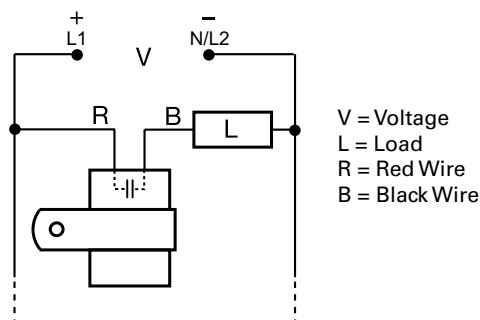


## MSM SERIES



### Wiring Diagram



### Description

The MSM Series replaces bi-metal type timing with reliable solid-state circuitry. There are no moving parts to arc or wear. It is a cost effective solution for OEM designers. It is available for printed circuit board mounting or surface mounting with a removable bracket and wire leads. The MSM Series offers immediate reset on removal of power.

#### Operation (Delay-on-Make)

The time delay begins upon application of input voltage. The output is de-energized before and during the time delay. At the end of the time delay, the output energizes and remains energized until input voltage is removed.

**Reset:** Removing input voltage resets the time delay and output.

### Features & Benefits

FEATURES	BENEFITS
<b>Analog circuitry</b>	Repeat Accuracy + / - 5%, Factory calibration + / - 15%
<b>Compact, low cost design</b>	Allows flexibility for OEM applications
<b>Long life</b>	No moving parts to arc or wear
<b>PCB or wire harness</b>	Offers design and installation flexibility
<b>Immediate reset</b>	Occurs on removal of power
<b>Totally Encapsulated</b>	Protects against shock, vibration and humidity

### Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY	WIRE TYPE	WIRE LENGTH inches (mm)
MSM10.5W6	12VDC	Fixed	0.5s	Standard Lead	6.0 (152.4)
MSM10.7W6	12VDC	Fixed	0.7s	Standard Lead	6.0 (152.4)
MSM11W6	12VDC	Fixed	1s	Standard Lead	6.0 (152.4)
MSM110W6	12VDC	Fixed	10s	Standard Lead	6.0 (152.4)
MSM130W9	12VDC	Fixed	30s	Standard Lead	9.0 (228.6)
MSM190W6	12VDC	Fixed	90s	Standard Lead	6.0 (152.4)
MSM20.15W9	24VAC	Fixed	0.15s	Standard Lead	9.0 (228.6)
MSM210P3	24VAC	Fixed	10s	PC Mount	0.5 (12.7)
MSM25W9	24VAC	Fixed	5s	Standard Lead	9.0 (228.6)
MSM30.7W6	24VDC	Fixed	0.7s	Standard Lead	6.0 (152.4)
MSM42W6	120VAC	Fixed	2s	Standard Lead	6.0 (152.4)
MSM43W6	120VAC	Fixed	3s	Standard Lead	6.0 (152.4)
MSM420W6	120VAC	Fixed	20s	Standard Lead	6.0 (152.4)
MSM450W6	120VAC	Fixed	50s	Standard Lead	6.0 (152.4)

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## MSM SERIES

### Specifications

#### Time Delay

<b>Type</b>	Analog Circuitry
<b>Range</b>	0.05 - 180s fixed
<b>Repeat Accuracy</b>	±5%
<b>Tolerance</b>	
<b>(Factory Calibration)</b>	±15%
<b>Recycle Time</b>	≤ 75ms

#### Time Delay vs Temp.

<b>&amp; Voltage</b>	±15%
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#### Input

<b>Voltage</b>	12 or 24VDC; 24, 120, or 230VAC
<b>Tolerance</b>	±10%
<b>AC Line Frequency</b>	50/60 Hz

#### Output

<b>Type</b>	Solid State
<b>Form</b>	NO, open during timing
<b>Maximum Load Current</b>	0.5A steady state 25°C; 0.25A steady state 60°C

#### Minimum Holding Current

<b>Voltage Drop</b>	≈ 2.5V @ 0.5A
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#### Protection

<b>Circuitry</b>	Encapsulated
<b>Dielectric Breakdown</b>	≥ 2000V RMS input to mounting surface
<b>Insulation Resistance</b>	≥ 100 MΩ
<b>Polarity</b>	DC units are reverse polarity protected

#### Mechanical

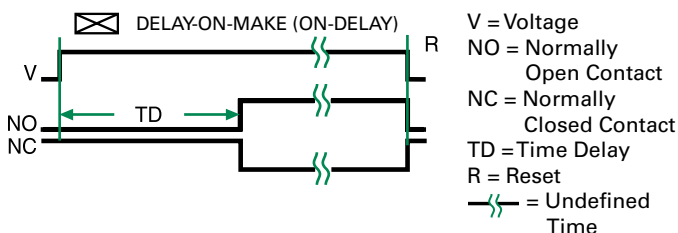
<b>Mounting</b>	<b>A.)</b> PC mount 14 AWG (2.087mm <sup>2</sup> ) wires (Can be inserted in AMP Miniature Spring Socket #645980-1) <b>B.)</b> Stranded 18 AWG wire leads (0.933 mm <sup>2</sup> ) with mounting bracket
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#### Environmental

##### Operation/Storage

<b>Temperature</b>	-20° to 60°C / -30° to 85°C
<b>Humidity</b>	95% relative, non-condensing
<b>Weight</b>	P: ≈ 1.1 oz (31.2 g) W: ≈ 1.2 oz (34 g)

### Function Diagram



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Authorized Distributor

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Littelfuse:

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