

Installation Instructions

AHW 3 Phase AC Surge Protection Series

INSTALLER MATERIALS CHECKLIST:

The following materials checklist is provided to assist in installation preparations. Installers may find it helpful to verify that all materials are available.

- Circuit breaker, Check product labeling for breaker requirements.
- Conduit and fittings, 3/4 inch for AC power.
- Punch for distribution panel, 3/4-inch conduit (26 mm).
- Wire strippers

GENERAL INSTRUCTIONS:

The Surge Protective Device (SPD) mounts directly to the service panel to be protected. Whenever possible, use the first circuit in the service panel. Wire lengths of 18" (60 cm) or less are desirable. The shortest possible wire length enhances the suppressor's performance by allowing less let-through voltage into the protected equipment.

INSTALLATION AND CONNECTION OF SUPPRESSOR:

- Install the SPD breaker. NOTE: Not all products require a separate SPD breaker. Check product labeling for requirements.
- Find and mark a suitable location (3/4 knockout preferred) for mounting the suppressor to the distribution panel.

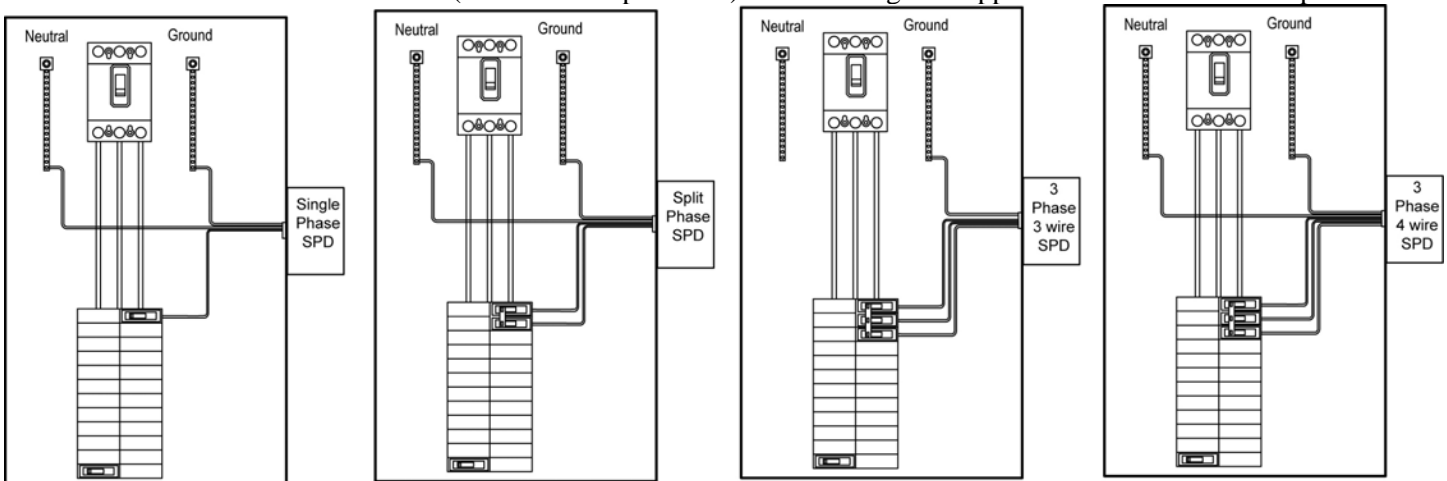


Figure 1 Wiring Diagram of Suppressor

- Punch the distribution panel where marked or punch knockout.
- Drill or punch mounting hole.
- Install 3/4 inch conduit through distribution panel and attach to 3/4 inch hub on suppressor.
- Mount suppressor to panel with conduit jam nut (Included).

With the power **“OFF”** first connect the ground and neutral wires to the appropriate busbars then connect the hot wires to the breaker terminals.

CAUTION: When installing **240/120 VAC high leg delta units** the orange wire must be connected to the high leg.

Optional

- Connect the remote contact to the remote alarm system. Please refer to the specific instructions for the alarm system at the installation site.
- Both normally open and normally closed contacts are available on the terminal block on the alarm PCB. See Figure 2 for connection location for common (C), normally open (NO), and normally closed (NC). Contacts are in energized mode.
- For models with “Push to Test” option depress and hold button to energize the remote contact relay and extinguish one of the LEDs.

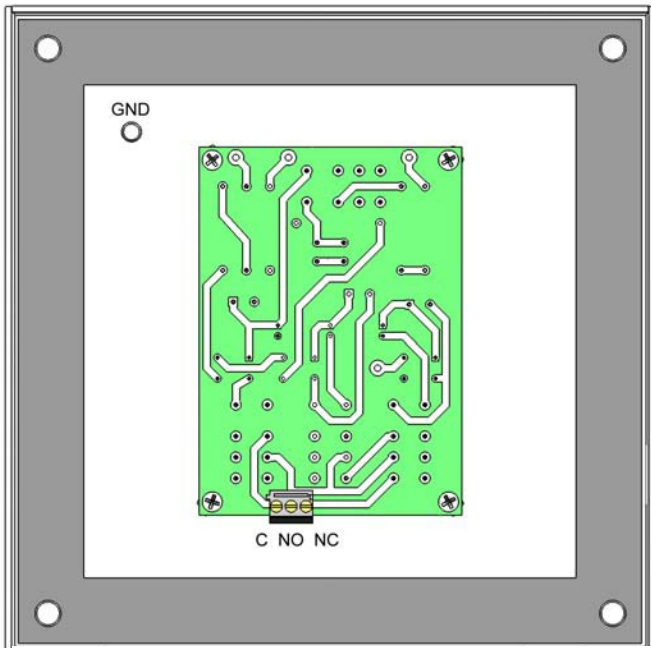


Figure 2 For models with a pre-installed alarm cable.

REMOTE ALARM CONNECTIONS FOR SYSTEMS WITH TRANSFER SWITCHES THAT HAVE UTILITY AND GENERATOR SURGE PROTECTORS INSTALLED.

Each All Mode product has remote monitoring capability with a set of dry Form-C contacts see Figure 2. Systems that incorporate a transfer switch and two surge protection devices will normally have one surge protector that is not powered creating a false alarm condition. To eliminate the false alarm condition and provide a single NC pair, please make the following connections:

- Connect the NO of the Utility power SPD to the NC of the Generator power SPD
- Connect the NC of the Utility power SPD to the NO of the Generator power SPD
- Use the C of both the Utility and Generator power SPD's as the new Normally Closed pair.

ALARM STATUS TABLE

UTILITY POWER	GENERATOR POWER	UTILITY SPD	GENERATOR SPD	ALARM STATUS
ON	OFF	OK	NO POWER	NO ALARM
OFF	ON	NO POWER	OK	NO ALARM
ON	OFF	FAILURE	NO POWER	ALARM
OFF	ON	NO POWER	FAILURE	ALARM
OFF	OFF	NO POWER	NO POWER	ALARM
ON	ON	OK	OK	ALARM

TO CHECK THAT CONNECTIONS ARE MADE CORRECTLY, TRIP THE BREAKER SUPPLYING POWER TO THE SPD's AND OBSERVE THE ALARM ACTIVITY.