



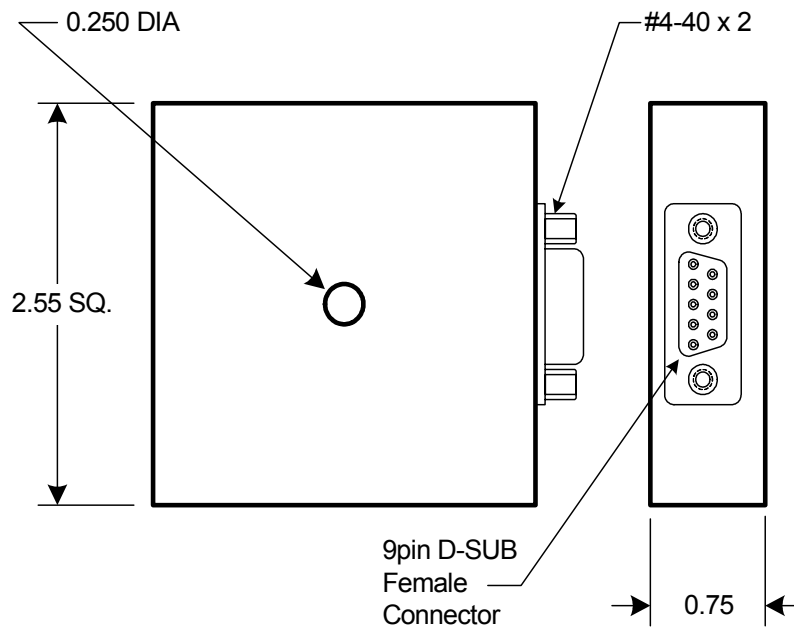
# Solid State Timers and Controllers

## EPC-13852

### Aircraft Lighting Controller

The EPC-13852 is a micro-controller based device design to control interior and exterior lights dependant on the action of keyfob, door, and flip light switches. The keyfob switch initiates a 1 minute energize cycle for all three light outputs, the door switch initiates a 10 minute cycle for all lights, and the flip light switches initiate independant 60 minute output cycles for their respective lights. The door switch is ignored during any flip light output cycle, and the flip light switches override a door switch timing cycle. The door switch and the flip light switches override the keyfob switch timing cycle, and the keyfob switch is ignored during the flip light and door switch cycles.

#### Mechanical



#### Truth Table

INPUT				OUTPUT			
7 Flip 2	6 Flip 1	1 Door	8 Keyfob	5 Flip 2	4 Flip 1	9 Step	Time Delay
X	X	X	X	X	X	X	X
X	X	X	0	1	1	0	1 Min
X	X	0	X	1	1	0	10 Min
X	X	0	0	1	1	0	10 Min
X	0	X	X	X	1	X	60 Min
X	0	0	X	X	1	X	60 Min
X	0	X	0	X	1	X	60 Min
0	X	X	X	1	X	X	60 Min
0	X	0	X	1	X	X	60 Min
0	X	X	0	1	X	X	60 Min
0	0	X	X	1	1	X	60 Min
0	0	0	X	1	1	X	60 Min
0	0	X	0	1	1	X	60 Min

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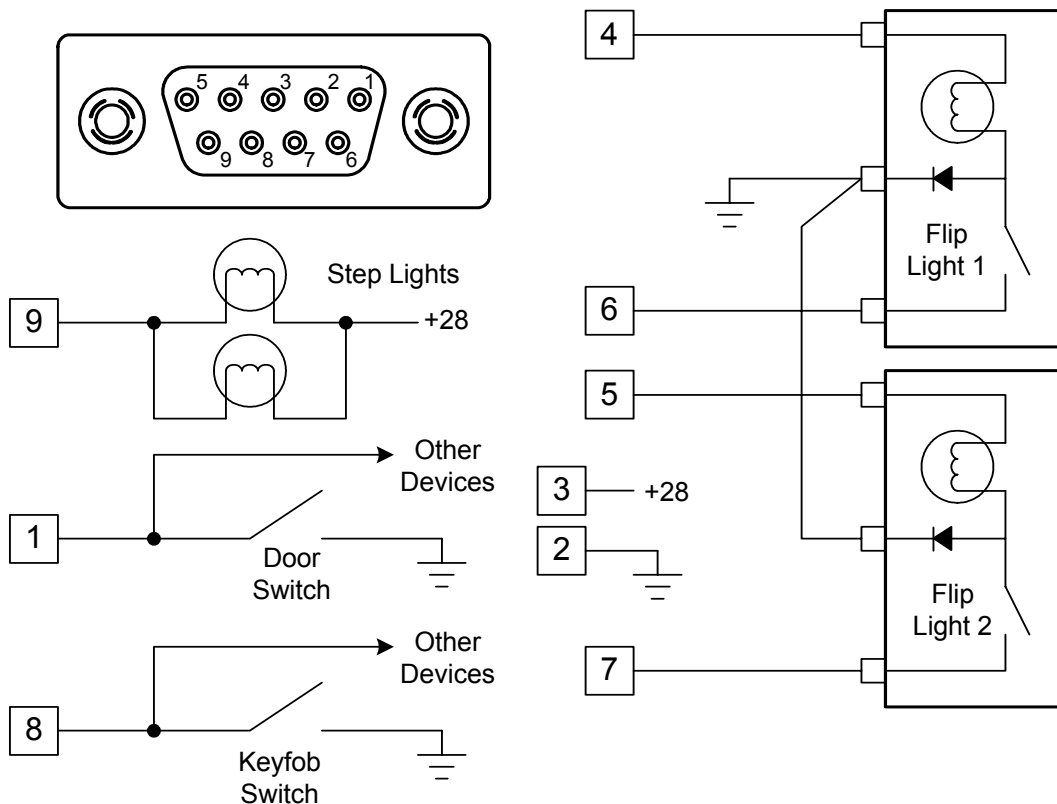
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# Solid State Timers and Controllers

## Wiring



## Specifications

**Operating Voltage:** 22V - 30.3V DC.

**Operating Current:** Less than 2mA at 28V DC.

**Fixed Timing:** 1 minute for keyfob switch, 10 min. for door switch and 60 min. for flip lights.

**Fixed Timing Tolerance:**  $\pm 10\%$  over entire operating voltage and temperature range

**Repeatability Of Timing Period:**  $\pm 1\%$  nominal.

**Recycle Time:** Operating voltage must be removed for a minimum of 250 milliseconds to guarantee all timing and output circuits have reset.

**Output Rating:** Step light output rated for 0.15A lamp load maximum, flip light outputs rated for 0.5A lamp load maximum.

**Output Voltage Drop in "ON" State:** All outputs rated 1V maximum @ 0.5A, 0.3V maximum @ 0.15A .

**Output Leakage Current:** 1mA maximum in "OFF" state.

**Transient Protection:** Outputs protected by 600mW silicon transient suppressors.

**Operating Temperature:**  $-30^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$  ( $-20^{\circ}\text{F}$  to  $+175^{\circ}\text{F}$ ).

**Humidity:** 95% non-condensing.

**Construction:** Thermoplastic case incorporating 9 pin female D-SUB connector with #4-40 female screwlocks. Encapsulated with polyurethane encapsulant to protect circuitry from humidity, shock and vibration.

**Data Sheet Revision Date:** June 30, 2006

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