

Pushbuttons



Indicating Lights



Emergency Stops



Selector Switches



|             |                                                       |    |
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**Note:** Supplement to Volume 7—Motor Controls, Logic and Connectivity, Tab 37.  
For additional accessories, please see section 37.4, 22.5 mm Modular Pushbuttons—M22.

# 37.5 Pushbuttons and Indicating Lights

## 22.5 mm Compact Pushbuttons—C22

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### 22.5 mm Compact Pushbuttons—C22



## Product Overview

### Product Description

The C22 compact pushbutton line offers an industry leading array of functional, attractive, and ergonomically designed “all-in-one” illuminated and non-illuminated pushbuttons, selector switches, emergency stops and indicating lights. The complete illuminated line is only offered in LED light units to ensure high-quality brightness and up to 100,000 hours of LED illumination. C22 operators are available with either a silver or black bezel and share the exact same front of the panel look and feel as Eaton’s M22 line. The C22’s compact, “all-in-one” design with the contact block(s) and operators integral provides the user with a simple solution.

### Wide Product Breadth

- In addition to the standard compact offering of indicating lights and pushbuttons, Eaton’s C22 offers keyed and non-keyed operators and emergency stops
- Hundreds of styles with standard laser etch markings with the ability to use custom M22 laser etched buttons in conjunction with C22 buttonless operators

## Contents

### Description

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### LED Indicators

- 100,000 hours of life in high-vibration environments
- Lenses specifically designed for LED illumination

### Rugged Design

- Pushbuttons (momentary) rated for 5 million mechanical operations and selector switches (non-keyed) rated for 1 million mechanical operations
- All components have IP65 rating, and some carry IP67 and IP69K for wash-down environment

### Standards and Certifications

All operators are IEC/EN 60947 VDE 0660, UL Listed, and CSA Certified.

All operators carry an IP65, IP66, IP67 or IP69K rating.

All products carry ratings of NEMA 1, 3R, 4X, 12 and 13



**Features**

- Field convertible maintained pushbuttons from maintained to momentary
- Field convertible selector switches from momentary to maintained operation and vice versa
- LED offering only for all illuminated operators
- Laser engraved pushbuttons and lenses
- Heavy-duty construction with a minimum of IP65 and UL NEMA® Type 4X/13 on front of panel operators. Many operators even carry IP67 and IP69K, for the toughest applications
- Silver or black colored nylon bezels
- Notched hole mounting with anti-rotation tab and central nut mounting on each operator
- Pushbuttons (momentary) rated for 5 million mechanical operations and selector switches (non-keyed) rated for 1 million mechanical operations
- Unique compact offerings, including keyed and non-keyed operators and emergency stops

**Benefits**

- Compact, “all-in-one” operator and contact block design simplifies product selection, inventory, and installation
- Field convertibility of pushbuttons and selector switches helps distributors and customers reduce inventory and increase functionality
- LED offering only for improved brightness quality and up to 100,000 hours of operation
- Plastic construction is corrosion resistant
- Operators are designed for rugged environments, ideal for wash-down applications (reference each operator’s IP ratings for ingress protection definition)
- Anti-rotation tab saves installation time and prevents operator rotation
- High mechanical and electrical life allows for use in tough and challenging applications
- Laser inscription capabilities allow for high quality, wear-resistant markings
- By having a compact design emergency stop, the C22 design eliminates the need for self-monitoring contact blocks

Product Selection Guide

Pushbuttons



|                   |                        |            |                           |            |                    |            |                       |            |
|-------------------|------------------------|------------|---------------------------|------------|--------------------|------------|-----------------------|------------|
| Description       | Non-illuminated, flush |            | Non-illuminated, extended |            | Illuminated, flush |            | Illuminated, extended |            |
| Operator          | Momentary              | Maintained | Momentary                 | Maintained | Momentary          | Maintained | Momentary             | Maintained |
| Product Selection | Page 6                 | Page 7     | Page 8                    | Page 9     | Page 10            | Page 11    | Page 12               | Page 13    |

Indicating Lights



|                   |                   |
|-------------------|-------------------|
| Description       | Indicating lights |
| Product Selection | Page 15           |

Emergency Stops



|                   |               |               |
|-------------------|---------------|---------------|
| Description       | Twist release | Keyed-release |
| Product Selection | Page 17       | Page 17       |

Selector Switches



|                   |                            |              |
|-------------------|----------------------------|--------------|
| Description       | Non-illuminated, knob type | Key-operated |
| Product Selection | Page 20                    | Page 21      |

**Pushbuttons—Non-Illuminated and Illuminated****Contents****Description****Page**

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**Pushbuttons—Non-Illuminated and Illuminated****Product Description**

C22 Compact Pushbuttons are a complete line of monoblock type pushbuttons with the contact blocks, mounting adapter, and operator all-in-one. The C22 pushbuttons offer the same look and feel as their modular counterpart, the M22. They also carry many of the same rugged ratings and options, such as laser etching, field convertibility, and LED technology.

**Note:** For additional accessories, please see Volume 7—Motor Controls, Logic and Connectivity, CA08100008E, Tab 37, section 37.4, 22.5 mm Modular Pushbuttons—M22.

**Features**

- Field convertible maintained pushbuttons from maintained to momentary
- LED offering only for improved brightness quality and up to 100,000 hours of operation
- Laser engraved pushbuttons and lenses
- Pushbuttons (momentary) rated for 5 million mechanical operations

**Protection Type**

- IP67/IP69K
- NEMA 4X, 13

# 37.5 Pushbuttons and Indicating Lights

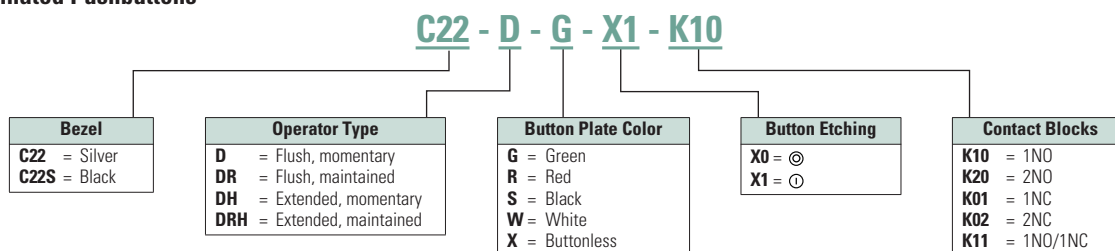
## 22.5 mm Compact Pushbuttons—C22

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### Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

#### Non-Illuminated Pushbuttons



### Product Selection

#### Non-Illuminated, Flush, Momentary

C22(S)-D-\_\_



#### Non-Illuminated Pushbuttons, Flush, Momentary

| Button Color | Button Etching | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|--------------|----------------|-----------------------------|-----------------------------|----------------------------|
| Green        | —              | 1NO                         | C22-D-G-K10                 | C22S-D-G-K10               |
|              |                | 2NO                         | C22-D-G-K20                 | C22S-D-G-K20               |
|              |                | 1NO/1NC                     | C22-D-G-K11                 | C22S-D-G-K11               |
|              | X1             | 1NO                         | C22-D-G-X1-K10              | C22S-D-G-X1-K10            |
|              |                | 2NO                         | C22-D-G-X1-K20              | C22S-D-G-X1-K20            |
|              |                | 1NO/1NC                     | C22-D-G-X1-K11              | C22S-D-G-X1-K11            |
| Red          | —              | 1NC                         | C22-D-R-K01                 | C22S-D-R-K01               |
|              |                | 2NC                         | C22-D-R-K02                 | C22S-D-R-K02               |
|              |                | 1NO/1NC                     | C22-D-R-K11                 | C22S-D-R-K11               |
|              | X0             | 1NC                         | C22-D-R-X0-K01              | C22S-D-R-X0-K01            |
|              |                | 2NC                         | C22-D-R-X0-K02              | C22S-D-R-X0-K02            |
|              |                | 1NO/1NC                     | C22-D-R-X0-K11              | C22S-D-R-X0-K11            |
| Black        | —              | 1NC                         | C22-D-S-K01                 | C22S-D-S-K01               |
|              |                | 2NC                         | C22-D-S-K02                 | C22S-D-S-K02               |
|              |                | 1NO/1NC                     | C22-D-S-K11                 | C22S-D-S-K11               |
|              | X0             | 1NC                         | C22-D-S-X0-K01              | C22S-D-S-X0-K01            |
|              |                | 2NC                         | C22-D-S-X0-K02              | C22S-D-S-X0-K02            |
|              |                | 1NO/1NC                     | C22-D-S-X0-K11              | C22S-D-S-X0-K11            |
| White        | —              | 1NO                         | C22-D-W-K10                 | C22S-D-W-K10               |
|              |                | 2NO                         | C22-D-W-K20                 | C22S-D-W-K20               |
|              |                | 1NO/1NC                     | C22-D-W-K11                 | C22S-D-W-K11               |
|              | X1             | 1NO                         | C22-D-W-X1-K10              | C22S-D-W-X1-K10            |
|              |                | 2NO                         | C22-D-W-X1-K20              | C22S-D-W-X1-K20            |
|              |                | 1NO/1NC                     | C22-D-W-X1-K11              | C22S-D-W-X1-K11            |
| Buttonless   | —              | 1NO                         | C22-D-X-K10                 | C22S-D-X-K10               |
|              |                | 2NO                         | C22-D-X-K20                 | C22S-D-X-K20               |
|              |                | 1NC                         | C22-D-X-K01                 | C22S-D-X-K01               |
|              | —              | 2NC                         | C22-D-X-K02                 | C22S-D-X-K02               |
|              |                | 1NO/1NC                     | C22-D-X-K11                 | C22S-D-X-K11               |
|              |                | —                           | —                           | —                          |

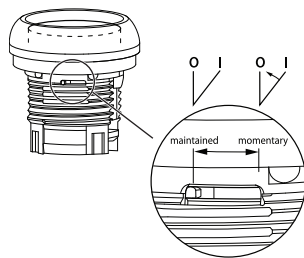
## Non-Illuminated, Flush, Maintained

C22(S)-DR-

## Non-Illuminated Pushbuttons, Flush, Maintained



| Button Color | Button Etching | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|--------------|----------------|-----------------------------|-----------------------------|----------------------------|
| Green        | —              | 1NO                         | C22-DR-G-K10                | C22S-DR-G-K10              |
|              | —              | 2NO                         | C22-DR-G-K20                | C22S-DR-G-K20              |
|              | —              | 1NO/1NC                     | C22-DR-G-K11                | C22S-DR-G-K11              |
|              | X1             | 1NO                         | C22-DR-G-X1-K10             | C22S-DR-G-X1-K10           |
|              | X1             | 2NO                         | C22-DR-G-X1-K20             | C22S-DR-G-X1-K20           |
|              | X1             | 1NO/1NC                     | C22-DR-G-X1-K11             | C22S-DR-G-X1-K11           |
| Red          | —              | 1NC                         | C22-DR-R-K01                | C22S-DR-R-K01              |
|              | —              | 2NC                         | C22-DR-R-K02                | C22S-DR-R-K02              |
|              | —              | 1NO/1NC                     | C22-DR-R-K11                | C22S-DR-R-K11              |
|              | X0             | 1NC                         | C22-DR-R-X0-K01             | C22S-DR-R-X0-K01           |
|              | X0             | 2NC                         | C22-DR-R-X0-K02             | C22S-DR-R-X0-K02           |
|              | X0             | 1NO/1NC                     | C22-DR-R-X0-K11             | C22S-DR-R-X0-K11           |
| Black        | —              | 1NC                         | C22-DR-S-K01                | C22S-DR-S-K01              |
|              | —              | 2NC                         | C22-DR-S-K02                | C22S-DR-S-K02              |
|              | —              | 1NO/1NC                     | C22-DR-S-K11                | C22S-DR-S-K11              |
|              | X0             | 1NC                         | C22-DR-S-X0-K01             | C22S-DR-S-X0-K01           |
|              | X0             | 2NC                         | C22-DR-S-X0-K02             | C22S-DR-S-X0-K02           |
|              | X0             | 1NO/1NC                     | C22-DR-S-X0-K11             | C22S-DR-S-X0-K11           |
| White        | —              | 1NO                         | C22-DR-W-K10                | C22S-DR-W-K10              |
|              | —              | 2NO                         | C22-DR-W-K20                | C22S-DR-W-K20              |
|              | —              | 1NO/1NC                     | C22-DR-W-K11                | C22S-DR-W-K11              |
|              | X1             | 1NO                         | C22-DR-W-X1-K10             | C22S-DR-W-X1-K10           |
|              | X1             | 2NO                         | C22-DR-W-X1-K20             | C22S-DR-W-X1-K20           |
|              | X1             | 1NO/1NC                     | C22-DR-W-X1-K11             | C22S-DR-W-X1-K11           |
| Buttonless   | —              | 1NO                         | C22-DR-X-K10                | C22S-DR-X-K10              |
|              | —              | 2NO                         | C22-DR-X-K20                | C22S-DR-X-K20              |
|              | —              | 1NC                         | C22-DR-X-K01                | C22S-DR-X-K01              |
|              | —              | 2NC                         | C22-DR-X-K02                | C22S-DR-X-K02              |
|              | —              | 1NO/1NC                     | C22-DR-X-K11                | C22S-DR-X-K11              |



**Note:** Maintained pushbuttons can be converted in the field to momentary operation by switching the locking ring, which is accessible through the side of the operator body.

## Non-Illuminated, Extended, Momentary

C22(S)-DH-



## Non-Illuminated Pushbuttons, Extended, Momentary

| Button Color | Button Etching | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|--------------|----------------|-----------------------------|-----------------------------|----------------------------|
| Green        | —              | 1NO                         | C22-DH-G-K10                | C22S-DH-G-K10              |
|              | —              | 2NO                         | C22-DH-G-K20                | C22S-DH-G-K20              |
|              | —              | 1NO/1NC                     | C22-DH-G-K11                | C22S-DH-G-K11              |
|              | X1             | 1NO                         | C22-DH-G-X1-K10             | C22S-DH-G-X1-K10           |
|              | X1             | 2NO                         | C22-DH-G-X1-K20             | C22S-DH-G-X1-K20           |
|              | X1             | 1NO/1NC                     | C22-DH-G-X1-K11             | C22S-DH-G-X1-K11           |
| Red          | —              | 1NC                         | C22-DH-R-K01                | C22S-DH-R-K01              |
|              | —              | 2NC                         | C22-DH-R-K02                | C22S-DH-R-K02              |
|              | —              | 1NO/1NC                     | C22-DH-R-K11                | C22S-DH-R-K11              |
|              | X0             | 1NC                         | C22-DH-R-X0-K01             | C22S-DH-R-X0-K01           |
|              | X0             | 2NC                         | C22-DH-R-X0-K02             | C22S-DH-R-X0-K02           |
|              | X0             | 1NO/1NC                     | C22-DH-R-X0-K11             | C22S-DH-R-X0-K11           |
| Black        | —              | 1NC                         | C22-DH-S-K01                | C22S-DH-S-K01              |
|              | —              | 2NC                         | C22-DH-S-K02                | C22S-DH-S-K02              |
|              | —              | 1NO/1NC                     | C22-DH-S-K11                | C22S-DH-S-K11              |
|              | X0             | 1NC                         | C22-DH-S-X0-K01             | C22S-DH-S-X0-K01           |
|              | X0             | 2NC                         | C22-DH-S-X0-K02             | C22S-DH-S-X0-K02           |
|              | X0             | 1NO/1NC                     | C22-DH-S-X0-K11             | C22S-DH-S-X0-K11           |
| White        | —              | 1NO                         | C22-DH-W-K10                | C22S-DH-W-K10              |
|              | —              | 2NO                         | C22-DH-W-K20                | C22S-DH-W-K20              |
|              | —              | 1NO/1NC                     | C22-DH-W-K11                | C22S-DH-W-K11              |
|              | X1             | 1NO                         | C22-DH-W-X1-K10             | C22S-DH-W-X1-K10           |
|              | X1             | 2NO                         | C22-DH-W-X1-K20             | C22S-DH-W-X1-K20           |
|              | X1             | 1NO/1NC                     | C22-DH-W-X1-K11             | C22S-DH-W-X1-K11           |

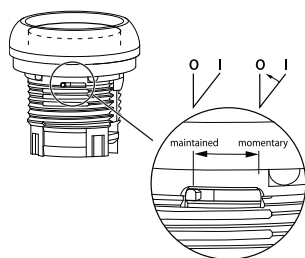
## Non-Illuminated, Extended, Maintained

C22(S)-DRH-

## Non-Illuminated Pushbuttons, Extended, Maintained



| Button Color | Button Etching | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|--------------|----------------|-----------------------------|-----------------------------|----------------------------|
| Green        | —              | 1NO                         | C22-DRH-G-K10               | C22S-DRH-G-K10             |
|              | —              | 2NO                         | C22-DRH-G-K20               | C22S-DRH-G-K20             |
|              | —              | 1NO/1NC                     | C22-DRH-G-K11               | C22S-DRH-G-K11             |
|              | X1             | 1NO                         | C22-DRH-G-X1-K10            | C22S-DRH-G-X1-K10          |
|              | X1             | 2NO                         | C22-DRH-G-X1-K20            | C22S-DRH-G-X1-K20          |
|              | X1             | 1NO/1NC                     | C22-DRH-G-X1-K11            | C22S-DRH-G-X1-K11          |
| Red          | —              | 1NC                         | C22-DRH-R-K01               | C22S-DRH-R-K01             |
|              | —              | 2NC                         | C22-DRH-R-K02               | C22S-DRH-R-K02             |
|              | —              | 1NO/1NC                     | C22-DRH-R-K11               | C22S-DRH-R-K11             |
|              | X0             | 1NC                         | C22-DRH-R-X0-K01            | C22S-DRH-R-X0-K01          |
|              | X0             | 2NC                         | C22-DRH-R-X0-K02            | C22S-DRH-R-X0-K02          |
|              | X0             | 1NO/1NC                     | C22-DRH-R-X0-K11            | C22S-DRH-R-X0-K11          |
| Black        | —              | 1NC                         | C22-DRH-S-K01               | C22S-DRH-S-K01             |
|              | —              | 2NC                         | C22-DRH-S-K02               | C22S-DRH-S-K02             |
|              | —              | 1NO/1NC                     | C22-DRH-S-K11               | C22S-DRH-S-K11             |
|              | X0             | 1NC                         | C22-DRH-S-X0-K01            | C22S-DRH-S-X0-K01          |
|              | X0             | 2NC                         | C22-DRH-S-X0-K02            | C22S-DRH-S-X0-K02          |
|              | X0             | 1NO/1NC                     | C22-DRH-S-X0-K11            | C22S-DRH-S-X0-K11          |
| White        | —              | 1NO                         | C22-DRH-W-K10               | C22S-DRH-W-K10             |
|              | —              | 2NO                         | C22-DRH-W-K20               | C22S-DRH-W-K20             |
|              | —              | 1NO/1NC                     | C22-DRH-W-K11               | C22S-DRH-W-K11             |
|              | X1             | 1NO                         | C22-DRH-W-X1-K10            | C22S-DRH-W-X1-K10          |
|              | X1             | 2NO                         | C22-DRH-W-X1-K20            | C22S-DRH-W-X1-K20          |
|              | X1             | 1NO/1NC                     | C22-DRH-W-X1-K11            | C22S-DRH-W-X1-K11          |

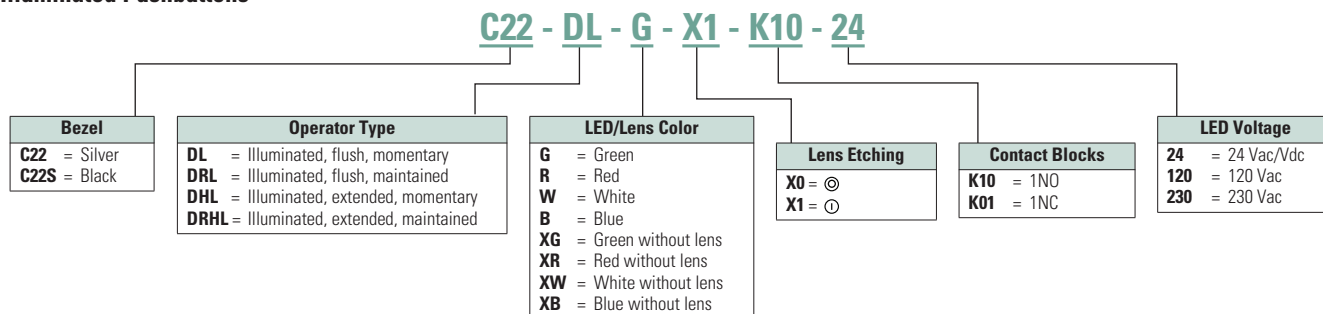


**Note:** Maintained pushbuttons can be converted in the field to momentary operation by switching the locking ring, which is accessible through the side of the operator body.

## Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

### Illuminated Pushbuttons



## Product Selection

### Illuminated, Flush, Momentary

C22(S)-DL-

#### Illuminated Pushbuttons, Flush, Momentary



| LED Color | Button Color | Voltage    | Button Etching | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|-----------|--------------|------------|----------------|-----------------------------|-----------------------------|----------------------------|
| Green     | Green        | 24 Vac/Vdc | —              | 1NO                         | C22-DL-G-K10-24             | C22S-DL-G-K10-24           |
|           |              | 120 Vac    | —              | 1NO                         | C22-DL-G-K10-120            | C22S-DL-G-K10-120          |
|           |              | 230 Vac    | —              | 1NO                         | C22-DL-G-K10-230            | C22S-DL-G-K10-230          |
|           |              | 24 Vac/Vdc | X1             | 1NO                         | C22-DL-G-X1-K10-24          | C22S-DL-G-X1-K10-24        |
|           |              | 120 Vac    | X1             | 1NO                         | C22-DL-G-X1-K10-120         | C22S-DL-G-X1-K10-120       |
|           |              | 230 Vac    | X1             | 1NO                         | C22-DL-G-X1-K10-230         | C22S-DL-G-X1-K10-230       |
|           | Buttonless   | 24 Vac/Vdc | —              | 1NO                         | C22-DL-XG-K10-24            | C22S-DL-XG-K10-24          |
|           |              | 120 Vac    | —              | 1NO                         | C22-DL-XG-K10-120           | C22S-DL-XG-K10-120         |
|           |              | 230 Vac    | —              | 1NO                         | C22-DL-XG-K10-230           | C22S-DL-XG-K10-230         |
|           | Red          | 24 Vac/Vdc | —              | 1NC                         | C22-DL-R-K01-24             | C22S-DL-R-K01-24           |
|           |              | 120 Vac    | —              | 1NC                         | C22-DL-R-K01-120            | C22S-DL-R-K01-120          |
|           |              | 230 Vac    | —              | 1NC                         | C22-DL-R-K01-230            | C22S-DL-R-K01-230          |
|           |              | 24 Vac/Vdc | X0             | 1NC                         | C22-DL-R-X0-K01-24          | C22S-DL-R-X0-K01-24        |
|           |              | 120 Vac    | X0             | 1NC                         | C22-DL-R-X0-K01-120         | C22S-DL-R-X0-K01-120       |
|           |              | 230 Vac    | X0             | 1NC                         | C22-DL-R-X0-K01-230         | C22S-DL-R-X0-K01-230       |
|           | Buttonless   | 24 Vac/Vdc | —              | 1NC                         | C22-DL-XR-K01-24            | C22S-DL-XR-K01-24          |
|           |              | 120 Vac    | —              | 1NC                         | C22-DL-XR-K01-120           | C22S-DL-XR-K01-120         |
|           |              | 230 Vac    | —              | 1NC                         | C22-DL-XR-K01-230           | C22S-DL-XR-K01-230         |
| White     | White        | 24 Vac/Vdc | —              | 1NO                         | C22-DL-W-K10-24             | C22S-DL-W-K10-24           |
|           |              | 120 Vac    | —              | 1NO                         | C22-DL-W-K10-120            | C22S-DL-W-K10-120          |
|           |              | 230 Vac    | —              | 1NO                         | C22-DL-W-K10-230            | C22S-DL-W-K10-230          |
|           |              | 24 Vac/Vdc | X1             | 1NO                         | C22-DL-W-X1-K10-24          | C22S-DL-W-X1-K10-24        |
|           |              | 120 Vac    | X1             | 1NO                         | C22-DL-W-X1-K10-120         | C22S-DL-W-X1-K10-120       |
|           |              | 230 Vac    | X1             | 1NO                         | C22-DL-W-X1-K10-230         | C22S-DL-W-X1-K10-230       |
|           | Buttonless   | 24 Vac/Vdc | —              | 1NO                         | C22-DL-XW-K10-24            | C22S-DL-XW-K10-24          |
|           |              | 120 Vac    | —              | 1NO                         | C22-DL-XW-K10-120           | C22S-DL-XW-K10-120         |
|           |              | 230 Vac    | —              | 1NO                         | C22-DL-XW-K10-230           | C22S-DL-XW-K10-230         |
|           | Blue         | 24 Vac/Vdc | —              | 1NO                         | C22-DL-B-K10-24             | C22S-DL-B-K10-24           |
|           |              | 120 Vac    | —              | 1NO                         | C22-DL-B-K10-120            | C22S-DL-B-K10-120          |
|           |              | 230 Vac    | —              | 1NO                         | C22-DL-B-K10-230            | C22S-DL-B-K10-230          |
|           |              | 24 Vac/Vdc | —              | 1NO                         | C22-DL-B-K10-24             | C22S-DL-B-K10-24           |
|           |              | 120 Vac    | —              | 1NO                         | C22-DL-B-K10-120            | C22S-DL-B-K10-120          |
|           |              | 230 Vac    | —              | 1NO                         | C22-DL-B-K10-230            | C22S-DL-B-K10-230          |
|           | Buttonless   | 24 Vac/Vdc | —              | 1NO                         | C22-DL-XB-K10-24            | C22S-DL-XB-K10-24          |
|           |              | 120 Vac    | —              | 1NO                         | C22-DL-XB-K10-120           | C22S-DL-XB-K10-120         |
|           |              | 230 Vac    | —              | 1NO                         | C22-DL-XB-K10-230           | C22S-DL-XB-K10-230         |

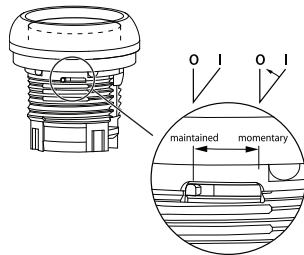
## Illuminated, Flush, Maintained

C22(S)-DRL\_

## Illuminated Pushbuttons, Flush, Maintained



| LED Color | Button Color | Voltage    | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|-----------|--------------|------------|-----------------------------|-----------------------------|----------------------------|
| Green     | Green        | 24 Vac/Vdc | 1NO                         | C22-DRL-G-K10-24            | C22S-DRL-G-K10-24          |
|           |              | 120 Vac    | 1NO                         | C22-DRL-G-K10-120           | C22S-DRL-G-K10-120         |
|           |              | 230 Vac    | 1NO                         | C22-DRL-G-K10-230           | C22S-DRL-G-K10-230         |
|           | Buttonless   | 24 Vac/Vdc | 1NO                         | C22-DRL-XG-K10-24           | C22S-DRL-XG-K10-24         |
|           |              | 120 Vac    | 1NO                         | C22-DRL-XG-K10-120          | C22S-DRL-XG-K10-120        |
|           |              | 230 Vac    | 1NO                         | C22-DRL-XG-K10-230          | C22S-DRL-XG-K10-230        |
|           | Red          | 24 Vac/Vdc | 1NC                         | C22-DRL-R-K01-24            | C22S-DRL-R-K01-24          |
|           |              | 120 Vac    | 1NC                         | C22-DRL-R-K01-120           | C22S-DRL-R-K01-120         |
|           |              | 230 Vac    | 1NC                         | C22-DRL-R-K01-230           | C22S-DRL-R-K01-230         |
| Red       | Red          | 24 Vac/Vdc | 1NC                         | C22-DRL-R-K01-24            | C22S-DRL-R-K01-24          |
|           |              | 120 Vac    | 1NC                         | C22-DRL-R-K01-120           | C22S-DRL-R-K01-120         |
|           |              | 230 Vac    | 1NC                         | C22-DRL-R-K01-230           | C22S-DRL-R-K01-230         |
|           | Buttonless   | 24 Vac/Vdc | 1NC                         | C22-DRL-XR-K01-24           | C22S-DRL-XR-K01-24         |
|           |              | 120 Vac    | 1NC                         | C22-DRL-XR-K01-120          | C22S-DRL-XR-K01-120        |
|           |              | 230 Vac    | 1NC                         | C22-DRL-XR-K01-230          | C22S-DRL-XR-K01-230        |
|           | White        | 24 Vac/Vdc | 1NO                         | C22-DRL-W-K10-24            | C22S-DRL-W-K10-24          |
|           |              | 120 Vac    | 1NO                         | C22-DRL-W-K10-120           | C22S-DRL-W-K10-120         |
|           |              | 230 Vac    | 1NO                         | C22-DRL-W-K10-230           | C22S-DRL-W-K10-230         |
| White     | White        | 24 Vac/Vdc | 1NO                         | C22-DRL-W-K10-24            | C22S-DRL-W-K10-24          |
|           |              | 120 Vac    | 1NO                         | C22-DRL-W-K10-120           | C22S-DRL-W-K10-120         |
|           |              | 230 Vac    | 1NO                         | C22-DRL-W-K10-230           | C22S-DRL-W-K10-230         |
|           | Buttonless   | 24 Vac/Vdc | 1NO                         | C22-DRL-XW-K10-24           | C22S-DRL-XW-K10-24         |
|           |              | 120 Vac    | 1NO                         | C22-DRL-XW-K10-120          | C22S-DRL-XW-K10-120        |
|           |              | 230 Vac    | 1NO                         | C22-DRL-XW-K10-230          | C22S-DRL-XW-K10-230        |
|           | Blue         | 24 Vac/Vdc | 1NO                         | C22-DRL-B-K10-24            | C22S-DRL-B-K10-24          |
|           |              | 120 Vac    | 1NO                         | C22-DRL-B-K10-120           | C22S-DRL-B-K10-120         |
|           |              | 230 Vac    | 1NO                         | C22-DRL-B-K10-230           | C22S-DRL-B-K10-230         |
| Blue      | Blue         | 24 Vac/Vdc | 1NO                         | C22-DRL-B-K10-24            | C22S-DRL-B-K10-24          |
|           |              | 120 Vac    | 1NO                         | C22-DRL-B-K10-120           | C22S-DRL-B-K10-120         |
|           |              | 230 Vac    | 1NO                         | C22-DRL-B-K10-230           | C22S-DRL-B-K10-230         |
|           | Buttonless   | 24 Vac/Vdc | 1NO                         | C22-DRL-XB-K10-24           | C22S-DRL-XB-K10-24         |
|           |              | 120 Vac    | 1NO                         | C22-DRL-XB-K10-120          | C22S-DRL-XB-K10-120        |
|           |              | 230 Vac    | 1NO                         | C22-DRL-XB-K10-230          | C22S-DRL-XB-K10-230        |



**Note:** Maintained pushbuttons can be converted in the field to momentary operation by switching the locking ring, which is accessible through the side of the operator body.

## Illuminated, Extended, Momentary

C22(S)-DLH-\_\_

## Illuminated Pushbuttons, Extended, Momentary



| LED Color | Button Color | Voltage    | Button Etching | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|-----------|--------------|------------|----------------|-----------------------------|-----------------------------|----------------------------|
| Green     | Green        | 24 Vac/Vdc | —              | 1NO                         | C22-DLH-G-K10-24            | C22S-DLH-G-K10-24          |
|           |              | 120 Vac    | —              | 1NO                         | C22-DLH-G-K10-120           | C22S-DLH-G-K10-120         |
|           |              | 230 Vac    | —              | 1NO                         | C22-DLH-G-K10-230           | C22S-DLH-G-K10-230         |
|           |              | 24 Vac/Vdc | X1             | 1NO                         | C22-DLH-G-X1-K10-24         | C22S-DLH-G-X1-K10-24       |
|           |              | 120 Vac    | X1             | 1NO                         | C22-DLH-G-X1-K10-120        | C22S-DLH-G-X1-K10-12       |
|           |              | 230 Vac    | X1             | 1NO                         | C22-DLH-G-X1-K10-230        | C22S-DLH-G-X1-K10-23       |
| Red       | Red          | 24 Vac/Vdc | —              | 1NC                         | C22-DLH-R-K01-24            | C22S-DLH-R-K01-24          |
|           |              | 120 Vac    | —              | 1NC                         | C22-DLH-R-K01-120           | C22S-DLH-R-K01-120         |
|           |              | 230 Vac    | —              | 1NC                         | C22-DLH-R-K01-230           | C22S-DLH-R-K01-230         |
|           |              | 24 Vac/Vdc | X0             | 1NC                         | C22-DLH-R-X0-K01-24         | C22S-DLH-R-X0-K01-24       |
|           |              | 120 Vac    | X0             | 1NC                         | C22-DLH-R-X0-K01-120        | C22S-DLH-R-X0-K01-12       |
|           |              | 230 Vac    | X0             | 1NC                         | C22-DLH-R-X0-K01-230        | C22S-DLH-R-X0-K01-23       |
| White     | White        | 24 Vac/Vdc | —              | 1NO                         | C22-DLH-W-K10-24            | C22S-DLH-W-K10-24          |
|           |              | 120 Vac    | —              | 1NO                         | C22-DLH-W-K10-120           | C22S-DLH-W-K10-120         |
|           |              | 230 Vac    | —              | 1NO                         | C22-DLH-W-K10-230           | C22S-DLH-W-K10-230         |
|           |              | 24 Vac/Vdc | X1             | 1NO                         | C22-DLH-W-X1-K10-24         | C22S-DLH-W-X1-K10-24       |
|           |              | 120 Vac    | X1             | 1NO                         | C22-DLH-W-X1-K10-120        | C22S-DLH-W-X1-K10-12       |
|           |              | 230 Vac    | X1             | 1NO                         | C22-DLH-W-X1-K10-230        | C22S-DLH-W-X1-K10-23       |
| Blue      | Blue         | 24 Vac/Vdc | —              | 1NO                         | C22-DLH-B-K10-24            | C22S-DLH-B-K10-24          |
|           |              | 120 Vac    | —              | 1NO                         | C22-DLH-B-K10-120           | C22S-DLH-B-K10-120         |
|           |              | 230 Vac    | —              | 1NO                         | C22-DLH-B-K10-230           | C22S-DLH-B-K10-230         |

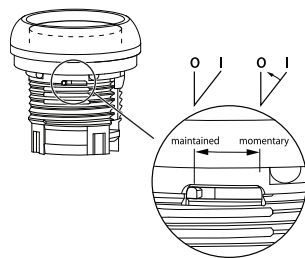
## Illuminated, Extended, Maintained

C22(S)-DRLH-

## Illuminated Pushbuttons, Flush, Maintained



| LED Color | Button Color | Voltage    | Button Etching | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|-----------|--------------|------------|----------------|-----------------------------|-----------------------------|----------------------------|
| Green     | Green        | 24 Vac/Vdc | —              | 1NO                         | C22-DRLH-G-K10-24           | C22S-DRLH-G-K10-24         |
|           |              | 120 Vac    | —              | 1NO                         | C22-DRLH-G-K10-120          | C22S-DRLH-G-K10-120        |
|           |              | 230 Vac    | —              | 1NO                         | C22-DRLH-G-K10-230          | C22S-DRLH-G-K10-230        |
|           |              | 24 Vac/Vdc | X1             | 1NO                         | C22-DRLH-G-X1-K10-24        | C22S-DRLH-G-X1-K10-24      |
|           |              | 120 Vac    | X1             | 1NO                         | C22-DRLH-G-X1-K10-120       | C22S-DRLH-G-X1-K10-120     |
|           |              | 230 Vac    | X1             | 1NO                         | C22-DRLH-G-X1-K10-230       | C22S-DRLH-G-X1-K10-230     |
| Red       | Red          | 24 Vac/Vdc | —              | 1NC                         | C22-DRLH-R-K01-24           | C22S-DRLH-R-K01-24         |
|           |              | 120 Vac    | —              | 1NC                         | C22-DRLH-R-K01-120          | C22S-DRLH-R-K01-120        |
|           |              | 230 Vac    | —              | 1NC                         | C22-DRLH-R-K01-230          | C22S-DRLH-R-K01-230        |
|           |              | 24 Vac/Vdc | X0             | 1NC                         | C22-DRLH-R-X0-K01-24        | C22S-DRLH-R-X0-K01-24      |
|           |              | 120 Vac    | X0             | 1NC                         | C22-DRLH-R-X0-K01-120       | C22S-DRLH-R-X0-K01-120     |
|           |              | 230 Vac    | X0             | 1NC                         | C22-DRLH-R-X0-K01-230       | C22S-DRLH-R-X0-K01-230     |
| White     | White        | 24 Vac/Vdc | —              | 1NO                         | C22-DRLH-W-K10-24           | C22S-DRLH-W-K10-24         |
|           |              | 120 Vac    | —              | 1NO                         | C22-DRLH-W-K10-120          | C22S-DRLH-W-K10-120        |
|           |              | 230 Vac    | —              | 1NO                         | C22-DRLH-W-K10-230          | C22S-DRLH-W-K10-230        |
|           |              | 24 Vac/Vdc | X1             | 1NO                         | C22-DRLH-W-X1-K10-24        | C22S-DRLH-W-X1-K10-24      |
|           |              | 120 Vac    | X1             | 1NO                         | C22-DRLH-W-X1-K10-120       | C22S-DRLH-W-X1-K10-120     |
|           |              | 230 Vac    | X1             | 1NO                         | C22-DRLH-W-X1-K10-230       | C22S-DRLH-W-X1-K10-230     |
| Blue      | Blue         | 24 Vac/Vdc | —              | 1NO                         | C22-DRLH-B-K10-24           | C22S-DRLH-B-K10-24         |
|           |              | 120 Vac    | —              | 1NO                         | C22-DRLH-B-K10-120          | C22S-DRLH-B-K10-120        |
|           |              | 230 Vac    | —              | 1NO                         | C22-DRLH-B-K10-230          | C22S-DRLH-B-K10-230        |



**Note:** Maintained pushbuttons can be converted in the field to momentary operation by switching the locking ring, which is accessible through the side of the operator body.

## Indicating Lights



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## Indicating Lights

**Product Description**

C22 indicating lights use a combination of a durable, bright LED unit and modern lenses designed specifically for this type of LED to create a bright and visible indicating light. As with the pushbuttons, the indicating light lenses can be laser etched, simply order without lens and order M22/C22 custom etched lenses to attach.

**Note:** For additional accessories, please see Volume 7—Motor Controls, Logic and Connectivity, CA08100008E, Tab 37, section 37.4, 22.5 mm Modular Pushbuttons—M22.

**Features**

- LED offering only for improved brightness quality and up to 100,000 hours of operation
- Lenses specifically designed for LED illumination
- Lenses capable of being laser etched for custom solutions that last

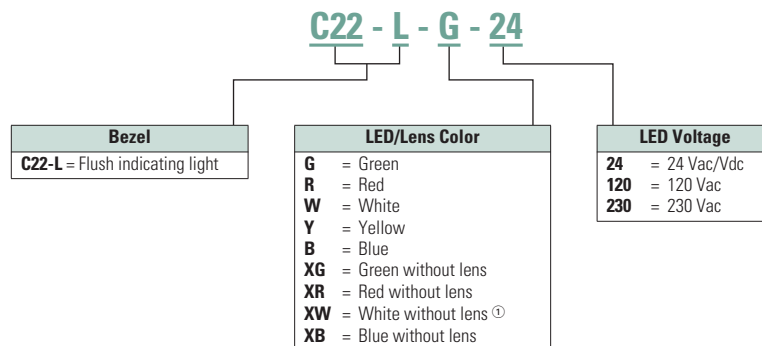
**Protection Type**

- IP67/IP69K
- NEMA 4X, 13

## Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

### Indicating Lights



## Product Selection

### Indicating Lights

C22-L-\_\_



#### Indicating Lights

| Lens Color   | LED Color | Voltage    | Catalog Number      |
|--------------|-----------|------------|---------------------|
| Green        | Green     | 24 Vac/Vdc | <b>C22-L-G-24</b>   |
|              |           | 120 Vac    | <b>C22-L-G-120</b>  |
|              |           | 230 Vac    | <b>C22-L-G-230</b>  |
| Red          | Red       | 24 Vac/Vdc | <b>C22-L-R-24</b>   |
|              |           | 120 Vac    | <b>C22-L-R-120</b>  |
|              |           | 230 Vac    | <b>C22-L-R-230</b>  |
| White        | White     | 24 Vac/Vdc | <b>C22-L-W-24</b>   |
|              |           | 120 Vac    | <b>C22-L-W-120</b>  |
|              |           | 230 Vac    | <b>C22-L-W-230</b>  |
| Yellow       | White     | 24 Vac/Vdc | <b>C22-L-Y-24</b>   |
|              |           | 120 Vac    | <b>C22-L-Y-120</b>  |
|              |           | 230 Vac    | <b>C22-L-Y-230</b>  |
| Blue         | Blue      | 24 Vac/Vdc | <b>C22-L-B-24</b>   |
|              |           | 120 Vac    | <b>C22-L-B-120</b>  |
|              |           | 230 Vac    | <b>C22-L-B-230</b>  |
| Without Lens | Green     | 24 Vac/Vdc | <b>C22-L-XG-24</b>  |
|              |           | 120 Vac    | <b>C22-L-XG-120</b> |
|              |           | 230 Vac    | <b>C22-L-XG-230</b> |
|              | Red       | 24 Vac/Vdc | <b>C22-L-XR-24</b>  |
|              |           | 120 Vac    | <b>C22-L-XR-120</b> |
|              |           | 230 Vac    | <b>C22-L-XR-230</b> |
|              | White     | 24 Vac/Vdc | <b>C22-L-XW-24</b>  |
|              |           | 120 Vac    | <b>C22-L-XW-120</b> |
|              |           | 230 Vac    | <b>C22-L-XW-230</b> |
|              | Blue      | 24 Vac/Vdc | <b>C22-L-XB-24</b>  |
|              |           | 120 Vac    | <b>C22-L-XB-120</b> |
|              |           | 230 Vac    | <b>C22-L-XB-230</b> |

#### Note

① Use white LED for both white and yellow lenses.

Emergency Stops



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Emergency Stops

Product Description

C22 emergency stops are a durable and reliable solution to a variety of e-stop applications. This compact e-stop, available as twist-to-release and keyed-release, is a simple product that eliminates the need for self-monitoring contact blocks, all while still meeting almost all of the industry safety standards.

**Note:** For additional accessories, please see Volume 7—Motor Controls, Logic and Connectivity, CA08100008E, Tab 37, section 37.4, 22.5 mm Modular Pushbuttons—M22.

Features

- Available in both twist-release and keyed-release with either 45 mm or 60 mm operators

Protection Type

- Twist-Release
  - IP67/IP69K
- Keyed-Release
  - IP66
- NEMA 4X, 13

## Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

### Emergency Stops

#### C22 - PVS45P - MS1 - K01

| Operator Type                 | Key Code       | Contact Blocks |
|-------------------------------|----------------|----------------|
| PVT45P = Twist-release, 45 mm | MS1 = MS1      | K02 = 2NC      |
| PVT60P = Twist-release, 60 mm | MS2 = MS2      | K11 = 1NO/1NC  |
| PVS45P = Key-release, 45 mm   | MS3 = MS3      |                |
| PVS60P = Key-release, 60 mm   | MS4 = MS4      |                |
|                               | MS5 = MS5      |                |
|                               | MS6 = MS6      |                |
|                               | MS7 = MS7      |                |
|                               | MS8 = MS8      |                |
|                               | RS = Ronis-445 |                |

## Product Selection

### Non-Illuminated, Twist-Release

C22-PVT\_

#### Non-Illuminated Emergency Stops, Twist-Release



| Release Method | Operator Size | Contact Block Configuration | Catalog Number |
|----------------|---------------|-----------------------------|----------------|
| Twist-release  | 45 mm         | 2NC                         | C22-PVT45P-K02 |
|                |               | 1NO/1NC                     | C22-PVT45P-K11 |
|                | 60 mm         | 2NC                         | C22-PVT60P-K02 |
|                |               | 1NO/1NC                     | C22-PVT60P-K11 |

### Non-Illuminated, Keyed-Release

C22-PVS\_

#### Non-Illuminated Emergency Stops, Keyed-Release



| Release Method | Operator Size | Key Code | Contact Block Configuration | Catalog Number     |
|----------------|---------------|----------|-----------------------------|--------------------|
| Keyed-release  | 45 mm         | MS1      | 2NC                         | C22-PVS45P-MS1-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS1-K11 |
|                |               | MS2      | 2NC                         | C22-PVS45P-MS2-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS2-K11 |
|                |               | MS3      | 2NC                         | C22-PVS45P-MS3-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS3-K11 |
|                |               | MS4      | 2NC                         | C22-PVS45P-MS4-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS4-K11 |
|                |               | MS5      | 2NC                         | C22-PVS45P-MS5-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS5-K11 |
|                |               | MS6      | 2NC                         | C22-PVS45P-MS6-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS6-K11 |
|                |               | MS7      | 2NC                         | C22-PVS45P-MS7-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS7-K11 |
|                |               | MS8      | 2NC                         | C22-PVS45P-MS8-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS45P-MS8-K11 |
|                |               | Ronis    | 2NC                         | C22-PVS45P-RS-K02  |
|                |               |          | 1NO/1NC                     | C22-PVS45P-RS-K11  |

37.5

Pushbuttons and Indicating Lights

22.5 mm Compact Pushbuttons—C22

37

C22-PVS\_



Non-Illuminated Emergency Stops, Keyed-Release, continued

| Release Method | Operator Size | Key Code | Contact Block Configuration | Catalog Number     |
|----------------|---------------|----------|-----------------------------|--------------------|
| Keyed-release  | 60 mm         | MS1      | 2NC                         | C22-PVS60P-MS1-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS1-K11 |
|                |               | MS2      | 2NC                         | C22-PVS60P-MS2-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS2-K11 |
|                |               | MS3      | 2NC                         | C22-PVS60P-MS3-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS3-K11 |
|                |               | MS4      | 2NC                         | C22-PVS60P-MS4-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS4-K11 |
|                |               | MS5      | 2NC                         | C22-PVS60P-MS5-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS5-K11 |
|                |               | MS6      | 2NC                         | C22-PVS60P-MS6-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS6-K11 |
|                |               | MS7      | 2NC                         | C22-PVS60P-MS7-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS7-K11 |
|                |               | MS8      | 2NC                         | C22-PVS60P-MS8-K02 |
|                |               |          | 1NO/1NC                     | C22-PVS60P-MS8-K11 |
|                |               | Ronis    | 2NC                         | C22-PVS60P-RS-K02  |
|                |               |          | 1NO/1NC                     | C22-PVS60P-RS-K11  |

Selector Switches



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Selector Switches

Product Description

With over 20 variations of operation and 8 varieties of key codes, the C22 line offers a very complete line of selector switches.

**Note:** For additional accessories, please see Volume 7—Motor Controls, Logic and Connectivity, CA08100008E, Tab 37, section 37.4, 22.5 mm Modular Pushbuttons—M22.

Features

- Selector switch (non-keyed) rated for 1 million mechanical operations
- Momentary selector switches are field convertible from momentary to maintained

Protection Type

- IP65
- NEMA 4X, 13

# 37.5 Pushbuttons and Indicating Lights

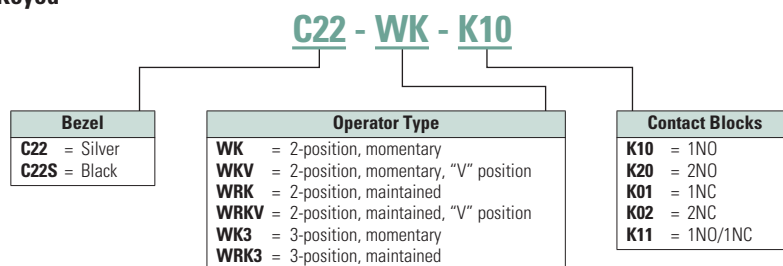
## 22.5 mm Compact Pushbuttons—C22

37

### Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

#### Selector Switches—Non-Keyed



### Product Selection

#### Non-Illuminated, Knob Type

C22(S)-WK- /  
C22(S)-WRK-



#### Non-Illuminated Selector Switches, Knob Type

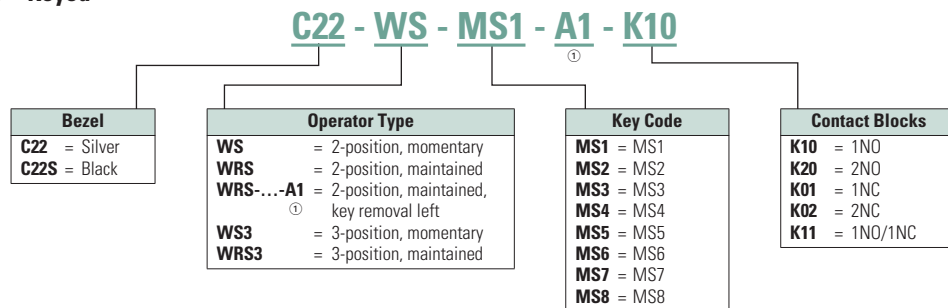
| Type           | Switching Position | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|----------------|--------------------|-----------------------------|-----------------------------|----------------------------|
| Two-position   | Momentary<br>40°   | 1NO                         | C22-WK-K10                  | C22S-WK-K10                |
|                |                    | 2NO                         | C22-WK-K20                  | C22S-WK-K20                |
|                |                    | 1NC                         | C22-WK-K01                  | C22S-WK-K01                |
|                |                    | 2NC                         | C22-WK-K02                  | C22S-WK-K02                |
|                |                    | 1NO/1NC                     | C22-WK-K11                  | C22S-WK-K11                |
|                | Momentary<br>60°   | 1NO                         | C22-WKV-K10                 | C22S-WKV-K10               |
|                |                    | 2NO                         | C22-WKV-K20                 | C22S-WKV-K20               |
|                |                    | 1NC                         | C22-WKV-K01                 | C22S-WKV-K01               |
|                |                    | 2NC                         | C22-WKV-K02                 | C22S-WKV-K02               |
|                |                    | 1NO/1NC                     | C22-WKV-K11                 | C22S-WKV-K11               |
|                | Maintained<br>40°  | 1NO                         | C22-WRK-K10                 | C22S-WRK-K10               |
|                |                    | 2NO                         | C22-WRK-K20                 | C22S-WRK-K20               |
|                |                    | 1NC                         | C22-WRK-K01                 | C22S-WRK-K01               |
|                |                    | 2NC                         | C22-WRK-K02                 | C22S-WRK-K02               |
|                |                    | 1NO/1NC                     | C22-WRK-K11                 | C22S-WRK-K11               |
|                | Maintained<br>60°  | 1NO                         | C22-WRKV-K10                | C22S-WRKV-K10              |
|                |                    | 2NO                         | C22-WRKV-K20                | C22S-WRKV-K20              |
|                |                    | 1NC                         | C22-WRKV-K01                | C22S-WRKV-K01              |
|                |                    | 2NC                         | C22-WRKV-K02                | C22S-WRKV-K02              |
|                |                    | 1NO/1NC                     | C22-WRKV-K11                | C22S-WRKV-K11              |
| Three-position | Momentary<br>40°   | 2NO                         | C22-WK3-K20                 | C22S-WK3-K20               |
|                |                    | 2NC                         | C22-WK3-K02                 | C22S-WK3-K02               |
|                |                    | 1NO/1NC                     | C22-WK3-K11                 | C22S-WK3-K11               |
|                | Maintained<br>60°  | 2NO                         | C22-WRK3-K20                | C22S-WRK3-K20              |
|                |                    | 2NC                         | C22-WRK3-K02                | C22S-WRK3-K02              |
|                |                    | 1NO/1NC                     | C22-WRK3-K11                | C22S-WRK3-K11              |

**Note:** Momentary selector switches can be field converted to maintained.

## Catalog Number Selection

Catalog Number Selection is for illustrative purposes only and not to be used to create new catalog numbers.

### Selector Switches—Keyed



### Non-Illuminated, Key Operated

C22(S)-WS-MS\_

#### Non-Illuminated Selector Switches, Key Operated



| Position     | Type                                 | Key Code | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|--------------|--------------------------------------|----------|-----------------------------|-----------------------------|----------------------------|
| Two-position | Momentary<br>key removal left<br>40° | MS1      | 1NO                         | C22-WS-MS1-K10              | C22S-WS-MS1-K10            |
|              |                                      |          | 2NO                         | C22-WS-MS1-K20              | C22S-WS-MS1-K20            |
|              |                                      |          | 1NC                         | C22-WS-MS1-K01              | C22S-WS-MS1-K01            |
|              |                                      |          | 2NC                         | C22-WS-MS1-K02              | C22S-WS-MS1-K02            |
|              |                                      |          | 1NO/1NC                     | C22-WS-MS1-K11              | C22S-WS-MS1-K11            |
|              |                                      | MS2      | 1NO                         | C22-WS-MS2-K10              | C22S-WS-MS2-K10            |
|              |                                      |          | 2NO                         | C22-WS-MS2-K20              | C22S-WS-MS2-K20            |
|              |                                      |          | 1NC                         | C22-WS-MS2-K01              | C22S-WS-MS2-K01            |
|              |                                      |          | 2NC                         | C22-WS-MS2-K02              | C22S-WS-MS2-K02            |
|              |                                      |          | 1NO/1NC                     | C22-WS-MS2-K11              | C22S-WS-MS2-K11            |
|              |                                      | MS3      | 1NO                         | C22-WS-MS3-K10              | C22S-WS-MS3-K10            |
|              |                                      |          | 2NO                         | C22-WS-MS3-K20              | C22S-WS-MS3-K20            |
|              |                                      |          | 1NC                         | C22-WS-MS3-K01              | C22S-WS-MS3-K01            |
|              |                                      |          | 2NC                         | C22-WS-MS3-K02              | C22S-WS-MS3-K02            |
|              |                                      |          | 1NO/1NC                     | C22-WS-MS3-K11              | C22S-WS-MS3-K11            |
|              |                                      | MS4      | 1NO                         | C22-WS-MS4-K10              | C22S-WS-MS4-K10            |
|              |                                      |          | 2NO                         | C22-WS-MS4-K20              | C22S-WS-MS4-K20            |
|              |                                      |          | 1NC                         | C22-WS-MS4-K01              | C22S-WS-MS4-K01            |
|              |                                      |          | 2NC                         | C22-WS-MS4-K02              | C22S-WS-MS4-K02            |
|              |                                      |          | 1NO/1NC                     | C22-WS-MS4-K11              | C22S-WS-MS4-K11            |
|              |                                      | MS5      | 1NO                         | C22-WS-MS5-K10              | C22S-WS-MS5-K10            |
|              |                                      |          | 2NO                         | C22-WS-MS5-K20              | C22S-WS-MS5-K20            |
|              |                                      |          | 1NC                         | C22-WS-MS5-K01              | C22S-WS-MS5-K01            |
|              |                                      |          | 2NC                         | C22-WS-MS5-K02              | C22S-WS-MS5-K02            |
|              |                                      |          | 1NO/1NC                     | C22-WS-MS5-K11              | C22S-WS-MS5-K11            |

**Note:** Momentary selector switches can be field converted to maintained.

## C22(S)-WRS-MS\_



## Non-Illuminated Selector Switches, Key Operated, continued

| Position                | Type                                        | Key Code | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|-------------------------|---------------------------------------------|----------|-----------------------------|-----------------------------|----------------------------|
| Two-position, continued | Momentary<br>key removal left<br>40°        | MS6      | 1NO                         | C22-WS-MS6-K10              | C22S-WS-MS6-K10            |
|                         |                                             |          | 2NO                         | C22-WS-MS6-K20              | C22S-WS-MS6-K20            |
|                         |                                             |          | 1NC                         | C22-WS-MS6-K01              | C22S-WS-MS6-K01            |
|                         |                                             |          | 2NC                         | C22-WS-MS6-K02              | C22S-WS-MS6-K02            |
|                         |                                             |          | 1NO/1NC                     | C22-WS-MS6-K11              | C22S-WS-MS6-K11            |
|                         |                                             | MS7      | 1NO                         | C22-WS-MS7-K10              | C22S-WS-MS7-K10            |
|                         |                                             |          | 2NO                         | C22-WS-MS7-K20              | C22S-WS-MS7-K20            |
|                         |                                             |          | 1NC                         | C22-WS-MS7-K01              | C22S-WS-MS7-K01            |
|                         |                                             |          | 2NC                         | C22-WS-MS7-K02              | C22S-WS-MS7-K02            |
|                         |                                             |          | 1NO/1NC                     | C22-WS-MS7-K11              | C22S-WS-MS7-K11            |
|                         |                                             | MS8      | 1NO                         | C22-WS-MS8-K10              | C22S-WS-MS8-K10            |
|                         |                                             |          | 2NO                         | C22-WS-MS8-K20              | C22S-WS-MS8-K20            |
|                         |                                             |          | 1NC                         | C22-WS-MS8-K01              | C22S-WS-MS8-K01            |
|                         |                                             |          | 2NC                         | C22-WS-MS8-K02              | C22S-WS-MS8-K02            |
|                         |                                             |          | 1NO/1NC                     | C22-WS-MS8-K11              | C22S-WS-MS8-K11            |
| Two-position            | Maintained<br>key removal left/right<br>40° | MS1      | 1NO                         | C22-WRS-MS1-K10             | C22S-WRS-MS1-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS1-K20             | C22S-WRS-MS1-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS1-K01             | C22S-WRS-MS1-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS1-K02             | C22S-WRS-MS1-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS1-K11             | C22S-WRS-MS1-K11           |
|                         |                                             | MS2      | 1NO                         | C22-WRS-MS2-K10             | C22S-WRS-MS2-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS2-K20             | C22S-WRS-MS2-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS2-K01             | C22S-WRS-MS2-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS2-K02             | C22S-WRS-MS2-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS2-K11             | C22S-WRS-MS2-K11           |
|                         |                                             | MS3      | 1NO                         | C22-WRS-MS3-K10             | C22S-WRS-MS3-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS3-K20             | C22S-WRS-MS3-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS3-K01             | C22S-WRS-MS3-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS3-K02             | C22S-WRS-MS3-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS3-K11             | C22S-WRS-MS3-K11           |

**Note:** Momentary selector switches can be field converted to maintained.

C22(S)-WRS...-MS1\_

## Non-Illuminated Selector Switches, Key Operated, continued

| Position                | Type                                        | Key Code | Contact Block Configuration | Silver Bezel Catalog Number | Black Bezel Catalog Number |
|-------------------------|---------------------------------------------|----------|-----------------------------|-----------------------------|----------------------------|
| Two-position, continued | Maintained<br>key removal left/right<br>40° | MS4      | 1NO                         | C22-WRS-MS4-K10             | C22S-WRS-MS4-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS4-K20             | C22S-WRS-MS4-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS4-K01             | C22S-WRS-MS4-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS4-K02             | C22S-WRS-MS4-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS4-K11             | C22S-WRS-MS4-K11           |
|                         |                                             | MS5      | 1NO                         | C22-WRS-MS5-K10             | C22S-WRS-MS5-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS5-K20             | C22S-WRS-MS5-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS5-K01             | C22S-WRS-MS5-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS5-K02             | C22S-WRS-MS5-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS5-K11             | C22S-WRS-MS5-K11           |
|                         | Maintained<br>key removal left<br>40°       | MS6      | 1NO                         | C22-WRS-MS6-K10             | C22S-WRS-MS6-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS6-K20             | C22S-WRS-MS6-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS6-K01             | C22S-WRS-MS6-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS6-K02             | C22S-WRS-MS6-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS6-K11             | C22S-WRS-MS6-K11           |
|                         |                                             | MS7      | 1NO                         | C22-WRS-MS7-K10             | C22S-WRS-MS7-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS7-K20             | C22S-WRS-MS7-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS7-K01             | C22S-WRS-MS7-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS7-K02             | C22S-WRS-MS7-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS7-K11             | C22S-WRS-MS7-K11           |
|                         | Maintained<br>key removal left<br>40°       | MS8      | 1NO                         | C22-WRS-MS7-K10             | C22S-WRS-MS7-K10           |
|                         |                                             |          | 2NO                         | C22-WRS-MS7-K20             | C22S-WRS-MS7-K20           |
|                         |                                             |          | 1NC                         | C22-WRS-MS7-K01             | C22S-WRS-MS7-K01           |
|                         |                                             |          | 2NC                         | C22-WRS-MS7-K02             | C22S-WRS-MS7-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS7-K11             | C22S-WRS-MS7-K11           |
| Two-position            | Maintained<br>key removal left<br>40°       | MS1      | 1NO                         | C22-WRS-MS1-A1-K10          | C22S-WRS-MS1-A1-K10        |
|                         |                                             |          | 2NO                         | C22-WRS-MS1-A1-K20          | C22S-WRS-MS1-A1-K20        |
|                         |                                             |          | 1NC                         | C22-WRS-MS1-A1-K01          | C22S-WRS-MS1-A1-K01        |
|                         |                                             |          | 2NC                         | C22-WRS-MS1-A1-K02          | C22S-WRS-MS1-A1-K02        |
|                         |                                             |          | 1NO/1NC                     | C22-WRS-MS1-A1-K11          | C22S-WRS-MS1-A1-K11        |
|                         | Momentary<br>Key Removal Center<br>40°      | MS1      | 2NO                         | C22-WS3-MS1-K20             | C22S-WS3-MS1-K20           |
|                         |                                             |          | 2NC                         | C22-WS3-MS1-K02             | C22S-WS3-MS1-K02           |
|                         |                                             |          | 1NO/1NC                     | C22-WS3-MS1-K11             | C22S-WS3-MS1-K11           |
|                         | Maintained<br>Key Removal Left/Right<br>60° | MS1      | 2NO                         | C22-WRS3-MS1-K20            | C22S-WRS3-MS1-K20          |
|                         |                                             |          | 2NC                         | C22-WRS3-MS1-K02            | C22S-WRS3-MS1-K02          |
| Three Position          | Momentary<br>Key Removal Center<br>40°      | MS1      | 1NO/1NC                     | C22-WS3-MS1-K11             | C22S-WS3-MS1-K11           |
|                         |                                             |          | 2NO                         | C22-WS3-MS1-K20             | C22S-WS3-MS1-K20           |
|                         | Maintained<br>Key Removal Left/Right<br>60° | MS1      | 2NO                         | C22-WRS3-MS1-K20            | C22S-WRS3-MS1-K20          |
|                         |                                             |          | 2NC                         | C22-WRS3-MS1-K02            | C22S-WRS3-MS1-K02          |
|                         | Momentary<br>Key Removal Center<br>40°      | MS1      | 1NO/1NC                     | C22-WS3-MS1-K11             | C22S-WS3-MS1-K11           |
|                         |                                             |          | 2NO                         | C22-WS3-MS1-K20             | C22S-WS3-MS1-K20           |

**Note:** Momentary selector switches can be field converted to maintained.

## Technical Data and Specifications

## 22.5 mm Compact Pushbuttons—C22

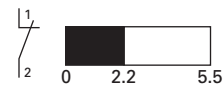
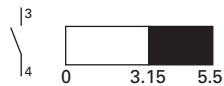
| Description                                                                         | Unit             |                   | Pushbutton Actuators                                                                                                                                                        |               | Indicator Lights C22 | Selector Switch Actuators C22                                                                                                                                               | Key-Operated Buttons C22 | Emergency Stop/ Emergency Switching OFF Pushbuttons C22 |
|-------------------------------------------------------------------------------------|------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------|
|                                                                                     |                  |                   | Illuminated Pushbuttons C22                                                                                                                                                 | Momentary     |                      |                                                                                                                                                                             |                          |                                                         |
| General                                                                             |                  |                   |                                                                                                                                                                             |               |                      |                                                                                                                                                                             |                          |                                                         |
| Standards                                                                           |                  |                   | IEC/EN 60947 VDE 0660                                                                                                                                                       |               |                      |                                                                                                                                                                             |                          |                                                         |
| Lifespan, mechanical                                                                | Operations       | x 10 <sup>6</sup> | 5                                                                                                                                                                           | 1             | —                    | 1                                                                                                                                                                           | 0.1                      | 0.05                                                    |
| Operating frequency                                                                 | Operations/h     |                   | ≥3600                                                                                                                                                                       | ≥3600         | —                    | ≥2000                                                                                                                                                                       | ≥100                     | ≥300                                                    |
| Actuating force                                                                     |                  | N                 | ≥5                                                                                                                                                                          | ≥5            | —                    | —                                                                                                                                                                           | —                        | ≥50                                                     |
| Operating torque                                                                    |                  | Nm                | —                                                                                                                                                                           | —             | —                    | ≥0.3                                                                                                                                                                        | ≥0.5                     | —                                                       |
| Terminal screw tightening torque                                                    |                  | Nm                | 0.8                                                                                                                                                                         | 0.8           | 0.8                  | 0.8                                                                                                                                                                         | 0.8                      | 0.8                                                     |
| Threaded ring tightening torque                                                     |                  | Nm                | 2                                                                                                                                                                           | 2             | 2                    | 2                                                                                                                                                                           | 2                        | 2                                                       |
| Protection type                                                                     |                  |                   | IP67, IP69K                                                                                                                                                                 | IP67, IP69K   | IP67, IP69K          | IP65                                                                                                                                                                        | IP66                     | IP67, IP69K                                             |
| Climatic proofing                                                                   |                  |                   | Damp heat, constant, to IEC 60068-2-78<br>Damp heat, cyclic, to IEC 60068-2-30                                                                                              |               |                      |                                                                                                                                                                             |                          |                                                         |
| Ambient temperature                                                                 |                  |                   |                                                                                                                                                                             |               |                      |                                                                                                                                                                             |                          |                                                         |
| Open                                                                                |                  | °C                | –25° to 70°                                                                                                                                                                 | –25° to 70°   | –25° to 70°          | –25° to 70°                                                                                                                                                                 | –25° to 70°              | –25° to 70°                                             |
| Storage                                                                             |                  | °C                | –30° to 80°                                                                                                                                                                 | –30° to 80°   | –30° to 80°          | –30° to 80°                                                                                                                                                                 | –30° to 80°              | –30° to 80°                                             |
| Mounting position                                                                   |                  |                   | As required                                                                                                                                                                 | As required   | As required          | As required                                                                                                                                                                 | As required              | As required                                             |
| Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal |                  | g                 | 30                                                                                                                                                                          | 30            | 30                   | 30                                                                                                                                                                          | 30                       | 30                                                      |
| Terminal capacities                                                                 |                  |                   |                                                                                                                                                                             |               |                      |                                                                                                                                                                             |                          |                                                         |
| Solid                                                                               |                  | mm <sup>2</sup>   | 2 x 0.5–1.5                                                                                                                                                                 | 2 x 0.5–1.5   | 2 x 0.5–1.5          | 2 x 0.5–1.5                                                                                                                                                                 | 2 x 0.5–1.5              | 2 x 0.5–1.5                                             |
| Flexible with ferrule                                                               |                  | mm <sup>2</sup>   | 2 x 0.5–1.5                                                                                                                                                                 | 2 x 0.5–1.5   | 2 x 0.5–1.5          | 2 x 0.5–1.5                                                                                                                                                                 | 2 x 0.5–1.5              | 2 x 0.5–1.5                                             |
| Contacts                                                                            |                  |                   |                                                                                                                                                                             |               |                      |                                                                                                                                                                             |                          |                                                         |
| Rated impulse withstand voltage                                                     | U <sub>imp</sub> | Vac               | 4000                                                                                                                                                                        | 4000          | 4000                 | 4000                                                                                                                                                                        | 4000                     | 4000                                                    |
| Rated insulation voltage                                                            | U <sub>i</sub>   | V                 | 250                                                                                                                                                                         | 250           | 250                  | 250                                                                                                                                                                         | 250                      | 250                                                     |
| Overvoltage category/pollution degree                                               |                  |                   | III/3                                                                                                                                                                       | III/3         | III/3                | III/3                                                                                                                                                                       | III/3                    | III/3                                                   |
| Control circuit reliability                                                         |                  |                   |                                                                                                                                                                             |               |                      |                                                                                                                                                                             |                          |                                                         |
| at 5 Vdc/1 mA                                                                       | H <sub>F</sub>   | Fault probability | Values follow                                                                                                                                                               | Values follow | —                    | Values follow                                                                                                                                                               | Values follow            | Values follow                                           |
| at 17 Vdc/7 mA                                                                      | H <sub>F</sub>   | Fault probability | N/O contact: statistically determined 1 failure per 17 x 10 <sup>6</sup> operations<br>N/C contact: statistically determined 1 failure per 0.9 x 10 <sup>6</sup> operations |               | —                    | N/O contact: statistically determined 1 failure per 17 x 10 <sup>6</sup> operations<br>N/C contact: statistically determined 1 failure per 0.9 x 10 <sup>6</sup> operations |                          |                                                         |
| at 24 Vdc/5 mA                                                                      | H <sub>F</sub>   | Fault probability | Values follow                                                                                                                                                               | Values follow | —                    | Values follow                                                                                                                                                               | Values follow            | Values follow                                           |
| Max. short-circuit protective device                                                |                  |                   |                                                                                                                                                                             |               |                      |                                                                                                                                                                             |                          |                                                         |
| Fuse                                                                                | gG/gL            | A                 | 10                                                                                                                                                                          | 10            | —                    | 10                                                                                                                                                                          | 10                       | 10                                                      |

## 22.5 mm Compact Pushbuttons—C22, continued

| Description               | Unit           | Push-button Actuators<br>Illuminated Pushbuttons C22 |            | Indicator<br>Lights C22 | Selector Switch<br>Actuators C22 | Key-Operated<br>Buttons C22 | Emergency Stop/<br>Emergency Switching<br>OFF Pushbuttons C22 |
|---------------------------|----------------|------------------------------------------------------|------------|-------------------------|----------------------------------|-----------------------------|---------------------------------------------------------------|
|                           |                | Momentary                                            | Maintained |                         |                                  |                             |                                                               |
| Switching Capacity        |                |                                                      |            |                         |                                  |                             |                                                               |
| Rated operational current |                |                                                      |            |                         |                                  |                             |                                                               |
| AC-15                     |                |                                                      |            |                         |                                  |                             |                                                               |
| 24V                       | I <sub>e</sub> | A                                                    | 4          | 4                       | —                                | 4                           | 4                                                             |
| 110V                      | I <sub>e</sub> | A                                                    | 2          | 2                       | —                                | 2                           | 2                                                             |
| 230V                      | I <sub>e</sub> | A                                                    | 1.5        | 1.5                     | —                                | 1.5                         | 1.5                                                           |
| DC-13                     |                |                                                      |            |                         |                                  |                             |                                                               |
| 24V                       | I <sub>e</sub> | A                                                    | 3          | 3                       | —                                | 3                           | 3                                                             |
| 60V                       | I <sub>e</sub> | A                                                    | 1          | 1                       | —                                | 1                           | 1                                                             |
| 110V                      | I <sub>e</sub> | A                                                    | 0.6        | 0.6                     | —                                | 0.6                         | 0.6                                                           |
| 220V                      | I <sub>e</sub> | A                                                    | 0.3        | 0.3                     | —                                | 0.3                         | 0.3                                                           |
| Lifespan, electrical      |                |                                                      |            |                         |                                  |                             |                                                               |
| AC-15                     |                |                                                      |            |                         |                                  |                             |                                                               |
| 230V/0.5A                 | Operations     | x 10 <sup>6</sup>                                    | 0.4        | 0.4                     | —                                | 0.4                         | 0.4                                                           |
| 230V/1.0A                 |                | x 10 <sup>6</sup>                                    | 0.6        | 0.6                     | —                                | 0.6                         | 0.6                                                           |

## Contact Travel

## Contact Travel Diagram



Contact closed  
 Contact open

# 37.5 Pushbuttons and Indicating Lights

## 22.5 mm Compact Pushbuttons—C22

37

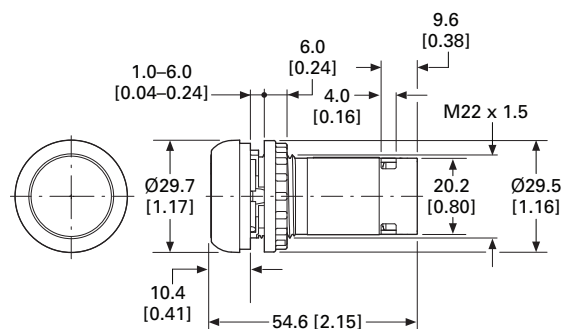
### Dimensions

Approximate Dimensions in mm [in]

#### Illuminated Pushbuttons

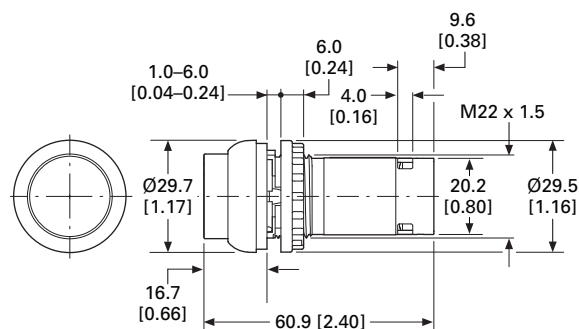
*Flat*

**C22(S)-DRL\_/C22(S)-DL\_**



*Extended*

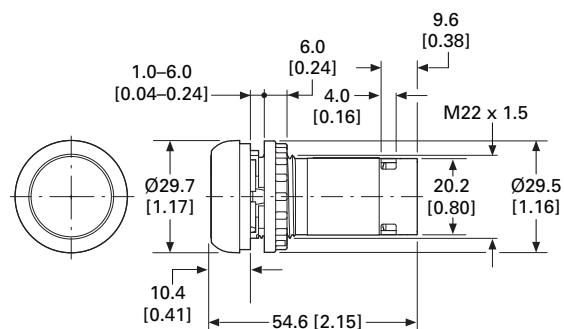
**C22(S)-DRLH\_/C22(S)-DLH\_**



#### Pushbutton Actuators

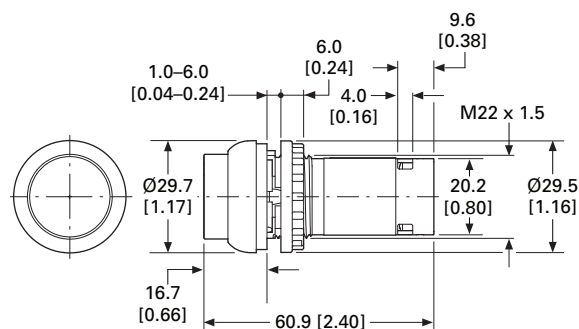
*Flat*

**C22(S)-DR\_/C22(S)-D\_**



*Extended*

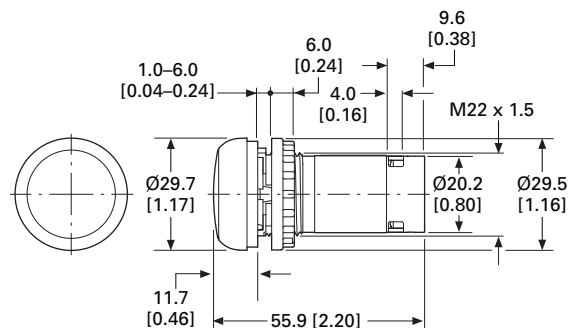
**C22(S)-DRH\_/C22(S)-DH\_**



#### Indicating Lights

*Flat*

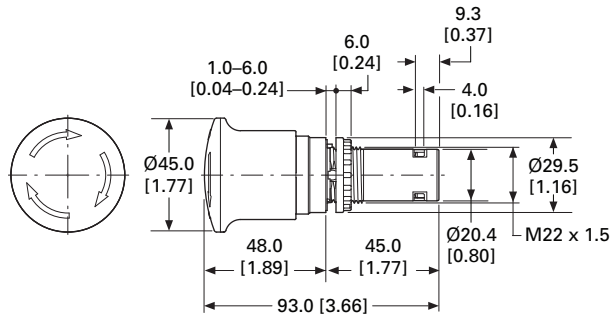
**C22-L\_**



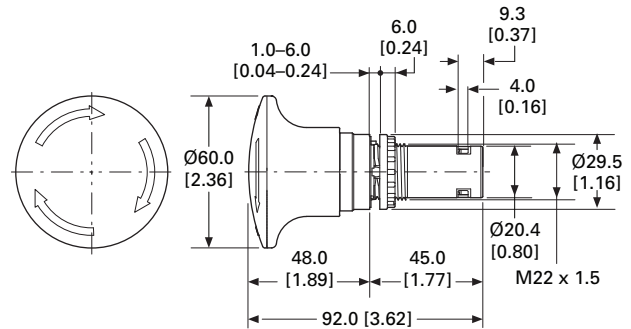
Approximate Dimensions in mm [in]

### Emergency Stop/Emergency Switching OFF Pushbuttons

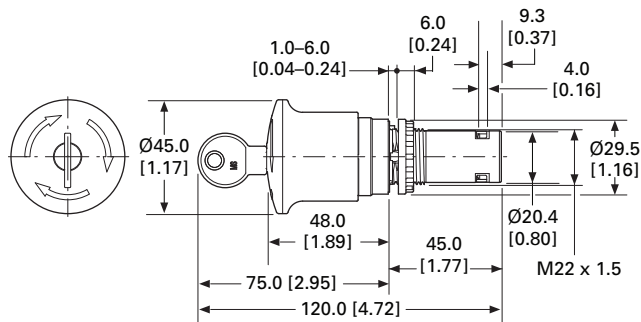
#### C22-PVT45P\_



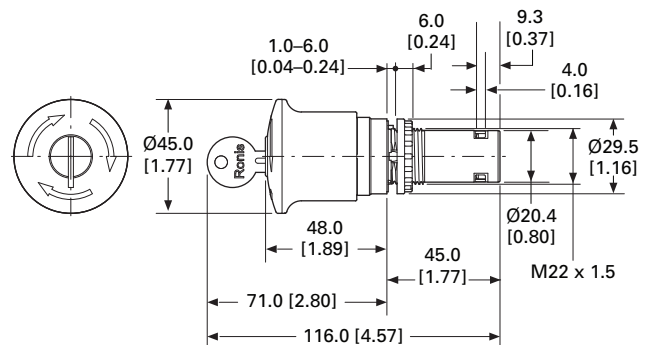
#### C22-PVT60P\_



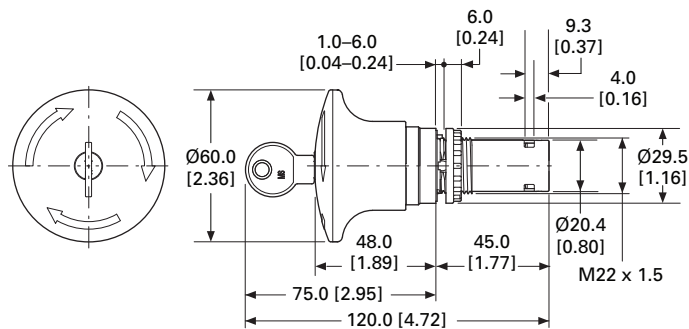
#### C22-PVT45P-MS\_



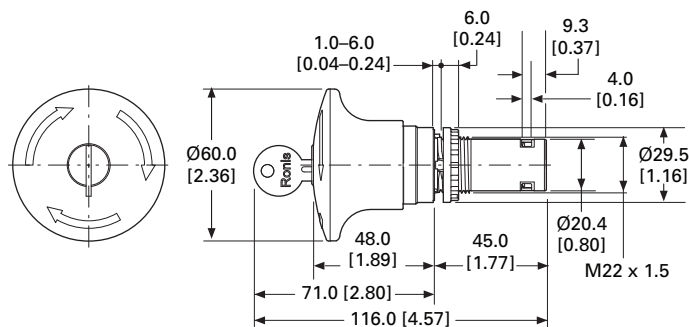
#### C22-PVT45P-RS\_



#### C22-PVT60P-MS\_



#### C22-PVT60P-MS\_



# 37.5 Pushbuttons and Indicating Lights

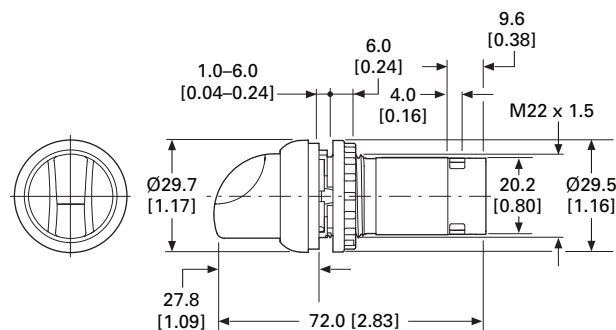
## 22.5 mm Compact Pushbuttons—C22

37

Approximate Dimensions in mm [in]

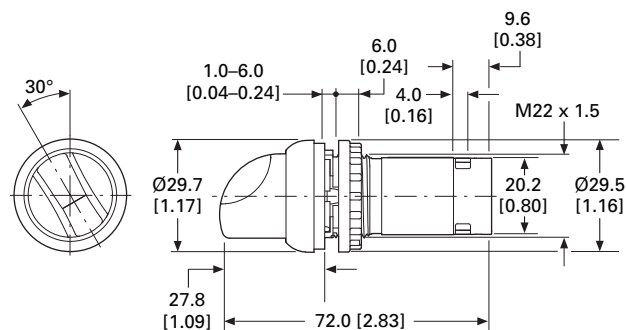
### Selector Switch Actuators

#### C22(S)-W(R)K\_



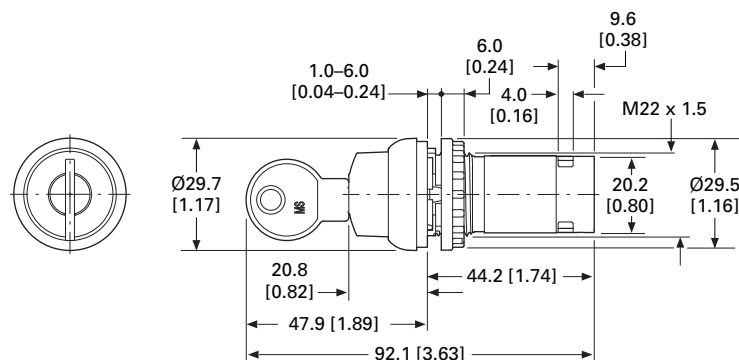
### Selector Switch Actuators/V Position

#### C22(S)-W(R)KV\_

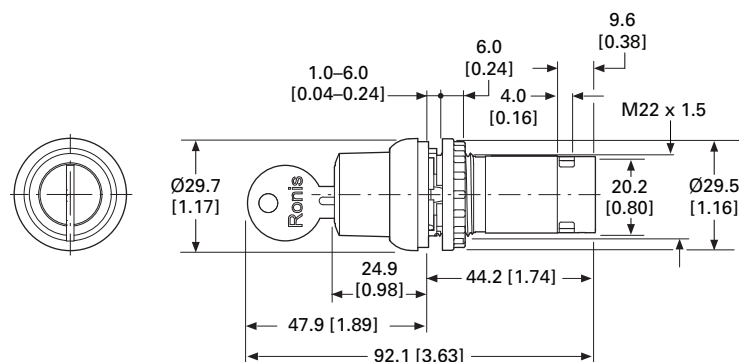


### Key Operated Actuators

#### C22(S)-WS(3)-MS\_/C22(S)-WRS(3)-MS\_



#### C22(S)-WS(3)-RS\_/C22(S)-WRS(3)-RS\_









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