

°C	<i>For Phase-Control Circuit</i>	Series HB22
%RH		
SHIMADEN		

Heater Breakdown Detector



BASIC FEATURES

- *Detects heater breaks in heating devices and outputs an alarm signal.*
- *RoHS directive supported*

SPECIFICATIONS

- Model : HB22
- Power supply : 100 to 240V AC $\pm 10\%$ 50/60Hz
- Rated control voltage (Heater voltage) : 100, 110, 120, 200, 220, 240 V AC (Either one to be selected.)
- Rated frequency : 50/60 Hz
- Operation current : 0.5 to 5A AC (Depends on the external CT when the operating current is more than 5A.)
- Setting range: 10 to 100% (0.5 to 5A: When input voltage is rated value)
- Sensitivity: Approx. 3% of the current setting value (When input voltage is rated value)
- Operation time: 0.5 sec. Max.(In case of the current changes from 150% to 0% of the operating value)
- Effect of fluctuation of input voltage : $\pm 5\%$ FS or less of the theoretical value on operating current value with the rated voltage
(In a range from 20% to 110% of the input voltage)
- Alarm action output : Relay contact (1c/SPDT)
- Contact capacity : 240 V AC, 2A (Resistive load)
- Alarm action display : Red LED lamp is on during alarm action.
- Operating environment conditions
 - Temperature : -10 to 50°C
 - Humidity : 90% RH max. (no dew condensation)
 - Elevation : 2000 m above sea level or lower
 - Overvoltage category : II
 - Pollution degree : 2 (IEC60664)
- Temperature when kept unused : -20 to 65 °C
- Insulation resistance : 500V DC 100M Ω Min. between each terminal of the power supply-heater voltage-heater current-alarm output.
- Dielectric strength : 1 min. at 1500V AC between each terminal of the power supply-heater voltage-heater current-alarm output.
- Material : ABS resin molding.
- External dimensions : H83.5×W50×D146.5mm (including socket terminal block)
- Mounting : 11P plug-in panel or DIN rail
- Weight : Main unit Approx. 190g
Socket terminal block Approx. 75g

Note: This apparatus is designed for single-phase circuits, that is, unusable for 3-phase circuits.

In case if it is used for a heater of which the amperage exceeds 5A, a CT (current detector) should be installed externally.

ORDERING INFORMATION

ITEMS	CODE	仕 様		
1. SERIES	HB22 -	Heater Break Alarm For ON-OFF control/phase control compatible 0.5 to 5A		
2. CONTROL VOLTAGE (Heater voltage)	19 -	100V AC	±10% 50/60Hz	
	20 -	110V AC		
	21 -	120V AC		
	22 -	200V AC		
	23 -	220V AC		
	25 -	240V AC		
	99 -	Others		
3. REMARKS	0	Without		
	9	With		

WIRING EXAMPLE

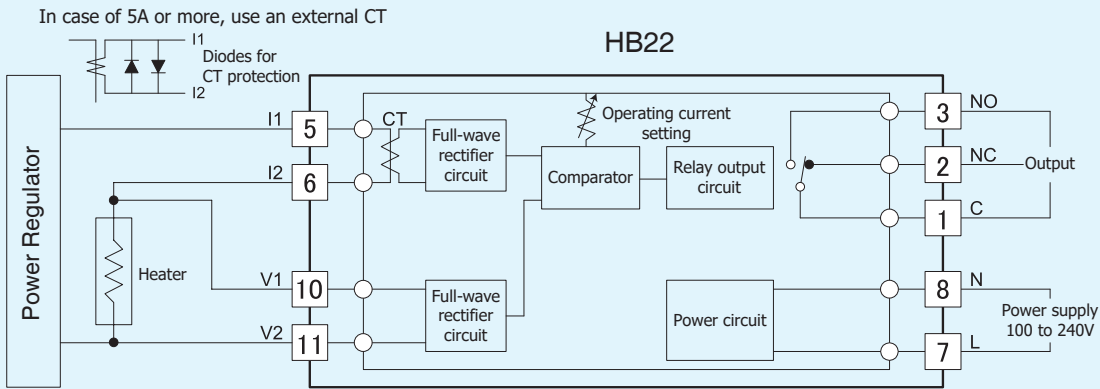
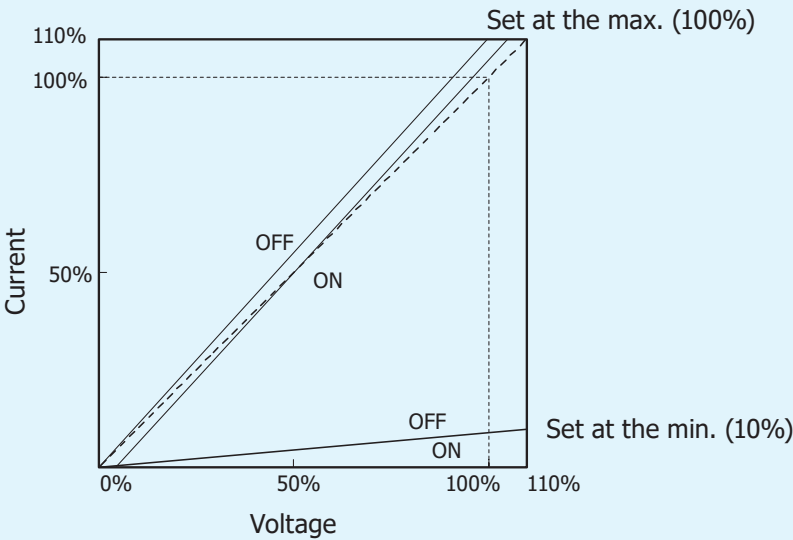
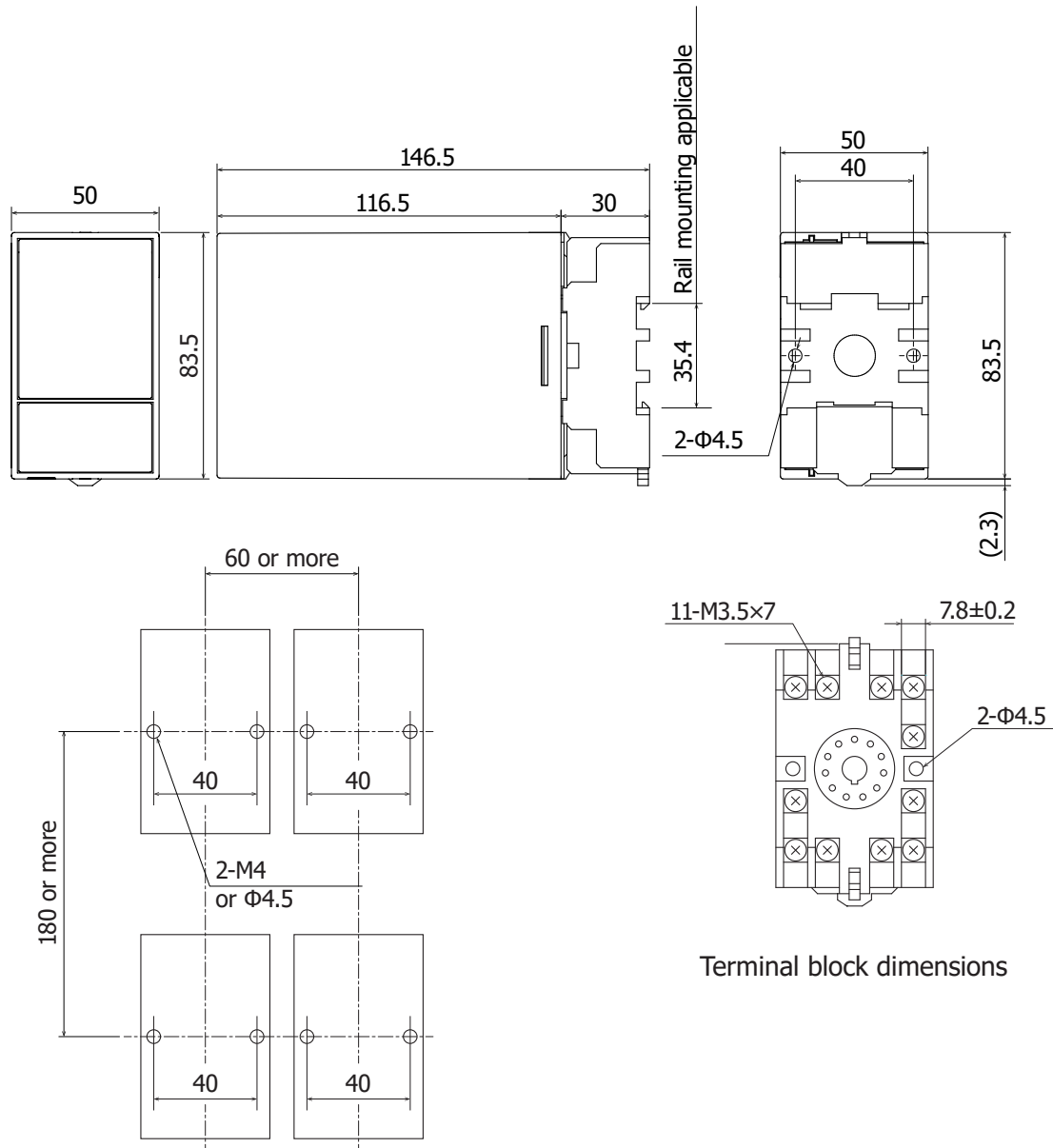


DIAGRAM of PERFORMANCE CHARACTERISTICS



EXTERNAL DIMENSIONS AND PANEL CUTOUT


Panel cut out

Terminal block dimensions

Unit : mm

■ Avoid using it for control of devices upon which human life is dependent.


WARNING

- * Be sure to follow the instruction manual when operating this device.
- * This device is designed for industrial use to control temperature, humidity and other physical values. Avoid using it for control of devices upon which human life is dependent.
- * If the possibility of loss or damage to your system or property as a result of failure of any parts of the process exists, proper safety measures must be made before the instrument is put into use so as to prevent the occurrence of trouble.

Head Office & Saitama Factory
ISO 9001/ISO14001 Certification Obtained

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