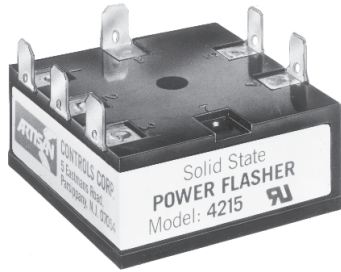




# Solid State Timers and Controllers

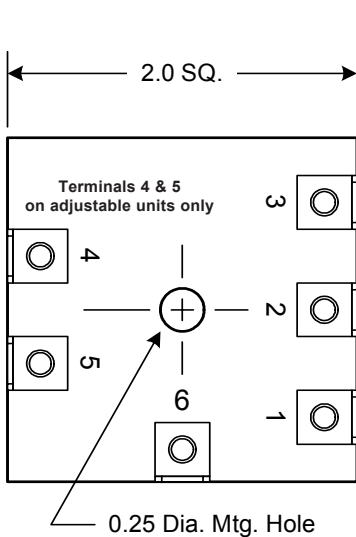
## 4215

## AC Power Flasher AC/DC Control

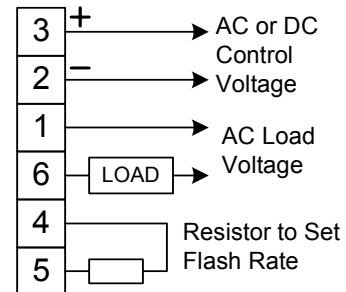
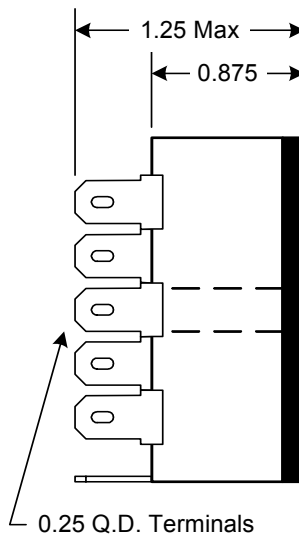


The model 4215 is an AC power flasher that provides AC or DC control of AC load circuits. Optical isolation between the input control voltage and output load voltage permits input control to be different from the output load voltage. When the control voltage is applied, the model 4215 begins a flashing cycle, with the output switch turning ON first. The load circuit will continue to flash for as long as the control voltage remains applied. The model 4215 provides zero voltage output switching of AC loads up to 10 amperes. The flash rate is fixed at a 50% duty cycle of the fixed or adjustable flash rate period. Available in both fixed and adjustable timing models.

### Mechanical

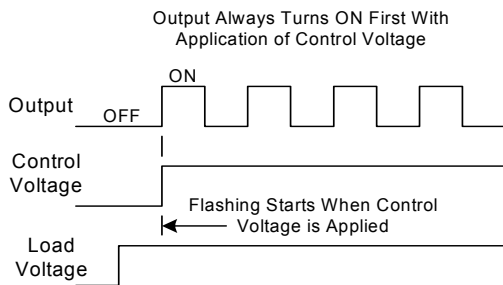


### Wiring



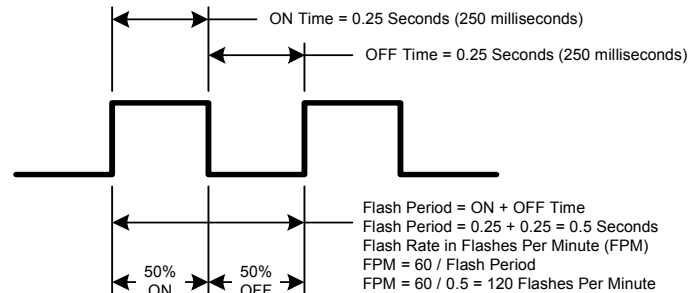
### Timing Diagram

### How To Find The Flash Rate.



The timing diagram shown below is for an application that requires the load circuit to be ON for 250 milliseconds and OFF for 250 milliseconds. (Remember - the ON and OFF times will essentially be equal due to the 50% duty cycle specification inherent in the model 4215)

The voltage across the load circuit would look something this:



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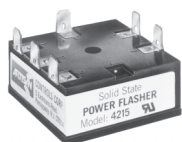
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# Solid State Timers and Controllers

## Specifications



**Control Voltage:** DC (5, 12, 24, 48), AC (12, 24, 48, 115, 230) 50/60 Hz. @ 5mA max.

**Load Voltage:** AC only (12, 24, 48, 115, 230) 50/60 Hz.

**Voltage Tolerances:** ±20%.

**Timing Mode:** Flasher (opto-isolation between control & output voltage).

**Fixed Flash Rate:** Factory fixed at any rate from 1 to 250 flashes-per-minute (FPM)

**Tolerances On Fixed Timing:** ±10%.

**Adjustable Flash Rate:** 1 to 60 flashes-per-minute and 5 to 250 flashes-per-minute.

**Purchase Tolerances**

**On Adjustable Flash Rate:** Minimum Flash Rate - 15%, +0%. Maximum Flash Rate - 0%, +15%

**External Flash Rate Resistor Range:** 0 to 1 meg ohm for both flash rate -1 and -2.

**Flash Rate Resistor Rating:** Worst case power dissipation never exceeds 3 milliwatts.

**Flash Rate Variation:** Less than 6% of set point over full temperature and voltage range.

**Repeatability Of Flashing Period:** ±1% at stabilized operating voltage temperature.

**Recycle Time:** Operating voltage must be removed for a minimum of 200 milliseconds to assure that the flasher and output circuits are reset.

**Output Rating:** 70mA to 5A inductive with inrush currents to 40A for 8 milliseconds.

**Extending Rating:** Operation to 10A by mounting the timer heat sink base on a metal surface and maintaining timer heat sink temperature to less than 90°C.

**Output Switch Characteristics:** 3 volt drop across output switch when ON, 4mA leakage when OFF.

**Transient Protection:** Output Switch 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:** 1500Vrms all terminals to heat sink, 1500Vrms from control voltage terminals to output terminals. Control voltage is optically isolated from the output switching terminals.

**Operating Temperature:** -20°C to +85°C

**Construction:** Encapsulated module with .25 quick connect wiring terminals.

**Agency Recognitions:** UL File #E47858 (Component Appliance Controls #ATN22)

**Data Sheet Revision Date:** May 22, 2006

## Ordering Information All Models

Part Number	Control Voltage	Load Voltage	Rating	F P M
<b>4215F</b> - Fixed Flash Rate	-1 (5V DC)			Fixed Flash Rate (4215F) Specify 1- 250 FPM
	-2 (12V DC)		-A (1 Amp) -B (5 Amp)	
	-3 (24V DC)	-6 (24V AC)		
	-4 (48V DC)	-7 (48V AC)	-B (10 Amp)	
<b>4215A</b> - Adjustable Flash Rate	-5 (12V AC)			Adjustable Flash Rate (4215A) -1 1-60 FPM -2 5-250 FPM
	-6 (24V AC)	-8 (115V AC)	Requires Additional Heat sink	
	-7 (48V AC)			
	-8 (115V AC)	-9 (230V AC)		
	-9 (230V AC)			

## Examples Of Part Numbers

4215F-1-8-A-60FPM is a model 4215F with 5V DC Control Voltage, 115V AC load operating voltage, 1 ampere output switch, with a fixed flash rate of 60 flashes-per-minute (FPM) ±10%.

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