

# Surge Protective Devices



## STC-SLAC Series

## Safety Information

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### Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

### **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

### **CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

### **NOTICE**

**NOTICE** is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

### Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Appleton Grp LLC d/b/a Appleton Group for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

## Introduction

The **STCSLAC12036** surge suppressor is specifically designed for electronic instruments used by the water/wastewater industries. It combines hybrid AC power protection and signal line protection in a NEMA-4X polycarbonate enclosure.

### **DANGER**

#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH**

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E, NOM-029-STPS or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors and covers before turning on power to this equipment.
- This equipment must be effectively grounded per all applicable codes. Use an equipment-grounding conductor to connect this equipment to the power system ground.
- Confirm that the Surge Protective Device voltage rating on the module or nameplate label is not less than the operating voltage.
- On DC signal line protection do not apply more than 150mA
- On AC line protection do not apply more than 15 Amps of continuous current.

**Failure to follow these instructions will result in death or serious injury.**



**WARNING:** This product can expose you to chemicals including DINP, which is known to the State of California to cause cancer, and DIDP which is known to the State of California to cause birth defects or other reproductive harm. For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### **NOTICE**

#### **LOSS OF SURGE SUPPRESSION**

- Make certain that Surge Protective Device is disconnected from the circuit it is protecting before conducting high potential insulation testing.

**Failure to follow these instructions can result in equipment damage.**

## Installation

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Confirm that the unit has the same voltage rating and configuration as the power system voltage and power system voltage to which it will be connected.

### For AC Power Connections:

- a. Connect AC Power as Marked on Case using #14 - #12 AWG wire (L, N, G). Torque to 12 lb-in (1.35 N-m).
- b. Keep 120 VAC Power feed separate from Low Voltage signal feed.

### For Signal Line Connections:

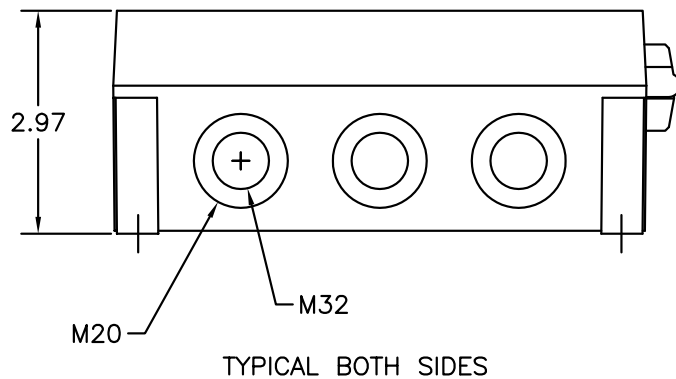
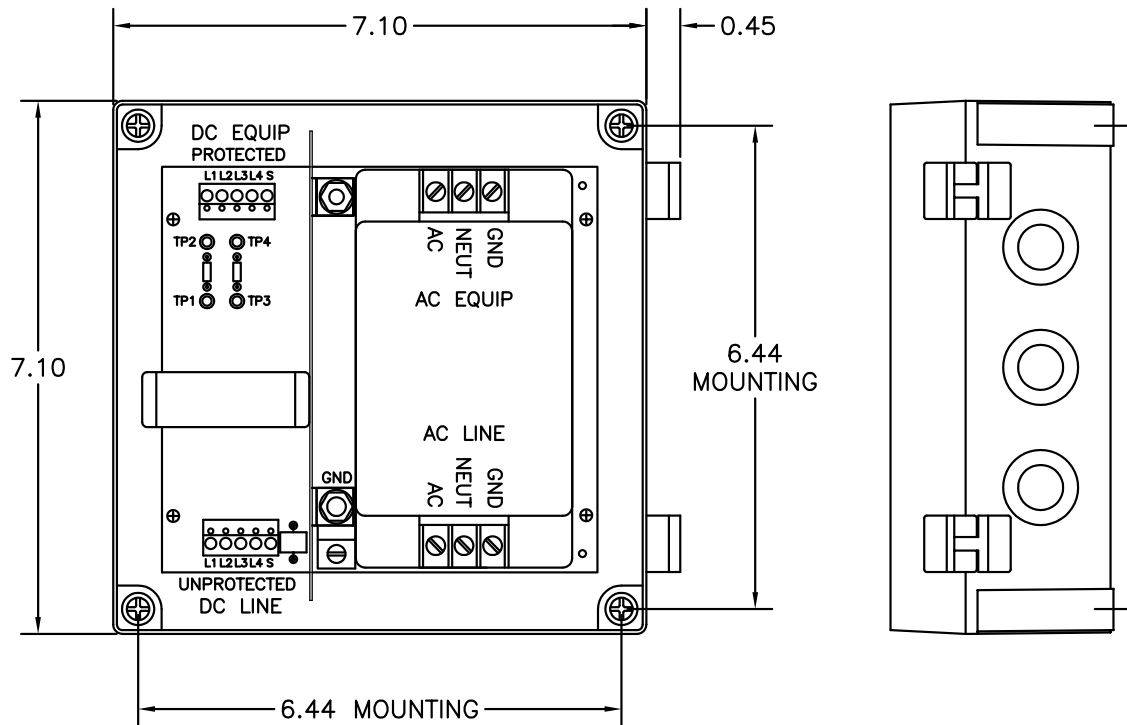
- a. Connect GND Terminal to Local Ground using #12 AWG wire minimum. Torque to 12 lb-in (1.35 N-m).
  - b. L1 and L2 – Connect for Signal Pair #1.
  - c. L3 and L4 – Connect for Signal Pair #2.
  - d. Terminals accept #24 - #14 AWG wire, torque to 3.47 lb-in (0.4 N-m).
3. Replace the barrier, cover/door and/or trim to the equipment.
  4. Equipment may be re-energized after all the above steps are complete.

**Figure 1: STCSLAC12036 Power Flow**



**The STCSLAC12036 is a directional surge protector. Connection must flow “in” the Unprotected (Field) Side, through the SPD, and “out” to the Protected (Equipment) Side.**

**Dimensions (in. / mm.)**



**Enclosure Dimensions (in. / mm.)**

Enclosure Type	H	W	D
NEMA 4X Polymeric (Standard)	7.0 (178.0)	7.0 (178.0)	3.0 (76.0)

## General Technical Specifications

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### AC Power Protection

<b>Operating Voltage</b>	120 VAC, 47-63 Hz	
<b>Clamping Voltage</b>	Normal Mode (L-N)	Common Mode (L-G) (N-G)
<b>IEEE C62.41.2 Cat A Ringwave (6kV / 200A)</b>	172 V	280 V
<b>IEEE C62.41.2 Cat B Ringwave (6kV / 500A)</b>	205 V	280 V
<b>IEEE C62.41.2 Cat B Combo Wave (6kV / 3kA)</b>	330 V	360 V
<b>Maximum Operating Current</b>	15 A	
<b>Peak Surge Current</b>	39 kA (8x20 $\mu$ s)	
<b>SPD Technology</b>	MOV/Inductor/Capacitor	
<b>EMI Attenuation</b>	>40dB (100kHz - 100MHz)	

### Signal Line Protection

<b>Operating Voltage</b>	0-36 VDC
<b>Maximum Operating Current</b>	150 mA (0.15 A)
<b>Peak Surge Current</b>	10 kA (8x20 $\mu$ s)
<b>SPD Technology</b>	GDT/PTC/SAD
<b>Series Resistance</b>	5 Ohm (Typical)

## Technical Support

Website: [www.solahd.com](http://www.solahd.com)

Technical Support E-Mail: [solahd.technicalservices@emerson.com](mailto:solahd.technicalservices@emerson.com)

Toll-Free: (800) 377-4384

USA: (847) 268-6651

## Warranty

Please see the “Terms & Conditions of Sale” document.

While every precaution has been taken to ensure accuracy and completeness in this manual, Appleton Grp LLC d/b/a Appleton Group assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

## STC-SLAC Series

A272-340 Rev. 0 12/2020

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