

## Emergency Stop Switches

# Emergency Stop Switches

- Direct opening action (IEC 60947-5-5; 5.2, IEC 60947-5-1; Annex K)
- Safety lock mechanism (IEC 60947-5-5; 6.2)
- Degree of Protection IP65 (IEC 60529)



• See website for details on approvals and standards.

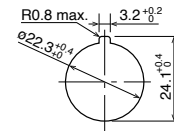
## Specifications

Operating Temperature		–25 to +60°C (no freezing)
Operating Humidity		45 to 85% RH (no condensation)
Storage Temperature		–40 to +80°C (no freezing)
Minimum Force Required for Direct Opening Action		80N
Minimum Operator Stroke Required for Direct Opening Action		5.5mm
Maximum Operator Stroke		10.0mm
Contact Resistance		50 mΩ maximum (initial value)
Insulation Resistance		100 MΩ minimum (500V DC megger)
Dielectric Strength		Between live and dead parts: 2500V AC, 1 minute Between terminals of different poles: 2500V AC, 1 minute Bet ween terminals of the same poles: 2500V AC, 1 minute
Vibration Resistance	Damage limits	10 to 500 Hz, Amplitude 0.35 mm, Acceleration 50m/s²
	Operating extremes	10 to 500 Hz, Amplitude 0.35 mm, Acceleration 50m/s²
Shock Resistance		Damage limits: 1,000 m/s2 Operating extremes: 150 m/s2
Operation Frequency		900 operations/hour
Life	Mechanical	Single contact block: 100,000 operations minimum Double contact block: 50,000 operations minimum
	Electrical	Single contact block: 100,000 operations minimum Double contact block: 50,000 operations minimum (at 900 operations/h, duty ratio 40%)
Degree of Protection		IP65 (IEC 60529), UL Type 4X
Short-circuit Protection		250V/10A fuse (Type aM IEC 60269-1/IEC 60269-2)
Weight (approx.)		51g (HW1B-V4P02) 67g (HW1B-V4P04) 48g (HW1B-Y2P02)



## Mounting Hole Layout

All dimensions in mm.



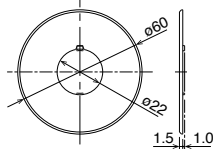
Minimum Mounting Centers for HW1B (emergency stop switch)

	Vertical Spacing	Horizontal Spacing
HW1B-V3 HW1B-V4 HW1B-Y2	50 mm minimum	50 mm minimum
HW1B-V5	60 mm minimum	60 mm minimum

- The minimum mounting centers of HW1B (pushbuttons) and each HW series emergency stop switches are shown. For other button shapes, refer to the dimensions and take wiring and operation of switches into consideration.

## Nameplate (for ø22 mm Emergency Stop Switches)

Package Quantity: 1

Shape	Legend	Part No.	Ordering No.	Remarks
	(blank)	HWAV-0-Y	HWAV-0-Y	<b>HWAV-27-Y</b> Nameplate color: yellow Legend color: black Panel thickness: 0.8 to 4.5 mm Material: Polyamide 
	EMERGENCY STOP	HWAV-27-Y	HWAV-27-Y	

- "EMERGENCY OFF" and white (blank) nameplates available. See website or catalog for SEMI Emergency off (EMO) switches and Stop switches.


Note) For machinery subject to ISO/IEC standards such as machine tools and food machinery, in compliant with the revised ISO13850, it is not recommended to display texts or symbols such as EMERGENCY STOP on the actuator or nameplate of an emergency stop device.

## Emergency Stop Switches


Assembled



Package Quantity: 1

Name / Shape	Contact Configuration	Part No. (Coded)
 ø29mm Mushroom Pushlock Turn Reset HW@B-V3	1NC	HW@B-V3P01R
	1NO-1NC	HW@B-V3P11R
	2NC	HW@B-V3P02R
	3NC	HW@B-V3P03N2R
	1NO-1NC	HW@B-V3P22R
	4NC	HW@B-V3P04R

Package Quantity: 1

Name / Shape	Contact Configuration	Part No. (Coded)
 ø40mm Mushroom Pushlock Turn Reset HW1B-V4 HW4B-V4	1NC	HW@B-V4P01R
	1NO-1NC	HW@B-V4P11R
	2NC	HW@B-V4P02R
	3NC	HW@B-V4P03N2R
	1NO-1NC	HW@B-V4P22R
	4NC	HW@B-V4P04R

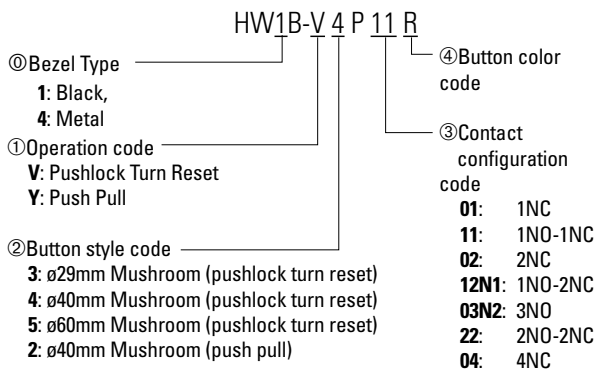
- Pushlock turn reset – Button is maintained when pressed and is reset when turned clockwise.
- Emergency stop switches with 1 contact block contain 2 dummy blocks. Pushbuttons with 2 contact block contains 1 dummy block.

• For other specifications, select from sub-assembled units (page 48).

## Part No. Example

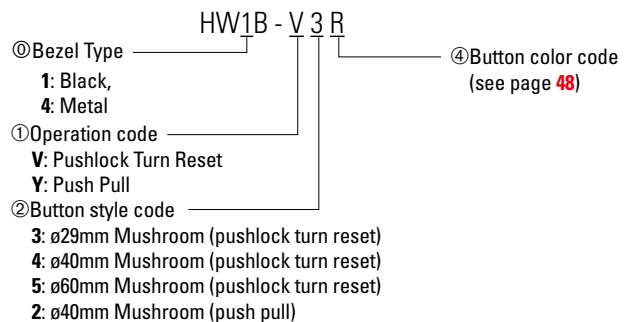
### Assembled and sub-assembled unit

Assembled Part No. Example



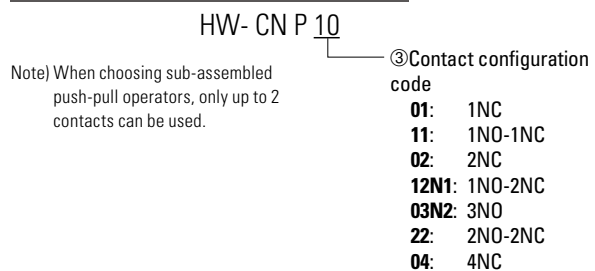
- For available assembled products, see table above.

### Sub-assembled operator unit



Note) Only up to 2 contacts can be used for push-pull switches

### Sub-assembled contact unit



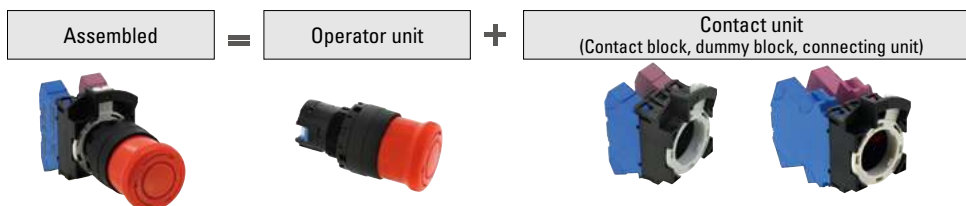
Note

- For emergency stop purposes, these switches must contain at least one NC contact block.




## Emergency Stop Switches

### Sub-Assembled

When ordering, specify the sub-assembled ordering no. See page 47 for available assembled products.



#### Pushlock Turn Reset

Name / Shape	Contact Configuration	<Reference> Assembled Part No. ④ = 1 or 4	④ Button Color Code
 ø29mm Mushroom HW®B-V3	1NC	HW®B-V3P01④	R (red) Y (yellow)
	1NO-1NC	HW®B-V3P11④	
	2NC	HW®B-V3P02④	
	1NO-2NC	HW®B-V3P12N1④	
	3NC	HW®B-V3P03N2④	
	2NO-2NC	HW®B-V3P22④	
 ø40mm Mushroom HW®B-V4	1NC	HW®B-V4P01④	R (red) Y (yellow)
	1NO-1NC	HW®B-V4P11④	
	2NC	HW®B-V4P02④	
	1NO-2NC	HW®B-V4P12N1④	
	3NC	HW®B-V4P03N2④	
	2NO-2NC	HW®B-V4P22④	
 ø60mm Mushroom HW®B-V5	1NC	HW®B-V5P01④	R (red) Y (yellow)
	1NO-1NC	HW®B-V5P11④	
	2NC	HW®B-V5P02④	
	1NO-2NC	HW®B-V5P12N1④	
	3NC	HW®B-V5P03N2④	
	2NO-2NC	HW®B-V5P22④	

- Pushlock turn reset – Button is maintained when pressed and is reset when turned clockwise.

#### Sub-assembled Ordering No.


#### Pushlock Turn Reset

Package Quantity: 1

Operator Unit		Contact Unit		
Name / Shape	Part No. (Ordering No.)	Shape	Contact Configuration	Part No. (Ordering No.)
 ø29mm Mushroom	HW®B-V3④		1NC	HW-CNP01
			1NO-1NC	HW-CNP11
			2NC	HW-CNP02
			1NO-2NC	HW-CNP12N1
			3NC	HW-CNP03N2
			2NO-2NC	HW-CNP22
 ø40mm Mushroom	HW®B-V4④		1NC	HW-CNP01
			1NO-1NC	HW-CNP11
			2NC	HW-CNP02
			1NO-2NC	HW-CNP12N1
			3NC	HW-CNP03N2
			2NO-2NC	HW-CNP22
 ø60mm Mushroom	HW®B-V5④		1NC	HW-CNP01
			1NO-1NC	HW-CNP11
			2NC	HW-CNP02
			1NO-2NC	HW-CNP12N1
			3NC	HW-CNP03N2
			2NO-2NC	HW-CNP22

- Specify a button color code in place of ④ in the Part No. R (red), Y (yellow)  
Note) Y (yellow) cannot be used as a emergency stop switch by EN standards.



#### Push Pull

Name / Shape	Contact Configuration	<Reference> Assembled Part No.	④ Button Color Code
 ø40mm Mushroom HW1B-Y2	1NC	HW®B-Y2P01④	R (red) Y (yellow)
	1NO-1NC	HW®B-Y2P11④	
	2NC	HW®B-Y2P02④	

- Push-Pull – 2-position switches with button maintained in both depressed and reset positions.
- Bezel Type: 1: Black, 4: Metal

#### Push Pull

Package Quantity: 1

Operator Unit		Contact Unit		
Name / Shape	Part No. (Ordering No.)	Shape	Contact Configuration	Part No. (Ordering No.)
 ø40mm Mushroom	HW®B-Y2④		1NC	HW-CNP01
			1NO-1NC	HW-CNP11
			2NC	HW-CNP02

- Specify a button color code in place of ④ in the Part No. R (red), Y (yellow)  
Note) Y (yellow) cannot be used as a emergency stop switch by EN standards.  
Note) Only up to 2 contacts can be used for push-pull switches.

For Part No. (Ordering No.) / mounting positions of contact units, see page 51.

## Emergency Stop Switches Dimensions

All dimensions in mm.

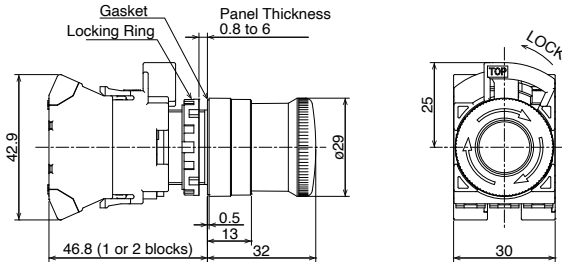
### Dimensions

All dimensions in mm.

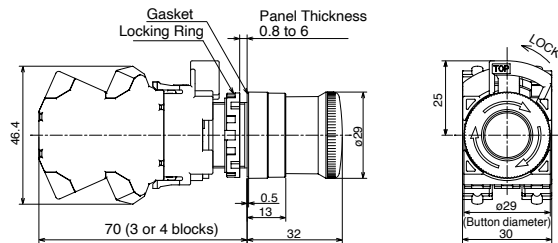
ø29mm Mushroom Pushlock Turn Reset

HW1B-V3

1 to 2 contacts



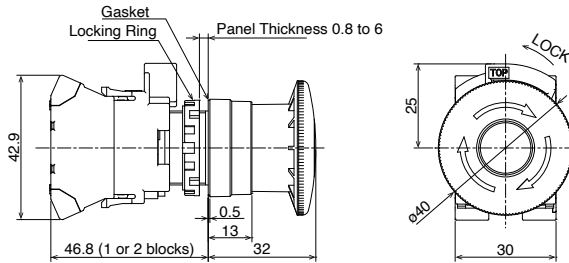
3 to 4 contacts



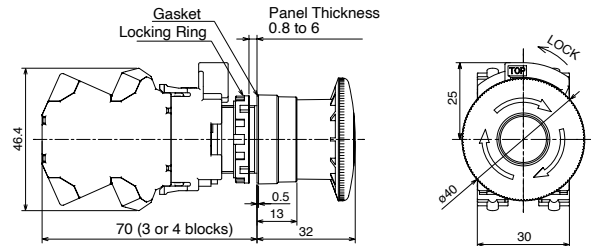
ø29mm Mushroom Pushlock Turn Reset

HW1B-V4

1 to 2 contacts



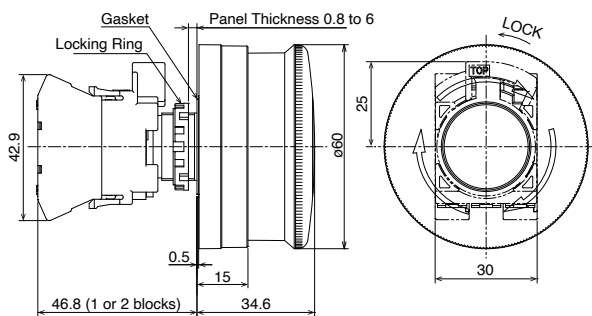
3 to 4 contacts



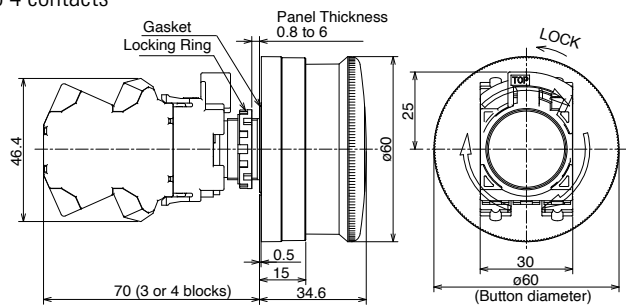
ø60mm Mushroom Pushlock Turn Reset

HW1B-V5

1 to 2 contacts



3 to 4 contacts



ø40mm Mushroom Push Pull (2-position)

HW1B-Y2

1 to 2 contacts

