

Surge Protective Device

Technical Documentation



ACCESSORY SOLD SEPARATELY

The **ASCO Model 172** is designed to protect two pairs of wires specifically for alarm and security systems where operating currents can be as high as 5 Amps. Electrically, the Model 172 is a rugged series hybrid implementing a staged complement of MOVs, copper wound inductors and Silicon Avalanche Diodes. This design reduces series resistance to 0.2 ohms per pair. These products are intended to mate with a PCB1B gold-plated female terminal connector accessory.

The Model 172 modules plug into a base accessory (PCB1B). The base accessory can be mounted to any flat surface and should be located as close as practical to the protected

equipment. Terminal 1 and/or terminal 10 should be connected to Building-Approved Ground with 12 or 10 gauge solid wire.

Key Specs

- **Voltage:** 0-70 VDC
- **Current:** 5 Amp
- **Connection:** Modular; Hardwire into base
- **Mounting:** Punch into keyed base/DIN

**See Ordering Information for model number selection*

Features

- Three-stage hybrid protection
- Differential protection
- Common mode protection
- Plug-in module
- Automatic recovery
- Fast response time
- Continuous current up to 5 Amps
- Requires accessory PCB1B base
- PTU (Pass Thru Unit) available for troubleshooting
- 5 year warranty

General Technical Specifications

Operating Voltage	24 - 70 VDC
Clamping Voltage	30 - 100 VDC
Operating Current	5 A
Peak Surge Current	10 kA (8 x 20 μ s)
Frequency Range	0 to 10 MHz
Insertion Loss	< 0.1 dB at 10 MHz
SPD Technology	MOV, SAD, w/ Series Inductor
Connection Type	Terminal block w/ compression lugs Terminals accept up to 10 AWG
Operating Temperature	-40°C to +85°C
Dimensions (in / mm)	3.7" H x 1.75" W x 2.375" L [94 x 44.45 x 60.33 mm] (172 + PCB1B Base)
Weight (oz / kg)	8 oz [0.23 kg]
Certifications	UL 497B

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 verouillez toutes les sources d'alimentation de cet équipement avant de.

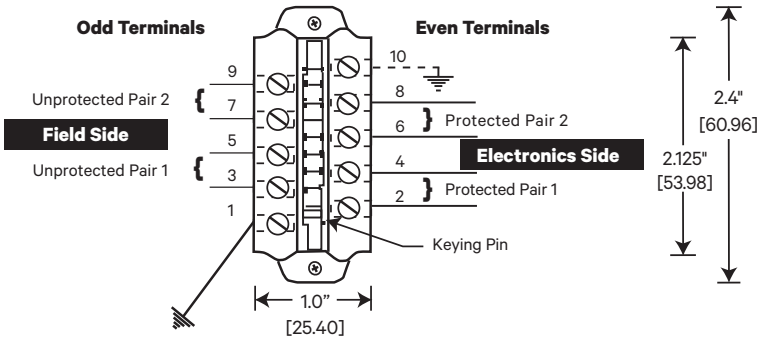
Certifications

- UL 497B

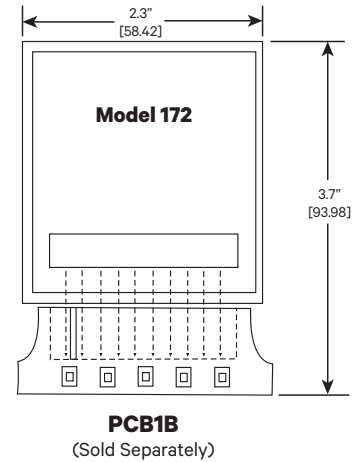
Installation Instructions

DRAWING 1

PCB1B Accessory Terminal Assignments



DRAWING 2



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 44 lbf/in [8 kgf/cm].
4. Insert 172 module into keyed PCB1B base. See Drawing 2.
5. Apply power to protected circuit.

Ordering Information

Other configurations available, please contact factory.

MODEL <i>Former Model Name</i>	OPERATING VOLTAGE	CLAMPING VOLTAGE
172D015S10KXPCNO <i>Edco PHC-015</i>	12 VDC	15 VDC
172D030S10KXPCNO <i>Edco PHC-030</i>	24 VDC	30 VDC
172D043S10KXPCNO <i>Edco PHC-043</i>	36 VDC	43 VDC <i>(for Horn, Bell, Strobes)</i>
172D060S10KXPCNO <i>Edco PHC-060</i>	52 VDC	60 VDC
172D100S10KXPCNO <i>Edco PHC-SP70</i>	70 VDC	*100 VDC

Other Models Available. Contact Factory.

*Not UL Listed

ACCESSORIES *Former Accessory Name*

PCB1B <i>PCB1B-WKEY</i>	Wiring Base, Plug-in Socket
PCDIN <i>11604KIT-PC</i>	DIN Mounting Kit for PCB1B
PTU <i>PC642PTU</i>	Pass Through Module for Troubleshooting