

USER MANUAL

MODEL 501LC Low Capacitance RS-232 Surge Protector



PATTON
Electronics Co.

Part# 07M501LC-A
Doc# 074061UA
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SALES OFFICE
(301) 975-1000
TECHNICAL SUPPORT
(301) 975-1007

1.0 WARRANTY INFORMATION

Patton Electronics warrants all Model 501LC components to be free from defects, and will—at our option—repair or replace the product should it fail within one year from the first date of shipment.

This warranty is limited to defects in workmanship or materials, and does not cover customer damage, abuse, or unauthorized modification. If this product fails or does not perform as warranted, your sole recourse shall be repair or replacement as described above. Under no condition shall **Patton Electronics** be liable for any damages incurred by the use of this product. These damages include, but are not limited to, the following: lost profits, lost savings, and incidental or consequential damages arising from the use of or inability to use this product. **Patton Electronics** specifically disclaims all other warranties, expressed or implied, and the installation or use of this product shall be deemed an acceptance of these terms by the user.

1.2 SERVICE

All warranty and nonwarranty repairs must be returned freight prepaid and insured to Patton Electronics. All returns must have a Return Materials Authorization number on the outside of the shipping container. This number may be obtained from Patton Electronics Technical Support at **(301) 975-1007**. *Packages received without an RMA number will not be accepted.*

Patton Electronics' technical staff is also available to answer any questions that might arise concerning the installation or use of your Model 501LC. Technical Service hours: **8AM to 5PM EST, Monday through Friday.**

2.0 GENERAL INFORMATION

Thank you for your purchase of this Patton Electronics product. This product has been thoroughly inspected and tested and is warranted for One Year parts and labor.

If any questions arise during installation or use of the unit, contact Patton Electronics Technical Support: **(301) 975-1007**; <http://www.patton.com>; or, support@patton.com.

2.1 FEATURES

- One male and one female DB-25 connector
- Maximum surge capacity of 1250 amps (8/20µs waveform)
- Capacitance of only 45pf per signal connection (line to line or line to ground)
- Silicon Avalanche Diode surge protection
- Protects against bi-directional—positive or negative—transients
- Fits into tight installation spaces
- Made in the USA

2.2 DESCRIPTION

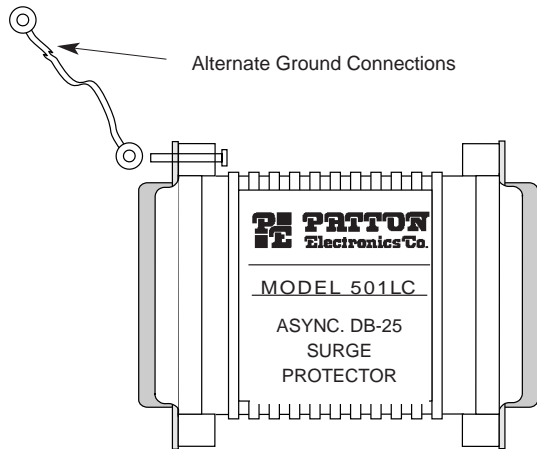
The Model 501LC low capacitance RS-232 surge protector provides **reliable transient protection**, while adding only 45pf of capacitance to each signal connection. This means that the Model 501LC appears to the system as several inches of cable, whereas a standard RS-232 surge protector can reduce the allowable cable distance by as much as 8%. The Model 501LC suppresses harmful transients—such as lightning induced energies, AC power induction and electrostatic discharge (ESD)—from either direction.

The Model 501LC uses Silicon Avalanche Diodes, which do not degrade over time with transient surge "hits" as do metal oxide varistors. Connecting directly to your equipment's RS-232 serial port, the Model 501LC protects pins 2-8, 11, 20, 22, 24 & 25 and guards against surges up to 1250 amps (8/20µs waveform) per line. If the Model 501LC receives a surge above its rating, all voltages will be sent directly to ground and your hardware will be protected. Measuring only 2.2" x 1.75" x 0.75", the Model 501LC fits into tight installation spaces. The Model 501LC is housed in an ABS plastic case and comes with one male and one female DB-25 connector.

3.0 INSTALLATION

The Patton Model 501LC is easy to install. The following instructions will clearly explain each step.

1. Look at your equipment's user manual to determine if the shell of the DB-25 connector is connected to frame ground of the equipment.
2. If there is any doubt that the shell of the connector is connected to frame ground, you should use the ground strap. Attach one end of the grounding strap to one of the connectors on the Model 501LC (see diagram, and the other end to frame ground.
3. Securely connect the Model 501LC between the incoming data cable and your equipment's I/O port. To obtain maximum protection, install Model 501LC at both ends of your RS-232 cable.



APPENDIX A

PATTON MODEL 501C SPECIFICATIONS

Case: Molded ABS (black) plastic

Interface: DB-25 to DB-25

Pins Protected: 2-8, 11, 20, 22, 24 & 25, pin 1 ground

External Power: None

Connectors: (2) DB-25s = 1 Male, 1 female

Max Continuous Operating Voltage: +/- 15 Volts

Clamp Voltage: 27 Volts @ 200amps (8/20 μ s)

Series Resistance: None

Surge Capacity: 1250amps 8/20 μ s waveform

Capacitance: (line-line or line-ground) 45pf per signal connection

Operational/Storage Temp: -55 to +100°C

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