

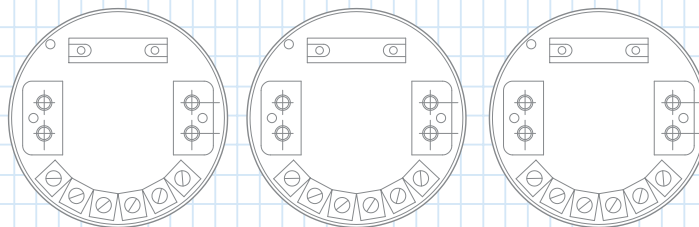
Flasher Model 9010-03

We developed the microcontroller based 9010 series to meet all the requirements of low voltage marine flasher applications with the greatest flexibility, electrical protection and efficiency. It offers a flash synchronization feature between



multiple flashers and programmability of three functions:
1-Infinite rhythm selection, 2-Regulated output voltage and
3- second output for lampchanger or dual filament lamp.

Pulse width modulation (PWM) applies stable,



regulated true RMS voltage to maintain constant color temperature of the lamp filament over the full input voltage range above the regulated voltage level.

"Light Waves To The World"

Flasher Model 9010-03

Technical Specification:

Model	Programable Flasher 9010 (03)	
Lamp voltage	6.2 v, 10.3v, 12v, 24v \pm 1% ^① (Switchable or Programmable) ^② Regulation by Pulse Width Modulation (PWM)	
Frequency of (PWM)	488 Hz \pm 0.5%	
Rated Lamp current ^②	0.2 ... 10A	
Max. Lamp current ^②	10 A	
Max. Lamp power ^②	120W (12v system) 240W (24v system)	
Operating voltage ^②	4.5 ... 36v	
Second output	Lampchanger (linear) or 2nd Filament (PWM) (Switchable or Programmable) ^②	
Idle Current	<5mA	
Selectable Rhythms::		
switch selectable	252 ^①	
programmable	4 ^②	
timing accuracy	\pm 0.5%	
synchronization	yes ^③	
vibration	10G	
shock	40G	
temperature range-	40° ... +85°C (-40° ... +185°F)	
weight	0.55 Kg (1.2lb)	

- Lampchanger switching circuit operates so that arcing of lampchanger contacts does not occur
- Factory Mutual (FM) approved for use in Class I, Division II Groups C & D hazardous locations when used with FM approved CR Lampchanger 2086A and FM approved lantern

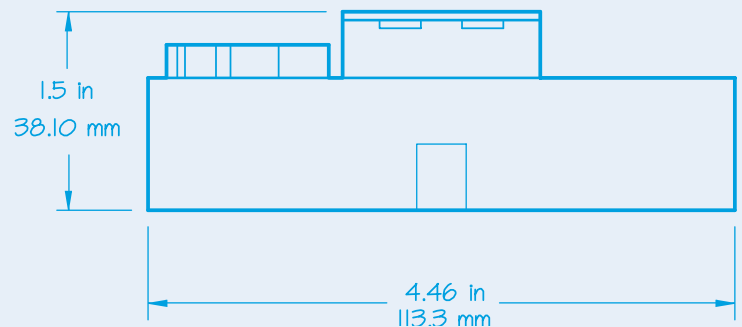
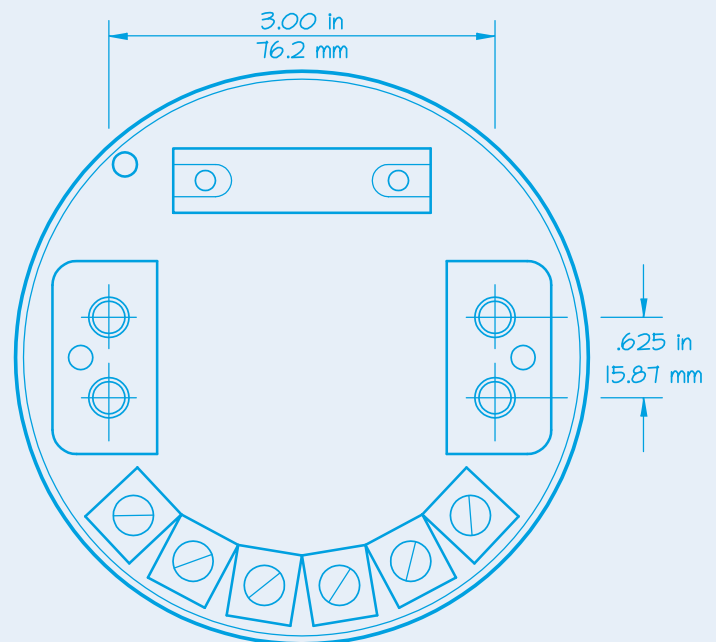
- ① - Standard or customer predetermined rhythm sets and voltage available: accessible by 12 position DIP switch
- ② - Infinite rhythm selection with use of CR Programmer Model 9400. Rhythms can be programmed into 4 switch locations
- ③ - If Daylight Control sensor is used, synchronized flashers will all turn off and on at daylight and at night time: (A) In sync or (B) Independently - contact factory when customer plans to synchronize with Flashers of other manufacturers.

Materials:

- Housing - High impact injection molded plastic shell w/epoxy resin fill
- Terminals - Injection molded plastic with hot tinned copper connector
- Terminal Screws - Stainless Steel American standard or Metric threads
- Mounting bracket - Black anodized aluminum with stainless steel thread inserts American standard or Metric threads

Features:

- Microcontroller Based
- 10 amp Output with Extremely Low Power Dissipation
- Infinite Rhythm Programmability
- Programmable Output voltage
- Programmable Lampchanger or Dual Filament on Second Output
- Accurate lamp Voltage Regulation by Pulse Width Modulation (PWM)
- Synchronization of Two or More Flashers
- Electronic Reverse Polarity and Short Circuit Protection
- Daylight Control Sensing Circuit
- LED Indicator for Second Filament of Dual Filament Lamp
- High side Switching (switching in positive side of load)
- Color Coded Terminals



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"Light Waves To The World"

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