



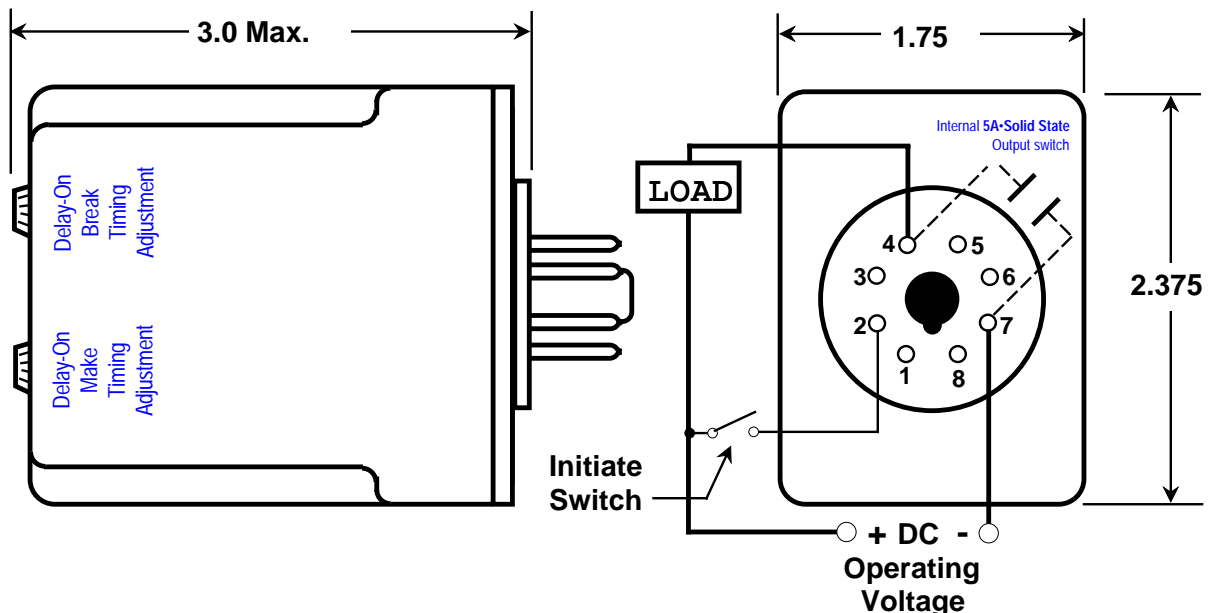
## Solid State Timers and Controllers



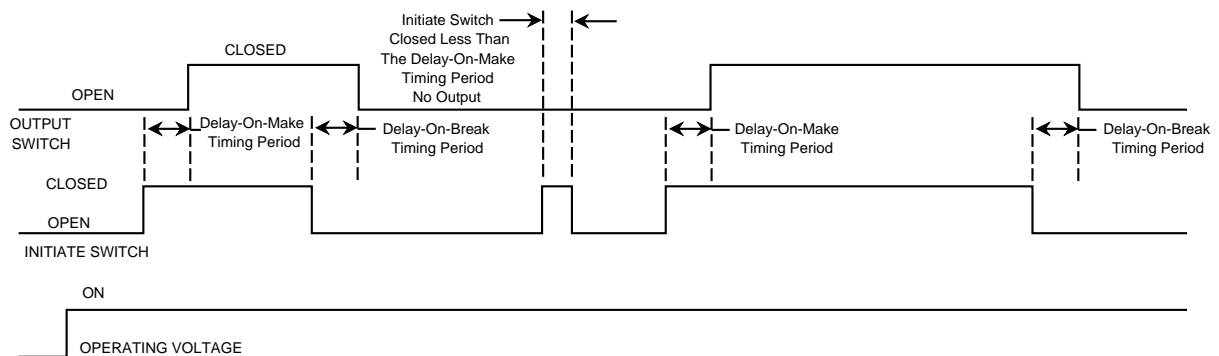
### 4888 Delay-On-Make - Delay-On-Break Time Delay Relay

The model 4888 is an electronic timing device which controls a solid state switch in a delay-on-make and a delay-on-break mode of timing. When operating voltage is applied, the timer is in a standby condition until an initiate switch closes. When the initiate switch closes the delay-on-make timing period begins. At the end of this period the output load energizes and remain energized for as long as the initiate switch is closed, and for a preset delay-on-break timing period after the initiate switch opens. Should the initiate switch close during the preset delay-on-break timing period, the output will remain energized and the timing period reset. Both timing periods are adjusted by integral potentiometers atop the timer.

#### Mechanical & Wiring .....



#### Timing Diagram .....



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## Solid State Timers and Controllers

### Specifications .....



**Operating Voltage:** 10V - 20V, 18V - 30V, 28V - 40V, 38V - 60V, 50V - 90V, 70V - 130V, 120V - 200V, 190V - 240V, 220V - 280V, 240V - 300V DC only.

**Operating Current:** 20 mA max. in standby prior to closure of initiate switch. 35 mA max. during the delay-on-make and the delay-on-break timing periods.

**Timing Mode:** Delay-on-make, Delay-on-break initiate switch controlled.

**Initiate Switch Characteristics:** Initiate switch must be rated for low level current duty of 10 mA. The Initiate Switch does not carry any portion of the load current.

**Fixed Timing:** Delay-On-Make, and delay-on-break timing periods may be factory fixed at any specified timing period from 0.1 to 10,000 seconds.

**Tolerances On Fixed Timing:**  $\pm 10\%$ .

**Adjustable Delay-On-Make:** Nine (9) ranges provide adjustable timing from 0.1 to 10,000 seconds.

**Adjustable Delay-On-Break:** Nine (9) ranges provide adjustable timing from 0.1 to 10,000 seconds.

**Timing Adjustment:** Potentiometers atop the timer provide full range timing adjustment.

**Timing Resolution:** 1% of the max. timing range specified as a minimum ( $270^\circ$  rotation).

**Purchase Tolerances On** -15%, +0% on the low end and -0%, +15% on the high end. This

**Adjustable Timing Periods:** guarantees the timing range specified.

**Repeatability Of Timing Period:**  $\pm 2\%$  nominal for both timing periods.

**Recycle Time:** A new cycle can be initiated 50 milliseconds after the completion of the Delay-On-Break timing period.

**Output:** Solid state switch rated for 10A at 400V DC.

**Output Switch Leakage Current:** 2mA max. at any specified operating voltage.

**Output Switch Voltage Drop:** 1V DC max at 10 Amperes.

**Transient Protection:** Protected by silicon transient suppressors responding to transients within  $1 \times 10^{-12}$  seconds to a peak pulse power dissipation of 1500 watts, with transient surge currents to 200 amperes for durations up to 1/120 second at  $25^\circ\text{C}$ . Maximum transient voltage protection is 6000 volts as delivered through a source resistance of 30 ohms with a maximum duration of 8.3 milliseconds.

**Operating Temperature:**  $-20^\circ\text{F}$  to  $+158^\circ\text{F}$ .

**Construction:** Encapsulated module with octal plug-in base.

**Data Sheet Revision Date:** June 2, 1995

### Ordering Information Fixed & Adjustable Timing .....

Part Number	Operating Voltage	Delay On Make Timing Range	Delay On Break Timing Range
4888 - 1	12V DC	-A .1-10 -B .5-20	-A .1-10 -B .5-20
4888 - 2	24V DC	-C 10-60 -D 50-200	-C 10-60 -D 50-200
4888 - 3	36V DC	-E 100-600 -F 300-900	-E 100-600 -F 300-900
4888 - 4	48V DC	-G 500-2000 -H 1000-5000	-G 500-2000 -H 1000-5000
4888 - 5	74V DC	-J 2500-10000	-J 2500-10000
4888 - 6	110V DC		
4888 - 7	160V DC	OR	OR
4888 - 8	220V DC	For Fixed Delay-On-Make Model	For Fixed Delay-On-Break Model
4888 - 9	240V DC	Specify Time In Seconds From	Specify Time In Seconds From
4888 - 10	270V DC	0.1 To 10,000	0.1 To 10,000

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