







HW Series Control Stations

Control Station (Gray Cover)

Shape	Contact	Part No.	Button Color	Mounted Unit (Operator)
With Pushbutton HW1X-BM 	1NO	HW1X-BM110①	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	HW1B-M1
	1NO-1NC	HW1X-BM111①		

Shape	No. of Positions	Contact Code	Contact Block		Operator Position			Part No.	Mounted Unit (Operator)
			Mounting Position	Type	L	C	R		
With Selector Switch HW1X-S 	90° 2-position Maintained	10 (1NO)	1	NO		-	●	HW1X-S2T10	HW1S-2T
			2	Dummy					
		11 (1NO-1NC)	1	NO		-	●		
			2	NC	●	-			
	45° 3-position Maintained	20 (2NO)	1	NO	●			HW1X-S3T20	HW1S-3T
			2	NO			●		

Emergency Station Control Station (Yellow Cover)

Shape	Contact	Part No.	Button Color	Mounted Unit (Operator)
With Pushlock Turn Reset Switch HW1X-BV 	1NC	HW1X-BV401R	Red only	HW1B-V4R
	1NO-1NC	HW1X-BV411R		
	2NC	HW1X-BV402R		
With Pushlock Key Reset Switch HW1X-BX 	1NC	HW1X-BX401R	Red only	HW1B-X4R
	1NO-1NC	HW1X-BX411R		
	2NC	HW1X-BX402R		

Accessories

Name	Part No.	Ordering Part No.	Package Quantity	Remarks
Nameplate	NSA-0	NSA-0	1	Black surface, made of aluminum 0.8 mm thick
		NSA-0PN10	10	
Cover Gasket	HW9Z-W	HW9Z-WPN05	5	Made of rubber
Connector Locking Nut	HW9Z-G	HW9Z-GPN05	5	Made of white plastic, G1/2 thread
	HW9Z-PG	HW9Z-PGPN05	5	Made of black plastic, PG16 thread

Ordering Information

- Unless otherwise specified, every control station is supplied with two gland locking nuts (G1/2 thread).
- When using PG16 glands, specify as described below.

HW1X-BM110① - PG

_____ Supplied with two PG16 gland locking nuts

ø22 HW Series Control Stations

Specifications

Operating Temperature	-25 to +60°C (no freezing)
Storage Temperature	-40 to +80°C (no freezing)
Operating Humidity	45 to 80% RH (no condensation)
Rated Insulation Voltage	600V
Contact Resistance	50 mΩ maximum (initial value)
Insulation Resistance	100 MΩ minimum (500V DC megger)
Electric Shock Protection Class	Class II (IEC 61140)
Dielectric Strength	Between live and dead parts: 2,500V AC, 1 minute
Vibration Resistance	Operating extremes: 5 to 55 Hz, amplitude 0.5 mm
Shock Resistance	Damage limits: 1,000 m/s ² Operating extremes: 100 m/s ²
Mechanical Life (minimum operations)	Pushbuttons, momentary: 5,000,000 Selector switches: 500,000 Pushlock turn reset switches: 500,000
Electrical Life (minimum operations)	Pushbuttons, momentary: 500,000 *1 Selector switches: 500,000 *2 Pushlock turn reset switches: 500,000 *3 (Switching frequency) *1 1,800 operations/h, duty ratio 40% *2 1,200 operations/h, duty ratio 40% *3 900 operations/h, duty ratio 40%
Conduit Port	ø23mm knockout on top and bottom
Applicable Gland	G1/2 or PG16 (plastic fitting)
Applicable Wire	Solid wire: ø1.6mm maximum Stranded wire: 2.0 mm ² maximum
Mounting Screw	Two M4 screws Tightening torque 1.4 to 2.0 N·m
Degree of Protection	IP65 (IEC 60529)

Contact Ratings

Contact Block	Rated Insulation Voltage	600V
	Rated Continuous Current	10A
	Contact Ratings by Utilization Category IEC 60947-5-1	AC-15 (A600) DC-13 (P600)

Applicable Standards and Approvals

Safety Standards	File No. or Organization
UL508	UL Listing File No. E68961
CSA C22.2 No. 14	c-UL (File No. E68961)
EN60947-5-1	TÜV PS No. B98 08 13332 398

Attachments

Name	Part No.	Quantity
Nameplate *1	NSA-0	1
Cover Gasket *2	HW9Z-W	1
Gland Locking Nut	HW9Z-G	2

For details, see the instruction sheet attached to the control station.

*1: The nameplate is supplied with the pushbutton and selector switch control stations, not with the emergency stop control station.

*2: The cover gasket is supplied with the emergency stop control station, not with the pushbutton and selector switch control stations.

Characteristics

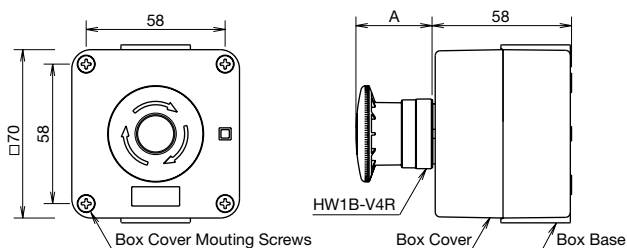
Contact Ratings by Utilization Category

Operational Voltage		24V	48V	50V	110V	220V	440V
Operational Current	AC 50/60 Hz	AC-12 Control of resistive loads and solid state loads	10A	—	10A	6A	2A
		AC-15 Control of electromagnetic loads (> 72 VA)	10A	—	7A	5A	3A
DC		DC-12 Control of resistive loads and solid state loads	8A	4A	—	2.2A	1.1A
		DC-13 Control of electromagnets	4A	2A	—	1.1A	0.6A

Note:

The operational current represents the classification by making and breaking currents (IEC 60947-5-1). Minimum applicable load: 3V AC/DC, 5 mA (Applicable range may vary with operating conditions and load types.)

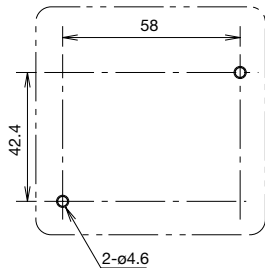
Dimensions



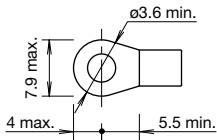
All dimensions in mm.

Control Unit (Operator)	Dimension A (mm)
Pushbutton	13.0
Selector Switch	21.0
Pushlock Turn Reset	32.0
Pushlock Key Reset	32.0 (Key inserted: 49.4)

Mounting Hole Layout

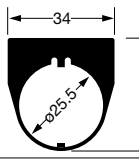


Applicable Terminal



Tightening torque: 1.0 to 1.3 N·m
A maximum of two pieces can be connected to one terminal.

Nameplate

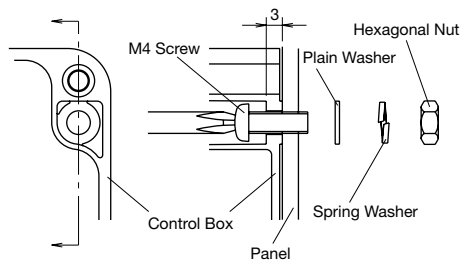
Part No.	NSA-0
Color: Black, without legend Thickness: 1.2 mm (Remove the anti-rotation projection)	
Material	Aluminum

The nameplate is supplied with the pushbutton and selector switch control stations. When not using the nameplate, use the cover gasket (HW9Z-W). HW series nameplates (HWA*) cannot be used.

Operating Instructions

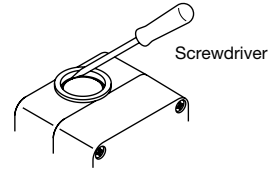
• Panel Mounting

To mount the control station on a panel, use two M4 screws, plane washers and spring washers to preventing loosening. Tighten the screws to a torque of 1.4 to 2.0 N·m. Determine the screw length in consideration of the panel thickness.



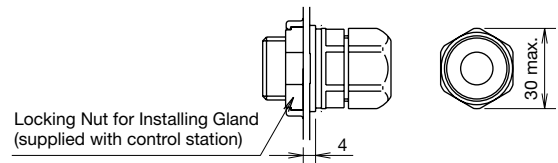
• Applicable Gland and Installation

- To install a gland, break open the conduit port on the top and bottom of the enclosure. Before opening the conduit port, remove the attached two connector locking nuts from the enclosure base. Place the tip of a screwdriver on the conduit port and strike the screwdriver end. Make sure that the conduit port is free from burrs and cracks, which may hamper waterproof characteristics.



- Use G1/2 or PG16 glands which can mount on a panel of 4.0 mm thick minimum. To install the gland to the enclosure, use the attached gland locking nut and tighten the locking nut sufficiently. If the locking nut is tightened insufficiently, the waterproof characteristics are not ensured.

Thread Size	Locking Nut Color	Locking Nut Part No.
G1/2	White	HW9Z-G
PG16	Black	HW9Z-PG



- Only when using a plastic gland, Insulation Class II (IEC 61140) is satisfied.
- Install the enclosure cover flat on the enclosure base. When the enclosure cover is installed diagonally, the enclosure cover cannot be secured correctly, resulting in an operation error.

Applicable Cables

Applicable CVV Cable	Outside Diameter	Core Wires
1.25 mm ²	ø14.5 mm maximum	8 maximum
2.0 mm ²	ø14.5 mm maximum	8 maximum

Applicable Conduits

Metal Conduit Outside Diameter	ø10 mm	ø12 mm
Conduit Inside Diameter	ø8.3 mm minimum	ø10.6 mm minimum
IV Wire Quantity	1.25 mm ²	2 to 3
	2.0 mm ²	2 to 3
		3 to 4

Wire containment density: 32% to 48%
Select a cable appropriate for the connector.

Specifications and other descriptions in this brochure are subject to change without notice.



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