

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

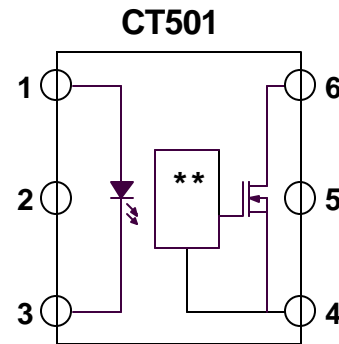
The CT-501 is a single pole DC solid-state relay featuring current limiting and thermal shutdown. The input is a single LED, typical control current is 20 mA.

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.

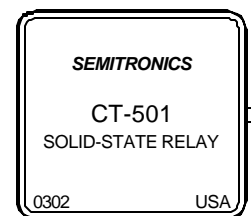
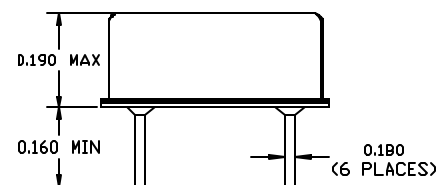
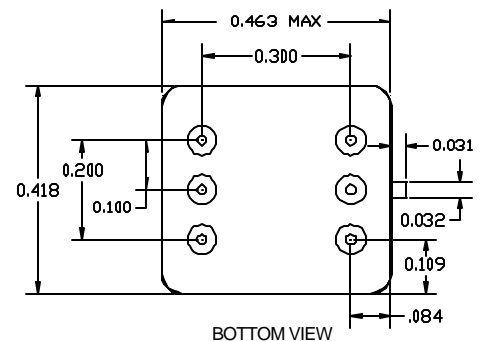
The relay is packaged in a 6 pin hermetic package, with a 4 pin half size crystal can package as an option.

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.