



Model 175

## 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 ASCO Power Technologies 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 **ASCO Model 175** 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 Model 175 is gold-plated, double sided and is designed to mate with the ASCO PCB1BWKEY gold-plated female terminal connector (included). 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 ASCO PCB1BWKEY accessory 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](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.**

## ⚠ DANGER

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

- These protectors are intended for indoor use on communication loop circuits which have been isolated from the Public Switch Telephone Network.
- 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 will result in death or serious injury.**

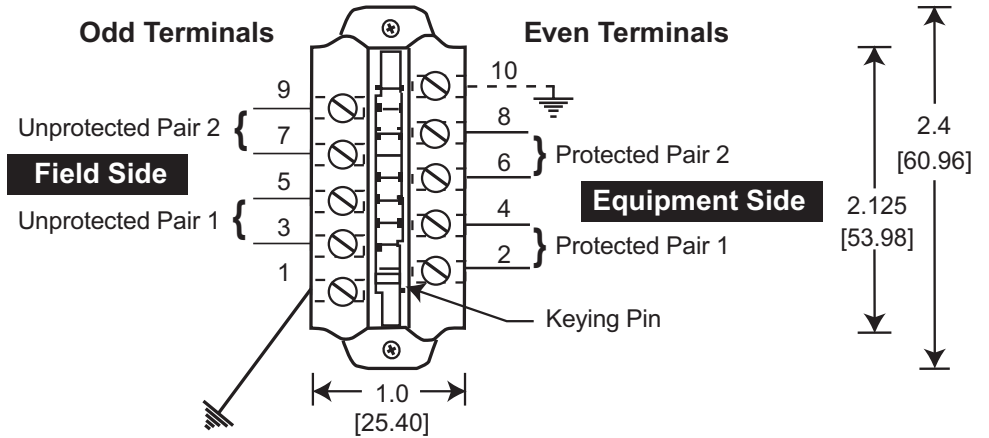
## Installation

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Mount base PCB1BWKEY 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 Drawing 1 for steps 3-5:

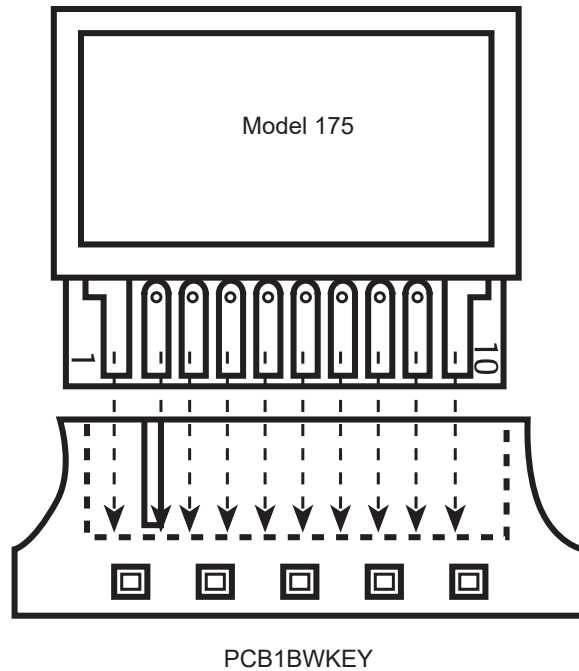
3. Attach field side pairs (26-10 AWG) to positions 3/5 and 7/9. Torque wires to 7 in-lbs [0.8 N-m].
4. Attach equipment side pairs (26-10 AWG) to positions 2/4 and 6/8. Torque wires to 7 in-lbs [0.8 N-m].
5. Attach ground wire (10 AWG) to positions 1 or 10 on base. Torque wire to 7 in-lbs [0.8 N-m].
7. Insert 175 module into keyed PCB1BWKEY base. See Drawing 2.
8. Replace the barrier, cover/door and/or trim to the equipment.
9. Equipment may be re-energized after all the above steps are complete.

**Drawing 1:** PCB1BWKEY Accessory Terminal Assignments  
(Dimensions: in. / mm.)



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

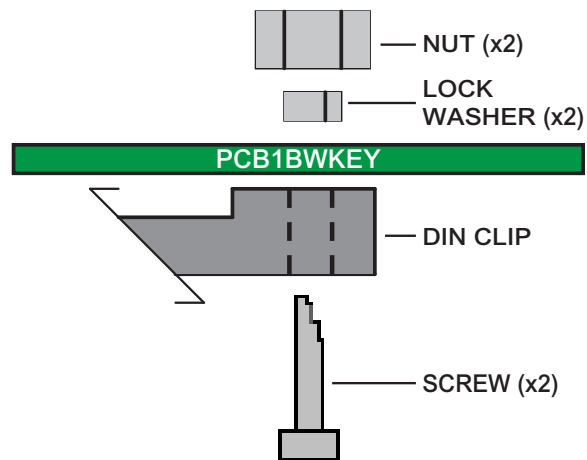
**Drawing 2:** Plug Model 175 into PCB1BWKEY base.



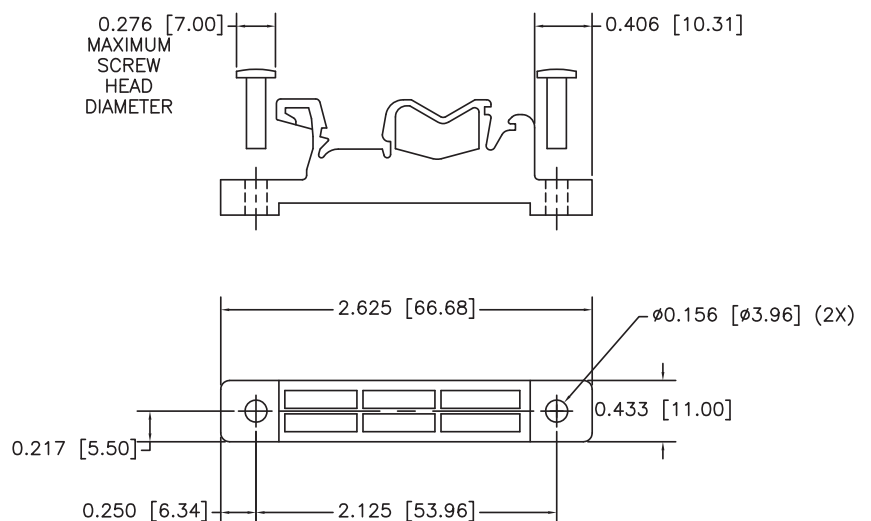
## 11604KITPC Mounting Kit



**Drawing 3:** 11604KITPC Mounting Kit installation



**Drawing 4:** 11604KITPC Mounting Kit dimensions

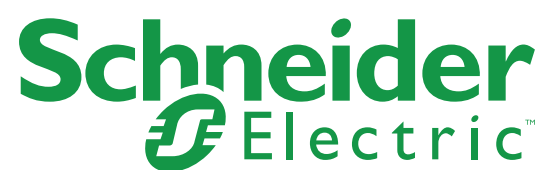


**General Technical Specifications (PC642)**

Operating Voltage	5, 24, 30, 36 VDC
Clamping Voltage	8, 30, 36, 43 VDC
Maximum Operating Current	150mA
Peak Surge Current	10 kA (8 x 20 µs)
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] (175 module + PCB1BWKEY Base)
Weight (oz / kg)	1 oz [0.03 kg]
Certifications	UL 497B
Limited warranty	5 Years

**Model Cross Reference**

<b>MODEL</b> <i>Former Model Name</i>	<b>APPLICATION</b>
<b>175D008S10KDPCB0</b> <i>Edco PC642C-008DKIT</i>	8 VDC (0-5 VDC Operating Voltages) 3 Stage L-L Hybrid PCB1BWKEY Base Included
<b>175D030S10KLPCB0</b> <i>Edco PC642C-030LCKIT</i>	30 VDC (0-24 VDC Operating Voltages) 3 Stage L-L & L-G Hybrid (Low Capacitance) PCB1BWKEY Base Included
<b>175D036S10KLPCB0</b> <i>Edco PC642C-036LCKIT</i>	36 VDC (0-30 VDC Operating Voltages) 3 Stage L-L & L-G Hybrid (Low Capacitance) PCB1BWKEY Base Included
<b>175D043S10KLPCB0</b> <i>Edco PC642C-043LCKIT</i>	43 VDC (0-36 VDC Operating Voltages) 3 Stage L-L & L-G Hybrid (Low Capacitance) PCB1BWKEY Base Included
<b>ACCESSORIES</b>	
<b>11604KITPC</b>	DIN Mounting Kit for PCB1BWKEY



6700 Tower Cir #700  
Franklin, TN 37067

[se.com/us/en/work/support](http://se.com/us/en/work/support)  
1-888-778-2733

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