

ø22 HW Series Control Units Operating Instructions

HW SERIES CONTROL UNITS

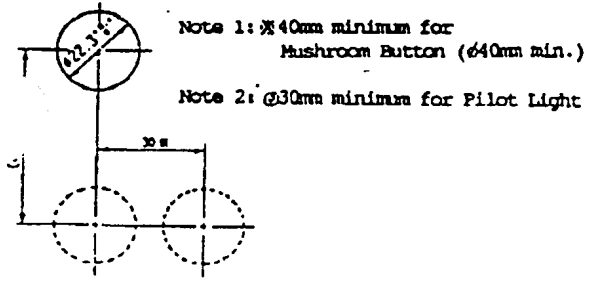


Read this operating instructions before using the control units.

1. Installation
 Note: For compliance with SEMI S 2 standards, EMO switches must be mounted between 33 inches and 64.5 inches from ground level.

2. Installation

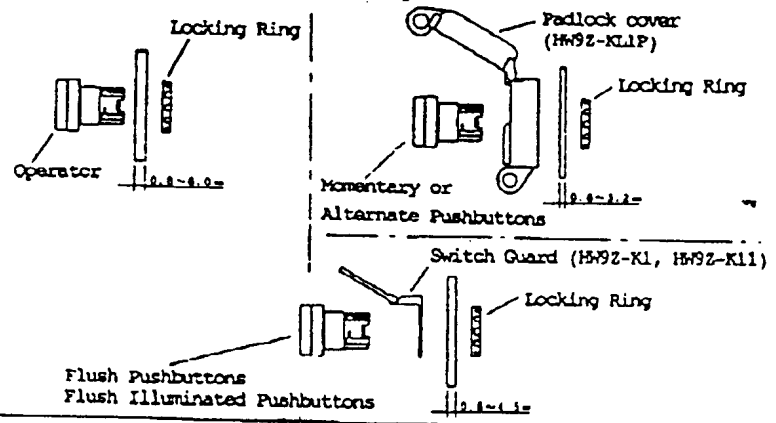
2-1 Mounting Hole Layout



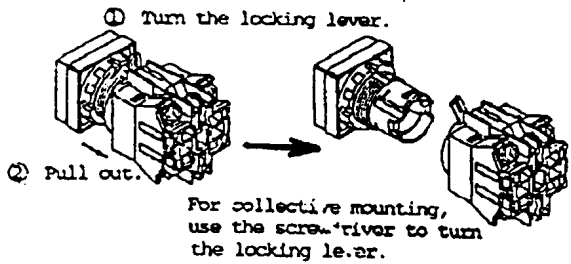
- The minimum mounting centers above are for a one-stack contact block (1 or 2 contacts). When a two-stack contact block or an illuminated unit is used, refer to the DIMENSIONS and determine the minimum mounting centers in consideration of wiring works.
- For Mushroom Button, Selector, and Pushlock Turn Reset types, determine the appropriate minimum mounting centers in consideration of easy operation.

2-2 Mounting Panel Thickness

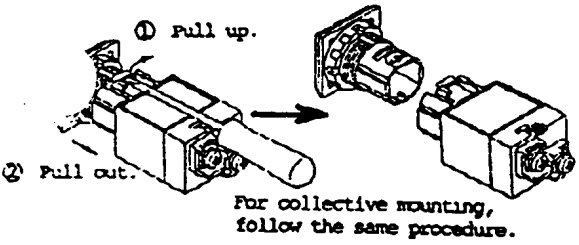
Panel thickness should be between 0.8 and 6.0mm. When optional accessories (padlock cover, switch guard) are used, change panel thickness according to the below.



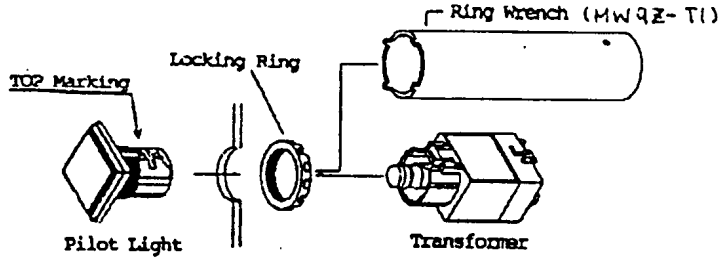
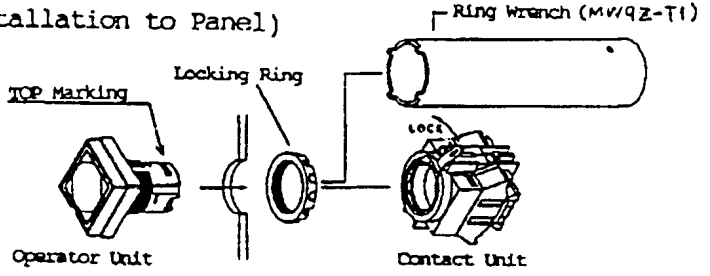
2-3 Procedures of Mounting to Panel (Removing Contact Block)



(Removing Transformer)

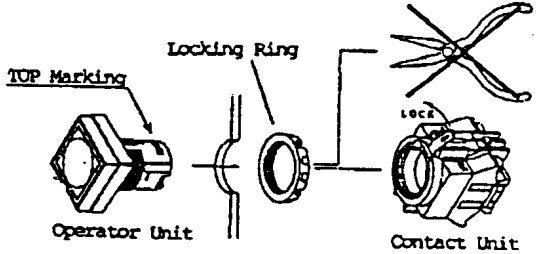
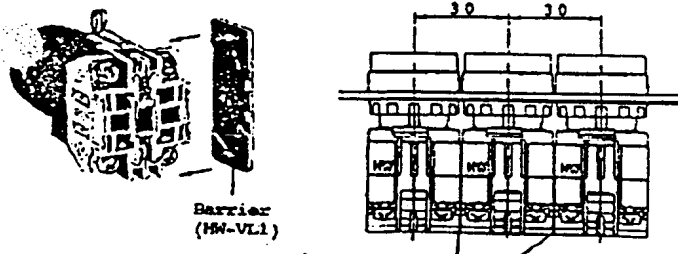


(Installation to Panel)



2-4 Notes for Collective Mounting

Be sure to use a barrier (optional) to prevent terminal contacts when the control units (except pilot lights) are mounted horizontally with a 30mm mounting center.



- Note 1: The tightening torque of locking ring should not exceed 2N·m (20.4 kgf·cm).
- Note 2: Do not tighten the locking ring using a plier excessively.

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3. Button Replacement

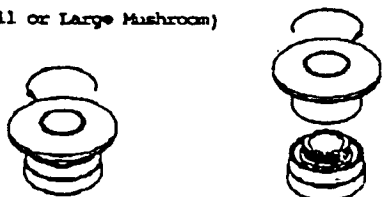
When replacing a button, follow the next procedure.

(Round, Square, Round w/Square Bezel)

Small flat-head screwdriver



(Small or Large Mushroom)



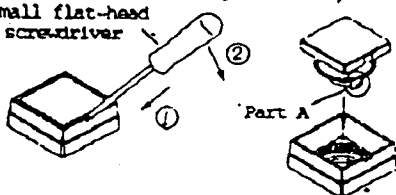
Small or large mushroom button can not be removed from the operator unit of Pushlock-turn switch. Lever, knob cannot removed from the operator unit of selector switch.

4. Lens & Marking Plate Replacements

4-1 Lens Unit Replacement

(Round, Square, Round w/Square Bezel)

Small flat-head screwdriver

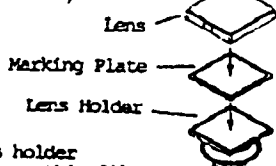
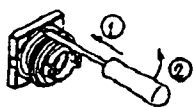


(Note 1) Do not insert the screwdriver deep into the recess of the lens because the waterproof packing may be damaged.

(Note 2) When installing the lens unit to the operator unit, set the part A of lens holder to the TOP side of the unit.

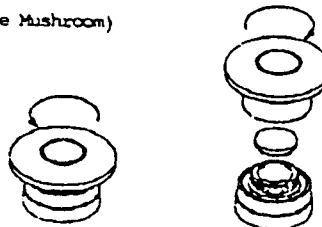
4-2 Lens Replacement

(Round, Square, Round w/Square Bezel)



Note: The filter in the lens holder cannot be removed because this filter is sealed to make the unit waterproof and oiltight.

(Small or Large Mushroom)

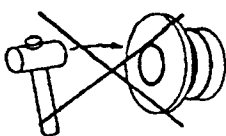


4-3 Combination Procedure

	Built-in Marking Plate	Applicable Marking Film
Round w/Square Bezel	<p>Marking Plate</p>	<p>Film</p>
Round w/Square Bezel	<p>Marking Plate</p>	<p>Film</p>

Note: Pay attention to the orientation of marking plate.

Be sure to use your hand for handling control units.



6. Lens Color

Illumination color is different in green between LED and Incandescent illuminations.

LED illumination: Light Green
Incandescent illumination: Dark Green

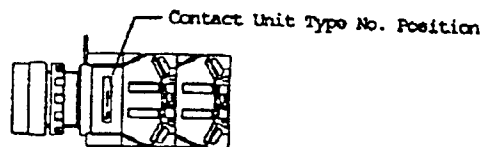
7. Combination of Contact Unit and Operator Unit

Make sure that combination of contact unit and operator unit is correct.

Refer to the Type No. Development of assembled unit and contact unit shown below.

(Example)

	Assembled Unit	Contact Unit
Pushbutton	HW18-M21R	HW-CB11
Illuminated Pushbutton	HW1L-M122Q7G	HW-CL22Q7
Selector Switch	HW1S-3TJ21N1	HW-CB21N1



Note 1: For illuminated pushbuttons and pilot lights, legends and symbols can be engraved on marking plates, or printed mylar can be inserted under lens for labelling purposes.

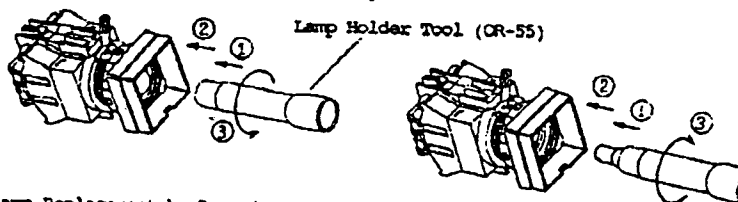
Note 2: For details on marking plate and film, see the catalog.

Note 3: Marking film can not be inserted for small or large illuminated mushroom buttons.

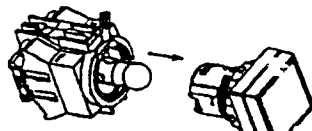
8. Lamp Replacement

Lamps can be replaced using the lamp holder tool from the front of the panel. Also by removing the contact block from the operator unit, the lamp can be removed. Turn the power off before replacing the lamps.

• Lamp Replacement from the front of panel



• Lamp Replacement by Removing Contact Block contact block without using the lamp holder tool.



• Lamp Replacement by Removing Transformer (for pilot light)

The lamp can be replaced by removing the transformer without using the lamp holder tool.