

# BRAVO COMMUNICATIONS, INC.

## SURE/FIRE® MODEL RJ45SB DATACOM PROTECTOR

### Description

Bravo's Sure/Fire Model RJ45SB is an universal solid state RS-422/423/485 Serial DATACOM Protector that stops all forms of damaging voltage transients (spikes and surges) that are prevalent in typical differential serial cable environments. This unit provides protection on all 8 signals of its RJ45 connectors and comes packaged complete with both RJ45 and RJ12 patch cables for easy insertion directly into the serial interface port requiring protection. This close proximity protection at the source provides the fastest response times and avoids sneak through transients that can otherwise occur on exposed cable runs (antennae). The mass of copper cable segments exposed in a typical serial cable environment act as antennae for attracting (inducing) damaging lightning and electrostatic discharge (ESD) energy waveforms. This phenomena together with the sensitivity of low voltage differential signaling circuitry, severely exposes critical systems to the forces of electrical storms, ESD, induced transients, switching transients and various types of line faults.

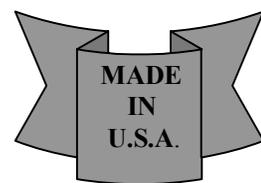
As part of Bravo's Sure/Fire DATACOM Protector Product Series, Model RJ45SB is designed as an in-line cable port protector with a built-in ground wire for diverting/shunting abnormal and excessive voltage transients.

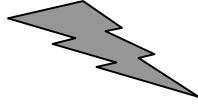
### Features

- ◆ Solid State protection on all 8 signal lines.
- ◆ Stops all bidirectional voltage transients greater than  $\pm 8$  volts.
- ◆ Unique Avalanche Diode Array protects from voltage transients greater than normal dataline interface signal levels @ 600 Watts of energy per line in less than a pico-second.
- ◆ High-Quality data signal design allows high speeds to 50 Mhz.
- ◆ Solid State circuitry stops all voltage transients repeatedly and then automatically resets itself.
- ◆ Compact protection in a shielded all metal enclosure.
- ◆ Protects all RJ11, RJ12 and RJ45 Serial Ports and shunts excess energy automatically via the attached 18 AWG ground wire.
- ◆ Every unit has passed a rigorous set of signal and functional tests.

### Benefits

- ◆ Universal Protection for up to 8-signal applications.
- ◆ Stops spikes and surges covering a complete range of voltage, current, waveform speed and pulse duration transients. Saves equipment and prevents downtime costs.
- ◆ Quick Response damaging energy sink to ground with precision.
- ◆ Negligible cable loading effect with with low capacitance won't disturb normal operation.
- ◆ Powerful enough to use for practically any application environment.
- ◆ Makes installation a snap for system integration where space is at a premium.
- ◆ Unit is bidirectional with RJ45 connector receptacles and comes complete with silver satin insertion patch cables.
- ◆ Fails short if overstressed sacrificing itself due to an extreme transient effectively disconnecting your unprotected equipment.





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There are Bravo DATACOM Protectors to protect all major network/equipment interfaces including RS-232/V.24, Parallel, DB9,DB15,DB25, Centronics, RJ modular, and terminal block.

Inquire at Bravo or your Bravo Distributor if you need more information regarding your specific protection requirements.

## Installation & Operation

- ◆ The Bravo RJ45SB Protector simply snaps into the DATACOM interface port of the equipment you wish to protect. You then attach the unit's ground wire ring terminal to a proper equipment chassis/earth ground. The chassis ground serves as a zero voltage reference that determines proper voltage clamping levels. Therefore, it is critical that you ensure the integrity of your ground connection and ground location.
- ◆ Normal RS-422/423/485 cable interface signals are allowed to flow passively through the Protector without interruption. If an abnormal voltage level is sensed, the Bravo RJ45SB will instantly activate and clamp the damaging voltage transient and divert it through its isolated ground wire to earth ground, thereby safeguarding your valuable equipment. Afterwards, the protector safely resets itself and assumes its normal guardian/watchdog operation.
- ◆ A RJ45SB is recommended for every RJ modular cable port you want to protect. Because damaging voltage transients can originate anywhere on a cable conductor or be induced through the cable jacket anywhere along the cable run path, only equipment ports having properly installed protectors will be safeguarded.

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## Transient Protection

- ◆ Unique diode array network of 600 watt avalanche diode energy dissipation per line in less than a pico-second response time.
- ◆ All interface signal lines are protected for universal RJ modular interface protection.
- ◆ High precision Automatically Resettable Solid State Technology on all signal lines.
- ◆ Clamping nominally @  $\pm 8.2$  Volts. Clamps both positive and negative voltage transients.
- ◆ Effectively disconnects the protected port in the event of an extreme overstress voltage transient event.

## Physical

- ◆ Weight: Approximately 2 ounces (0.06 kg.).
- ◆ Dimensions: 1.031"H x 2.600"W x 0.8125"D;  
26.187 mm H x 66.040 mm W x 20.638 mm D

## Environment

- ◆ Operating temperature: -20° to +80° C; -4° to 176° F.
- ◆ Relative Humidity: 0-90% (non-condensing).

## Certifications

- ◆ Meets or exceeds all applicable UL, FCC, NEC, CCITT, R.E.A. and worldwide standards.
- ◆ UL 94 V-0 transient voltage suppressors.

## Warranty

- ◆ 5-year limited warranty.

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