



Features

- Patent #6,327,129
- Board Mount
- 230 V, 250 V, 330 V surge protector
- UL recognized
- Economical, reliable choice for all paired copper communications circuits
- Solid-state responsiveness combined with robust GDT

Applications

- Telecommunications
- High speed data networks
- Hybrid fiber-coax networks
- Broadband powered networks

MSP® Series - Multi-Stage Protector Sub-Assembly

Bourns MSP® Series is a new generation of telecommunications protector designed to be the best all-around protection choice on both today and tomorrow's copper pair based communications circuits. It combines the strengths of gas tube and solid-state protectors while eliminating their weaknesses. Bourns' new MSP® protector series is the synergistic integration of three advanced protection technologies; sixth generation gas tube, precision matched MOVs, and switch-grade failshort. Working together, these three technologies meet the challenges of the evolving high-speed network.

Bourns MSP® Series can be used universally on POTS, ISDN, ADSL, SDSL, HDSL, RADSL, VDSL, 10BaseT, and T1 carrier. Bourns MSP® Series is the most economical, reliable, and best performing choice for all paired copper communications circuits.

Characteristics

Test Methods per IEEE C62.31, UL 497, CSA C22.2, Telcordia GR 1361 and applicable sections of Telcordia GR 974.

Characteristic	Model No.		
	2026-23-CxxM1xx	2026-25-CxxM1xx	2026-33-CxxM1xx
DC Breakdown @ 100-2000 V/s	184 to 276 V	200 to 300 V	300 to 400 V
AC Breakdown @ 60 Hz	184 to 276 V	200 to 300 V	300 to 400 V
Impulse Breakdown			
100 V/μs	450 V	475 V	600 V
1000 V/μs	500 V	525 V	650 V

Insulation Resistance	100 Vdc	> 1 GΩ
Insertion Loss	10 MHz	0.01 dB
Capacitance Line to Line	1 MHz	10 pF typical
Capacitance Line to Ground	1 MHz	20 pF typical
Impulse Reset (DC Extinguishing)	52 V, 260 mA	< 10 ms
	135 V, 200 mA	< 10 ms ¹
Impulse Life Characteristics	100 A, 10/1000 μs	> 3000 operations ²
	300 A, 10/1000 μs	> 1000 operations ²
	500 A, 10/1000 μs	> 1000 operations ³
	2000 A, 10/250 μs	> 100 operations ²
	5000 A, 20/100 μs	> 10 operations ²
	20000 A, 8/20 μs	> 10 operations ^{2,4}
AC Life Characteristics	0.5 A rms continuous	> 30 seconds
	1 A rms, 1 second, 600 ft. cable	> 60 operations
	1 A rms, 1 second, 1 mile cable	> 60 operations
	10 A rms, 1 second	> 20 operations
	65 A rms, 11 cycles	> 1 operation ³
	120 A rms, 0.1 second	1 operation
	200 A rms, 11 cycles	1 operation ^{3,5}
Life Test Criteria	Insulation Resistance Throughout the Life Test	100 MΩ
	Life Test Failures	0.0 %
	Failures During Environmental Cycling w/Surges	0.0 %
Failsafe (vented or non-vented gas tube)		> 30 A rms, simultaneously

Notes:

- UL, cUL Listed.

¹ Surpasses Telcordia GR 974 (network applied).

² Exceeds Telcordia GR 1361.

³ RUS (REA) PE-80.

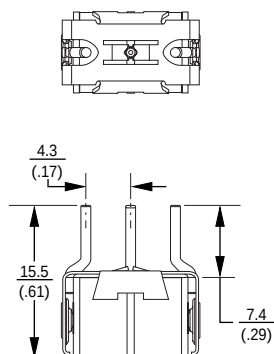
⁴ Total current equally divided between each line to ground.

⁵ Protector may short to ground.

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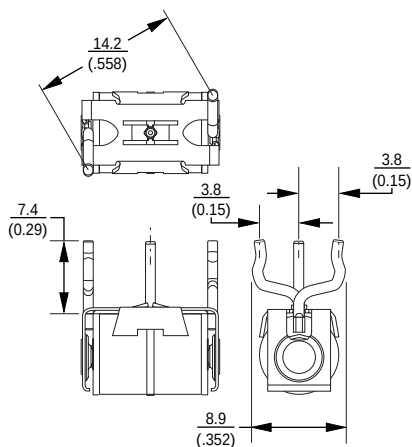
How To Order / Product Dimensions

2026-xx-C2M1xx



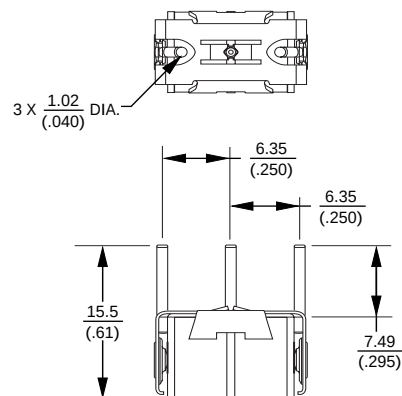
2026-23-C2M136
2026-25-C2M136
2026-33-C2M143

2026-xx-C16M1xx



2026-23-C16M136
2026-25-C16M136
2026-33-C16M143

2026-xx-C4M1xx



2026-23-C4M136
2026-25-C4M136
2026-33-C4M143

DIMENSIONS = $\frac{\text{MILLIMETERS}}{\text{(INCHES)}}$

Contact factory for custom configurations.

REV. 07/03

"MSP" is a registered trademark of Bourns, Inc.
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.