

0.2 Amp 70 Volt DC Solid State Relay

Features

- Current Limiting
- Optical Isolation 500V min
- Thermal Shutdown
- Compact Hermetic Package
- Custom Option Available.
- Available to Military Y Level

Applications

- Aircraft Power Switching
- Process Controls
- Automatic Test Equipment
- Automotive Applications

Description

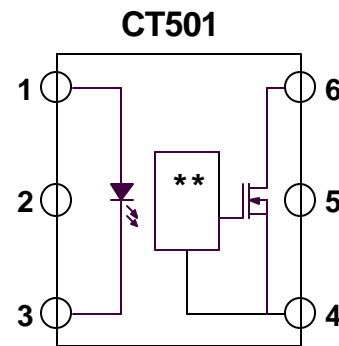
The CT-501 is a single pole DC solid-state relay featuring current limiting and thermal shutdown. The input is a single LED, typical control current is 20 mA.

The main intended application is in 28V aircraft systems. When used in this application the relay can withstand a direct short on the output. The thermal shutdown will then keep the output in the off state until the temperature drops. The output will then attempt to turn back on. There is no need to re-cycle the input.

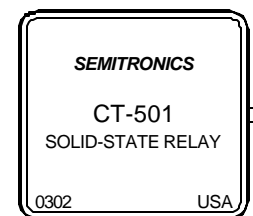
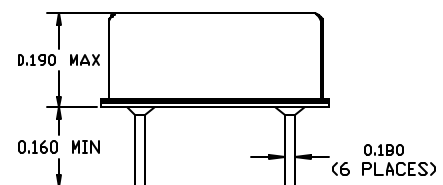
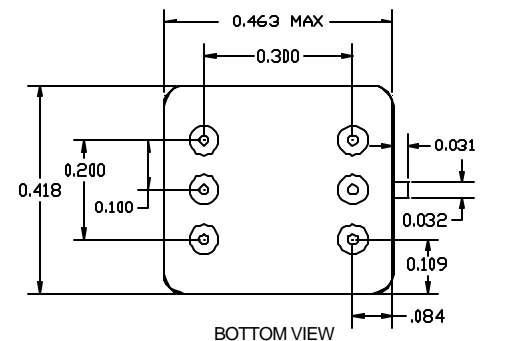
The relay is packaged in a 6 pin hermetic package, with a 4 pin half size crystal can package as an option.

Additional options of ON resistance and output voltage are also available as well as commercial grade relays. Please consult our sales department for further information regarding specific requirements.

Full custom solid-state relay design services are also available.



** Current Limiting and Thermal Shutdown



TOP VIEW

Absolute Maximum Ratings

| Parameter | | Limits | | Units |
|-----------------------|-----------------------------|--------|------|-------|
| | | Min | Max | |
| LED Forward Current | Steady State | | 50 | mA |
| LED Forward Current | Peak 10% Duty Cycle | | 75 | mA |
| LED Reverse Voltage | Reverse Current -10 μ A | | 5 | V |
| Output Voltage | Open Circuit | | 70 | V |
| Output Current | I _{LED} = 20 mA | | 0.3 | A |
| Operating Temperature | | -55 | +100 | °C |
| Storage Temperature | | -55 | +150 | °C |
| Isolation Voltage | | 500 | | Vrms |

Electrical Characteristics @25°C unless otherwise specified

| Parameter | Symbol | Test Conditions | Limits | | Units |
|-----------------------------|--------------------|--|--------|-----|------------|
| | | | Min | Max | |
| LED Forward Voltage | V _{f LED} | I _{LED} = 20 mA | 1.1 | | V |
| LED Reverse Current | I _{r LED} | V _r = -5 V | -5.0 | | μ A |
| Minimum LED Current | I _{min} | Rated Load | 10.0 | | mA |
| Off State Leakage | V _{off} | I _{LED} = 10 μ A, V _o = 60 V | | 1.0 | μ A |
| On Resistance | R _{on} | I _{LED} = 20 mA, I _o = 200 mA | | 2.0 | Ω |
| Turn-on Time | T _{on} | I _{LED} = 20 mA, Rated Load | | 1.0 | mS |
| Turn-off Time | T _{off} | I _{LED} = 0 mA | | 2.0 | mS |
| Isolation Resistance | R _{iso} | Input to Output 500 Vrms | 1000 | | M Ω |
| Power Dissipation | P _d | | | 1.0 | W |
| Input to Output Capacitance | C _{io} | 1 kHz, 1 Vrms | | 5.0 | pf |

Ordering Information:

CT501

Semitronics Standard Testing and Screening for Industrial Applications.

CT501M

Testing and Screening for Military Applications. See MIL-PRF-28750D.