

# Pushbuttons and Indicating Lights

E22/EM22 Pilot Devices



## 23 Pushbuttons and Indicating Lights

|                                 |            |
|---------------------------------|------------|
| Product Description .....       | V12-T23-2  |
| Product History .....           | V12-T23-2  |
| Product History Time Line ..... | V12-T23-2  |
| Replacement Capabilities .....  | V12-T23-3  |
| Further Information .....       | V12-T23-14 |
| Pricing Information .....       | V12-T23-14 |

### Pushbuttons and Indicating Lights



E22/EM22 Pilot Devices

#### Product Description

Eaton's Cutler-Hammer® 22.5 mm industrial heavy-duty pushbutton line offers a wide array of functional, smartly styled illuminated and non-illuminated pushbuttons, selector switches, push-pulls, alternate action and twist-to-release operators. The complete line also includes transformer, full voltage, resistor, LED or neon light units.

E22 operators are available with either a traditional chrome or matte black front-of-panel appearance. The space-saving design and modular construction of the E22 line makes on-the-job assembly fast and simplifies the stocking of both components and complete devices.

Eaton's Cutler-Hammer EM22 metal series is a rugged line of metal construction 22.5 mm pushbutton devices. They are an extension of the industrially proven E22 heavy-duty double insulated 22.5 mm pushbutton family.

EM22 operators are heavy-duty zinc die-cast construction plated with a corrosion-resistant chromate finish. Operators are complete with a very durable chrome-plated metal bezel. Indicating light units in the EM22 series feature smartly styled round lenses that enhance their appearance and brightness.

All EM22 operators are compatible with existing E22 contact blocks, light units, accessories and enclosures.

EM22 metal operators and indicating lights are grounded when mounted to metal panels through the toothed mounting nut. They are not grounded when mounted to plastic panels.

#### Product History

E22 was first sold in 1983. The line has had one major change in the mid 1990s to increase the size of the button plates to be roughly equivalent to a 30mm pushbutton. Then in 2002, the EM22 extension of the line was introduced. Since then, only minor changes/additions have occurred. While the entire product breadth is not available anymore as aftermarket, most functionality is available in the products shown in this catalog.

#### Product History Time Line

| Product | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | Present |
|---------|------|------|------|------|------|------|---------|
| E22     |      | ■    |      |      |      |      |         |
| EM22    |      |      |      |      |      | ■    |         |

### Replacement Capabilities

#### **Momentary Contact Pushbuttons, Non-Illuminated—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13**

Will accept maximum of three contact blocks (six circuits) when used with supplied three-way adapter and optional operator plug.

#### 25 mm Diameter Flush Button

| Color | E22 Series—Plastic Operators  |                                | EM22 Series—Metal Operators    |                                |
|-------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
|       | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Black | E22PB1                        | E22P1                          | E22P1                          | EM22P1                         |
| Red   | E22PB2                        | E22P2                          | E22P2                          | EM22P2                         |
| Green | E22PB3                        | E22P3                          | E22P3                          | EM22P3                         |

#### 25 mm Diameter Extended Button

| Color | E22 Series—Plastic Operators  |                                | EM22 Series—Metal Operators    |                                |
|-------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
|       | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Red   | E22EB2                        | E22E2                          | E22E2                          | EM22E2                         |

#### 40 mm Diameter Mushroom Head Button

| Color | E22 Series—Plastic Operators  |                                | EM22 Series—Metal Operators    |                                |
|-------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
|       | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Black | E22LB1                        | E22L1                          | E22L1                          | EM22L1                         |
| Red   | E22LB2                        | E22L2                          | E22L2                          | EM22L2                         |

#### 50 mm Diameter Mushroom Head Button—Plastic

| Color | E22 Series—Plastic Operators  |                                | EM22 Series—Metal Operators    |                                |
|-------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
|       | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Red   | E22JP2                        | E22JP2                         | E22JP2                         | EM22JP2                        |



**Note**

Operator plug E22BA2 required if third contact block is used. See Page V12-T23-11.



#### Illuminated Pushbuttons, Non-Illuminated—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

Will accept maximum of two contact blocks (four circuits) when used with supplied three-way adapter.

#### 25 mm Diameter Flush Lens

| Color | E22 Series—Plastic Operators |   | EM22 Series—Metal Operators |  |
|-------|------------------------------|---|-----------------------------|--|
|       | Black Bezel Catalog Number   |  | Chrome Bezel Catalog Number |  |
| Red   | E22NB2                       |   | E22N2                       | EM22N2   |
| Green | E22NB3                       |   | E22N3                       | EM22N3   |
| White | E22NB5                       |   | E22N5                       | EM22N5   |
| Amber | E22NB9                       |   | E22N9                       | EM22N9   |

#### 25 mm Diameter Extended Lens

| Color | E22 Series—Plastic Operators |   | EM22 Series—Metal Operators |  |
|-------|------------------------------|---|-----------------------------|--|
|       | Black Bezel Catalog Number   |  | Chrome Bezel Catalog Number |  |
| Red   | E22TB2                       |   | E22T2                       | EM22T2   |
| Green | E22TB3                       |   | E22T3                       | EM22T3   |
| Amber | E22TB9                       |   | E22T9                       | EM22T9   |

#### Alternate Action (Push-Push) Components Non-Illuminated Push-Push Operators

Will accept a maximum of two contact blocks when used with supplied three-way adapter, five-way mounting adapters are not to be used.

#### Flush, Non-Illuminated Push-Push Operators—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13 <sup>①</sup>

##### Black Bezel



##### Chrome Bezel



| Color | E22 Series—Plastic Operators |                             |
|-------|------------------------------|-----------------------------|
|       | Black Bezel Catalog Number   | Chrome Bezel Catalog Number |
| Black | E22PPB1                      | E22PP1                      |
| White | E22PPB5                      | E22PP5                      |
| Gray  | E22PPB7                      | E22PP7                      |

#### Emergency Stop Components

Maximum of two contact blocks (four circuits) when used with supplied three-way adapter (unless otherwise noted).

#### Standard Emergency Stop and Emergency OFF Operators—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

##### E22LTA2



##### E22LTA2N123



| Action   | Color | Button Diameter/<br>Material | Legend/<br>Engraving | Plastic—Black Bezel<br>Catalog Number |
|--|-------|------------------------------|----------------------|---------------------------------------|
| Maintained<br>Trigger action<br>Twist-to-release | Red   | 40 mm/plastic                | —                    | E22LTA2 <sup>②</sup>                  |
| Maintained<br>Trigger action<br>Twist-to-release | Red   | 40 mm/plastic                | EMO                  | E22LTA2N123 <sup>②</sup>              |

#### Notes

<sup>①</sup> In order to comply with NFPA 79 and IEC 60204-1 requirements: The colors black, white or gray shall be used for Push-Push operators that act alternately as START/ON and STOP/OFF pushbuttons. White shall be used for illuminated Push-Push operators. Push-Push operators shall only be used for functions that cannot result in a hazardous condition.

IEC 60204-1 recommends that Push-Push operators acting alternately as START/ON and STOP/OFF pushbuttons be marked with the IEC symbol for Push-Push pushbuttons.

<sup>②</sup> Compliant with EN418 Machinery Safety Directive.

### Twist-to-Release, Push-Pull and Key Release Components

#### Maintained Contact Mushroom Head Operators, Non-Illuminated—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

Will accept maximum of two contact blocks (four circuits) when used with supplied three-way adapter.

#### Twist-to-Release—28 mm Diameter Button (Push to Latch—Twist to Release)

| E22 Series—Plastic Operators |                               | EM22 Series—Metal Operators    |                                |
|------------------------------|-------------------------------|--------------------------------|--------------------------------|
| Color                        | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Red                          | E22MLB2                       | E22ML2                         | EM22ML2                        |

#### Twist-to-Release—40 mm Diameter Button (Push to Latch—Twist to Release)

| E22 Series—Plastic Operators |                               | EM22 Series—Metal Operators    |                                |
|------------------------------|-------------------------------|--------------------------------|--------------------------------|
| Color                        | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Red                          | E22LLB2                       | E22LL2                         | EM22LL2                        |

#### Push-Pull—40 mm Diameter Button (Push to Latch—Pull to Release)

| E22 Series—Plastic Operators |                               | EM22 Series—Metal Operators    |                                |
|------------------------------|-------------------------------|--------------------------------|--------------------------------|
| Color                        | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Red                          | E22LPB2                       | E22LP2                         | EM22LP2                        |

#### Push-Pull—50 mm Diameter Button (Push to Latch—Pull to Release)

| E22 Series—Plastic Operators  |                               | EM22 Series—Metal Operators    |                                |
|-------------------------------|-------------------------------|--------------------------------|--------------------------------|
| Color                         | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Red                           | E22JPLB2                      | E22JPL2                        | EM22JPL2                       |
| Red (metal)<br>EMERGENCY STOP | E22JLB2N8                     | E22JL2N8                       | EM22JL2N8                      |

#### Key Release—40 mm Diameter Button (Push to Latch—Turn Key to Release) ①

| E22 Series—Plastic Operators |                               | EM22 Series—Metal Operators    |                                |
|------------------------------|-------------------------------|--------------------------------|--------------------------------|
| Color                        | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| Red                          | E22GB2                        | E22G2                          | EM22G2                         |

#### Note

① For legend plates, use oversize plates, Catalog Numbers E22VA2 or VA8 listed on Page V12-T23-11.

#### Indicating Light Units—One-Piece LED

- One-piece body style
- Plastic operators
- Full voltage LEDs
- Cluster-style integrated LED (non-removable)
- Plastic lenses

#### Non-Removable LED



Non-Removable LED

#### Cluster LED Type Indicating Lights—Non-Removable LEDs—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

| Description  | Supply Voltage  | LED Color | Lamp Life ① | Catalog Number  |
|--|-----------------|-----------|-------------|-----------------|
| Includes permanently attached lens and board mounted, cluster style LEDs | 24 Vac/Vdc      | Red       | 100,000     | <b>E22HL2X4</b> |
|  |                 | Green     | 100,000     | <b>E22HL3X4</b> |
|  |                 | Amber     | 100,000     | <b>E22HL9X4</b> |
|  | 110/120 Vac/Vdc | Red       | 100,000     | <b>E22HL2X8</b> |
|  |                 | Green     | 100,000     | <b>E22HL3X8</b> |
|  |                 | Amber     | 100,000     | <b>E22HL9X8</b> |

#### Indicating Light Units—One-Piece Incandescent

- One-piece body style
- Plastic operators
- Full voltage
- Bayonet base incandescent lamp

#### Incandescent Standard Lens



#### Incandescent Standard Lens Type Indicating Lights—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

| Description                                 | Supply Voltage                | Color | Lamp Life ① | Catalog Number  |
|---|-------------------------------|-------|-------------|-----------------|
| Includes lens and T 3-1/4 bayonet base lamp | 24 Vac/Vdc<br>#1819 lamp      | Red   | 2500        | <b>E22HV2X4</b> |
|   |                               | Green | 2500        | <b>E22HV3X4</b> |
|   |                               | Amber | 2500        | <b>E22HV9X4</b> |
|   | 110/120 Vac/Vdc<br>W1121 lamp | Red   | 1000        | <b>E22HV2X8</b> |
|   |                               | Green | 1000        | <b>E22HV3X8</b> |
|   |                               | Amber | 1000        | <b>E22HV9X8</b> |

#### Note

① Published theoretical lamp lives are based on ideal laboratory conditions and should be used for comparison only. Actual life may be shorter due to application conditions.

### Indicating Light Components

E22



EM22



#### Indicating Lights—Without Light Unit—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

| Color                                 | E22 Series—Plastic Operators<br>Catalog Number | EM22 Series—Metal Operators<br>Catalog Number |
|---------------------------------------|--|---|
| <b>25 mm Diameter Standard Lens</b> ① |  |   |
| Red                                   | E22H2  | EM22H2  |
| Green                                 | E22H3  | EM22H3  |
| White                                 | E22H5  | EM22H5  |
| Amber                                 | E22H9  | EM22H9  |
| Clear                                 | E22H0  | EM22H0  |

### Push-Pull Components—Illuminated Operators

Will accept a maximum of two contact blocks when used with supplied three-way adapter. Five-way mounting adapters are not to be used with three-position operators.

E22 Black



E22 Chrome



EM22 Chrome



#### Illuminated Push-Pull Operators—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

| Color   | E22 Series—Plastic Operators  |                                | EM22 Series—Metal Operators    |
|---|-------------------------------|--------------------------------|--------------------------------|
|   | Black Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| <b>Two-Position—40 mm Diameter Lens</b> ② (Maintained)                |                               |                                |                                |
| Red   | E22GDB2 ①                     | E22GD2 ①                       | EM22GD2 ①                      |
| Green   | E22GDB3                       | E22GD3                         | EM22GD3                        |
| <b>Three-Position—40 mm Diameter Lens</b> ② (Spring Return to Center) |                               |                                |                                |
| Red   | E22HDB2                       | E22HD2                         | —                              |
| Green   | E22HDB3                       | E22HD3                         | —                              |

#### Notes





① For LED/incandescent lamps, see **Page V12-T23-10**.

② All illuminated Push-Pull operators require tall LEDs from **Page V12-T23-10**.

#### Selector Switches




##### 45° Throw Non-Illuminated Lever and Knob Operated Selector Switches—Plastic

Will accept a maximum of two contact blocks (four circuits) with supplied three-way mounting adapter. Optional five-way adapter will accept a maximum of five contact blocks (10 circuits).

|   |   | 45° Throw Non-Illuminated Lever and Knob Operated Selector Switches—<br>UL (NEMA) Type 3, 3R, 4, 4X, 12, 13 |   |   |             |                                       |  |
|---|---|---|---|---|-------------|---------------------------------------|--|
|   |   | Operating Mode<br>M = Maintained<br>S = Momentary   |   |   | Cam<br>Code | Plastic—Black Bezel<br>Catalog Number | Plastic—Chrome Bezel<br>Catalog Number |
| Left  | Center  | Right   |   |   |             |                                       |  |
| <b>Black Bezel, Lever</b>                   |  |   |   |   |             |                                       |  |
| <b>Chrome Bezel, Lever</b>                  |  |   |   |   |             |                                       |  |
| <b>Black Bezel, Lever</b>                   |  |   |   |   |             |                                       |  |
| <b>Chrome Bezel, Lever</b>                  |  |   |   |   |             |                                       |  |
| <b>Two-Position—45° Throw—Black Lever</b>   |   |   |   |   |             |                                       |  |
|   | —   | M   | M | 2 | E22VBF1     | E22VF1                                |  |
|   | M   | —   | M | 2 | E22VB51     | E22V51                                |  |
| <b>Three-Position—45° Throw—Black Lever</b> |   |   |   |   |             |                                       |  |
|   | M   | M   | M | 1 | E22VBG1     | E22VG1                                |  |
|   | S   | M   | S | 1 | E22VBL1     | E22VL1                                |  |
| <b>Two-Position—45° Throw—Black Knob</b>    |   |   |   |   |             |                                       |  |
|   | M   | —   | M | 2 | E22XB51     | E22X51                                |  |
| <b>Three-Position—45° Throw—Black Knob</b>  |   |   |   |   |             |                                       |  |
|   | M   | M   | M | 1 | E22XBG1     | E22XG1                                |  |
|   | S   | M   | S | 1 | E22XBL1     | E22XL1                                |  |

##### 60° Throw Non-Illuminated Lever and Knob Operated Selector Switches

Will accept a maximum of two contact blocks (four circuits) with supplied three-way mounting adapter. Optional five-way adapter will accept a maximum of five contact blocks (10 circuits).

|  |   | 60° Throw Non-Illuminated Lever and Knob Operated Selector Switches—<br>UL (NEMA) Type 3, 3R, 4, 4X, 12, 13 |   |                               |             |                                |                                |
|--|---|---|---|-------------------------------|-------------|--------------------------------|--------------------------------|
|  |   | Operating Mode<br>M = Maintained<br>S = Momentary   |   |                               | Cam<br>Code | E22 Series—Plastic Operators   |                                |
| Left                                       | Center  | Right   |   | Black Bezel<br>Catalog Number |             | Chrome Bezel<br>Catalog Number | Chrome Bezel<br>Catalog Number |
| <b>E22 Black Bezel, Knob</b>               |  |   |   |                               |             |                                |                                |
| <b>E22 Chrome Bezel, Knob</b>              |  |   |   |                               |             |                                |                                |
| <b>EM22 Black Knob</b>                     |  |   |   |                               |             |                                |                                |
| <b>Two-Position—60° Throw—Black Knob</b>   |   |   |   |                               |             |                                |                                |
|  | M   | —   | M | 2                             | E22XB561    | E22X561                        | EM22X561                       |
| <b>Three-Position—60° Throw—Black Knob</b> |   |   |   |                               |             |                                |                                |
|  | M   | M   | M | 1                             | E22XBG61    | E22XG61                        | EM22XG61                       |



### Key Operated Selector Switches

Key removal from maintained positions only—will accept a maximum of two contact blocks (four circuits) with supplied three-way mounting adapter. Optional five-way adapter will accept a maximum of five contact blocks (10 circuits).

#### Plastic Black Bezel



#### Plastic Chrome Bezel



#### Metal Chrome Bezel



### Key Operated Selector Switches—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

**Operating Mode**  
**M = Maintained**  
**S = Momentary**

|                       |        |       | E22 Series—Plastic Operators |   | EM22 Series—Metal Operators                  |  |
|-----------------------|--------|-------|------------------------------|---|--|--|
| Left                  | Center | Right | Cam Code                     | 45° Black Bezel Catalog Number <sup>①</sup> | 45° Chrome Bezel Catalog Number <sup>①</sup> | 60° Chrome Bezel Catalog Number <sup>①</sup> |
|                       |        |       |                              |   |  |  |
| <b>Two-Position</b>   |        |       |                              |   |  |  |
| M                     | —      | M     | 2                            | E22KB52                                     | E22K52                                       | —  |
| M                     | —      | M     | 2                            | E22KB53                                     | E22K53                                       | EM22K53                                      |
| M                     | —      | S     | 2                            | E22KB62                                     | E22K62                                       | EM22K62                                      |
| —                     | M      | M     | 2                            | E22KF4                                      | E22KF4                                       | EM22KF4                                      |
| <b>Three-Position</b> |        |       |                              |   |  |  |
| M                     | M      | M     | 1                            | E22KBG7                                     | E22KG7                                       | —  |

### Spare Key

| Description   | Reference Number Stamped on Key | Catalog Number |
|---------------|---------------------------------|----------------|
| Standard lock | 92239                           | E22KS2         |

### Specialty Operators

#### Mechanical Push Rod



### Flush Pushbutton Operators with Mechanical Push Rod—UL (NEMA) Type 3, 3R, 4, 4X, 12, 13

| Description  | Color | Plastic—Black Bezel Catalog Number | Plastic—Chrome Bezel Catalog Number |
|--|-------|------------------------------------|-------------------------------------|
| 25 mm diameter flush pushbutton<br>Operators supplied with mechanical push rod—suitable for external mechanical reset of overload relays. Push rod must be cut to desired length | Gray  | E22PB7L                            | E22P7L                              |

### Double-Headed Pushbuttons

#### Double-Headed Pushbuttons



### Illuminated and Non-Illuminated Double-Headed Pushbuttons—UL (NEMA) Type 1; IP40

| Description                              | Operator Colors | Marking | Plastic—Black Bezel Catalog Number |
|--|-----------------|---------|------------------------------------|
| Non-illuminated double-headed pushbutton | Green—Red       | I       | E22DB1A21                          |

### Contact Blocks

#### Contact Blocks



### Contact Blocks

| Description             | Catalog Number        |
|-------------------------|-----------------------|
| 1NC                     | E22B1 <sup>②</sup>    |
| 1NO                     | E22B2                 |
| 1NO-1NC                 | E22B11 <sup>②</sup>   |
| 2NO                     | E22B20                |
| One self-monitoring 1NC | E22CB1M <sup>②③</sup> |

#### Notes

<sup>①</sup> Final digit of catalog number represents key removal position per the chart below.

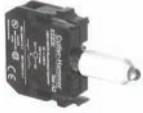
| Key Removal Position | Code Suffix | Key Removal Position   | Code Suffix |
|----------------------|-------------|------------------------|-------------|
| Left only            | 2           | Center only            | 4           |
| Right and left       | 3           | Right, left and center | 7           |

<sup>②</sup> Marked with direct opening action (DOA) symbol per IEC 60947-5-1 (Annex K) and NEMA ICS 5 (Part 6).

<sup>③</sup> For use with trigger action emergency stop (E22LTA2) operators.

**Light Units and Lamps**

E22 light units consist of two versions—standard size LED lamps and tall LED lamps. Select the standard LED light units for all indicating lights, illuminated pushbuttons, push-push (alternate action) or double-headed pushbutton operators. Select the tall LED light units for all illuminated selector switches and push-pull operators.

**LED Light Units—Includes a T3-1/4 (BA9) Bayonet Base LED****Tall LED Light Unit****Standard LED Light Unit**

| Type         | Supply Voltage    | LED Color | Standard LED <sup>①</sup><br>Catalog Number | Tall LED <sup>①</sup><br>Catalog Number |   |
|--------------|-------------------|-----------|---|---|---|
| Full voltage | Unit without lamp | —         | E22DE                                       | E22DE                                   |   |
|              | 24 Vac/Vdc        | Red       | E22DL24R                                    | E22DLT24R                               |   |
|              |                   | Green     | E22DL24G                                    | E22DLT24G                               |   |
|              |                   | Yellow    | E22DL24Y                                    | —                                       |   |
|              |                   | White     | E22DL24W                                    | —                                       |   |
| 120 Vac/Vdc  | Red               | Red       | E22DL120R                                   | E22DLT120R                              |   |
|              |                   | Green     | E22DL120G                                   | E22DLT120G                              |   |
|              | Yellow            | Yellow    | E22DL120Y                                   | —                                       |   |
|              |                   | White     | White                                       | E22DL120W                               | — |

E22 light units consist of two versions—with standard bulb or with tall bulbs. Select the standard bulb light units for all indicating lights, illuminated pushbuttons, push-push (alternate action) or double-headed pushbutton operators. Select the tall bulb light units for all illuminated selector switches and push-pull operators.

**Caution:** Please note that 120V full voltage light units (E22D120) are only suitable for indicating light operators and will overheat in other operators.

**Incandescent Light Units—Includes a T3-1/4 (BA9) Bayonet Base Lamp (Except When Noted)****Incandescent Light Units**

| Type                | Supply Voltage<br>50/60 Hz | Lamp<br>Voltage | Standard Bulb<br>Catalog Number |
|---------------------|----------------------------|-----------------|---------------------------------|
| Full voltage AC/DC  | Unit without lamp          | —               | E22D                            |
|                     | 24                         | 24              | E22D24                          |
|                     | 120                        | 120             | E22D120 <sup>②</sup>            |
| Resistor AC/DC      | 120                        | 60              | E22R2                           |
| Transformer AC only | 120                        | 6               | E22TL1                          |
|                     | 240                        | 6               | E22TL2                          |









**PresTest Units—Includes Prewired 1NO-1NC Contact Blocks****PresTest Unit**

| Type                | Supply Voltage<br>50/60 Hz | Lamp<br>Voltage | Standard Bulb<br>Catalog Number |
|---------------------|----------------------------|-----------------|---------------------------------|
| Full voltage AC/DC  | Unit without lamp          | —               | E22D0C                          |
|                     | 24                         | 24              | E22D24C                         |
| Resistor AC/DC      | 120                        | 60              | E22R2C                          |
| Transformer AC only | 120                        | 6               | E22TL1C                         |

**Notes**

- ① Use tall LEDs for Pull/Push operators. For all other illuminated devices, use standard LEDs.
- ② E22D120 light units are suitable for indicating light operators only.

### Accessories

| EM22 and E22 Series Accessories   |  |
|---|--|
| Hole Plug   | Description <span style="float: right;">Catalog Number</span>  |
|    | <p><b>Hole Plug</b></p> <p>Forms oil- and watertight seal for unused panel holes — UL Listed Type 4-4X-13 black nylon</p> <p style="text-align: right;"><b>E22BHP</b></p>  |
| <b>Enlarge Yellow Legend Plates</b>   | <p><b>Enlarge Yellow Legend Plates</b> ①</p> <p>1.77 inches (45 mm) blank <span style="float: right;"><b>E22VA2</b></span></p> <p>2.76 inches (70 mm) printed EMERGENCY STOP <span style="float: right;"><b>E22VA8</b></span></p>  |
|    |  |
| <b>Mounting Adapter</b>   | <p><b>Mounting Adapter</b></p> <p>Supplied as standard with E22 operators. Provides contact block and light unit mounting. <span style="float: right;"><b>E22BA1</b></span></p>  |
|    |  |
| <b>Auto Latch Mounting Adapter</b>  | <p><b>Auto Latch Mounting Adapter</b></p> <p>Supplied as standard with EM22 operators. Provides contact block and light unit mounting. <span style="float: right;"><b>E22BA1A</b></span></p>   |
|   |  |
| <b>Operator Plug</b>  | <p><b>Operator Plug</b></p> <p>Must be inserted into rear of momentary action pushbutton and mushroom head operators when third contact block is installed in center position. Not to be used with maintained action or illuminated operators—minimum order quantity 10 pieces. To assemble, push plug into the rear of the operator. On mushroom operators, cut down the plug to 0.62 inches (15.2 mm) prior to assembly. Plug is notched to indicate cut down length. <span style="float: right;"><b>E22BA2</b></span></p> |
|  |  |
| <b>Locating Ring</b>  | <p><b>Locating Ring</b></p> <p>Provides additional anti-rotation features when using optional panel mounting hole notch—minimum order quantity 10 pieces (metal) <span style="float: right;"><b>E22LRM</b></span></p>  |
|  |  |
| <b>Padlockable Transparent Cover</b>  | <p><b>Padlockable Transparent Cover</b></p> <p>Suitable for use with 25 mm flush and extended pushbutton operators only <span style="float: right;"><b>E22PCM</b></span></p> <p>Suitable for use with 28 mm mushroom operators, knob and key selector switches <span style="float: right;"><b>E22BA9</b></span></p>  |
|  |  |
| <b>Mushroom Guard</b>   | <p><b>Mushroom Guard</b></p> <p>For 40 mm trigger action switch—to be used with E22LTA2 and E22LTA2N123 operators <span style="float: right;"><b>E22MGTA</b></span></p> <p><b>Note</b></p> <p>① Yellow plates comply with EN418 machine safety standard background requirements for E-Stops.</p>   |
|  |  |

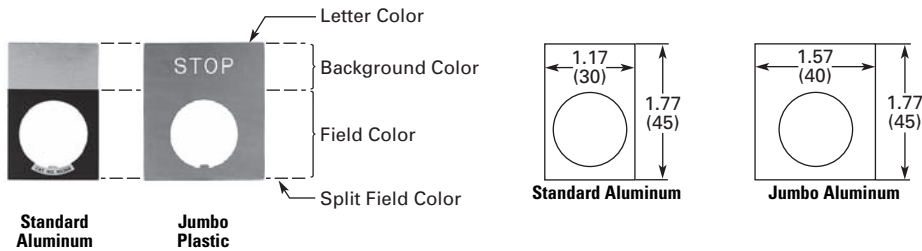
#### Options

##### Engraved Legend Plates with Standard Markings—1/8-Inch High Character Size

**Aluminum**—Aluminum legend plates have a plastisol backing to help prevent rotation of the operator when installed in an unnotched hole. Operators installed with aluminum legend plates and legend plates with clip-in inserts maintain their UL Listed Type 4-4X-13 rating.

**Plastic**—Both the laminated plastic legend plates and the legend plates with clip-in inserts offer the choice of four background colors. Either side of the legend plate or insert can be field engraved.

##### Color Diagram and Approximate Dimensions in Inches (mm)



#### Engraved Legend Plates

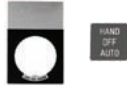
| Nameplate Type                           | Standard Aluminum with Plastisol Backing<br>NEMA 3, 3R, 4, 4X, 12, 13 ① |                  | Standard Plastic,<br>NEMA 1 Only |                  |
|--|---|------------------|----------------------------------|------------------|
|  | Letter Color  | Background Color | Letter Color                     | Background Color |
| Standard Aluminum with Plastisol Backing | Black   | Silver           | White                            | White            |
| Standard Plastic                         | Black   | Black            | Black                            | Red              |
| Standard Plastic                         | Black   | Red              | Black                            | Red              |
| <b>Pushbutton</b>                        |   |                  |                                  |                  |
| No engraving                             | <b>E22NS36</b>  | <b>E22NS37</b>   | <b>E22NSP77</b>                  | <b>E22NSP77</b>  |
| CLOSE                                    | <b>E22NS11</b>  | —                | —                                | —                |
| DOWN                                     | <b>E22NS12</b>  | —                | —                                | —                |
| EMERG. STOP                              | —   | <b>E22NS13</b>   | —                                | —                |
| FORWARD                                  | <b>E22NS15</b>  | —                | —                                | —                |
| JOG                                      | <b>E22NS19</b>  | —                | —                                | —                |

#### Note

① To order jumbo legend plates, replace the fifth character with an **L**. For example E22NL87 is an aluminum, Jumbo legend plate marked "FASTER."

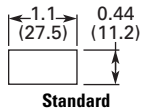
### Engraved Legend Plates, Continued

Standard Aluminum with Plastisol Backing NEMA 3, 3R, 4, 4X, 12, 13 and Self-Adhesives Used on Enclosures <sup>①</sup>



| Nameplate Type                        | Black   | Black   |
|---------------------------------------|---------|---------|
| Letter Color                          | Silver  | Silver  |
| Background Color                      | Black   | Red     |
| Field Color                           |         |         |
| <b>Pushbutton</b>                     |         |         |
| MOTOR RUN                             | E22NS81 | —       |
| MOTOR STOP                            | E22NS82 | —       |
| ON                                    | E22NS25 | —       |
| OPEN                                  | E22NS26 | —       |
| POWER ON                              | E22NS80 | —       |
| REVERSE                               | E22NS30 | —       |
| RUN                                   | E22NS31 | —       |
| START                                 | E22NS33 | —       |
| STOP                                  | —       | E22NS34 |
| UP                                    | E22NS35 | —       |
| <b>Two-Position Selector Switch</b>   |         |         |
| FOR/REV                               | E22NS38 | —       |
| HAND/AUTO                             | E22NS39 | —       |
| JOG/ RUN                              | E22NS41 | —       |
| OFF/ON                                | E22NS42 | —       |
| OPEN/CLOSE                            | E22NS43 | —       |
| UP/DOWN                               | E22NS48 | —       |
| <b>Three-Position Selector Switch</b> |         |         |
| FOR/OFF/REV                           | E22NS50 | —       |
| HAND/OFF/AUTO                         | E22NS51 | —       |

### Approximate Dimensions in Inches (mm)



### Legend Plates and Legend Plate Carriers

Plastic with Clip-In Insert without Carrier  
NEMA 3, 3R, 4, 4X, 12, 13



| Nameplate Type                    | White |
|-----------------------------------|-------|
| Letter Color                      | Black |
| Background Color                  | Black |
| Field Color                       |       |
| <b>Pushbutton</b>                 |       |
| Legend plate carrier <sup>②</sup> | E22ND |

### Enclosures

These totally insulated, NEMA 4, 4X, 12, 13 rated polycarbonate enclosures are available in 1, 2, 3, 4, 6 and 9 hole configurations in single or double depth.

#### E22CSP1



#### Enclosures—UL (NEMA) 4, 4X, 12, 13

Cover Holes, Centerlines and Legend Plate Selection

| Usable Depth Inches (mm)   | Catalog Number |
|--|----------------|
| Will accommodate 2.65 inch (65 mm) legend plates listed on Page V12-T23-11 | E22CSP1        |
| 3.4 (87)   | E22CDP1        |

#### E22CSP1Y



|                          |           |                       |
|--------------------------|-----------|-----------------------|
| With safety yellow cover | 2.2 (57)  | E22CSP1Y <sup>③</sup> |
|                          | 3.15 (80) | E22CDP1Y <sup>③</sup> |

#### E22CSP2



|  |          |         |
|--|----------|---------|
| 1.42 inch (36 mm)  | 2.2 (57) | E22CSP2 |
| Will accommodate self-adhesive legend plates listed on Pages V12-T23-12 and V12-T23-13 |          |         |

#### E22CSP4



|  |          |         |
|--|----------|---------|
| 1.18 inch (30 mm)  | 2.2 (57) | E22CSP4 |
| Will accommodate self-adhesive legend plates listed on Pages V12-T23-12 and V12-T23-13 |          |         |

#### Notes

- <sup>①</sup> To order jumbo legend plates, replace the fifth character with an L. For example, E22NL87 is an aluminum, jumbo legend plate marked "FASTER."
- <sup>②</sup> One carrier required for each clip-in insert.
- <sup>③</sup> Yellow covers comply with background requirements for EN418 Safety of Machinery Standard.

**Further Information****Publication  
Number****Description**

| Publication<br>Number | Description             |
|-----------------------|-------------------------|
| TD04712001E           | E22/EM22 Technical Data |

**Pricing Information**

For pricing information, please consult Eaton's Price and Availability Digest (PAD) or your local authorized Eaton distributor.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Switch Hardware](#) category:*

*Click to view products by [Eaton](#) manufacturer:*

Other Similar products are found below :

[893102000](#) [LZZ1A](#) [0098.9234](#) [61-9707.7](#) [61-9771.0](#) [M2PA-5011](#) [635401](#) [6PA104](#) [6PA113](#) [6PA147-E6](#) [6PA148-E6](#) [6PA32](#) [6PA9](#) [700106](#)  
[700109](#) [700201A56](#) [700303A56](#) [700701264](#) [700C1GRY](#) [700C2GRN](#) [704-6001](#) [704.960.4](#) [704.960.9](#) [704.965.1](#) [704.965.2](#) [704.965.6](#)  
[704.966.0](#) [7089-3](#) [71M1048](#) [757200264](#) [778000A56](#) [79215938](#) [MHU35](#) [MHU37](#) [825.003.011](#) [825.005.011](#) [825.053.011](#) [825.055.011](#)  
[826.000.071](#) [827.020.011](#) [827.400.021](#) [835.900.023](#) [MML52C10C](#) [MML52E10C](#) [MML72EEK](#) [MML92HGH](#) [MML93K](#) [84211M02CNNS](#)  
[84211M02LGRS](#) [84211M02LNNX3](#)