# IEC Push Button Specifications

**Bulletin Numbers 800F, 800FC, 800FD, 800B, 800MB, and 800MR**

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<td>47</td>
</tr>
</tbody>
</table>

## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1</td>
<td>Provides general guidelines for installing a Rockwell Automation industrial system.</td>
</tr>
<tr>
<td>Product Certifications website, <a href="http://www.ab.com">http://www.ab.com</a></td>
<td>Provides declarations of conformity, certificates, and other certification details.</td>
</tr>
</tbody>
</table>

You can view or download publications at [http://www.rockwellautomation.com/literature/](http://www.rockwellautomation.com/literature/). To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.
800F 22.5 mm Push Buttons

**Bulletin 800FP Plastic Operators**
- IP65/66, Type 4/4X/13
- Engineering grade thermoplastics
- Chemical-resistant for harsh environments

**Bulletin 800FM Metal Operators**
- IP65/66, Type 4/13
- Die-cast metal construction
- Chrome-plated

3-Across x 2-Deep Back-of-Panel (6 Circuits Max.)
- Rugged snap-fit design for plastic or metal latch
- Stackable contact blocks
- Rotating collar for easy one-hand latch removal
- Color-coded contact block plungers for contact identification

**Plastic Latch with Contact Block**

**Metal Latch with Contact Block**

**Assembly Overview**
### Mechanical Ratings

<table>
<thead>
<tr>
<th>Description</th>
<th>Plastic (Bulletin 800FP)</th>
<th>Metal (Bulletin 800FM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration (assembled to panel)</td>
<td>Tested at 10...2000 Hz, 1.52 mm displacement (peak-to-peak) max./10 G max. for 3 hr duration, no damage</td>
<td>IP65/66 (Type 3/3R/4/4X/12/13)</td>
</tr>
<tr>
<td>Shock</td>
<td>Tested at 1/2 cycle sine wave for 11 ms; no damage at 100 G</td>
<td>IP65/66 (Type 3/3R/4/12/13)</td>
</tr>
<tr>
<td>Degree of protection‡</td>
<td>IP65/66 (Type 3/3R/4/4X/12/13)</td>
<td>IP65/66 (Type 3/3R/4/12/13)</td>
</tr>
<tr>
<td>Mechanical durability per EN 60947-5-1 (Annex C)</td>
<td>10 000 000 Cycles</td>
<td>Momentary push buttons, momentary mushroom</td>
</tr>
<tr>
<td></td>
<td>1,000,000 Cycles</td>
<td>Multi-function, selector switch, key selector switch, selector jog, SensEject™ key selector switch</td>
</tr>
<tr>
<td></td>
<td>500,000 Cycles</td>
<td>Non-illuminated push-pull E-stop§</td>
</tr>
<tr>
<td></td>
<td>300,000 Cycles</td>
<td>Twist-to-release E-stop, illuminated push-pull E-stop§, alternate action push buttons</td>
</tr>
<tr>
<td></td>
<td>100,000 Cycles</td>
<td>Potentiometer, toggle switch</td>
</tr>
<tr>
<td>Operating forces (typical with one contact block)</td>
<td>Flush/extended = 5 N, E-stop = 36 N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mushroom = 9 N</td>
<td></td>
</tr>
<tr>
<td>Operating torque (typical application with one contact block)</td>
<td>Selector switch = 0.25 N•m (2.2 lb•in)</td>
<td></td>
</tr>
<tr>
<td>Mounting torque</td>
<td>Plastic</td>
<td>1.7 N•m (15 lb•in)</td>
</tr>
<tr>
<td></td>
<td>Metal</td>
<td>4.4 N•m (40 lb•in)</td>
</tr>
</tbody>
</table>

### Environmental

| Temperature range (operating) | -25...+70 °C (-13...+158 °F)♣ |
| Temperature range (short term storage) | -40...+85 °C (-40...+185 °F) |
| Humidity                     | 50...95% RH from 25...60 °C (77...140 °F) |

### Performance Data

Performance data given in this publication is provided only as a guide for the user in determining suitability and do not constitute a performance warranty of any kind. Such data may represent the results of accelerated testing at elevated stress levels, and the user is responsible for correlating the data to actual application requirements. ALL WARRANTIES AS TO ACTUAL PERFORMANCE, WHETHER EXPRESS OR IMPLIED, ARE EXPRESSLY DISCLAIMED.

† Momentary mushroom operators are IP65. Plastic keyed operators are IP66, Type 4/13; not Type 4X.
§ Limit of four contact blocks max. for these devices.
♣ Operating temperatures below 0 °C (32 °F) are based on the absence of freezing moisture and liquids, UL Recognized to 55 °C (131 °F) - Incandescent module max. 40 °C (104 °F).

### Standards Compliance and Certifications

<table>
<thead>
<tr>
<th>Certifications</th>
<th>UR/UL, CSA, CCC, CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards Compliance — CE Marked</td>
<td>NEMA ICS-5; UL 508, EN ISO 13850, EN 60947-1, EN 60947-5-1, EN 60947-5-5</td>
</tr>
<tr>
<td>Terminal Identification</td>
<td>EN/IEC 60947-1</td>
</tr>
<tr>
<td>Shipping Approvals</td>
<td>ABS</td>
</tr>
<tr>
<td>RoHS</td>
<td>✔</td>
</tr>
</tbody>
</table>
### Electrical Ratings

#### Standard contact block ratings

<table>
<thead>
<tr>
<th>Screw Termination Spring Clamp Termination</th>
</tr>
</thead>
<tbody>
<tr>
<td>A600, Q600 AC</td>
</tr>
<tr>
<td>600V AC</td>
</tr>
<tr>
<td>AC 15, DC 13 to IEC/EN 60947-5-1 and UL 508, 17V, 5 mA min.</td>
</tr>
</tbody>
</table>

#### Low voltage contact block ratings‡

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>Current Draw</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>5V</td>
<td>1 mA DC min.</td>
<td>50/60 Hz</td>
</tr>
</tbody>
</table>

#### LED Module Ratings

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>LED Module Ratings</th>
<th>Range</th>
<th>Current Draw</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>24…120V AC/DC</td>
<td>24V AC</td>
<td>20…132V AC/DC</td>
<td>15 mA (AC), 12 mA (DC)</td>
<td>50/60 Hz, DC</td>
</tr>
<tr>
<td>24V DC</td>
<td>10…30V DC</td>
<td>24 mA</td>
<td>50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>120V AC</td>
<td>102…132V AC</td>
<td>6 mA</td>
<td>50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>240V AC</td>
<td>204…264V AC</td>
<td>6 mA</td>
<td>50/60 Hz</td>
<td></td>
</tr>
</tbody>
</table>

#### Insulation voltage (Ui)

- Screw terminal = 690V
- Spring-clamp = 300V

#### Wire capacity (screw terminal)§

<table>
<thead>
<tr>
<th>Wire Capacity (AWG)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>#18…12 AWG</td>
<td>(0.75…2.5 mm²)</td>
</tr>
<tr>
<td>Max. (2) #14 AWG</td>
<td>(1) #12 AWG</td>
</tr>
</tbody>
</table>

#### Wire capacity (spring-clamp terminal)

<table>
<thead>
<tr>
<th>Wire Capacity (AWG)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>#18…14 AWG</td>
<td>(0.75…1.5 mm²)</td>
</tr>
</tbody>
</table>

#### Recommended tightening torque on screw terminals

- 0.7…0.9 N•m (6…8 lb•in)

#### Dielectric strength (minimum)

2500V for one minute

#### External short circuit protection

- Standard blocks: 10 A type gL/gG cartridge fuse to EN 60269-2-1 or gN (Class J to UL 248-8 or Class C to UL 248-4)
- Low voltage contact blocks: 6 A type gL/gG cartridge fuse to EN 60269-2-1 or gN (Class J to UL 248-8 or Class C to UL 248-4)

#### Electrical shock protection

Finger-safe conforming to IP2X

### Mechanical Ratings

#### Vibration (assembled to panel)

Tested at 10…2000 Hz, 1.52 mm displacement (peak-to-peak) max./10 G max. 6 hr

#### Contact durability per EN 60947-5-1 (Annex C)

- N.O.: 10 000 000 cycles
- N.O.E.M.: Single circuit contact block 3.4 N
- N.C. and N.O.E.M.: Dual circuit contact block 5…6.5 N
- N.C.L.B.: 1.5 mm (0.060 in.)
- N.C.E.B.: 2.5 mm (0.1 in.)

#### Push button travel to change electrical state

N.C. and N.O.E.M.: 1.5 mm (0.060 in.)

#### Operating forces (typical)

- Single circuit contact block: 3.4 N
- Dual circuit contact block: 5…6.5 N

#### Illumination

<table>
<thead>
<tr>
<th>LED Dominant Wavelength</th>
<th>LED Luminous Intensity</th>
<th>Incandescent maximum wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>525 nm</td>
<td>2.6 W</td>
</tr>
<tr>
<td>Red</td>
<td>629 nm</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>780 mcd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>360 mcd</td>
<td></td>
</tr>
</tbody>
</table>

#### Materials

- Springs: Stainless steel and zinc coated music wire
- Electrical contacts: Standard Silver-nickel, Low voltage Gold-plated over silver
- Terminals: Screw Brass, Spring-clamp Silver-plated brass

---

* Performance Data — see note on page 3.

† Low voltage contacts are recommended for applications below 17V, 5 mA.

§ Wires less than #18 AWG (0.75 mm²) may not hold in terminal securely.
# Material Listing

<table>
<thead>
<tr>
<th>Component</th>
<th>For Use with</th>
<th>Material Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel gasket</td>
<td>All operators</td>
<td>Nitrile, TPE</td>
</tr>
<tr>
<td>Diaphragm seal</td>
<td>Illuminated push button, non-illuminated push button</td>
<td>Automotive industry acceptable silicone</td>
</tr>
<tr>
<td>K-seal</td>
<td>Selector switch, key selector switch, push/twist-to-release E-stop, key E-stop, push/pull mushroom</td>
<td>Nitrile</td>
</tr>
<tr>
<td>Diaphragm retainer, return spring I</td>
<td>Illuminated push button, non-illuminated push button, momentary mushroom</td>
<td>Automotive industry acceptable silicone</td>
</tr>
<tr>
<td>Return spring II</td>
<td>Reset, selector switch, key selector switch, alternate action, push/twist-to-release E-stop, key E-stop, push/pull mushroom</td>
<td>Zinc-coated music wire</td>
</tr>
<tr>
<td>Button cap/mushroom head</td>
<td>Non-illuminated push button, momentary mushroom, reset, push/twist-to-release E-stop, key E-stop, push/pull mushroom, multi-function</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>2-color molded button cap</td>
<td>Non-illuminated push button</td>
<td>PBT/polycarbonate blend</td>
</tr>
<tr>
<td>Lens</td>
<td>Multi-function</td>
<td>Acetal</td>
</tr>
<tr>
<td>Lens, knob</td>
<td>Illuminated push button, illuminated momentary mushroom, illuminated selector switch</td>
<td>Polyamide</td>
</tr>
<tr>
<td>Knob</td>
<td>Non-illuminated selector switch</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic bezel/bushing I</td>
<td>Non-illuminated push button, illuminated push button, momentary mushroom, selector switch, key selector switch, push/twist-to-release E-stop, key E-stop, push/pull mushroom, multi-function, reset</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic bezel/bushing II, jam nut</td>
<td>Pilot light, reset jam nut, reset pushers</td>
<td>Glass-filled PBT</td>
</tr>
<tr>
<td>Metal bezel/bushing</td>
<td>All metal operators</td>
<td>Zinc</td>
</tr>
<tr>
<td>Diffuser</td>
<td>Illuminated push button, pilot light</td>
<td>Polycarbonate</td>
</tr>
<tr>
<td>Legend frames</td>
<td>—</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic mounting ring</td>
<td>All plastic operators</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Metal mounting ring</td>
<td>All metal operators</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic latch</td>
<td>—</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Metal latch</td>
<td>—</td>
<td>Chromated zinc + stainless steel</td>
</tr>
<tr>
<td>Plastic enclosure</td>
<td>—</td>
<td>PBT/polycarbonate blend</td>
</tr>
<tr>
<td>Metal enclosure</td>
<td>—</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Terminal screws</td>
<td>LED module, incandescent module, contact blocks</td>
<td>Zinc-plated steel with chromate</td>
</tr>
<tr>
<td>Terminals</td>
<td>LED module, incandescent module, contact blocks</td>
<td>Brass with silver-nickel contacts</td>
</tr>
<tr>
<td>Spring clamps</td>
<td>LED module, incandescent module, contact blocks</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Lamp socket</td>
<td>Incandescent module</td>
<td>Brass</td>
</tr>
<tr>
<td>Housing</td>
<td>Incandescent module, LED module</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Low-voltage terminals</td>
<td>Contact blocks</td>
<td>Gold-plated silver-nickel contacts</td>
</tr>
<tr>
<td>Low-voltage spanner</td>
<td>Contact blocks</td>
<td>Gold-plated silver-nickel contacts</td>
</tr>
<tr>
<td>Spanner</td>
<td>Contact blocks</td>
<td>Brass with silver-nickel contacts</td>
</tr>
<tr>
<td>Boot</td>
<td>Toggle Switch, illuminated push button, non-illuminated push button, multi-function illuminated and non-illuminated</td>
<td>Automotive industry acceptable silicone</td>
</tr>
</tbody>
</table>
### Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

### Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
<tr>
<td>G</td>
<td>Guarded</td>
</tr>
</tbody>
</table>

### Color Cap

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Orange</td>
</tr>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>8</td>
<td>Grey*</td>
</tr>
<tr>
<td>9</td>
<td>No cap</td>
</tr>
<tr>
<td>X</td>
<td>Assortment pack‡</td>
</tr>
</tbody>
</table>

* Available in flush only.

‡ Assortment pack contains one cap of each color, not available in BP packaging.

§ Only available with no color cap (9 from Table c).

---

**800F**

```
<table>
<thead>
<tr>
<th>a</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>F</td>
</tr>
<tr>
<td>c</td>
<td>3</td>
</tr>
<tr>
<td>d</td>
<td></td>
</tr>
</tbody>
</table>
```

---

**800F 22.5 mm Push Buttons**

Momentary Push Button Operators, Non-Illuminated — Flush, Extended, Guarded

**Flush Operator**
Cat. No. 800FP-F3

**Extended Operator**
Cat. No. 800FM-E4

**Guarded Operator**
Cat. No. 800FP-G6

---

IEC Push Button Specifications
Momentary Push Button Operators, Non-Illuminated — with Two-Color Molded Legend Caps

Flush Operator
Cat. No. 800FP-F301

800F P – F 3 01

a

Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

b

Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
<tr>
<td>G</td>
<td>Guarded</td>
</tr>
</tbody>
</table>

c

Color Cap

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Orange</td>
</tr>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

d

Legend Text

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>START</td>
</tr>
<tr>
<td>02</td>
<td>STOP</td>
</tr>
<tr>
<td>05</td>
<td>O</td>
</tr>
<tr>
<td>06</td>
<td>I</td>
</tr>
<tr>
<td>08</td>
<td>→</td>
</tr>
<tr>
<td>09</td>
<td>Forward</td>
</tr>
<tr>
<td>10</td>
<td>Reverse</td>
</tr>
<tr>
<td>11</td>
<td>R</td>
</tr>
</tbody>
</table>

* For custom laser-engraved legend cap, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
† White and yellow caps have black text. All other color caps have white text.
¶ Legend button cap supplied loose for customer installation.
∆ Available for flush only.
§ Valid color cap/legend text codes include:

<table>
<thead>
<tr>
<th>Color</th>
<th>Flush Caps</th>
<th>Extended Caps</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>FORWARD, REVERSE, START, I, →, R</td>
<td>→, R</td>
</tr>
<tr>
<td>Black</td>
<td>FORWARD, REVERSE, →, R</td>
<td>STOP, O, →, R</td>
</tr>
<tr>
<td>Green</td>
<td>FORWARD, REVERSE, START, I, →</td>
<td>→</td>
</tr>
<tr>
<td>Red</td>
<td>FORWARD, REVERSE, STOP, O, →</td>
<td>STOP, O, →</td>
</tr>
<tr>
<td>Yellow</td>
<td>FORWARD, REVERSE, →</td>
<td>→</td>
</tr>
<tr>
<td>Blue</td>
<td>FORWARD, REVERSE, →, R</td>
<td>→, R</td>
</tr>
</tbody>
</table>
Momentary Push Button Operators, Illuminated — Flush, Extended, Guarded

Flush Operator
Cat. No. 800FM-LF4

Extended Operator
Cat. No. 800FP-LE3

Guarded Operator
Cat. No. 800FP-LG3

800F P – LE 3 –

Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF</td>
<td>Flush</td>
</tr>
<tr>
<td>LE</td>
<td>Extended</td>
</tr>
<tr>
<td>LG</td>
<td>Guarded</td>
</tr>
</tbody>
</table>

Color Cap *

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber‡</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow‡</td>
</tr>
<tr>
<td>6</td>
<td>Blue‡</td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
</tr>
<tr>
<td>9</td>
<td>No cap</td>
</tr>
</tbody>
</table>

Packaging

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>1 per package</td>
</tr>
<tr>
<td>BP</td>
<td>10 per package§</td>
</tr>
</tbody>
</table>

* For custom laser-engraved operator, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
† When using LED for illumination, a white LED is recommended.
§ Only available with no color cap (9 from Table c).

Push-to-Test Push Button Device Schematic

Illuminated push buttons may be wired as a push-to-test device by using the following schematic and Cat. No. 800F-XD7 Diode module from page 10-111.
### Alternate Action Operators — Non-Illuminated

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA</td>
<td>Non-illuminated, flush, alternate action</td>
</tr>
</tbody>
</table>

**Color Cap**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Orange</td>
</tr>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>9</td>
<td>No cap</td>
</tr>
<tr>
<td>X</td>
<td>Assortment pack</td>
</tr>
</tbody>
</table>

* Must use N.O.E.M. or N.C. contacts.
† For custom laser-engraved legend cap, consult your local Rockwell Automation sales office or Allen-Bradley distributor.

### Alternate Action Operators — Illuminated

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFA</td>
<td>Illuminated, flush, alternate action</td>
</tr>
</tbody>
</table>

**Color Cap**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
</tr>
<tr>
<td>9</td>
<td>No lens</td>
</tr>
</tbody>
</table>

▲ Must use N.O.E.M. or N.C. contacts.
△ LED module required for illumination, can not use incandescent module.
▲ For custom laser-engraved operator, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
▲ Use of a white LED is recommended.
Pilot Light Operators

800F 22.5 mm Push Buttons  IEC Push Button Specifications

<table>
<thead>
<tr>
<th>Operator Construction</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(IP66, Type 4/4X/13)</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(IP66, Type 4/13)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Type</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Diffuser</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lens Cap *</th>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber‡</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Yellow‡</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Blue‡</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>No lens</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packaging</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>1 per package</td>
<td></td>
</tr>
<tr>
<td>BP</td>
<td>10 per package</td>
<td></td>
</tr>
</tbody>
</table>

‡ When using LED for illumination, a white LED is recommended.

For custom laser-engraved pilot light, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
2-Position Selector Switch Operators, Non-Illuminated

### Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

### Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard knob</td>
</tr>
<tr>
<td>H</td>
<td>Knob lever‡</td>
</tr>
</tbody>
</table>

### Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>Maintained (60° switching angle)</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>Spring return from left (60° switching angle)</td>
<td></td>
</tr>
<tr>
<td>R2</td>
<td>Spring return from right (60° switching angle)</td>
<td></td>
</tr>
</tbody>
</table>

### Switching Angle

- **Target Table and Operator Position**: 
  - **N.O.** O X
  - **N.C.** X O

**Note:** X = Closed/O = Open

- Target table for spring return from left is reversed from what is shown in the table.
- Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

### Packaging

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>1 per package</td>
</tr>
<tr>
<td>BP</td>
<td>10 per package</td>
</tr>
</tbody>
</table>

### Knob/Insert Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Knob Color</th>
<th>Insert Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black</td>
<td>White</td>
</tr>
</tbody>
</table>

‡ 30 mm hole spacing will not work if knob lever is used. See page 38 for recommended operator panel spacing.

§ For use in vertical mount Bul. 800F enclosures.

△ Not available with 90° offset orientation.
2-Position Selector Switch Operators, Illuminated

Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS</td>
<td>Standard knob</td>
</tr>
<tr>
<td>LH</td>
<td>Knob lever△</td>
</tr>
</tbody>
</table>

Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>Maintained (60° switching angle)</td>
</tr>
<tr>
<td>L2</td>
<td>Spring return from left (60° switching angle)</td>
</tr>
<tr>
<td>R2</td>
<td>Spring return from right (60° switching angle)</td>
</tr>
</tbody>
</table>

Target Table and Operator Position

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Target Table</th>
<th>Operator Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open
△ Target table for spring return from left is reversed from what is shown in the table.
♣ Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

Knob/Insert Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Knob Color</th>
<th>Insert Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber♦</td>
<td>White</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
<td>White</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
<td>White</td>
</tr>
<tr>
<td>5</td>
<td>Yellow♦</td>
<td>Black</td>
</tr>
<tr>
<td>6</td>
<td>Blue♦</td>
<td>White</td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
<td>Black</td>
</tr>
</tbody>
</table>

Orientation

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Standard</td>
</tr>
<tr>
<td>N</td>
<td>90° offset§</td>
</tr>
</tbody>
</table>

† LED module required for illumination, can not use incandescent module.
§ For use in vertical mount enclosures.
▲ Crevices may exist on product that may be unsuitable for certain applications. Please consult your local Rockwell Automation sales office or Allen-Bradley distributor.
△ Only available in clear.
♦ Use of a white LED is recommended.
3-Position Selector Switch Operators, Non-Illuminated

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator</td>
</tr>
</tbody>
</table>

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Standard knob</td>
</tr>
<tr>
<td>H</td>
<td>Knob lever</td>
</tr>
</tbody>
</table>

**Target Table and Operator Position (60° Switching Angle)**

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Position on Mounting Latch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Left</td>
</tr>
<tr>
<td></td>
<td>Right</td>
</tr>
<tr>
<td></td>
<td>Center</td>
</tr>
<tr>
<td></td>
<td>Center CL</td>
</tr>
<tr>
<td></td>
<td>Center CR</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

Δ Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

* 30 mm hole spacing will not work if knob lever is used. See page 38 for recommended operator panel spacing.

**Orientation**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>90° offset</td>
</tr>
</tbody>
</table>

**Operation**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL</td>
<td>Center left</td>
</tr>
<tr>
<td>CR</td>
<td>Center right</td>
</tr>
</tbody>
</table>

abcde f

Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>Maintained</td>
</tr>
<tr>
<td>L3</td>
<td>Spring return from left</td>
</tr>
<tr>
<td>R3</td>
<td>Spring return from right</td>
</tr>
<tr>
<td>B3</td>
<td>Spring return from left and right</td>
</tr>
</tbody>
</table>

Knob/Insert Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Knob Color</th>
<th>Insert Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black</td>
<td>White</td>
</tr>
</tbody>
</table>

Target Table and Operator Position (60° Switching Angle)
3-Position Selector Switch Operators, Illuminated §

Switching Angle

Standard Knob
Cat. No. 800FP-LSM37

Target Table and Operator Position (60° Switching Angle)

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Left</th>
<th>O</th>
<th>X</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>N.C.</td>
<td></td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Right</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td></td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open
▲ Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

800F  P – LS  M3  3  ___

Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS</td>
<td>Standard knob</td>
</tr>
<tr>
<td>LH</td>
<td>Knob lever♣</td>
</tr>
</tbody>
</table>

Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>Maintained</td>
</tr>
<tr>
<td>L3</td>
<td>Spring return from left</td>
</tr>
<tr>
<td>R3</td>
<td>Spring return from right</td>
</tr>
<tr>
<td>B3</td>
<td>Spring return from left and right</td>
</tr>
</tbody>
</table>

Knob/Insert Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Knob Color</th>
<th>Insert Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber♦</td>
<td>White</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
<td>White</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
<td>White</td>
</tr>
<tr>
<td>5</td>
<td>Yellow♦</td>
<td>Black</td>
</tr>
<tr>
<td>6</td>
<td>Blue♦</td>
<td>White</td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
<td>Black</td>
</tr>
</tbody>
</table>

Orientation

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>90° offset‡</td>
</tr>
</tbody>
</table>

* LED module required for illumination, can not use incandescent module.
‡ For use in vertical mount 800F enclosures.
§ Crevices may exist on product that may be unsuitable for certain applications. Please consult your local Rockwell Automation sales office or Allen-Bradley distributor.
▲ Only available in clear.
♦ Use of a white LED is recommended.
4-Position Selector Switch Operators, Non-Illuminated

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Position on Mounting Latch</th>
<th>N.O.</th>
<th>N.C.E.B.</th>
<th>N.C.L.B.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Left</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Right</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Center</td>
<td>X</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Center CL</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Center CR</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Left</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Right</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Center CL</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Center CR</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Left</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Right</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Center</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Center CL</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Center CR</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Note:** X = Closed / O = Open

* Must use N.O., N.C.E.B., or N.C.L.B. contact blocks only. Cannot use N.C. or N.O.E.M. contact blocks with 4-position selector switch.

Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

#### Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

#### Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4</td>
<td>Maintained (45° switching angle)</td>
<td></td>
</tr>
</tbody>
</table>

#### Knob/Insert Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Knob Color</th>
<th>Insert Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black</td>
<td>White</td>
</tr>
</tbody>
</table>

#### Orientation

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Standard</td>
</tr>
<tr>
<td>N</td>
<td>90° offset†</td>
</tr>
</tbody>
</table>

† For use in vertical mount enclosures.

§ The center contact block can have the same target output as the left or right contact block, by specifying center left (CL) or center right (CR) option.
2-Position Key-Operated Selector Switches, Non-Illuminated

Switching Angle

<table>
<thead>
<tr>
<th>Target Table and Operator Position†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Type</td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open
* Target table for spring return from left is reversed from what is shown in the table.
† Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

```
800F  M  -  KM2  1  d
```

### a

<table>
<thead>
<tr>
<th>Operator Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>P</td>
</tr>
<tr>
<td>M</td>
</tr>
</tbody>
</table>

### b

<table>
<thead>
<tr>
<th>Operator Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>KM2</td>
</tr>
<tr>
<td>KL2</td>
</tr>
<tr>
<td>KR2</td>
</tr>
</tbody>
</table>

### c

<table>
<thead>
<tr>
<th>Key Removal Position‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

‡ Key removal in maintained positions only.
§ Keyed operators are IP66, Type 4/13.
▲ Not intended for high security applications. Interoperability is possible with certain key/cylinder lock combinations. Consult your local Rockwell Automation sales office or Allen-Bradley distributor for interoperability information.
△ For replacement Ronis keys, see Accessories, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
3-Position Key-Operated Selector Switches, Non-Illuminated

**Switching Angle**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

### Target Table and Operator Position

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Position on Mounting Latch</th>
<th>Left</th>
<th>O</th>
<th>O</th>
<th>O</th>
<th>X</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td>Left</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Right</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Center</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>Left</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Right</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Center</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

* Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

See page 16 for optional key codes

---

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM3</td>
<td>Maintained</td>
</tr>
<tr>
<td>KR3</td>
<td>Spring return from right</td>
</tr>
<tr>
<td>KL3</td>
<td>Spring return from left</td>
</tr>
<tr>
<td>KB3</td>
<td>Spring return from both</td>
</tr>
</tbody>
</table>

**Key Removal Position**

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Left</td>
</tr>
<tr>
<td>3</td>
<td>All</td>
</tr>
<tr>
<td>4</td>
<td>Center</td>
</tr>
<tr>
<td>5</td>
<td>Left/center</td>
</tr>
<tr>
<td>7∆</td>
<td>Center/right</td>
</tr>
</tbody>
</table>

* Key removal in maintained positions only.
† Keyed operators are IP66, Type 4/13.
‡ Not intended for high security applications. Interoperability is possible with certain key/cylinder lock combinations. Consult your local Rockwell Automation sales office or Allen-Bradley distributor for interoperability information.
▲ For replacement Ronis keys, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
∆ Key removal position only valid with operator types 800F_-KM3 and 800F_-KL3.
2-Position Push-Pull Operators, Non-Illuminated — Twist-to-Release (Trigger Action), Push-Pull (Trigger Action)★▲

![Operator Construction Diagram](image)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Type</th>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Push, Twist-to-Release★</td>
<td>MT3</td>
<td>30 mm color cap</td>
</tr>
<tr>
<td></td>
<td>MT4</td>
<td>40 mm color cap</td>
</tr>
<tr>
<td></td>
<td>MT6</td>
<td>60 mm color cap</td>
</tr>
<tr>
<td>Push-Pull∇</td>
<td>MP4</td>
<td>40 mm color cap</td>
</tr>
<tr>
<td>Half-Dome Push-Pull∇</td>
<td>MP9</td>
<td>90 mm color cap‡</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Color Cap</th>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engraving</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Blank</td>
<td>No engraving on cap</td>
</tr>
<tr>
<td></td>
<td>LE</td>
<td>EMO laser engraved</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>EMO printed</td>
</tr>
</tbody>
</table>

★ All emergency stop operators are EN ISO 13850 compliant with standard NC, NCLB, or self-monitoring contact blocks.
▲ E-Stop operators, latch, and contact block combinations have been third-party tested for B10d values. B10d values can be found in publication SAFETY-SR001_-EN-E.
★ Only available with red color cap.
△ For EMO guards, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
★▲ Only available on 40 mm color cap.
§ Only available on 40 mm push, twist-to-release operator type (MT44).
‡ Half-dome operators only available with black, red, and yellow color caps.
∇ Limit of four contact blocks max. for these devices.
2-Position Push-Pull Operators, Illuminated — Twist-to-Release (Trigger Action), Push-Pull (Trigger Action)★ † ‡\

- LED module required for illumination, can not use incandescent module.
- All emergency stop operators are EN ISO 13850 compliant with standard NC, NCLB, or self-monitoring contact blocks.
- E-Stop operators, latch, and contact block combinations have been third-party tested for B10d values. B10d values can be found in publication SAFETY-SR001_-EN-E.
- Only available with red color cap.
- Use of a white LED is recommended.
- Only available with 40 mm Push-Pull color cap (LMP4 from Table b).
- Half-dome operators only available with red and yellow lens cap colors.
- Limit of four contact blocks max. for these devices.

---

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

**Operator Type**

- **Push, Twist-to-Release§**
  - Code | Type               |
  - LMT4  | 40 mm color cap   |
  - LMT6  | 60 mm color cap   |
  - Push-Pull&  |
  - Code | Type               |
  - LMP3  | 30 mm color cap   |
  - LMP4  | 40 mm color cap   |
  - LMP6  | 60 mm color cap   |
  - Half-Dome Push-Pull&  |
  - Code | Type               |
  - LMP9  | 90 mm color cap   |

**Lens Cap Color**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow ♦</td>
</tr>
<tr>
<td>6</td>
<td>Blue ♦</td>
</tr>
</tbody>
</table>

---

*800F 22.5 mm Push Buttons*
2-Position Non-Illuminated Operators — Mushroom, Key Release (Trigger Action)★ ∆

<table>
<thead>
<tr>
<th>Operator Construction</th>
<th>Operator Type</th>
<th>Lens Cap Color</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code</strong></td>
<td><strong>Description</strong></td>
<td><strong>Code</strong></td>
</tr>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/13)</td>
<td>4</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
<td></td>
</tr>
</tbody>
</table>

★ All emergency stop operators are EN ISO 13850 compliant with standard NC, NCLB, or self-monitoring contact blocks.

∆ E-Stop operators, latch, and contact block combinations have been third-party tested for B10d values. B10d values can be found in publication SAFETY-SR001_-EN-E.

‡ Keyed operators are IP66, Type 4/13.

§ Not intended for high security applications. Interoperability is possible with certain key/cylinder lock combinations. Consult your local Rockwell Automation sales office or Allen-Bradley distributor for interoperability information.

▲ For replacement Ronis keys, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
### IEC Push Button Specifications

**800F 22.5 mm Push Buttons**

#### 3-Position Push-Pull Operators, Illuminated & Non-Illuminated — Mushroom:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Non-illuminated</td>
</tr>
<tr>
<td>L</td>
<td>Illuminated‡</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Out</th>
<th>Center</th>
<th>In 🌟</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.C.E.B.</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>N.C.L.B.</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open

*Must use N.O., N.C.E.B., or N.C.L.B. contact blocks only. Cannot use N.C. or N.O.E.M. contact blocks with 3-position push-pull operators. Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber§</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>6</td>
<td>Blue§</td>
</tr>
<tr>
<td>7</td>
<td>Clear§</td>
</tr>
</tbody>
</table>

### Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Operator Type</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td></td>
<td>Non-illuminated</td>
</tr>
<tr>
<td>L</td>
<td></td>
<td>Illuminated‡</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Function</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM</td>
<td>Momentary out, Maintained center, Momentary in</td>
</tr>
<tr>
<td>MP</td>
<td>Momentary out, Maintained center, Maintained in</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cap Size</th>
<th>Code</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>40 mm plastic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positions</th>
<th>Code</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>3-position</th>
</tr>
</thead>
</table>

‡ LED module required for illumination. Cannot use incandescent module.

§ Available in illuminated only.

▲ Use of white LED is recommended.

Available in non-illuminated only.

---

**800F** | **M** | **L** | **MM** | **4** | **4** | **E3**
---|---|---|---|---|---|---
**a** | **b** | **c** | **d** | **e** | **f** |

Sold as stand-alone operator only. Not available as a composite catalog number.

Sold as stand-alone operator only. Not available as a composite catalog number.
Momentary Push Button Operators, Non-Illuminated — Mushroom

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP65, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP65, Type 4/13)</td>
</tr>
</tbody>
</table>

### Size and Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM4</td>
<td>40 mm momentary</td>
</tr>
<tr>
<td>MM6</td>
<td>60 mm momentary</td>
</tr>
<tr>
<td>MM9</td>
<td>90 mm momentary†</td>
</tr>
</tbody>
</table>

† Only available with black, red, and yellow cap colors.

Momentary Push Button Operators, Illuminated — Mushroom

<table>
<thead>
<tr>
<th>Code</th>
<th>Color Cap</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>7</td>
<td>Clear §</td>
</tr>
</tbody>
</table>

§ When using LED for illumination, a white LED is recommended.

Momentary mushroom operators are IP65 rated.

<table>
<thead>
<tr>
<th>Code</th>
<th>Lens Cap Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow §</td>
</tr>
<tr>
<td>6</td>
<td>Blue §</td>
</tr>
<tr>
<td>7</td>
<td>Clear §</td>
</tr>
</tbody>
</table>
2-Function Momentary Multi-Operator, Non-Illuminated

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Plastic operator (IP66, Type 4/4X)</td>
</tr>
<tr>
<td>M</td>
<td>Metal operator (IP66, Type 4)</td>
</tr>
</tbody>
</table>

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U2</td>
<td>Two-function</td>
</tr>
</tbody>
</table>

**Operator Type — Position A**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
<tr>
<td>X</td>
<td>No caps (all positions)†</td>
</tr>
</tbody>
</table>

**Operator Color Cap/Text — Position A§**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>A</td>
<td>Green with &quot;Start&quot; text</td>
</tr>
<tr>
<td>B</td>
<td>Red with &quot;Stop&quot; text</td>
</tr>
<tr>
<td>C</td>
<td>White with &quot;Start&quot; text</td>
</tr>
<tr>
<td>D</td>
<td>Black with &quot;Stop&quot; text</td>
</tr>
<tr>
<td>E</td>
<td>Green with &quot;I&quot; text</td>
</tr>
<tr>
<td>F</td>
<td>Red with &quot;O&quot; text</td>
</tr>
<tr>
<td>G</td>
<td>White with &quot;I&quot; text</td>
</tr>
<tr>
<td>H</td>
<td>Black with &quot;O&quot; text</td>
</tr>
</tbody>
</table>

**Operator Type — Position C**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
</tbody>
</table>

**Operator Color Cap/Text — Position C§**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>A</td>
<td>Green with &quot;Start&quot; text</td>
</tr>
<tr>
<td>B</td>
<td>Red with &quot;Stop&quot; text</td>
</tr>
<tr>
<td>C</td>
<td>White with &quot;Start&quot; text</td>
</tr>
<tr>
<td>D</td>
<td>Black with &quot;Stop&quot; text</td>
</tr>
<tr>
<td>E</td>
<td>Green with &quot;I&quot; text</td>
</tr>
<tr>
<td>F</td>
<td>Red with &quot;O&quot; text</td>
</tr>
<tr>
<td>G</td>
<td>White with &quot;I&quot; text</td>
</tr>
<tr>
<td>H</td>
<td>Black with &quot;O&quot; text</td>
</tr>
</tbody>
</table>

* Position 1 of the latch (left position when viewed from the back) corresponds to position A of the operator. Position 2 of the latch (right position when viewed from the back) corresponds to position C of the operator.

† For custom-engraved caps, consult your local Rockwell Automation sales office or Allen-Bradley distributor.

§ Valid color cap/legend text codes include:

<table>
<thead>
<tr>
<th>Color</th>
<th>Flush Caps</th>
<th>Extended Caps</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>START, I</td>
<td>—</td>
</tr>
<tr>
<td>Black</td>
<td>—</td>
<td>STOP, O</td>
</tr>
<tr>
<td>Green</td>
<td>START, I</td>
<td>—</td>
</tr>
<tr>
<td>Red</td>
<td>—</td>
<td>STOP, O</td>
</tr>
</tbody>
</table>
2-Function Momentary Multi-Operator, Illuminated

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Plastic operator (IP66, Type 4/4X)</td>
</tr>
<tr>
<td>M</td>
<td>Metal operator (IP66, Type 4)</td>
</tr>
</tbody>
</table>

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LU2</td>
<td>Two-function Illuminated</td>
</tr>
</tbody>
</table>

**Operator Type — Position A**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
<tr>
<td>X</td>
<td>No caps (all positions)</td>
</tr>
</tbody>
</table>

**Operator Color Cap/Text — Position A**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>A</td>
<td>Green with “Start” text</td>
</tr>
<tr>
<td>B</td>
<td>Red with “Stop” text</td>
</tr>
<tr>
<td>C</td>
<td>White with “Start” text</td>
</tr>
<tr>
<td>D</td>
<td>Black with “Stop” text</td>
</tr>
<tr>
<td>E</td>
<td>Green with “I” text</td>
</tr>
<tr>
<td>F</td>
<td>Red with “O” text</td>
</tr>
<tr>
<td>G</td>
<td>White with “I” text</td>
</tr>
<tr>
<td>H</td>
<td>Black with “O” text</td>
</tr>
</tbody>
</table>

**Operator Type — Position C**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
</tbody>
</table>

**Operator Color Cap/Text — Position C**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>A</td>
<td>Green with “Start” text</td>
</tr>
<tr>
<td>B</td>
<td>Red with “Stop” text</td>
</tr>
<tr>
<td>C</td>
<td>White with “Start” text</td>
</tr>
<tr>
<td>D</td>
<td>Black with “Stop” text</td>
</tr>
<tr>
<td>E</td>
<td>Green with “I” text</td>
</tr>
<tr>
<td>F</td>
<td>Red with “O” text</td>
</tr>
<tr>
<td>G</td>
<td>White with “I” text</td>
</tr>
<tr>
<td>H</td>
<td>Black with “O” text</td>
</tr>
</tbody>
</table>

* LED module required for illumination, cannot use incandescent module.
‡ Position 1 of the latch (left position when viewed from the back) corresponds to position A of the operator. Position 2 of the latch (right position when viewed from the back) corresponds to position C of the operator. Position 3 of the latch (center position) is reserved for the power module.
§ For custom-engraved caps, consult your local Rockwell Automation sales office or Allen-Bradley distributor.
▲ Valid color cap/legend text codes include:
3-Function Momentary Multi-Operator, Non-Illuminated

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Plastic operator (IP66, Type 4/4X)</td>
</tr>
<tr>
<td>M</td>
<td>Metal operator (IP66, Type 4)</td>
</tr>
</tbody>
</table>

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>U3</td>
<td>Three-function</td>
</tr>
</tbody>
</table>

**Operator Type — Position A**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
<tr>
<td>X</td>
<td>No caps (all positions)‡§</td>
</tr>
</tbody>
</table>

**Operator Color Cap/Text — Position A**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Green with “Start” text</td>
</tr>
<tr>
<td>B</td>
<td>Red with “Stop” text</td>
</tr>
<tr>
<td>C</td>
<td>White with “Start” text</td>
</tr>
<tr>
<td>D</td>
<td>Black with “Stop” text</td>
</tr>
<tr>
<td>E</td>
<td>Green with “I” text</td>
</tr>
<tr>
<td>F</td>
<td>Red with “O” text</td>
</tr>
<tr>
<td>G</td>
<td>White with “I” text</td>
</tr>
<tr>
<td>H</td>
<td>Black with “O” text</td>
</tr>
</tbody>
</table>

**Operator Color Cap/Text — Position C**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
</tbody>
</table>

**Operator Color Cap/Text — Position C**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

* Position 1 of the latch (left position when viewed from the back) corresponds to position A of the operator. Position 2 of the latch (right position when viewed from the back) corresponds to position C of the operator. Position 3 of the latch (center position) corresponds to position B of the operator.

‡ For custom-engraved caps, consult your local Rockwell Automation sales office or Allen-Bradley distributor.

§ For “no caps” option, (position B) center cap available as red, no text only.

♣ Valid color cap/legend text codes include:

<table>
<thead>
<tr>
<th>Color</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Flush Caps, Extended Caps</td>
</tr>
<tr>
<td>Black</td>
<td>START, I, STOP, O</td>
</tr>
<tr>
<td>Green</td>
<td>START, I, —</td>
</tr>
<tr>
<td>Red</td>
<td>—, STOP, O</td>
</tr>
</tbody>
</table>

Rockwell Automation Publication 800-TD008A-EN-P 25
**Reset Operators — Mechanical and/or Electrical Reset**

![Reset Operator Image]

**Cat. No. 800FP-R611**

### Operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

### Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Reset</td>
</tr>
</tbody>
</table>

### Color Cap

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

### Legend Text

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No text</td>
</tr>
<tr>
<td>11</td>
<td>R</td>
</tr>
</tbody>
</table>

* Will accept latch and up to four single circuit contact blocks or two dual circuit contact blocks; no contacts allowed in center position.

‡ 11 mm reset stroke length.
Selector Push Button Operators

Target Table and Operator Position (2-Position)

<table>
<thead>
<tr>
<th>Contact Type†</th>
<th>Position on Mounting Latch</th>
<th>Selector Left Free</th>
<th>Selector Left Depressed</th>
<th>Selector Right Free</th>
<th>Selector Right Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td>Left</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>N.O.</td>
<td>Right</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.O.</td>
<td>Center</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>Left</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>Right</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>N.C.</td>
<td>Center</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open

Target Table and Operator Position (3-Position)

<table>
<thead>
<tr>
<th>Contact Type†</th>
<th>Position on Mounting Latch</th>
<th>Selector Left Free</th>
<th>Selector Left Depressed</th>
<th>Selector Center Free</th>
<th>Selector Center Depressed</th>
<th>Selector Right Free</th>
<th>Selector Right Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td>Left</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>N.O.</td>
<td>Right</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.O.</td>
<td>Center</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>Left</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>Right</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>N.C.</td>
<td>Center</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open
† Contact selection is limited to the following options; consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.

800F  P – SJ  2  2

-operator Construction

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Round plastic operator (IP66, Type 4/4X/13)</td>
</tr>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2-position</td>
</tr>
<tr>
<td>3</td>
<td>3-position</td>
</tr>
</tbody>
</table>

Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SJ</td>
<td>Selector jog</td>
</tr>
</tbody>
</table>

Color Cap*:  

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
</tbody>
</table>

* Buttons cannot be engraved.
## 800F 22.5 mm Push Buttons

### IEC Push Button Specifications

#### Toggle Switch Operators

![Toggle Switch Operator](image)

**Operator Construction**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Round metal operator (IP66, Type 4/13)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J</td>
<td>Toggle switch †‡</td>
</tr>
</tbody>
</table>

† Use legend plates 800F-34_ and 800F-35_.
‡ Silicone boot comes standard with toggle switch, consult your local Rockwell Automation sales office or Allen-Bradley distributor for replacement boots.

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>2-position, maintained</td>
</tr>
<tr>
<td>R2</td>
<td>2-position, momentary</td>
</tr>
<tr>
<td>M4</td>
<td>4-position, maintained</td>
</tr>
<tr>
<td>R4</td>
<td>4-position, momentary</td>
</tr>
</tbody>
</table>

**Operator Function**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>2-position, maintained</td>
</tr>
<tr>
<td>R2</td>
<td>2-position, momentary</td>
</tr>
<tr>
<td>M4</td>
<td>4-position, maintained</td>
</tr>
<tr>
<td>R4</td>
<td>4-position, momentary</td>
</tr>
</tbody>
</table>

---

### Target Table and Operator Position (2-Position)

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Position on Mounting Latch</th>
<th>Toggle Left</th>
<th>Center</th>
<th>Toggle Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td>Left</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.O.</td>
<td>Right</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>N.O.</td>
<td>Center</td>
<td>X</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>Left</td>
<td>X</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>N.C.</td>
<td>Right</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N.C.</td>
<td>Center</td>
<td>O</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

---

### Target Table and Operator Position (4-Position)

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Position on Mounting Latch</th>
<th>Toggle Up</th>
<th>Toggle Left</th>
<th>Center</th>
<th>Toggle Right</th>
<th>Toggle Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.O.</td>
<td>Left</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>N.O.</td>
<td>Right</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>N.C.L.B.</td>
<td>Left</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N.C.L.B.</td>
<td>Right</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N.C.E.B.</td>
<td>Left</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N.C.E.B.</td>
<td>Right</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

† Contact selection is limited to the following options, consult your local Rockwell Automation sales office or Allen-Bradley distributor for other options.
‡ Must use N.O., N.C.E.B., or N.C.L.B. contact blocks only. Cannot use N.C. or N.O.E.M. contact blocks with 4-position toggle switch.

---

Use legend plates 800F-34_ and 800F-35_.

Silicone boot comes standard with toggle switch, consult your local Rockwell Automation sales office or Allen-Bradley distributor for replacement boots.
## IEC Push Button Specifications

### 800F 22.5 mm Push Buttons

#### Back-of-Panel Components

**Contact Blocks with Latch — Composite**

<table>
<thead>
<tr>
<th>800F –</th>
<th>P</th>
<th>X</th>
<th>0</th>
<th>1</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Plastic latch</td>
</tr>
<tr>
<td>M</td>
<td>Metal latch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Screw termination</td>
</tr>
<tr>
<td>Q</td>
<td>Spring-clamp termination</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Block(s) Termination Style</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screw termination</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Spring-clamp termination</td>
<td>Q</td>
<td></td>
</tr>
</tbody>
</table>

*Six circuits maximum allowable.*

<table>
<thead>
<tr>
<th>N.O. (Normally Open) Circuits</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No contact</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1 N.O.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2 N.O.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3 N.O.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4 N.O.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5 N.O.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6 N.O.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N.C. (Normally Closed) Circuits</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No contact</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1 N.C.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3 N.C.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4 N.C.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5 N.C.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6 N.C.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specialty Contact Block(s)</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td></td>
<td>Standard blocks</td>
</tr>
<tr>
<td>V</td>
<td></td>
<td>Low voltage — QuadCONNECT™</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>N.O. early make</td>
</tr>
<tr>
<td>L</td>
<td></td>
<td>N.C. late break</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>N.C. early break</td>
</tr>
<tr>
<td>S</td>
<td></td>
<td>N.C. self-monitoring</td>
</tr>
</tbody>
</table>

#### Power Modules with Latch — Composite

<table>
<thead>
<tr>
<th>800F –</th>
<th>M</th>
<th>N</th>
<th>3</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
<td>b</td>
<td>c</td>
<td>d</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Plastic latch</td>
</tr>
<tr>
<td>M</td>
<td>Metal latch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Module Type</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Incandescent module, screw termination</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>Integrated LED module, screw termination</td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>Integrated LED module, spring-clamp termination</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No bulb</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6V AC/DC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12V AC/DC</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>24V AC/DC</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>48V AC/DC</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>120V AC</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>240V AC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lamp Color</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Incandescent</td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>Red LED</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Green LED</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td>White LED</td>
<td></td>
</tr>
</tbody>
</table>

§ LED modules for use with all illuminated operators. Incandescent module for use with pilot lights, momentary push buttons, and momentary mushroom operators only.

▲ Four circuits maximum allowable when power module is used. Contact blocks cannot be stacked on power module.

♦ Only available for incandescent module.

♠ For best illumination results, LED color should match lens color. For yellow operator, select a white LED.
### Back-of-Panel Components, Continued

#### Power Modules with Contact Blocks and Latch — Composite

<table>
<thead>
<tr>
<th>800F</th>
<th>P</th>
<th>N</th>
<th>5</th>
<th>R</th>
<th>X</th>
<th>1</th>
<th>0</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
<td>f</td>
<td>g</td>
</tr>
</tbody>
</table>

#### a) Style

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Plastic latch</td>
</tr>
<tr>
<td>M</td>
<td>Metal latch</td>
</tr>
</tbody>
</table>

#### b) Power Module Type†‡

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Incandescent module, screw termination</td>
</tr>
<tr>
<td>N</td>
<td>Integrated LED module, screw termination</td>
</tr>
<tr>
<td>Q</td>
<td>Integrated LED module, spring-clamp termination</td>
</tr>
</tbody>
</table>

#### c) Voltage

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No bulb§</td>
</tr>
<tr>
<td>1</td>
<td>6V AC/DC§</td>
</tr>
<tr>
<td>2</td>
<td>12V AC/DC§</td>
</tr>
<tr>
<td>3</td>
<td>24V AC</td>
</tr>
<tr>
<td>4</td>
<td>48V AC/DC§</td>
</tr>
<tr>
<td>5</td>
<td>120V AC</td>
</tr>
<tr>
<td>7</td>
<td>240V AC▲</td>
</tr>
</tbody>
</table>

#### d) Lamp Color∆

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Incandescent</td>
</tr>
<tr>
<td>R</td>
<td>Red LED</td>
</tr>
<tr>
<td>G</td>
<td>Green LED</td>
</tr>
<tr>
<td>W</td>
<td>White LED</td>
</tr>
</tbody>
</table>

#### e) Contact Block(s) Termination Style

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Screw termination</td>
</tr>
<tr>
<td>Q</td>
<td>Spring-clamp termination</td>
</tr>
</tbody>
</table>

#### f) N.O. (Normally Open) Circuits

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No contact</td>
</tr>
<tr>
<td>1</td>
<td>1 N.O.</td>
</tr>
<tr>
<td>2</td>
<td>2 N.O.</td>
</tr>
<tr>
<td>3</td>
<td>3 N.O.</td>
</tr>
<tr>
<td>4</td>
<td>4 N.O.</td>
</tr>
</tbody>
</table>

#### g) N.C. (Normally Closed) Circuits

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No contact</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1 N.C.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3 N.C.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4 N.C.</td>
<td></td>
</tr>
</tbody>
</table>

#### h) Specialty Contact Block(s)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Standard blocks</td>
</tr>
<tr>
<td>V</td>
<td>Low voltage — QuadCONNECT™</td>
</tr>
<tr>
<td>E</td>
<td>N.O. early make</td>
</tr>
<tr>
<td>L</td>
<td>N.C. late break</td>
</tr>
<tr>
<td>B</td>
<td>N.C. early break</td>
</tr>
<tr>
<td>S</td>
<td>N.C. self-monitoring</td>
</tr>
</tbody>
</table>

---

* Four circuits maximum allowable when power module is used. Contact blocks cannot be stacked on power module.

† LED modules for use with all illuminated operators. Incandescent module for use with pilot lights, push buttons, and momentary mushroom operators only.

§ Only available for incandescent module.

▲ Only available for integrated LED module.

∆ For best illuminated results, LED should match lens color. For yellow operator, select a white LED.
## IEC Push Button Specifications

### 800F 22.5 mm Push Buttons

#### Assembled Stations with DeviceNet

<table>
<thead>
<tr>
<th>Hole Count</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Hole</td>
<td>800F</td>
<td>a b c d e</td>
</tr>
<tr>
<td>3-Hole</td>
<td>800F</td>
<td>a b c d c d e</td>
</tr>
<tr>
<td>4-Hole</td>
<td>800F</td>
<td>a b c d c d e</td>
</tr>
</tbody>
</table>

### Mounting Orientation

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>Vertical</td>
</tr>
<tr>
<td>H</td>
<td>Horizontal</td>
</tr>
</tbody>
</table>

### Enclosure Style/Legends

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2-hole/legend frames</td>
</tr>
<tr>
<td>B</td>
<td>3-hole/legend frames</td>
</tr>
<tr>
<td>C</td>
<td>4-hole/legend frames</td>
</tr>
<tr>
<td>D</td>
<td>2-hole/no legend frames</td>
</tr>
<tr>
<td>E</td>
<td>3-hole/no legend frames</td>
</tr>
<tr>
<td>F</td>
<td>4-hole/no legend frames</td>
</tr>
<tr>
<td>H</td>
<td>2-hole/E-stop only no legend frames‡</td>
</tr>
</tbody>
</table>

### Operator Types

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Non-illuminated flush button</td>
</tr>
<tr>
<td>B</td>
<td>Non-illuminated extended button</td>
</tr>
<tr>
<td>C</td>
<td>Non-illuminated guarded button</td>
</tr>
<tr>
<td>D</td>
<td>Illuminated flush button</td>
</tr>
<tr>
<td>E</td>
<td>Illuminated extended button</td>
</tr>
<tr>
<td>F</td>
<td>Illuminated guarded button</td>
</tr>
<tr>
<td>G</td>
<td>Non-illuminated 2-pos. selector switch</td>
</tr>
<tr>
<td>H</td>
<td>Non-illuminated 3-pos. selector switch</td>
</tr>
<tr>
<td>J</td>
<td>Pilot light (diffused)</td>
</tr>
<tr>
<td>K</td>
<td>Hole plug &amp;</td>
</tr>
<tr>
<td>L</td>
<td>Non-illuminated TTR E-stop §&amp;</td>
</tr>
<tr>
<td>M</td>
<td>Non-illuminated push pull §&amp;</td>
</tr>
<tr>
<td>N</td>
<td>2-pos. key selector switch</td>
</tr>
<tr>
<td>P</td>
<td>3-pos. key selector switch</td>
</tr>
<tr>
<td>R</td>
<td>Non-illuminated 40 mm mushroom</td>
</tr>
<tr>
<td>T</td>
<td>E-stop key release §&amp;</td>
</tr>
<tr>
<td>U</td>
<td>Potentiometer &amp;</td>
</tr>
<tr>
<td>W</td>
<td>Illuminated push pull</td>
</tr>
<tr>
<td>X</td>
<td>Illuminated 2-pos. maintained selector switch</td>
</tr>
<tr>
<td>Y</td>
<td>Illuminated 3-pos. maintained selector switch</td>
</tr>
<tr>
<td>Z</td>
<td>Illuminated 40 mm mushroom</td>
</tr>
</tbody>
</table>

### Color/Text

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
</tr>
<tr>
<td>8</td>
<td>Grey ‡</td>
</tr>
<tr>
<td>9</td>
<td>No cap</td>
</tr>
<tr>
<td>10</td>
<td>Amber</td>
</tr>
<tr>
<td>A</td>
<td>Green with “Start” text</td>
</tr>
<tr>
<td>B</td>
<td>Red with “Stop” text</td>
</tr>
<tr>
<td>C</td>
<td>Black with “→” symbol</td>
</tr>
<tr>
<td>D</td>
<td>Black with “←” symbol</td>
</tr>
<tr>
<td>E</td>
<td>Black with “↑” symbol</td>
</tr>
<tr>
<td>F</td>
<td>Black with “↓” symbol</td>
</tr>
<tr>
<td>G</td>
<td>Green with “I” symbol</td>
</tr>
<tr>
<td>H</td>
<td>Red with “O” symbol</td>
</tr>
<tr>
<td>I</td>
<td>Blue with “R” text</td>
</tr>
<tr>
<td>J</td>
<td>Red with yellow metal guard ‡</td>
</tr>
<tr>
<td>K</td>
<td>Yellow with yellow metal guard ‡</td>
</tr>
</tbody>
</table>

### External I/O Version

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No external I/O</td>
</tr>
<tr>
<td>A</td>
<td>1 input/1 output (sinking)</td>
</tr>
<tr>
<td>B</td>
<td>1 input/1 output (sourcing)</td>
</tr>
<tr>
<td>C</td>
<td>2 input</td>
</tr>
<tr>
<td>D</td>
<td>2 output (sourcing)</td>
</tr>
<tr>
<td>E</td>
<td>1 E-stop block ♠</td>
</tr>
<tr>
<td>F</td>
<td>2 E-stop block ♠</td>
</tr>
<tr>
<td>G</td>
<td>2 input/2 output</td>
</tr>
<tr>
<td>H</td>
<td>2 input/2 output</td>
</tr>
<tr>
<td>K</td>
<td>2 input/2 output</td>
</tr>
<tr>
<td>L</td>
<td>1 input/1 output (sinking) + 1 E-stop block ♠</td>
</tr>
<tr>
<td>M</td>
<td>1 input/1 output (sourcing) + 1 E-stop block ♠</td>
</tr>
<tr>
<td>N</td>
<td>1 input/1 output (sinking) + 2 E-stop block ♠</td>
</tr>
<tr>
<td>P</td>
<td>1 input/1 output (sourcing) + 2 E-stop block ♠</td>
</tr>
<tr>
<td>Q</td>
<td>2 input + 1 E-stop block ♠</td>
</tr>
<tr>
<td>R</td>
<td>2 input + 2 E-stop block ♠</td>
</tr>
<tr>
<td>U</td>
<td>2 output (sourcing) + 1 E-stop block ♠</td>
</tr>
<tr>
<td>W</td>
<td>2 output (sourcing) + 2 E-stop block ♠</td>
</tr>
<tr>
<td>X</td>
<td>2 input + 1 input/1 output (sinking)</td>
</tr>
</tbody>
</table>

* Selector Switches in a vertical mount enclosure are mounted with a horizontal orientation.
* Footnote § indicates that the operator is to be used as an E-Stop. To be valid as an E-Stop, the operator must use color/text option 4 from Table d and it must be placed in the last hole position in the enclosure, where a yellow round E-Stop legend plate is provided. An E-Stop connector also must be chosen from Table e. Also see footnote ♠.
* Footnote ♠ indicates that there are two physical external I/O connectors.
* Operator Types L, M, and T from Table c may be used as emergency stops. To be valid as an E-Stop, operators must use color/text option 4 from Table d and it must be placed in the last hole position in the enclosure, where a yellow round E-Stop legend plate is provided. An E-Stop connector also must be chosen from Table e. Also see footnote ♠.
* An E-Stop connector is used, 2 unassigned I/O points can be assigned to the other connector.
* External I/O Versions F, L, M, and U receive only one contact block for the external E-Stop string. These connectors are rated 3 A. If more than 3 A of current is needed or if there are two E-Stop strings, use External I/O Versions G, N, P, R, and W. These versions receive two contact blocks. This allows for 6 A of switching or for two E-Stop strings.
* Cannot be ordered with “No Cap” (9 from Table d - Color/Text).
* Operator Types K, L, M, T, and U from Table c are not available with legend frames.
* Only available with non-illuminated push-pull operator (M from Table c).
Two-Color Molded Legend Caps — Non-Illuminated Push Buttons

### Button Cap Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF</td>
<td>Flush</td>
</tr>
<tr>
<td>AE</td>
<td>Extended</td>
</tr>
</tbody>
</table>

### Color Cap

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

### Legend Text

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>START</td>
</tr>
<tr>
<td>02</td>
<td>STOP</td>
</tr>
<tr>
<td>05</td>
<td>O</td>
</tr>
<tr>
<td>06</td>
<td>I</td>
</tr>
<tr>
<td>08</td>
<td>→</td>
</tr>
<tr>
<td>09</td>
<td>FORWARD</td>
</tr>
<tr>
<td>10</td>
<td>REVERSE</td>
</tr>
<tr>
<td>11</td>
<td>R</td>
</tr>
</tbody>
</table>

### Size/Color (Yellow)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15Y</td>
<td>60 mm round (30.5 mm mounting hole)</td>
</tr>
<tr>
<td>15YS</td>
<td>60 mm round (22.5 mm mounting hole)</td>
</tr>
<tr>
<td>16Y</td>
<td>90 mm round (22.5 mm mounting hole)</td>
</tr>
</tbody>
</table>

### Text

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No text</td>
</tr>
<tr>
<td>E112</td>
<td>EMERGENCY STOP</td>
</tr>
<tr>
<td>F112</td>
<td>ARRÊT D'URGENCE</td>
</tr>
<tr>
<td>S112</td>
<td>PARO DE EMERGENCIA</td>
</tr>
<tr>
<td>G112</td>
<td>NOT HALT</td>
</tr>
<tr>
<td>T112</td>
<td>ARRESTO EMERGENZA</td>
</tr>
<tr>
<td>N112</td>
<td>NØDSTOP, EMERGENCY STOP</td>
</tr>
<tr>
<td>P112</td>
<td>PARADA DE EMERGENCIA</td>
</tr>
</tbody>
</table>

### Push Button, Multi-Function Caps

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Push button extended cap</td>
</tr>
<tr>
<td>F</td>
<td>Push button flush cap</td>
</tr>
<tr>
<td>FA</td>
<td>Alternate action cap</td>
</tr>
<tr>
<td>FAU</td>
<td>Multi-function flush cap (for position A)</td>
</tr>
<tr>
<td>EAU</td>
<td>Multi-function extended cap (for position A)</td>
</tr>
<tr>
<td>FCU</td>
<td>Multi-function flush cap (for position C)</td>
</tr>
<tr>
<td>ECU</td>
<td>Multi-function extended cap (for position C)</td>
</tr>
</tbody>
</table>

### Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber</td>
</tr>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

---

* Available in flush only.
† White and yellow caps have black text. All other color caps have white text.
‡ Valid color cap text codes include:

<table>
<thead>
<tr>
<th>Color</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amber</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

△ Sold only multiples of 10. Order (quantity of) 10 to receive one package of 10 pieces.
* Not for use with base mounted contact blocks.
♣ Not available on 15YS version.
◆ Text printed on the 15Y version only.
△ Text printed on the 15YS & 16Y versions only.

---

Emergency Stop Legend Plates

### Size/Color (Yellow)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15Y</td>
<td>60 mm round (30.5 mm mounting hole)</td>
</tr>
<tr>
<td>15YS</td>
<td>60 mm round (22.5 mm mounting hole)</td>
</tr>
<tr>
<td>16Y</td>
<td>90 mm round (22.5 mm mounting hole)</td>
</tr>
</tbody>
</table>

### Text

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W112</td>
<td>NØDSTOP, EMERGENCY STOP</td>
</tr>
<tr>
<td>A112</td>
<td>NØDSTOP</td>
</tr>
<tr>
<td>B112</td>
<td>EMERGENCY STOP, ARRÊT D'URGENCE</td>
</tr>
<tr>
<td>D112</td>
<td>NOT HALT, ARRESTO EMERGENZA, ARRÊT D'URGENCE</td>
</tr>
<tr>
<td>H112</td>
<td>NØD-STOP, HÅTÄ-SEIS, NØD-STOP</td>
</tr>
<tr>
<td>M112</td>
<td>EMERGENCY STOP, ARRÊT D'URGENCE, NOT HALT</td>
</tr>
<tr>
<td>L112</td>
<td>NEYÐARSTOPP, NEYÐARSTOPP</td>
</tr>
</tbody>
</table>

---

Push Button, Multi-Function Caps

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Push button extended cap</td>
</tr>
<tr>
<td>F</td>
<td>Push button flush cap</td>
</tr>
<tr>
<td>FA</td>
<td>Alternate action cap</td>
</tr>
<tr>
<td>FAU</td>
<td>Multi-function flush cap (for position A)</td>
</tr>
<tr>
<td>EAU</td>
<td>Multi-function extended cap (for position A)</td>
</tr>
<tr>
<td>FCU</td>
<td>Multi-function flush cap (for position C)</td>
</tr>
<tr>
<td>ECU</td>
<td>Multi-function extended cap (for position C)</td>
</tr>
</tbody>
</table>

### Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber</td>
</tr>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>
Approximate Dimensions

Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes. Refer to RAISE software for additional dimensional information.

Non-Illuminated and Illuminated Momentary Flush Push Button Operators

Illuminated and Non-Illuminated Momentary Extended Push Button Operators

Non-Illuminated Guarded, Illuminated and Non-Illuminated Alternate Action Push Button Operators

90 mm Half Dome

90 mm Mushroom

Illuminated and Non-Illuminated Momentary Mushroom Operators 40 mm and 60 mm

Toggle Switch Operators

Selector Jog Operators

Illuminated Momentary Guarded Push Button Operators

Reset Operators with Reset Rod

Pilot Light Operators

Operator       A
40 mm          39.8
60 mm          59.8
800F 22.5 mm Push Buttons

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

Illuminated and Non-Illuminated 2-Position Multi-Function Operators

Non-Illuminated 3-Position Multi-Function Operators

Potentiometer Operator

Illuminated and Non-Illuminated Knob Selector Switch Operators

Non-Illuminated Knob Lever Selector Switch Operators

Illuminated and Non-Illuminated Twist-to-Release Operators 30 mm, 40 mm, and 60 mm

Illuminated and Non-Illuminated Push-Pull Mushroom Operators 30 mm, 40 mm, and 60 mm

<table>
<thead>
<tr>
<th>Operator</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 mm</td>
<td>30.0</td>
</tr>
<tr>
<td>40 mm</td>
<td>40.0</td>
</tr>
<tr>
<td>60 mm</td>
<td>60.0</td>
</tr>
</tbody>
</table>

Key Selector Switch and Key Ejected SensEject Operators

Mushroom Key Release Operator 40 mm

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

### Back-of-Panel Components — Incandescent Module with Latch

![Incandescent Module with Latch](image)

### Back-of-Panel Components — LED Module with Latch

![LED Module with Latch](image)

### Back-of-Panel Components — Contact Cartridges with Latch

![Contact Cartridges with Latch](image)

### Back-of-Panel Components — Dual Circuit Contact Block or Self Monitoring Contact Block (Max. of 1 Deep)

![Dual Circuit Contact Block or Self Monitoring Contact Block](image)

### Potentiometer with Resistive Element

![Potentiometer with Resistive Element](image)

### Customer Supplied Resistive Element

![Customer Supplied Resistive Element](image)

### 30 x 50 mm Snap-In Legend Plate

![30 x 50 mm Snap-In Legend Plate](image)

### 30 x 40 mm Snap-In Legend Plate

![30 x 40 mm Snap-In Legend Plate](image)

### Plate 27.1 mm x 6.4 mm

![Plate 27.1 mm x 6.4 mm](image)
Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes.

**60 mm Round Legend — 15Y**

**60 mm Round Legend — 15YS**

**30 x 60 mm Snap-In Legend Plate**

**Potentiometer Legend Plate (Series A)**

**Anti-Rotation Washer**

**Special Multi-Function Snap-In Legend Plate**

**30 x 40 mm One-Piece Legend Plate**

**30 x 50 mm One-Piece Legend Plate**

**30 mm to 22.5 mm Hole Adapter**

**30 x 66 mm One-Piece Legend Plate**

**Base Mount Adapter**

**Note:** Panel thickness range is 1.0…6.0 mm maximum.

Panel thickness reduced to 4 mm (standard anti-rotation washer) or 5 mm (thin anti-rotation washer) when optional legend plates are used.
Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes.

**Locking Cover**

**Maintained Mushroom Locking Attachment**

**Momentary Mushroom Locking Attachment**

**Extended Non-Illuminated Locking Attachment**

**Flush Non-Illuminated Locking Attachment**

**Selector Switch Locking Cover (Same for all Lock Positions)**

**Narrow Guard**

**Protective Ring**

**Plastic Guard**
800F 22.5 mm Push Buttons

IEC Push Button Specifications

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

### Plastic Enclosures

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>No. of Holes</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Mounting Holes</th>
</tr>
</thead>
<tbody>
<tr>
<td>800F-1P</td>
<td>1</td>
<td>85</td>
<td>89</td>
<td>58</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>800F-1Y+D</td>
<td></td>
<td>85</td>
<td>89</td>
<td>74</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>800F-2P+D</td>
<td>2</td>
<td>124</td>
<td>79</td>
<td>58</td>
<td>31</td>
<td>48</td>
</tr>
<tr>
<td>800F-3P+D</td>
<td>3</td>
<td>155</td>
<td>79</td>
<td>58</td>
<td>31</td>
<td>48</td>
</tr>
<tr>
<td>800F-4P+D</td>
<td>4</td>
<td>186</td>
<td>79</td>
<td>58</td>
<td>31</td>
<td>48</td>
</tr>
<tr>
<td>800F-6P+D</td>
<td>6</td>
<td>248</td>
<td>87</td>
<td>64</td>
<td>31</td>
<td>55</td>
</tr>
</tbody>
</table>

† Mounting screw — pan head with diameter ≤ 7 mm.

* P = PG conduit holes or M = Metric conduit holes

### Pendant Stations

- Cable opening = 21.2 mm diameter

### Metal Enclosures

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>No. of Holes</th>
<th>A</th>
<th>D</th>
<th>Mounting Holes</th>
</tr>
</thead>
<tbody>
<tr>
<td>800F-1M+P</td>
<td>1</td>
<td>99</td>
<td></td>
<td>62</td>
</tr>
<tr>
<td>800F-2M+P</td>
<td>2</td>
<td>137</td>
<td>37.5</td>
<td>100</td>
</tr>
<tr>
<td>800F-3M+P</td>
<td>3</td>
<td>174</td>
<td>37.5</td>
<td>137</td>
</tr>
<tr>
<td>800F-5M+P</td>
<td>5</td>
<td>249</td>
<td>37.5</td>
<td>212</td>
</tr>
</tbody>
</table>

* P = PG conduit holes or M = Metric conduit holes

---

**Note:**

Instruction Sheet

- Cable opening = 21.2 mm diameter

- Dimensions are not intended to be used for manufacturing purposes.
# Assembled Station Pin Out Chart

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Connector Style / No. of Pins</th>
<th>Location 1</th>
<th>A to Pin #</th>
<th>B to Pin #</th>
<th>Location 2</th>
<th>C to Pin #</th>
<th>D to Pin #</th>
<th>Location 3</th>
<th>E to Pin #</th>
<th>F to Pin #</th>
<th>G to Pin #</th>
</tr>
</thead>
<tbody>
<tr>
<td>800F-1YMQ3V</td>
<td>AC Micro / 5-pin</td>
<td>BX01V</td>
<td>1</td>
<td>2</td>
<td>BX01V</td>
<td>4</td>
<td>5</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
</tr>
<tr>
<td>800F-1YMQA</td>
<td>AC Micro / 6-pin</td>
<td>BX01</td>
<td>1</td>
<td>5</td>
<td>BX01</td>
<td>2</td>
<td>6</td>
<td>BX10</td>
<td>3</td>
<td>4</td>
<td>—</td>
</tr>
<tr>
<td>800F-NX1</td>
<td>AC Micro / 5-pin</td>
<td>BX01</td>
<td>1/4</td>
<td>2/3</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>800F-1YMQ1</td>
<td>DC Micro / 4-pin</td>
<td>BX01</td>
<td>1</td>
<td>2/3</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>800F-1YMQ2</td>
<td>DC Micro / 5-pin</td>
<td>BX01V</td>
<td>1</td>
<td>2</td>
<td>BX01V</td>
<td>4</td>
<td>5</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
</tr>
<tr>
<td>800F-1YMQ3</td>
<td>DC Micro / 5-pin</td>
<td>BX01V</td>
<td>1</td>
<td>2</td>
<td>BX01V</td>
<td>2</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>800F-1YMQ3VEG</td>
<td>DC Micro / 5-pin</td>
<td>BX01V</td>
<td>1</td>
<td>3</td>
<td>BX01V</td>
<td>2</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>800F-1YMQ3V</td>
<td>DC Micro / 5-pin</td>
<td>BX01V</td>
<td>1</td>
<td>2</td>
<td>BX01V</td>
<td>4</td>
<td>5</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
</tr>
<tr>
<td>800F-1YMQ4</td>
<td>Mini Receptacle / 4-pin</td>
<td>BX01</td>
<td>2</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>800F-1YMQ41</td>
<td>Mini Receptacle / 6-pin</td>
<td>BX10</td>
<td>1</td>
<td>J</td>
<td>BX01</td>
<td>2</td>
<td>4</td>
<td>BN3R</td>
<td>3</td>
<td>J</td>
<td>J</td>
</tr>
<tr>
<td>800F-1YMQ42</td>
<td>Mini Receptacle / 6-pin</td>
<td>BX10</td>
<td>1</td>
<td>J</td>
<td>BX01</td>
<td>6</td>
<td>5</td>
<td>BN3R</td>
<td>2</td>
<td>J</td>
<td>J</td>
</tr>
<tr>
<td>800F-1YMQ5</td>
<td>Mini Receptacle / 6-pin</td>
<td>BX10</td>
<td>1</td>
<td>J</td>
<td>BX01</td>
<td>6</td>
<td>5</td>
<td>BN3R</td>
<td>2</td>
<td>J</td>
<td>J</td>
</tr>
<tr>
<td>800F-1YMQ5</td>
<td>Mini Receptacle / 6-pin</td>
<td>BX10</td>
<td>1</td>
<td>J</td>
<td>BX01</td>
<td>6</td>
<td>5</td>
<td>BN3R</td>
<td>2</td>
<td>J</td>
<td>J</td>
</tr>
<tr>
<td>800F-1YMQ6</td>
<td>Mini Receptacle / 6-pin</td>
<td>BX10</td>
<td>1</td>
<td>J</td>
<td>BX01</td>
<td>6</td>
<td>5</td>
<td>BN7R</td>
<td>2</td>
<td>J</td>
<td>J</td>
</tr>
<tr>
<td>800F-1YMQ6</td>
<td>Mini Receptacle / 6-pin</td>
<td>BX10</td>
<td>1</td>
<td>J</td>
<td>BX01</td>
<td>6</td>
<td>5</td>
<td>BN7R</td>
<td>2</td>
<td>J</td>
<td>J</td>
</tr>
</tbody>
</table>

*J = Jumper*
**General Purpose Push Button Enclosures**

<table>
<thead>
<tr>
<th>Bulletin</th>
<th>598</th>
</tr>
</thead>
</table>

**Description**

Push Button Enclosure

**Features**

- Designed to house 22.5 mm push buttons (available in grey or yellow colors)

**Dimensions [mm]**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Available in 4 sizes</td>
<td></td>
</tr>
<tr>
<td>1-Hole: 110 x 80 x 85</td>
<td></td>
</tr>
<tr>
<td>2-Hole: 130 x 80 x 85</td>
<td></td>
</tr>
<tr>
<td>3-Hole: 180 x 80 x 85</td>
<td></td>
</tr>
<tr>
<td>4-Hole: 250 x 80 x 85</td>
<td></td>
</tr>
</tbody>
</table>

**Degree of Protection**

Type 1, 4, 4X, 12, 13

- IP66

**Storage Temperature Range**

-40…+75 °C (-40…+158 °F)

**Operating Temperature Range**

-40…+55 °C (-40…+131 °F)

**Material**

- Enclosure: Thermoplastic polyester blend, UL94-5VA
- Gasket: Foam-in-place polyurethane

| Standards | UL 508A and CSA C22.2, No. 14 |
| Certifications | cULus, CE |

**Technical Specifications**

| Product Certification | cULus Listed (File No. E54866; Guide No. NITW, NITW7), CE Marked |
| Approvals/Certifications | |
| Degree of Protection | Type 4, 4X, 12, and 13, IP66 |

**Environmental**

| Storage Temperature Range | -40…+75 °C (-40…+158 °F) |
| Operating Temperature Range | -40…+55 °C (-40…+131 °F) |

**Material**

| Enclosure | Thermoplastic polyester blend, UL94-5VA |
| Gasket | Foam-in-place polyurethane |
**Operator Mounting - Vertical vs. Horizontal Definition**

Due to the design of the enclosures, operators are mounted in both a vertical and horizontal orientation. The easiest way to visualize the operator orientation is by observing the contact block direction attached to the operators. If the contact blocks are mounted vertically the operator is mounted vertically in the enclosure. Vertical mounted operators are only found in position 2 & 3 of the 3-hole enclosure. If the contact blocks are mounted horizontally the operator is mounted horizontally in the enclosure. Horizontal mounted operators are found in position 1 of the 3-hole enclosure and all positions of the 5-…9-hole enclosures. It is necessary to know this when ordering individual operators for populating at the customer location.

**Operator Assembly Sequence and Mounting Orientation**

**Vertical Mount Operators**

<table>
<thead>
<tr>
<th>Pos. 2</th>
<th>Pos. 3</th>
<th>Multi-Operator</th>
</tr>
</thead>
</table>

**Horizontal Mount Operators**

<table>
<thead>
<tr>
<th>Position X</th>
<th>Multi-Operator</th>
</tr>
</thead>
</table>

**Operator Sequence when using a Mechanical Interlock**

The 1-, 2-, and 3-speed operators can be mounted with either our standard Cat. No. 800F-ALP latch or a mechanical interlocking latch (Cat. No. 800FC-ALP). For the 3-hole enclosure, the mechanical interlock can only be located in positions 2 & 3, with the black operator being located in position 2 and the white operator being located in position 3. For the 5-…9-hole enclosures, the mechanical interlock can be located in any two adjacent positions. For the 5-…9-hole enclosures, the white operator will be located in position X of the mechanical interlock and the black operator will be located in position X+1 of the mechanical interlock.

---

* Operator in Position 1 is mounted horizontal, contact blocks are horizontal. Operators in Positions 2 & 3 are mounted vertical, contact blocks are vertical.

† Operators in all positions are mounted horizontal, contact blocks are horizontal.
### 1-, 2-, and 3-Speed Operators ▲▲

<table>
<thead>
<tr>
<th>Operator Type</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>1-speed single arrow</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>1-speed double arrow</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>2-speed</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>3-speed‡</td>
</tr>
</tbody>
</table>

‡ Proper contact block assembly of these devices is required.

<table>
<thead>
<tr>
<th>Cap Color</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
<td></td>
</tr>
</tbody>
</table>

#### Arrow Direction Chart

- **UP**
- **FORWARD**
- **RIGHT**
- **DOWN**
- **REVERSE**
- **LEFT**

---

**800FP – C**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Code</th>
<th>Valid with Table a Selections:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Black with White Arrow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>White with Black Arrow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>White with Black Arrow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Black with White Arrow</td>
</tr>
<tr>
<td>U100</td>
<td>A, B, C</td>
<td>Blank</td>
</tr>
<tr>
<td>U241</td>
<td>D</td>
<td>DOWN</td>
</tr>
<tr>
<td>U243</td>
<td></td>
<td>UP</td>
</tr>
<tr>
<td>U244</td>
<td></td>
<td>RIGHT</td>
</tr>
<tr>
<td>U246</td>
<td></td>
<td>LEFT</td>
</tr>
<tr>
<td>U700</td>
<td></td>
<td>UP</td>
</tr>
<tr>
<td>U261</td>
<td></td>
<td>LEFT</td>
</tr>
<tr>
<td>U262</td>
<td></td>
<td>RIGHT</td>
</tr>
<tr>
<td>U263</td>
<td></td>
<td>FORWARD</td>
</tr>
<tr>
<td>U264</td>
<td></td>
<td>FORWARD</td>
</tr>
<tr>
<td>U265</td>
<td></td>
<td>REVERSE</td>
</tr>
<tr>
<td>U266</td>
<td></td>
<td>REVERSE</td>
</tr>
<tr>
<td>U267</td>
<td></td>
<td>FORWARD</td>
</tr>
<tr>
<td>U268</td>
<td></td>
<td>REVERSE</td>
</tr>
<tr>
<td>U269</td>
<td></td>
<td>FORWARD</td>
</tr>
<tr>
<td>U270</td>
<td></td>
<td>REVERSE</td>
</tr>
<tr>
<td>U271</td>
<td>A</td>
<td>2-speed</td>
</tr>
<tr>
<td>U272</td>
<td></td>
<td>2-speed UP</td>
</tr>
<tr>
<td>U273</td>
<td></td>
<td>2-speed RIGHT</td>
</tr>
<tr>
<td>U274</td>
<td></td>
<td>2-speed LEFT</td>
</tr>
<tr>
<td>U275</td>
<td></td>
<td>2-speed FORWARD</td>
</tr>
<tr>
<td>U276</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U277</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U278</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U279</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U280</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U281</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U282</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U283</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U284</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U285</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U286</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U287</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U288</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U289</td>
<td></td>
<td>2-speed</td>
</tr>
<tr>
<td>U290</td>
<td></td>
<td>2-speed</td>
</tr>
</tbody>
</table>

§ Proper contact block assembly of these devices is required.

Note: Please consult your local Rockwell Automation sales office or Allen-Bradley distributor for proper latch and contact block configurations.

§ Text (DOWN, UP, LEFT, etc.) indicates arrow direction. Text is not printed on operators.

▲ Cat. No. 800F-ALP (standard latch) and Cat. No. 800FC-ALP (mechanical interlock latch) can be used with these operators.

△ Booted style of operators for pendant stations.
IEC Push Button Specifications

800FC 22.5 mm Configured Pendant Stations

Catalog Number Explanation
Configured Pendant Stations

800FC –

| a | b | b₁ | c | c₁ | d | d₁ | e | e₁ | f | f₁ | g | g₁ | h | h₁ | j | j₁ | k | k₁ |
| Pos. 1 | Pos. 2 | Pos. 3 | Pos. 4 | Pos. 5 | Pos. 6 | Pos. 7 | Pos. 8 | Pos. 9 |
| 3-...9-hole |
| 5-...9-hole |

### Note:
A code from Tables b...k and b₁...k₁ must be specified for each operator to create a valid cat. no.

---

**Enclosure Code**

<table>
<thead>
<tr>
<th>Voltage ¹²</th>
<th>Legend Plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>24V AC/DC</td>
<td>No</td>
</tr>
<tr>
<td>120V AC</td>
<td>3</td>
</tr>
<tr>
<td>24V AC/DC</td>
<td>Yes</td>
</tr>
<tr>
<td>120V AC</td>
<td></td>
</tr>
</tbody>
</table>

---

**Legend Plate Text**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>A</td>
<td>C</td>
</tr>
<tr>
<td>E</td>
<td>G</td>
</tr>
<tr>
<td>B</td>
<td>D</td>
</tr>
<tr>
<td>F</td>
<td>H</td>
</tr>
</tbody>
</table>

---

**Operator Type**

**Single Speed Operators for use with Mechanical Interlock**§&¹¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td>Black operator (no text or symbol)</td>
</tr>
<tr>
<td>AB</td>
<td>Black operator with arrow (reverse — down/left)</td>
</tr>
<tr>
<td>AD</td>
<td>Black operator with arrow (reverse — down/left)</td>
</tr>
<tr>
<td>AL</td>
<td>Black operator with arrow (left)</td>
</tr>
<tr>
<td>A1</td>
<td>White operator (no text or symbol)</td>
</tr>
<tr>
<td>AF</td>
<td>White operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>AR</td>
<td>White operator with arrow (right)</td>
</tr>
<tr>
<td>AU</td>
<td>White operator with arrow (up)</td>
</tr>
</tbody>
</table>

**Fast Single Speed Operators for use with Mechanical Interlock**§&¹¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB</td>
<td>Black operator with double arrow (reverse — down/left)</td>
</tr>
<tr>
<td>DD</td>
<td>Black operator with double arrow (reverse — down/left)</td>
</tr>
<tr>
<td>DL</td>
<td>Black operator with double arrow (left fast)</td>
</tr>
<tr>
<td>DF</td>
<td>White operator with double arrow (forward — up/right)</td>
</tr>
<tr>
<td>DR</td>
<td>White operator with double arrow (right fast)</td>
</tr>
<tr>
<td>DU</td>
<td>White operator with double arrow (up fast)</td>
</tr>
</tbody>
</table>

**Two-Speed Operators for use with Mechanical Interlock**§&¹¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2</td>
<td>Black operator (no text or symbol)</td>
</tr>
<tr>
<td>BB</td>
<td>Black operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>BD</td>
<td>Black operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>BL</td>
<td>Black operator with arrow (left)</td>
</tr>
<tr>
<td>B1</td>
<td>White operator (no text or symbol)</td>
</tr>
<tr>
<td>BF</td>
<td>White operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>BR</td>
<td>White operator with arrow (right)</td>
</tr>
<tr>
<td>BU</td>
<td>White operator with arrow (up)</td>
</tr>
</tbody>
</table>

**Three-Speed Operators for use with Mechanical Interlock**§&¹¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2</td>
<td>Black operator (no text or symbol)</td>
</tr>
<tr>
<td>CB</td>
<td>Black operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>CD</td>
<td>Black operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>CL</td>
<td>Black operator with arrow (left)</td>
</tr>
<tr>
<td>C1</td>
<td>White operator (no text or symbol)</td>
</tr>
<tr>
<td>CF</td>
<td>White operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>CR</td>
<td>White operator with arrow (right)</td>
</tr>
<tr>
<td>CU</td>
<td>White operator with arrow (up)</td>
</tr>
</tbody>
</table>

---

¹² Enclosure code is always required. Voltage is used to select LEDs for illuminated operators. Standard contact blocks are used for both 24V and 120V enclosures.

★ Only available in position 1 of a 3-hole enclosure and in positions 1 & 2 of a 5-...9-hole enclosure.

-disabled style device provided.

‡ Monolithic style device provided.

§ For a 3-hole enclosure, when a mechanical interlock (c₁ & d₁ = M or B) is selected with a 1...3-speed operator, the black operator will be located in position 2 of the enclosure and the opposite white operator will be placed in position 3 of the enclosure (Example: ABMAFM or BMABUM).

For a 5-...9-hole enclosure, when a mechanical interlock (b₁...k₁ = M or B) is selected with a 1...3-speed operator, the white operator will be located in position X of the mechanical interlock and the opposite black operator will be placed in position X+1 of the mechanical interlock (Example: AFMABM or BUMBDM).

† Interlock and/or rubber boot selection = N (no interlock, no additional boots) is not allowed.

△ Interlock and/or rubber boot selection = E (electrical interlock, no additional boots) is not allowed.

★ Interlock and/or rubber boot selection = M (mechanical interlock) is not allowed.

∫ Interlock and/or rubber boot selection = B (electrical and mechanical interlock) is not allowed.

♀ Interlock and/or rubber boot selection = R (no interlock, additional rubber boot) is not allowed.

♂ Interlock and/or rubber boot selection = S (electrical interlock, additional rubber boot) is not allowed.

★ Only available in position 1 for a 3-hole enclosure, positions 1 and/or 5 for a 5-hole enclosure, positions 1 and/or 7 for a 7-hole enclosure, and positions 1 and/or 9 for a 9-hole enclosure.

¹¹ For proper installation, a trim washer or Cat. No. 800F-36_ legend plate must be installed with this operator.

---

**Interlock and/or Rubber Boot**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>No interlock, no additional boots</td>
</tr>
<tr>
<td>E</td>
<td>Electrical interlock, no additional boots</td>
</tr>
<tr>
<td>M</td>
<td>Mechanical interlock, boots standard §</td>
</tr>
<tr>
<td>B</td>
<td>Electrical and mechanical interlock, boots standard §</td>
</tr>
<tr>
<td>R</td>
<td>No interlock, additional rubber boot</td>
</tr>
<tr>
<td>S</td>
<td>Electrical interlock, additional rubber boot</td>
</tr>
</tbody>
</table>

---

For a 3-hole enclosure, when a mechanical interlock (b₁ & k₁ = M or B) is selected with a 1-...3-speed operator, the black operator will be located in position 2 of the enclosure and the opposite white operator will be placed in position 3 of the enclosure (Example: ABMAFM or BMABUM).

"Fast Single Speed Operators for use with Mechanical Interlock"§&¹¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB</td>
<td>Black operator with double arrow (forward — up/right)</td>
</tr>
<tr>
<td>DD</td>
<td>Black operator with double arrow (forward — up/right)</td>
</tr>
<tr>
<td>DL</td>
<td>Black operator with double arrow (right fast)</td>
</tr>
<tr>
<td>DF</td>
<td>White operator with double arrow (up fast)</td>
</tr>
</tbody>
</table>

---

"Three-Speed Operators for use with Mechanical Interlock"§&¹¹

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2</td>
<td>Black operator (no text or symbol)</td>
</tr>
<tr>
<td>CB</td>
<td>Black operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>CD</td>
<td>Black operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>CL</td>
<td>Black operator with arrow (left)</td>
</tr>
<tr>
<td>C1</td>
<td>White operator (no text or symbol)</td>
</tr>
<tr>
<td>CF</td>
<td>White operator with arrow (forward — up/right)</td>
</tr>
<tr>
<td>CR</td>
<td>White operator with arrow (right)</td>
</tr>
<tr>
<td>CU</td>
<td>White operator with arrow (up)</td>
</tr>
</tbody>
</table>
### Operator Type

#### Emergency Stop Operators

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT</td>
<td>Red operator — twist-to-release</td>
<td></td>
</tr>
<tr>
<td>ME</td>
<td>Illuminated red operator — twist-to-release</td>
<td></td>
</tr>
<tr>
<td>MK</td>
<td>Red operator — keyed twist-to-release</td>
<td></td>
</tr>
<tr>
<td>MM</td>
<td>Red operator — twist-to-release/push-pull</td>
<td></td>
</tr>
<tr>
<td>MG</td>
<td>Red operator with guard — twist-to-release/push-pull</td>
<td></td>
</tr>
</tbody>
</table>

#### Standard Extended Push Buttons — Non-Illuminated

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2</td>
<td>Black operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>ED</td>
<td>Black operator with arrow (down)</td>
<td>LIFT, DOWN</td>
</tr>
<tr>
<td>EL</td>
<td>Black operator with arrow (left)</td>
<td>HOIST, LEFT</td>
</tr>
<tr>
<td>EB</td>
<td>Black operator with double arrow (down &amp; left)</td>
<td>O/H CRANE, REVERSE</td>
</tr>
<tr>
<td>FD</td>
<td>Black operator with double arrow (down fast)</td>
<td>LIFT, DOWN FAST</td>
</tr>
<tr>
<td>FL</td>
<td>Black operator with double arrow (left fast)</td>
<td>O/H CRANE, LEFT FAST</td>
</tr>
<tr>
<td>FB</td>
<td>Black operator with double reverse arrow (left)</td>
<td>O/H CRANE, REVERSE, FORWARD</td>
</tr>
<tr>
<td>E1</td>
<td>White operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>EU</td>
<td>White operator with arrow (up)</td>
<td>LIFT, UP</td>
</tr>
<tr>
<td>ER</td>
<td>White operator with arrow (right)</td>
<td>HOIST, RIGHT</td>
</tr>
<tr>
<td>EF</td>
<td>White operator with arrow (forward — up/right)</td>
<td>O/H CRANE, FORWARD</td>
</tr>
<tr>
<td>FU</td>
<td>White operator with double arrow (up fast)</td>
<td>LIFT, UP FAST</td>
</tr>
<tr>
<td>FR</td>
<td>White operator with double arrow (right fast)</td>
<td>O/H CRANE, RIGHT FAST</td>
</tr>
<tr>
<td>FF</td>
<td>White operator with double arrow (forward fast — up/right)</td>
<td>O/H CRANE, FORWARD, FAST</td>
</tr>
<tr>
<td>E3</td>
<td>Green operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>EQ</td>
<td>Green operator with Start/Alarm symbol</td>
<td>START, ALARM</td>
</tr>
<tr>
<td>EN</td>
<td>Green operator with Start symbol</td>
<td>START</td>
</tr>
<tr>
<td>E4</td>
<td>Red operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>ES</td>
<td>Red operator with Stop symbol</td>
<td>STOP</td>
</tr>
<tr>
<td>E5</td>
<td>Yellow operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>EA</td>
<td>Yellow operator with Alarm symbol</td>
<td>ALARM</td>
</tr>
<tr>
<td>E6</td>
<td>Blue operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>R6</td>
<td>Blue operator with R6</td>
<td>RESET</td>
</tr>
</tbody>
</table>

#### Standard Extended Push Buttons — Illuminated

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>L3</td>
<td>Green operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>L4</td>
<td>Red operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>L5</td>
<td>Yellow operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>L6</td>
<td>Blue operator (no text or symbol)</td>
<td>Blank</td>
</tr>
<tr>
<td>L7</td>
<td>Clear operator (no text or symbol)</td>
<td>Blank</td>
</tr>
</tbody>
</table>

#### Selector Switches

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text (When Selected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SH</td>
<td>2-position</td>
<td>O-I</td>
</tr>
<tr>
<td>KH</td>
<td>3-position</td>
<td>Keyed-maintained</td>
</tr>
<tr>
<td>SJ</td>
<td>3-position</td>
<td>Standard-maintained</td>
</tr>
<tr>
<td>KJ</td>
<td>3-position</td>
<td>Keyed-maintained</td>
</tr>
</tbody>
</table>

### Operator Type

#### 2-Function Multi-Operator Push Buttons

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>VV</td>
<td>Black/white operator with arrow (down &amp; up)</td>
<td></td>
</tr>
<tr>
<td>VW</td>
<td>Black/white operator with arrow (left &amp; right)</td>
<td></td>
</tr>
<tr>
<td>VX</td>
<td>Black/white operator with arrow (reverse &amp; forward)</td>
<td></td>
</tr>
<tr>
<td>WV</td>
<td>Black/white operator, illuminated, with arrow (down &amp; up)</td>
<td></td>
</tr>
<tr>
<td>WW</td>
<td>Black/white operator, illuminated, with arrow (left &amp; right)</td>
<td></td>
</tr>
<tr>
<td>WX</td>
<td>Black/white operator with double arrows (down fast &amp; up fast)</td>
<td></td>
</tr>
<tr>
<td>XX</td>
<td>Black/white operator with double arrows (left fast &amp; right fast)</td>
<td></td>
</tr>
<tr>
<td>YV</td>
<td>Black/white operator, illuminated, with double arrows (down fast &amp; up fast)</td>
<td></td>
</tr>
<tr>
<td>YW</td>
<td>Black/white operator, illuminated, with double arrows (left fast &amp; right fast)</td>
<td></td>
</tr>
<tr>
<td>YX</td>
<td>Black/white operator, illuminated, with double arrows (reverse fast &amp; forward fast)</td>
<td></td>
</tr>
</tbody>
</table>

#### Pilot Lights

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text (When Selected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P0</td>
<td>Amber LED</td>
<td>Blank</td>
</tr>
<tr>
<td>P3</td>
<td>Green LED</td>
<td>Blank</td>
</tr>
<tr>
<td>P4</td>
<td>Red LED</td>
<td>Blank</td>
</tr>
<tr>
<td>P5</td>
<td>Yellow LED</td>
<td>Blank</td>
</tr>
<tr>
<td>P6</td>
<td>Blue LED</td>
<td>Blank</td>
</tr>
<tr>
<td>P7</td>
<td>Clear LED</td>
<td>Blank</td>
</tr>
</tbody>
</table>

#### Potentiometers

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text (When Selected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1P</td>
<td>Black operator — 150 Ω</td>
<td>Blank</td>
</tr>
<tr>
<td>2P</td>
<td>Black operator — 500 Ω</td>
<td>Blank</td>
</tr>
<tr>
<td>3P</td>
<td>Black operator — 1000 Ω</td>
<td>Blank</td>
</tr>
<tr>
<td>4P</td>
<td>Black operator — 2500 Ω</td>
<td>Blank</td>
</tr>
<tr>
<td>5P</td>
<td>Black operator — 5000 Ω</td>
<td>Blank</td>
</tr>
<tr>
<td>6P</td>
<td>Black operator — 10 000 Ω</td>
<td>Blank</td>
</tr>
</tbody>
</table>

#### Hole Plug

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Legend Plate Text (When Selected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N2</td>
<td>Black hole plug</td>
<td>Blank</td>
</tr>
</tbody>
</table>

---

**Note:** Footnote explanations on previous page.
## Specifications

### Front-of-Panel (Operators)

<table>
<thead>
<tr>
<th>Description</th>
<th>Plastic (Bulletin 800FP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration (assembled to panel)</td>
<td>Tested at 10…2000 Hz, 1.52 mm displacement (peak-to-peak) max./10 G max. for 3 hr duration, no damage</td>
</tr>
<tr>
<td>Shock</td>
<td>Tested at 1/2 cycle sine wave for 11 ms; no damage at 100 G</td>
</tr>
<tr>
<td>Degree of protection‡</td>
<td>IP66 (Type 4/4X/13)</td>
</tr>
<tr>
<td>Mechanical durability per EN 60947-5-1 (Annex C)</td>
<td>Multi-function, selector switch, key selector switch</td>
</tr>
<tr>
<td>10 000 000 Cycles</td>
<td>Momentary push buttons</td>
</tr>
<tr>
<td>1 000 000 Cycles</td>
<td>Twist-to-release E-stop, illuminated push-pull E-stop, alternate action push buttons</td>
</tr>
<tr>
<td>300 000 Cycles</td>
<td>Potentiometer, toggle switch</td>
</tr>
<tr>
<td>100 000 Cycles</td>
<td>Flush/extended = 5 N, E-stop = 36 N</td>
</tr>
<tr>
<td>Operating forces (typical with one contact block)</td>
<td>Selector switch = 0.25 N•m (2.2 lb•in)</td>
</tr>
<tr>
<td>Operating torque (typical application with one contact block)</td>
<td>1.7 N•m (15 lb•in)</td>
</tr>
<tr>
<td>Mounting torque</td>
<td>1.7 N•m (15 lb•in)</td>
</tr>
</tbody>
</table>

### Environmental

- Temperature range (operating): -25…+70 °C (-13…+158 °F)
- Temperature range (short term storage): -40…+85 °C (-40…+185 °F)
- Humidity: 50…95% RH from 25…60 °C (77…140 °F)

### Certifications

- UL/UR, CSA, CCC, CE
- NEMA ICS-5, UL 508, CSA C22.2 No. 14, EN ISO 13850, EN 60947-1, EN 60947-5-1, EN 60947-5-5

### Material Listing

<table>
<thead>
<tr>
<th>Component</th>
<th>For Use with</th>
<th>Material Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel gasket</td>
<td>All operators</td>
<td>Nitrile, TPE</td>
</tr>
<tr>
<td>Diaphragm seal</td>
<td>Illuminated push button</td>
<td>Automotive industry acceptable silicone</td>
</tr>
<tr>
<td>K-seal</td>
<td>Selector switch, key selector switch, push/twist-to-release E-stop, key E-stop</td>
<td>Nitrile</td>
</tr>
<tr>
<td>Diaphragm retainer, return spring I</td>
<td>Illuminated push button, non-illuminated push button</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Return spring II</td>
<td>Selector switch, key selector switch, alternate action, push/twist-to-release E-stop, key E-stop</td>
<td>Zinc-coated music wire</td>
</tr>
<tr>
<td>Button cap</td>
<td>Non-illuminated push button, push/twist-to-release, E-stop, key E-stop, multi-function</td>
<td>PBT/polycarbonate blend</td>
</tr>
<tr>
<td>2-color molded button cap</td>
<td>Non-illuminated push button</td>
<td>PBT/polycarbonate blend</td>
</tr>
<tr>
<td>Lens</td>
<td>Multi-function</td>
<td>Acetal</td>
</tr>
<tr>
<td>Lens, knob</td>
<td>Illuminated push button</td>
<td>Polyamide</td>
</tr>
<tr>
<td>Knob</td>
<td>Non-illuminated selector switch</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic bezel/bushing I</td>
<td>Non-illuminated push button, illuminated push button, selector switch, push/twist-to-release E-stop, key E-stop, multi-function</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic bezel/bushing II</td>
<td>Pilot light</td>
<td>Glass-filled PBT</td>
</tr>
<tr>
<td>Diffuser</td>
<td>Illuminated push button, pilot light</td>
<td>Polycarbonate</td>
</tr>
<tr>
<td>Plastic mounting ring</td>
<td>All plastic operators</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic latch</td>
<td>—</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Mechanical interlock latch</td>
<td>—</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Plastic enclosure</td>
<td>—</td>
<td>PBT/polycarbonate blend</td>
</tr>
<tr>
<td>Terminal screws</td>
<td>LED module, contact blocks</td>
<td>Zinc-plated steel with chromate</td>
</tr>
<tr>
<td>Terminals</td>
<td>LED module, contact blocks</td>
<td>Brass with silver-nickel contacts</td>
</tr>
<tr>
<td>Housing</td>
<td>LED module</td>
<td>Glass-filled polyamide</td>
</tr>
<tr>
<td>Low-voltage terminals</td>
<td>Contact blocks</td>
<td>Gold-plated silver-nickel contacts</td>
</tr>
<tr>
<td>Low-voltage spanner</td>
<td>Contact blocks</td>
<td>Gold-plated silver-nickel contacts</td>
</tr>
<tr>
<td>Spanner</td>
<td>Contact blocks</td>
<td>Brass with silver-nickel contacts</td>
</tr>
<tr>
<td>Boot</td>
<td>Illuminated push button, non-illuminated push button, multi-function illuminated and non-illuminated</td>
<td>Automotive industry acceptable silicone</td>
</tr>
</tbody>
</table>

---

* Performance Data — see note on page 3.

‡ Plastic keyed operators are IP66, Type 4/13; not Type 4X.

§ Operating temperatures below 0 °C (32 °F) are based on the absence of freezing moisture and liquids, UL Recognized to 55 °C (131 °F) - Incandescent module max. 40 °C (104 °F) - fully populated 9-hole pendant enclosure 45 °C (113 °F) with 75 °C wire.

Note: Use UL Listed type S or SJ cords, with a smooth outer jacket rated for wet locations use (marked W) and oil resistant outer covering (marked O) such as SOW or SJOW with copper wire, rated 75 °C min., 18…12 AWG, with an overall OD of 7.5…15 mm for the small cable sleeve (Cat. No. 800FC-AS3) and 9…22.5 mm for the large cable sleeve (Cat. No. 800FC-AS5).
800FC 22.5 mm Configured Pendant Stations

**Back-of-Panel Components**

### Electrical Ratings

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>Range</th>
<th>Current Draw</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>600V AC</td>
<td>A600, Q600</td>
<td>600V AC</td>
<td>AC 15, DC 13 to IEC/EN 60947-5-1 and UL 508, 17V, 5 mA min.</td>
</tr>
<tr>
<td>5V, 1 mA DC min.</td>
<td>C300, R150</td>
<td>5V, 1 mA DC min.</td>
<td>DC 17V, 5 mA min.</td>
</tr>
</tbody>
</table>

**Low voltage contact block ratings**

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>Range</th>
<th>Current Draw</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>24V AC</td>
<td>10...29V AC</td>
<td>31 mA</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>24V DC</td>
<td>10...30V DC</td>
<td>24 mA</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>120V AC</td>
<td>70...130V AC</td>
<td>25 mA</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>240V AC</td>
<td>180...264V AC</td>
<td>22 mA</td>
<td>50/60 Hz</td>
</tr>
</tbody>
</table>

**Thermal current**

10 A max. enclosed (40 °C ambient) to UL508, EN 60947-5-1

**Insulation voltage (Ui)**

Screw terminal = 690V, spring-clamp = 300V

**Wire capacity (screw terminal)**

#18...12 AWG (0.75...2.5 mm²)

Max. (2) #14 AWG or (1) #12 AWG

**Wire capacity (spring-clamp terminal)**

#18...14 AWG (0.75...1.5 mm²) One per spring clamp, two spring clamps per terminal

**Recommended tightening torque on screw terminals**

0.7...0.9 N•m (6...8 lb•in)

**Dielectric strength (minimum)**

2500V for one minute

### Mechanical Ratings

**Vibration (assembled to panel)**

Tested at 10...2000 Hz, 1.52 mm displacement (peak-to-peak) max./10 G max. 6 hr

**Shock**

Tested at 1/2 cycle sine wave for 11 ms and no damage at 100 G max.

**Contact durability per EN 60947-5-1 (Annex C)**

10 000 000 cycles

**N.O.**

Slow double make and break

**N.C.**

Slow double make and break — positive opening

**N.O.E.M.**

Double break / double make, early make

**N.C.E.B.**

Double break / double make, early break — positive opening

**N.O.E.E.M.**

Double break / double make, early early make

**N.O.L.M.**

Double break / double make, late make

**Standard push button travel to change electrical state**

N.C. and N.O.E.M. 1.5 mm (0.060 in.)

N.O. and N.C.L.B. 2.5 mm (0.1 in.)

**Multi-speed push button travel to change electrical state**

N.O.E.B. 3 mm (0.12 in.)

N.O.L.M. 4 mm (0.16 in.)

**Operating forces (typical)**

Single-circuit contact block 3.4 N

Dual-circuit contact block 5...6.5 N

**Illumination**

<table>
<thead>
<tr>
<th>LED Dominant Wavelength</th>
<th>LED Luminous Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>780 mcd</td>
</tr>
<tr>
<td>Red</td>
<td>780 mcd</td>
</tr>
<tr>
<td>Yellow</td>
<td>600 mcd</td>
</tr>
<tr>
<td>Blue</td>
<td>166 mcd</td>
</tr>
<tr>
<td>White</td>
<td>360 mcd</td>
</tr>
</tbody>
</table>

**Materials**

<table>
<thead>
<tr>
<th>Springs</th>
<th>Stainless steel and zinc coated music wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical contacts</td>
<td>Standard Silver-nickel</td>
</tr>
<tr>
<td>Low voltage</td>
<td>Gold-plated over silver</td>
</tr>
<tr>
<td>Terminals</td>
<td>Screw Brass</td>
</tr>
<tr>
<td>Spring-clamp</td>
<td>Silver-plated brass</td>
</tr>
</tbody>
</table>

---

* Performance Data — see note on page 3.

* Low voltage contacts are recommended for applications below 17V, 5 mA.

‡ Wires less than #18 AWG (0.75 mm²) may not hold in terminal securely.
Approximate Dimensions ★
Bul. 800FC 1-, 2-, and 3-Speed Operator

Bul. 800FC Pendant Station (3-Hole)

Bul. 800FC Legend Plate

Bul. 800FC Pendant Station (5-, 7-, and 9-Hole)

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>No. of Holes</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>800FC-4/5/C/D</td>
<td>5</td>
<td>309</td>
<td>36</td>
</tr>
<tr>
<td>800FC-6/7/E/F</td>
<td>7</td>
<td>381</td>
<td>36</td>
</tr>
<tr>
<td>800FC-8/9/G/H</td>
<td>9</td>
<td>453</td>
<td>36</td>
</tr>
</tbody>
</table>

★ For Bul. 800F operator dimensions, see page 33.
Order/Item ___________________________________________________________________________

Vertical Mounting

Cat. No. 800F-36VE100K

Cat. No. 800F-36VE100S

Cat. No. 800F-36VE100L

Horizontal Mounting

Cat. No. 800F-36HE100K

Cat. No. 800F-36HE100S

Cat. No. 800F-36HE100L
# Momentary Push Button Operators, Non-Illuminated

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush</td>
</tr>
<tr>
<td>E</td>
<td>Extended</td>
</tr>
</tbody>
</table>

## Color Cap

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

## Operator Type

### Legend Text

<table>
<thead>
<tr>
<th>Code</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>START</td>
</tr>
<tr>
<td>02</td>
<td>STOP</td>
</tr>
<tr>
<td>05</td>
<td>O</td>
</tr>
<tr>
<td>06</td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>→</td>
</tr>
<tr>
<td>09</td>
<td>FORWARD</td>
</tr>
<tr>
<td>10</td>
<td>REVERSE</td>
</tr>
<tr>
<td>11</td>
<td>R</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Color</th>
<th>Flush Caps</th>
<th>Extended Caps</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>START, I, →, FORWARD, REVERSE, R</td>
<td>→, R</td>
</tr>
<tr>
<td>Black</td>
<td>→, FORWARD, REVERSE</td>
<td>STOP, O, →, R</td>
</tr>
<tr>
<td>Green</td>
<td>START, I, →, FORWARD, REVERSE</td>
<td>→</td>
</tr>
<tr>
<td>Red</td>
<td>→, FORWARD, REVERSE</td>
<td>STOP, O, →</td>
</tr>
<tr>
<td>Yellow</td>
<td>→, FORWARD, REVERSE</td>
<td>→</td>
</tr>
<tr>
<td>Blue</td>
<td>→, FORWARD, REVERSE, R</td>
<td>→, R</td>
</tr>
</tbody>
</table>

<sup>§</sup> "STOP" or "O" color cap/legend text are not available for "10" or "20" contact modules.
## Pilot Light Devices — LED

### 800FD – P 3 N 7

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
</tr>
</tbody>
</table>

### Voltage

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>24V AC/DC</td>
</tr>
<tr>
<td>5</td>
<td>120V AC</td>
</tr>
<tr>
<td>7</td>
<td>240V AC</td>
</tr>
</tbody>
</table>

### Termination Style

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Standard screw</td>
</tr>
<tr>
<td>R</td>
<td>Ring lug</td>
</tr>
</tbody>
</table>

* Only valid with "no bulb" option.
† Only valid with "no lens" option.

## Pilot Light Devices — Incandescent

### 800FD – P 3 D 5

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Amber</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
<tr>
<td>7</td>
<td>Clear</td>
</tr>
<tr>
<td>9</td>
<td>No lens*</td>
</tr>
</tbody>
</table>

### Voltage

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No Bulb‡</td>
</tr>
<tr>
<td>1</td>
<td>6V AC/DC</td>
</tr>
<tr>
<td>2</td>
<td>12V AC/DC</td>
</tr>
<tr>
<td>3</td>
<td>24V AC/DC</td>
</tr>
<tr>
<td>4</td>
<td>48V AC/DC</td>
</tr>
<tr>
<td>5</td>
<td>120V AC/DC</td>
</tr>
</tbody>
</table>

### Termination Style

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Standard screw</td>
</tr>
<tr>
<td>R</td>
<td>Ring lug</td>
</tr>
</tbody>
</table>

* Only valid with "no bulb" option.
‡ Only valid with "no lens" option.
IN Panne Button Specifications 800FD 22.5 mm Monolithic Push Buttons

**Selector Switch Operators, Non-Illuminated**

![Selector Switch Operator](image)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>Maintained, 2-position</td>
</tr>
<tr>
<td>L2</td>
<td>Return from left, 2-position</td>
</tr>
<tr>
<td>R2</td>
<td>Return from right, 2-position</td>
</tr>
<tr>
<td>M3</td>
<td>Maintained, 3-position</td>
</tr>
<tr>
<td>L3</td>
<td>Return from left, 3-position</td>
</tr>
<tr>
<td>R3</td>
<td>Return from right, 3-position</td>
</tr>
<tr>
<td>B3</td>
<td>Return from both, 3-position</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Standard screw</td>
</tr>
<tr>
<td>R</td>
<td>Ring lug</td>
</tr>
</tbody>
</table>

**Contact Module**

<table>
<thead>
<tr>
<th>Code</th>
<th>Number of N.O.</th>
<th>Number of N.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>01‡</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>02‡</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

‡ Only available for 2-position selector switch.

**2-Position Selector Switch**

<table>
<thead>
<tr>
<th>Knob Position</th>
<th>Contacts/Contact Position</th>
<th>Left</th>
<th>Right</th>
<th>Left</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>—</td>
<td>O</td>
<td>—</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Note: X = Closed, O = Open

**3-Position Selector Switch**

<table>
<thead>
<tr>
<th>Knob Position</th>
<th>Contacts/Contact Position</th>
<th>Left</th>
<th>Right</th>
<th>Left</th>
<th>Right</th>
<th>Left</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11</td>
<td>O</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>X</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: X = Closed, O = Open

**2-Position Push-Pull/Twist-to-Release Mushroom Operators, Non-Illuminated**

![Mushroom Operator](image)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Red</td>
</tr>
<tr>
<td>4E</td>
<td>Red - EMO</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>6</td>
<td>Blue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>Standard screw</td>
</tr>
<tr>
<td>R</td>
<td>Ring lug</td>
</tr>
</tbody>
</table>

**Contact Module**

<table>
<thead>
<tr>
<th>Code</th>
<th>Number of N.O.</th>
<th>Number of N.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>02</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

* E-stops must contain at least one N.C. circuit.
§ All E-stop operators are EN/ISO 13850 compliant when using at least one N.C. contact block.
∆ E-Stop operators, latch, and contact block combinations have been third-party tested for B10d values. B10d values can be found in publication SAFETY-SR001_-EN-E.
# 800FD 22.5 mm Monolithic Push Buttons

## IEC Push Button Specifications

### Specifications

<table>
<thead>
<tr>
<th>Mechanical Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration (assembled to panel)</td>
</tr>
<tr>
<td>Shock</td>
</tr>
<tr>
<td>Degree of protection</td>
</tr>
<tr>
<td>Mechanical durability per EN 60947-5-1 (Annex C)</td>
</tr>
<tr>
<td>Mechanical durability per EN 60947-5-1 (Annex C)</td>
</tr>
<tr>
<td>Operating forces</td>
</tr>
<tr>
<td>Operating torque (typical application with one contact block)</td>
</tr>
<tr>
<td>Contact operation</td>
</tr>
<tr>
<td>Contact operation</td>
</tr>
<tr>
<td>Push button travel to change electrical state</td>
</tr>
<tr>
<td>Push button travel to change electrical state</td>
</tr>
</tbody>
</table>

### Environmental

| Temperature range (operating) | -25…+60 °C (-13…+140 °F)† |
| Temperature range (short term storage) | -40…+85 °C (-40…+185 °F) |
| Humidity | 50…95% RH from 25…60 °C (77…140 °F) |

### Electrical Ratings

| Standard contact block ratings |
| B300, R300 |
| AC 15, DC 13 |
| 300 VAC |
| EN/IEC 60947-5-1 and UL 508, 17 V, 5 mA min. |

| Nominal Voltage | Range | Current Draw | Frequency |
| 24V AC | 29…26V AC | 32 mA | 50/60 Hz |
| 24V DC | 18…30V DC | 24 mA | DC |
| 120V AC | 102…132V AC | 22 mA | 50/60 Hz |
| 240V AC | 204…264V AC | 22 mA | 50/60 Hz |

| LED module ratings |
| 5 A max. enclosed (40 °C ambient) to UL 508, EN/IEC 60947-5-1 |

| Insulation voltage (U) | 300V |
| Wire capacity (screw terminal) | #18…14 AWG (0.75…2.5 mm²) |
| Max. (2) #14 AWG, uses same size wire only |
| Wire capacity (ring lug terminal) | 6.35 mm (0.250 in.) Max. outer diameter with 3.8 mm (0.148 in.) hole diameter |
| Recommended tightening torque on screw terminals | 0.7…0.9 N•m (6…8 lb•in) |
| Dielectric strength (minimum) | 2500V for one minute |
| External short circuit protection | 5 A Type gL/gG cartridge fuse to EN 60269-2-1 or gnH (Class J to UL 248-8 or Class CC to UL 248-4) |
| Electrical shock protection | Finger-safe conforming to IP2X |

### Illumination

| LED dominant wavelength | Green | 525 nm |
| LED dominant wavelength | Red | 629 nm |
| LED dominant wavelength | Yellow | 590 nm |
| LED dominant wavelength | Blue | 470 nm |
| LED dominant wavelength | White | — |

| LED luminous intensity | Green | 780 mcd |
| LED luminous intensity | Red | 780 mcd |
| LED luminous intensity | Yellow | 600 mcd |
| LED luminous intensity | Blue | 168 mcd |
| LED luminous intensity | White | 360 mcd |

### Incandescent maximum wattage

| 2.8 W |

*Performance Data — see note on page 3.
† Operating temperatures below 0 °C (32 °F) are based on the absence of freezing moisture and liquids.
§ 3M MV018-R/S (#22…18 AWG) or 3M MVU14-6R/S (#16…14 AWG)
Specifications, Continued

<table>
<thead>
<tr>
<th>Materials</th>
<th>Springs</th>
<th>Stainless steel and zinc coated music wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical contacts</td>
<td>Brass with silver-nickel contacts</td>
<td></td>
</tr>
<tr>
<td>Terminals</td>
<td>Brass and phosphor bronze</td>
<td></td>
</tr>
<tr>
<td>Panel gasket</td>
<td>Nitrile and polyester-based TPE</td>
<td></td>
</tr>
<tr>
<td>Seal</td>
<td>Nitrile</td>
<td></td>
</tr>
<tr>
<td>Button cap/mushroom head</td>
<td>Polyester/polycarbonate blend</td>
<td></td>
</tr>
</tbody>
</table>

Lens (pilot light)              | Acrylic                     |
Bezel/bushing, housing          | Glass-filled polyester      |
Legend frames                   | Glass-filled polyamide      |
Mounting ring                   | Glass-filled polyamide      |
Terminal screws                  | Zinc-plated steel with chromate |
Lamp socket                     | Brass and Phosphor bronze  |

Standards Compliance and Certifications

<table>
<thead>
<tr>
<th>Certifications</th>
<th>UL, CSA, CCC, CE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conformity to standards — CE Marked</td>
<td>UL 508, EN/ISO 13850, EN 60947-1, EN 60947-5-1, EN 60947-5-5</td>
</tr>
<tr>
<td>Terminal identification</td>
<td>EN/IEC 60947-1</td>
</tr>
</tbody>
</table>

Approximate Dimensions

Dimensions in millimeters. Dimensions are not intended to be used for manufacturing purposes. Refer to RAISE software for additional dimensional information.

<table>
<thead>
<tr>
<th>Momentary Push Button Operators — Flush</th>
<th>Momentary Push Button Operators — Extended</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 45.7</td>
<td>14 45.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pilot Light Devices</th>
<th>11.3 45.7</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>2-Position Push-Pull/Twist-to-Release Mushroom Operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>32.1 45.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Selector Switch Operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.9 45.7</td>
</tr>
</tbody>
</table>

Plastic Enclosures

<table>
<thead>
<tr>
<th>Plastic Enclosures</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>No. of Units (Holes)</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>800FD-1P</td>
<td>1</td>
<td>72</td>
<td>59</td>
<td>41</td>
<td>95 g (3.5 oz)</td>
</tr>
<tr>
<td>800FD-1PY</td>
<td>1</td>
<td>(2-27/32)</td>
<td>(2-5/16)</td>
<td>(1-5/8)</td>
<td>(3.5 oz)</td>
</tr>
</tbody>
</table>

Use the same size wire only
Utiliser uniquement du fil de même dimension
Nur Draht der gleichen Stärke verwenden
Utilizzare solo cavi della stessa dimensione
Use somente fios de mesmo tamanho
Use solo el mismo tamaño de cable

*Performance Data — see note on page 3.*
Specifications

<table>
<thead>
<tr>
<th>Mechanical Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration (assembled to panel)</td>
</tr>
<tr>
<td>Shock</td>
</tr>
<tr>
<td>Degree of protection†</td>
</tr>
<tr>
<td>Mechanical durability per EN 60947-5-1 (Annex C)</td>
</tr>
<tr>
<td>2 000 000 Cycles</td>
</tr>
<tr>
<td>1 000 000 Cycles</td>
</tr>
<tr>
<td>250 000 Cycles</td>
</tr>
<tr>
<td>200 000 Cycles</td>
</tr>
<tr>
<td>250 000 Cycles</td>
</tr>
<tr>
<td>Operating forces (typical with one contact block)</td>
</tr>
<tr>
<td>E-stop = 14...16 N</td>
</tr>
<tr>
<td>Operating force (typical application with one contact block)</td>
</tr>
<tr>
<td>Mounting torque</td>
</tr>
</tbody>
</table>

Environmental

- Temperature range (operating): -25...+55 °C (-13...+131 °F) |
- Temperature range (short term storage): -40...+70 °C (-40...+158 °F) |
- Humidity: 50...95% RH from 25...60 °C (77...140 °F) |

† Keyed selector switches do not meet 4X rating.

Mechanical Ratings — Contact Blocks

| Vibration (assembled to panel) | Tested at 10...2000 Hz, 1.52 mm displacement (peak-to-peak) max./10 G max. for 6 hr duration, no damage |
| Shock | Tested at 1/2 cycle sine wave for 11 ms; no damage at 100 G max. |
| Contact durability | 200 000 cycles (Cat. No. 800B-PS_) |
| Contact operation | N.O. / N.C. Snap action |
| Slow make/break | positive opening |
| Contact operation | N.C. Slow make/break |
| N.O. | Slow make/break |
| Push button travel to change electrical state | 1.4 mm (0.06 in.) |
| Operating forces (typical) | 1 contact block = 3 N |
| 2 contact blocks = 6 N |

Electrical Ratings

| Standard contact block ratings | AC 1S, B300, 1.5 A/240V AC, 3 A/120V AC |
| DC 1S, R300, 0.1 A/250V DC, 0.22 A/125V DC |
| LED Module ratings | Nominal Voltage | Current | Frequency |
| 12...24V AC | 12 mA | 50/60 Hz |
| 12...24V DC | 12 mA | DC |
| 120V AC | 9 mA | 50/60 Hz |
| Thermal current | Ith = 5 A (AC), In = 1 A (DC) |
| Insulation voltage (U) | 300V |
| Stab termination | 2.8 X 0.5 mm |
| Dielectric strength (minimum) | 1500V 1 min. |
| External short circuit protection – standard blocks | 6 A type fl/GG cartridge fuse to EN 60269-2-1 or flN (Class J to UL 248-8 or Class C to UL 248-4) |
| Electrical shock protection | Finger-safe conforming to IP2X |

Standards Compliance and Certifications

| Certifications | UR, CSA, CCC, CE |
| Standards Compliance | UL 508, EN ISO 13850, EN 60947-1, EN 60947-5-1, EN 60947-5-5 |
| Terminal Identification | EN/IEC 60947-1 |
| RoHS Compliant | ✔ |

Materials

- Springs: Stainless steel and gold-plated, high-carbon steel
- Electrical contacts: Gold-plated silver
- Stab terminals: Phosphor bronze with gold or nickel plating
- Lenses: Polycarbonate

Standards Compliance — Contact Blocks

| Illumination |
| LED Dominant wavelength | Green | 525 nm |
| Red | 624 nm |
| White | — |
| LED Luminous intensity | Green | 500 mcd |
| Red | 400 mcd |
| White | 1000 mcd |
| Incandescent maximum wattage | 1.2 W |
### Operator Assembly Sequence

![Operator Assembly Sequence](image)

* Optional

### Target Table and Operator Position

<table>
<thead>
<tr>
<th>Contact Block Cat. No.</th>
<th>Contact Block Location</th>
<th>Contact Type</th>
<th>2-Position Target Table</th>
<th>3-Position Target Table</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>800B-PS11</strong></td>
<td>Top</td>
<td>N.C.</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Bottom</td>
<td>N.O.</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td><strong>800B-PS22</strong></td>
<td>Top</td>
<td>N.C.</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Bottom</td>
<td>N.O.</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td><strong>800B-PT01</strong></td>
<td>Top</td>
<td>N.A.</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Bottom</td>
<td>N.C.</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td><strong>800B-PT02</strong></td>
<td>Top</td>
<td>N.C.</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Bottom</td>
<td>N.C.</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td><strong>800B-PT11</strong></td>
<td>Top</td>
<td>N.O.</td>
<td>O</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Bottom</td>
<td>N.C.</td>
<td>X</td>
<td>O</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

**Note:** To illuminate a selector switch, add either an LED or incandescent bulb. All selector switches have a clear lens. Green and red LED bulbs can be used to change the selector switch color.
800B 16 mm Push Buttons

Approximate Dimensions

Round

Square

Rectangle

Large Square

Emergency Stop

Hole Patterns

Printed Circuit Board Pin Socket

Max 18.0

12.0 ±0.12

7.2 ±0.12

10 ±0.10

6.0 ±0.12

4.25 ±0.20
### Bul. 800MR - Momentary Contact Push Buttons

Momentary Contact Push Button Units, Non-Illuminated

<table>
<thead>
<tr>
<th>Operator Type *</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Flush head</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Extended head</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Mushroom head</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Button Color</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Orange</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Grey</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>White</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Red</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Yellow</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Contact Cartridges</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No contacts</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>1 N.O. - 1 N.C.</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>2 N.O.</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>1 N.O.E.M. - 1 N.C.L.B.</td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>A7</td>
<td>1 N.C.L.B. - 1 N.C.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>2 N.O. - 2 N.C.</td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td>1 N.O.</td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>1 N.C.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Block Termination Type ‡</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
<td></td>
</tr>
</tbody>
</table>

* Guards must be ordered separately.
† Logic Reed and small screw blocks can be ordered separately.
Momentary Contact Push Button Units, Illuminated

### 800MR – PA L 24 R e f

<table>
<thead>
<tr>
<th>Operator</th>
<th>Transformer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>PA</td>
<td>Flush ♦</td>
</tr>
<tr>
<td>PB</td>
<td>Extended</td>
</tr>
<tr>
<td>PMB</td>
<td>Mushroom</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Full Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>QA</td>
</tr>
<tr>
<td>QB</td>
</tr>
<tr>
<td>QMB</td>
</tr>
</tbody>
</table>

### Illumination Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Standard illumination as determined by power module type</td>
</tr>
<tr>
<td>L</td>
<td>LED§</td>
</tr>
</tbody>
</table>

### Input Voltage

<table>
<thead>
<tr>
<th>Full Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>24</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

### Transformer

<table>
<thead>
<tr>
<th>Transformer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>26</td>
</tr>
</tbody>
</table>

### Lens Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Amber</td>
</tr>
<tr>
<td>B</td>
<td>Blue</td>
</tr>
<tr>
<td>C</td>
<td>Clear</td>
</tr>
<tr>
<td>G</td>
<td>Green</td>
</tr>
<tr>
<td>R</td>
<td>Red</td>
</tr>
<tr>
<td>W</td>
<td>White</td>
</tr>
<tr>
<td>X</td>
<td>No lens with contact blocks</td>
</tr>
<tr>
<td>Blank</td>
<td>No lens without contact blocks</td>
</tr>
</tbody>
</table>

### Standard Contact Cartridges

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No contacts</td>
</tr>
<tr>
<td>A</td>
<td>1 N.O. - 1 N.C.</td>
</tr>
<tr>
<td>A2</td>
<td>2 N.O.</td>
</tr>
<tr>
<td>A3</td>
<td>1 N.O.E.M. - 1 N.C.L.B.</td>
</tr>
<tr>
<td>A4</td>
<td>2 N.C.</td>
</tr>
<tr>
<td>A7</td>
<td>1 N.C.L.B. - 1 N.C.</td>
</tr>
<tr>
<td>B</td>
<td>2 N.O. - 2 N.C.△</td>
</tr>
<tr>
<td>D1</td>
<td>1 N.O.</td>
</tr>
<tr>
<td>D2</td>
<td>1 N.C.</td>
</tr>
</tbody>
</table>

### Contact Block Termination Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
</tbody>
</table>

---

§ LEDs available in red, green, amber, blue, and white. LED color must match lens color, except clear lens supplied with white LED and white lens supplied with amber LED.

♣ Only available with LED Illumination option.

△ Only available with full voltage power module option and standard stab terminations.

♦ Guards must be ordered separately.

♠ Logic Reed and small screw blocks must be ordered separately.
IEC Push Button Specifications

800MR IEC Oiltight Operators

Bul. 800MR - Push-Pull

2-Position Push-Pull and Push-Pull/Twist Release and 3-Position Push-Pull Units, Non-Illuminated

<table>
<thead>
<tr>
<th>Operator Type</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX</td>
<td>Push-pull unit</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Function</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Position</td>
<td>Blank</td>
<td>Maintained - push-pull</td>
</tr>
<tr>
<td>T</td>
<td>Twist-release</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Position</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out</td>
<td>Blank</td>
<td>No contacts</td>
</tr>
<tr>
<td>Center</td>
<td>A</td>
<td>1 N.O. - 1 N.C.</td>
</tr>
<tr>
<td>In</td>
<td>A2</td>
<td>2 N.O.</td>
</tr>
<tr>
<td>N</td>
<td>D1</td>
<td>1 N.O.</td>
</tr>
<tr>
<td>Momentary</td>
<td>D2</td>
<td>1 N.C.</td>
</tr>
<tr>
<td>Maintained</td>
<td>A</td>
<td>1 N.C.L.B. - 1 N.C.</td>
</tr>
<tr>
<td>Momentary</td>
<td>A2</td>
<td>2 N.C.</td>
</tr>
<tr>
<td>A4</td>
<td>3 N.O. - 2 N.C.</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>D1</td>
<td>1 N.O.</td>
</tr>
<tr>
<td>N.C.</td>
<td>D2</td>
<td>1 N.C.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Button Color</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Green</td>
<td>1</td>
<td>Green</td>
</tr>
<tr>
<td>2 Black</td>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3 Orange</td>
<td>3</td>
<td>Orange</td>
</tr>
<tr>
<td>4 Grey</td>
<td>4</td>
<td>Grey</td>
</tr>
<tr>
<td>5 White</td>
<td>5</td>
<td>White</td>
</tr>
<tr>
<td>6 Red</td>
<td>6</td>
<td>Red</td>
</tr>
<tr>
<td>7 Blue</td>
<td>7</td>
<td>Blue</td>
</tr>
<tr>
<td>9 Yellow</td>
<td>9</td>
<td>Yellow</td>
</tr>
<tr>
<td>Blank</td>
<td>Blank</td>
<td>No cap</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Cartridges</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No contacts</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>1 N.O. - 1 N.C.</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>2 N.O.</td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>A7</td>
<td>1 N.C.L.B. - 1 N.C.</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>2 N.O. - 2 N.C.</td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td>1 N.O.</td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>1 N.C.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Block Termination Type‡</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Target Selection

<table>
<thead>
<tr>
<th>Code</th>
<th>2-Position</th>
<th>Contact Description</th>
<th>3-Position</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Blank</td>
</tr>
<tr>
<td>D1</td>
<td>O X N.O.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>D2</td>
<td>X O N.C.</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>A</td>
<td>O X N.O.</td>
<td>X O N.C.</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>A2</td>
<td>O X N.O.</td>
<td>X O N.C.</td>
<td>O</td>
<td>A2</td>
</tr>
<tr>
<td>A4</td>
<td>X O N.C.</td>
<td>X O N.C.</td>
<td>X</td>
<td>A4</td>
</tr>
<tr>
<td>—</td>
<td>— — —</td>
<td>N.C.L.B.</td>
<td>X</td>
<td>A7</td>
</tr>
<tr>
<td>B</td>
<td>O X N.O.</td>
<td>N.O. —</td>
<td>O X</td>
<td>B</td>
</tr>
<tr>
<td>X O</td>
<td>N.O.</td>
<td>N.O. —</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open

* Not available in twist release.
‡ Logic Reed and small screw blocks must be ordered separately.
2-Position Push-Pull and Push-Pull/Twist Release and 3-Position Push-Pull Units, Illuminated

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FX</td>
<td>Push-pull unit</td>
</tr>
</tbody>
</table>

**Operator Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Transformer</td>
</tr>
<tr>
<td>Q</td>
<td>Full voltage</td>
</tr>
</tbody>
</table>

**Operator Function**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Maintained</td>
</tr>
<tr>
<td>T</td>
<td>Twist-release</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Incandescent lamp</td>
</tr>
<tr>
<td>L</td>
<td>LED‡</td>
</tr>
</tbody>
</table>

**Operator Position**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out</td>
<td>Center</td>
</tr>
<tr>
<td>N</td>
<td>Momentary</td>
</tr>
</tbody>
</table>

**Voltage**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12V AC/DC</td>
</tr>
<tr>
<td>24</td>
<td>24V AC/DC</td>
</tr>
<tr>
<td>10</td>
<td>120V AC§</td>
</tr>
</tbody>
</table>

**Transformer**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>120V AC 50/60 Hz</td>
</tr>
<tr>
<td>26</td>
<td>240V AC 50/60 Hz</td>
</tr>
</tbody>
</table>

**Button Color**

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Amber</td>
</tr>
<tr>
<td>B</td>
<td>Blue</td>
</tr>
<tr>
<td>C</td>
<td>Clear</td>
</tr>
<tr>
<td>G</td>
<td>Green</td>
</tr>
<tr>
<td>R</td>
<td>Red</td>
</tr>
<tr>
<td>W</td>
<td>White</td>
</tr>
<tr>
<td>X</td>
<td>No cap</td>
</tr>
</tbody>
</table>

**Contact Cartridges**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No contacts</td>
</tr>
<tr>
<td>A</td>
<td>1 N.O. - 1 N.C.</td>
</tr>
<tr>
<td>A2</td>
<td>2 N.O.</td>
</tr>
<tr>
<td>A4</td>
<td>2 N.C.</td>
</tr>
<tr>
<td>A7</td>
<td>1 N.C.L.B. - 1 N.C.</td>
</tr>
<tr>
<td>B</td>
<td>2 N.O. - 2 N.C.</td>
</tr>
<tr>
<td>D1</td>
<td>1 N.O.</td>
</tr>
<tr>
<td>D2</td>
<td>1 N.C.</td>
</tr>
</tbody>
</table>

**Contact Block Termination Type**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
</tbody>
</table>

**Note:** See Table 1 for Target description.

---

Note: X = Closed/O = Open

* Not available in twist release.
† LEDs available in red, green, amber, blue, and white. LED color must match lens color, except clear lens supplied with white LED and white lens supplied with amber LED.
§ Only available with LED Illumination option.
▲ Only available with full voltage power module option and standard stab terminations.
☆ Logic Reed and small screw blocks must be ordered separately.
IEC Push Button Specifications

Bul. 800MR - Selector Switches
2-Position Selector Switch Units, Non-Illuminated

800MR - H H 2 B L A

800MR - H 31 B L A

Operator Positions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>2-position selector switch</td>
</tr>
<tr>
<td>H</td>
<td>2-position cylinder lock</td>
</tr>
</tbody>
</table>

Operator Color and Type§

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>No knob</td>
</tr>
<tr>
<td>H</td>
<td>Black</td>
</tr>
</tbody>
</table>

Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Maintained</td>
</tr>
<tr>
<td>4</td>
<td>Spring return from left</td>
</tr>
<tr>
<td>5</td>
<td>Spring return from right</td>
</tr>
</tbody>
</table>

Operator Function/Locking Position*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Lock in left</td>
</tr>
<tr>
<td>32</td>
<td>Lock in right</td>
</tr>
<tr>
<td>33</td>
<td>Lock in both</td>
</tr>
</tbody>
</table>

Cam Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>B cam</td>
</tr>
</tbody>
</table>

Contact Cartridge Position

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Both left and right</td>
</tr>
<tr>
<td>L</td>
<td>Left</td>
</tr>
</tbody>
</table>

Contact Block Termination Type♣

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
</tbody>
</table>

Table 1. Selector Switch Cam Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>Cam Description (2-Position)</th>
<th>Operator Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maintained and Spring Returned From Right</td>
<td>Spring Returned From Left</td>
</tr>
<tr>
<td>X O</td>
<td>N.C.</td>
<td>N.O.</td>
</tr>
<tr>
<td>O X</td>
<td>N.O.</td>
<td>N.C.</td>
</tr>
</tbody>
</table>

Note: X = Closed/O = Open
* Key removable in locked position only.
† If no optional key code is specified, the standard key (T100) will be supplied.
§ Red, green, blue, yellow, orange, grey, and white non-illuminated selector switch knobs and lever knobs must be ordered separately.
♣ Logic Reed and small screw contact blocks must be ordered separately.
♦ Contact cartridge position code (Table e) must be L.
* Contact cartridge position code (Table e) must be --.
### 3-Position Selector Switch Units, Non-Illuminated

**Standard Knob Operator**  
Cat. No. 800MR-JH2BB

**Knob Lever Operator**  
Cat. No. 800MR-JK2BB

<table>
<thead>
<tr>
<th>Operator Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>J</td>
</tr>
<tr>
<td>J</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Color and Type§</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Knob</td>
</tr>
<tr>
<td>Code</td>
</tr>
<tr>
<td>X</td>
</tr>
<tr>
<td>H</td>
</tr>
<tr>
<td>Blank</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operator Function/Locking Position*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>41</td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td>43</td>
</tr>
<tr>
<td>44</td>
</tr>
<tr>
<td>45</td>
</tr>
<tr>
<td>46</td>
</tr>
<tr>
<td>47</td>
</tr>
<tr>
<td>Spring Return From Left</td>
</tr>
<tr>
<td>Code</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>52</td>
</tr>
<tr>
<td>51</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Spring Return From Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>69</td>
</tr>
<tr>
<td>38</td>
</tr>
<tr>
<td>73</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Codes¶</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>Blank</td>
</tr>
<tr>
<td>02</td>
</tr>
<tr>
<td>03</td>
</tr>
<tr>
<td>04</td>
</tr>
<tr>
<td>05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2T Master Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>07</td>
</tr>
<tr>
<td>08</td>
</tr>
<tr>
<td>09</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cam Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>K</td>
</tr>
<tr>
<td>P</td>
</tr>
<tr>
<td>U</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Cartridge Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>Blank</td>
</tr>
<tr>
<td>L</td>
</tr>
<tr>
<td>R</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Block Termination Type♣</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>Blank</td>
</tr>
<tr>
<td>K</td>
</tr>
</tbody>
</table>

### Table 1. Selector Switch Cam Targets

<table>
<thead>
<tr>
<th>Target</th>
<th>B</th>
<th>K</th>
<th>P</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>O O X</td>
<td>N.O.</td>
<td>N.O.</td>
<td>N.O.</td>
<td>—</td>
</tr>
<tr>
<td>X O O</td>
<td>N.C.</td>
<td>N.C.</td>
<td>—</td>
<td>N.O.</td>
</tr>
<tr>
<td>O X X</td>
<td>N.O.E.M.</td>
<td>N.O.E.M.</td>
<td>—</td>
<td>N.C.L.B.</td>
</tr>
<tr>
<td>X X O</td>
<td>N.C.L.B.</td>
<td>N.C.L.B.</td>
<td>—</td>
<td>N.C.L.B.</td>
</tr>
<tr>
<td>O X O</td>
<td>—</td>
<td>—</td>
<td>N.C.</td>
<td>N.C.</td>
</tr>
</tbody>
</table>

**Note:** See Table 1 for cam and contact block selection.  
* Key removable in locked position only.  
† If no optional key code is specified, the standard key (T100) will be supplied.  
§ Red, green, blue, yellow, orange, grey, and white non-illuminated selector switch knobs and lever knobs must be ordered separately.  
♣ Logic Reed and small screw contact blocks must be ordered separately.  
△ Contact cartridge position code (Table e) must be L or R.  
☆ Contact cartridge position code (Table e) must be —.
### 4-Position Selector Switch Units, Non-Illuminated

**800MR – N H 2 Q B (Selector Switch)**

**800MR N 31 Q B (Cylinder Lock)**

#### Operator Positions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>4-position selector</td>
</tr>
<tr>
<td>N</td>
<td>4-position cylinder lock</td>
</tr>
</tbody>
</table>

#### Operator Color and Type

<table>
<thead>
<tr>
<th>Standard Knob Description</th>
<th>Knob Lever Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>H</td>
<td>K</td>
</tr>
<tr>
<td>Blank</td>
<td>Blank</td>
</tr>
</tbody>
</table>

#### Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Maintained</td>
</tr>
</tbody>
</table>

#### Operator Function/Locking Position

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Lock in position 1</td>
</tr>
<tr>
<td>32</td>
<td>Lock in position 2</td>
</tr>
<tr>
<td>33</td>
<td>Lock in position 3</td>
</tr>
<tr>
<td>34</td>
<td>Lock in position 4</td>
</tr>
<tr>
<td>41</td>
<td>Lock in position 1-2</td>
</tr>
<tr>
<td>42</td>
<td>Lock in position 1-3</td>
</tr>
<tr>
<td>43</td>
<td>Lock in position 1-4</td>
</tr>
<tr>
<td>44</td>
<td>Lock in position 2-3</td>
</tr>
<tr>
<td>45</td>
<td>Lock in position 2-4</td>
</tr>
<tr>
<td>46</td>
<td>Lock in position 3-4</td>
</tr>
<tr>
<td>51</td>
<td>Lock in position 1-2-3</td>
</tr>
<tr>
<td>52</td>
<td>Lock in position 1-2-4</td>
</tr>
<tr>
<td>53</td>
<td>Lock in position 1-3-4</td>
</tr>
<tr>
<td>54</td>
<td>Lock in position 2-3-4</td>
</tr>
<tr>
<td>61</td>
<td>Lock in all positions</td>
</tr>
</tbody>
</table>

#### Cam Type and Target Table

<table>
<thead>
<tr>
<th>Target</th>
<th>Contact Type (Rear View)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O O O X</td>
<td>1 N.O. —</td>
</tr>
<tr>
<td>O O X O</td>
<td>1 N.C. —</td>
</tr>
<tr>
<td>O X O O</td>
<td>— 1 N.O.</td>
</tr>
<tr>
<td>X O O O</td>
<td>— 1 N.C.</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

#### Contact Cartridges

<table>
<thead>
<tr>
<th>Standard Block/Stab Terminations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No contacts</td>
</tr>
<tr>
<td>B</td>
<td>2 N.O. - 2 N.C.</td>
</tr>
</tbody>
</table>

#### Contact Block Termination Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
</tbody>
</table>

† Red, green, blue, yellow, orange, grey, and white non-illuminated selector switch knobs and knob levers must be ordered separately.

‡ Key removable in locked position only.

‡ Operators are maintained in all positions.

§ If no optional key code is specified, the standard key (T100) will be supplied.

△ Logic Reed and small screw contact blocks must be ordered separately.

Red, green, blue, yellow, orange, grey, and white non-illuminated selector switch knobs and knob levers must be ordered separately.

Key removable in locked position only.

Operators are maintained in all positions.

If no optional key code is specified, the standard key (T100) will be supplied.

Logic Reed and small screw contact blocks must be ordered separately.
### 2-Position and 3-Position Knob/Lever Type Selector Switch Units, Illuminated

#### Standard Knob Operator
Cat. No. 800MR-24HA2BRA

#### Knob Lever Operator
Cat. No. 800MR-24HL2BRA

### 800MR-24

<table>
<thead>
<tr>
<th>a</th>
<th>H</th>
<th>A</th>
<th>L</th>
<th>2</th>
<th>B</th>
</tr>
</thead>
</table>

#### Operator Positions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>2-position</td>
</tr>
<tr>
<td>J</td>
<td>3-position</td>
</tr>
</tbody>
</table>

#### Operator Color and Type

<table>
<thead>
<tr>
<th>Standard Knob</th>
<th>Description</th>
<th>Knob Lever</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>No knob</td>
<td>X</td>
</tr>
<tr>
<td>A</td>
<td>Red</td>
<td>L</td>
</tr>
<tr>
<td>B</td>
<td>Green</td>
<td>M</td>
</tr>
<tr>
<td>D</td>
<td>Amber</td>
<td>P</td>
</tr>
<tr>
<td>Y</td>
<td>Clear</td>
<td>Z</td>
</tr>
</tbody>
</table>

**Note:** For Target arrangements see Table 1.

#### Cam Type (2-Position)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>B cam</td>
</tr>
</tbody>
</table>

#### Cam Type (3-Position)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>B cam</td>
</tr>
<tr>
<td>K</td>
<td>K cam</td>
</tr>
<tr>
<td>P</td>
<td>P cam</td>
</tr>
<tr>
<td>U</td>
<td>U cam</td>
</tr>
</tbody>
</table>

**Note:** For Target arrangements see Table 2.

### Illumination Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Incandescent</td>
</tr>
<tr>
<td>L</td>
<td>LED†</td>
</tr>
</tbody>
</table>

### Operator Function

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Maintained</td>
</tr>
<tr>
<td>4</td>
<td>Spring return from left</td>
</tr>
<tr>
<td>5</td>
<td>Spring return from right</td>
</tr>
<tr>
<td>9</td>
<td>Spring return from both</td>
</tr>
</tbody>
</table>

### Contact Cartridges

#### Contact Cartridge Position

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Both right and left</td>
</tr>
<tr>
<td>R</td>
<td>Right</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

#### Contact Block Termination Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
</tbody>
</table>

### Contact Cartridge Position

<table>
<thead>
<tr>
<th>Code</th>
<th>Left side</th>
<th>Right side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>No contacts</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>1 N.O.-1 N.C.</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>2 N.O.</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>1 N.O.E.M.-1 N.C.L.B.</td>
<td></td>
</tr>
<tr>
<td>A4</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td>1 N.O.-1 N.C.</td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>1 N.C.</td>
<td></td>
</tr>
<tr>
<td>P1</td>
<td>2 N.O.</td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>P3</td>
<td>2 N.O.</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>P5</td>
<td>2 N.O.</td>
<td></td>
</tr>
<tr>
<td>P6</td>
<td>2 N.C.</td>
<td></td>
</tr>
<tr>
<td>P7</td>
<td>2 N.O.-1 N.C.</td>
<td></td>
</tr>
<tr>
<td>P8</td>
<td>2 N.C.-1 N.C.</td>
<td></td>
</tr>
<tr>
<td>P9</td>
<td>1 N.O.</td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td>1 N.O.-1 N.C.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** See Table 1 for 2-position contact block selection. See Table 2 for 3-position contact block selection.

### Contact Block Position

<table>
<thead>
<tr>
<th>Code</th>
<th>Left Side</th>
<th>Right Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>N.O.</td>
<td>N.O.</td>
</tr>
<tr>
<td>X</td>
<td>N.C.</td>
<td>N.C.</td>
</tr>
<tr>
<td>X</td>
<td>N.O.E.M.</td>
<td>N.O.E.M.</td>
</tr>
<tr>
<td>X</td>
<td>N.C.L.B.</td>
<td>N.C.L.B.</td>
</tr>
<tr>
<td>X</td>
<td>N.C.L.B.</td>
<td>N.C.L.B.</td>
</tr>
<tr>
<td>X</td>
<td>N.O.</td>
<td>N.O.</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

### Table 1. Selector Switch Cam Targets

<table>
<thead>
<tr>
<th>Cam Description (2-Position)</th>
<th>Target</th>
<th>Operator Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintained and Spring Return From Right</td>
<td>X</td>
<td>O</td>
</tr>
<tr>
<td>Spring Return From Left</td>
<td>O</td>
<td>X</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

### Table 2. Selector Switch Cam Targets

<table>
<thead>
<tr>
<th>Cam Description (3-Position)</th>
<th>Target</th>
<th>B</th>
<th>K</th>
<th>P</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>O</td>
<td>X</td>
<td>N.O.</td>
<td>N.O.</td>
<td>—</td>
</tr>
<tr>
<td>X</td>
<td>O</td>
<td>O</td>
<td>N.C.</td>
<td>N.O.E.M.</td>
<td>—</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td>O</td>
<td>N.C.L.B.</td>
<td>N.C.L.B.</td>
<td>N.C.L.B.</td>
</tr>
<tr>
<td>O</td>
<td>X</td>
<td>O</td>
<td>—</td>
<td>—</td>
<td>N.C.</td>
</tr>
</tbody>
</table>

**Note:** X = Closed/O = Open

### Notes

- † LEDs only available in red, green, amber and white. Knob color must match LED color, except clear knob supplied with white LED.
- § Only available with full voltage power module and standard stab terminations.
- + Logic Reed and small screw contact blocks must be ordered separately.
- ‡ LEDs only available with LED illumination option.
- ‡ Only available with full voltage power module and standard stab terminations.
- ♦ Only available for 2-position selector switches.
- ♠ Only available with 2-position contact block selection.
IEC Push Button Specifications

4-Position Knob/Lever Type Selector Switch Units, Illuminated

**Standard Knob Operator**
Cat. No. 800MR-24NA2QB

**Knob Lever Operator**
Cat. No. 800MR-24NL2QB

**Code**
800MR – 24 N A L 2 Q B

**a**
Input Voltage
- Full Voltage

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>12V AC/DC</td>
</tr>
<tr>
<td>24</td>
<td>24V AC/DC</td>
</tr>
<tr>
<td>10</td>
<td>120V AC</td>
</tr>
</tbody>
</table>

**b**
Operator Positions
- 4-position‡

**c**
Operator Color and Type

<table>
<thead>
<tr>
<th>Standard Knob Code</th>
<th>Description</th>
<th>Knob Lever Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>No knob</td>
<td>X</td>
</tr>
<tr>
<td>A</td>
<td>Red</td>
<td>L</td>
</tr>
<tr>
<td>B</td>
<td>Green</td>
<td>M</td>
</tr>
<tr>
<td>D</td>
<td>Amber</td>
<td>P</td>
</tr>
<tr>
<td>Y</td>
<td>Clear</td>
<td>Z</td>
</tr>
</tbody>
</table>

**d**
Illumination Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Incandescent</td>
</tr>
<tr>
<td>L</td>
<td>LED§</td>
</tr>
</tbody>
</table>

**e**
Operator Function
- 2 Maintained

**f**
Cam Type and Target Table

<table>
<thead>
<tr>
<th>Target</th>
<th>Contact Type (Rear View)</th>
<th>Left</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>O O O X</td>
<td>1 N.O. —</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O O X O</td>
<td>1 N.C. —</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O X O O</td>
<td>— 1 N.O.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X O O O</td>
<td>— 1 N.C.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**g**
Contact Cartridges
- Standard Block

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>2 N.O. – 2 N.C.</td>
</tr>
</tbody>
</table>

**h**
Contact Block Termination Type♣
- Blank Stab terminals

Note: X = Closed/ O = Open

- Only available with LED Illumination option.
- ‡ Operator is maintained in all positions.
- § LEDs only available in red, green, amber and white. Knob color must match LED color, except clear knob supplied with white LED.
- ♣ Logic Reed contact blocks must be ordered separately.
Pilot Light Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Pilot light</td>
<td>12</td>
<td>12V AC/DC</td>
</tr>
<tr>
<td>PDT</td>
<td>Pilot light — dual input transformer</td>
<td>24</td>
<td>24V AC/DC</td>
</tr>
<tr>
<td>PT</td>
<td>Pilot light — push-to-test</td>
<td>10</td>
<td>120V AC§</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>Pilot light</td>
<td>16</td>
<td>120V AC 50/60 Hz</td>
</tr>
<tr>
<td>QT</td>
<td>Pilot light — push-to-test</td>
<td>26</td>
<td>240V AC 50/60 Hz</td>
</tr>
</tbody>
</table>

Illumination Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>LED‡</td>
</tr>
</tbody>
</table>

Contact Block Termination Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
<tr>
<td>K∆</td>
<td>Large screw, small screw contact blocks must be ordered separately.</td>
</tr>
</tbody>
</table>

Note: If large screw terminations are desired with a dual input transformer, (Cat. No. 800MR-PDT...), configurator space e must be left blank.

LEDs available in red, green, amber, blue, and white. LED color must match lens color, except clear lens supplied with white LED and white lens supplied with amber LED.

§ Only available with LED illumination option.

Wobble Stick Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Wobble stick</td>
</tr>
</tbody>
</table>

Contact Cartridges

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 N.O. - 1 N.C.</td>
</tr>
<tr>
<td>B</td>
<td>2 N.O. - 2 N.C.</td>
</tr>
</tbody>
</table>

Contact Block Termination Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Stab terminals</td>
</tr>
</tbody>
</table>

Note: Logic Reed and small screw contact blocks must be ordered separately.
# IEC Push Button Specifications

## 800MB IEC Oiltight Operators

### Bul. 800MB

**Momentary Contact Push Button Units, Non-Illuminated**

![Image of flush and extended head units](image)

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB</td>
<td>Black</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA</td>
<td>Flush head</td>
</tr>
<tr>
<td>CB</td>
<td>Extended head</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>No color insert</td>
</tr>
<tr>
<td>1</td>
<td>Green</td>
</tr>
<tr>
<td>3</td>
<td>Orange</td>
</tr>
<tr>
<td>4</td>
<td>Grey</td>
</tr>
<tr>
<td>5</td>
<td>White</td>
</tr>
<tr>
<td>6</td>
<td>Red*</td>
</tr>
<tr>
<td>7</td>
<td>Blue</td>
</tr>
<tr>
<td>9</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

* Red flush head must be ordered separately.
† Grey bezel can be ordered separately.
§ Logic Reed and small screw contact blocks must be ordered separately.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
</tbody>
</table>
**Momentary Contact Push Button Units, Illuminated**

<table>
<thead>
<tr>
<th>a</th>
<th>Bezel Color‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB</td>
<td>Black</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b</th>
<th>Power Module Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>CQ</td>
<td>Full voltage</td>
</tr>
<tr>
<td>CP</td>
<td>Transformer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c</th>
<th>Operator Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Flush</td>
</tr>
<tr>
<td>B</td>
<td>Extended</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d</th>
<th>Illumination Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>Blank</td>
<td>Incandescent</td>
</tr>
<tr>
<td>L</td>
<td>LED§▲</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>12</td>
<td>12V AC/DC</td>
</tr>
<tr>
<td>24</td>
<td>24V AC/DC</td>
</tr>
<tr>
<td>10</td>
<td>120V AC△</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>f</th>
<th>Transformer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>16</td>
<td>120V AC</td>
</tr>
<tr>
<td>26</td>
<td>240V AC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>g</th>
<th>Contact Block(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>Blank</td>
<td>No contacts</td>
</tr>
<tr>
<td>D1</td>
<td>1 N.O.</td>
</tr>
<tr>
<td>D2</td>
<td>1 N.C.</td>
</tr>
<tr>
<td>A</td>
<td>1 N.O. - 1 N.C.</td>
</tr>
<tr>
<td>A2</td>
<td>2 N.O.</td>
</tr>
<tr>
<td>A4</td>
<td>2 N.C.</td>
</tr>
<tr>
<td>A7</td>
<td>1 N.C.L.B. - 1 N.C.</td>
</tr>
<tr>
<td>B</td>
<td>2 N.O. - 2 N.C.♠</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>h</th>
<th>Contact Block Termination Type▼</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
</tr>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
</tr>
<tr>
<td>K</td>
<td>Large screw</td>
</tr>
</tbody>
</table>

* Red flush head push buttons are not suitable for applications requiring extended head or other unguarded buttons capable of being operated quickly in emergencies, and they may not comply with applicable codes or standards.

‡ Grey bezels can be ordered separately.

§ LEDs are only available in red, green, amber, and white; lens color must match LED color.

▲ White LED available in 24V AC/DC only.

△ LED only.

● Packet of colored inserts, one of each color. Not available with LED option for illuminated devices.

▲ Only available with full voltage illumination option and standard stab terminations.

▼ Logic Reed and small screw contact blocks must be ordered separately.
## Dual Operator Momentary Contact Push Button Units, Non-Illuminated

![Dual Operator Black Bezel](image)

**Product Code:** 800MB-DB16

### Bezel Color

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB</td>
<td>Black</td>
</tr>
</tbody>
</table>

### Operator Type

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| DB16 | Dual push button unit  
Upper — Flush green  
Lower — Extended red |

### Contact Blocks

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| Blank| No contact  
B     | 2 N.O. - 2 N.C. |

### Legend Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| Blank| Upper — Blank  
Lower— Blank  
50    | Upper — ON  
Lower— OFF  
64    | Upper — START  
Lower— STOP |

*Grey bezels must be ordered separately.
‡ Logic Reed and small screw contact blocks must be ordered separately.
Pilot Light Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Bezel Color</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB</td>
<td>MB Black</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Power Module Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CP</td>
<td>Transformer</td>
<td></td>
</tr>
<tr>
<td>CQ</td>
<td>Full voltage</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Illumination Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blank</td>
<td>Incandescent</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>LED*</td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>Push-to-test</td>
<td></td>
</tr>
<tr>
<td>TL</td>
<td>Push-to-test with LED*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Lens Color</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>MB</td>
<td>X</td>
<td>Packet of colored inserts*</td>
</tr>
<tr>
<td>A</td>
<td>A</td>
<td>Amber</td>
</tr>
<tr>
<td>B</td>
<td>B</td>
<td>Blue</td>
</tr>
<tr>
<td>C</td>
<td>C</td>
<td>Clear/white</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
<td>Green</td>
</tr>
<tr>
<td>R</td>
<td>R</td>
<td>Red</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Termination Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Pilot Lights</td>
<td></td>
</tr>
<tr>
<td>Blank</td>
<td>Stab terminals</td>
<td></td>
</tr>
<tr>
<td>TL</td>
<td>Push-to-Test Pilot Lights</td>
<td></td>
</tr>
</tbody>
</table>

* LEDs are only available in red, green, amber, and white; lens color must match LED color.

§ LED only.

▲ Packet of colored inserts, one of each color. Not available with LED illumination option.

△ Only available with full voltage power module and standard stab terminations.

◆ Grey bezel can be ordered separately.

▼ Small screw contact blocks must be ordered separately.
Specifications

<table>
<thead>
<tr>
<th>Electrical Ratings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Ratings</td>
<td>Refer to the Contact Ratings tables below.</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>1600V for one minute</td>
</tr>
<tr>
<td></td>
<td>1300V for one minute (Logic Reed)</td>
</tr>
<tr>
<td>Electrical Design Life Cycles</td>
<td>750 000 at maximum rated load</td>
</tr>
<tr>
<td></td>
<td>200 000 at maximum rated load (Logic Reed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical Ratings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration</td>
<td>10...2000 Hz 1.52 mm displacement (peak-to-peak) Max./10 G Max. (except Logic Reed)</td>
</tr>
<tr>
<td>Shock</td>
<td>1/2 cycle sine wave for 11 milliseconds ≥ 25 G (contact fragility) and no damage at 100 G</td>
</tr>
<tr>
<td>Degree of Protection</td>
<td>Type 13; IEC 144 IP65 Oil-tight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical Design Life Cycles</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Push Buttons</td>
<td>1,000,000 minimum</td>
</tr>
<tr>
<td>Potentiometers</td>
<td>100,000 minimum</td>
</tr>
<tr>
<td>All other devices</td>
<td>200,000 minimum</td>
</tr>
</tbody>
</table>

| Contact Operation | Contact blocks with Bifurcated spanner: Slow make and break, simple break. |
| Logic Reed Contact Blocks | Snap-action |

<table>
<thead>
<tr>
<th>Typical Operating Forces</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operators without contact blocks</td>
<td>2.45 lb (10.8 N)</td>
</tr>
<tr>
<td>Push-Pull Units</td>
<td>8 lb (35.3 N) push to in position</td>
</tr>
<tr>
<td></td>
<td>4 lb (17.7 N) maximum pull to out position</td>
</tr>
<tr>
<td>Contact Blocks</td>
<td>Standard — 1.5 lb (6.7 N)</td>
</tr>
<tr>
<td></td>
<td>Logic Reed — 0.616 lb (2.6 N)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range</td>
<td>Operating 32...131 °F (0...55 °C)</td>
</tr>
<tr>
<td></td>
<td>Storage -40...+185 °F (-40...+85 °C)</td>
</tr>
<tr>
<td>Humidity</td>
<td>50% at 104 °F (40 °C)</td>
</tr>
<tr>
<td>Panel Thickness Requirements</td>
<td>1/16...1/4 in. (1.6...6.4 mm)</td>
</tr>
</tbody>
</table>

Note: Operating temperatures at +32 °F (0 °C) are based on the absence of freezing moisture and liquids.

<table>
<thead>
<tr>
<th>Certifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UL Listed — File: E14840, E10314</td>
<td></td>
</tr>
<tr>
<td>Guide: NKCR, NOIV</td>
<td></td>
</tr>
<tr>
<td>CSA Certified: LR1234, LR11924</td>
<td></td>
</tr>
<tr>
<td>IEC Compliance, IEC 529</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Contact Ratings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(IEC 337-1) (NEMA ICS 2-125) Maximum continuous current $I_b^{17}$ 10 A. Bulletin 800M units have control circuit ratings with 800M contact blocks as follows:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Operational Volts Ue</th>
<th>Utilization Category</th>
<th>Rated Operational Currents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC</td>
<td>NEMA</td>
<td>Volts Ue</td>
<td>Make</td>
</tr>
<tr>
<td>AC 300</td>
<td>AC-II</td>
<td>A300</td>
<td>120...300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>72...120</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>24...72‡</td>
</tr>
</tbody>
</table>

‡ For applications below 24V and 24 mA, Logic Reed contacts are recommended.

<table>
<thead>
<tr>
<th>Logic Reed Contact Ratings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum: 150V AC, 0.15 A, 8 VA and 30V DC, 0.06 A, 1.8 VA. Should only be used with resistive loads.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wire Capacity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stab Termination Contact Blocks —</td>
<td></td>
</tr>
<tr>
<td>Accepts two 0.110 x 0.032 in. push-on connectors or one 0.250 x 0.032 in. push-on connector.</td>
<td></td>
</tr>
<tr>
<td>Small Screw Contact Blocks —</td>
<td></td>
</tr>
<tr>
<td>Accepts one #14 or two #16 AWG solid or stranded wires.</td>
<td></td>
</tr>
<tr>
<td>Large Screw Termination Contact Blocks —</td>
<td></td>
</tr>
<tr>
<td>Accepts two #12 AWG solid or stranded wires.</td>
<td></td>
</tr>
</tbody>
</table>

Specifications 800MR/800MB IEC Oil-tight Operators
Approximate Dimensions
Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

**Bul. 800MR Extension in Front of Panel**

- Round Push Button
  - Flush, Extended and Illuminated Extended
- Round Push Button
  - Illuminated Flush
- Round Push Button
  - Mushroom
- Round Selector Switch
  - and Potentiometer
  - and Standard Knob
- Panel Wobble Stick Unit

- Round Selector Switch
  - and Potentiometer
  - and Wing Lever
- Round Cylinder Lock
  - Selector Switch
- Round Push-Pull
  - Twist or Pull Release Units

**Bul. 800MB Front View of Square Units**

**CAUTION:** To avoid possible excessive heat, clusters of nine or more continuously illuminated units mounted in a small enclosure should be spaced at 1-1/2 in. (38.1 mm) minimum centers in one direction.

- Unit without Insert
  - and Backlit Unit
- Square Backlit
  - with Guarded Bezel
- Square Backlit
  - with Unguarded Bezel
- Dual Operator Unit

**Bul. 800MB Extension in Front of Panel**

- Square Push Button
  - Flush and Extended
- Square Push Button
  - Large Extended
- Square Push Button
  - Dual Operator
Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

**Extension Behind Panel**

![Typical View]

**Units with Quick Connect Terminal Contact Blocks**

<table>
<thead>
<tr>
<th>Description</th>
<th>Push Button</th>
<th>Pilot Light</th>
<th>Sel. Switch</th>
<th>Cyl. Lock</th>
<th>Pot.</th>
<th>Push-Pull or Twist Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Illuminated</td>
<td>2-1/4 (57.2)</td>
<td>—</td>
<td>2-15/32 (62.7)</td>
<td>3-1/2 (88.9)</td>
<td>2-1/32 (51.6)</td>
<td>2-3/4 (69.8)</td>
</tr>
<tr>
<td>Illuminated Full Voltage</td>
<td>2-1/4 (57.2)</td>
<td>2-15/32 (62.7)</td>
<td>—</td>
<td>—</td>
<td>2-3/4 (69.8)</td>
<td>2-25/32 (70.6)</td>
</tr>
<tr>
<td>Transformer</td>
<td>2-23/32 (69.1)</td>
<td>2-29/32 (73.6)</td>
<td>—</td>
<td>—</td>
<td>3-3/32 (78.6)</td>
<td>2-25/32 (70.6)</td>
</tr>
</tbody>
</table>

**Units Having Small Screw Terminals with Pressure Plates**

<table>
<thead>
<tr>
<th>Description</th>
<th>Push Button</th>
<th>Pilot Light</th>
<th>Sel. Switch</th>
<th>Cyl. Lock</th>
<th>Pot.</th>
<th>Push-Pull or Twist Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Illuminated</td>
<td>2-1/32 (51)</td>
<td>—</td>
<td>2-3/16 (59)</td>
<td>—</td>
<td>2-17/32 (64.3)</td>
<td>3-9/16 (90.5)</td>
</tr>
<tr>
<td>Illuminated Full Voltage</td>
<td>2-1/32 (51)</td>
<td>—</td>
<td>2-17/32 (64.3)</td>
<td>—</td>
<td>2-31/32 (75.4)</td>
<td>—</td>
</tr>
<tr>
<td>Transformer</td>
<td>2-23/32 (69.1)</td>
<td>—</td>
<td>2-31/32 (75.4)</td>
<td>—</td>
<td>3-5/32 (80.1)</td>
<td>—</td>
</tr>
</tbody>
</table>

**Units Having Large Screw Terminals with Pressure Plates**

<table>
<thead>
<tr>
<th>Description</th>
<th>Push Button</th>
<th>Pilot Light</th>
<th>Sel. Switch</th>
<th>Cyl. Lock</th>
<th>Pot.</th>
<th>Push-Pull or Twist Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Illuminated</td>
<td>2-45/64 (68.6)</td>
<td>—</td>
<td>2-59/64 (74.2)</td>
<td>—</td>
<td>2-13/64 (51.6)</td>
<td>—</td>
</tr>
<tr>
<td>Illuminated Full Voltage</td>
<td>3-11/64 (80.6)</td>
<td>3-23/64 (85.3)</td>
<td>—</td>
<td>—</td>
<td>3-13/64 (81.4)</td>
<td>—</td>
</tr>
<tr>
<td>Transformer</td>
<td>3-11/64 (80.6)</td>
<td>3-23/64 (85.3)</td>
<td>—</td>
<td>—</td>
<td>3-35/64 (90.1)</td>
<td>—</td>
</tr>
</tbody>
</table>

**Panel Depth Requirements**

1/16...1/4 in. (1.6...6.4 mm)
Approximate Mounting Dimensions

Caution: To avoid possible excessive heat, clusters of nine or more continuously illuminated units mounted in a small enclosure should be spaced at 1-1/2 in. (38.1 mm) minimum centers in one direction.

† Large screw terminal contact blocks require a minimum vertical spacing of 1-37/64 in. (40 mm); selector switches with wing lever knobs require 2-1/4 in. (57.1 mm) vertical and horizontal minimum spacing and large round legend plates require 1-1/2 in. (38.1 mm) minimum spacing.

<table>
<thead>
<tr>
<th>Type of Unit</th>
<th>Weight</th>
<th>Type of Unit</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Push Buttons</strong></td>
<td></td>
<td><strong>Selector Switches</strong></td>
<td></td>
</tr>
<tr>
<td>Non-Illuminated</td>
<td>3-1/4  (0.09)</td>
<td>Illuminated Full Voltage</td>
<td>3-1/2 (0.10)</td>
</tr>
<tr>
<td>Illuminated</td>
<td></td>
<td>Transformer</td>
<td>5 (0.14)</td>
</tr>
<tr>
<td>Pilot Light</td>
<td>2-1/4  (0.06)</td>
<td>Push-Pull Units</td>
<td></td>
</tr>
<tr>
<td>Push-to-Test</td>
<td>3 (0.09)</td>
<td>Non-Illuminated Full Voltage</td>
<td>4-1/2 (0.13)</td>
</tr>
<tr>
<td>Pilot Light</td>
<td>4-1/2  (0.13)</td>
<td>Illuminated Transformer</td>
<td>5-1/2 (0.16)</td>
</tr>
<tr>
<td>Push-to-Test</td>
<td>5 (0.14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cylinder Lock</strong></td>
<td>6 (0.17)</td>
<td><strong>Potentiometer Units</strong></td>
<td>4 (0.11)</td>
</tr>
</tbody>
</table>

* When using a padlocking cover and depending upon the types of adjacent units involved, the minimum vertical or horizontal spacing may have to be increased for operating clearance.
Dimensions in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

**Legend Plates**

The Bulletin 800MR large half round legend plates are not recommended for use with the twist-release units because of the operator knob size. The legend plate is virtually unreadable. Push-pull units can be mounted in a 1-1/4 in. minimum horizontal spacing when no legend plate is used. Vertical spacing is 1-1/2 in. when the Bulletin 800MR large half round legend plate is used.

† These Bulletin 800MR legend plates consist of Bulletin 800T legend plates with Cat. No. 800MR-N50 adapter rings.
Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Publication 800-TD008A-EN-P - August 2014