USER MANUAL

TS Series (Model 52X)
Terminal Strip
Surge Protectors
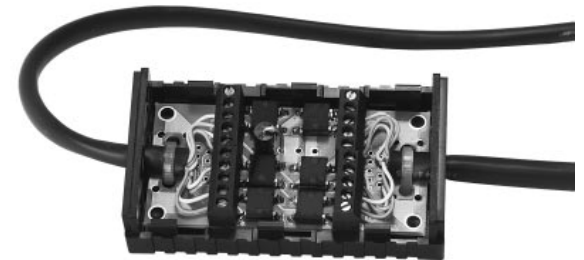
PATTON
Electronics Co.

1.0 WARRANTY INFORMATION

Patton Electronics warrants all 52X-TS Series 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.

1.1 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**; **http://www.patton.com**; or, **support@patton.com**.

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 Model 52X. Technical Service hours: **8AM to 5PM EST, Monday through Friday.**

1.2 CE NOTICE

The CE symbol on your Patton Electronics equipment indicates that it is in compliance with the Electromagnetic Compatibility (EMC) directive and the Low Voltage Directive (LVD) of the Union European (EU). A Certificate of Compliance is available by contacting Technical Support.

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 during installation or use of the 52X-TS, contact Patton Electronics Technical Support: **(301) 975-1007**; **http://www.patton.com**; or, **support@patton.com**.

2.1 FEATURES

- Choose from 2, 4, 6, 8 or 10-wire Terminal Strip configurations
- Clamping voltages for RS-232, RS-422, RS-485, Token Ring or Ethernet (Call for custom options).
- Supports asynchronous or synchronous data rates up to 20 Mbps
- Strain relief straps hold wires firmly in place
- Surge handling capacity of 1500 Watts
- Surge energy is diverted to ground through braided metal strap
- Screw terminals terminals are available for 18 - 28 AWG
- Made in the U.S.A.

2.2 DESCRIPTION

The Patton 52X-TS Series of terminal strip surge protectors lets you design a custom surge protector to fit just about any 2, 4, 6, 8 or 10-wire application. To design your custom surge protector, specify the number of lines you need protected. Then, specify the clamping voltage (for example, 18V for RS-232, or 7.5V for RS-422, RS-485, Token Ring or Ethernet) that is optimal for your application. Each surge protector comes with input/output terminal strips and strain relief straps. Simply attach your stripped wires to the surge protector and terminate the ends with whatever connectors you choose. See Section 3.0 for installation details.

The Patton 52X-TS Series provides reliable, transparent protection at data rates up to 20 Mbps, so you can be confident using these protectors in a wide variety of Local Area Networks (LANs), Wide Area Networks (WANs), and data communications environments. Surge energy is intercepted by a solid state hybrid circuit and diverted safely to chassis ground through a braided metal strap. The 52X-TS Series can handle repeated surge hits up to 1.5 k Watts without degrading its performance.

Each Patton 52X-TS Series protector is equipped with a heavy duty braided metal strap to shunt harmful over-voltages safely to ground. It is housed in a sturdy, flame retardant plastic case (UL94-5V flame rating).

Warning: Should your equipment or building be subject to a direct lightening strike, this product **will not** provide complete protection.

3.0 INSTALLATION

This section tell you how to open the case, how to connect the bare wires to the terminal blocks, and how to fasten the strain relief strap to secure the wires.

Make sure you follow the installation instructions exactly. If the suppressor is improperly installed, the current limiting feature could be rendered inoperable. If you have any question as to how your hardware is grounded, consult the manufacturer's user manual(s).

1.   Open the case by inserting a screwdriver into the side of the case opening and gently turn the screwdriver. The case will pop open. Once the case is open, you will see the terminal blocks.
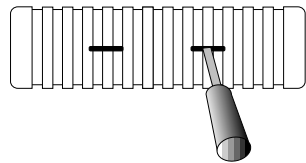
Figure 1. Opening the 52X-ST Case

2.   As show in Figure 2, strip the outer insulation from the wires about 1 inch from the end.
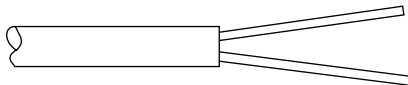
Figure 2. Stripping the 52X-ST Outer Insulation

3.   Strip off the insulation on each of the wires about 0.25 inches (.6 centimeters).

4.   Place the cable through the end plate and under the cable tie installed on the board. Make a small loop in the cable using the cable ties provided, to hold the loop in place. Tighten both cable ties. Figure 3 below shows the correct connection.
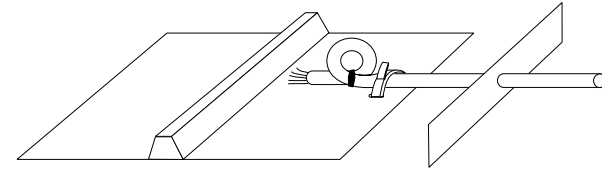
Figure 3. Installing the 52X-TS Cable

5.   Connect the wires to the terminal blocks. Use Figure 4 to ensure that each wire of the 52X-TS is connected to the correct corresponding pin number on the opposite side of the protector. Also shown in Figure 4 is the proper wire pairing for the 52X-TS.
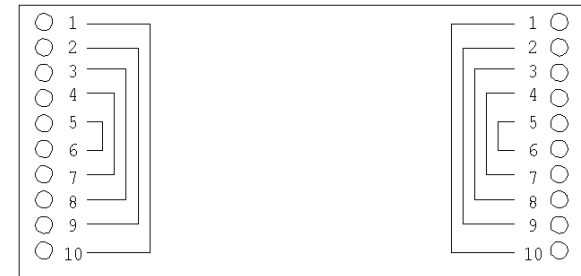
Figure 4. 52X-TS Differential Pairing and Pin Numbers

APPENDIX A

MODEL 52X-ST SPECIFICATIONS

Interface: RS-232, RS-422/485, Ethernet, Token Ring

Connectors: Terminal Strip

Wires Protected: 2, 4, 6, 8 or 10

Surge Capacity: 400A (8/20 µS)

Clamp Voltage: Residual surge[†] @ 2 kV (1.2/50µS), 1 kA
                          (8/20µS wave form [105 volts])

Maximum Speed: 20 Mbps

Construction: UL94-5V rated flame-retardant plastic

Size: 3.0" (7.62cm) x 1.67" (4.24cm) x .8(2.03cm)

Relative Humidity: 5 to 95%, noncondensing

Temperature: -40 to +85°C (-40 to +185°F)

[†]   Residual surge is a special term defined by the IEEE and
       NEMA to replace the term "clamp voltage."