

## Surge Protective Device

## Technical Documentation



ACCESSORY SOLD SEPARATELY

The **ASCO Model 175** are designed for (five wire) applications where a send pair, a receive pair and a common wire all need protection. The card edge module is gold-plated, double sided and is designed to mate with the PCB1B gold-plated female terminal connector.

Electrically, Model 175 incorporates hybrid suppression technology. The circuitry can be utilized as described in Drawing 1 on the back.

The Model 175 is gold-plated, double sided and is designed to mate with the ASCO PCB1B gold-plated female terminal connector (sold separately). When snapped together, the data circuits “pass thru” the protector in a serial fashion from the four “Field Side” terminals to the four “Electronics Side” terminals. Terminals 1 or 10 of the ASCO PCB1B accessory must be attached to Building- Approved Ground.

The Model 175 is gold-plated, double sided and is designed to mate with the ASCO PCB1B gold-plated

## Key Specs

- **Voltage:** 0-5 VDC, 0-12 VDC
- **Current:** 150mA
- **Connection:** Modular, Hardwire into Base (PCB1B)
- **Mounting:** Punch into keyed base/DIN

\*See Ordering Information for model number selection

## Features

- Multi-stage Hybrid Protection
- Line to Line Protection
- Low Capacitance Option
- Plug-in Module
- Fast Response Time
- 5 year warranty

General Technical Specifications	
Operating Voltage	5, 12 VDC
Clamping Voltage	8, 15 VDC
Operating Current	0.15 A
Peak Surge Current	10 kA (8 x 20 $\mu$ s) 500A per line (10 x 700 $\mu$ s)
Frequency Range	0 to 20 MHz
Insertion Loss	<0.1 dB at 20 MHz
Response Time	<1 Nanosecond
Series Resistance	5 Ohm Typical
Capacitance	50pf
SPD Technology	GDT, SAD, w/Series PTC
Connection Type	Terminal Block w/Compression Lugs Terminal Accepts up to 10AWG
Operating Temperature	-40°C to +80°C
Dimensions (in / mm)	2.0" H x 1.0" W x 2.5" L (Model 175 + Base) [50.8 x 25.4 x 63.5 mm]
Weight (oz / kg)	2 oz [0.06 kg]

### Caution

Do not place this product in service on any signal line capable of supplying more than 150 mA continuously.

### Attention

Ne pas placer ce produit dans le service sur une ligne de signal capable de fournir en permanence plus de 150 mA.

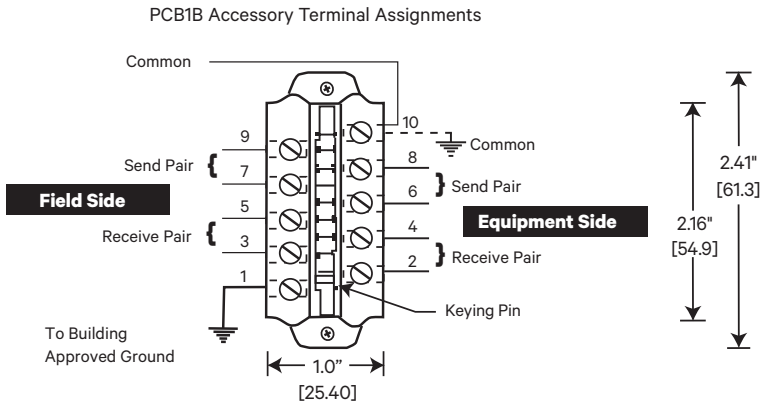
## DANGER!

Only qualified personnel should install or service this system. Electrical safety pre-cautions must be followed when installing or servicing this equipment. To prevent risk of electrical shock, turn off and lock out all power sources to the unit before making electrical connections or servicing.

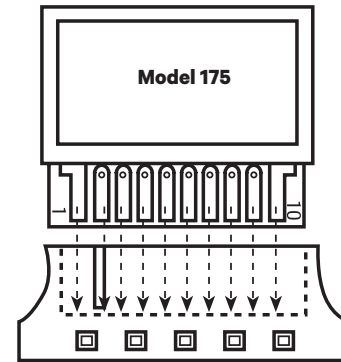
Seulement le personnel qualifié doit installer ou maintenir ce système. Des précautions de sécurité en électricité doivent être suivies lors de l'installation ou de la maintenance de cet équipement. Pour éviter tout risque de choc électrique, débranchez et verrouillez toutes les sources d'alimentation de cet équipement avant de.

## Installation Instructions

**DRAWING 1**



**DRAWING 2**



**PCB1B**  
(Sold Separately)

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

NOTE: DO NOT daisy chain grounds. NOT intended for shield termination. Install ground in accordance with all applicable codes.

## Read and Understand These Instructions

### Note:

- These protectors are intended for indoor use on communication loop circuits which have been isolated from the Public Switch Telephone Network.
- The communication loop circuits shall not be exposed to accidental contact with the electric light or power conductors.
- The protectors shall be installed per the applicable requirements of the National Electric Code, ANSI/NFPA 70.
- Measure DC operating voltage of system to insure it does not exceed the rating of the selected surge device.

### Installation:

1. Turn off power to circuit to be protected prior to installation.
2. Screw mounting base #PCB1B (accessory) in desired location preferably as close to protected equipment as possible and in close proximity to a building approved grounding point using (2) #4 screws. PCB1B may also be DIN rail mounted using optional DIN clip accessory #PCDIN.
3. Attach field side pairs (26-10 AWG) to positions 3/5 and 7/9, attach electronics side pairs (26-10 AWG) to positions 2/4 and 6/8. Attach ground wire (10 AWG) to positions 1 or 10 on base. See Drawing 1. Torque wires to 7 lb-in [0.791 N-m].
4. Insert 175 module into keyed PCB1B base. See Drawing 2.
5. Apply power to protected circuit.

## Ordering Information

Other configurations available, please contact factory.

### MODEL

### APPLICATION

**PC642C-008LCAPD**

0-5 VDC

**PC642C-015LCAPD**

0-12 VDC

### ACCESSORIES Former Accessory Name

**PCB1B** PCB1B-WKEY

Wiring Base, Plug-in Socket

**PCDIN** 11604KIT-PC

DIN Mounting Kit for PCB1B

**PTU** PC642PTU

Pass Through Module for Troubleshooting