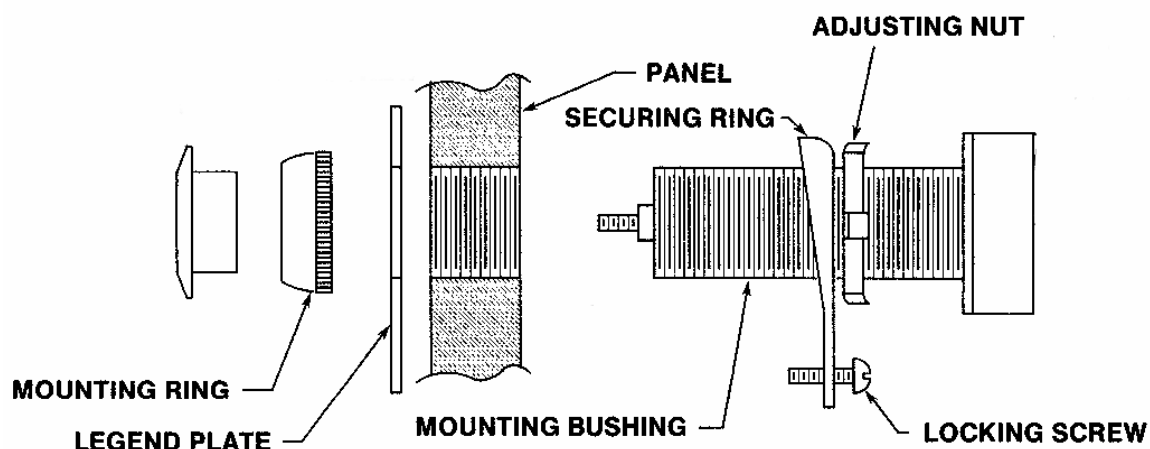


Renewal Parts for Bulletin 800H/800HL NEMA Type 7&9 Operators



800HL (long barrel unit) is pictured above, the drawing is for illustration only. The exact size and dimensions of the 800H/800HL operator will vary depending upon the exact catalog number used.

800H standard length units similar in appearance. Securing Ring is used as shown above, without the Adjusting Nut (with the exceptions of the Dual Pushbutton Units and Pigtail Pilot Lights). The **Mounting Bushing** is not available as a repair part. **Legend Plates** are available separately (consult the Allen-Bradley Industrial Control catalog). Replacement Color Caps, Pilot Light Lenses, and Selector Switch knobs are listed in the Allen-Bradley Industrial Control catalog.

CATALOG NUMBER	DESCRIPTION	MOUNTING RING	SECURING RING	LOCKING SCREW	ADJUSTING NUT ①
800H-AP***	Flush Head Pushbutton	40309-011-02	40309-010-02	28001-175-07	M-8681
800H-BP***	Extended Head Pushbutton	40309-013-02	40309-010-02	28001-175-07	M-8681
800H-DP***	Mushroom Head Pushbutton	40309-044-02	40309-010-02	28001-175-07	M-8681
800H-DPH	Dual Pushbutton Units	Not Used	40309-010-02	28001-175-07	M-8681
800H-FPX**	Non-Illum. Push Pull Devices	40309-044-02	40309-010-02	28001-175-07	M-8681
800H-FPXM**	Illum. Push Pull, 3 pos	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-FPXN**	Illum. Push-Pull, 3 pos	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-FPXP**	Illum. Push-Pull, 2 pos	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-FPXQ**	Illum. Push-Pull, 2 pos	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-HP, -JP, or -NP	Selector Switch – Std Knob – 2, 3, or 4 position	800H-N130F	40309-010-02	28001-175-07	M-8681
800H-HP, -JP, or -NP	Selector Switch – Knob Lever 2, 3, or 4 position	800H-N131F	40309-010-02	28001-175-07	M-8681
800H-HP, -JP, or -NP	Selector Switch – Cylinder Lock 2, 3, or 4 position	40309-011-02	40309-010-02	28001-175-07	M-8681
800H-HP, -JP, or -NP	Selector Switch – Gray Wing Lever - 2, 3, or 4 position	800H-N138	40309-010-02	28001-175-07	M-8681
800H-HP, -JP, or -NP	Selector Switch – Red Wing Lever - 2, 3, or 4 position	800H-N138A	40309-010-02	28001-175-07	M-8681
800H-LP**	Pigtail Pilot Light Unit	Not Used	40309-010-02	28001-175-07	M-8681
800H-PP**	Pilot Light Transformer Unit	Not Used	40309-010-02	28001-175-07	M-8681
800H-PPB***	Illum. Pushbutton with Guard	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-PPT**	Push-to-Test Pilot Light	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-QP***	Pilot Light Full Voltage Unit	Not Used	40309-010-02	28001-175-07	M-8681
800H-QPB***	Illum. Pushbutton with Guard	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-QPT***	Push-to-Test Pilot Light	Not Used ②	40309-010-02	28001-175-07	M-8681
800H-RP**	Neon Pilot Light	Not Used	40309-010-02	28001-175-07	M-8681
800H-RPB**	Neon Illum. Pushbutton with Guard	Not used ②	40309-010-02	28001-175-07	M-8681
800H-UP***	Potentiometer Units – All ③	40309-061-02	40309-010-02	28001-175-07	M-8681



① Adjusting Nut is only required on the long barrel style units (800HL-***) dual pushbutton units (800H-DPH) and pigtail pilot light units (800H-LP***).

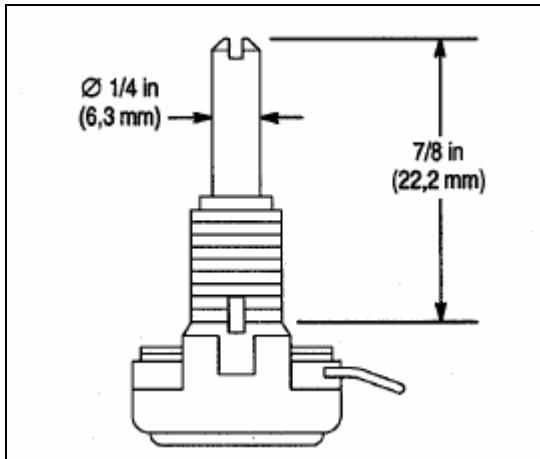
② These units require the use of a Guard Ring (looks like a round shroud), part number is 40309-042-02 (part is not pictured above).

③ Potentiometer units require the use of an aluminum mounting ring adapter (1.25in diameter), part number is 40309-060-02 (part is not pictured above).

Renewal Parts for Bulletin 800H/800HL NEMA Type 7&9 Operators

Replacement Parts Bulletin 800H Nema 7&9 Potentiometer Units

	Potentiometer Knob Assembly (includes two set screws). Order part number 40274-073-52.
	Mounting Ring Adaptor. Order part number 40309-060-02.



Resistive Element (Potentiometer)

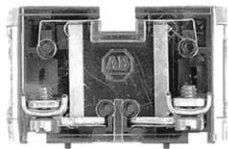
Catalog Number	Replacement Potentiometer Unit	Resistance Value	Type of Taper
800H-UP4	24752-221-03	150 ohm, 2.25 watts	Linear
800H-UP12	24752-221-05	500 ohm, 2.25 watts	Linear
800H-UP13	24752-221-06	1K ohm, 2.25 watts	Linear
800H-UP16	24752-221-07	1.5K ohm, 2.25 watts	Linear
800H-UP19	24752-221-08	2.5K ohm, 2.25 watts	Linear
800H-UP24	24752-221-10	5K ohm, 2.25 watts	Linear
800H-UP29	24752-221-12	10K ohm, 2.25 watts	Linear
800H-UP34	24752-221-13	15K ohm, 2.25 watts	Linear
800H-UP35	24752-221-14	20K ohm, 2.25 watts	Linear
800H-UP37	24752-221-15	25K ohm, 2.25 watts	Linear
800H-UP41	24752-221-17	50K ohm, 2.25 watts	Linear
800H-UP46	24752-221-19	75K ohm, 2.25 watts	Linear
800H-UP49	24752-221-21	100K ohm, 2.25 watts	Linear
800H-UP50	24752-221-22	150K ohm, 2.25 watts	Linear
800H-UP51	24752-221-23	200K ohm, 2.25 watts	Linear
800H-UP54	24752-221-25	400K ohm, 2.25 watts	Linear
800H-UP55	24752-221-26	500K ohm, 2.25 watts	Linear
800H-UP56	24752-221-27	800K ohm, 2.25 watts	Linear
800H-UP57	24752-221-28	1 Meg ohm, 2.25 watts	Linear
800H-UP59	24752-221-29	2 Meg ohm, 2.25 watts	Linear
800H-UP62	24752-221-30	3 Meg ohm, 2.25 watts	Linear
800H-UP64	24752-221-31	4 Meg ohm, 2.25 watts	Linear
800H-UP90	24752-221-38	400K ohm, 2.25 watts	Linear
800H-UP91	24752-221-46	100K ohm, 2.25 watts	Modified Linear to 102 degrees, linear from 103 to 312 degrees

Bulletin 800T/H

30.5 mm Push Buttons

Accessories, Continued

Power Modules



Full Voltage Power Module
Cat. No. 800T-N330



Transformer Power Module
Cat. No. 800T-N326



Dual Input Power Modules
Cat. No. 800T-N296 (Transformer)
Cat. No. 800T-N290N (Diode)

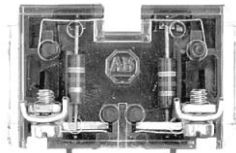
Full Voltage§		Transformer§		Dual Input		
Voltage	Cat. No.	Voltage	Cat. No.	Type	Voltage	Cat. No.
6V AC/DC 12V AC/DC 24V AC/DC 120V AC/DC	800T-N330	48V AC 50/60 Hz	800T-N325	Transformer*	120V AC	800T-N296
		120V AC 50/60 Hz	800T-N326	Diode Type*	24V AC/DC	800T-N290N
		240V AC 50/60 Hz	800T-N327		120V AC/DC	800T-N291N
		277V AC 50/60 Hz	800T-N327Y		—	—
		480V AC 50/60 Hz	800T-N328	—	—	—
240V AC/DC‡	800T-N331	600V AC 50/60 Hz	800T-N329	—	—	—

* Transformer type dual input provides circuit isolation via a miniature type relay. This module is used in conjunction with a 120V transformer.

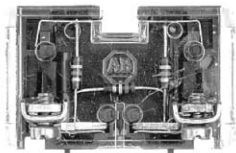
* Diode type dual input provides circuit isolation via opposing diodes. Not recommended for use with solid-state outputs and neon indicators.

‡ 240V full voltage module contains 50% dropping resistors for use with a 120V incandescent lamp.

§ Specify Bulletin 800TC for finger-safe power modules. Example: **Cat. No. 800T-N330** becomes **800TC-N330**.



Resistor Power Module
Cat. No. 800T-N332



Neon Power Module
Cat. No. 800T-N333

Resistor (10% Drop)➤		Neon♣➤	
Voltage	Cat. No.	Voltage	Cat. No.
120V AC/DC	800T-N332	120V AC/DC	800T-N333
		240V AC/DC	800T-N334

♣ Neon modules contain resistors.

➤ Specify Bulletin 800TC for finger-safe power modules. Example: **Cat. No. 800T-N332** becomes **800TC-N332**.

Bulletin 800H

Hazardous Location Push Buttons

Type 7 and 9, for Divisions 1 and 2

Modifications and Accessories

Contact Blocks✦

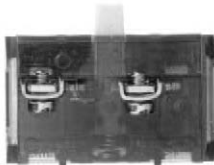
Packaged in kit form for field installation. All necessary mounting hardware is provided with each contact block kit. Contact ratings are listed on page 10-133. **Note:** It is not recommended to mount more than four contact blocks on any one unit (maximum two blocks deep). Sealed switch contact blocks are limited to two blocks per unit maximum.



Shallow Block



Mini Block



PenTUFF (Low Voltage) Contact Block

Contact Type	Shallow Block✦✧‡	Mini Block✦‡	PenTUFF (Low Voltage) Block✦✧‡
	Cat. No.	Cat. No.	Cat. No.
1 N.O.	800T-XD1	800T-XD5	800T-XD1V
1 N.C.	800T-XD2	800T-XD6	800T-XD2V
1 N.O.E.M.	800T-XD3	—	800T-XD3V
1 N.C.L.B.	800T-XD4	—	800T-XD4V
1 N.O. - N.C.	800T-XA	—	800T-XAV
2 N.O.	800T-XA2	—	—
2 N.C.	800T-XA4	—	—
1 N.C.L.B. - 1 N.O.	800T-XA1	—	—
1 N.C.L.B. - 1 N.C.	800T-XA7	—	—

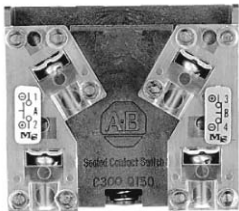
- ✦ To determine if a conduit seal-off is necessary, see page 10-159 for sealing well information.
- ✧ Specify Bulletin 800TC for finger-safe contact blocks. Example: **Cat. No. 800TC-XA.**
- ‡ Contact blocks with normally closed contacts meet direct drive positive opening standard requirements.



Logic Reed Block



Sealed Switch Block



Stackable Sealed Switch Block

Contact Type	Logic Reed Block§	Sealed Switch Block§	Stackable Sealed Switch Block§
	Cat. No.	Cat. No.	Cat. No.
1 N.O.	800T-XD1R	800T-XD1P	800T-XD1Y
1 N.C.	800T-XD2R	800T-XD2P	800T-XD2Y
1 N.O. - 1 N.C.	800T-XAR	800T-XAP	800T-XAY
2 N.O.	800T-XA2R	—	800T-XA2Y
2 N.C.	800T-XA4R	—	800T-XA4Y

- § To determine if a conduit seal-off is necessary, see page 10-159 for sealing well information.
- ✦ Refer to 800T/H section, page 10-33, for additional contact blocks and accessories.

Bulletin 800H

Hazardous Location Push Buttons

Type 7 and 9, for Divisions 1 and 2

Modifications and Accessories, Continued

Replacement Color Caps (Illuminated)



Pilot Light
Cat. No. 800H-N104R



Push-to-Test Pilot Light
Cat. No. 800H-N105R



Illuminated Push Button
Cat. No. 800H-N106R



Illuminated Push-Pull
Cat. No. 800H-NP50A

	Pilot Light	Push-to-Test Pilot Light	Illuminated Push Button	Illuminated Push-Pull
Color	Cat. No.	Cat. No.	Cat. No.	Cat. No.
Red	800H-N104R	800H-N105R	800H-N106R	800H-NP50R
Green	800H-N104G	800H-N105G	800H-N106G	800H-NP50G
Amber	800H-N104A	800H-N105A	800H-N106A	800H-NP50A
Blue	800H-N104B	800H-N105B	800H-N106B	800H-NP50B
White	800H-N104W	800H-N105W	800H-N106W	800H-NP50W
Clear	800H-N104C	800H-N105C	800H-N106C	800H-NP50C

Replacement Color Caps (Non-Illuminated)



Momentary Mushroom — Standard (Plastic)
Cat. No. 800T-N246R



Momentary Mushroom — Jumbo (Metal)
Cat. No. 800T-N248R



Push-Pull — Standard (Metal)
Cat. No. 800H-NP51C



Push-Pull — Jumbo (Metal)
Cat. No. 800H-NP52A

	Momentary Mushroom — Standard (Plastic)	Momentary Mushroom — Jumbo (Metal) *	Push-Pull Standard (Metal)	Push-Pull Jumbo (Metal)
Color	Cat. No.	Cat. No.	Cat. No.	Cat. No.
Red	800T-N246R	800T-N248R	800H-NP51A	800H-NP52A
Green	800T-N246G	800T-N248G	800H-NP51B	800H-NP52B
Blue	800T-N246BL	800T-N248BL	800H-NP51C	800H-NP52C
Yellow	800T-N246Y	800T-N248Y	800H-NP51E	800H-NP52E
Black	800T-N246B	800T-N248B	800H-NP51H	800H-NP52H
Gray	800T-N246GR	800T-N248GR	800H-NP51G	—
Natural	—	800T-N248	—	—

* To order Plastic Jumbo Mushroom Caps, replace **248** with **247**. Plastic not available in natural color.

Example: Cat. No. 800T-N248R becomes Cat. No. 800T-N247R.

Replacement Knobs and Dual Push Button Assembly



Standard Knob
Cat. No. 800H-N130F



Knob Lever
Cat. No. 800H-N131F



Wing Lever
Cat. No. 800H-N138



Dual Push Button
Cat. No. 800H-NP39

	Standard Knob	Knob Lever	Wing Lever*	Dual Push Button
Color	Cat. No.	Cat. No.	Cat. No.	Cat. No.
White	800H-N130F	800H-N131F	—	—
Kit (Complete)†	800H-N130	800H-N131	—	—
Grey	—	—	800H-N138	—
Red	—	—	800H-N138A	—
Green Red	—	—	—	800H-NP39

* Standard finish is grey.

† Kit includes knob and packet of inserts (Cat. No. 800T-N123). Refer to color insert kits on page 10-159.

Hazardous Location Push Buttons

Type 7 and 9, for Divisions 1 and 2

Modifications and Accessories, Continued

Boots and Booted Knobs



Flush Push Button Boot
Cat. No. 800H-NP5B



Extended Push Button Boot
Cat. No. 800H-NPE5A



Booted Standard Knob Selector Switch
Cat. No. 800H-NP5



Booted Knob Lever Selector Switch
Cat. No. 800H-NPE5

Boot Material†	Boot Color	Flush Push Button Boot Cat. No.	Extended Push Button Boot Cat. No.	Booted Standard Knob Selector Switch * Cat. No.	Booted Knob Lever Selector Switch * Cat. No.
Hypalon	Red	*	800H-NPE5A	—	—
	Green	800H-NP5B	800H-NPE5B	—	—
	Black	800H-NP5H	800H-NPE5H	800H-NP5	800H-NPE5
	Yellow	800H-NP5E	800H-NPE5E	—	—
	Blue	800H-NP5C	800H-NPE5C	—	—
Silicone •	Red	*	800H-NPE101R	—	—
	Green	800H-NP101G	800H-NPE101G	—	—
	Black	800H-NP101B	800H-NPE101B	800H-NP101	800H-NPE101
	Yellow	800H-NP101Y	800H-NPE101Y	—	—
	Blue	800H-NP101BL	800H-NPE101BL	—	—
Urethane ••	Red	*	800H-NPE100R	—	—
	Green	800H-NP100G	800H-NPE100G	—	—
	Black	800H-NP100B	800H-NPE100B	800H-NP100	800H-NPE100
	Yellow	800H-NP100Y	800H-NPE100Y	—	—
	Blue	800H-NP100BL	800H-NPE100BL	—	—
Ethylene Propylene ••	Red	*	800H-NPE103R	—	—
	Green	800H-NP103G	800H-NPE103G	—	—
	Black	800H-NP103B	800H-NPE103B	800H-NP103	800H-NPE103
	Yellow	—	—	—	—
	Blue	—	—	—	—

* Red flush head push buttons are not suitable for applications requiring extended head, mushroom head or other unguarded buttons capable of being operated quickly in emergencies, and they may not comply with applicable codes or standards. To order a protective boot for a red flush head push button, use the following cat. nos.: Hypalon — Cat. No. 800H-NP5A; Silicone — Cat. No. 800H-NP101R; Urethane — Cat. No. 800H-NP100R; Ethylene Propylene — Cat. No. 800H-NP103R.

* Includes color insert kit.

† Dots printed on the inside of the boot identify the boot material.

Push Button Guards and Mushroom Push Button Guards



Cat. No.
800H-NP19



Cat. No.
800H-NP13



Cat. No.
800H-NP9



Cat. No.
800H-NP12

Push Buttons, Pilot Lights and Push-to-Test	Extra Long Guard (1 in.) for Push Button	Mushroom	Jumbo Mushroom
Cat. No.	Cat. No.	Cat. No.	Cat. No.
800H-NP19	800H-NP13	800H-NP9	800H-NP12

Protective Rings



Protective Ring for 2-Position Push-Pull
Cat. No. 800H-NP40



Jumbo Protective Ring for 2-Position Push-Pull
Cat. No. 800H-NP40J

Protective Ring for Illuminated Push Buttons		
Description	Type	Cat. No.
Protective ring for 800H 2-position push-pull operators. Illuminated or non-illuminated. Often used to avoid unintentional tripping of E-stop operators. Available for standard size button (40 mm) or for jumbo size button (60 mm).	For standard size button	800H-NP40
	For jumbo size button	800H-NP40J



Allen-Bradley

Visit our website: www.ab.com/catalogs

Preferred availability cat. nos. are printed in **bold**




Bulletin 800H

Hazardous Location Push Buttons



Type 7 and 9, for Divisions 1 and 2

General Accessories

Plugs

	Description	Cat. No.	
 <p>Cat. No. 800H-NP7</p>	Coupler Used for both horizontal and vertical assembly.	800H-NP7	
	Description	Type	Cat. No.
 <p>Cat. No. 800H-NP1 (Operators not included)</p>	Closing Plug Whenever an enclosure with more than the required number of openings is used, this plug can be used to close the unused openings. Includes synthetic O-ring washer.	For Cover Hole	800H-NP1
		For Base Coupler Hole	800H-NP3
	Description	Size	Cat. No.
 <p>Cat. No. 800H-NP10 (Operators not included)</p>	Conduit Entry Plug This plug can be used to plug unused conduit openings in Type 7 and 9 bases.	3/4 in.	800H-NP10
		1 in.	800H-NP11

Locking Attachments

	Description	Cat. No.
 <p>Cat. No. 800H-NP2 (Padlock not included)</p>	Push Button Padlocking Attachments This device permits locking in the depressed position on extended head push button units only.	800H-NP2
 <p>Cat. No. 800H-NP17 (Padlock not included)</p>	Dual Push Button Extended Head Padlocking Attachments This device permits locking for dual push button — extended head units only.	800H-NP17


Bulletin 800H

Hazardous Location Push Buttons






Type 7 and 9, for Divisions 1 and 2

General Accessories, Continued

Locking Attachments

	Description	Cat. No.
 Cat. No. 800H-NP4 <i>(Padlock not included)</i>	Padlocking Cover Padlocking cover is used for Type 7 and 9 selector switches, non-illuminated push buttons (except mushrooms) and non-illuminated 2-position push-pull units, but not for potentiometer units. Note: push-pull units will only lock in the depressed position. Padlocking cover includes blank legend plate for customer marking. A pre-marked legend plate entitled OPEN COVER TO OPERATE (Front View) and PULL-TO-START-PUSH-TO-STOP (rear view) is available. To order legend plate only, specify Cat. No. 800H-W174L.	800H-NP4

Miscellaneous

		Description	Style	No. of Wires	Cat. No.	
 Cat. No. 800H-NPRD91	 Cat. No. 800H-NPD93	Sealing Well with or without Integral Type 3 Flange Seal These sealing wells can only be used with bases having 1 in. conduit entries. They reduce costs usually necessary with other conduit seal fittings for most installations (subject to applicable codes and laws) while maintaining Type 7 and 9 integrity. When using a sealing well with integral flange seal for Type 3 outdoor applications, an approved drain fitting must be provided. (Refer to National Electrical Code.)	With Integral Flange Seal, Type 3, 7, and 9	2	800H-NPRD90	
				4	800H-NPRD91	
				6	800H-NPRD92	
				8	800H-NPRD93	
			Without Integral Flange Seal, Type 7 and 9	2	800H-NPD90	
				4	800H-NPD91	
				6	800H-NPD92	
				8	800H-NPD93	
		Description	Style	Cat. No.		
 Cat. No. 800H-NP20		Type 3 Flange Seal This seal provides a Type 3 rating while maintaining Type 7 and 9 integrity. They are used with the Allen-Bradley enclosures listed on page 10-134 for outdoor applications. An approved drain (see listing) is required for condensation when using this option (refer to National Electrical Code). For a Type 4 rating, use sealing nuts to seal the push button operators in addition to using the flange seal. Sealing kit is comprised of flange seal and sealing nut.	Flange Seal	800H-NP20		
			Drain for 3/4 in. Conduit Opening	800H-NP21		
				Drain for 1 in. Conduit Opening	800H-NP22	
 Cat. No. 800H-NP21				Type 4 Sealing Nut	800H-N479	
				Type 4 Sealing Kit	800H-N479F	
		Description	Color	Cat. No.		
 Cat. No. 800H-NP23R		Color Insert Kit These color insert kits are used with illuminated push buttons, pilot lights, push-pull, and push-to-test push buttons (order quantity of 1 to receive kit of 5 inserts).	Red	800H-NP23R		
			Green	800H-NP23G		
			Amber	800H-NP23A		
			Blue	800H-NP23B		
			White	800H-NP23W		
			One of each color	800H-NP23		




Bulletin 800H

Hazardous Location Push Buttons

Type 7 and 9, for Divisions 1 and 2

Replacement Lamps

Pilot Lights, Illuminated Push Buttons, Illuminated Push-Pull, Illuminated Push-Pull/Twist to Release

Lamp	Type	Current, Typical	Lamp Voltage	ANSI No.	Cat. No.	
	Full Voltage Transformer	150 mA/250 mA	6.3V AC	755/1866	*	800T-N65
	Full Voltage	80 mA	14V AC/DC	756	*	800T-N141
		70 mA	24V AC/DC	757	*	800T-N157
		50 mA	48V AC/DC	1835	*	800T-N365
	Full Voltage Resistor	22 mA	120V AC/DC	949	*	800T-N169
	Flashing	150 mA	6V AC/DC	267	*	800T-N212
		57 mA	24V AC/DC	24 MB	*	800T-N180
	Dual Input Diode	21 mA	120V AC	90 MB	*	800T-N261
		2 mA	120V AC/DC	B2A		609-N9
Lamp	Type	Current, Typical*	Lamp Voltage	Leakage Current	Cat. No. §	
	Full Voltage	13 mA/22 mA	12V AC/DC	3 mA		800T-N362x
		13 mA/21 mA	24V AC/DC	3 mA		800T-N319x
		12 mA/17 mA	32V AC/DC	3 mA		800T-N363x
		9 mA/14 mA	48V AC/DC	3 mA		800T-N364x
		3.3 mA/6 mA	120V AC	—		800T-N320x
		4.5 mA/6.2 mA	130V AC/DC	3 mA		800T-N321x
	Transformer	14 mA/48 mA	6V AC	14 mA		800T-N318x
	Flashing	18 mA	24V AC/DC	—	♣	800T-N319Fx

* Item is sold in multiples of 5. Order quantity of 5 to receive package of 5 pieces.

* Typical current draw varies with LED color. The first mA value is for a green or blue LED and the second mA value is for a red or amber LED.

‡ All LEDs except 120V have an internal shunt resistor for use with solid-state outputs. LEDs will not illuminate below listed leakage current.

§ To complete the cat. no. replace the x with the first letter of the desired color: **Amber**, **Green**, **Red**, **Blue**, or **White**.
White LEDs only available in 6, 24, 120, and 130V.

♣ Flashing rate is 2 Hz.

Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.


The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Rockwell Automation does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Allen-Bradley office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

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Throughout this document we use notes to make you aware of safety considerations:


ATTENTION	Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss
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IMPORTANT	Identifies information that is critical for successful application and understanding of the product.
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Use only replacement parts and devices recommended by Rockwell Automation to maintain the integrity of the equipment. It is the user's responsibility to ensure that the renewal part number selected is properly matched to the model, series and revision level of the equipment being serviced.

ATTENTION	Servicing energized Industrial Control Equipment can be hazardous. Severe injury or death can result from electrical shock, burn, or unintended actuation of controlled equipment. Recommended practice is to disconnect and lockout control equipment from power sources, and release stored energy, if present.
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Refer to **National Fire Protection Association Standard No. NFPA70E, Part 2 and (as applicable) OSHA rules for Control of Hazardous Energy Sources (Lockout/Tagout) and OSHA Electrical Safety Related Work Practices** for safety related work practices, including procedural requirements for lockout/tagout, and appropriate work practices, personnel qualifications and training requirements where it is not feasible to de-energize and lockout or tagout electric circuits and equipment before working on or near exposed circuit parts.

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