

# USER MANUAL

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## MODEL 531 Ethernet (ThinNet) Surge Protectors



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Part# 07M531-B  
Doc# 074051UB  
Revised 12/18/96

SALES OFFICE  
(301) 975-1000  
TECHNICAL SUPPORT  
(301) 975-1007  
<http://www.patton.com>

## 1.0 WARRANTY INFORMATION

**Patton Electronics** warrants all Model 531 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: **(301) 975-1007**. **Notice:** 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 Patton Model Patton Model 531. 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](mailto:support@patton.com).

### 2.1 FEATURES

- Can handle large surges caused by storms, power outages, etc.
- Conforms to the IEEE 802.3 specification
- Provides separate connection to chassis ground for surge handling
- Easy to install
- Made in the U.S.A

### 2.2 DESCRIPTION

LANs are naturally susceptible to a host of lethal transient voltages, according to the IEEE 802.3 specification (see paragraph 8.7.2). That's why we designed the Model 531 series LAN surge protectors.

The Model 531 connects directly between incoming ThinNet data cables and LAN I/O ports. By shunting all threatening voltages to the chassis ground, the Model 531 ensures the integrity of the data in your LAN and protects connected equipment from lightning induced energies, AC power induction, electrostatic discharges and ground potential differences.

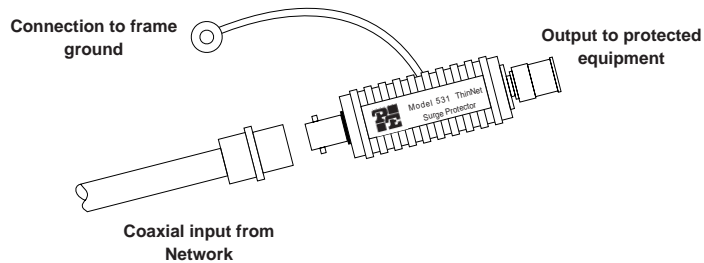
**Warning:** This product will not provide complete protection should your equipment or building be subject to a direct lightning hit.

### 3.0 INSTALLATION

Patton's Model 531 units are easy to install and should give you years of trouble-free service. Here are a few simple instructions to help you get things hooked up right:

#### Standard Model 531 MF:

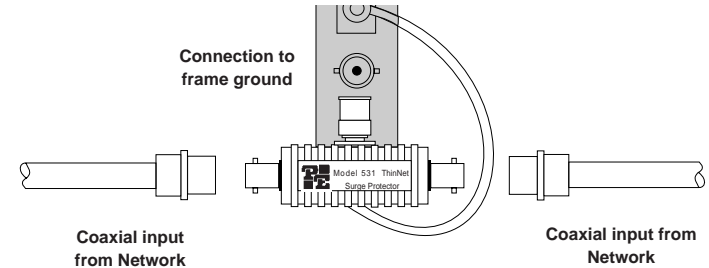
1. Unplug (disconnect) the existing connection between the coaxial cable and the equipment I/O port.
2. Install the Model 531 between the incoming coax line and the protected equipment (see below). Place the surge protector as close as possible to the device being protected.
3. Connect the braided ground strap directly to a frame ground connection on the protected device. If you are unsure where to locate a frame ground connection on your equipment, consult the equipment's user manual or contact the manufacturer—the ground connection is critical for proper operation of the Model 531.



#### T-Splitter Model 531 MFF:

1. Remove the existing T-splitter from the Network Interface Card and disconnect the coaxial cables.
2. Install the Model 531 directly on the Network Interface Card and reattach the coaxial cables.

3. Connect the braided ground strap directly to a frame ground connection on the protected device. If you are unsure where to locate a frame ground connection on your equipment, consult the equipment's user manual or contact the manufacturer - the ground connection is critical for proper operation.



APPENDIX A

**PATTON MODEL 531 SPECIFICATIONS**

<b>Interface:</b>	Ethernet (IEEE 802.3, ThinNet) BNC coaxial
<b>Size:</b>	2.0" long x 1.0" diameter
<b>Circuit:</b>	Bipolar, solid state protection on BNC connectors
<b>Response Time:</b>	Less than 5 nanoseconds.
<b>Input Capacitance:</b>	18 pF
<b>Clamp Voltage:</b>	25 volts at 100A (8/20 $\mu$ waveform )
<b>Surge Capacity:</b>	400A (8/20 $\mu$ waveform )
<b>Energy Handling:</b>	1.5 Kilowatts per wire
<b>Transfer Loss:</b>	-.05dB at 100 MHz
<b>Return Loss:</b>	-17dB @ 100MHz
<b>Group Delay:</b>	None, 1 MHz to 100 MHz
<b>Series Resistance:</b>	None
<b>Max Signal Rate:</b>	> 10 Mbps
<b>Grounding:</b>	External connection provides separate unit-ground to chassis-ground contact
<b>Operational/Storage Temperature:</b>	-55 to +100°C

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