

■ CHARACTERISTICS

Accuracy of operating time	±1% max. of FS (±1% ±10 ms max. at 1.2-s range) (See Note 1.)
Setting error	±10% ±50 ms max. of FS (See Note 1.)
Signal input time	50 ms min. (See Note 1.)
Voltage influence	±0.5% max. of FS (±0.5% ±10 ms max. at 1.2-s range)
Temperature influence	±2% max. of FS (±2% ±10 ms max. at 1.2-s range)
Insulation resistance	100 MΩ min. at 500 VDC
Dielectric strength	Between current-carrying metal parts and exposed non-current-carrying metal parts: 2,000 VAC for 1 min. Between control output terminals and operating circuit: 2,000 VAC for 1 min. Between contacts of different polarities: 2,000 VAC for 1 min. Between contacts not located next to each other: 1,000 VAC for 1 min.
Vibration resistance	Malfunction: 0.5-mm single amplitude at 10 to 55 Hz Destruction: 0.75-mm single amplitude at 10 to 55 Hz
Shock resistance	Malfunction: 100 m/s ² (approximately 10G) Destruction: 1,000 m/s ² (approximately 100G)
Contact material	AgNi+gold plating (Use the G6RN-1 at 12 VDC.)
Impulse withstand voltage	3 kV (between power terminals) 4.5 kV (between current-carrying metal parts and exposed non-current-carrying metal parts)
Noise immunity	Square-wave noise generated by noise simulator (pulse width: 100 ns/1 μs, 1-ns rise) ±1.5 kV
Static immunity	Malfunction: 4 kV Destruction: 8 kV
Life expectancy	Mechanical: 10 million operations min. (under no load at 1,800 operations/h) Electrical: 100,000 operations min. (5 A at 250 VAC, resistive load at 360 operations/h) (See Note 2.)
EMC	<u>EMI</u> Emission Enclosure: EN55011 Group 1 class A Emission AC Mains: EN55011 Group 1 class A Harmonic Current: EN61000-3-2 Voltage Fluctuation and Flickering EN61000-3-3 <u>EMS</u> Immunity ESD: EN61000-4-2: 6 kV contact discharge (level 3); 8 kV air discharge (level 3) Immunity RF-interference from AM Radio Waves: EN61000-4-3: 10 V/m (80 MHz to 1 GHz) (level 3) Immunity Burst: EN61000-4-4: 2 kV power port and output port (level 3); 1 kV control port with capacitive clamp (level 3) Immunity Surge: EN61000-4-5: 2 kV common mode (level 3); 1 kV differential mode (level 3)
Enclosure rating	IP30 (Terminal block: IP20)
Weight	120 g

Note: 1. With the H3DE-M□, if the voltage exceeds 26.4 VAC/DC, the following hold at signal OFF for C, D, and G modes:

Accuracy of operating time: ±1% ±50 ms max. at 1.2-s range

Setting error: ±10% +100/-50 ms max.

Signal input time: 100 ms min.

2. For reference : A maximum current of 0.15 A can be switched at 125 VDC (cosφ=1).

A maximum current of 0.1 A can be switched if L/R is 7 ms.

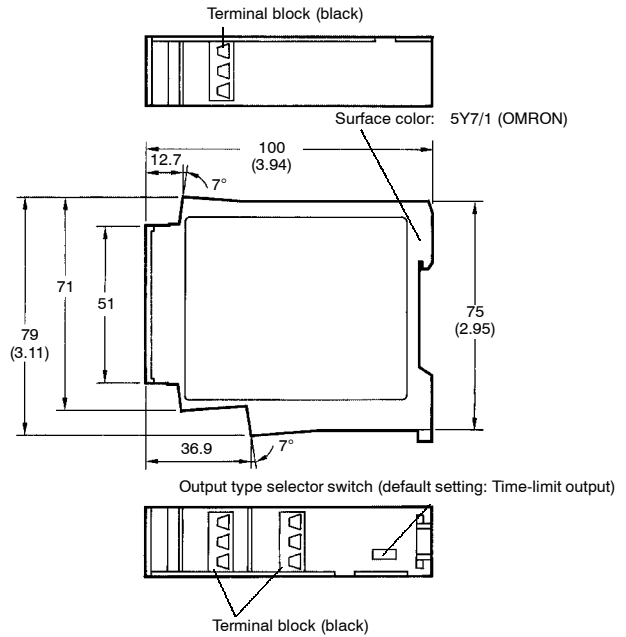
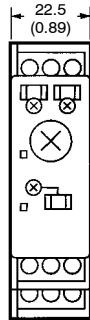
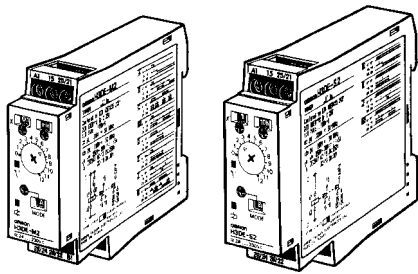
In both cases, a life of 100,000 operations can be expected.

The minimum applicable load is 10 mA at 5 VDC (failure level: P).

Dimensions


Unit: mm (inch)

H3DE-M H3DE-S

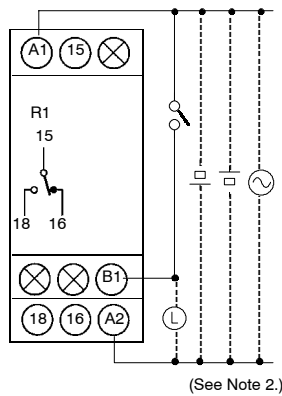


Installation

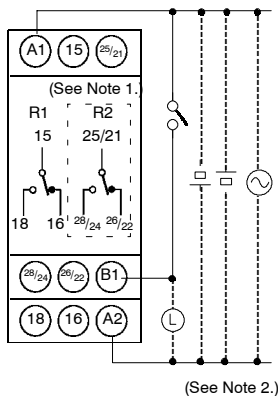
TERMINAL ARRANGEMENT

- Note: 1. The contact symbol for the H3DE is indicated with  because it offers multiple operating modes and is different from the delayed contact for conventional timers.
2. DC supply voltage does not require the designation of polarity.
3. The relay R2 can be set to either instantaneous or time-limit contact using the switch located on the bottom of the Timer.

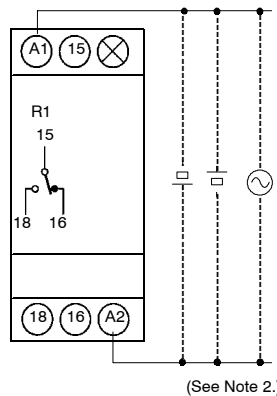
H3DE-M1



H3DE-M2



H3DE-S1



H3DE-S2

