



## Solid State Timers and Controllers

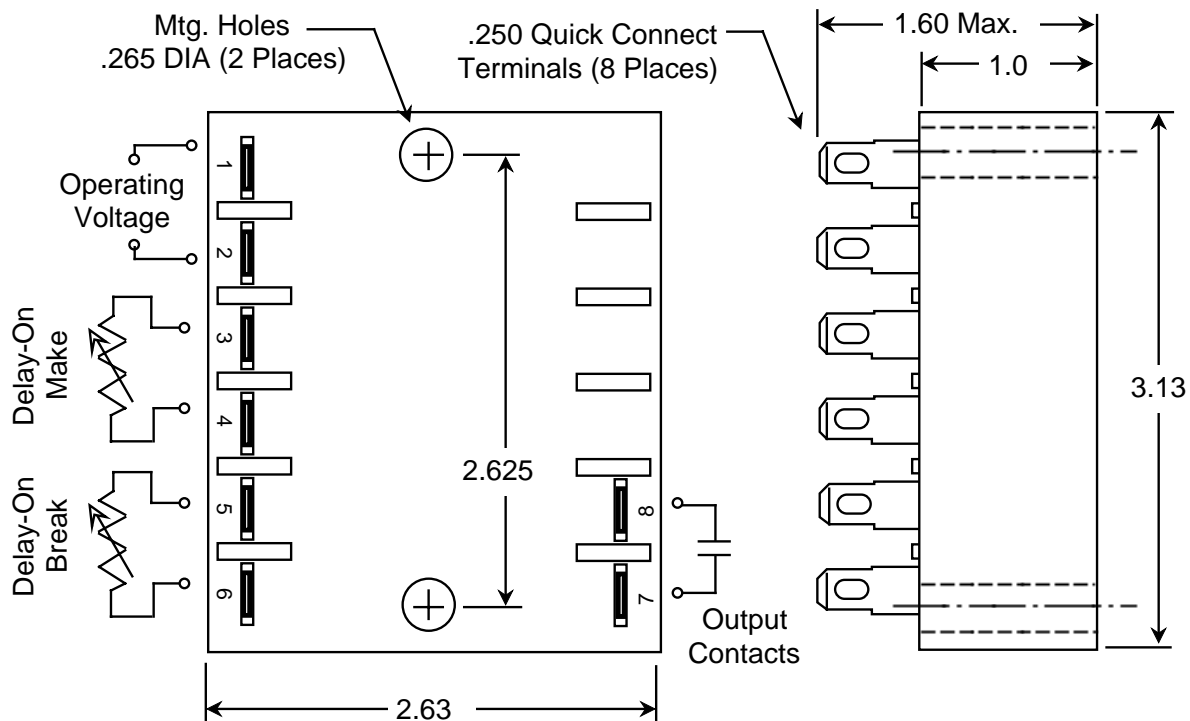


4387F  
Series  
Shown

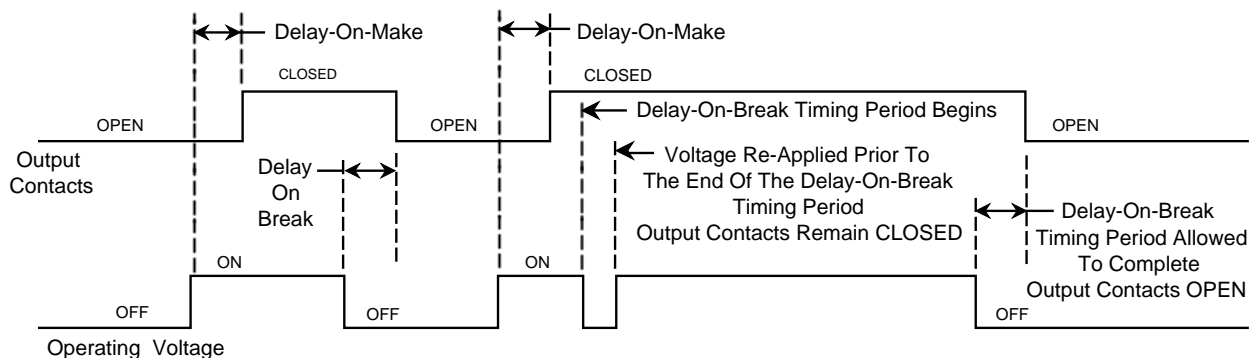
### 4387 Delay-On-Make - True Delay-On-Break Time Delay Relay

The model 4387 is a delay-on-make timing device that incorporates a true delay-on-break timing feature. The feature that makes the delay-on-break a 'true' delay-on-break, is that the delay-on-break is initiated by the removal of the operating voltage alone, and does not require any standby voltage during the delay-on-break timing period. The output is a SPST normally open set of relay contacts that is sustained in the closed state during the delay-on-break timing without the aid of any standby voltage. Available in both fixed and adjustable models, the model 4387 can have both timing periods fixed at the factory or supplied with both or only one of the timing periods remotely adjustable.

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



#### Timing Diagram .....



**Tel: 201-428-1770 • Fax: 201-428-1426 • Toll Free: 800-457-4950**

**Artisan Controls Corporation, 5 Eastmans Road, Suite 100, Parsippany, New Jersey 07054, USA**



## Solid State Timers and Controllers

### Specifications

- Operating Voltage:** 12V DC, 24V DC, 48V DC, 110V DC, 24V AC, 48V AC, 115V AC, 230V AC all AC voltages @ 50/60Hz. DC models are non-polar.
- Operating Voltage Tolerance** DC models -10%, +40%, AC models  $\pm 15\%$ .
- Operating Current:** 50 mA maximum all models.
- Timing Mode:** Delay-On-Make with True Delay-On-Break feature.
- Fixed Timing:** Delay-On-Make may be factory fixed at any timing period from 0.5 to 8,000 seconds, Delay-On-Break from 0.5 300 seconds
- Tolerances On Fixed Timing:**  $\pm 10\%$ .
- Adjustable Delay-On-Make:** Delay-On-Make may be adjusted remotely from 0.5 to 8,000 seconds.
- Adjustable Delay-On-Break:** Delay-On-Break from 0.5 300 seconds
- Timing Adjustment:** Remote resistors set the timing periods (See *Timing Charts*).
- 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:**  $\pm 1\%$  nominal for the Delay-On-Make timing period,  $\pm 5\%$  nominal for the Delay-On-Break timing period.
- Recycle Time:** A new cycle can be initiated 50 milliseconds after the completion of the Delay-On-Break timing period.
- Output:** SPST-NO contacts.
- Output Contact Rating:** 8A 1/6 HP 125V, 250V AC 5A 30V DC, 0.24A 125V DC. 3A 250V AC ( $\cos \phi = 0.4$ ). 100,000 operations at full rated load.
- 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.
- Operating Temperature:** -25°C to +65°C.
- Construction:** Encapsulated module with .25 quick connect tab type terminals.
- Data Sheet Revision Date:** September 17, 1999

### Ordering Information Adjustable Timing . . . . . Timing Charts Adjustable Models.

Part Number	Operating Voltage	Delay On Make Timing Range	Delay On Break Timing Range
4387A - 2	12V DC		
4387A - 3	24V DC	-A 0.5 - 30	-A 0.5 - 5
4387A - 4	48V DC	-B 1 - 300	-B 1 - 10
4387A - 5	110V DC	-C 2 - 1,000	-C 3 - 30
4387A - 6	24V AC	-D 10 - 5,000	-D 6 - 60
4387A - 7	48V AC	-E 30 - 8,000	-E 30 - 300
4387A - 8	115V AC		
4387A - 9	230V AC		

#### Delay-On-Make Timing vs Timing Resistor

External Resistor (Ohms)	DASH NO.				
	-A	-B	-C	-D	-E
0	0.5	1	2	10	30
1 Meg	4	30	100	500	900
3 Meg	12	90	300	1,500	2,700
5 Meg	20	150	500	2,500	4,500
10 Meg	30	300	1,000	5,000	8,000

#### Delay-On-Break Timing vs Timing Resistor

External Resistor (Ohms)	DASH NO.				
	-A	-B	-C	-D	-E
0	0.5	1	3	6	30
1 Meg	5	10	30	60	300

### Ordering Information Fixed Timing . . . . .

Part Number	Operating Voltage	Delay On Make Timing Range	Delay On Break Timing Range
4387F - 2	12V DC		
4387F - 3	24V DC		
4387F - 4	48V DC	Specify Delay-On-Make Time In Seconds From 0.5 To 10,000	Specify Delay-On-Break Time In Seconds From 0.5 To 300
4387F - 5	110V DC		
4387F - 6	24V AC		
4387F - 7	48V AC		
4387F - 8	115V AC		
4387F - 9	230V AC		

EX: An external 1 meg ohm potentiometer across the delay-on-make terminals (3 & 4) will adjust the delay-on-make timing period from 1 to 30 seconds for the -B range, and An external 1 meg ohm potentiometer across the delay-on-break terminals (5 & 6) will adjust the delay-on-break timing period from 1 to 10 seconds for the -B range.

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