



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 Bellcore 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.

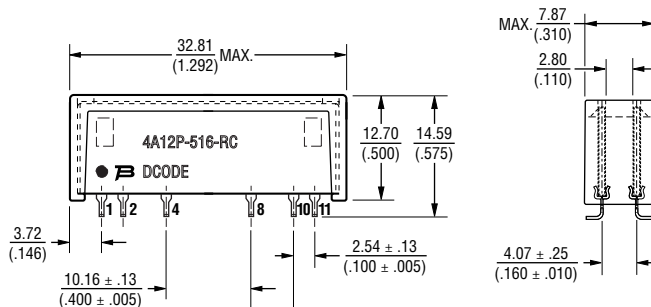
100 Vrms, 2.2 Amp Short Circuit Current:
Duration.....15 minutes

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

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

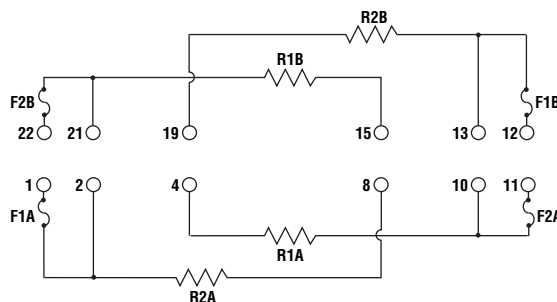
600 Vrms, 60 Amp Short Circuit Current:
Duration.....5 seconds

Product Dimensions



DIMENSIONS: MILLIMETERS
(INCHES)

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



WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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