


## HE1B Basic Enabling Switch

## 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 <sup>2</sup> (15G)
	Damage Limits	1000m/s <sup>2</sup> (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 <sup>2</sup> 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	

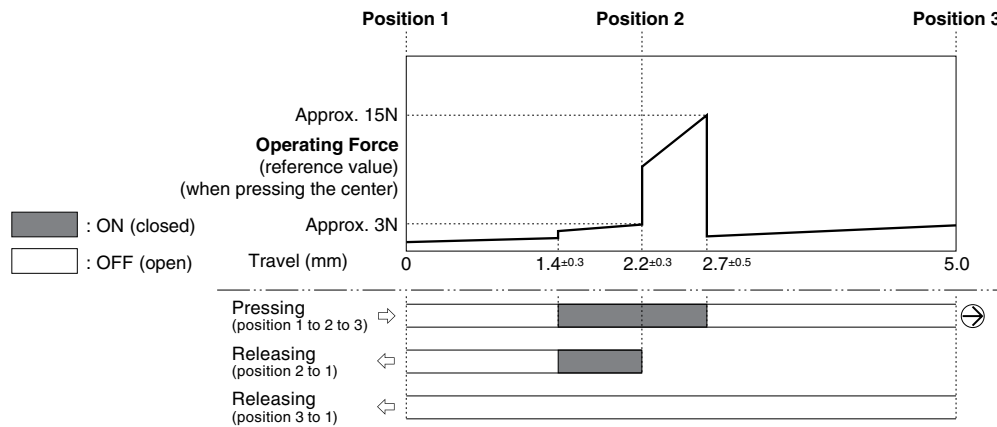
## Current Ratings

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)			



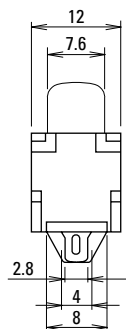
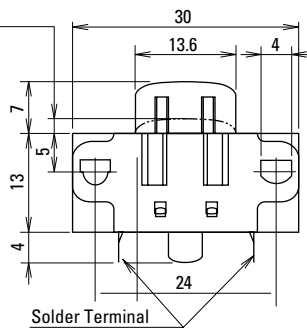
Minimum applicable load: AC/DC3V • 5mA (For reference only).

## Operating Characteristics



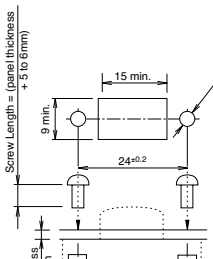
## Dimensions (mm)

When pressed to position 3: 2



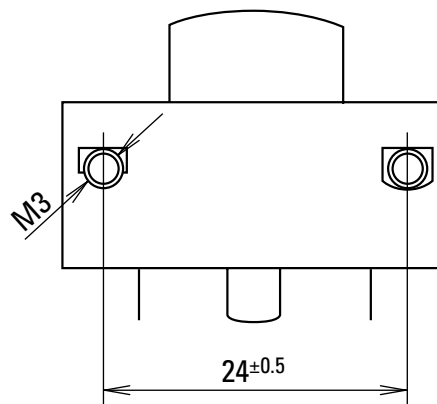
### HE1B-M1 (Side Mounting)

- M3 Screw (not provided)
- Thread built in



### HE1B-M1N (Front Mounting)

- M3 Screw (not provided)
- Locking nut (2 pcs) included



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