



Features

- Lead free versions available (RoHS compliant*)
- Overcurrent/lightning protection to BELLCORE GR-1089
- Typical application is secondary protection on telecom line cards
- UL497A recognition
- Thermal fuse links

4A12P-516-500 - Surge Line Protection Module

Electrical Characteristics

Resistance Value.....	50 Ω
Resistance Tolerance.....	$\pm 1\%$
TCR.....	100 ppm/ $^{\circ}\text{C}$
Ratio Tolerance.....	$\pm 0.5\%$
Temperature Range.....	-40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$

Physical Characteristics

Body Style	Dual In Line SMD - Twin Pack
Substrate Material	96 % Alumina
Lead Frame Material	Copper, solder coated
Flammability	Conforms to UL94V-0
Processability.....	Unit is only suitable for no-clean processing
Convection Reflow.....	Unit will withstand 260 $^{\circ}$, 20 seconds
Packaging	16 " diameter reels, 44 mm tape, 250 pcs./reel

Functional Characteristics (per Belcore GR-1089)

First Level Lightning Surge -

Resistors will remain within tolerance after testing.

1000 Volts Peak, 100 Amp Peak Current, Max. Rise/Min. Decay Time 10x1000 μs , 60 Seconds Between Pulses:	
Number of Pulses	25 each resistor each polarity

2500 Volts Peak, 500 Amp Peak Current, Max. Rise/Min. Decay Time 2x10 μs , 60 Seconds Between Pulses:	
Number of Pulses	10 simultaneous each polarity

First Level AC Power Fault -

Resistors will remain within tolerance after testing.

50 Vrms, 0.33 Amp Short Circuit Current: Duration.....	15 minutes
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100 Vrms, 0.17 Amp Short Circuit Current: Duration.....	15 minutes
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600 Vrms, 1.00 Amp Short Circuit Current: Duration.....	60 One-second pulses
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Second Level Lightning Surge -

Resistor package must fail safely causing no fire, electrical, or fragmentation hazard.

5000 Volts Peak, 500 Amp Peak Current, Max. Rise/Min. Decay Time 2x10 μs : Number of Pulses	1 simultaneous each polarity
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Second Level AC Power Fault -

Resistor package must fail safely causing no fire, electrical, or fragmentation hazard. Device will fail prior to Bussman MDQ 1-6/10 A fuse in series.

100 Vrms, 2.2 Amp Short Circuit Current: Duration.....	15 minutes
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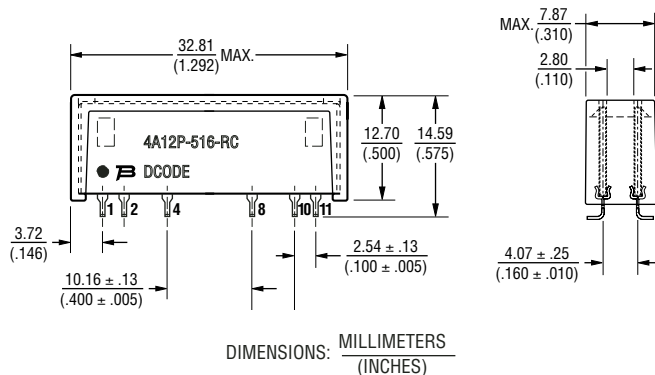
600 Vrms, 7 Amp Short Circuit Current: Duration.....	5 seconds
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250 Vrms, 25 Amp Short Circuit Current: Duration.....	15 minutes
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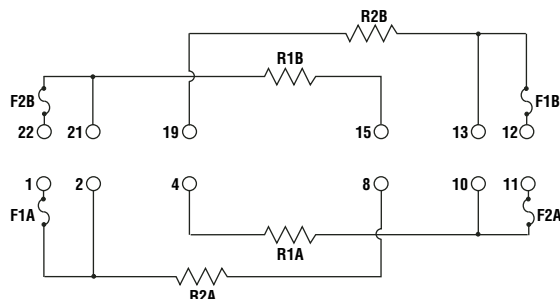
600 Vrms, 60 Amp Short Circuit Current: Duration.....	5 seconds
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*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

Product Dimensions



Electrical Schematic



How To Order

4A 12 P - 516 - 500 LF

Model _____
(4A = Surface Mount)

Number of Pins _____

Physical Configuration _____

Electrical Configuration _____
516 = Matched pair of resistors plus thermal fuse

Resistance Code _____
• 500 = 50 Ω

Lead Free Option _____
Blank = Standard Product
LF = Lead Free / RoHS Compliant Product



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REV. 06/06