



# TO-5 CASE SOLID STATE RELAY

40 V AC or DC/50mA

**CSS-5-1**  
**C.O.T.S.**  
**M28750/5**

## FEATURES:

- Transformer isolation
- High switching speed
- TTL compatible
- AC or DC switching
- Hermetic TO-5 package

## ELECTRICAL SPECIFICATIONS:

### Input Data:

- Input voltage range:** 4.0 to 7 V dc.  
**Rated turn-on voltage:** 5.0 V dc.  
**Rated turn-off voltage:** 1.0 V dc maximum.  
**Input current:** 22 mA dc maximum at rated voltage.  
**Turn-on time:** 10 microseconds maximum at rated voltage.  
**Turn-off time:** 15 microseconds maximum from rated voltage.

### Output Data:

- Rated output current:** See Graph.  
**Rated output voltage:**  $\pm 40$  V, ac or dc.  
**Output voltage drop:** 0.5 V dc maximum  
**Output leakage current:** 100 microamperes maximum at rated voltage.  
**Overload:** 0.01 joule surge, 1 percent duty cycle.  
**DC offset voltage:**  $\pm 10$  milivolts.

### Electrical Data:

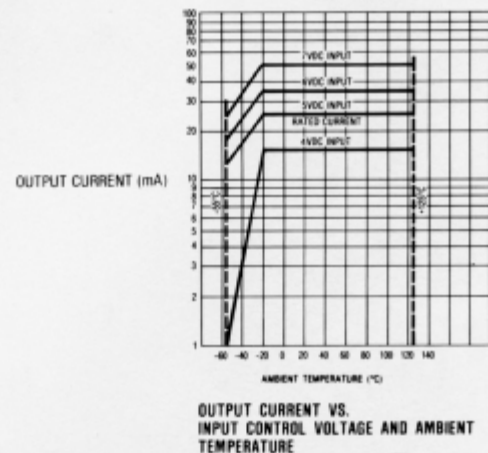
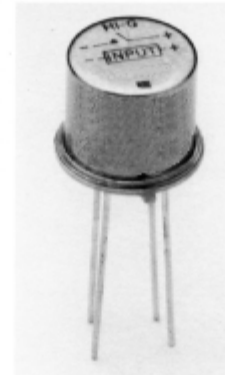
- Dielectric withstanding voltage:** 1,000 V ac (P-P), 60Hz, all terminals to case.  
**Insulation resistance:** 100 megohms at 500 V dc. all terminals to case.  
**Isolation:** 10 picofarads tested at 1 kHz.  
**Power dissipation:** 140 milliwatts maximum at rated voltage.

## ENVIRONMENTAL DATA:

- Temperature (operating and storage):**  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .  
**Shock (specified pulse):** MIL-STD-202, method 213, test condition F (1500 G's).  
**Vibration:** MIL-STD-202, method 204, test condition H, except peak value shall be 100 G's (10 to 2,000 Hz)  
**Salt spray (corrosion):** In accordance with MIL-STD-750, method 1041.

## PHYSICAL DATA:

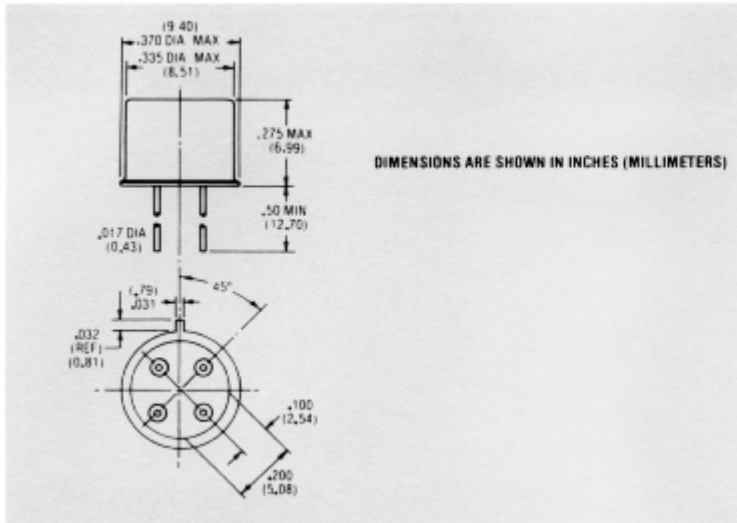
- Terminal strength (MIL-STD-202, method 211):**  
**Pull test:** Test condition A, 1 pound pull.  
**Bend test:** Test condition C,  $\frac{1}{2}$  pound load.  
**Twist test:** Test condition D.  
**Weight:** 5 grams (.18 ounce) typical.  
**Seal:** Hermetic,  $10^{-8}$  ATM CM<sup>3</sup>/S.



## SPECIAL NOTES:

- Reversing polarity of input may cause permanent damage.
- Input must be a step function. Rise or fall time, as applicable, not to exceed  $100\mu$  seconds.
- Inductive loads must be diode suppressed.
- For any control voltage, the maximum load current value shown on graph must not be exceeded. Attempting to draw currents in excess of these curves can cause permanent damage.

## MECHANICAL SPECIFICATIONS



## WIRING DIAGRAM

