

**INSTALLATION INSTRUCTIONS**  
**MODEL: ST-PDBn-xx-v**

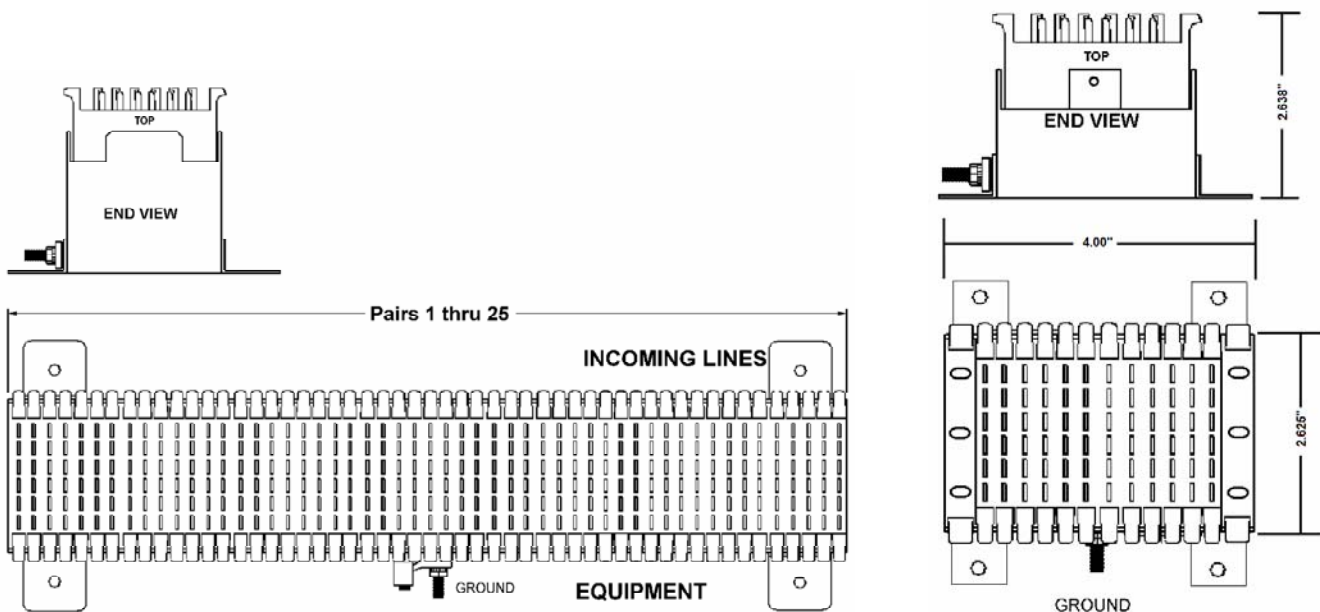
**WARNING - HAZARDOUS VOLTAGES MAY BE PRESENT.** Improper installation may result in serious injury to the installer and/or damage to the electrical system or connected communication equipment. Read all instructions before beginning the installation. Safety equipment must be used as prescribed by OSHA, whenever working around hazardous voltages.

**Failure of unit and/or consequential equipment damage due to improper installation or misapplication is not covered by the product warranty.**

Voltage measurements, data transmission rates and **installation must be completed by a certified technician** in accordance with the National Electric Code, State, and Local codes. The National Electric Code, State and Local Code requirements supersede this instruction.

**POWER MUST BE REMOVED FROM THE ELECTRICAL SYSTEM BEFORE INSTALLING THE S-PDBn-xx-v SERIES TELEPHONE UNIT.**

**PICTORIAL CONNECTION DIAGRAM**



**BEFORE INSTALLATION**

Prior to installation of the S-PDBn-xx-v series unit:

- **1** – Test system to verify that the voltage and current do not exceed the Maximum Continuous Operating Levels listed in the table below.
- **2** – Actual measurement with an oscilloscope, or verification through review of 'as installed' equipment specifications may be sufficient to establish compliance.
- **3** – **If the circuit exceeds Maximum Continuous Operating Levels in voltage and/or current, do not proceed with the installation!**

The S-PDBn-xx-v series devices are designed to protect standard voice grade telephone lines. These devices are intended for installation at the telephone demarcation point so as to allow for a common grounding point.

There are no position-oriented components in the S-PDBn-xx-v series units; therefore, the devices can be mounted upside down or sideways to allow for the most efficient installation.

Version:	Models Numbers:	Description of Available Models:
Sequence >	ST-PDBn-xx-v	See 6-pair and 25-pair Versions Below: 'n' = either 6 or 25
1	ST-PDB6	6 Pair Telephone, 130V, Punch Block Connected
2	ST-PDB6-T1	4 Pair Telephone & 1 (2-pair) 4-wire T-1, 130V, Punch Block Connected
3	ST-PDB6-A-33	6 Pair Alarm Circuit Device, 33V, Punch Block Connected
4	ST-PDB6-D-33	6 Pair Data Line Device, 33V, Punch Block Connected
1	ST-PDB25	25 Pair Telephone, 130V, Punch Block Connected
2	ST-PDB25-T1	23 Pair Telephone and One 4-wire T-1, 130V, Punch Block Connected
3	ST-PDB25-A-33	25 Pair Alarm Circuit Device, 33V, Punch Block Connected
4	ST-PDB25-D-33	25 Pair Data Line Device, 33V, Punch Block Connected

**Notes:** 'xx' = Description feature (above), & 'v' = Feature voltage.

**Table of Maximum Continuous Operating Limits**

Model Types	Maximum Continuous Operating Voltage	Maximum Continuous Operating Current	Maximum Data Rate
1 & 2	130 Vrms	5 A	100 kbits/sec
3 & 4	36 Vrms	5 A	100 kbits/sec
2- (T1 pins only)	130 Vrms	500 mA	2 Mbps

## INSTALLATION STEPS

**CAUTION: Do not proceed further until power has been removed from the electrical system.**

### STEP 1: Mounting the Unit

- Mechanically mount the suppressor using the mounting feet at the ends of the device.
- The device should be mounted for maximum separation between protected and unprotected wiring.
- The device contains no direction-oriented components and can be mounted in any position.
- The device should be the last device placed in the circuit before the protected equipment.
- The device should be mounted at, or as close as practical to the phone company demarcation point.

### STEP 2: Wiring the Unit

- Connect a ground wire (#6-12 AWG) from ground lug to System ground.
- Connect the incoming line 1 TIP (or 1<sup>st</sup> Alarm) wire to the first INPUT Punch Down Block (PDB) terminal with a PDB tool (or press a 0.25" stacon female down on top of the 1<sup>st</sup> IDC.).
- Connect the outgoing line 1 TIP (or 1<sup>st</sup> Alarm) wire to the first OUTPUT PDB terminal directly across from the first INPUT PDB terminal, as above.
- Connect the incoming line 1 RING (or 2<sup>nd</sup> Alarm) wire to the second INPUT PDB terminal, as before.
- Connect the outgoing line 1 RING (or 2<sup>nd</sup> Alarm) wire to the second OUTPUT PDB terminal directly across from the second INPUT PDB terminal, as above.
- Continue the INPUT and OUTPUT connections for successive conductors for all remaining lines.

### STEP 3: Restart the system and check for proper operation.

- The Telephone (or Alarm) System may require recalibration due to the additional resistance of the suppressor on the line. If, upon installation of the surge suppressor, the telephone (or alarm) system does not operate properly, remove the suppressor and contact: Energy Control Systems at: 817.483.8497