

## SCM<sup>†</sup> Strobe Control Module



### Features

- Strobe control module for Banner strobed LED lights
- Two independently-adjustable strobe light output circuits designed to strobe LED lights up to 60 Hz
- Direct plug-in connection to Banner strobed LED lights via the 9-pin D-sub connector available on models of strobed lights
- Removable (plug-in) terminal block for power and trigger signal connections
- Separate trigger inputs for each output channel; inputs accept 5 to 12V dc trigger signal
- Simple switch selection of either high to low or low to high trigger signal
- One 3 m (10') shielded cable for trigger signal is supplied
- Output pulse width adjustable using binary DIP switches from 5 to 1,315 microseconds (separate adjustment for each output channel)
- Black anodized aluminum housing

### Specifications for Model SCM<sup>†</sup> Strobe Control Module

<b>Input Power</b>	24V dc $\pm 5\%$ at 2.0A max. Power supply model <b>PSC-24(E)</b> is recommended (see Accessories) Fuse: 5 x 20 mm fast-acting 3A, externally accessible
<b>Trigger Inputs</b>	Two inputs - one for each output channel Each input accepts 5 to 12V dc signal, 10 mA max. Switch selectable for high to low or low to high trigger signal Note: Use two-wire shielded cable for trigger signal(s); one 3 m (10') trigger cable is provided with SCM module
<b>Outputs</b>	Two independently-adjustable 24V dc $\pm 5\%$ outputs, 9A peak max. <b>Strobe rate:</b> 60 Hz max. <b>Pulse duration:</b> Adjustable from 5 to 1,315 microseconds in 10 microsecond increments Note: Outputs use 9-pin D-sub connectors which allow direct plug-in connection of Banner strobed LED lights
<b>Environmental Rating</b>	IEC IP20; NEMA 1
<b>Operating Conditions</b>	<b>Temperature:</b> 0° to 40°C (+32° to 104° F) <b>Maximum relative humidity:</b> 95% at 40°C (non-condensing)

<sup>†</sup> This model is not stocked and is non-returnable.

**WARRANTY:** Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.

# SCM Strobe Control Module

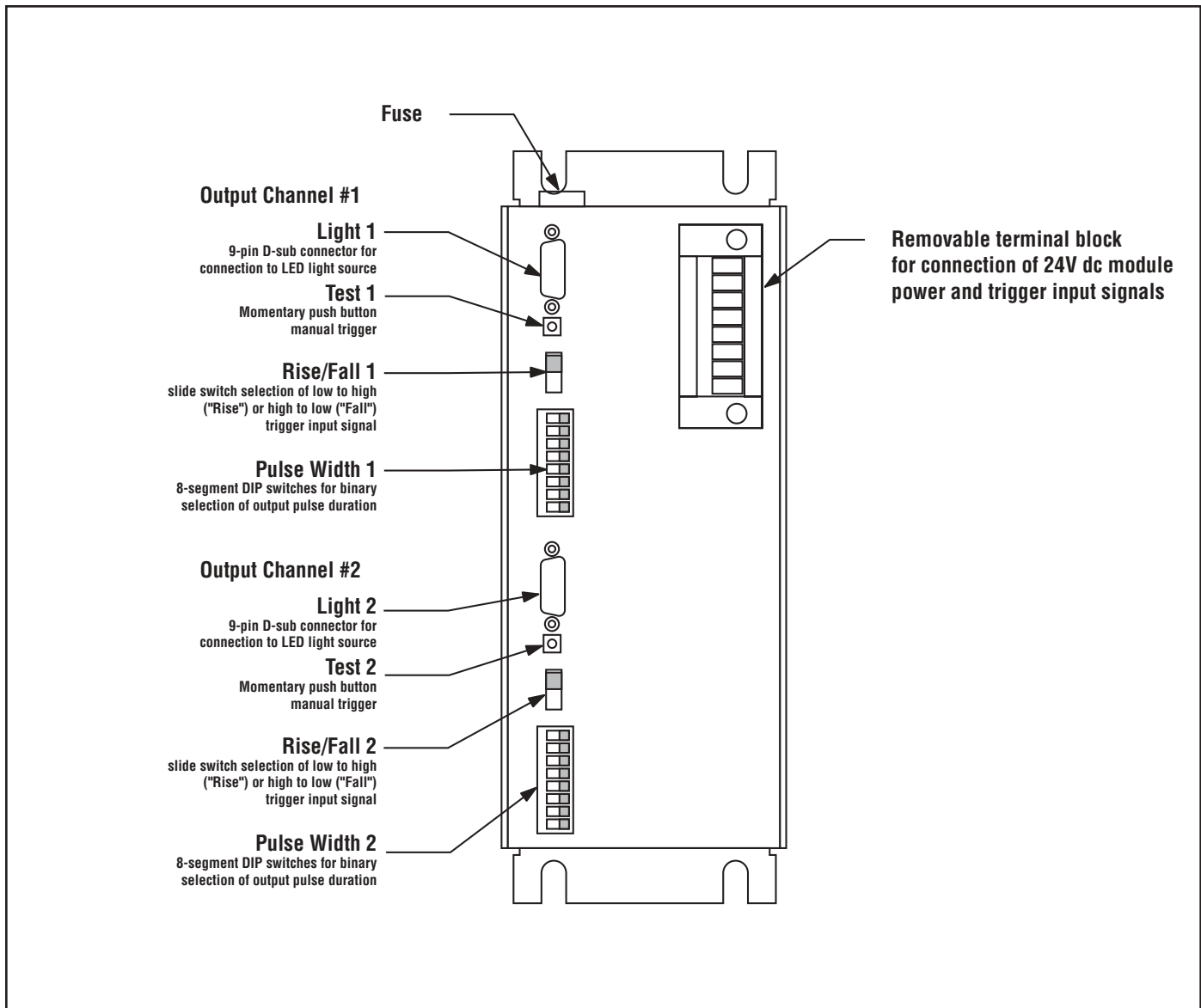


Figure 1. SCM Strobe Control Module feature identification

## Wiring

### Power Input

24V dc  $\pm 5\%$  is connected between “+24V DC” and “DC GND” on the removeable terminal block (see Figure 1). Power supply model **PSC-24(E)** is recommended for powering the SCM, and is available as an accessory (see page 4 and data sheet P/N 67466).

### Trigger Inputs

The trigger signal must be a voltage between 5 and 12V dc. The source of a trigger signal must be capable of supplying up to 10 mA. 2-wire shielded cable must be used. One 3 m (10') trigger cable is supplied. Connect as indicated above, for each strobe channel used.

## Outputs

Light 1 and Light 2 are independent outputs for controlling Banner LED strobed lights. Lights are pre-wired with a 2 m (6') cable terminated with a 9-pin D-sub connector, which plugs directly into the controller. The connector pin configuration is as follows:

Pins 4 and 5 = +24V dc  
Pins 1 and 6 = dc common

Cable length from the SCM to an LED light is limited to a maximum of 4.8 m (16'). See Accessories on page 4 for available extension cables.

Note: **Be certain that an LED light source plugged into the SCM module is the strobed type and NOT the continuous type.** All strobed type lights have a model number which ends with the letter "S" (indicating Strobed).

If powering two lights from one strobe output, be certain that the combined peak current demand of the two light does not exceed 9A.

## Settings

**Trigger Response (Rise/Fall)** Select the desired response from each trigger signal. Choose "Rise" for strobe trigger on transition from low to high voltage, or "Fall" for trigger on a high to low transition.

**Pulse Width** P/W1 and P/W2 are 8-bit binary output pulse width selector switches for channels 1 & 2. Each bit is weighted, as follows:

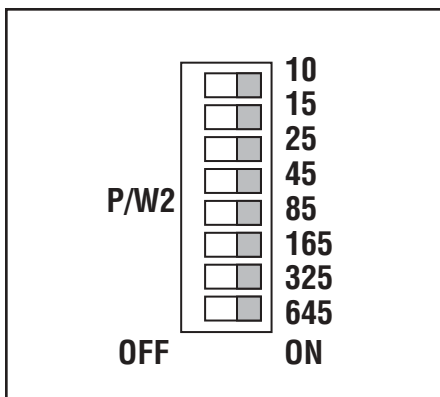


Figure 2. Switch bank

Switch	Value (μs)
1	10
2	15
3	25
4	45
5	85
6	165
7	325
8	645

The programmed pulse width is equal to the total of the values selected. Move each switch to the right to select its value.

Note: Moving all switches to the left results in a 5μs pulse width.

Tip: Use the following formula to calculate image blur of an inspection system, measured in pixels:

$$\text{Blur} = T_S \times V \times \text{FOV}$$

Where:  $T_S$  = Strobe pulse width (seconds)  
 $V$  = Speed of targets moving past the inspection point (length/sec)  
 FOV = Field of view of the inspection system (pixels/length)

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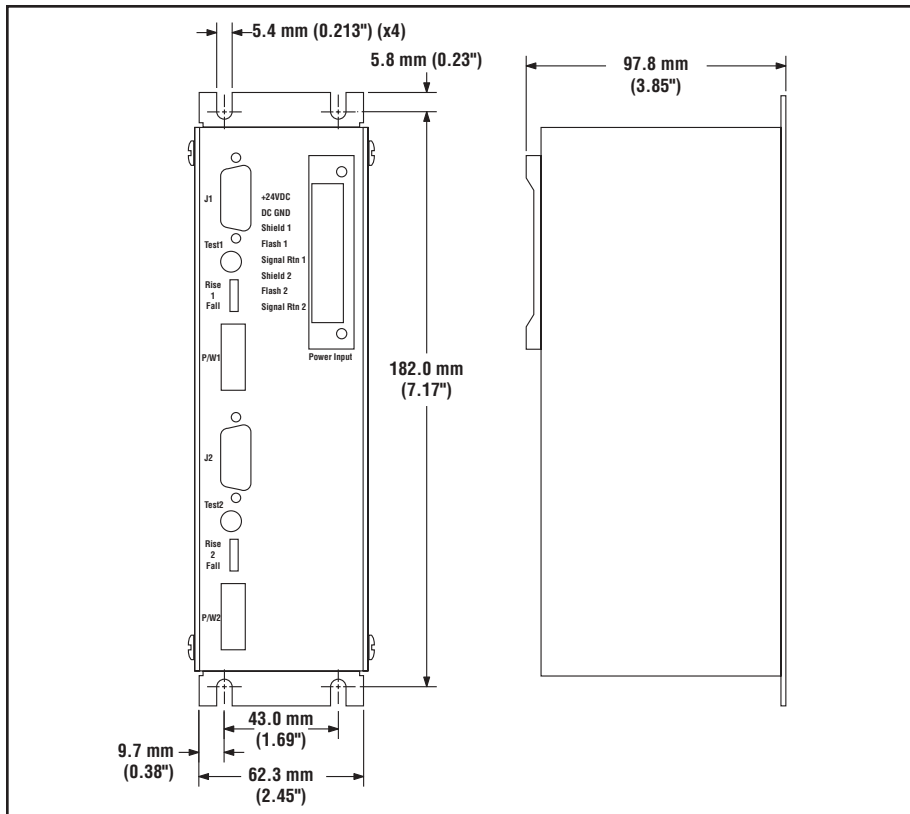


Figure 3. SCM Strobe Control Module dimensions

## Accessories

### Power Supplies

Models	Input	Input Cord	Output	Output Cable	Used with
PSC-24 <sup>†</sup>	100-250V ac 50/60 Hz	North America (NEMA 5-15)	24V dc $\pm 5\%$ with voltage regulation of $\pm 1\%$ 2.2 A max.	1.8 m (6') 2-wire Unterminated	SCM Strobe Control Module
PSC-24E <sup>†</sup>		Cont. Europe (Schuko CEE 7)			



### Extension Cables

Models	Length	Configuration
DB906S <sup>†</sup>	1.8 m (6')	Terminated both ends with 9-pin D-sub connector, for strobed lights (one end male pins and opposite end female pins)
DB910S <sup>†</sup>	3.0 m (10')	
DB9YS <sup>†</sup>	1.8 m (6')	Y cable for powering 2 lights from one supply, for strobed lights

<sup>†</sup> These models are not stocked and are non-returnable.

