

# NEW PRODUCT BRIEF



## Bourns® Model 1220 Series Thermally Protected MOV (TPMOV) Surge Protective Devices

### INTRODUCTION

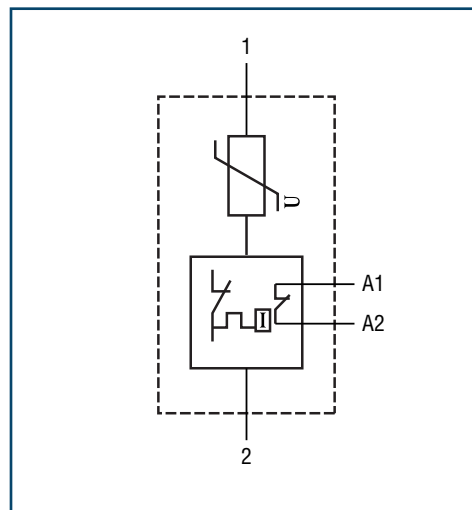
Bourns further expands its thermal protection Surge Protective Device (SPD) family with the release of its Model 1220 Series. This new SPD is a PCB mountable TPMOV that provides surge suppression with thermal protection. It is designed to open in the event of overheating due to an abnormal overvoltage or Temporary Overvoltage (TOV) condition and will interrupt any abnormal current that may be encountered, within rated limits.

The Model 1220 Series is a general duty TPMOV SPD with a maximum discharge current rating of 75 kA (8/20  $\mu$ s). This series is UL recognized and complies with UL 1449 and IEC/EN 61643-11 standards.

### FEATURES

- Complies with UL 1449 and IEC/EN 61643-11 standards
- UL recognized Type 4, Type 2 location SPD, passed 200 kA short circuit current rating (SCCR)
- High reliability protected MOV with Advanced Thermal Disconnecter (TD+)
- Compact size saves installation space
- PCB mountable design, compatible with reflow and wave soldering procedures

### CIRCUIT DIAGRAM



### BENEFITS

- **Thermal Protection Mechanism:** The built-in thermal element in a TPMOV monitors the device's temperature. If the device experiences prolonged high-energy surges causing excessive heating, the thermal element activates.
- **Temporary Disconnection:** When the thermal element activates, the TPMOV temporarily disconnects itself from the circuit. This prevents sustained overheating and potential thermal runaway, enhancing the safety and reliability of the surge protection.

### APPLICATIONS

- Surge protective devices
- AC/DC distribution
- All power circuits
- Telecommunication
- Built-in surge protection of electronic equipment

### MORE INFORMATION

- AC Power SPDs: [Model 1250A Series SPD](#)
- DC Power SPDs: [Model 1420A Series SPD](#)
- [High-energy MOVs](#)
- [High-current GDTs](#)
- [Power TVS Diodes](#)

### HOW TO ORDER

Model Designator	<b>1220 - xx - lx - xxxMx</b>
1220 = Thermally Protected Metal Oxide Varistor	
Nominal Discharge Current (8/20 $\mu$ s) $I_{nom, rate}$	
10 = 10 kA	
20 = 20 kA	
Max. Discharge Current (8/20 $\mu$ s) $I_{max, rate}$	
1 = 22 kA	
2 = 25 kA	
3 = 40 kA	
4 = 50 kA	
5 = 75 kA	
Operating Voltage	
120 = 120/240 V, 120/208 V	
230 = 220/380 V, 230/400 V	
277 = 240/415 V, 277/480 V	
400 = 277/480 V, 347/600 V	
480 = 347/600 V, 480 V (Delta)	
600 = 600 V (Delta)	
Module Type (Refer to Product Dimensions)	
M1 = Module Type 1	
M2 = Module Type 2	
M3 = Module Type 3	
M4 = Module Type 4	

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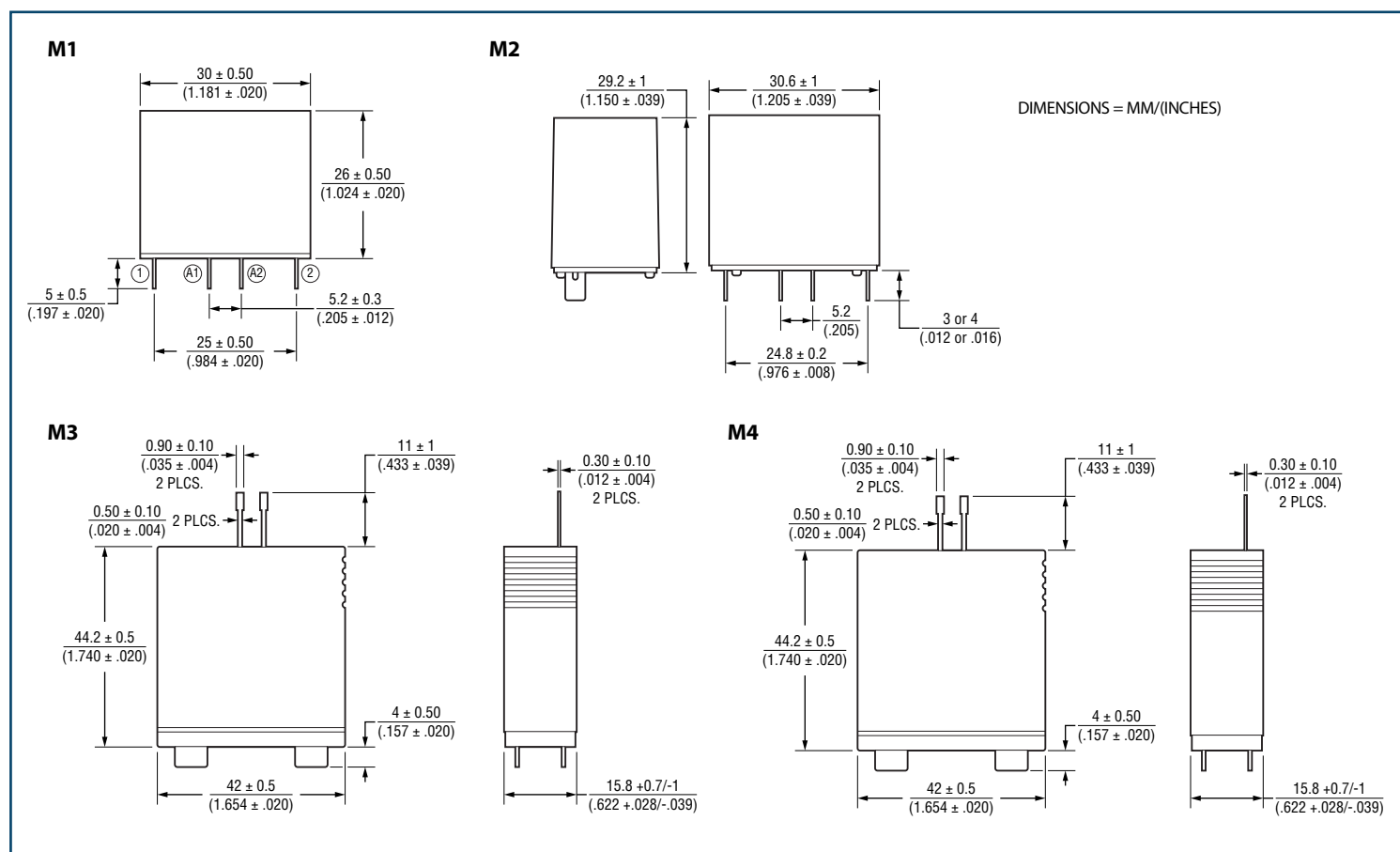
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### ELECTRICAL CHARACTERISTICS

Series	Product Technologies	Connection Mode	AC System	Nominal System Voltage	Max. Operating Voltage (U <sub>c</sub> )	UL Category	Compliance
<b>1220-10-xx-xxxM1</b>	High Energy MOV Technology	1-Pole, L-N or L-G or N-PE	IT, TT, TN, Single, Split Phase, Delta, Wye	120V, 277V, 347V, 480V, 600V	150 V, 320 V, 420 V, 550 V, 690 V	Type 4, Type 2 Location	UL 1449
<b>1220-20-xx-xxxM2</b>				120 V, 277 V, 347 V, 480 V	150 V, 320 V, 420 V, 550 V		
<b>1220-20-xx-xxxM3</b>	Advanced Thermal Disconnecter (TD+)	120V, 230V, 277V, 347V, 480V, 600V	150V, 275V, 320V, 420V, 550V, 690V				
<b>1220-20-xx-xxxM4</b>		120 V, 230 V, 277 V	150 V, 275 V, 320 V				

For full characteristics, see data sheet

### PRODUCT DIMENSIONS



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