

## ø22 Flush Mount CW Switches &amp; Pilot Devices

Flush bezel projects only 2.5mm from front of panel and as little as 39.9mm behind the panel!

## Key features:

- ø22.3mm mounting hole compliant with IEC 60947-5-1
- 3.5-mm operator travel for pushbuttons ensures comfortable and reliable operation
- Up to 6 contacts per switch are possible with use of dual contact blocks
- Black and metallic bezels available
- Illuminated pushbuttons, pushbuttons, pilot lights, selector switches and key selector switches are available
- Direct opening NC contact
- 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 models can be connected
- Contact blocks can be removed by locking lever
- IP20 finger-safe screw terminals
- UL Type 4X rating

| Applicable Standards     | Mark                                                                              | File No. or Organization |
|--------------------------|-----------------------------------------------------------------------------------|--------------------------|
| UL508<br>CSA C22.2 No.14 |  | UL/c-UL File No. E68961  |
| EN60947-5-1              |  | TÜV SÜD                  |
|                          |  | EC Low Voltage Directive |



## 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                                                                                                   |
| 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 (IEC60664-1/60947-5-1)                                                                                  |
| Pollution Degree                        | 3 (IEC60947-5-1)                                                                                               |
| Vibration Resistance                    | Operating extremes: 5 to 55Hz, amplitude 0.5mm                                                                 |
| Shock Resistance                        | Operating extremes: 100m/s <sup>2</sup><br>Damage limits: 1000m/s <sup>2</sup>                                 |
| Mechanical Life<br>(minimum operations) | Pushbutton, illuminated pushbutton: 2,000,000<br>Selector switch: 250,000<br>Key selector switch: 250,000      |
| Electrical Life<br>(minimum operations) | 50,000 (see Contact Ratings)<br>100,000 (see Contact Ratings)<br>(switching frequency 1800 operations/h)       |
| Degree of Protection (IEC60529)         | Panel front: IP65<br>Terminals: IP20<br>Type 4X                                                                |
| Short-circuit Protection                | 250V/10A fuse, (Type aM IEC60269-1, IEC602069-2)                                                               |
| Electrical Shock Protection             | Class II (IEC61140)                                                                                            |
| Terminal Style                          | Screw terminal (M3.5 slotted Phillips screw)                                                                   |
| Bezel Material                          | Polyamide                                                                                                      |
| Applicable Wire Size                    | Up to 2 wires of 2mm <sup>2</sup> (solid wire ø1.6)<br>maximum (AWG14 to 16)<br>(Ring terminal cannot be used) |
| Recommended<br>Tightening Torque        | Terminal: 1.0 to 1.3N·m<br>Locking ring: 1.2N·m                                                                |

## Contact Ratings

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



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

## Direct Opening of Key Selector Switch

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

## Weights

|                        |                                                                  |
|------------------------|------------------------------------------------------------------|
| Illuminated Pushbutton | 46g (CW1L-M1E02QH, 2 contacts)<br>62g (CW1L-M1E22QH, 4 contacts) |
| Pushbutton             | 45g (CW1B-M1E03, 3 contacts)<br>52g (CW1B-M1E22, 4 contacts)     |
| Pilot Light            | 27g (CW1P-1EQH)                                                  |
| 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)     |

## LED Module

|                               |                                                                                    |               |               |                 |                 |
|-------------------------------|------------------------------------------------------------------------------------|---------------|---------------|-----------------|-----------------|
| Rated Insulation Voltage (Ui) | 250V                                                                               |               |               |                 |                 |
| Rated Operating Voltage (Ue)  | 6V AC/DC                                                                           | 12V AC/DC     | 24V AC/DC     | 100/120V AC     | 230/240V AC     |
| Operating Voltage Range       | 6V AC/DC±10%                                                                       | 12V AC/DC±10% | 24V AC/DC±10% | 100/120V AC±10% | 230/240V AC±10% |
| Illumination Color Code ②     | A (amber), G (green), PW (white), R (red), S (blue)                                |               |               |                 |                 |
| LED Module Part Number        | CW-EAQ2②                                                                           | CW-EAQ3②      | CW-EAQ4②      | CW-EAQH②        | CW-EAQM4②       |
| Current Draw                  | 15mA                                                                               | 15mA          | 16.5mA        | 18mA            | 18mA            |
| Life (reference value)        | Approx. 30,000 hours                                                               |               |               |                 |                 |
| Internal Circuit              |  |               |               |                 |                 |

1. Specify an illumination color code in place of ② in the part number.  
2. Use the white (PW) LED module for yellow illumination.

## Contact Blocks

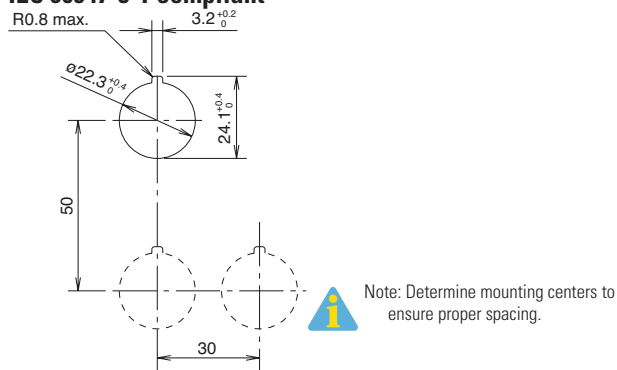
| Contact Block    | Single Contact Block                                                                |                                                                                     | Double Contact Block                                                                |                                                                                       |                                                                                       |
|------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 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                                                                                 |                                                                                       |                                                                                       |

## Degree of Protection

| Rating                 | IP65 | IP66  | IP67  | UL Type 4X |
|------------------------|------|-------|-------|------------|
| Illuminated Pushbutton | Yes  | Yes * | Yes * | Yes *      |
| Pilot Light            | Yes  | Yes   | No    | Yes        |
| Pushbutton             | Yes  | Yes * | Yes * | Yes *      |
| Selector Switch        | Yes  | Yes   | Yes   | Yes        |
| Key Selector Switch    | Yes  | Yes   | No    | Yes        |

- \*When used with rubber boot (CW9Z-D11, -D12)

## Mounting Hole Layout IEC 60947-5-1 compliant



## Illuminated Pushbuttons (Assembled)

| Style                                                                                                                                                                                                                                         | Operating Voltage | Contact Configuration                          | Black Bezel                                                                                              | Metallic Bezel                                                                                           | Illumination Color Code ②                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Round Flush<br>CW□L-□1<br><br><br>(black bezel)<br><br><br>(metallic bezel) | 6V AC/DC          | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③1E10Q2②<br>CW1L-③1E01Q2②<br>CW1L-③1E11Q2②<br>CW1L-③1E20Q2②<br>CW1L-③1E02Q2②<br>CW1L-③1E22Q2②       | CW4L-③1E10Q2②<br>CW4L-③1E01Q2②<br>CW4L-③1E11Q2②<br>CW4L-③1E20Q2②<br>CW4L-③1E02Q3②<br>CW4L-③1E22Q2②       | A: amber<br>G: green<br>PW: white<br>R: red<br>S: blue<br>Y: yellow |
|                                                                                                                                                                                                                                               | 12V AC/DC         | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③1E10Q3②<br>CW1L-③1E01Q3②<br>CW1L-③1E11Q3②<br>CW1L-③1E20Q3②<br>CW1L-③1E02Q3②<br>CW1L-③1E22Q3②       | CW4L-③1E10Q3②<br>CW4L-③1E01Q3②<br>CW4L-③1E11Q3②<br>CW4L-③1E20Q3②<br>CW4L-③1E02Q3②<br>CW4L-③1E22Q3②       |                                                                     |
|                                                                                                                                                                                                                                               | 24V AC/DC         | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③1E10Q4②<br>CW1L-③1E01Q4②<br>CW1L-③1E11Q4②<br>CW1L-③1E20Q4②<br>CW1L-③1E02Q4②<br>CW1L-③1E22Q4②       | CW4L-③1E10Q4②<br>CW4L-③1E01Q4②<br>CW4L-③1E11Q4②<br>CW4L-③1E20Q4②<br>CW4L-③1E02Q4②<br>CW4L-③1E22Q4②       |                                                                     |
|                                                                                                                                                                                                                                               | 100/120V AC       | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③1E10QH②<br>CW1L-③1E01QH②<br>CW1L-③1E11QH②<br>CW1L-③1E20QH②<br>CW1L-③1E02QH②<br>CW1L-③1E22QH②       | CW4L-③1E10QH②<br>CW4L-③1E01QH②<br>CW4L-③1E11QH②<br>CW4L-③1E20QH②<br>CW4L-③1E02QH②<br>CW4L-③1E22QH②       |                                                                     |
|                                                                                                                                                                                                                                               | 230/240V AC       | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③1E10QM4②<br>CW1L-③1E01QM4②<br>CW1L-③1E11QM4②<br>CW1L-③1E20QM4②<br>CW1L-③1E02QM4②<br>CW1L-③1E22QM4② | CW4L-③1E10QM4②<br>CW4L-③1E01QM4②<br>CW4L-③1E11QM4②<br>CW4L-③1E20QM4②<br>CW4L-③1E02QM4②<br>CW4L-③1E22QM4② |                                                                     |
|                                                                                                                                                                                                                                               | 6V AC/DC          | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③2E10Q2②<br>CW1L-③2E01Q2②<br>CW1L-③2E11Q2②<br>CW1L-③2E20Q2②<br>CW1L-③2E02Q2②<br>CW1L-③2E22Q2②       | CW4L-③2E10Q2②<br>CW4L-③2E01Q2②<br>CW4L-③2E11Q2②<br>CW4L-③2E20Q2②<br>CW4L-③2E02Q2②<br>CW4L-③2E22Q2②       |                                                                     |
|                                                                                                                                                                                                                                               | 12V AC/DC         | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③2E10Q3②<br>CW1L-③2E01Q3②<br>CW1L-③2E11Q3②<br>CW1L-③2E20Q3②<br>CW1L-③2E02Q3②<br>CW1L-③2E22Q3②       | CW4L-③2E10Q3②<br>CW4L-③2E01Q3②<br>CW4L-③2E11Q3②<br>CW4L-③2E20Q3②<br>CW4L-③2E02Q3②<br>CW4L-③2E22Q3②       |                                                                     |
|                                                                                                                                                                                                                                               | 24V AC/DC         | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③2E10Q4②<br>CW1L-③2E01Q4②<br>CW1L-③2E11Q4②<br>CW1L-③2E20Q4②<br>CW1L-③2E02Q4②<br>CW1L-③2E22Q4②       | CW4L-③2E10Q4②<br>CW4L-③2E01Q4②<br>CW4L-③2E11Q4②<br>CW4L-③2E20Q4②<br>CW4L-③2E02Q4②<br>CW4L-③2E22Q4②       |                                                                     |
|                                                                                                                                                                                                                                               | 100/120V AC       | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③2E10QH②<br>CW1L-③2E01QH②<br>CW1L-③2E11QH②<br>CW1L-③2E20QH②<br>CW1L-③2E02QH②<br>CW1L-③2E22QH②       | CW4L-③2E10QH②<br>CW4L-③2E01QH②<br>CW4L-③2E11QH②<br>CW4L-③2E20QH②<br>CW4L-③2E02QH②<br>CW4L-③2E22QH②       |                                                                     |
|                                                                                                                                                                                                                                               | 230/240V AC       | 1NO<br>1NC<br>1NO-1NC<br>2NO<br>2NC<br>2NO-2NC | CW1L-③2E10QM4②<br>CW1L-③2E01QM4②<br>CW1L-③2E11QM4②<br>CW1L-③2E20QM4②<br>CW1L-③2E02QM4②<br>CW1L-③2E22QM4② | CW4L-③2E10QM4②<br>CW4L-③2E01QM4②<br>CW4L-③2E11QM4②<br>CW4L-③2E20QM4②<br>CW4L-③2E02QM4②<br>CW4L-③2E22QM4② |                                                                     |



- Specify an illumination color code in place of ② in the Part Number.
- Specify function code in place of ③ in the Part Number. M: momentary, A: maintained
- See page 603 for dimensions.
- See next page for replacement LED modules.
- A dummy block is installed when one contact block is used.
- Additional contact configurations available, contact IDEC for more details

Illuminated Pushbuttons (Sub-assembled)



Contact Blocks

| Style                                                                             | Contacts                   | Contact Block | Contact Configuration | Part Number |
|-----------------------------------------------------------------------------------|----------------------------|---------------|-----------------------|-------------|
|  | Finger-safe screw terminal | Single        | 1NO                   | YW-E10R     |
|                                                                                   |                            |               | 1NC                   | YW-E01      |
|  | Finger-safe screw terminal | Double        | 2NO                   | YW-EW2R0    |
|                                                                                   |                            |               | 2NC                   | YW-EW02     |
|                                                                                   |                            |               | 1NO-1NC               | YW-EW1R1    |
|  | Dummy block                |               |                       | CW-DB       |

LED Module

| Style                                                                               | Part Number |
|-------------------------------------------------------------------------------------|-------------|
|  | CW-EAQ ②①   |

- ① In place of ①, specify the Lens/LED Color Code from table.
- ② In place of ②, specify the Voltage Code from table.
3. Use PW LED for yellow lens.

Contact Block Mounting Adaptor

| Style                                                                               | Part Number |
|-------------------------------------------------------------------------------------|-------------|
|  | CW-CN       |

Operators

| Style                                                                             |            |                | Black Bezel | Metallic Bezel |
|-----------------------------------------------------------------------------------|------------|----------------|-------------|----------------|
|  | Momentary  | Round Flush    | CW1L-M10    | CW4L-M10       |
|                                                                                   |            | Round Extended | CW1L-M20    | CW4L-M20       |
|  | Maintained | Round Flush    | CW1L-A10    | CW4L-A10       |
|                                                                                   |            | Round Extended | CW1L-A20    | CW4L-A20       |

Lens

| Style                                                                               |                | Part Number |
|-------------------------------------------------------------------------------------|----------------|-------------|
|   | Round Flush    | CW9Z-L11①   |
|  | Round Extended | CW9Z-L12①   |

- ① In place of ①, specify the Lens/LED Color Code from table.

① Lens/LED Color Code

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

\*Use PW for LED module, use C for lens.

② Voltage Code

| Voltage     | Code |
|-------------|------|
| 6V AC/DC    | 2    |
| 12V AC/DC   | 3    |
| 24V AC/DC   | 4    |
| 100/120V AC | H    |
| 230/240V AC | M4   |

## Non-Illuminated Pushbuttons (Assembled)

| Style                                                                                                          | Contact Configuration | Black Bezel | Metallic Bezel | Button Color Code ①                                                |
|----------------------------------------------------------------------------------------------------------------|-----------------------|-------------|----------------|--------------------------------------------------------------------|
| Round Flush<br>CW□B-□1<br>    | 1NO                   | CW1B-③1E10① | CW4B-③1E10①    | B: black<br>G: green<br>R: red<br>S: blue<br>W: white<br>Y: yellow |
|                                                                                                                | 1NC                   | CW1B-③1E01① | CW4B-③1E01①    |                                                                    |
|                                                                                                                | 1NO-1NC               | CW1B-③1E11① | CW4B-③1E11①    |                                                                    |
|                                                                                                                | 2NO                   | CW1B-③1E20① | CW4B-③1E20①    |                                                                    |
|                                                                                                                | 2NC                   | CW1B-③1E02① | CW4B-③1E02①    |                                                                    |
|                                                                                                                | 2NO-1NC*              | CW1B-M1E21① | CW4B-M1E21①    |                                                                    |
|                                                                                                                | 1NO-2NC*              | CW1B-M1E12① | CW4B-M1E12①    |                                                                    |
|                                                                                                                | 3NO*                  | CW1B-M1E30① | CW4B-M1E30①    |                                                                    |
|                                                                                                                | 3NC*                  | CW1B-M1E03① | CW4B-M1E03①    |                                                                    |
|                                                                                                                | 2NO-2NC               | CW1B-③1E22j | CW4B-③1E22j    |                                                                    |
| Round Extended<br>CW□B-□2<br> | 1NO                   | CW1B-③2E10① | CW4B-③2E10①    |                                                                    |
|                                                                                                                | 1NC                   | CW1B-③2E01① | CW4B-③2E01①    |                                                                    |
|                                                                                                                | 1NO-1NC               | CW1B-③2E11① | CW4B-③2E11①    |                                                                    |
|                                                                                                                | 2NO                   | CW1B-③2E20① | CW4B-③2E20①    |                                                                    |
|                                                                                                                | 2NC                   | CW1B-③2E02① | CW4B-③2E02①    |                                                                    |
|                                                                                                                | 2NO-1NC*              | CW1B-M2E21① | CW4B-M2E21①    |                                                                    |
|                                                                                                                | 1NO-2NC*              | CW1B-M2E12① | CW4B-M2E12①    |                                                                    |
|                                                                                                                | 3NO*                  | CW1B-M2E30① | CW4B-M2E30①    |                                                                    |
|                                                                                                                | 3NC*                  | CW1B-M2E03① | CW4B-M2E03①    |                                                                    |
|                                                                                                                | 2NO-2NC               | CW1B-M2E22① | CW4B-③2E22①    |                                                                    |



- Specify a button color code in place of ① in the part number.
- Specify function code in place of ③ in the Part Number. M: momentary, A: maintained
- See page 604 for dimensions.
- Two dummy blocks are installed when one contact is used and one dummy block is installed when two contact blocks are used.
- \*These contact configurations are not available in maintained action
- Additional contact configurations available; contact IDEC for more details.

## Non-Illuminated Pushbuttons (Sub-assembled)

Contact Blocks + Mounting Adaptor + Operator = Completed Unit



## Contact Blocks

| Style                                                                               | Contacts                   | Contact Block | Contact Configuration | Part Number |
|-------------------------------------------------------------------------------------|----------------------------|---------------|-----------------------|-------------|
|  | Finger-safe screw terminal | Single        | 1NO                   | YW-E10R     |
|                                                                                     |                            |               | 1NC                   | YW-E01      |
|                                                                                     | Finger-safe screw terminal | Double        | 2NO                   | YW-EW2R0    |
|                                                                                     |                            |               | 2NC                   | YW-EW02     |
|  | Dummy block                |               | 1NO-1NC               | YW-EW1R1    |
|                                                                                     |                            |               |                       | CW-DB       |

## Operators\*

| Style                                                                               |            |                | Black Bezel | Metallic Bezel |
|-------------------------------------------------------------------------------------|------------|----------------|-------------|----------------|
|  | Momentary  | Round Flush    | CW1B-M1①    | CW4B-M1①       |
|                                                                                     |            | Round Extended | CW1B-M2①    | CW4B-M2①       |
|  | Maintained | Round Flush    | CW1B-A1①    | CW4B-A1①       |
|                                                                                     |            | Round Extended | CW1B-A2①    | CW4B-A2①       |

## ① Button Color Code

| Color  | Code |
|--------|------|
| Black  | B    |
| Green  | G    |
| Red    | R    |
| Blue   | S    |
| White  | W    |
| Yellow | Y    |



- Specify a button color code in place of ①.
- \*Operator button is not removable from operator.

## Contact Block Mounting Adaptor

| Style                                                                                 | Part Number |
|---------------------------------------------------------------------------------------|-------------|
|  | CW-CN       |

## Pilot Lights (Assembled)

| Style                                                                                                                              | Operating Voltage | Black Bezel | Metallic Bezel | Illumination Color Code ②                                           |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|----------------|---------------------------------------------------------------------|
| <br>Round Flush Lens<br>CW□P-1<br>(black bezel)   | 6V AC/DC          | CW1P-1EQ2②  | CW4P-1EQ2②     | A: amber<br>G: green<br>R: red<br>S: blue<br>PW: white<br>Y: yellow |
|                                                                                                                                    | 12V AC/DC         | CW1P-1EQ3②  | CW4P-1EQ3②     |                                                                     |
|                                                                                                                                    | 24V AC/DC         | CW1P-1EQ4②  | CW4P-1EQ4②     |                                                                     |
|                                                                                                                                    | 100/120V AC       | CW1P-1EQH②  | CW4P-1EQH②     |                                                                     |
|                                                                                                                                    | 230/240V AC       | CW1P-1EQM4② | CW4P-1EQM4②    |                                                                     |
| <br>Round Dome Lens<br>CW□P-2<br>(metallic bezel) | 6V AC/DC          | CW1P-2EQ2②  | CW4P-2EQ2②     |                                                                     |
|                                                                                                                                    | 12V AC/DC         | CW1P-2EQ3②  | CW4P-2EQ3②     |                                                                     |
|                                                                                                                                    | 24V AC/DC         | CW1P-2EQ4②  | CW4P-2EQ4②     |                                                                     |
|                                                                                                                                    | 100/120V AC       | CW1P-2EQH②  | CW4P-2EQH②     |                                                                     |
|                                                                                                                                    | 230/240V AC       | CW1P-2EQM4② | CW4P-2EQM4②    |                                                                     |



- Specify an illumination color code in place of ② in the Part Number
- See page 604 for dimensions.
- See page 602 for replacement LED modules.
- Two dummy blocks are installed.

## Pilot Lights (Sub-assembled)

| Contact Blocks*                                                                    | + | LED Module                                                                         | + | Mounting Adaptor                                                                   | + | Operator                                                                           | + | Lens                                                                                  | = | Completed Unit                                                                       |
|------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------|---|------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------|
|  |   |  |   |  |   |  |   |  |   |  |



\* 2 dummy blocks are required for each completed pilot light.

### Contact Block

| Style                                                                               | Contacts    | Part Number |
|-------------------------------------------------------------------------------------|-------------|-------------|
|  | Dummy Block | CW-DB       |

### LED Module

| Style                                                                               | Part Number |
|-------------------------------------------------------------------------------------|-------------|
|  | CW-EAQ ②①   |

- In place of ①, specify the Lens/LED Color Code from table.
- In place of ②, specify the Voltage Code from table.
- Use PW LED for yellow lens.

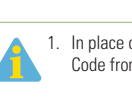
### Contact Block Mounting Adaptor

| Style                                                                               | Part Number |
|-------------------------------------------------------------------------------------|-------------|
|  | CW-CN       |

### Operators

| Style                                                                               | Black Bezel | Metallic Bezel |
|-------------------------------------------------------------------------------------|-------------|----------------|
|  | CW1P-00     | CW4P-00        |
|  |             |                |

### Lens

| Style                                                                                 | Part Number              |
|---------------------------------------------------------------------------------------|--------------------------|
|  | Round Flush<br>CW9Z-L11① |
|  | Round Dome<br>CW9Z-L15①  |



- In place of ①, specify the Lens/LED Color Code from table.

### ① Lens/LED Color Code

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

\*Use PW for LED module, use C for lens.

### ② Voltage Code

| Voltage     | Code |
|-------------|------|
| 6V AC/DC    | 2    |
| 12V AC/DC   | 3    |
| 24V AC/DC   | 4    |
| 100/120V AC | H    |
| 230/240V AC | M4   |

## Selector Switches (Assembled)

| Shape            | CW□S<br>(Knob Operator) |               |  | (black bezel)     |  | (metallic bezel)                                                                                 |                                                                                                                 |
|------------------|-------------------------|---------------|-----------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| No. of Positions | Contact Configuration   | Contact Block |                                                                                   | Operator Position |                                                                                    | <br>Maintained | <br>Spring return from right |
| 90° 2-position   | 1NO<br>(10)             | 1             | NO                                                                                |                   | ●                                                                                  | CW□S-2E10                                                                                        | CW□S-21E10                                                                                                      |
|                  |                         | 2             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 1NC<br>(01)             | 1             | —                                                                                 | Dummy             |                                                                                    | CW□S-2E01                                                                                        | CW□S-21E01                                                                                                      |
|                  |                         | 2             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 1NO-1NC<br>(11)         | 1             | NO                                                                                |                   | ●                                                                                  | CW□S-2E11                                                                                        | CW□S-21E11                                                                                                      |
|                  |                         | 2             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 2NO<br>(20)             | 1             | NO                                                                                |                   | ●                                                                                  | CW□S-2E20                                                                                        | CW□S-21E20                                                                                                      |
|                  |                         | 2             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NO                                                                                |                   | ●                                                                                  |                                                                                                  |                                                                                                                 |
|                  | 2NC<br>(02)             | 1             | NC                                                                                | ●                 |                                                                                    | CW□S-2E02                                                                                        | CW□S-21E02                                                                                                      |
|                  |                         | 2             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 2NO-1NC<br>(21)         | 1             | NO                                                                                |                   | ●                                                                                  | CW□S-2E21                                                                                        | CW□S-21E21                                                                                                      |
|                  |                         | 2             | NO                                                                                |                   | ●                                                                                  |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 1NO-2NC<br>(12)         | 1             | NO                                                                                |                   | ●                                                                                  | CW□S-2E12                                                                                        | CW□S-21E12                                                                                                      |
|                  |                         | 2             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 3NO<br>(30)             | 1             | NO                                                                                |                   | ●                                                                                  | CW□S-2E30                                                                                        | CW□S-21E30                                                                                                      |
|                  |                         | 2             | NO                                                                                |                   | ●                                                                                  |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NO                                                                                |                   | ●                                                                                  |                                                                                                  |                                                                                                                 |
|                  | 3NC<br>(03)             | 1             | NC                                                                                | ●                 |                                                                                    | CW□S-2E03                                                                                        | CW□S-21E03                                                                                                      |
|                  |                         | 2             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NC                                                                                | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 2NO-2NC<br>(22)         | 1             | NO/<br>NC                                                                         | NC                |                                                                                    | CW□S-2E22                                                                                        | CW□S-21E22                                                                                                      |
|                  |                         |               |                                                                                   | NC                | ●                                                                                  |                                                                                                  |                                                                                                                 |
|                  |                         | 2             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | NO/<br>NC                                                                         | NO                |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | NC                      |               |                                                                                   | ●                 |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | 4NO<br>(40)             | 1             | 2NO                                                                               | NO                |                                                                                    | CW□S-2E40                                                                                        | CW□S-21E40                                                                                                      |
|                  |                         |               |                                                                                   | NO                |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 2             | —                                                                                 | Dummy             |                                                                                    |                                                                                                  |                                                                                                                 |
|                  |                         | 3             | 2NO                                                                               | NO                |                                                                                    |                                                                                                  |                                                                                                                 |
|                  | NO                      |               |                                                                                   |                   | ●                                                                                  |                                                                                                  |                                                                                                                 |

Selector Switches (Assembled) con't

| No. of Positions  | Contact Configuration | Contact Block     |      | Operator Position |       |   |  |  |  |  |
|-------------------|-----------------------|-------------------|------|-------------------|-------|---|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                   |                       | Mounting Position | Type | 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   | ■                 |       |   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |

## Selector Switches (Assembled) con't

| No. of Positions  | Contact Configuration | Contact Block     |       | Operator Position |     |       | <br>Maintained | <br>Spring return from right | <br>Spring return from left | <br>Spring return two-way |
|-------------------|-----------------------|-------------------|-------|-------------------|-----|-------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                   |                       | Mounting Position | Type  | L                 | C   | R     |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
| 45°<br>3-position | 2NO-2NC<br>(22)       | 1                 | NO/NC | NO NC             | ●   | —     | CW□S-3E22                                                                                       | CW□S-31E22                                                                                                     | CW□S-32E22                                                                                                     | CW□S-33E22                                                                                                   |
|                   |                       | 2                 | —     | —                 | —   | Dummy |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                   |                       | 3                 | NO/NC | NO NC             | —   | ●     |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                   | 4NO<br>(40)           | 1                 | 2NO   | NO NO             | ● ● | —     | CW□S-3E40                                                                                       | CW□S-31E40                                                                                                     | CW□S-32E40                                                                                                     | CW□S-33E40                                                                                                   |
|                   |                       | 2                 | —     | —                 | —   | Dummy |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                   |                       | 3                 | 2NO   | NO NO             | —   | ● ●   |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                   | 2NO-2NC<br>(22N2)     | 1                 | 2NC   | NC NC             | —   | —     | CW□S-3E22N2                                                                                     | CW□S-31E22N2                                                                                                   | CW□S-32E22N2                                                                                                   | CW□S-33E22N2                                                                                                 |
|                   |                       | 2                 | —     | —                 | —   | Dummy |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                   |                       | 3                 | 2NO   | NC NC             | —   | ● ●   |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |



1. Specify a bezel color code in place of □ in the Part Number, 1 (black bezel), 4 (metallic bezel)
2. For the contact block mounting position, see below.
3. Lever operator is also available. For dimensions, see page 605.
4. To order a lever operator selector switch, insert L before E in the knob operator part number.  
Example: Knob Operator part number CW1S-3E11 becomes CW1S-3LE11 for Lever Operator.

## Lever Operator

## Contact Block Mounting Position

CW1S-□L  
(black bezel)CW4S-□L  
(metallic bezel)

|   |    | Left | Center | Right |                   |
|---|----|------|--------|-------|-------------------|
|   |    | L    | C      | R     | Operator Position |
| 1 | NO | ●    | —      | —     |                   |
| 2 | NC | —    | ●      | —     |                   |
| 3 | NC | —    | —      | ●     |                   |

Selector Switches (Sub-assembled)

Contact Block

+

Mounting Adaptor

+

Operator

=

Completed Unit






Contact Blocks

| Style                                                                             | Contacts                   | Contact Block | Contact Configuration | Part Number |
|-----------------------------------------------------------------------------------|----------------------------|---------------|-----------------------|-------------|
|  | Finger-safe screw terminal | Single        | 1NO                   | YW-E10R     |
|                                                                                   |                            |               | 1NC                   | YW-E01      |
|  |                            | Double        | 2NO                   | YW-EW2R0    |
|                                                                                   |                            |               | 2NC                   | YW-EW02     |
|                                                                                   | 1NO-1NC                    |               | YW-EW1R1              |             |
|  | Dummy block                |               |                       | CW-DB       |

Contact Block Mounting Adaptor

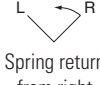
| Style                                                                               | Part Number |
|-------------------------------------------------------------------------------------|-------------|
|  | CW-CN       |

Operators

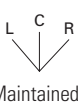
| Style                                                                                                        | Position   | Handle | Description              | Black Bezel | Metallic Bezel |
|--------------------------------------------------------------------------------------------------------------|------------|--------|--------------------------|-------------|----------------|
|                           | 2-position | Knob   | Maintained               | CW1S-2      | CW4S-2         |
|                                                                                                              |            |        | Spring return from right | CW1S-21     | CW4S-21        |
|                                                                                                              |            | Lever  | Maintained               | CW1S-2L     | CW4S-2L        |
|                                                                                                              |            |        | Spring return from right | CW1S-21L    | CW4S-21L       |
| <br>(knob operator shown) | 3-position | Knob   | Maintained               | CW1S-3      | CW4S-3         |
|                                                                                                              |            |        | Spring return from right | CW1S-31     | CW4S-31        |
|                                                                                                              |            |        | Spring return from left  | CW1S-32     | CW4S-32        |
|                                                                                                              |            |        | Spring return two-way    | CW1S-33     | CW4S-33        |
|                                                                                                              |            | Lever  | Maintained               | CW1S-3L     | CW4S-3L        |
|                                                                                                              |            |        | Spring return from right | CW1S-31L    | CW4S-31L       |
|                                                                                                              |            |        | Spring return from left  | CW1S-32L    | CW4S-32L       |
|                                                                                                              |            |        | Spring return two-way    | CW1S-33L    | CW4S-33L       |

 Lever or knob is supplied with operator.

## Key Selector Switches (Assembled)

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

Key Selector Switches (Assembled) con't

| No. of Positions | Contact Configuration | Contact Block     |      | Operator Position |       |   |  |  |  |  |
|------------------|-----------------------|-------------------|------|-------------------|-------|---|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                  |                       | Mounting Position | Type | L                 | C     | R | Maintained                                                                        | Spring return from right                                                          | Spring return from left                                                             | Spring return two-way                                                               |
| 45° 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   | ■                 |       |   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |

## Key Selector Switches (Assembled) con't

| No. of Positions | Contact Configuration | Contact Block     |       | Operator Position |    |       | <br>Maintained | <br>Spring return from right | <br>Spring return from left | <br>Spring return two-way |
|------------------|-----------------------|-------------------|-------|-------------------|----|-------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                  |                       | Mounting Position | Type  | L                 | C  | R     |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
| 90° 2-position   | 2NO-2NC (22)          | 1                 | NO/NC | NO                | NC |       | CW□K-3AE22                                                                                      | CW□K-31BE22                                                                                                    | CW□K-32CE22                                                                                                    | CW□K-33DE22                                                                                                  |
|                  |                       | 2                 | —     |                   |    | Dummy |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                  |                       | 3                 | NO/NC | NO                | NC |       |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                  | 4NO (40)              | 1                 | 2NO   | NO                | NO |       | CW□K-3AE40                                                                                      | CW□K-31BE40                                                                                                    | CW□K-32CE40                                                                                                    | CW□K-33DE40                                                                                                  |
|                  |                       | 2                 | —     |                   |    | Dummy |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                  |                       | 3                 | 2NO   | NO                | NO |       |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                  | 2NO-2NC (22N2)        | 1                 | 2NC   | NC                | NC |       | CW□K-3AE22N2                                                                                    | CW□K-31BE22N2                                                                                                  | CW□K-32CE22N2                                                                                                  | CW□K-33DE22N2                                                                                                |
|                  |                       | 2                 | —     |                   |    | Dummy |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |
|                  |                       | 3                 | 2NC   | NC                | NC |       |                                                                                                 |                                                                                                                |                                                                                                                |                                                                                                              |



- Specify a bezel color code in place of □ in the Part Number: 1 (black bezel), 4 (metallic bezel).
- On the spring-returned models, the key can be released only from the maintained position. On the maintained models, the key can be released from any 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 right.
- For dimensions, see page 606.
- 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)  
1H to 2H: Reversible key  
3H to 6H: Non-reversible key

Key removal position code  
2-position

A: Removable in all positions  
B: Removable in left only  
C: Removable in right only

3-position

A: Removable in all positions  
B: Removable in left and center  
C: Removable in right and center  
D: Removable in center only  
E: Removable in right and left  
G: Removable in left only  
H: Removable in right only

Note: Key is retained in all spring-returned positions.

## Contact Block Mounting Position



|   |    | Left | Center | Right |                   |
|---|----|------|--------|-------|-------------------|
|   |    | L    | C      | R     | Operator Position |
| 1 | NO | ●    |        |       |                   |
| 2 | NC |      | ●      |       |                   |
| 3 | NC |      | ●      |       |                   |

Note:  
Key number is indicated on the key cylinder.  
Standard keys do not have a key number indication.

Key Selector Switches (Sub-assembled)



Contact Blocks

| Style                                                                             | Contacts                   | Contact Block | Contact Configuration | Part Number |
|-----------------------------------------------------------------------------------|----------------------------|---------------|-----------------------|-------------|
|  | Finger-safe screw terminal | Single        | 1NO                   | YW-E10R     |
|                                                                                   |                            |               | 1NC                   | YW-E01      |
| Double                                                                            |                            | 2NO           | YW-EW2R0              |             |
|                                                                                   |                            | 2NC           | YW-EW02               |             |
|                                                                                   | 1NO-1NC                    | YW-EW1R1      |                       |             |
|  | Dummy block                |               |                       | CW-DB       |

Contact Block Mounting Adaptor

| Style                                                                             | Part Number |
|-----------------------------------------------------------------------------------|-------------|
|  | CW-CN       |

Operator

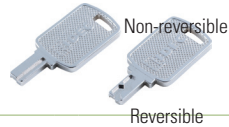
| Style                                                                               | Position   | Description                                                            | Black Bezel | Metallic Bezel |
|-------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------|-------------|----------------|
|  | 2-position | Maintained, key removable all positions                                | CW1K-2A     | CW4K-2A        |
|                                                                                     |            | Maintained, key removable left position only                           | CW1K-2B     | CW4K-2B        |
|                                                                                     |            | Maintained, key removable right position only                          | CW1K-2C     | CW4K-2C        |
|                                                                                     |            | Spring return from right                                               | CW1K-21B    | CW4K-21B       |
|  | 3-position | Maintained, key removable all positions                                | CW1K-3A     | CW1K-3A        |
|                                                                                     |            | Maintained, key removable left and center positions only               | CW1K-3B     | CW4K-3B        |
|                                                                                     |            | Maintained, key removable right and center positions only              | CW1K-3C     | CW4K-3C        |
|                                                                                     |            | Maintained, key removable center position only                         | CW1K-3D     | CW4K-3D        |
|                                                                                     |            | Maintained, key removable left and right positions only                | CW1K-3E     | CW4K-3E        |
|                                                                                     |            | Maintained, key removable left position only                           | CW1K-3G     | CW4K-3G        |
|                                                                                     |            | Maintained, key removable right position only                          | CW1K-3H     | CW4K-3H        |
|                                                                                     |            | Spring return from right, key removable left and center positions only | CW1K-31B    | CW4K-31B       |
|                                                                                     |            | Spring return from right, key removable center position only           | CW1K-31D    | CW4K-31D       |
|                                                                                     |            | Spring return from right, key removable left position only             | CW1K-31G    | CW4K-31G       |
|                                                                                     |            | Spring return from left, key removable right and center positions only | CW1K-32C    | CW4K-32C       |
|                                                                                     |            | Spring return from left, key removable center position only            | CW1K-32D    | CW4K-32D       |
|                                                                                     |            | Spring return from left, key removable right position only             | CW1K-32H    | CW4K-32H       |
|                                                                                     |            | Spring return two-way, key removable center position only              | CW1K-33D    | CW4K-33D       |

 Two keys supplied with operator.

## Accessories

| Item                | Appearance                                                                        | Material          | Part Number | Remarks                                                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------|-------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Locking Ring Wrench |  | Brass             | MW9Z-T1     | <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 150g</li> </ul>  |
| Mounting Hole Plug  |  | Polyamide (black) | LW9Z-BP1    | <ul style="list-style-type: none"> <li>Used to plug an unnecessary ø22.3mm hole in the panel</li> <li>Degree of protection: IP65</li> <li>Panel thickness: 0.8 to 6.0mm</li> </ul>                                                                                |

## Replacement Parts

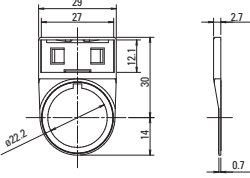
| Shape                                                                                                      | Material             | Part Number  | Remarks                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------|----------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lens<br>                  | 1 Round Flush        | Polyallylate | CW9Z-L11②                                                                                                                                                      |
|                                                                                                            | 2 Round Extended     | Polyallylate | CW9Z-L12②                                                                                                                                                      |
|                                                                                                            | 3 Round Dome         | Polyallylate | CW9Z-L15②                                                                                                                                                      |
| Single Contact Block<br>  | 1NO                  | YW-E10R      | Push rod color: Black<br>Housing color: Blue/black<br>Terminal No.: 3-4                                                                                        |
|                                                                                                            | 1NC                  | YW-E01       | Push rod color: Red<br>Housing color: Reddish purple<br>Terminal No.: 1-2                                                                                      |
| Double Contact Block<br> | 2NO                  | YW-EW2R0     | Push rod color: black<br>Housing color: blue and black<br>Terminal No. 1st tier: 13-14, 2nd tier: 23-24                                                        |
|                                                                                                            | 2NC                  | YW-EW02      | Push rod color: red<br>Housing color: reddish purple<br>Terminal No. 1st tier: 11-12, 2nd tier: 21-22                                                          |
|                                                                                                            | 1NO, 1NC             | YW-EW1R1     | Push rod color: gray<br>Housing color: reddish purple/blue<br>Terminal No. 1st tier: 13-14, 2nd tier: 21-22                                                    |
| Rubber Boot (clear)<br> | Round Flush          |              | CW9Z-D11                                                                                                                                                       |
|                                                                                                            | Round Extended       |              | CW9Z-D12                                                                                                                                                       |
| Dummy Block<br>         | Polyamide (black)    | CW-DB        |                                                                                                                                                                |
| Locking Ring<br>        | Polyamide (black)    | CW9Z-LN      |                                                                                                                                                                |
| Gasket<br>              | Nitrile rubber       | CW9Z-WM      | Waterproof gasket between CW control unit bezel and the mounting panel.                                                                                        |
| Nameplate<br>           | Plastic              | CWAM-OB      |                                                                                                                                                                |
| Spare Key<br>           | Zinc (nickel-plated) | LA9Z-SK-□    | 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 606. |

LED Modules

| Shape                                                                             | Operating Voltage Range | Current Draw | Part Number | Illumination Color Code ②                                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------|--------------|-------------|-------------------------------------------------------------------------------------------------------------------------------|
|  | 6V AC/DC±10%            | 15mA         | CW-EAQ2②    | Specify an illumination color code in place of ② in the Part Number<br>A: amber<br>G: green<br>PW: white<br>R: red<br>S: blue |
|                                                                                   | 12V AC/DC±10%           | 15mA         | CW-EAQ3②    |                                                                                                                               |
|                                                                                   | 24V AC/DC±10%           | 16.5mA       | CW-EAQ4②    |                                                                                                                               |
|                                                                                   | 100/120V AC±10%         | 18mA         | CW-EAQH②    |                                                                                                                               |
|                                                                                   | 230/240V AC±10%         | 18mA         | CW-EAQM4②   |                                                                                                                               |

Nameplate

CWAM-Black Plastic



29  
27  
12.1  
30  
14  
0.7  
ø22.2

|                                            |         |                              |
|--------------------------------------------|---------|------------------------------|
| Nameplate (blank engraving plate included) | CWAM-OB |                              |
| Nameplate (engraved)                       | CWAM-①  |                              |
| Additional Insert (blank)                  | HWNP-O  | HWNP Dimensions<br>27<br>2.5 |
| Additional Insert (engraved)               | HWNP-①  |                              |

Standard Legend Codes

| Pushbuttons |      |               |      | Pushbuttons/Selector Switches |      |                   |      | Selector Switches |      |
|-------------|------|---------------|------|-------------------------------|------|-------------------|------|-------------------|------|
| Legend      | Code | Legend        | Code | Legend                        | Code | Legend            | Code | Legend            | Code |
| AUTO        | 101  | OPEN          | 116  | AUTO-MAN                      | 201  | REV-FOR           | 216  | AUTO-MAN-OFF      | 301  |
| CLOSE       | 102  | OUT           | 117  | CLOSE-OPEN                    | 202  | RUN-JOG           | 217  | AUTO-OFF-MAN      | 302  |
| DOWN        | 103  | RAISE         | 118  | DOWN-UP                       | 203  | RUN-SAFE          | 218  | CLOSE-OFF-OPEN    | 303  |
| EMERG.      | 104  | RESET         | 119  | FAST-SLOW                     | 204  | SAFE-RUN          | 219  | DOWN-OFF-SLOW     | 304  |
| STOP        | 105  | REVERSE       | 120  | FOR-REV                       | 205  | SLOW-FAST         | 220  | FAST-OFF-SLOW     | 305  |
| FAST        | 106  | RUN           | 121  | HAND-AUTO                     | 206  | START-STOP        | 221  | FOR-OFF-REV       | 306  |
| FORWARD     | 107  | SLOW          | 122  | HIGH-LOW                      | 207  | STOP-START        | 222  | LEFT-OFF-RIGHT    | 307  |
| HAND        | 108  | START         | 123  | JOG-RUN                       | 208  | UP-DOWN           | 223  | LOWER-OFF-RAISE   | 308  |
| HIGH        | 109  | STOP          | 125  | LEFT-RIGHT                    | 209  | OI (Int'l OFF ON) | 250  | OFF-MAN-AUTO      | 309  |
| IN          | 110  | TEST          | 126  | LOWER-                        | 210  |                   |      | OFF-SLOW-FAST     | 310  |
| INCH        | 111  | UP            | 127  | RAISE                         | 211  |                   |      | OFF-1-2           | 311  |
| JOG         | 112  | I (Int'l On)  | 150  | MAN-AUTO                      | 212  |                   |      | OPEN-OFF-CLOSE    | 312  |
| LOW         | 113  | O (Int'l Off) | 151  | OFF-ON                        | 213  |                   |      | SLOW-OFF-FAST     | 313  |
| LOWER       | 114  | Off           | 152  | ON-OFF                        | 214  |                   |      | SUMMER-OFF-WINTER | 314  |
| OFF         | 115  | EMO           |      | OPEN-CLOSE                    | 215  |                   |      | UP-OFF-DOWN       | 315  |
| ON          |      |               |      | RAISE-LOWER                   |      |                   |      | 1-OFF-2           | 316  |
|             |      |               |      |                               |      |                   |      | HAND-OFF-AUTO     | 317  |

- 
- To order engraved nameplates, add legend code to nameplate part number.
  - Character height based on the number of characters and size of nameplate. Standard character size is 3/16".
  - Nameplates with standard legends are the same list price as blank nameplates.

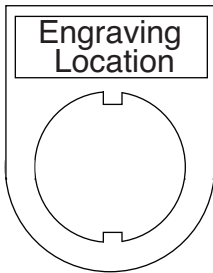
- 
- In place of ①, insert either the standard legend code from table below or custom engraving delimited by " ".
  - Standard engravings are available at no charge.

Nameplates Order Form — CW Series

Copy this order form and use it to specify Letter Height, Custom Engravings, Location of Engraving on Nameplate, and Quantity Desired.  
To ensure engraving accuracy, fax it to your IDEC representative or Distributor.

|               |                                   |
|---------------|-----------------------------------|
| Your Company: | IDEC Rep/Distributor Contact:     |
| Name:         | PO number (if known):             |
| Telephone:    | IDEC Rep/Distributor Phone:       |
| Fax & Email:  | IDEC Rep/Distributor Fax & Email: |

CWAM Nameplate



Engraving Location

**Step 1.**  
Choose Letter Size - 7/64" or 1/8".  
Check the box for the letter size you want. Then write your lettering in box below the check boxes. Note: 1/8" size letters cannot exceed 9 characters.

**Step 2.**  
Specify Quantity.  
Enter the number of nameplates desired in the box on the right.

☐ 7/64" Letter Size  
☐ 1/8" Letter Size

11 characters maximum (for 7/64" size letters)  
9 characters maximum (for 7/8" size letters)

Qty

1 2 3 4 5 6 7 8 9 10 11

Sample Letter Sizes  
7/64" Letters: A B C D  
1/8" Letters: A B C D

## Dimensions (mm)

### Illuminated Pushbuttons

#### 1 to 3 Contacts

##### Round Flush

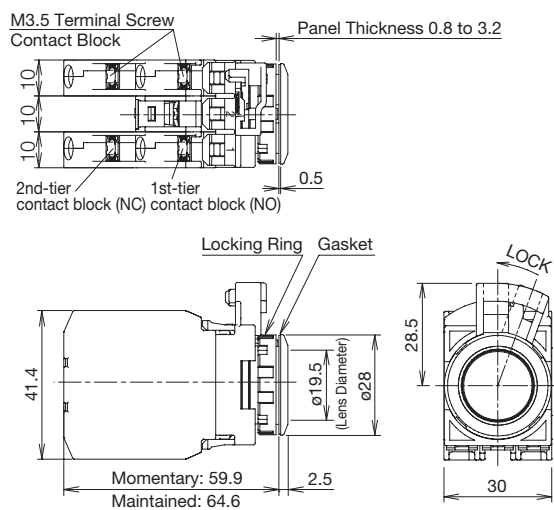


##### Round Extended



#### 4 to 6 Contacts

##### Round Flush



##### Round Extended

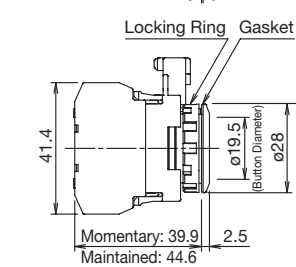
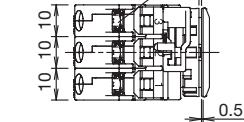


## Pushbuttons

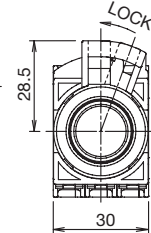
### 1 to 3 Contacts

#### Round Flush

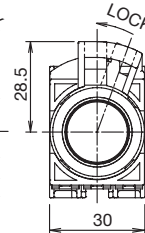
M3.5 Terminal Screw  
Contact Block



#### Momentary

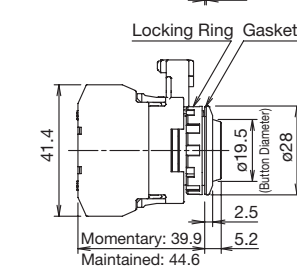
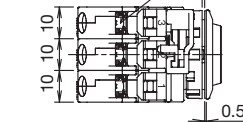


#### Maintained

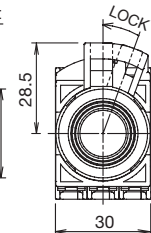


#### Round Extended

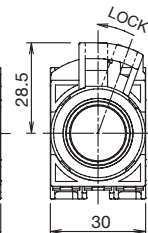
M3.5 Terminal Screw  
Contact Block



#### Momentary



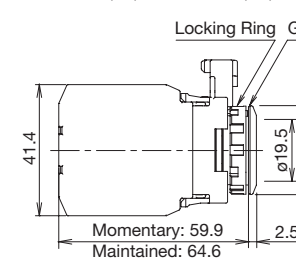
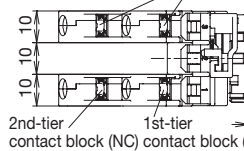
#### Maintained



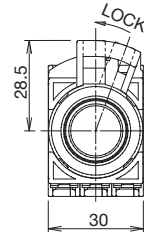
### 4 to 6 Contacts

#### Round Flush

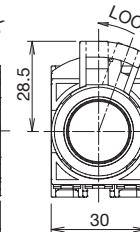
M3.5 Terminal Screw  
Contact Block



#### Momentary

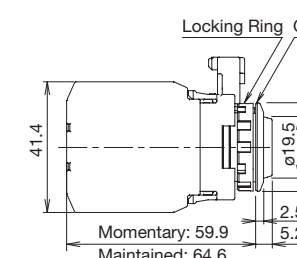
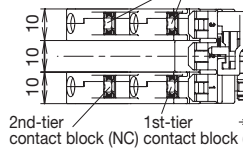


#### Maintained

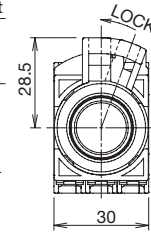


#### Round Extended

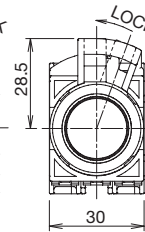
M3.5 Terminal Screw  
Contact Block



#### Momentary



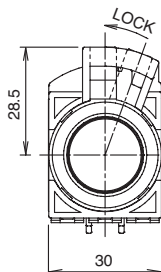
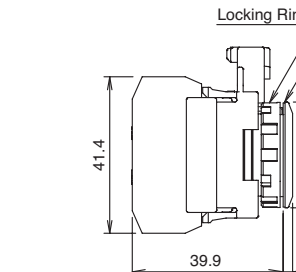
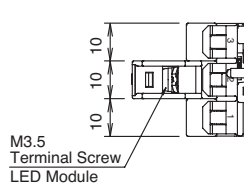
#### Maintained



## Pilot Lights

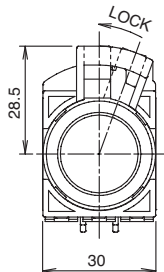
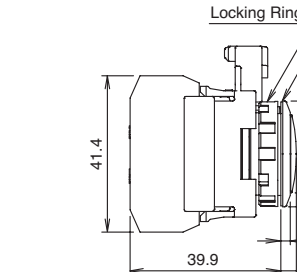
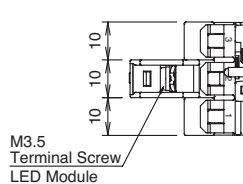
#### Round Flush

Panel Thickness 0.8 to 3.2



#### Round Dome

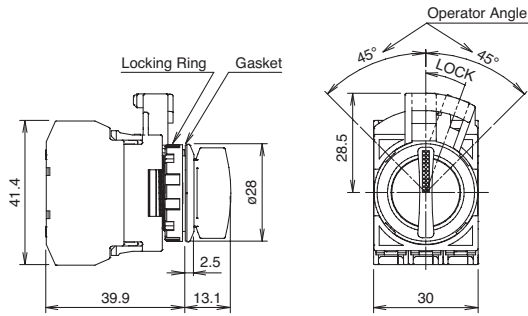
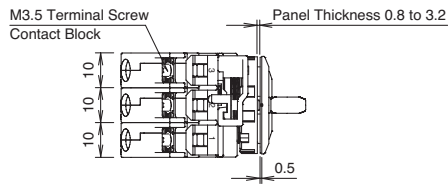
Panel Thickness 0.8 to 3.2



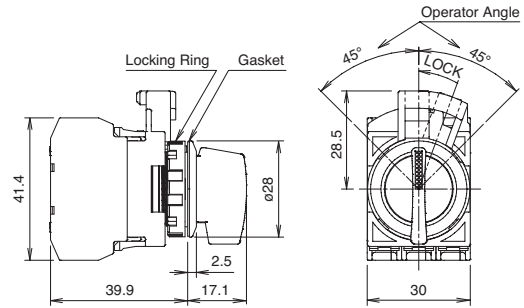
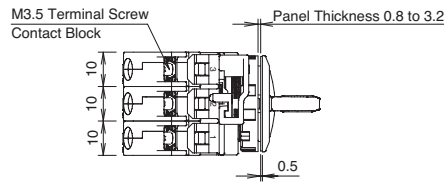
## Selector Switches

## 1 to 3 Contacts

## Knob Operator

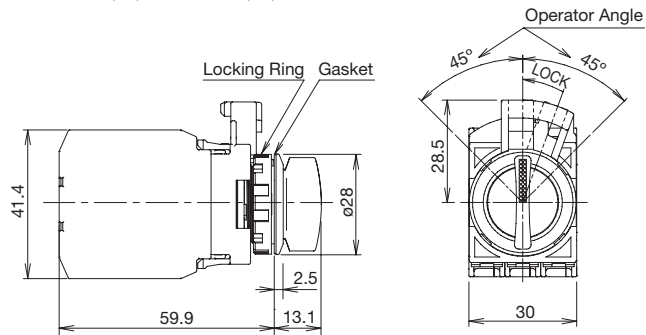
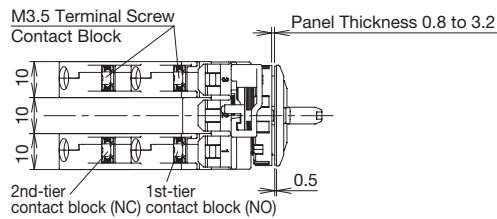


## Lever Operator

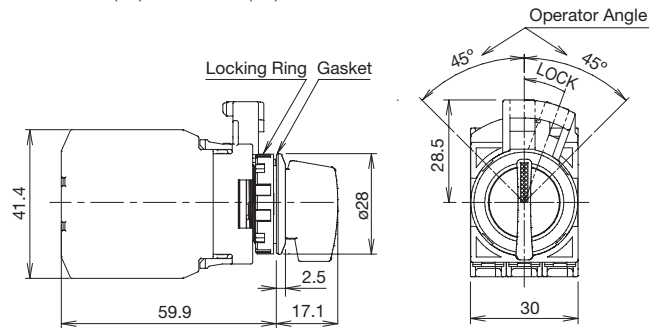
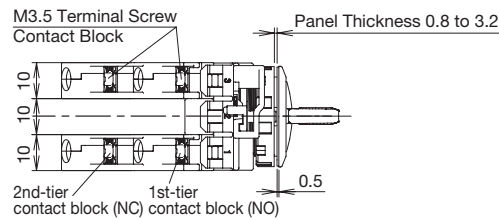


## 4 to 6 Contacts

## Knob Operator

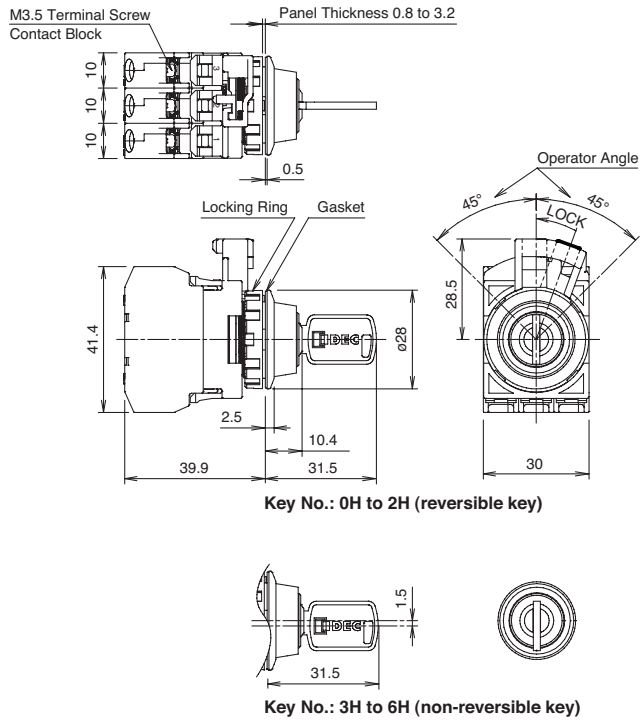


## Lever Operator



## Key Selector Switches

### 1 to 3 Contacts

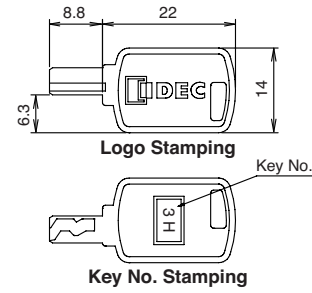


### Keys

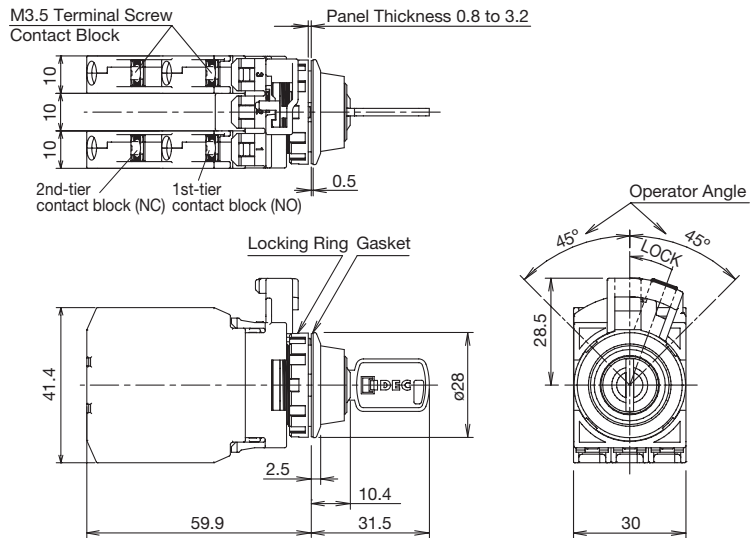
#### Reversible Key



#### Non-reversible Key



### 4 to 6 Contacts



## Safety Precautions

Turn off the power to CW series switches before installation, removal, wiring and maintenance. Failure to turn power off may cause electrical shocks or fire hazard.

When 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 switches 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 environments, contact failure due to corrosion or color change or breakage of the housing may occur.

Main parts of the CW series switches are made of plastic. Do not scratch the surface with a sharp object or apply excessive electric shock or load, otherwise the switches 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 switches.

### Panel Mounting

First remove the contact block and then 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.

### Mounting Hole

1. Mounting hole dimensions are in compliance with IEC60947-5-1.
2. If the anti-rotation projection is removed from the bezel, CW series switches can be mounted in ø22.3mm mounting holes. To remove the anti-rotation projection, remove the gasket and use cutting pliers to break the projection.



### Removing and Installing the Contact Unit

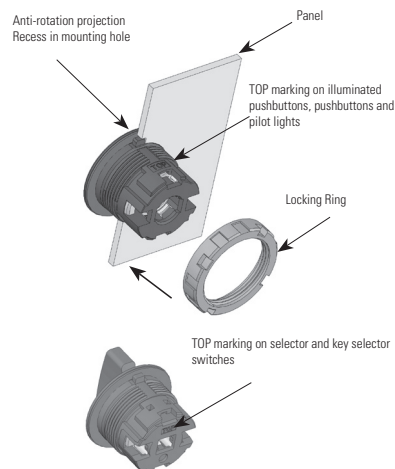
1. To remove the contact block from the operator, push the yellow locking lever and turn it to the left.



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.

### 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.

### Illuminated Pushbuttons and Pilot Lights

#### Removing the Lens

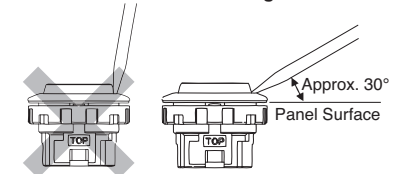
To remove the lens from an illuminated pushbutton or pilot light, insert a flat screwdriver under the flange of the lens at 90° from the TOP marking and twist the screwdriver.

Do not insert the screwdriver too far 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 film can be applied for inscriptions or identification.

#### Applicable Marking Film Size

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

Thickness: 0.2mm maximum

Film material: Polyester (recommended)

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

## Pushbuttons

Pushbutton caps cannot be removed. Do not tamper with the cap using a screwdriver or pliers, otherwise it may be damaged.

## Selector Switches

Turn the selector operator or key to the detent positions.

### Key Selector Switches

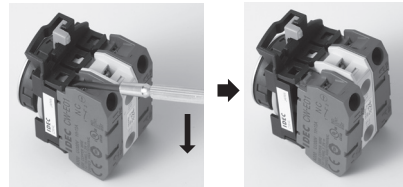
To prevent malfunction and damage, take the following precautions.

- Completely insert the key before turning.
  - Do not remove the key while turning.
  - Besides the standard key (0H), six other keys are available. Use only a key with a number that matches the number on the switches' key cylinder. (The standard key does not have a key number.)
  - Keys are available in two shapes.
    - 0H (standard), 1H, 2H: reversible keys
    - 3H, 4H, 5H, 6H: non-reversible keys
- Make sure of correct insertion direction.

## Operating Instructions, con't

### Contact Blocks and LED Modules

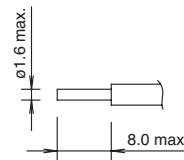
To remove the contact block from the operator, insert a flat screwdriver under the latch and push the screwdriver down as shown below. Before removing the LED module, first remove all contact blocks, and then remove the LED module in the same manner.



## Wiring

### Applicable Wires

Stranded wire: 2.0 mm<sup>2</sup> maximum (14AWG)  
Solid wire: ø1.6 mm maximum

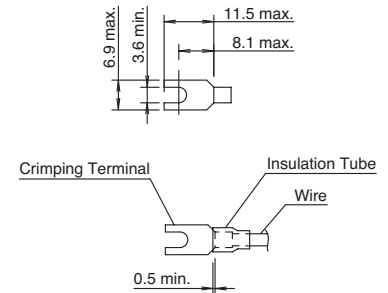


One or two wires can be connected to the terminal.

### Applicable Crimping Terminals

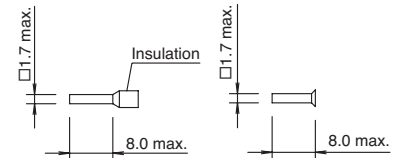
#### Spade terminal

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



#### Ferrule

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



When using spade terminals or ferrules, ensure that they are inserted completely. Ring terminals cannot be used.

### Screw Tightening Torque

Tighten the M3.5 terminal screws to a recommended torque of 1.0 to 1.3N·m.