

HE1B Basic Enabling Switch

Overview

XW Series E-Stops

Interlock Switches

Enabling Switches

Safety Control Relays

Light Curtains


AS-Interface Safety at Work

Key features:

- 3-position functionality (OFF – ON –OFF) as required for manual robotic control
- Ideally suited for use as enabling (aka “deadman”) switch on teach pendants
- Provides a high level of safety based on human behavioral studies that determine personnel may squeeze OR let go when presented with a panic situation
- Positive action contacts “On” (pos. 2) to “Off” (pos. 3) ensure no contact welding (per EN60947-5-1 / IEC60947-5-1)
- Contacts will not close when released from “Off” (pos. 3) to “Off” (pos. 1) (per IEC60204-1; 9.2.5.8)
- Small and lightweight



Part Numbers

Item	Installation	Part Number
	Side	HE1B-M1
	Front	HE1B-M1N



Specifications

Conforming to Standards		UL508 (UL recognized), CSA C22.2, No. 14 (c-UL recognized), IEC/EN 60947-5-1, IEC/EN 60947-5-8 (TUV approval)
Operating Temperature		–25 to +60°C (no freezing)
Operating Humidity		45 to 85% RH (no condensation)
Storage Temperature		–40 to +80°C (no freezing)
Pollution Degree		2
Initial Contact Resistance		50mΩ maximum
Insulation Resistance		100MΩ minimum
Impulse Withstand Voltage		2.5kV
Operating Frequency		1200 operations/hour
Mechanical Life		Position 1→2→1: 1,000,000 operations minimum Position 1→2→3→1: 100,000 operations minimum
Electrical Life		100,000 operations minimum at rated load
Shock Resistance	Operating Extremes	150m/s ² (15G)
	Damage Limits	1000m/s ² (100G)
Vibration Resistance	Operating Extremes	5 to 55Hz, amplitude 0.5mm minimum
	Damage Limits	16.7Hz, amplitude 1.5mm minimum
Terminal		Solder Terminal
Recommended Wire Size		0.5mm ² maximum / 1 line (20AWG)
Solder Heat Resistance		260°C / 3 seconds maximum
Terminal Pulling Strength		20N minimum
Recommended Screw Torque		HE1B-M1: M3 screw / 0.5 to 0.8Nm
Degree of Protection		IP40 (IEC 60529) excluding terminal part
Conditional Short-Circuit Current		50A (250V)
Recommended Short Circuit Protection		250V, 10A fast blow fuse (IEC 60127-1)
Circuit Opening Force		30N minimum (position 2→3)
Control Resistance (Operating)		250N minimum
Weight		Approx. 6g

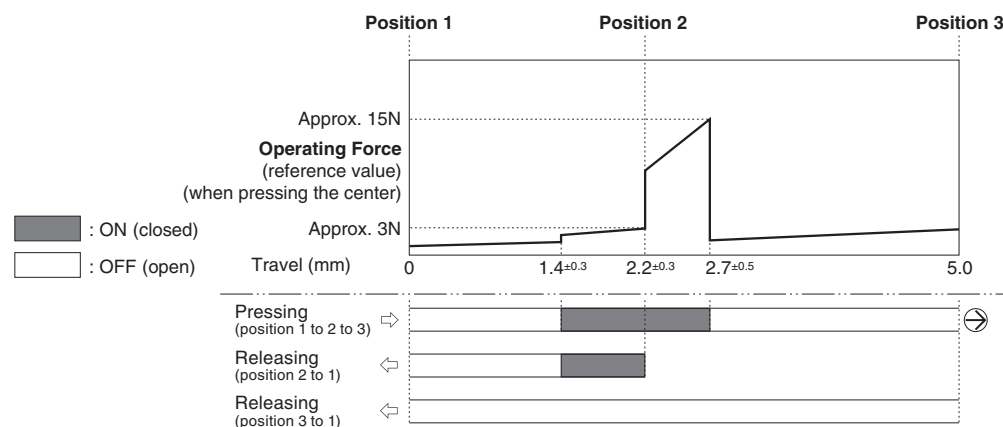
Current Ratings

Rated Insulation Voltage (Ui)			AC / DC250V		
Thermal Current (Ith)			5A		
Rated Operating Voltage (Ue)			30V	125V	250V
Rated Operating Current (Ie)	AC 50/60Hz	Resistive Load (AC-12)	—	3A	1.5A
		Inductive Load (AC-15)	—	1.5A	0.75A
	DC	Resistive Load (DC-12)	2A	0.4A	0.2A
		Inductive Load (DC-13)	1A	0.22A	0.1A
Contact Configuration			SPST-NO three position (OFF-ON-OFF)		



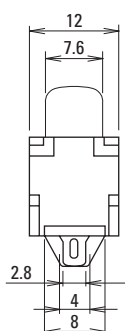
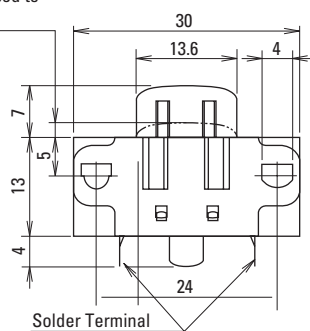
Minimum applicable load: AC/DC3V • 5mA (For reference only).

Operating Characteristics



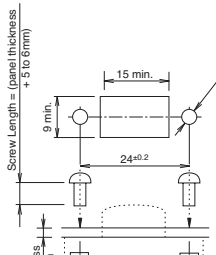
Dimensions (mm)

When pressed to position 3: 2



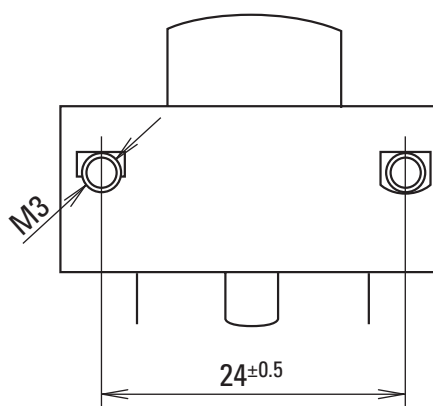
HE1B-M1 (Side Mounting)

1. M3 Screw (not provided)
2. Thread built in



HE1B-M1N (Front Mounting)

1. M3 Screw (not provided)
2. Locking nut (2 pcs) included



When using a panel thicker than 2mm, the button will be lower than the surface of the panel

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IDEC:

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