



Think Automation and beyond...

ø22 mm CW Series Flush Silhouette Switches



Double contact block



Single contact block



Shortest
in its class



IDEC CORPORATION

Ø22 mm CW Series Flush Silhouette Switches



**Double
Contact
Block**

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

Double
contact blocks



Single
contact blocks



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

Short depth behind the panel for compact equipment.

Double: 59.9 mm (maintained: 64.6 mm)

Single: 39.9 mm (maintained: 44.6 mm)

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

Double
contact block



(Actual size)

59.9 mm

Single
contact block



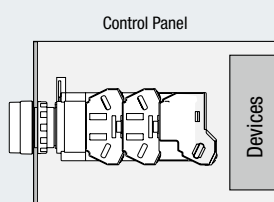
(Actual size)

39.9 mm

**Fits in
small
space**

*Four-contact
illuminated pushbutton*

Conventional



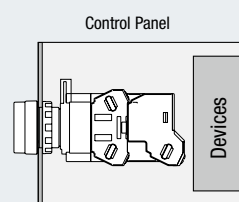
**40% less space
50% less weight**

CW series
double contact block



*Two-contact
illuminated pushbutton*

Conventional



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

CW series
single contact block



sophistication



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

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



Safety

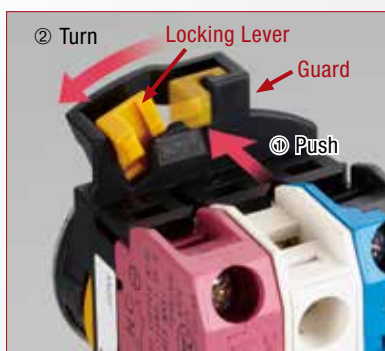
Third-generation safety construction

Two-action removal of contact blocks

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

Locking lever integrated with guard

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



Removing contact blocks

IP20 Finger-safe Terminal

Finger-safe, IP20 terminal prevents electrical shock.



Variety



Illuminated Pushbuttons
(round flush or extended)



See page 8.



Pilot lights
(round flush or extended)



See page 10.



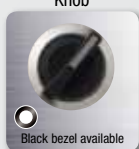
Pushbuttons
(round flush or extended)



See page 11.



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



Low extension with flush silhouette.
See page 12.

Lever



Key Selector Switches
Wave key
7 different key numbers



See page 14.



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

Colors

Illuminated Pushbuttons/Pilot Lights



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

Pushbuttons



Ø22 Flush Silhouette Switches CW Series

Flush bezel projects only 2.5 mm from front of panel

Only 39.9 mm depth behind the panel (single contact block, momentary).

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

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

Contact Ratings

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

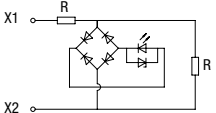
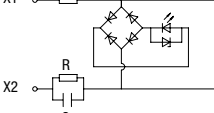
Weight (Examples)

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

Direct Opening of Key Selector Switch

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

LED Module

Rated Insulation Voltage (Ui)	250V					
Rated Operating Voltage (Ue)	6V AC/DC	12V AC/DC	24V AC/DC	100/120V AC (50/60 Hz sine wave)	200/220V AC (50/60 Hz sine wave)	230/240V AC (50/60 Hz sine wave)
Operating Voltage Range	6V AC/DC ±10%	12V AC/DC ±10%	24V AC/DC ±10%	100/120V AC ±10%	200/220V AC ±10%	230/240V AC ±10%
Illumination Color Code ②	A (amber), G (green), PW (pure white), R (red), S (blue)					
LED Module Part No.	CW-EAQ2②	CW-EAQ3②	CW-EAQ4②	CW-EAQH②	CW-EAQM②	CW-EAQM4②
Current Draw	15 mA	15 mA	16.5 mA	18 mA	20 mA	18 mA
Life (reference value)	Approx. 30,000 hours (the illuminance is reduced to 50% of the initial intensity when used on complete DC at 25°C.)					
Internal Circuit	 - LED Chip - Rectifying Diode - Zener Diode - Resistor			 - LED Chip - Rectifying Diode - Zener Diode - Resistor - Capacitor		

- Specify an illumination color code in place of ② in the Part No.

ø22 Flush Silhouette Switches CW Series

Part No. Development

Illuminated Pushbuttons

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

C W 1 L - M 1 E 10 Q4 ②

Code	Bezel Color
1	Black
4	Metallic

Code	Operation
M	Momentary
A	Maintained

Code	Shape
1	Round Flush
2	Round Extended

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

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

Illumination Color

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

Rated Voltage

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

Contact Configuration

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

Pilot Lights

C W 1 P - 1 E Q4 ②

Code	Bezel Color
1	Black
4	Metallic

Code	Shape
1	Round Flush
2	Round Extended

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

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

Illumination Color

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

Rated Voltage

Code	Rated Voltage	Code	Rated Voltage
Q2	6V AC/DC	QH	100/120V AC
Q3			

Selector Switches

CW 1 S - 2 L E 10

Bezel Color

Code	Bezel Color
1	Black
4	Metallic

Positions

2-position

Code	Position	Code	Positions
2	Maintained 	21	Spring return from right 

3-position

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

Contact Configuration
See page 12 and 13.

Operator

Code	Shape
Blank	Knob
L	Lever

Key Selector Switches

CW 1 K - 2 A E 10 - 1H

Bezel Color

Code	Bezel Color
1	Black
4	Metallic

Positions

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

Key

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

Contact Configuration
See page 14 and 15.

Key Removal Position

2-position

Code	Position	Code	Positions	Code	Positions
A	Maintained 	B	Removable in left only 	C	Removable in right only 



①②: Key retained position

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

3-position

Code	Position	Code	Positions	Code	Positions	Code	Positions
A	Maintained 	B	Removable in left and center 	C	Removable in right and center 	D	Removable in center only

ø22 Flush Silhouette Switches CW Series Illuminated Pushbuttons

Illuminated Pushbuttons

Package quantity: 1

Shape	Operation	Operating Voltage	Contact Configuration	Part No.		Illumination Color Code ②
				Black Bezel	Metallic Bezel	
Round Flush CW□L-M1 CW□L-A1  (black bezel)  (metallic bezel)	Momentary	6V AC/DC	1NO	CW1L-M1E10Q2②	CW4L-M1E10Q2②	Specify an illumination color code in place of ② in the Part No. A: amber G: green PW: pure white R: red S: blue Y: yellow
			1NC	CW1L-M1E01Q2②	CW4L-M1E01Q2②	
			1NO-1NC	CW1L-M1E11Q2②	CW4L-M1E11Q2②	
			2NO	CW1L-M1E20Q2②	CW4L-M1E20Q2②	
			2NC	CW1L-M1E02Q2②	CW4L-M1E02Q2②	
			2NO-2NC	CW1L-M1E22Q2②	CW4L-M1E22Q2②	
		12V AC/DC	1NO	CW1L-M1E10Q3②	CW4L-M1E10Q3②	
			1NC	CW1L-M1E01Q3②	CW4L-M1E01Q3②	
			1NO-1NC	CW1L-M1E11Q3②	CW4L-M1E11Q3②	
			2NO	CW1L-M1E20Q3②	CW4L-M1E20Q3②	
			2NC	CW1L-M1E02Q3②	CW4L-M1E02Q3②	
			2NO-2NC	CW1L-M1E22Q3②	CW4L-M1E22Q3②	
		24V AC/DC	1NO	CW1L-M1E10Q4②	CW4L-M1E10Q4②	
			1NC			

Illuminated Pushbuttons

Package quantity: 1

Shape	Operation	Operating Voltage	Contact Configuration	Part No.		Illumination Color Code ②
				Black Bezel	Metallic Bezel	
Round Extended CW□L-M2 CW□L-A2  (black bezel)  (metallic bezel)	Momentary	6V AC/DC	1NO	CW1L-M2E10Q2②	CW4L-M2E10Q2②	Specify an illumination color code in place of ② in the Part No. A: amber G: green PW: pure white R: red S: blue Y: yellow
			1NC	CW1L-M2E01Q2②	CW4L-M2E01Q2②	
			1NO-1NC	CW1L-M2E11Q2②	CW4L-M2E11Q2②	
			2NO	CW1L-M2E20Q2②	CW4L-M2E20Q2②	
			2NC	CW1L-M2E02Q2②	CW4L-M2E02Q2②	
			2NO-2NC	CW1L-M2E22Q2②	CW4L-M2E22Q2②	
		12V AC/DC	1NO	CW1L-M2E10Q3②	CW4L-M2E10Q3②	
			1NC	CW1L-M2E01Q3②	CW4L-M2E01Q3②	
			1NO-1NC	CW1L-M2E11Q3②	CW4L-M2E11Q3②	
			2NO	CW1L-M2E20Q3②	CW4L-M2E20Q3②	
			2NC	CW1L-M2E02Q3②	CW4L-M2E02Q3②	
			2NO-2NC	CW1L-M2E22Q3②	CW4L-M2E22Q3②	
		24V AC/DC	1NO	CW1L-M2E10Q4②	CW4L-M2E10Q4②	

ø22 Flush Silhouette Switches CW series Pilot Lights

Pilot Lights

Package quantity: 1

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

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

Pushbuttons

Package quantity: 1

Shape	Operation	Contact Configuration	Part No.		Button Color Code ①
			Black Bezel	Metallic Bezel	
Round Flush CW□B-M1 CW□B-A1  (black bezel)  (metallic bezel) 	Momentary	1NO	CW1B-M1E10①	CW4B-M1E10①	B: black G: green R: red S: blue W: white Y: yellow
		1NC	CW1B-M1E01①	CW4B-M1E01①	
		1NO-1NC	CW1B-M1E11①	CW4B-M1E11①	
		2NO	CW1B-M1E20①	CW4B-M1E20①	
		2NC	CW1B-M1E02①	CW4B-M1E02①	
		2NO-1NC	CW1B-M1E21①	CW4B-M1E21①	
		1NO-2NC	CW1B-M1E12①	CW4B-M1E12①	
		3NO	CW1B-M1E30①	CW4B-M1E30①	
		3NC	CW1B-M1E03①	CW4B-M1E03①	
		2NO-2NC	CW1B-M1E22①	CW4B-M1E22①	
	Maintained	1NO	CW1B-A1E10①	CW4B-A1E10①	B: black G: green R: red S: blue W: white Y: yellow
		1NC	CW1B-A1E01①	CW4B-A1E01①	
		1NO-1NC	CW1B-A1E11①	CW4B-A1E11①	
		2NO	CW1B-A1E20①	CW4B-A1E20①	
		2NC	CW1B-A1E02①	CW4B-A1E02①	
		2NO-1NC	CW1B-A1E21①	CW4B-A	

ø22 Flush Silhouette Switches CW series Selector Switches

Selector Switches									
Package quantity: 1									
Shape	CW□S (Knob Operator)   (black bezel)  (metallic bezel)								
No. of Positions	Contact Configuration (Code)	Contact Block		Operator Position		L R Maintained	L R Spring return from right		
		Mounting Position	Contact	L	R				
90° 2-position	1NO (10)	1	NO		●	CW□S-2E10	CW□S-21E10		
		2	—	Dummy					
		3	—	Dummy					
	1NC (01)	1	—	Dummy		CW□S-2E01	CW□S-21E01		
		2	—	Dummy					
		3	NC	●					
	1NO-1NC (11)	1	NO		●	CW□S-2E11	CW□S-21E11		
		2	—	Dummy					
		3	NC	●					
	2NO (20)	1	NO		●	CW□S-2E20	CW□S-21E20		
		2	—	Dummy					
		3	NO		●				

Flush Silhouette Switches CW series Selector Switches ø22

Package quantity: 1

No. of Positions	Contact Configuration (Code)	Contact Block		Operator Position										
		Mounting Position	Contact	L	C	R								
45° 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		●									

ø22 Flush Silhouette Switches CW series Key Selector Switches

Key Selector Switches

Package quantity: 1

Shape	CW□K      (black bezel) (metallic bezel)									
	No. of Positions	Contact Configuration (Code)	Contact Block		Operator Position		L R Maintained	L R Spring return from right		
90° 2-position	1NO (10)		1	NO		I	CW□K-2AE10	CW□K-21BE10		
			2	—	Dummy					
			3	—	Dummy					
	1NC (01)		1	—	Dummy		CW□K-2AE01	CW□K-21BE01		
			2	—	Dummy					
			3	NC	●					
	1NO-1NC (11)		1	NO		●	CW□K-2AE11	CW□K-21BE11		
			2	—	Dummy					
			3	NC	●					
	2NO (20)		1	NO		●	CW□K-2AE20	CW□K-21BE20		
			2	—	Dummy					

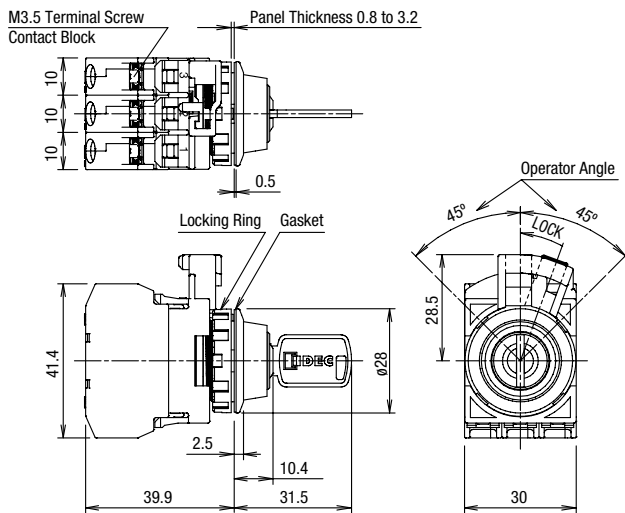
Flush Silhouette Switches CW series Key Selector Switches ø22

Package quantity: 1

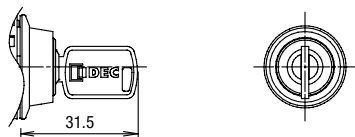
No. of Positions	Contact Configuration	Contact Block		Operator Position			L C R Maintained	L C R Spring return from right	L C R Spring return from left	L C R Spring return two-way				
		Mounting Position	Contact	L	C	R								
45° 3-position	1NO-1NC (11)	1	NO	●			CW□K-3AE11	CW□K-31BE11	CW□K-32CE11	CW□K-33DE11				
		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		</									

Key Selector Switches

1 to 3 contacts



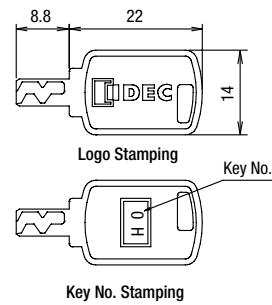
Key No: 0H to 2H (reversible key)



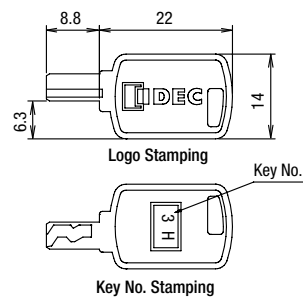
Key No: 3H to 6H (non-reversible key)

Keys

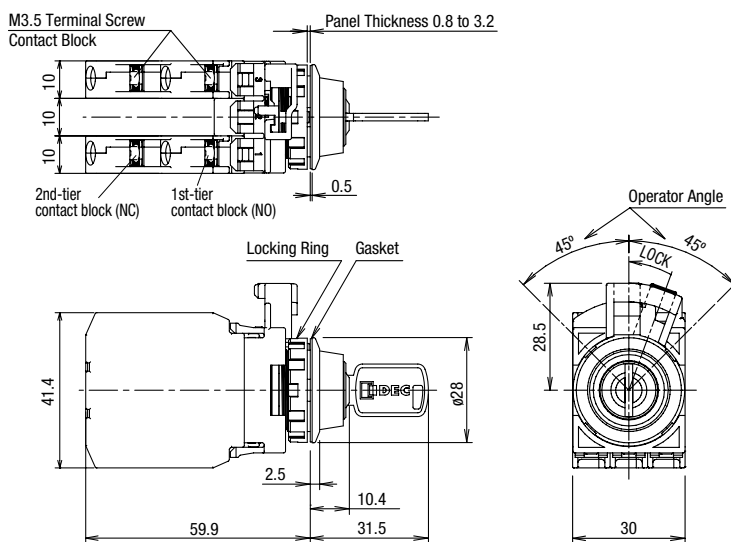
Reversible Key



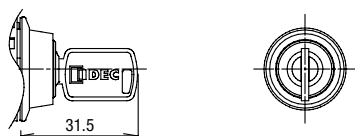
Non-reversible Key



4 contacts



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

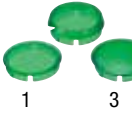


Key No: 3H to 6H (non-reversible key)

See page 5 for mounting hole layout.

Maintenance Parts

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

Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks	
Button 	1 For round flush	Polyarylate ø19.5 H3.5	CW9Z-B11①	CW9Z-B11①PN05	5	- For maintained pushbuttons. - Specify a button color code in place of ① in the Part No. B (black), G (green), R (red), S (blue), W (white), Y (yellow)
	2 For round extended	Polyarylate ø19.5 H6.2	CW9Z-B12①	CW9Z-B12①PN05	5	
Lens 	1 Round Flush	Polyarylate	CW9Z-L11②	CW9Z-L11②PN05	5	Color code ②: A (amber), C (clear), G (green), R (red), S (blue), Y (yellow) Use a clear (C) lens for pure white (PW) illumination. 1: For illuminated pushbutton, pilot light 2: For illuminated pushbutton 3: For pilot light
	2 Round Extended	Polyarylate	CW9Z-L12②	CW9Z-L12②PN05	5	
	3 Round Extended	Polyarylate	CW9Z-L15②	CW9Z-L15②PN05	5	
Single Contact Block 	1NO		YW-E10R	YW-E10R	1	Push rod color: black Housing color: blue and black Terminal No.: 3-4
	1NC		YW-E01	YW-E01	1	Push rod color: red Housing color: reddish purple Terminal No.: 1-2
Double Contact Block  (photo: YW-EW1R1)	2NO		YW-EW2R0	YW-EW2R0	1	Push rod color: black Housing color: blue and black Terminal No. 1st tier: 13-14 2nd tier: 23-24
	2NC		YW-EW02	YW-EW02	1	Push rod color: red Housing color: reddish purple Terminal No. 1st tier: 11-12 2nd tier: 21-22
	1NO, 1NC		YW-EW1R1	YW-EW1R1	1	

Safety Precautions

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

Operating Instructions

Notes for Operation

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

Operating Conditions

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

Removing and Installing the Contact Unit

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



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

Panel Mounting

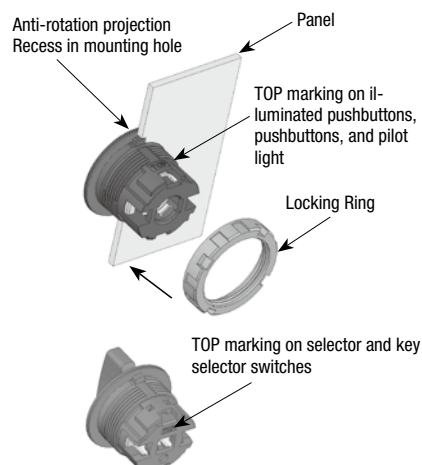
Remove the contact block from the operator. Remove the locking ring from the operator. Insert the operator into the panel cut-out from the front, tighten the locking ring from the back, then install the contact block to the operator.

Installation in Panel Cut-out

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

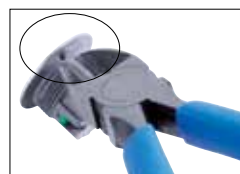
Note for Panel Mounting

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



Mounting Hole

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



Operating Instructions

Pushbuttons (momentary)

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

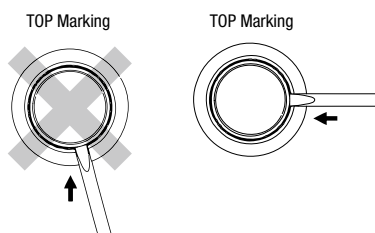
Pushbuttons (maintained) / Illuminated Pushbuttons / Pilot Lights

Removing the button/lens

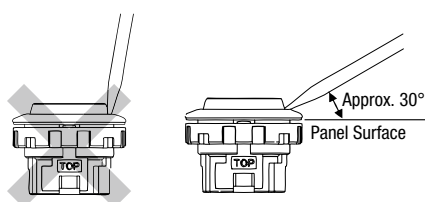
To remove the button or lens from a pushbutton, illuminated pushbutton or pilot light, insert a flat screwdriver under the flange of the lens at 90° from the TOP marking and twist the screwdriver.

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

[Screwdriver Insertion Direction]

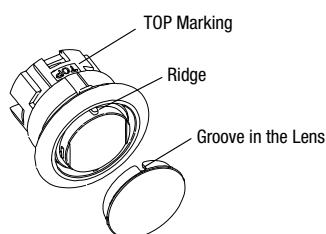


[Screwdriver Insertion Angle]



Installing the Lens

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



Marking

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

Applicable Marking Film Size

Illuminated Pushbutton (Round Flush) Pilot Light (Round Flush, Round Extended)	Illuminated Pushbutton (Round Extended)

Thickness: 0.2 mm maximum

Film material: Polyester (recommended)

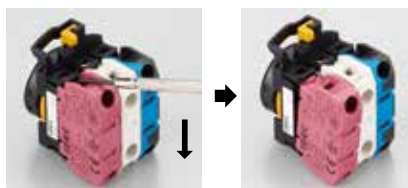
Note: Film is not supplied and must be prepared by the user.

Installing the Rubber Boot

When using in places where the switches are subjected to water splash or an excessive amount of dust, make sure to use the optional rubber

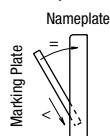
Contact Blocks and LED Modules

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

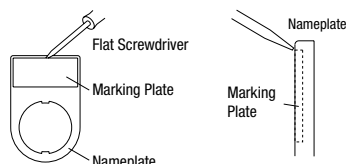


Nameplate / Marking Plate

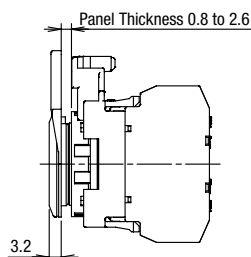
- Installing the marking plate on a nameplate



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



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



Wiring

Applicable Wires

Stranded wire: 2.0 mm² maximum (14AWG)

Solid wire: ø1.6 mm maximum (16AWG)

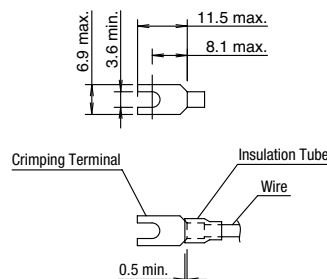
One or two wires can be connected to the terminal.

Applicable Crimping Terminals

[Spade terminal]

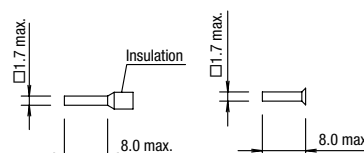
When using crimping terminals, be sure to use insulating tubes or use insulated crimping terminals.

Note: Ring terminals cannot be used.



[Ferrule]

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



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

[Solid Wire]