



Think Automation and beyond...

## ø22 mm CW Series Flush Silhouette Switches



Double contact block



Single contact block



Shortest  
in its class



IDEC CORPORATION

## Ø22 mm CW Series Flush Silhouette Switches



**Double  
Contact  
Block**

**New double contact blocks with four-contact configurations.**  
(Illuminated pushbuttons, pushbuttons, selector switches, key selector switches)

Double  
contact blocks



Single  
contact blocks



**Shortest  
in its class**  
(as of March 2013)

**Short depth behind the panel for compact equipment.**

**Double: 59.9 mm (maintained: 64.6 mm)**

**Single: 39.9 mm (maintained: 44.6 mm)**

Switching capacity is 120V AC, 10A (resistive load). The compact style requires less depth behind the panel.  
Can be used with IDEC's FB and other 22 mm control boxes. No transformer needed for any voltage.

Double  
contact block



(Actual size)

59.9 mm

Single  
contact block



(Actual size)

39.9 mm

**Fits in  
small  
space**

*Four-contact  
illuminated pushbutton*

Conventional



**40% less space  
50% less weight**

CW series  
double contact block



*Two-contact  
illuminated pushbutton*

Conventional



**50% less space  
59% less weight**

CW series  
single contact block



# sophistication



## Sleek and stylish switches and pilot lights with a 2.5 mm-thick bezel

The CW series gives a sleek, stylish image to your machines or control panels. The surface is safer with less chance of unexpected operation or accidents by hitting the projections, and also is cleaner with less dust build-up.



**Safety**

## Third-generation safety construction

### Two-action removal of contact blocks

IDEC's original two-action push-turn locking lever provides a higher level of safety by preventing unexpected release of the locking lever. Whether the contact block is installed securely can be checked easily from the back of the panel, with the position of the locking lever.

### Locking lever integrated with guard

Prevents locking lever from unexpected release or damage by trapped wires.



Removing contact blocks

### IP20 Finger-safe Terminal

Finger-safe, IP20 terminal prevents electrical shock.



## Variety



**Illuminated Pushbuttons**  
(round flush or extended)



See page 8.



**Pilot lights**  
(round flush or extended)



See page 10.



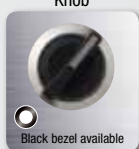
**Pushbuttons**  
(round flush or extended)



See page 11.



**Selector Switches**  
(knob or lever)  
2- and 3-position



Low extension with flush silhouette.  
See page 12.

Lever



**Key Selector Switches**  
Wave key  
7 different key numbers



See page 14.



Hard to duplicate, wave-key ensures a high level of safety.

## Colors

### Illuminated Pushbuttons/Pilot Lights



Amber (A) Blue (S) Green (G) Red (R) Pure White (PW) Yellow (Y)

### Pushbuttons



Black Blue Green Red White Yellow

### Bezels



Metallic Black (plastic)

# Ø22 Flush Silhouette Switches CW Series

Flush bezel projects only 2.5 mm from front of panel  
Only 39.9 mm depth behind the panel (single contact block, momentary).

- Ø22.3 mm mounting hole compliant with IEC 60947-5-1
- 3.5-mm operator travel for pushbuttons ensures comfortable and reliable operation.
- Black plastic and metallic bezels available.
- Four-contact configuration is available with double contact blocks.
- Direct opening NC contact ensures shutdown without failure.
- Seven different keys can be chosen for key selector switches.
- 10A contact rating. Up to three contact blocks for non-illuminated and two contact blocks for illuminated units can be connected.
- Contact blocks can be removed by the two-action locking lever integrated with a guard, ensuring safety.
- IP20 finger-safe screw terminals
- IP66/67, UL Type 4X degree of protection from panel front (see Table 1).

| Applicable Standards     | Mark                                                                              | File No. or Organization                                     |
|--------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------|
| UL508<br>CSA C22.2 No.14 |  | UL/c-UL File No. E68961                                      |
| EN60947-5-1              |  | EU Low Voltage Directive                                     |
| GB14048.5                |  | No. 2012010305589209<br>(Pilot lights: No. 2012010304567962) |

## Contact Ratings

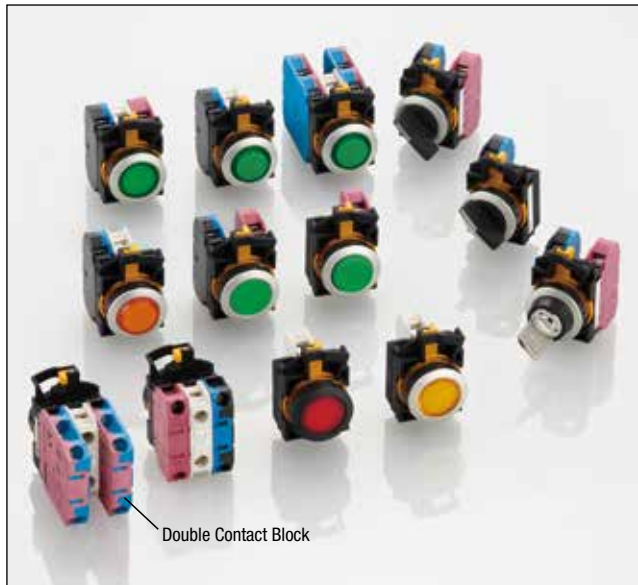
|                               |                                       |                |                        |        |       |       |
|-------------------------------|---------------------------------------|----------------|------------------------|--------|-------|-------|
| Rated Insulation Voltage (Ui) |                                       |                |                        | 300V   |       |       |
| Rated Thermal Current (Ith)   |                                       |                |                        | 10A    |       |       |
| Rated Operating Voltage (Ue)  |                                       |                |                        | 24V    | 120V  | 240V  |
| Rated Operating Current (Ie)  | Electrical Life<br>50,000 operations  | AC<br>50/60 Hz | Resistive Load (AC-12) | 10A    | 10A   | 6A    |
|                               |                                       |                | Inductive Load (AC-15) | 10A    | 6A    | 3A    |
|                               |                                       | DC             | Resistive Load (DC-12) | 8A     | 2.2A  | 1.1A  |
|                               |                                       |                | Inductive Load (DC-13) | 4A     | 1.1A  | 0.55A |
|                               | Electrical Life<br>100,000 operations | AC<br>50/60 Hz | Resistive Load (AC-12) | 5A     | 5A    | 3A    |
|                               |                                       |                | Inductive Load (AC-15) | 5A     | 3A    | 1.5A  |
|                               |                                       | DC             | Resistive Load (DC-12) | 4A     | 1.1A  | 0.55A |
|                               |                                       |                | Inductive Load (DC-13) | 2A     | 0.55A | 0.27A |
| Contact Material              |                                       |                |                        | Silver |       |       |

- Minimum applicable load (reference value): 3V AC/DC, 5 mA (Applicable range is subject to the operating conditions and load.)
- Note: The operational current represents the classification by making and breaking currents (IEC 60947-5-1).
- UL, c-UL rating: A300, CCC rating: A300

Table 1 (Degree of Protection)

|                        | IP65 | IP66       | IP67       | UL Type 4X |
|------------------------|------|------------|------------|------------|
| Illuminated Pushbutton | Yes  | Yes (Note) | Yes (Note) | Yes (Note) |
| Pilot Light            | Yes  | Yes        | No         | Yes        |
| Pushbutton             | Yes  | Yes (Note) | Yes (Note) | Yes (Note) |
| Selector Switch        | Yes  | Yes        | Yes        | Yes        |
| Key Selector Switch    | Yes  | Yes        | No         | Yes        |

Note: When used with rubber boot (CW9Z-D11, -D12)



## Specifications

|                                      |                                                                                                                                                                                                                                                                                                                                                                                    |                                                               |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Operating Temperature                | Non-illuminated: -25 to +60°C (no freezing)<br>LED illuminated: -25 to +55°C (no freezing)                                                                                                                                                                                                                                                                                         |                                                               |
| Operating Humidity                   | 45 to 85% RH (no condensation)                                                                                                                                                                                                                                                                                                                                                     |                                                               |
| Storage Temperature                  | -40 to +80°C (no freezing)                                                                                                                                                                                                                                                                                                                                                         |                                                               |
| Contact Resistance                   | 50 mΩ maximum (initial value)                                                                                                                                                                                                                                                                                                                                                      |                                                               |
| Insulation Resistance                | 100 MΩ minimum (500V DC megger)                                                                                                                                                                                                                                                                                                                                                    |                                                               |
| Overvoltage Category                 | II (IEC 60664-1)                                                                                                                                                                                                                                                                                                                                                                   |                                                               |
| Impulse Withstand Voltage            | 2.5 kV (IEC 60664-1/60947-5-1)                                                                                                                                                                                                                                                                                                                                                     |                                                               |
| Pollution Degree                     | 3 (IEC 60947-5-1)                                                                                                                                                                                                                                                                                                                                                                  |                                                               |
| Vibration Resistance                 | Operating extremes: 5 to 55Hz, amplitude 0.5 mm<br>Damage limits: 30 Hz, amplitude 1.5 mm                                                                                                                                                                                                                                                                                          |                                                               |
| Shock Resistance                     | Operating extremes: 100 m/s <sup>2</sup><br>Damage limits: 1000 m/s <sup>2</sup>                                                                                                                                                                                                                                                                                                   |                                                               |
| Mechanical Life (minimum operations) | Illuminated pushbutton/pushbutton<br>Momentary: 2,000,000 (single contact block)<br>1,000,000 (double contact block)<br>Maintained: 250,000 (single contact block)<br>100,000 (double contact block)<br>Selector switch: 250,000 (single contact block)<br>100,000 (double contact block)<br>Key selector switch: 250,000 (single contact block)<br>100,000 (double contact block) |                                                               |
| Electrical Life (minimum operations) | Single contact block                                                                                                                                                                                                                                                                                                                                                               | 50,000 (see Contact Ratings)<br>100,000 (see Contact Ratings) |
|                                      | Double contact block                                                                                                                                                                                                                                                                                                                                                               | 25,000 (see Contact Ratings)<br>50,000 (see Contact Ratings)  |
|                                      | Switching frequency<br>Momentary: 1800 operations/h<br>Maintained: 900 operations/h                                                                                                                                                                                                                                                                                                |                                                               |
| Degree of Protection (IEC 60529)     | Panel front: See table to the left<br>Terminal: IP20 (IEC 60529)                                                                                                                                                                                                                                                                                                                   |                                                               |
| Short-circuit Protection             | 250V/10A fuse<br>(Type aM IEC 60269-1, IEC 602069-2)                                                                                                                                                                                                                                                                                                                               |                                                               |
| Electrical Shock Protection          | Class II (IEC 61140)                                                                                                                                                                                                                                                                                                                                                               |                                                               |
| Terminal Style                       | Screw terminal (M3.5 slotted Phillips screw)<br>(Ring terminal cannot be used.)                                                                                                                                                                                                                                                                                                    |                                                               |
| Bezel Material                       | Polyamide                                                                                                                                                                                                                                                                                                                                                                          |                                                               |
| Applicable Wire Size                 | Up to 2 wires of 2 mm <sup>2</sup> (solid wire Ø1.6) maximum (14 to 16AWG)                                                                                                                                                                                                                                                                                                         |                                                               |
| Recommended Tightening Torque        | Terminal: 1.0 to 1.3 N·m<br>Locking ring: 1.2 N·m                                                                                                                                                                                                                                                                                                                                  |                                                               |

## Weight (Examples)

|                        |                                                                  |
|------------------------|------------------------------------------------------------------|
| Illuminated Pushbutton | 46g (CW1L-M1E02QH, 2 contacts)<br>62g (CW1L-M1E22QH, 4 contacts) |
| Pilot Light            | 27g (CW1P-1EQH)                                                  |
| Pushbutton             | 45g (CW1B-M1E03, 3 contacts)<br>52g (CW1B-M1E22, 4 contacts)     |
| Selector Switch        | 48g (CW1S-2E03, 3 contacts)<br>55g (CW1S-2E22, 4 contacts)       |
| Key Selector Switch    | 61g (CW1K-2AE03, 3 contacts)<br>68g (CW1K-2AE22, 4 contacts)     |

## Direct Opening of Key Selector Switch

| Applicable Type                                   | 2-position (3NC) | 3-position (2NC) |
|---------------------------------------------------|------------------|------------------|
| Minimum Operator Angle for Direct Opening Action  | 90°              | 45°              |
| Minimum Operator Torque for Direct Opening Action | 0.2 N·m          | 0.3 N·m          |
| Maximum Operator Angle                            | 90°              | 45°              |

## LED Module

|                               |                                                                                                                                                                                                               |                |                |                                                                                                                                                                                                                                   |                                     |                                     |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| Rated Insulation Voltage (Ui) | 250V                                                                                                                                                                                                          |                |                |                                                                                                                                                                                                                                   |                                     |                                     |
| Rated Operating Voltage (Ue)  | 6V AC/DC                                                                                                                                                                                                      | 12V AC/DC      | 24V AC/DC      | 100/120V AC<br>(50/60 Hz sine wave)                                                                                                                                                                                               | 200/220V AC<br>(50/60 Hz sine wave) | 230/240V AC<br>(50/60 Hz sine wave) |
| Operating Voltage Range       | 6V AC/DC ±10%                                                                                                                                                                                                 | 12V AC/DC ±10% | 24V AC/DC ±10% | 100/120V AC ±10%                                                                                                                                                                                                                  | 200/220V AC ±10%                    | 230/240V AC ±10%                    |
| Illumination Color Code ②     | A (amber), G (green), PW (pure white), R (red), S (blue)                                                                                                                                                      |                |                |                                                                                                                                                                                                                                   |                                     |                                     |
| LED Module Part No.           | CW-EAQ2②                                                                                                                                                                                                      | CW-EAQ3②       | CW-EAQ4②       | CW-EAQH②                                                                                                                                                                                                                          | CW-EAQM②                            | CW-EAQM4②                           |
| Current Draw                  | 15 mA                                                                                                                                                                                                         | 15 mA          | 16.5 mA        | 18 mA                                                                                                                                                                                                                             | 20 mA                               | 18 mA                               |
| Life (reference value)        | Approx. 30,000 hours<br>(the illuminance is reduced to 50% of the initial intensity when used on complete DC at 25°C.)                                                                                        |                |                |                                                                                                                                                                                                                                   |                                     |                                     |
| Internal Circuit              |  <ul style="list-style-type: none"> <li>LED Chip</li> <li>Rectifying Diode</li> <li>Zener Diode</li> <li>Resistor</li> </ul> |                |                |  <ul style="list-style-type: none"> <li>LED Chip</li> <li>Rectifying Diode</li> <li>Zener Diode</li> <li>Resistor</li> <li>Capacitor</li> </ul> |                                     |                                     |

- Specify an illumination color code in place of ② in the Part No.
- Use the pure white (PW) LED module for yellow illumination.

## Contact Blocks

|                  | Single Contact Block                                                                |                                                                                     | Double Contact Block                                                                |                                                                                       |                                                                                       |
|------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Contact          | 1NO                                                                                 | 1NC                                                                                 | 2NO                                                                                 | 2NC                                                                                   | 1NO-1NC                                                                               |
| Part No.         | YW-E10R                                                                             | YW-E01                                                                              | YW-EW2R0                                                                            | YW-EW02                                                                               | YW-EW1R1                                                                              |
| Shape            |  |  |  |  |  |
| Housing Color    | Blue/Black                                                                          | Reddish Purple                                                                      | Blue/Black                                                                          | Reddish Purple                                                                        | Reddish Purple/Blue                                                                   |
| Push Rod Color   | Black                                                                               | Red                                                                                 | Black                                                                               | Red                                                                                   | Gray                                                                                  |
| Terminal No.     | 3-4                                                                                 | 1-2                                                                                 | 1st tier: 13-14<br>2nd tier: 23-24                                                  | 1st tier: 11-12<br>2nd tier: 21-22                                                    | 1st tier: (NO) 13-14<br>2nd tier: (NC) 21-22                                          |
| Weight (approx.) | 11g                                                                                 |                                                                                     | 19g                                                                                 |                                                                                       |                                                                                       |



## Mounting Hole Layout

IEC 60947-5-1 compliant



Note: Determine mounting centers to ensure easy operation.

## ø22 Flush Silhouette Switches CW Series

### Part No. Development

#### Illuminated Pushbuttons

Note: Please use these charts to interpret the part numbers as all combinations are not possible to be created.

**C W 1 L - M 1 E 10 Q4 ②**

| Code | Bezel Color |
|------|-------------|
| 1    | Black       |
| 4    | Metallic    |

| Code | Operation  |
|------|------------|
| M    | Momentary  |
| A    | Maintained |

| Code | Shape          |
|------|----------------|
| 1    | Round Flush    |
| 2    | Round Extended |

| Code | Option                              | Part No. Example |
|------|-------------------------------------|------------------|
| W    | White lens type (when light is off) | CW1L-M1E10Q4W②   |

- For white lens, clear lens is used instead of colored lens for amber, green, red, and blue illuminated pushbuttons. Amber, green, red, or blue LED units are used.

#### Illumination Color

| Code | Color      | Code | Color  |
|------|------------|------|--------|
| A    | Amber      | R    | Red    |
| G    | Green      | S    | Blue   |
| PW   | Pure White | Y    | Yellow |

#### Rated Voltage

| Code | Rated Voltage | Code | Rated Voltage |
|------|---------------|------|---------------|
| Q2   | 6V AC/DC      | QH   | 100/120V AC   |
| Q3   | 12V AC/DC     | QM   | 200/220V AC   |
| Q4   | 24V AC/DC     | QM4  | 230/240V AC   |

#### Contact Configuration

| Code | Contact Configuration | Code | Contact Configuration |
|------|-----------------------|------|-----------------------|
| 10   | 1NO                   | 20   | 2NO                   |
| 01   | 1NC                   | 02   | 2NC                   |
| 11   | 1NO-1NC               | 22   | 2NO-2NC               |

#### Pilot Lights

**C W 1 P - 1 E Q4 ②**

| Code | Bezel Color |
|------|-------------|
| 1    | Black       |
| 4    | Metallic    |

| Code | Shape          |
|------|----------------|
| 1    | Round Flush    |
| 2    | Round Extended |

| Code | Option                              | Part No. Example |
|------|-------------------------------------|------------------|
| W    | White lens type (when light is off) | CW1P-1EQ4W②      |

- For white lens, clear lens is used instead of colored lens for amber, green, red, and blue illuminated pushbuttons. Amber, green, red, or blue LED units are used.

#### Illumination Color

| Code | Color      | Code | Color  |
|------|------------|------|--------|
| A    | Amber      | R    | Red    |
| G    | Green      | S    | Blue   |
| PW   | Pure White | Y    | Yellow |

#### Rated Voltage

| Code | Rated Voltage | Code | Rated Voltage |
|------|---------------|------|---------------|
| Q2   | 6V AC/DC      | QH   | 100/120V AC   |
| Q3   | 12V AC/DC     | QM   | 200/220V AC   |
| Q4   | 24V AC/DC     | QM4  | 230/240V AC   |

#### Pushbuttons

**C W 1 B - M 1 E 10 ①**

| Code | Bezel Color |
|------|-------------|
| 1    | Black       |
| 4    | Metallic    |

| Code | Operation  |
|------|------------|
| M    | Momentary  |
| A    | Maintained |

| Code | Shape          |
|------|----------------|
| 1    | Round Flush    |
| 2    | Round Extended |

#### Button Color

| Code | Color | Code | Color  |
|------|-------|------|--------|
| A    | Amber | R    | Red    |
| B    | Black | S    | Blue   |
| G    | Green | Y    | Yellow |

#### Contact Configuration

| Code | Contact Configuration | Code | Contact Configuration |
|------|-----------------------|------|-----------------------|
| 10   | 1NO                   | 02   | 2NC                   |
| 01   | 1NC                   | 21   | 2NO-1NC               |
| 11   | 1NO-1NC               | 22   | 2NO-2NC               |
| 12   | 1NO-2NC               | 30   | 3NO                   |
| 20   | 2NO                   | 03   | 3NC                   |

## Selector Switches

**CW 1 S - 2 L E 10**

**Bezel Color**

| Code | Bezel Color |
|------|-------------|
| 1    | Black       |
| 4    | Metallic    |

**Positions**

**2-position**

| Code | Position                                                                                        | Code | Positions                                                                                                     |
|------|-------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------|
| 2    | Maintained<br> | 21   | Spring return from right<br> |

**3-position**

| Code | Position                                                                                        | Code | Positions                                                                                                     | Code | Position                                                                                                     | Code | Positions                                                                                                  |
|------|-------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------------------|
| 3    | Maintained<br> | 31   | Spring return from right<br> | 32   | Spring return from left<br> | 33   | Spring return two-way<br> |

**Contact Configuration**  
See page 12 and 13.

**Operator**

| Code  | Shape |
|-------|-------|
| Blank | Knob  |
| L     | Lever |

## Key Selector Switches

**CW 1 K - 2 A E 10 - 1H**

**Bezel Color**

| Code | Bezel Color |
|------|-------------|
| 1    | Black       |
| 4    | Metallic    |

**Positions**

| Code | Bezel Color                              |
|------|------------------------------------------|
| 2    | 90° 2-position, maintained               |
| 21   | 90° 2-position, spring return from right |
| 3    | 45° 3-position, maintained               |
| 31   | 45° 3-position, spring return from right |
| 32   | 45° 3-position, spring return from left  |
| 33   | 45° 3-position, spring return two-way    |

**Key**

| Code     | Bezel Color        |
|----------|--------------------|
| Blank    | Standard           |
| 1H to 2H | Reversible Key     |
| 3H to 6H | Non-reversible Key |

**Contact Configuration**  
See page 14 and 15.

**Key Removal Position**

**2-position**

| Code | Position                                                                                          | Code | Positions                                                                                                     | Code | Positions                                                                                                      |
|------|---------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------|
| A    | Maintained<br> | B    | Removable in left only<br> | C    | Removable in right only<br> |



①②: Key retained position

Note: The key cannot be removed in a spring return position.

## 3-position

| Code | Position                                                                                                                        | Code | Positions                                                                                                           | Code | Positions                                                                                                            | Code | Positions                                                                                                       |
|------|---------------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------|
| A    | Maintained<br>                               | B    | Removable in left and center<br> | C    | Removable in right and center<br> | D    | Removable in center only<br> |
| E    | Maintained (removable in right and left)<br> | G    | Removable in left only<br>       | H    | Removable in right only<br>       |      |                                                                                                                 |

①②: Key retained position

| Spring Return from right                                                            | Spring Return from left                                                             | Spring Return two-way                                                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |

Note: The key cannot be removed in a spring return position.

# ø22 Flush Silhouette Switches CW Series Illuminated Pushbuttons

## Illuminated Pushbuttons

Package quantity: 1

| Shape                                                                                                                                                                                                                                                       | Operation  | Operating Voltage | Contact Configuration | Part No.       |                | Illumination Color Code ②                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|-----------------------|----------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                             |            |                   |                       | Black Bezel    | Metallic Bezel |                                                                                                                                                  |
| Round Flush<br>CW□L-M1<br>CW□L-A1<br><br><br>(black bezel)<br><br><br>(metallic bezel) | Momentary  | 6V AC/DC          | 1NO                   | CW1L-M1E10Q2②  | CW4L-M1E10Q2②  | Specify an illumination color code in place of ② in the Part No.<br><br>A: amber<br>G: green<br>PW: pure white<br>R: red<br>S: blue<br>Y: yellow |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-M1E01Q2②  | CW4L-M1E01Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-M1E11Q2②  | CW4L-M1E11Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-M1E20Q2②  | CW4L-M1E20Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-M1E02Q2②  | CW4L-M1E02Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-M1E22Q2②  | CW4L-M1E22Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 12V AC/DC         | 1NO                   | CW1L-M1E10Q3②  | CW4L-M1E10Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-M1E01Q3②  | CW4L-M1E01Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-M1E11Q3②  | CW4L-M1E11Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-M1E20Q3②  | CW4L-M1E20Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-M1E02Q3②  | CW4L-M1E02Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-M1E22Q3②  | CW4L-M1E22Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 24V AC/DC         | 1NO                   | CW1L-M1E10Q4②  | CW4L-M1E10Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-M1E01Q4②  | CW4L-M1E01Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-M1E11Q4②  | CW4L-M1E11Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-M1E20Q4②  | CW4L-M1E20Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-M1E02Q4②  | CW4L-M1E02Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-M1E22Q4②  | CW4L-M1E22Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 100/120V AC       | 1NO                   | CW1L-M1E10QH②  | CW4L-M1E10QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-M1E01QH②  | CW4L-M1E01QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-M1E11QH②  | CW4L-M1E11QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-M1E20QH②  | CW4L-M1E20QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-M1E02QH②  | CW4L-M1E02QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-M1E22QH②  | CW4L-M1E22QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 200/220V AC       | 1NO                   | CW1L-M1E10QM②  | CW4L-M1E10QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-M1E01QM②  | CW4L-M1E01QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-M1E11QM②  | CW4L-M1E11QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-M1E20QM②  | CW4L-M1E20QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-M1E02QM②  | CW4L-M1E02QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-M1E22QM②  | CW4L-M1E22QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 230/240V AC       | 1NO                   | CW1L-M1E10QM4② | CW4L-M1E10QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-M1E01QM4② | CW4L-M1E01QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-M1E11QM4② | CW4L-M1E11QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-M1E20QM4② | CW4L-M1E20QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-M1E02QM4② | CW4L-M1E02QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-M1E22QM4② | CW4L-M1E22QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             | Maintained | 6V AC/DC          | 1NO                   | CW1L-A1E10Q2②  | CW4L-A1E10Q2②  | Specify an illumination color code in place of ② in the Part No.<br><br>A: amber<br>G: green<br>PW: pure white<br>R: red<br>S: blue<br>Y: yellow |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-A1E01Q2②  | CW4L-A1E01Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-A1E11Q2②  | CW4L-A1E11Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-A1E20Q2②  | CW4L-A1E20Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-A1E02Q2②  | CW4L-A1E02Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-A1E22Q2②  | CW4L-A1E22Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 12V AC/DC         | 1NO                   | CW1L-A1E10Q3②  | CW4L-A1E10Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-A1E01Q3②  | CW4L-A1E01Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-A1E11Q3②  | CW4L-A1E11Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-A1E20Q3②  | CW4L-A1E20Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-A1E02Q3②  | CW4L-A1E02Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-A1E22Q3②  | CW4L-A1E22Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 24V AC/DC         | 1NO                   | CW1L-A1E10Q4②  | CW4L-A1E10Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-A1E01Q4②  | CW4L-A1E01Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-A1E11Q4②  | CW4L-A1E11Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-A1E20Q4②  | CW4L-A1E20Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-A1E02Q4②  | CW4L-A1E02Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-A1E22Q4②  | CW4L-A1E22Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 100/120V AC       | 1NO                   | CW1L-A1E10QH②  | CW4L-A1E10QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-A1E01QH②  | CW4L-A1E01QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-A1E11QH②  | CW4L-A1E11QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-A1E20QH②  | CW4L-A1E20QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-A1E02QH②  | CW4L-A1E02QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-A1E22QH②  | CW4L-A1E22QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 200/220V AC       | 1NO                   | CW1L-A1E10QM②  | CW4L-A1E10QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-A1E01QM②  | CW4L-A1E01QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-A1E11QM②  | CW4L-A1E11QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-A1E20QM②  | CW4L-A1E20QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-A1E02QM②  | CW4L-A1E02QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-A1E22QM②  | CW4L-A1E22QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            | 230/240V AC       | 1NO                   | CW1L-A1E10QM4② | CW4L-A1E10QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NC                   | CW1L-A1E01QM4② | CW4L-A1E01QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 1NO-1NC               | CW1L-A1E11QM4② | CW4L-A1E11QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO                   | CW1L-A1E20QM4② | CW4L-A1E20QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NC                   | CW1L-A1E02QM4② | CW4L-A1E02QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                             |            |                   | 2NO-2NC               | CW1L-A1E22QM4② | CW4L-A1E22QM4② |                                                                                                                                                  |

- See page 21 for replacement LED modules.
- Marking film can be inserted to indicate legends. See page 23.
- See page 16 for dimensions.
- White lens type (when light is off) are available. Clear lens is used instead of colored lens for amber, green, red, and blue illuminated pushbuttons. Amber, green, red, or blue LED units are used. To specify, add W before the color code in Part No.  
Example:  
CW1L-M1E10Q2WR
- A dummy block is installed when one contact block is used.



## Illuminated Pushbuttons

Package quantity: 1

| Shape                                                                                                                                                                                                                                                          | Operation  | Operating Voltage | Contact Configuration | Part No.       |                | Illumination Color Code ②                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|-----------------------|----------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                |            |                   |                       | Black Bezel    | Metallic Bezel |                                                                                                                                                  |
| Round Extended<br>CW□L-M2<br>CW□L-A2<br><br><br>(black bezel)<br><br><br>(metallic bezel) | Momentary  | 6V AC/DC          | 1NO                   | CW1L-M2E10Q2②  | CW4L-M2E10Q2②  | Specify an illumination color code in place of ② in the Part No.<br><br>A: amber<br>G: green<br>PW: pure white<br>R: red<br>S: blue<br>Y: yellow |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-M2E01Q2②  | CW4L-M2E01Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-M2E11Q2②  | CW4L-M2E11Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-M2E20Q2②  | CW4L-M2E20Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-M2E02Q2②  | CW4L-M2E02Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-M2E22Q2②  | CW4L-M2E22Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 12V AC/DC         | 1NO                   | CW1L-M2E10Q3②  | CW4L-M2E10Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-M2E01Q3②  | CW4L-M2E01Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-M2E11Q3②  | CW4L-M2E11Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-M2E20Q3②  | CW4L-M2E20Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-M2E02Q3②  | CW4L-M2E02Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-M2E22Q3②  | CW4L-M2E22Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 24V AC/DC         | 1NO                   | CW1L-M2E10Q4②  | CW4L-M2E10Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-M2E01Q4②  | CW4L-M2E01Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-M2E11Q4②  | CW4L-M2E11Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-M2E20Q4②  | CW4L-M2E20Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-M2E02Q4②  | CW4L-M2E02Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-M2E22Q4②  | CW4L-M2E22Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 100/120V AC       | 1NO                   | CW1L-M2E10QH②  | CW4L-M2E10QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-M2E01QH②  | CW4L-M2E01QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-M2E11QH②  | CW4L-M2E11QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-M2E20QH②  | CW4L-M2E20QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-M2E02QH②  | CW4L-M2E02QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-M2E22QH②  | CW4L-M2E22QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 200/220V AC       | 1NO                   | CW1L-M2E10QM②  | CW4L-M2E10QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-M2E01QM②  | CW4L-M2E01QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-M2E11QM②  | CW4L-M2E11QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-M2E20QM②  | CW4L-M2E20QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-M2E02QM②  | CW4L-M2E02QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-M2E22QM②  | CW4L-M2E22QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 230/240V AC       | 1NO                   | CW1L-M2E10QM4② | CW4L-M2E10QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-M2E01QM4② | CW4L-M2E01QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-M2E11QM4② | CW4L-M2E11QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-M2E20QM4② | CW4L-M2E20QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-M2E02QM4② | CW4L-M2E02QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-M2E22QM4② | CW4L-M2E22QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                | Maintained | 6V AC/DC          | 1NO                   | CW1L-A2E10Q2②  | CW4L-A2E10Q2②  | Specify an illumination color code in place of ② in the Part No.<br><br>A: amber<br>G: green<br>PW: pure white<br>R: red<br>S: blue<br>Y: yellow |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-A2E01Q2②  | CW4L-A2E01Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-A2E11Q2②  | CW4L-A2E11Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-A2E20Q2②  | CW4L-A2E20Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-A2E02Q2②  | CW4L-A2E02Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-A2E22Q2②  | CW4L-A2E22Q2②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 12V AC/DC         | 1NO                   | CW1L-A2E10Q3②  | CW4L-A2E10Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-A2E01Q3②  | CW4L-A2E01Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-A2E11Q3②  | CW4L-A2E11Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-A2E20Q3②  | CW4L-A2E20Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-A2E02Q3②  | CW4L-A2E02Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-A2E22Q3②  | CW4L-A2E22Q3②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 24V AC/DC         | 1NO                   | CW1L-A2E10Q4②  | CW4L-A2E10Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-A2E01Q4②  | CW4L-A2E01Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-A2E11Q4②  | CW4L-A2E11Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-A2E20Q4②  | CW4L-A2E20Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-A2E02Q4②  | CW4L-A2E02Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-A2E22Q4②  | CW4L-A2E22Q4②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 100/120V AC       | 1NO                   | CW1L-A2E10QH②  | CW4L-A2E10QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-A2E01QH②  | CW4L-A2E01QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-A2E11QH②  | CW4L-A2E11QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-A2E20QH②  | CW4L-A2E20QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-A2E02QH②  | CW4L-A2E02QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-A2E22QH②  | CW4L-A2E22QH②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 200/220V AC       | 1NO                   | CW1L-A2E10QM②  | CW4L-A2E10QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-A2E01QM②  | CW4L-A2E01QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-A2E11QM②  | CW4L-A2E11QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-A2E20QM②  | CW4L-A2E20QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-A2E02QM②  | CW4L-A2E02QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-A2E22QM②  | CW4L-A2E22QM②  |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            | 230/240V AC       | 1NO                   | CW1L-A2E10QM4② | CW4L-A2E10QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NC                   | CW1L-A2E01QM4② | CW4L-A2E01QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 1NO-1NC               | CW1L-A2E11QM4② | CW4L-A2E11QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO                   | CW1L-A2E20QM4② | CW4L-A2E20QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NC                   | CW1L-A2E02QM4② | CW4L-A2E02QM4② |                                                                                                                                                  |
|                                                                                                                                                                                                                                                                |            |                   | 2NO-2NC               | CW1L-A2E22QM4② | CW4L-A2E22QM4② |                                                                                                                                                  |

- See page 21 for replacement LED modules.
- Marking film can be inserted to indicate legends. See page 23.
- See page 16 for dimensions.
- White lens type (when light is off) are available. Clear lens is used instead of colored lens for amber, green, red, and blue illuminated pushbuttons. Amber, green, red, or blue LED units are used. To specify, add W before the color code in Part Number. Example: CW1L-M2E10Q2WR
- A dummy block is installed when one contact block is used.



## ø22 Flush Silhouette Switches CW series Pilot Lights

### Pilot Lights

Package quantity: 1

| Shape                                                                                                                                                                                                                                                                                                                             | Operating Voltage | Part No.    |                | Illumination Color Code ②                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|----------------|--------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                   |                   | Black Bezel | Metallic Bezel |                                                                          |
| Round Flush<br>CW□P-1<br><br>(black bezel)<br><br>(metallic bezel)<br>         | 6V AC/DC          | CW1P-1EQ2②  | CW4P-1EQ2②     | A: amber<br>G: green<br>PW: pure white<br>R: red<br>S: blue<br>Y: yellow |
|                                                                                                                                                                                                                                                                                                                                   | 12V AC/DC         | CW1P-1EQ3②  | CW4P-1EQ3②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 24V AC/DC         | CW1P-1EQ4②  | CW4P-1EQ4②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 100/120V AC       | CW1P-1EQH②  | CW4P-1EQH②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 200/220V AC       | CW1P-1EQM②  | CW4P-1EQM②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 230/240V AC       | CW1P-1EQM4② | CW4P-1EQM4②    |                                                                          |
| Round Extended<br>CW□P-2<br><br>(black bezel)<br><br>(metallic bezel)<br> | 6V AC/DC          | CW1P-2EQ2②  | CW4P-2EQ2②     | A: amber<br>G: green<br>PW: pure white<br>R: red<br>S: blue<br>Y: yellow |
|                                                                                                                                                                                                                                                                                                                                   | 12V AC/DC         | CW1P-2EQ3②  | CW4P-2EQ3②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 24V AC/DC         | CW1P-2EQ4②  | CW4P-2EQ4②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 100/120V AC       | CW1P-2EQH②  | CW4P-2EQH②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 200/220V AC       | CW1P-2EQM②  | CW4P-2EQM②     |                                                                          |
|                                                                                                                                                                                                                                                                                                                                   | 230/240V AC       | CW1P-2EQM4② | CW4P-2EQM4②    |                                                                          |

- Specify an illumination color code in place of ② in the Part No.
- See page 16 for dimensions.
- See page 21 for replacement LED modules.
- Two dummy blocks are installed.

## Pushbuttons

Package quantity: 1

| Shape                                                                                                                                                                                                                                                                                                                                          | Operation  | Contact Configuration | Part No.    |                | Button Color Code ①                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------------------|-------------|----------------|--------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                |            |                       | Black Bezel | Metallic Bezel |                                                                    |
| Round Flush<br>CW□B-M1<br>CW□B-A1<br><br>(black bezel)<br><br>(metallic bezel)<br>         | Momentary  | 1NO                   | CW1B-M1E10① | CW4B-M1E10①    | B: black<br>G: green<br>R: red<br>S: blue<br>W: white<br>Y: yellow |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NC                   | CW1B-M1E01① | CW4B-M1E01①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-1NC               | CW1B-M1E11① | CW4B-M1E11①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO                   | CW1B-M1E20① | CW4B-M1E20①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NC                   | CW1B-M1E02① | CW4B-M1E02①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO-1NC               | CW1B-M1E21① | CW4B-M1E21①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-2NC               | CW1B-M1E12① | CW4B-M1E12①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 3NO                   | CW1B-M1E30① | CW4B-M1E30①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 3NC                   | CW1B-M1E03① | CW4B-M1E03①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                | Maintained | 2NO-2NC               | CW1B-M1E22① | CW4B-M1E22①    | B: black<br>G: green<br>R: red<br>S: blue<br>W: white<br>Y: yellow |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO                   | CW1B-A1E10① | CW4B-A1E10①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NC                   | CW1B-A1E01① | CW4B-A1E01①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-1NC               | CW1B-A1E11① | CW4B-A1E11①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO                   | CW1B-A1E20① | CW4B-A1E20①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NC                   | CW1B-A1E02① | CW4B-A1E02①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO-1NC               | CW1B-A1E21① | CW4B-A1E21①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-2NC               | CW1B-A1E12① | CW4B-A1E12①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 3NO                   | CW1B-A1E30① | CW4B-A1E30①    |                                                                    |
| Round Extended<br>CW□B-M2<br>CW□B-A2<br><br>(black bezel)<br><br>(metallic bezel)<br> | Momentary  | 1NO                   | CW1B-M2E10① | CW4B-M2E10①    | B: black<br>G: green<br>R: red<br>S: blue<br>W: white<br>Y: yellow |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NC                   | CW1B-M2E01① | CW4B-M2E01①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-1NC               | CW1B-M2E11① | CW4B-M2E11①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO                   | CW1B-M2E20① | CW4B-M2E20①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NC                   | CW1B-M2E02① | CW4B-M2E02①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO-1NC               | CW1B-M2E21① | CW4B-M2E21①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-2NC               | CW1B-M2E12① | CW4B-M2E12①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 3NO                   | CW1B-M2E30① | CW4B-M2E30①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 3NC                   | CW1B-M2E03① | CW4B-M2E03①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                | Maintained | 2NO-2NC               | CW1B-M2E22① | CW4B-M2E22①    | B: black<br>G: green<br>R: red<br>S: blue<br>W: white<br>Y: yellow |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO                   | CW1B-A2E10① | CW4B-A2E10①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NC                   | CW1B-A2E01① | CW4B-A2E01①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-1NC               | CW1B-A2E11① | CW4B-A2E11①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO                   | CW1B-A2E20① | CW4B-A2E20①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NC                   | CW1B-A2E02① | CW4B-A2E02①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO-1NC               | CW1B-A2E21① | CW4B-A2E21①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 1NO-2NC               | CW1B-A2E12① | CW4B-A2E12①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 3NO                   | CW1B-A2E30① | CW4B-A2E30①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 3NC                   | CW1B-A2E03① | CW4B-A2E03①    |                                                                    |
|                                                                                                                                                                                                                                                                                                                                                |            | 2NO-2NC               | CW1B-A2E22① | CW4B-A2E22①    |                                                                    |

- Specify a button color code in place of ① in the Part No.
- See page 17 for dimensions.
- Two or one dummy block is installed when one or two contact blocks are used, respectively.
- Contact configurations 2NO-1NC, 1NO-2C, 3NO, and 3NC are available for momentary pushbuttons only.



# Flush Silhouette Switches CW series Selector Switches ø22

Package quantity: 1

| No. of Positions  | Contact Configuration (Code) | Contact Block     |         | Operator Position |   |   |  |  |  |  |
|-------------------|------------------------------|-------------------|---------|-------------------|---|---|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                   |                              | Mounting Position | Contact | L                 | C | R |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| 45°<br>3-position | 1NO-1NC (11)                 | 1                 | NO      | ●                 |   |   | CW□S-3E11                                                                         | CW□S-31E11                                                                         | CW□S-32E11                                                                          | CW□S-33E11                                                                          |
|                   |                              | 2                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N1)               | 1                 | NC      |                   |   | ● | CW□S-3E11N1                                                                       | CW□S-31E11N1                                                                       | CW□S-32E11N1                                                                        | CW□S-33E11N1                                                                        |
|                   |                              | 2                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NO      |                   |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N2)               | 1                 | NO      | ●                 |   |   | CW□S-3E11N2                                                                       | CW□S-31E11N2                                                                       | CW□S-32E11N2                                                                        | CW□S-33E11N2                                                                        |
|                   |                              | 2                 | NC      |                   | ● |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N3)               | 1                 | —       | Dummy             |   |   | CW□S-3E11N3                                                                       | CW□S-31E11N3                                                                       | CW□S-32E11N3                                                                        | CW□S-33E11N3                                                                        |
|                   |                              | 2                 | NC      |                   | ● |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NO      |                   |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N4)               | 1                 | —       | Dummy             |   |   | CW□S-3E11N4                                                                       | CW□S-31E11N4                                                                       | CW□S-32E11N4                                                                        | CW□S-33E11N4                                                                        |
|                   |                              | 2                 | NO      | ●                 |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO (20)                     | 1                 | NO      | ●                 |   |   | CW□S-3E20                                                                         | CW□S-31E20                                                                         | CW□S-32E20                                                                          | CW□S-33E20                                                                          |
|                   |                              | 2                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NO      |                   |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO (20N1)                   | 1                 | —       | Dummy             |   |   | CW□S-3E20N1                                                                       | CW□S-31E20N1                                                                       | CW□S-32E20N1                                                                        | CW□S-33E20N1                                                                        |
|                   |                              | 2                 | NO      | ●                 |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NO      |                   |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NC (02)                     | 1                 | NC      |                   |   | ● | CW□S-3E02                                                                         | CW□S-31E02                                                                         | CW□S-32E02                                                                          | CW□S-33E02                                                                          |
|                   |                              | 2                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NC (02N1)                   | 1                 | —       | Dummy             |   |   | CW□S-3E02N1                                                                       | CW□S-31E02N1                                                                       | CW□S-32E02N1                                                                        | CW□S-33E02N1                                                                        |
|                   |                              | 2                 | NC      |                   | ● |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-1NC (21)                 | 1                 | NO      | ●                 |   |   | CW□S-3E21                                                                         | CW□S-31E21                                                                         | CW□S-32E21                                                                          | CW□S-33E21                                                                          |
|                   |                              | 2                 | NO      | ●                 |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-1NC (21N1)               | 1                 | NO      | ●                 |   |   | CW□S-3E21N1                                                                       | CW□S-31E21N1                                                                       | CW□S-32E21N1                                                                        | CW□S-33E21N1                                                                        |
|                   |                              | 2                 | NC      |                   | ● |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NO      |                   |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-2NC (12)                 | 1                 | NO      | ●                 |   |   | CW□S-3E12                                                                         | CW□S-31E12                                                                         | CW□S-32E12                                                                          | CW□S-33E12                                                                          |
|                   |                              | 2                 | NC      |                   | ● |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-2NC (12N1)               | 1                 | NC      |                   |   | ● | CW□S-3E12N1                                                                       | CW□S-31E12N1                                                                       | CW□S-32E12N1                                                                        | CW□S-33E12N1                                                                        |
|                   |                              | 2                 | NO      | ●                 |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 3NO (30)                     | 1                 | NO      | ●                 |   |   | CW□S-3E30                                                                         | CW□S-31E30                                                                         | CW□S-32E30                                                                          | CW□S-33E30                                                                          |
|                   |                              | 2                 | NO      | ●                 |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NO      |                   |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 3NC (03)                     | 1                 | NC      |                   |   | ● | CW□S-3E03                                                                         | CW□S-31E03                                                                         | CW□S-32E03                                                                          | CW□S-33E03                                                                          |
|                   |                              | 2                 | NC      |                   | ● |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NC      | ●                 |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-2NC (22)                 | 1                 | NO/NC   | NO                | ● |   | CW□S-3E22                                                                         | CW□S-31E22                                                                         | CW□S-32E22                                                                          | CW□S-33E22                                                                          |
|                   |                              | 2                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | NO/NC   | NO                | ● |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 4NO (40)                     | 1                 | 2NO     | NO                | ● |   | CW□S-3E40                                                                         | CW□S-31E40                                                                         | CW□S-32E40                                                                          | CW□S-33E40                                                                          |
|                   |                              | 2                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | 2NO     | NO                |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-2NC (22N2)               | 1                 | 2NC     | NC                |   | ● | CW□S-3E22N2                                                                       | CW□S-31E22N2                                                                       | CW□S-32E22N2                                                                        | CW□S-33E22N2                                                                        |
|                   |                              | 2                 | —       | Dummy             |   |   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                              | 3                 | 2NO     | NC                |   | ● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

• Specify a bezel color code in place of □ in the Part No.: 1 (black bezel), 4 (metallic bezel) • For the contact block mounting position, see page 12.

• Lever operator is also available. For dimensions, see page 18.

• When ordering a lever operator selector switch, designate L before E in the Part No. of knob operator selector switches.

[Example] CW1S-3E11 → CW1S-3LE11

Knob Operator    Lever Operator

# ø22 Flush Silhouette Switches CW series Key Selector Switches

## Key Selector Switches

Package quantity: 1

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |               |       |                   |   |                           |                                         |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------|-------------------|---|---------------------------|-----------------------------------------|
| Shape            | CW□K                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |       |                   |   |                           |                                         |
|                  | <div><div></div><div></div><div>(black bezel)(metallic bezel)</div></div> |               |       |                   |   |                           |                                         |
| No. of Positions | Contact Configuration (Code)                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Contact Block |       | Operator Position |   | <div>L R</div> Maintained | <div>L R</div> Spring return from right |
| 90° 2-position   | 1NO (10)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1             | NO    |                   | I | CW□K-2AE10                | CW□K-21BE10                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | —     | Dummy             |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | —     | Dummy             |   |                           |                                         |
|                  | 1NC (01)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1             | —     | Dummy             |   | CW□K-2AE01                | CW□K-21BE01                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | —     | Dummy             |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NC    | ●                 |   |                           |                                         |
|                  | 1NO-1NC (11)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1             | NO    |                   | ● | CW□K-2AE11                | CW□K-21BE11                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | —     | Dummy             |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NC    | ●                 |   |                           |                                         |
|                  | 2NO (20)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1             | NO    |                   | ● | CW□K-2AE20                | CW□K-21BE20                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | —     | Dummy             |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NO    |                   | ● |                           |                                         |
|                  | 2NC (02)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1             | NC    | ●                 |   | CW□K-2AE02                | CW□K-21BE02                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | —     | Dummy             |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NC    | ●                 |   |                           |                                         |
|                  | 2NO-1NC (21)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1             | NO    |                   | ● | CW□K-2AE21                | CW□K-21BE21                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | NO    |                   | ● |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NC    | ●                 |   |                           |                                         |
|                  | 1NO-2NC (12)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1             | NO    |                   | ● | CW□K-2AE12                | CW□K-21BE12                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | NC    | ●                 |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NC    | ●                 |   |                           |                                         |
|                  | 3NO (30)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1             | NO    |                   | ● | CW□K-2AE30                | CW□K-21BE30                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | NO    |                   | ● |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NO    |                   | ● |                           |                                         |
|                  | 3NC (03)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1             | NC    | ●                 |   | CW□K-2AE03                | CW□K-21BE03                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | NC    | ●                 |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NC    | ●                 |   |                           |                                         |
|                  | 2NO-2NC (22)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1             | NO/NC | NO                | ● | CW□K-2AE22                | CW□K-21BE22                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | —     | Dummy             |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | NO/NC | NO                | ● |                           |                                         |
|                  | 4NO (40)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1             | 2NO   | NO                | ● | CW□K-2AE40                | CW□K-21BE40                             |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2             | —     | Dummy             |   |                           |                                         |
|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3             | 2NO   | NO                | ● |                           |                                         |

- Specify a bezel color code in place of □ in the Part No.: 1 (black bezel), 4 (metallic bezel)
- On the spring-returned types, the key can be released only from the maintained position. On the maintained types, the key can be released from every position. Key retained positions are also available. See below.
- Two keys are supplied. • Key cylinder material: Metal
- Besides the standard key (key number 0H), six other keys are also available. See below.
- For the contact block mounting position, see page 12. • For dimensions, see page 19.
- When ordering an optional key or optional key retained positions, specify designation codes as shown below:

[Example] CW1K-2AE10-1H

|                                                                                                                                     |                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (blank): Standard key (0H, reversible)<br>1H to 2H: Reversible key<br>3H to 6H: Non-reversible key                                  | Note:<br>Key number is indicated on the key cylinder.<br>Standard keys do not have a key number indication.                                                                                                                                    |
|                                                                                                                                     |                                                                                                                                                                                                                                                |
| Key removal position code<br>2-position<br>A: Removable in all positions<br>B: Removable in left only<br>C: Removable in right only | 3-position<br>A: Removable in all positions<br>B: Removable in left and center<br>C: Removable in right and center<br>D: Removable in center only<br>E: Removable in right and left<br>G: Removable in left only<br>H: Removable in right only |

Note: Key is retained in the spring-returned position.

# Flush Silhouette Switches CW series Key Selector Switches ø22

Package quantity: 1

| Package quantity: |                       |                   |         |                   |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|-------------------|-----------------------|-------------------|---------|-------------------|--------|--------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| No. of Positions  | Contact Configuration | Contact Block     |         | Operator Position |        |        |  |  |  |  |
|                   |                       | Mounting Position | Contact | L                 | C      | R      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
| 45°<br>3-position | 1NO-1NC (11)          | 1                 | NO      | ●                 |        |        | CW□K-3AE11                                                                        | CW□K-31BE11                                                                        | CW□K-32CE11                                                                         | CW□K-33DE11                                                                         |
|                   |                       | 2                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N1)        | 1                 | NC      |                   | ■      |        | CW□K-3AE11N1                                                                      | CW□K-31BE11N1                                                                      | CW□K-32CE11N1                                                                       | CW□K-33DE11N1                                                                       |
|                   |                       | 2                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NO      |                   |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N2)        | 1                 | NO      | ●                 |        |        | CW□K-3AE11N2                                                                      | CW□K-31BE11N2                                                                      | CW□K-32CE11N2                                                                       | CW□K-33DE11N2                                                                       |
|                   |                       | 2                 | NC      |                   | ●      |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N3)        | 1                 | —       | Dummy             |        |        | CW□K-3AE11N3                                                                      | CW□K-31BE11N3                                                                      | CW□K-32CE11N3                                                                       | CW□K-33DE11N3                                                                       |
|                   |                       | 2                 | NC      |                   | ●      |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NO      |                   |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-1NC (11N4)        | 1                 | —       | Dummy             |        |        | CW□K-3AE11N4                                                                      | CW□K-31BE11N4                                                                      | CW□K-32CE11N4                                                                       | CW□K-33DE11N4                                                                       |
|                   |                       | 2                 | NO      | ●                 |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO (20)              | 1                 | NO      | ●                 |        |        | CW□K-3AE20                                                                        | CW□K-31BE20                                                                        | CW□K-32CE20                                                                         | CW□K-33DE20                                                                         |
|                   |                       | 2                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NO      |                   |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO (20N1)            | 1                 | —       | Dummy             |        |        | CW□K-3AE20N1                                                                      | CW□K-31BE20N1                                                                      | CW□K-32CE20N1                                                                       | CW□K-33DE20N1                                                                       |
|                   |                       | 2                 | NO      | ●                 |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NO      |                   |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NC (02)              | 1                 | NC      |                   | ■      |        | CW□K-3AE02                                                                        | CW□K-31BE02                                                                        | CW□K-32CE02                                                                         | CW□K-33DE02                                                                         |
|                   |                       | 2                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NC (02N1)            | 1                 | —       | Dummy             |        |        | CW□K-3AE02N1                                                                      | CW□K-31BE02N1                                                                      | CW□K-32CE02N1                                                                       | CW□K-33DE02N1                                                                       |
|                   |                       | 2                 | NC      |                   | ●      |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-1NC (21)          | 1                 | NO      | ●                 |        |        | CW□K-3AE21                                                                        | CW□K-31BE21                                                                        | CW□K-32CE21                                                                         | CW□K-33DE21                                                                         |
|                   |                       | 2                 | NO      | ●                 |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-1NC (21N1)        | 1                 | NO      | ●                 |        |        | CW□K-3AE21N1                                                                      | CW□K-31BE21N1                                                                      | CW□K-32CE21N1                                                                       | CW□K-33DE21N1                                                                       |
|                   |                       | 2                 | NC      |                   | ●      |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NO      |                   |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-2NC (12)          | 1                 | NO      | ●                 |        |        | CW□K-3AE12                                                                        | CW□K-31BE12                                                                        | CW□K-32CE12                                                                         | CW□K-33DE12                                                                         |
|                   |                       | 2                 | NC      |                   | ●      |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 1NO-2NC (12N1)        | 1                 | NC      |                   | ■      |        | CW□K-3AE12N1                                                                      | CW□K-31BE12N1                                                                      | CW□K-32CE12N1                                                                       | CW□K-33DE12N1                                                                       |
|                   |                       | 2                 | NO      | ●                 |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 3NO (30)              | 1                 | NO      | ●                 |        |        | CW□K-3AE30                                                                        | CW□K-31BE30                                                                        | CW□K-32CE30                                                                         | CW□K-33DE30                                                                         |
|                   |                       | 2                 | NO      | ●                 |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NO      |                   |        | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 3NC (03)              | 1                 | NC      |                   | ■      |        | CW□K-3AE03                                                                        | CW□K-31BE03                                                                        | CW□K-32CE03                                                                         | CW□K-33DE03                                                                         |
|                   |                       | 2                 | NC      |                   | ●      |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NC      | ■                 |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-2NC (22)          | 1                 | NO/NC   | NO<br>NC          | ●<br>■ | ■      | CW□K-3AE22                                                                        | CW□K-31BE22                                                                        | CW□K-32CE22                                                                         | CW□K-33DE22                                                                         |
|                   |                       | 2                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | NO/NC   | NO<br>NC          | ●<br>■ | ●      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 4NO (40)              | 1                 | 2NO     | NO<br>NO          | ●<br>● |        | CW□K-3AE40                                                                        | CW□K-31BE40                                                                        | CW□K-32CE40                                                                         | CW□K-33DE40                                                                         |
|                   |                       | 2                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | 2NO     | NO<br>NO          |        | ●<br>● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   | 2NO-2NC (22N2)        | 1                 | 2NC     | NC<br>NC          | ■<br>■ | ■      | CW□K-3AE22N2                                                                      | CW□K-31BE22N2                                                                      | CW□K-32CE22N2                                                                       | CW□K-33DE22N2                                                                       |
|                   |                       | 2                 | —       | Dummy             |        |        |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                   |                       | 3                 | 2NO     | NO<br>NO          |        | ●<br>● |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

- Specify a bezel color code in place of □ in the Part No.: 1 (black bezel), 4 (metallic bezel)
- On the spring-returned types, the key can be released only from the maintained position. On the maintained types, the key can be released from every position. Key retained positions are also available. See page 14.
- Two keys are supplied. • Key cylinder material: Metal
- Besides the standard key (key number 0H), six other keys are also available. See page 14.
- For the contact block mounting position, see right.
- For dimensions, see page 19.

Contact Block Mounting Position



# ø22 Flush Silhouette Switches CW series Dimensions

All dimensions in mm.

## Dimensions

### Illuminated Pushbuttons

See page 5 for mounting hole layout.

#### 1 to 2 contacts

##### Round Flush



##### Round Extended



#### 4 contacts

##### Round Flush



##### Round Extended



### Pilot Lights

##### Round Flush



##### Round Extended



All dimensions in mm.

## Pushbuttons

### 1 to 3 contacts

See page 5 for mounting hole layout.

#### Round Flush

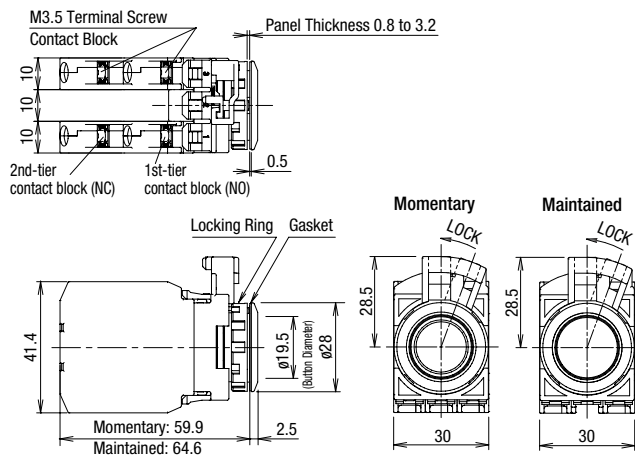


#### Round Extended



### 4 contacts

#### Round Flush



#### Round Extended



## ø22 Flush Silhouette Switches CW series Dimensions

### Selector Switches

All dimensions in mm.

#### 1 to 3 contacts

See page 5 for mounting hole layout.

##### Knob Operator



##### Lever Operator



#### 4 contacts

##### Knob Operator



##### Lever Operator

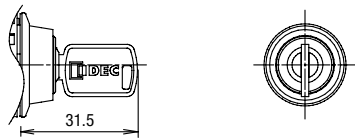


## Key Selector Switches

### 1 to 3 contacts



Key No: 0H to 2H (reversible key)



Key No: 3H to 6H (non-reversible key)

## Keys

### Reversible Key



### Non-reversible Key



### 4 contacts



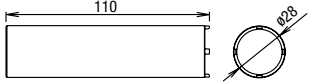
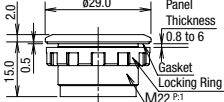
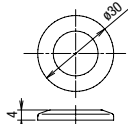
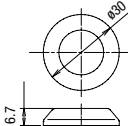
Key No: 0H to 2H (reversible key)



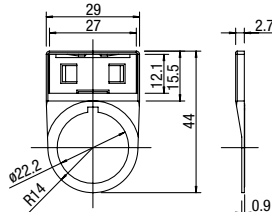
Key No: 3H to 6H (non-reversible key)

See page 5 for mounting hole layout.

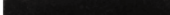
## Accessories

| Shape                                                                                                                                                                                    | Material                                                | Part No.                               | Package Quantity     | Remarks                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                         | Brass                                                   | MW9Z-T1                                | 1                    | <ul style="list-style-type: none"> <li>Used to tighten the locking ring when installing the CW series control unit in a panel cut-out.</li> <li>Weight: Approx 150 g</li> </ul>                                                                                                                   |
|                                                                                                         | Polyamide (black)                                       | LW9Z-BP1                               | 1                    | <ul style="list-style-type: none"> <li>Used to plug an unnecessary <math>\varnothing 22.3</math> mm hole in the panel.</li> <li>Degree of protection: IP65</li> <li>Panel thickness: 0.8 to 6.0 mm</li> </ul>                                                                                     |
| <b>1</b> <br><b>2</b>  | <b>1</b> For round flush<br><b>2</b> For round extended | Rubber<br>(Transparent silicon rubber) | <b>1</b><br><b>1</b> | <ul style="list-style-type: none"> <li>Degree of protection: IP66/67 UL Type 4X</li> <li>Panel thickness: 0.8 to 3.2 mm</li> <li>Use with round extended illuminated push-buttons/pushbuttons.</li> </ul> <br> |

## Nameplates

| Description                                                                         | Legend                                 | Material        | Part No. | Ordering No.        | Package Quantity | Dimensions (mm)                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|----------------------------------------|-----------------|----------|---------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Order marking plate (HWNP) separately. | Plastic (black) | CWAM     | <div>CWAM</div>     | 1                | <ul style="list-style-type: none"> <li>Marking plate HWNP is necessary.</li> <li>Degree of protection: IP65</li> <li>Do not remove the gasket on the operator.</li> </ul>  |
|                                                                                     |                                        |                 |          | <div>CWAMPN10</div> | 10               | <ul style="list-style-type: none"> <li>Cannot be used with HW/FB series control box types.</li> </ul>                                                                                                                                                           |

## Making Plate

| Description                                                                                 | Material                         | Part No. | Ordering No. | Package Quantity | Dimensions (mm)                                                                                                                                                             |
|---------------------------------------------------------------------------------------------|----------------------------------|----------|--------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HWNP<br> | Aluminum (black)<br>1.0 mm thick | HWNP-*   | HWNP-*       | 1                | <ul style="list-style-type: none"> <li>• White legend on black background.</li> </ul>  |
|                                                                                             |                                  |          | HWNP-*PN10   | 10               | <ul style="list-style-type: none"> <li>• Engraving area: W25, H7</li> <li>• Thickness: 1.0 mm</li> </ul>                                                                    |

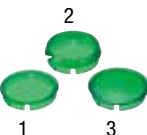
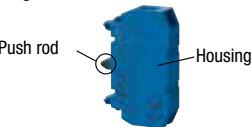
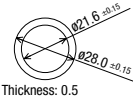
- Specify a legend code in place of \* in the Ordering No.

## Legends

| Code | Legend  | Code | Legend        |
|------|---------|------|---------------|
| 0    | (blank) | 4    | STOP          |
| 1    | ON      | 31   | OFF-ON        |
| 2    | OFF     | 33   | HAND-AUTO     |
| 3    | START   | 53   | HAND-OFF-AUTO |

## Maintenance Parts

Used for replacement only. Do not use the maintenance parts to remodel or expand the CW series control units.

| Shape                                                                                                                                                   |                      | Material                  | Part No.  | Ordering No.  | Package Quantity | Remarks                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------|-----------|---------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Button</b><br><div></div>                                           | 1 For round flush    | Polyarylate<br>ø19.5 H3.5 | CW9Z-B11① | CW9Z-B11①PN05 | 5                | <ul style="list-style-type: none"><li>For maintained pushbuttons.</li><li>Specify a button color code in place of ① in the Part No.<br/>B (black), G (green), R (red), S (blue), W (white), Y (yellow)</li></ul>                            |
|                                                                                                                                                         | 2 For round extended | Polyarylate<br>ø19.5 H6.2 | CW9Z-B12① | CW9Z-B12①PN05 | 5                |                                                                                                                                                                                                                                             |
| <b>Lens</b><br><div></div>                                             | 1 Round Flush        | Polyarylate               | CW9Z-L11② | CW9Z-L11②PN05 | 5                | Color code ②: A (amber), C (clear), G (green), R (red), S (blue), Y (yellow)<br>Use a clear (C) lens for pure white (PW) illumination.<br>1: For illuminated pushbutton, pilot light<br>2: For illuminated pushbutton<br>3: For pilot light |
|                                                                                                                                                         | 2 Round Extended     | Polyarylate               | CW9Z-L12② | CW9Z-L12②PN05 | 5                |                                                                                                                                                                                                                                             |
|                                                                                                                                                         | 3 Round Extended     | Polyarylate               | CW9Z-L15② | CW9Z-L15②PN05 | 5                |                                                                                                                                                                                                                                             |
| <b>Single Contact Block</b><br><div></div>                             |                      | 1NO                       | YW-E10R   | YW-E10R       | 1                | Push rod color: black<br>Housing color: blue and black<br>Terminal No.: 3-4                                                                                                                                                                 |
|                                                                                                                                                         |                      | 1NC                       | YW-E01    | YW-E01        | 1                | Push rod color: red<br>Housing color: reddish purple<br>Terminal No.: 1-2                                                                                                                                                                   |
| <b>Double Contact Block</b><br><div><br/><br/>(photo: YW-EW1R1)</div> |                      | 2NO                       | YW-EW2R0  | YW-EW2R0      | 1                | Push rod color: black<br>Housing color: blue and black<br>Terminal No.<br>1st tier: 13-14<br>2nd tier: 23-24                                                                                                                                |
|                                                                                                                                                         |                      | 2NC                       | YW-EW02   | YW-EW02       | 1                | Push rod color: red<br>Housing color: reddish purple<br>Terminal No.<br>1st tier: 11-12<br>2nd tier: 21-22                                                                                                                                  |
|                                                                                                                                                         |                      | 1NO, 1NC                  | YW-EW1R1  | YW-EW1R1      | 1                | Push rod color: gray<br>Housing color: reddish purple/blue<br>Terminal No.<br>1st tier: 13-14<br>2nd tier: 21-22                                                                                                                            |
| <b>Dummy Block</b><br><div></div>                                    |                      | Polyamide (black)         | CW-DB     | CW-DBPN05     | 5                |                                                                                                                                                                                                                                             |
| <b>Locking Ring</b><br><div></div>                                   |                      | Polyamide (black)         | CW9Z-LN   | CW9Z-LNPN05   | 5                |                                                                                                                                                                                                                                             |
| <b>Gasket</b><br><div></div>                                         |                      | Nitrile rubber            | CW9Z-WM   | CW9Z-WMPN10   | 10               | Waterproof gasket between CW control unit bezel and the mounting panel.<br><div><br/>Thickness: 0.5</div>                                              |
|                                                                                                                                                         |                      |                           |           |               |                  |                                                                                                                                                                                                                                             |
| <b>Spare Key</b><br><div></div>                                      |                      | Zinc (nickel-plated)      | LA9Z-SK-□ | LA9Z-SK-□PN02 | 2                | Specify a key No. in place of □.<br>0H: Standard key (reversible)<br>1H to 2H: Reversible key<br>3H to 6H: Non-reversible key<br>For dimensions, see page 19.                                                                               |

## LED Module

Package quantity: 1

| Shape                                                                               | Operating Voltage Range | Current Draw | Part No.         | Illumination Color Code ②                                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------|--------------|------------------|---------------------------------------------------------------------------------------------------------------------------------|
|  | 6V AC/DC ±10%           | 15 mA        | <b>CW-EAQ2②</b>  | Specify an illumination color code in place of ② in the Part No.<br>A: amber<br>G: green<br>PW: pure white<br>R: red<br>S: blue |
|                                                                                     | 12V AC/DC ±10%          | 15 mA        | <b>CW-EAQ3②</b>  |                                                                                                                                 |
|                                                                                     | 24V AC/DC ±10%          | 16.5 mA      | <b>CW-EAQ4②</b>  |                                                                                                                                 |
|                                                                                     | 100/120V AC ±10%        | 18 mA        | <b>CW-EAQH②</b>  |                                                                                                                                 |
|                                                                                     | 200/220V AC ±10%        | 20 mA        | <b>CW-EAQM②</b>  |                                                                                                                                 |
|                                                                                     | 230/240V AC ±10%        | 18 mA        | <b>CW-EAQM4②</b> |                                                                                                                                 |

• Use a pure white (PW) LED module for yellow (Y) illumination.

### Safety Precautions

- Turn off the power to the CW series control units before installation, removal, wiring, and maintenance. Failure to turn power off may cause electrical shocks or fire hazard.
- For wiring, use wires of a proper size to meet the voltage and current requirements. Tighten the M3.5 terminal screws to a tightening torque of 1.0 to 1.3 N·m. Failure to tighten the terminal screws may cause overheating and fire.

### Operating Instructions

#### Notes for Operation

- When using the CW series control units in a safety-related circuit of a control system, observe safety rules and regulations of each country concerning particular applications of the actual machines and facilities. Perform risk assessment before operation to ensure safety.

#### Operating Conditions

- In corrosive gas or high-temperature, high-humidity atmosphere, contact failure due to corrosion or color change or breakage of the housing may occur.
- Main parts of the CW series control units are made of plastics. Do not scratch the surface with a sharp object or apply excessive shocks or load, otherwise the control units may be damaged. In particular, keep the button, lens, and bezel from such damage, otherwise appearance and function may be impaired.
- Do not apply detergents, cutting oils, or chemicals which may impair the function and appearance of the CW series control units.

#### Removing and Installing the Contact Unit

1. To remove the contact block from the operator, push the yellow locking lever and turn it to the left.



2. To install, align the TOP marking on the operator with the TOP marking on the contact block mounting adaptor, and turn the locking lever to the right.

#### Panel Mounting

Remove the contact block from the operator. Remove the locking ring from the operator. Insert the operator into the panel cut-out from the front, tighten the locking ring from the back, then install the contact block to the operator.

#### Installation in Panel Cut-out

Remove the locking ring from the operator. With the anti-rotation projection on the operator aligned with the recess in the mounting hole, insert the operator into the mounting hole. Tighten the locking ring from the rear of the panel.

#### Note for Panel Mounting

When installing the operator in a panel cut-out, use the optional locking ring wrench (MW9Z-T1) to tighten the locking ring to a recommended tightening torque of 1.2 N·m. Do not use pliers and do not tighten excessively, otherwise the operator may be damaged.



#### Mounting Hole

1. Mounting hole dimensions are in compliance with IEC 60947-5-1.
2. If the anti-rotation projection is removed from the bezel, CW series control units can be mounted in ø22.3 mm mounting holes. To remove the anti-rotation projection, remove the gasket and use cutting pliers to break the projection.



## Operating Instructions

### Pushbuttons (momentary)

Momentary pushbutton caps cannot be removed. Do not tamper with the pushbutton caps using a screwdriver or pliers, otherwise the pushbutton caps may be damaged.

### Pushbuttons (maintained) / Illuminated Pushbuttons / Pilot Lights

#### Removing the button/lens

To remove the button or lens from a pushbutton, illuminated pushbutton or pilot light, insert a flat screwdriver under the flange of the lens at 90° from the TOP marking and twist the screwdriver.

Do not insert the screwdriver too deeply and do not apply excessive force to the lens, otherwise the bezel surface may be damaged.

#### [Screwdriver Insertion Direction]



#### [Screwdriver Insertion Angle]



### Installing the Lens

Turn the groove in the lens to the TOP marking on the operator housing. With the groove aligned with the ridge, press the lens in.



### Marking

Marking plates are not available for CW series illuminated pushbuttons and pilot lights. Marking film can be inserted to indicate legends.

#### Applicable Marking Film Size

| Illuminated Pushbutton (Round Flush)<br>Pilot Light (Round Flush,<br>Round Extended) | Illuminated Pushbutton<br>(Round Extended) |
|--------------------------------------------------------------------------------------|--------------------------------------------|
|                                                                                      |                                            |

Thickness: 0.2 mm maximum

Film material: Polyester (recommended)

Note: Film is not supplied and must be prepared by the user.

### Installing the Rubber Boot

When using in places where the switches are subjected to water splash or an excessive amount of dust, make sure to use the optional rubber boot. Mount the rubber boot so that the protrusion at the bottom surface of the operator fits with the recess on the operator, placing the rubber boot all around the operator sleeve. Make sure that the protrusion on the rubber boot and the recess on the operator is properly fitted, otherwise, the waterproof and dustproof characteristics are not ensured.

#### How to Install the Rubber Boot



Note: Install the rubber boot before mounting the unit to the panel.

### Maintained

Do not replace the button/lens while the operator is latched. Otherwise the internal structure will be damaged.

### Selector Switches

Turn the selector operator or key to the detent positions.

#### Key Selector Switches

To prevent malfunctions and damage, take the following precautions.

- Insert the key to the bottom before turning.
- Do not remove the key while turning.
- Besides the standard key (0H), six other keys are available. Use a key with a key selector switch of a matching number indicated on the key cylinder. Standard key does not have a key number indication.
- Keys are available in two shapes. Key numbers 0H (standard), 1H, and 2H are reversible keys. Key numbers 3H, 4H, 5H, and 6H are non-reversible keys. Make sure of correct insertion direction.

## Contact Blocks and LED Modules

To remove the contact block from the operator, insert a flat screwdriver under the latch and push down the screwdriver as shown below. Before removing the LED module, first remove all contact blocks, and remove the LED module in the same manner.



## Nameplate / Marking Plate

- Installing the marking plate on a nameplate



- To remove the marking plate, insert the flat screwdriver between the marking plate and nameplate.



Note: When using a nameplate, the mounting panel thickness is 2.6 mm maximum.



## Wiring

### Applicable Wires

Stranded wire: 2.0 mm<sup>2</sup> maximum (14AWG)

Solid wire:  $\phi$ 1.6 mm maximum (16AWG)

One or two wires can be connected to the terminal.

### Applicable Crimping Terminals

[Spade terminal]

When using crimping terminals, be sure to use insulating tubes or use insulated crimping terminals.

Note: Ring terminals cannot be used.



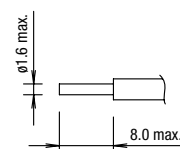
[Ferrule]

When connecting two ferrules to one terminal, use ferrules without insulation.



When using spade terminals or ferrules, insert them to the bottom.

[Solid Wire]



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