

## LEONICS®

## TVSS ⚡ TVSS POWER STRIP

### TPS-series

Power Line and Signal Surge Protector



Authorized Distributor

LEN.MAN.SUR.128 Rev.1.00/2007

## TVSS Power Strip TPS-series Power Line and Signal Surge Protector

### SAFETY INSTRUCTIONS

Please read carefully and follow this LEONICS TPS-series Power Line and Signal Surge Protector guide.

**Important:** Please keep this manual for reference in order to use the TPS-series Power Line and Signal Surge Protector properly and safely. This user's guide contains instructions for installation and operation and part descriptions.

If there are any symptoms of problems which are not mentioned in this guide or any queries, please contact your LEONICS local distributions, LEONICS Service Center, send e-mail to support@leonics.com or visit www.leonics.com.

For your convenience and quick reference for LEONICS TPS-series Power Line and Signal Surge Protector service, please fill the requested information in the blanks below.

LEONICS TPS model : \_\_\_\_\_  
 Serial number : \_\_\_\_\_  
 Purchase date : \_\_\_\_\_  
 Purchase from : \_\_\_\_\_

- 1.1 Read this TPS-series user's guide carefully before installation and operation.
- 1.2 The TPS-series TVSS, which is mentioned in this user's guide, is designed for single phase electricity system only.
- 1.3 To achieve the maximum performance, the TVSS must be connected to

a grounded electrical outlet to work properly. Connecting to non-grounded electrical outlet, the TVSS will not be able to properly protect your electrical equipments.

- 1.4 The TPS-series TVSS is for indoor use only. Install the TVSS in dry place with good ventilation, low humidity, no chemical particles and no inflammable substances. Avoid installing the TVSS near radio transmission station, heat dissipation equipments or directly to sunlight.

### INTRODUCTION

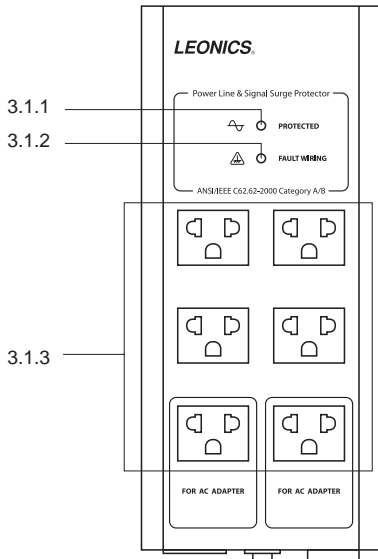
Natural phenomena such as thunderstorm, lightning and the START-STOP of the high power motorized equipment such as air conditioner, washing machine, printer, all are the common causes of transient voltage or surge. It can be considered a transient with voltage levels greater than 2,000 V and current levels greater than 100 A within 1 - 10 microseconds. The effects of surge cause electronic equipment and telecommunication equipment damage, operate incorrectly, shorten their equipment lives f or lose data.

LEONICS TPS-series Power Line and Signal Surge Protector is a transient voltage surge suppressor (TVSS) or surge protector which reduces voltage of medium transient surge, filters noise in building cables and protects transient surge which induced into data cables and signal cables such as telephone cable, ADSL cable, LAN cable, RS-232 cable, RS-485 cable and etc. It is applicable for location in Category A and B for indoor point outlets or specific electrical equipment.

- Feature**
- 6 surge protection outlets and 2 surge protection channels for communication or network system
  - LED indicators show operating status
  - Accordance with ANSI/IEEE C62.41-1991 and ANSI/IEEE C62.42-2000
  - Compact, light weight and easy to install

# FRONT PANEL AND COMPONENTS

## 3.1 Front panel



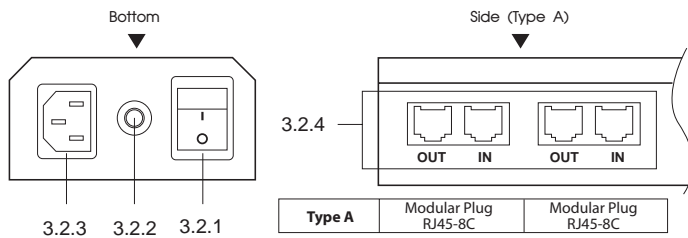
- 3.1.1 **PROTECTED:** Indicates that the TPS-series TVSS is operating normally.
- 3.1.2 **FAULT WIRING:** Indicates that the electrical outlet is not properly grounded or the line-neutral is reversed.

Table 1 shows relationship of LED indicators and operating status

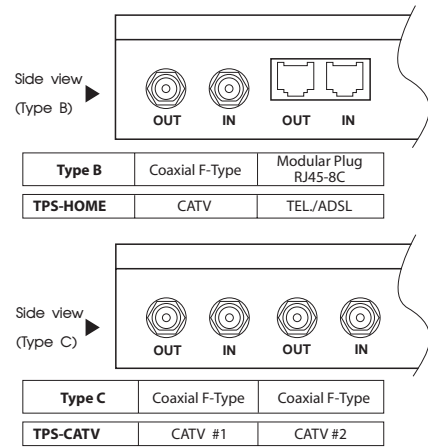
LED indicators		Operating status
PROTECTED	FAULT WIRING	
ON	OFF	The TVSS provides maximum surge protection.
ON	ON	The TVSS can not provide maximum surge protection because of your electrical outlet is not properly grounded or the line-neutral is reversed.
OFF	ON	- The TVSS has sacrificed to protect your electrical equipment. - Line-neutral reversal or poor ground connection.
OFF	OFF	The TVSS has sacrificed to protect your electrical equipment.

- 3.1.3 **Output Outlet:** 6 surge protection outlets for connecting to electrical equipment.

## 3.2 Side and rear panel



Type A	Modular Plug RJ45-8C	Modular Plug RJ45-8C
TPS-RS232	RS232C#1	RS232C#2
TPS-RS425	RS422 / RS485#1	RS422 / RS485#2
TPS-LAN	LAN #1	LAN #2
TPS-TEL	TEL. LINE #1	TEL. LINE #2
TPS-ISDN	ISDN #1	ISDN #2
TPS-DSL	DSL #1	DSL #2
TPS-ADSL	ADSL	TEL./ADSL
TPS-HDSL	HDSL #1	HDSL #2
TPS-PLC	PLC #1	PLC #2
TPS-DATA	DATA #1	DATA #2
TPS-SOHO	LAN	TEL./ADSL
TPS-MFG	RS422 / RS485#1	RS232C



- 3.2.1 **ON/OFF switch:** The switch to turn on and turn off TPS-series TVSS.
- 3.2.2 **Overload protector:** Over current or short circuit protection component; press the button to reset when the pin tripped.
- 3.2.3 **AC INPUT:** The power socket for plug in the input power cord.
- 3.2.4 **Signal Surge Protector:** The sockets for protecting transient surge from telephone cable, antenna, data cable and etc.; Different model provides different socket types, notice the caption below each socket.

## INSTALLATION

### 4.1 Installation

- 4.1.1 Turn off all electrical equipment.
- 4.1.2 Connect signal cables (such as telephone lines, LAN cable, antenna cable or coaxial cable) into Signal Surge Protector sockets at the side of TPS-series TVSS as below
  - IN: The socket to connect input signal cable.
  - OUT: The socket to connect signal cable which are protected to telephone, facsimile machine, modem, ADSL/ISDN/HDSL/DSL devices or CATV devices.
- 4.1.3 Plug the power cord from your electrical equipments into the TVSS output outlets.
- 4.1.4 Plug the TVSS into the grounded electrical outlet only.

**Note:** To achieve the maximum performance, the TVSS must be connected to a grounded electrical outlet to work properly. Connecting to non-grounded electrical outlet, the TVSS will not be able to properly protect your electrical equipments.

### 4.2 Turn on and turn off TPS-Series

- 4.2.1 Turn on ON/OFF switch. PROTECTED indicator will be lit.
- 4.2.2 Turn on all connected electrical equipment.
- 4.2.3 To turn off the TPS-series TVSS, turn off then turn off ON/OFF switch.

## TROUBLESHOOTING

Symptoms	Possible causes	Solutions
PROTECTED indicator is lit, but electrical equipment do not work. Overload protector tripped.	The connected electrical equipment are exceed the TVSS's capability.	1. Disconnect some electrical equipment. 2. Reset overload protector. 3. If the symptom persists, contact our service center.
PROTECTED and FAULT WIRING indicators are lit.	Line-neutral reversal or poor ground connection.	Contact a qualified electrician to inspect and correct the wiring and grounding problem.
PROTECTED indicator is OFF but FAULT WIRING indicator is it.	The TVSS has sacrificed to protect your electrical equipment.	The TVSS has to be replaced. Please contact service center.