

Power OFF-delay Timer

H3DT-HBS AC/DC24-48



Image

Power OFF-delay Timer, 24 to 48 VAC/VDC, Time range 0.1 to 12 s

Rated power supply voltage	24 to 48 VAC 50/60 Hz 24 to 48 VDC Ripple 20% max.
Control output (Type)	Relay output (SPDT)
Operating resetting	Instantaneous operation/Time-limit reset
Connecting method	Push-In Plus Terminal Block

Ratings/Specifications

As of December 23, 2024

Rated power supply voltage	24 to 48 VAC 50/60 Hz 24 to 48 VDC Ripple 20% max.
Allowable voltage variable range	85% to 110% of rated voltage
Power consumption	Approx. 1.0 VA (at 48 VAC) Approx. 0.4 W (at 24 VDC)
Number of time ranges	2
Operation mode	Power OFF-delay
Control output (Type)	Relay output (SPDT)
Operating resetting	Instantaneous operation/Time-limit reset
Ambient temperature range	Operating: -20 to 60 °C (with no icing) Storage: -40 to 70 °C (with no icing)
Ambient humidity range	Operating: 25 to 85 %
Accuracy of operating time	±1% FS max. (±1% ±10 ms in a range of 1.2 s)
Setting error	±10% FS ±0.05 s max.
Influence of voltage	±0.5% FS max. (±0.5% ±10 ms in a range of 1.2 s)
Influence of temperature	±2% FS max. (±2% ±10 ms in a range of 1.2 s)
Insulation resistance	100 MΩ min. (at 500 VDC)
Dielectric strength	Between charged metal part and operating section: 2,900 VAC 50/60 Hz for 1 min Between control output terminals and operating circuit: 2,000 VAC 50/60 Hz 1 min Between non-continuous contacts: 1,000 VAC 50/60 Hz 1 min
Impulse withstand voltage	Between power terminals: 1 kV Between conductor terminal and operating section: 7.4 kV
Noise immunity	±1.5 kV (between power terminals), square-wave noise by noise simulator (pulse width: 100 ns/1 μs, 1-ns rise)
Static immunity	Multifunction: 4 kV, Destruction: 8 kV

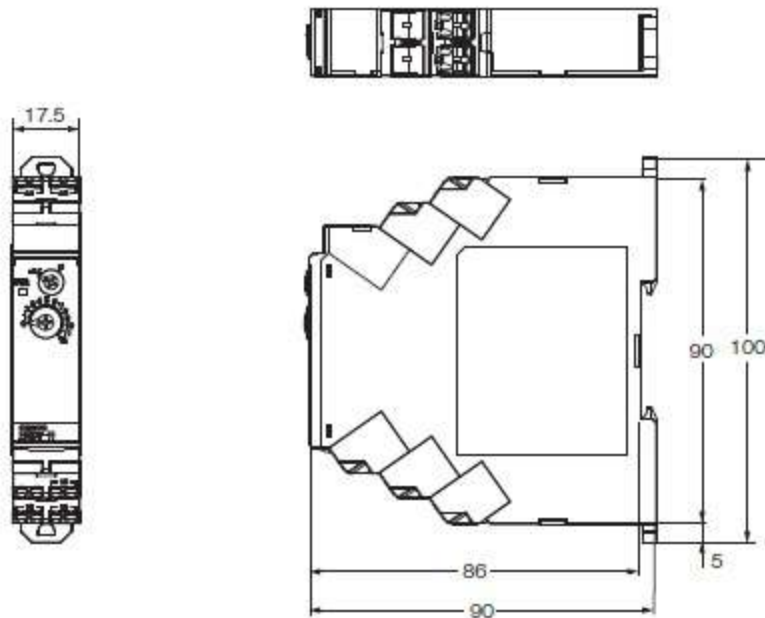
Vibration resistance	Destruction: 10 to 55 Hz, 0.75 mm single amplitude each in 3 directions for 2 h Malfunction: 10 to 55 Hz, 0.5 mm single amplitude each in 3 directions for 10 min
Shock resistance	Destruction: 1,000 m/s ² , 3 times each in 6 directions Malfunction: 100 m/s ² , 3 times each in 6 directions
Life expectancy (relay output)	Electrical: 100,000 operations min. (5 A at 250 VAC, resistive load at 360 operations/h) Mechanical: 10 million operations min. (under no load at 1,800 operations/h)
Degree of protection	IP30 (Terminal Block: IP20)
Connecting method	Push-In Plus Terminal Block
Weight	Approx. 90 g

As of December 23, 2024

Dimensions

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Outline drawing



As of December 23, 2024

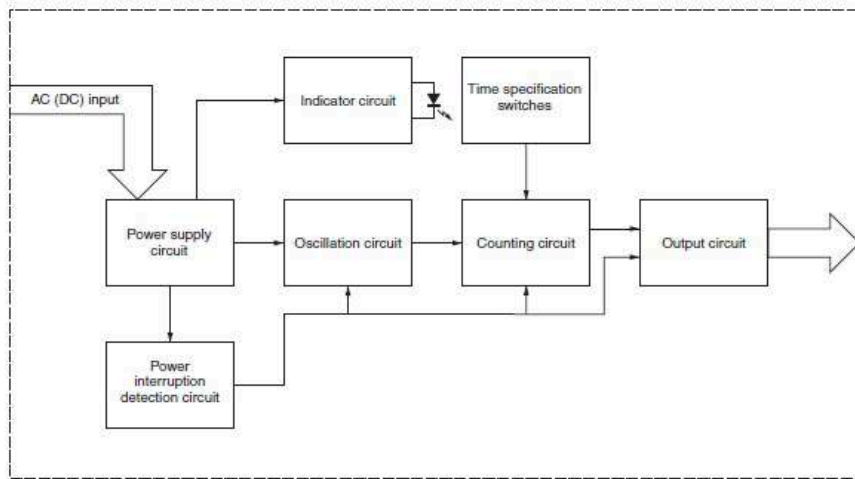
Internal connection

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Internal connection

Block Diagrams

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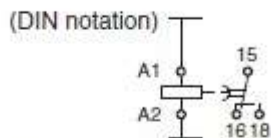
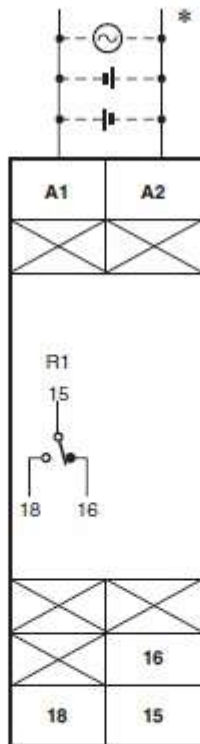
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Terminal arrangement

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Terminal arrangement

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Note: The above figure shows the terminal arrangement for a 24 to 48-VAC/DC model. Models with 100 to 120-VAC or 200 to 240-VAC power input do not have a DC input.

* The power supply terminals do not have polarity.

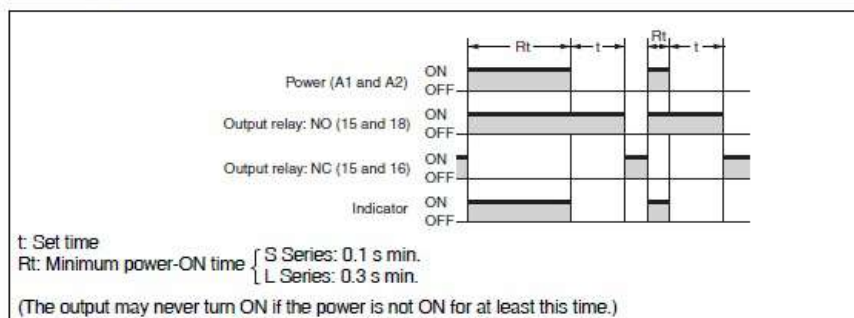
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Operating chart

As of December 23, 2024

Operating chart

Timing Charts



As of December 23, 2024