

## KLIXON® | M2 Series

Narrow Differential Thermostats, -18°C to 149°C, SPST

### FEATURES

- Low profile, narrow differential
- Hermetically sealed, vacuum baked and back-filled with nitrogen
- Single Pole / Single Throw (SPST)
- High resistance to shock and vibration
- Preset temperature set points, non-adjustable calibration
- Qualified to MIL-PRF-24236/20, S-311-641
- On NASA S-311-664 QPL

### INTRODUCTION

The Klixon® M2 series of thermostats are engineered for exceptional vibration and shock resistance to provide reliable switching in a low-profile, narrow differential package for the most demanding applications. Prior to the final weld, finished assemblies are vacuum baked and back-filled with dry nitrogen. The inert, dry atmosphere eliminates moisture and other volatiles to prevent condensation at low temperatures or possible contact contamination at high temperatures. This back-fill also improves the dielectric characteristics of the device and prevents oxidation of the contacts. The M2 thermostat is the ideal choice where quality and reliability are paramount. Applications include: airplane wing de-icing systems, satellite heaters, aircraft controls, warning devices, and electronic device overheat protection.

### SPECIFICATIONS

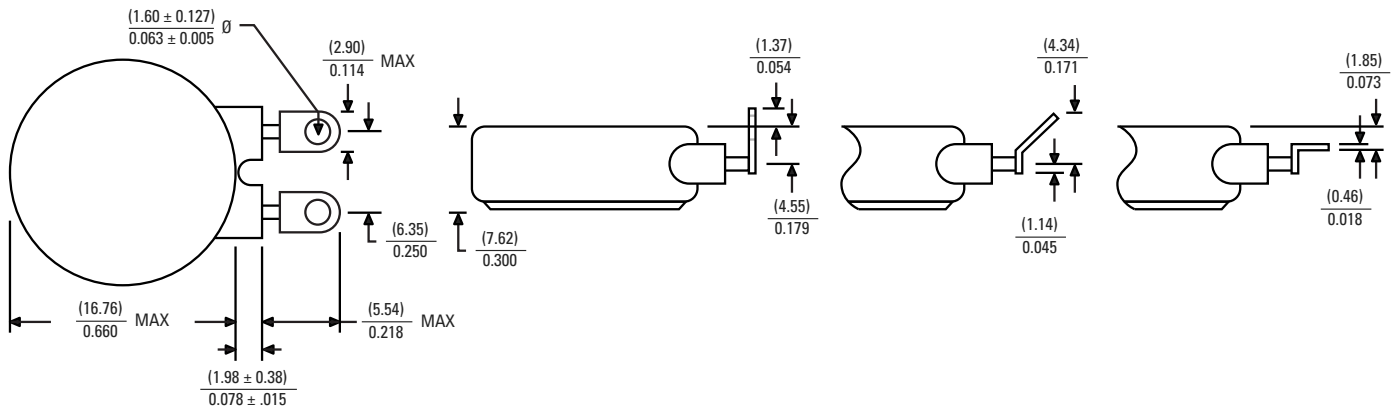
<b>Contact Ratings (Resistive)</b>	<i>Cycles</i> 250,000	<i>30VDC / 30VAC</i> 2.0 amps	<i>120VAC</i> 2.0 amps
<b>Operating Temperature</b>	-18°C to 149°C (0°F to 300°F)		
<b>Dielectric Strength</b>	1250 VAC, rms, 60 cycles for 1 minute, terminal to case per MIL-STD-202, Method 301		
<b>Contact Resistance</b>	0.050 ohms maximum per MIL-STD-202, Method 307		
<b>Vibration</b>	10-2000 Hz, 10G, per MIL-STD-202, Method 204, Condition D (monitored)		
<b>Shock</b>	100G, 6 milliseconds, per MIL-STD-202, Method 213		
<b>Hermeticity</b>	1 x 10 <sup>-8</sup> atm cc/sec. maximum, per MIL-STD-202, Method 112, Condition C		
<b>Salt Spray</b>	Per MIL-STD-202, Method 101, Condition B, 5% solution		
<b>Average Weight</b>	5.4 grams (average)		
<b>Ambient Temperature Range</b>	-54°C to 204°C (-65°F to +400°F) <i>Maximum ambient exposure for close on rise devices is 38°C above contact operating temperature, for open on rise devices it is 38°C below contact operating temperature.</i>		

### STANDARD TEMPERATURE SETTINGS

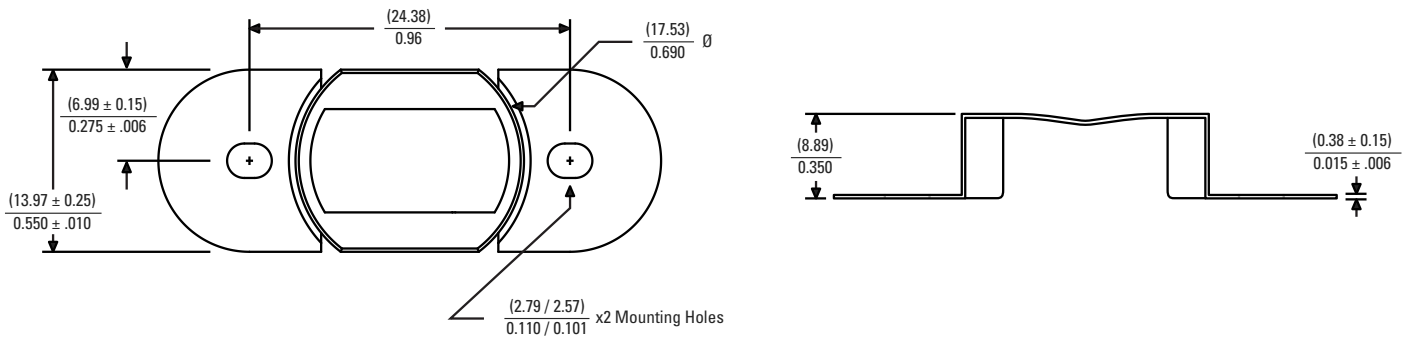
CLOSING TEMPERATURE RANGE	OPENING TEMPERATURE DIFFERENTIAL	TOLERANCE	
		Standard	Special
17°C to 121°C (0°F to 250°F)	1°C to 3°C (2°F to 5°F)	± 2°C (± 4°F)	± 1.7°C (± 3°F)
122°C to 149°C (251°F to 300°F)	2°C to 4°C (3°F to 7°F)	± 3°C (± 5°F)	± 2°C (± 4°F)

The standard operating temperatures, differential and tolerances are shown in this table, but can be customized to meet your specific requirements.

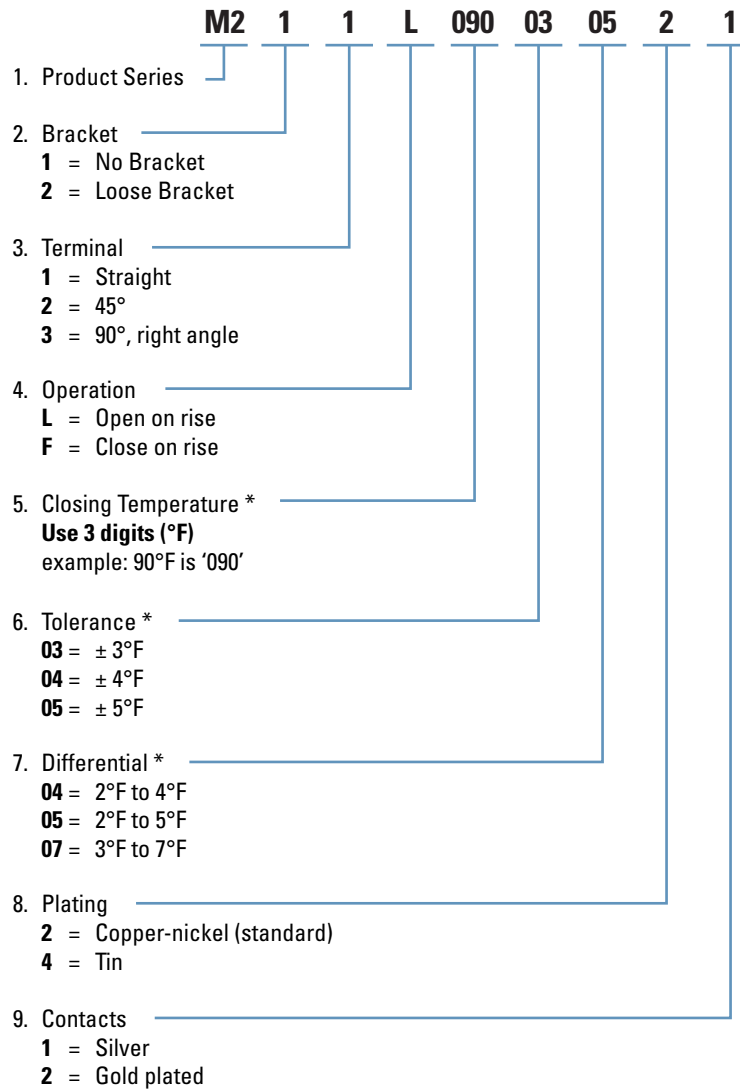
### STANDARD CONFIGURATIONS



### Mounting Bracket



## STANDARD M2 PART NUMBER BUILDER



\* See temperature table for standard tolerances / differentials

Example is a M2 series, no bracket, straight terminals, open on rise at 90°F ± 3°F with 2°F to 5°F differential, copper-nickel plating, silver contacts

## SPECIAL M2 PART NUMBER BUILDER

