

Power OFF-delay Timer

H3DT-HBL AC/DC24-48



Image

Power OFF-delay Timer, 24 to 48 VAC/VDC, Time range 1 to 120 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

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|---|---|
| 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. |
| Setting error | ±10% FS ±0.05 s max. |
| Influence of voltage | ±0.5% FS max. |
| Influence of temperature | ±2% FS max. |
| 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 |

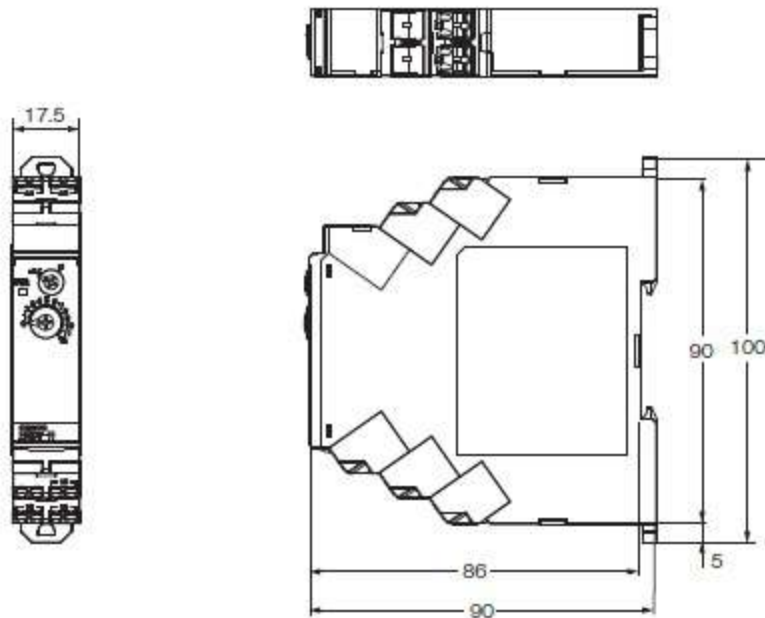
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|---------------------------------------|--|
| Vibration resistance | Destruction: 10 to 55 Hz, 0.75 mm single amplitude each in 3 directions for 2 h Malfunction: 10 to 55 Hz, 0.5 mm single amplitude each in 3 directions for 10 min |
| Shock resistance | 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

As of December 23, 2024

Outline drawing



As of December 23, 2024

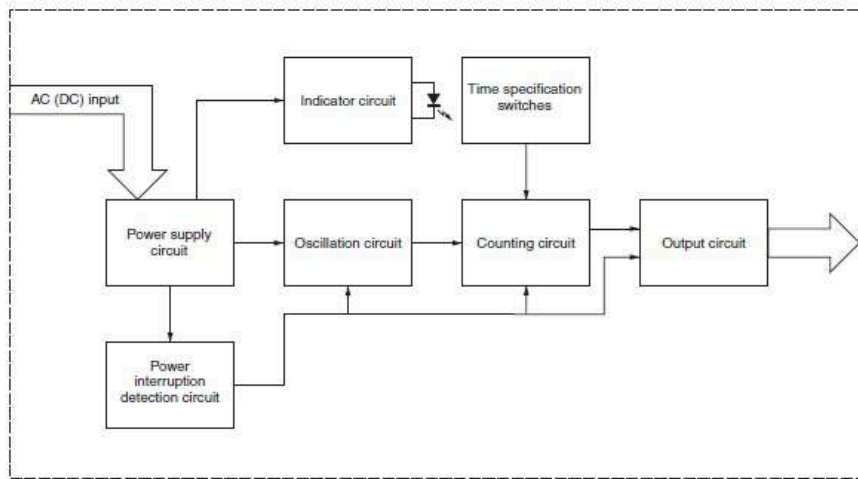
Internal connection

As of December 23, 2024

Internal connection

Block Diagrams

H3DT-H



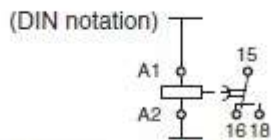
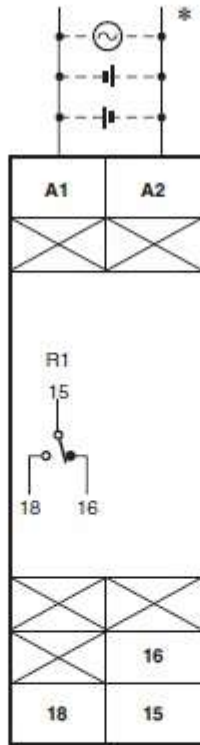
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Terminal arrangement

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Terminal arrangement

H3DT-H



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.

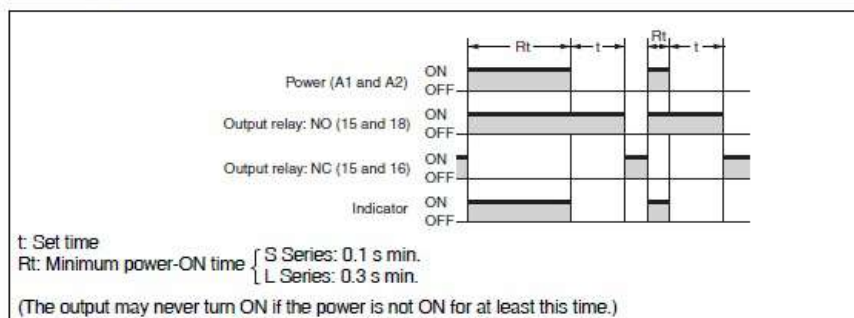
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Operating chart

As of December 23, 2024

Operating chart

Timing Charts



As of December 23, 2024