



# Solid State Timers and Controllers

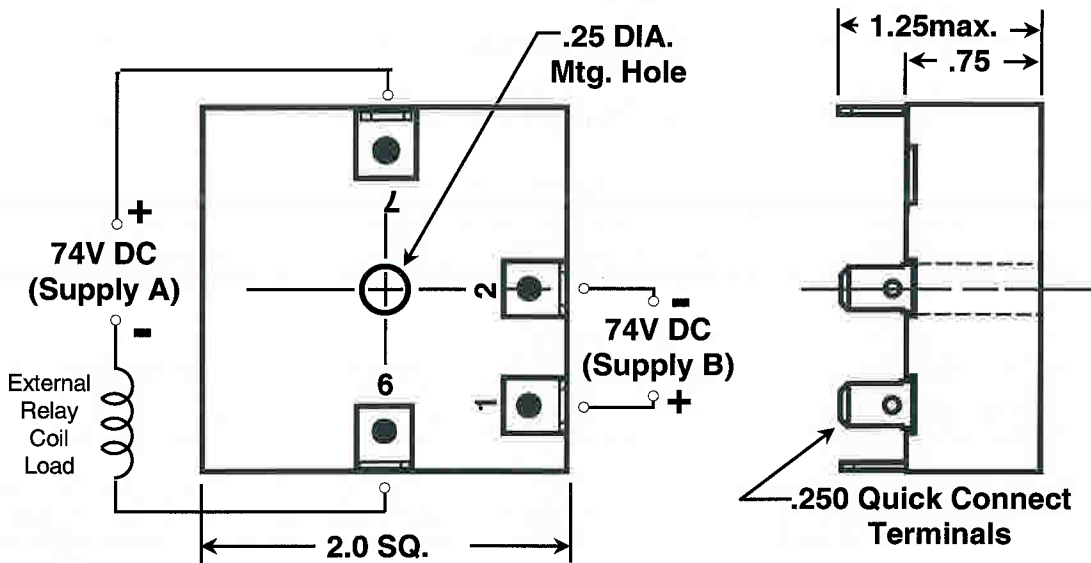
## 4382

### Dual Supply Interval Timing Module

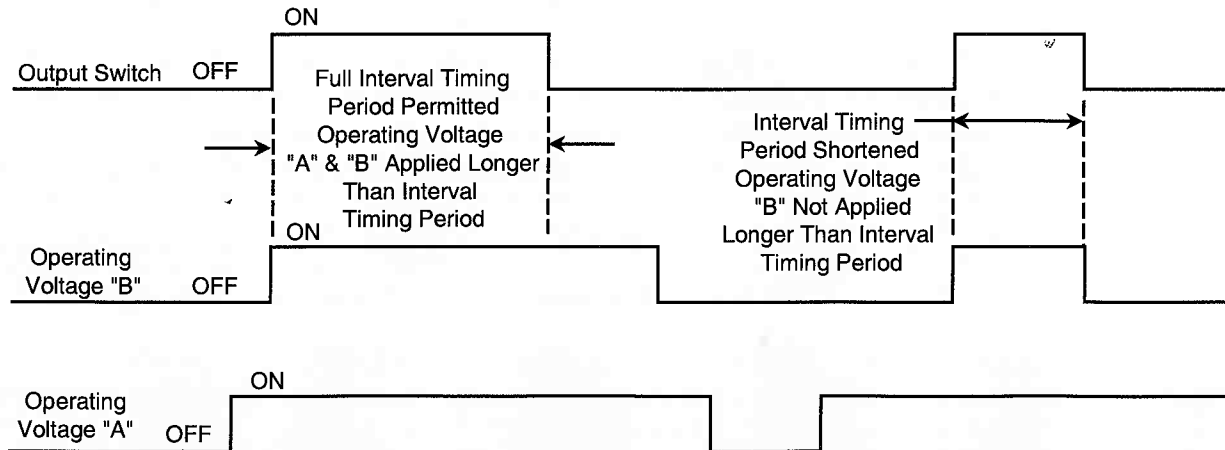


The model 4382 is an all solid state timer that offers interval timing operation. Intended for service in locomotive and transit car applications, the model 4382 offers excellent transient protection and provides for reliable timing control. The model 4382 is capable of controlling DC loads to 1 ampere at voltages up to 100V DC. Application of the operating voltage supply 'B' turns on the remote load circuit connected in supply 'A' and starts the timing period. At the end of the preset timing period, the remote load circuit turns off. Should the supply 'B' voltage be removed for 100 milliseconds, or longer, during the timing period, the timing period will reset and start again when supply 'B' voltage is re-applied. The model 4382 is available in fixed timing intervals from 1 second to 24 hours.

### Mechanical & Wiring .....



### Timing Diagram .....





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## Specifications .....

**Operating Voltage Supply "A":** 50V - 100V DC (74V nominal).

**Operating Voltage Supply "B":** 50V - 100V DC (74V nominal).

**Voltage "A" & "B" Isolation:** Voltages "A" & "B" are isolated from each other up to 1000V AC/DC. Initiate voltage supply "B" is optically coupled to timer logic and output circuit connected to supply "A."

**Voltage Control Relationship:** Voltage "A" is the supply voltage for the internal output switch and the load circuit. When the output is energized, voltage "A" can be removed and re-applied and not effect the timing period, only the output load condition. Once the output load circuit is turned off at the end of the timing interval, Voltage "A" has no effect on the output switch, and cannot retrigger another timing cycle with the load turning back on. Voltage "B" is the supply voltage that actually controls the timing period and the drive to the optically coupled output switch. Removing voltage "B" will cause the timing circuit to reset to the full timing period, and when voltage "B" is re-applied, the timing cycle will begin again.

**Operating Current:** Less than 25 mA on supply 'B', 20 mA plus load current on supply 'A'.

**Timing Mode:** Interval.

**Fixed Timing:** 1 second to 86,400 seconds (24 Hours).

**Purchase Tolerances On Timing:** ±10%.

**Timing Variation:** Less than 5% of set point over specified temperature and voltage range.

**Repeatability Of Timing Period:** ±2% nominal.

**Recycle Time:** 100 milliseconds maximum.

**Output:** Solid state switch normally open.

**Output Rating:** Rated for 5mA to 1A inductive with inrush current to 15A for 8mS.

**Load Connection:** External load must be connected to terminal #6 and the negative side of the 74V of supply "A", and terminal #7 connected to the positive side of the 74V of supply "A."

### Voltage Drop Across Solid State

**Output Switch During Energize Time:** 2 volts maximum.

### Leakage Current Through Solid State

#### Output Switch When Output

**Is Not Energized:** 1 mA maximum.

**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° C. Maximum transient voltage protection is 6000 volts as delivered through a source resistance of 30 ohms with a maximum duration of 8.3ms.

**Dielectric:** 1500V rms all terminals to case.

**Operating Temperature:** -40°C to +85°C

**Construction:** Encapsulated module with .25 quick connect tab type terminals.

**Data Sheet Revision Date:** August 21, 1995

## Ordering Information .....

Part Number	Interval Timing Period
4382 -	Specify Time In Seconds From 1 To 86,400

Examples:

4382 - 1: this model is fixed at 1 seconds.

4382 - 50: this model is fixed at 50 seconds.

4382 - 3600: this model is fixed at 3600 seconds ( 1 Hour).