



Features

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

4A12P-516-RC - Surge Line Protection Module

Electrical Characteristics

Resistance Value.....	50 Ω
Resistance Tolerance.....	±1 %
TCR.....	100 ppm/°C
Ratio Tolerance.....	±0.5 %
Temperature Range.....	-40 °C to +85 °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 °, 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

100 Vrms, 0.17 Amp Short Circuit Current:
Duration.....15 minutes

600 Vrms, 1.00 Amp Short Circuit Current:
Duration.....60 One-second pulses

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

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

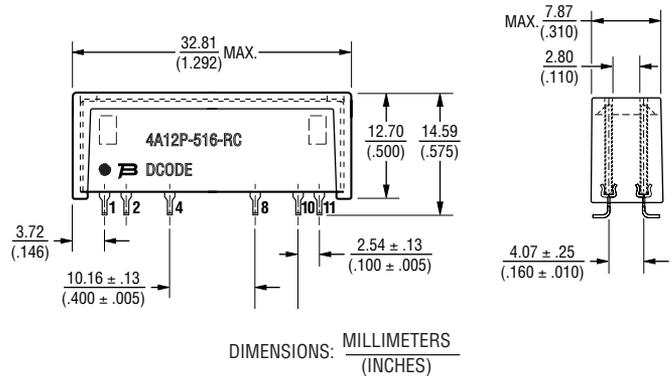
600 Vrms, 7 Amp Short Circuit Current:
Duration.....5 seconds

250 Vrms, 25 Amp Short Circuit Current:
Duration.....15 minutes

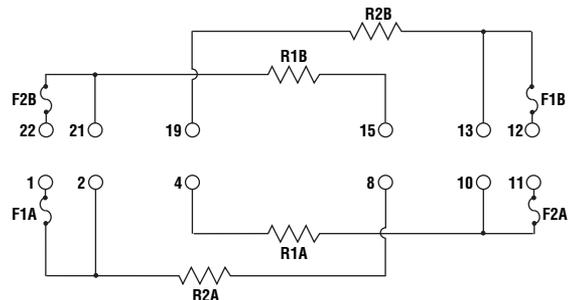
600 Vrms, 60 Amp Short Circuit Current:
Duration.....5 seconds

*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
• 300 = 30 Ω
• 200 = 20 Ω

RoHS Compliant Option _____
Blank = Standard Product
LF = RoHS Compliant Product

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