

Surge Protective Devices



STC642 Series

Safety Information

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 SolaHD STC642036 Series surge protective device, (SPD) is a two-pair (four or five wire) module implementing three-stage hybrid technology. This SPD addresses overvoltage transients with gas tubes and silicon avalanche components. In addition, sneak and fault currents are mitigated with self resettable fuses (PTCs). The PTCs increase resistance several orders of magnitude when over-currents exceed certain levels. A normal state resumes when over-currents are removed. The ability to self-restore in this manner significantly increases suppressor performance and survivability.

The STC642036 is gold-plated, double sided and is designed to mate with the gold-plated female terminal connector base. When snapped together, the data circuits “pass thru” the protector in a serial fashion from the four “Field Side” terminals to the four “Equipment Side” terminals. Terminals 1 or 10 of the base must be attached to Building- Approved Ground.

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.
- This equipment must be installed inside an enclosure and located so, as to prevent accidental contact with terminals during maintenance or servicing.
- Do not place this product in service on any line capable of supplying more than 150 mA continuously.

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.

NOTICE

HAZARD OF MIS-INSTALLATION

- Only install this protective device in indoor applications and on communication loop circuits which have been isolated from the public switch telephone network (PSTN).
- Do not expose the communication loop to contact with the electric light or power conductors.
- Install the protectors as per the applicable requirements of the National Electric Code, ANSI/NFPA 70.
- DO NOT daisy chain grounds. Ground connections are not for shield termination. Install ground in accordance with all applicable codes.

Failure to follow these instructions can result in equipment damage.

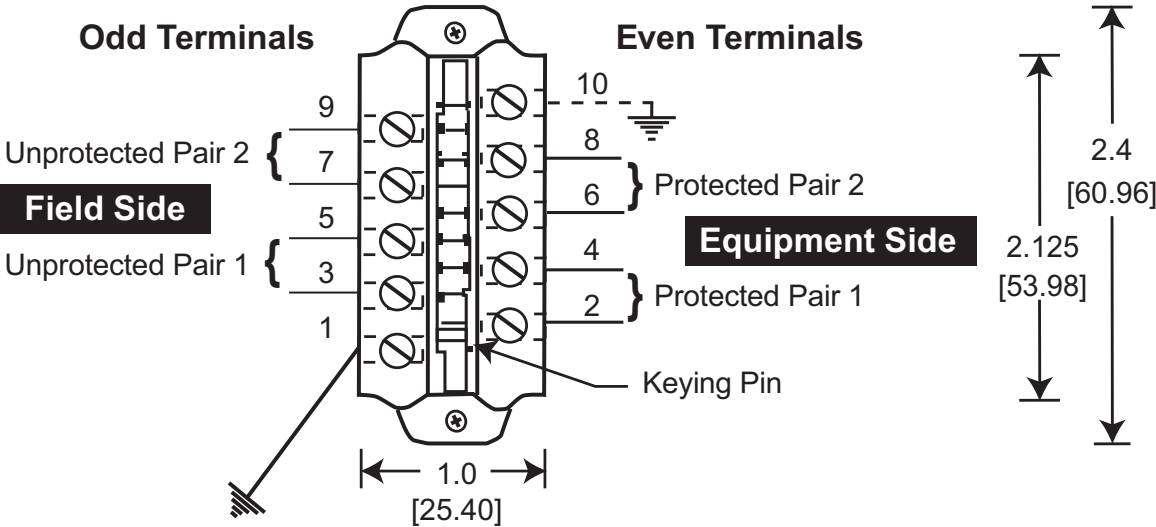
Installation

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Mount the base in desired location, preferably as close to load equipment as possible and in close proximity to a building approved grounding point using (2) #4 screws.

Refer to Figure 1 for steps 3–5:

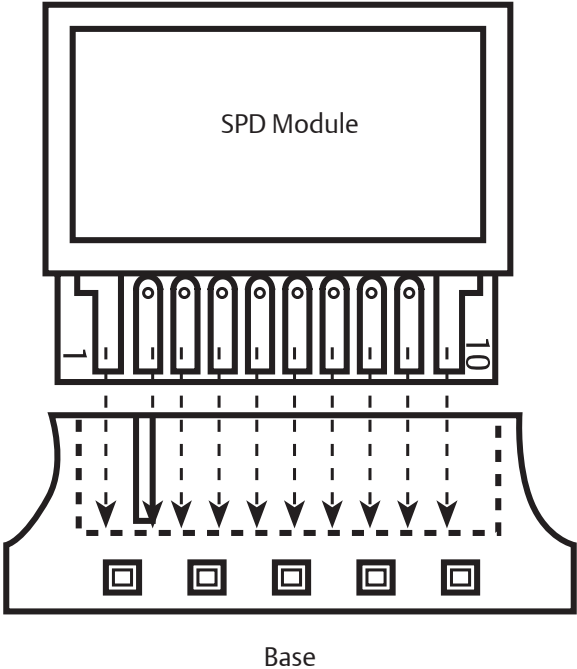
3. Attach field side pairs (26-10 AWG) to positions 3/5 and 7/9. Torque wires to 7 in-lbs [0.8 N-m].
4. Attach equipment side pairs (26-10 AWG) to positions 2/4 and 6/8. Torque wires to 7 in-lbs [0.8 N-m].
5. Attach ground wire (10 AWG) to positions 1 or 10 on base. Torque wire to 7 in-lbs [0.8 N-m].
6. Insert the module into keyed base. See Figure 2.
7. Replace the barrier, cover/door and/or trim to the equipment.
8. Equipment may be re-energized after all the above steps are complete.

Figure 1: Base Terminal Assignments (Dimensions: in./[mm])



Ground Terminal 1 or 10 to Building Approved Ground (preferably AC Power ground)

Figure 2: Plug SPD Module into base.



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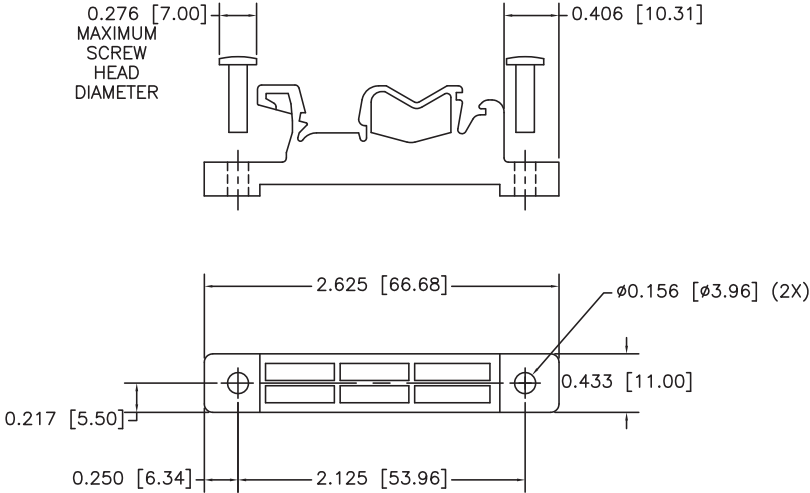
General Technical Specifications

Operating Voltage	36 VDC
Breakdown Voltage	43 VDC
Operating Current	0.15 A
Peak Surge Current	10 kA (8 x 20 μ s)
Frequency Range	0 to 20 MHz
Insertion Loss	< 0.1 dB at 50 MHz
SPD Technology	GDT, SAD, with Series PTC
Connection Type	Terminal Block with mechanical lugs Terminals accept up to 10 AWG
Operating Temperature	-40°C to +85°C
Dimensions (in./[mm])	2.0 x 1.0 x 2.5 in. [50.8 x 25.4 x 63.5 mm] (SPD module + Base)
Weight (oz/[kg])	1 oz [0.03 kg]
Certifications	UL 497B
Limited warranty	5 Years

Model Reference

Model	Application
STCDRS036	36 VDC (5–36 VDC Operating Voltages) 3 Stage L-L & L-G Hybrid Base is included.
Accessory	
STC642DINKIT	DIN Mounting Kit for STC642 Series

STC642DINKIT



Technical Support

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USA: (847) 268-6651

Warranty

Please refer to 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.

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