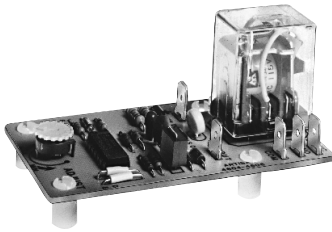




## Solid State Timers and Controllers

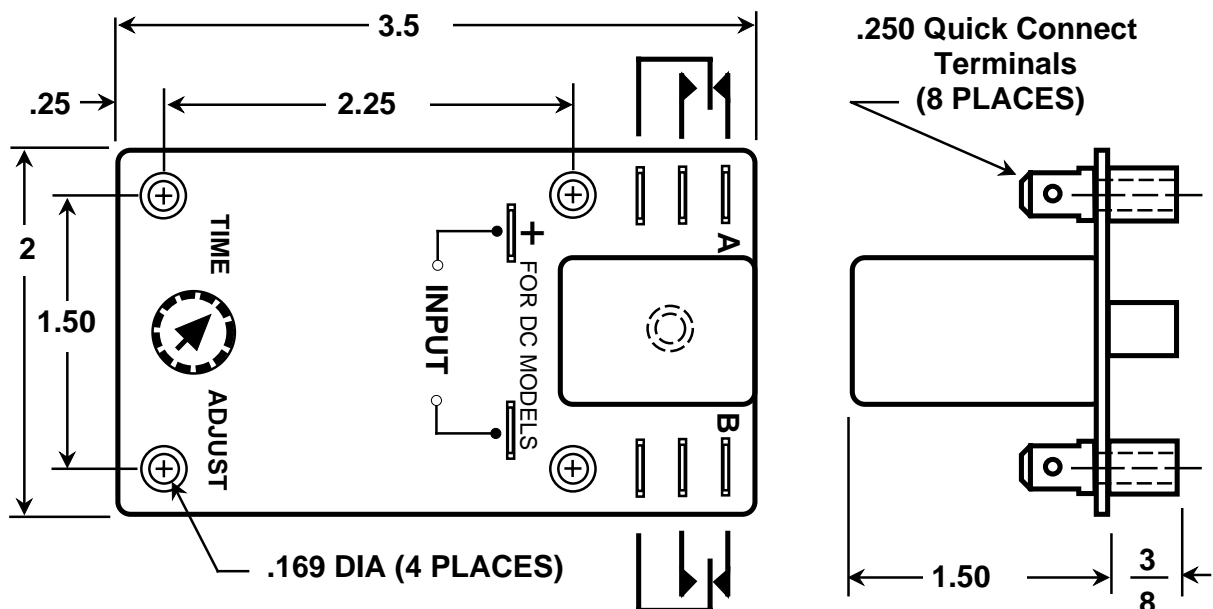
# 4604

### Interval Timing Relay

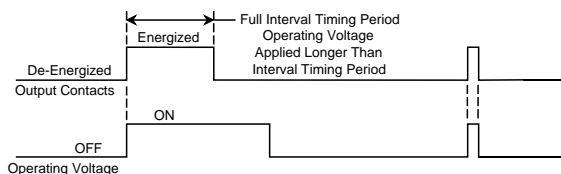


The model 4604, open board timer, combines digital timing techniques with 10 output contacts to form an interval timer that is available in either AC or DC operating voltages. The model 4604 is available in fixed timing periods to 2000 seconds and adjustable timing periods to 900 seconds. When operating voltage is applied to the input terminals the relay energizes. The relay will remain energized for the preset timing period and then de-energize. To recycle the timer the operating voltage must be removed for a minimum of the recycle time and then reapplied.

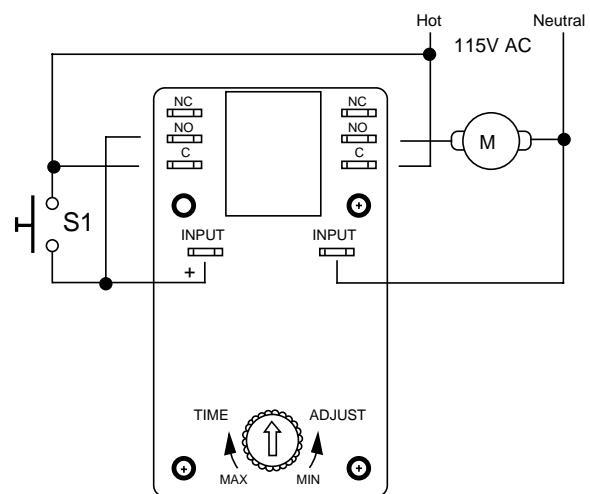
### Mechanical & Wiring



### Timing Diagram ..... 4604 Wired As A Single-Shot Timer ....



The wiring diagram shown illustrates the possible application in which the model 4604 is wired to control a motor for a preset timing interval each time that the energize switch S1 is momentarily closed. When S1 is closed, the operating voltage for the 4604 is applied to the operating voltage terminals through the contacts of the timer. The energized contacts maintain operating voltage until the end of the timing interval. At the end of the timing interval, the contacts open and the timer drops out.



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## Solid State Timers and Controllers

### Specifications .....

**Operating Voltage:** 12V DC, 24V DC, 48V DC 110V DC, 24V AC, 48V AC, 115V AC, 230V AC.

**Voltage Tolerance:** -10%, +15% AC and DC models, AC 50/60Hz.

**Operating Current:** 12V DC 85mA, 24V DC 45mA, 48V DC 25mA, 110V DC 15mA, 24V AC 60mA, 48V AC 30mA, 115V AC 16mA, 230V AC 12mA.

**Timing Mode:** Interval.

**Fixed Timing:** From 0.1 seconds to 2,000 seconds.

**Fixed Timing Purchase Tolerance** 2%, 5%, 10%, and 20%.

**Adjustable Timing:** 5 ranges: 0.1-3, 1-30, 2-100, 10-500, 30-900 seconds

**Timing Range Tolerance:** Adjustable Interval timing guaranteed with maximums of -15% on the low times and +15% on the high times. Ex: The -4 timing range is specified as adjustable from 10 to 500 seconds, and including tolerance specification can range from as low as 8.5 seconds to a high of 575 seconds.

**Timing Variation:** Less than 6% of set point over specified temperature and voltage range.

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

**Recycle Time:** Operating voltage must be removed for a minimum of 200 milliseconds to guarantee all timing and output circuits have reset.

**Output:** DPDT relay contacts.

**Output Rating:** UL rated for 10A, 1/3 HP, 125V, 250V AC, 10A 30V DC CSA rated for 10A, 1/4 HP, 125V, 250V AC, 10A 30V DC relay is covered by UL File No. E57520, and CSA File No. LR26550. 50,000 operations at 10A 250V AC and 3A at 30V DC. 1,500 Vrms for one minute between contact sets, 1,000 Vrms for one minute between open contacts, and 2,000 Vrms between contacts and operating voltage terminals for one minute.

**Transient Protection:** The timing circuit is protected with a zener type voltage limiting device and an MOV rated for transient limiting at a voltage below that of the solid state switching element. The MOV is rated for transient absorption to 25 joules.

**Operating Temperature:** -20°C to +70°C.

**Construction:** Open PC board with .25 quick connect wiring terminals.

**Data Sheet Revision Date:** April 11, 2000

### Ordering Information .....

Part Number	Operating Voltage	Interval Timing Period	Timing Tolerance
<b>4604F -</b> (Fixed Timing)	-2 (12V DC)	Specify the fixed timing period in seconds from 0.1 to 2000 for 4604F	-A 2%
	-3 (24V DC)		-B 5%
	-4 (48V DC)	Specify the dash Number for 4604A	-C 10 %
	-5 (110V DC)		-D 20 %
	-6 (24V AC)		
<b>4604A -</b> (Adjustable Timing)	-7 (48V AC)	-1 (0.1-3)	For 4604F Fixed Timing only
	-8 (115V AC)	-2 (1-30)	
	-9 (230V AC)	-3 (2-100)	
		-4 (10-500)	
		-5 (30-900)	
		Range In Seconds	

Examples:

4604F - 8 - 600 - C Is a model 4604F with 115V AC operating voltage with a fixed interval time of 600 seconds. Purchase tolerance on the interval time is 10%.

4604A - 6 - 5 Is a model 4604A with 24V AC operating voltage with an adjustable interval timing period from 30 to 900 seconds.

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