

HE1B Basic Three-position Enabling Switches

3-position enabling switch to avoid hazards.

Ideal for installing in teach pendants and other enabling devices.

- Ergonomically-designed OFF-ON-OFF.
- Direct opening action mechanism for shifting from position 2 (ON) to position 3 (OFF) (EN 60947-5-1/IEC 60947-5-1, Annex K).
- The switch does not turn ON while being released from position 3 (OFF when pressed) to position 1 (OFF when released) (IEC60204-1, 9.2.5.8).
- Reliable performance in compact and lightweight package.



HE1B

Mounting Style	Contact Configuration	Part No.	Ordering No.	Package Quantity
Side Mounting	1 contact (3-position)	HE1B-M1	HE1B-M1PN10	10
Top Mounting		HE1B-M1N	HE1B-M1NPN10	

- Minimum applicable load (reference value): 3V AC/DC, 5 mA

Ratings

Contact Ratings

Rated Insulation Voltage (Ui)		250V			
Rated Thermal Current (Ith)		5A			
Rated Voltage (Ue)		30V	125V	250V	
Rated Current (Ie)	AC 50/60 Hz	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 (3-position switch)		1 contact			

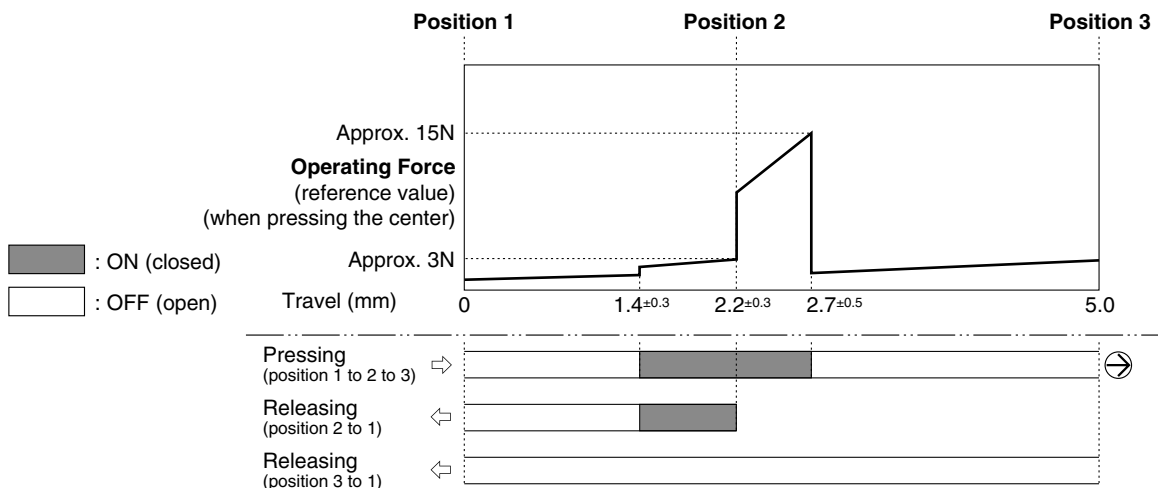
- Minimum applicable load (reference value): 3V AC/DC, 5 mA
(Applicable range is subject to the operating conditions and load.)

Specifications

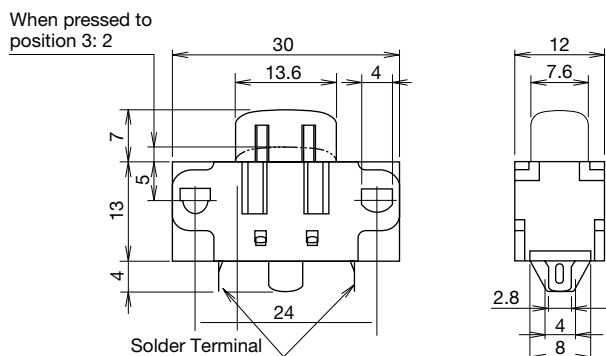
Applicable Standards	UL508 (UL recognized), CSA C22.2, No. 14 (c-UL recognized), IEC/EN 60947-5-1, IEC/EN 60947-5-8 (TÜV approval), IEC/EN60947-5-1, UL508 (UL recognized), CSA C22.2 No.14 (c-UL recognized)
Applicable Standards for Use	ISO 12100-1, -2/EN12100-1, -2, IEC 60204-1 / EN 60204-1 ISO 11161 / prEN 11161, ISO 10218 / EN 775, ANSI/RIA R15.06, ANSI B11.19
Operating Temperature	-25 to +60°C (no freezing)
Relative Humidity	45 to 85% (no condensation)
Storage Temperature	-40 to +80°C (no freezing)
Pollution Degree	2
Contact Resistance	50 mΩ maximum (initial value)
Insulation Resistance	100 MΩ minimum (500V DC megger)
Impulse Withstand Voltage	2.5 kV
Operating Frequency	1,200 operations per hour
Mechanical Durability	Position 1 → 2 → 1: 1,000,000 operations Position 1 → 2 → 3 → 1: 100,000 operations
Electrical Durability	100,000 operations minimum
Shock Resistance	Operating extremes: 150 m/s ² Damage limits: 1,000 m/s ²
Vibration Resistance	Operating extremes: 5 to 55 Hz, amplitude 0.5 mm Damage limits: 16.7 Hz, amplitude 1.5 mm
Terminal Style	Solder terminal
Applicable Wire	1 cable, 0.5 mm ² maximum
Terminal Soldering Heat Resistance	310 to 350°C, 3 seconds maximum
Terminal Tensile Strength	20N minimum
Mounting Screw Recommended Tightening Torque	HE1B-M1: M3 screw / 0.5 to 0.8 N·m HE1B-M1N: M2.6 screw / 0.4 to 0.6 N·m
Degree of Protection	IP40, except terminals (IEC 60529)
Conditional Short-circuit Current	50A (250V) (Use 250V/10A fast-blow fuse for short-circuit protection.)
Direct Opening Force	30N minimum (position 2 → 3)
Operator Strength	250N minimum
Weight (approx.)	6g

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Operation Characteristics

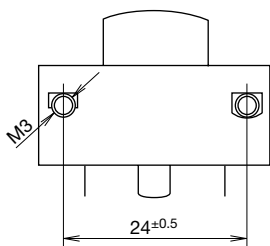


Dimensions



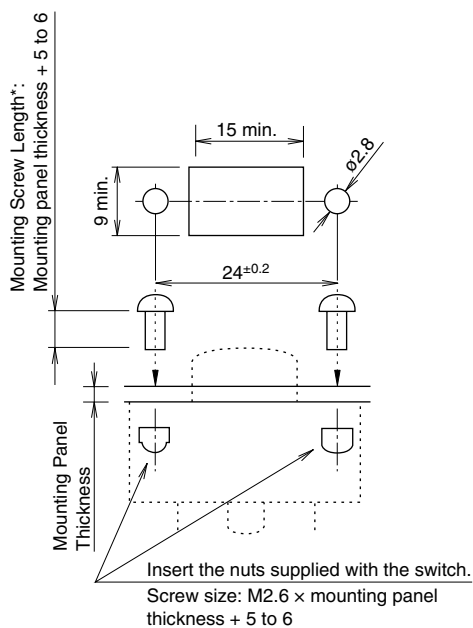
Mounting Hole Layout

HE1B-M1 (side mounting)



• M3 mounting screws must be supplied by the user.

HE1B-M1N (top mounting)



Note: When installed on a mounting panel thicker than 2 mm, the actuator surface is below the panel when the button is pressed to position 3.

* Two M2.6 nuts are supplied. Mounting screws (M2.6) must be supplied by the user.

All dimensions in mm.