24 V POWER LINE SURGE SUPPRESSOR

DoorKing Part Number
1878-010

The Model 1878 is used to protect electronic equipment powered by **6 to 24 volts AC or DC.** The surge suppressor may be sacrificed during an "extreme" power spike to protect the equipment. Protection is acrossed the power lines and from each line to ground. The clamping voltage is approximately 50 volts. **DO NOT connect to power lines over 24 VAC. Maximum current is 10 amps.**

Grounding the Surge Suppressor

Acceptable Grounding: The importance of providing a good ground cannot be over emphasized. The grounding point should be close to the equipment being protected. This will provide a quick path to ground for any power surge or spike. Locate the surge suppressor as close as possible (within 3 ft) to the grounding point. **DO NOT** place the surge suppressor far away from the grounding point.

Ideally, it is recommended to provide a good grounding rod for a gate operator or a telephone entry system and all related components. The NEC recommends that the grounding rod be a copper clad rod, no smaller than 5/8" in diameter and no less than 8' in length, with a minimum of 8' buried in the ground. Check with local regulations for specifications on the grounding rod.

Unacceptable Grounding: A metal fence post, goose neck mounting post or metal frame of a gate operator is not considered an earth ground. These items are generally not deep enough in the ground and/or are insulated from the ground by concrete.

Utilize a Single Point Ground for Multiple Equipment: Provide a Ground Bus to connect all grounds to the local grounding rod when grounding multiple devices. This includes Case Ground, Electrical Ground, Surge Suppression Grounds, etc.

Existing Electrical Supply Panel Ground: Utilizing the "Green Wire" from an existing electrical panel may result in performance related problems:

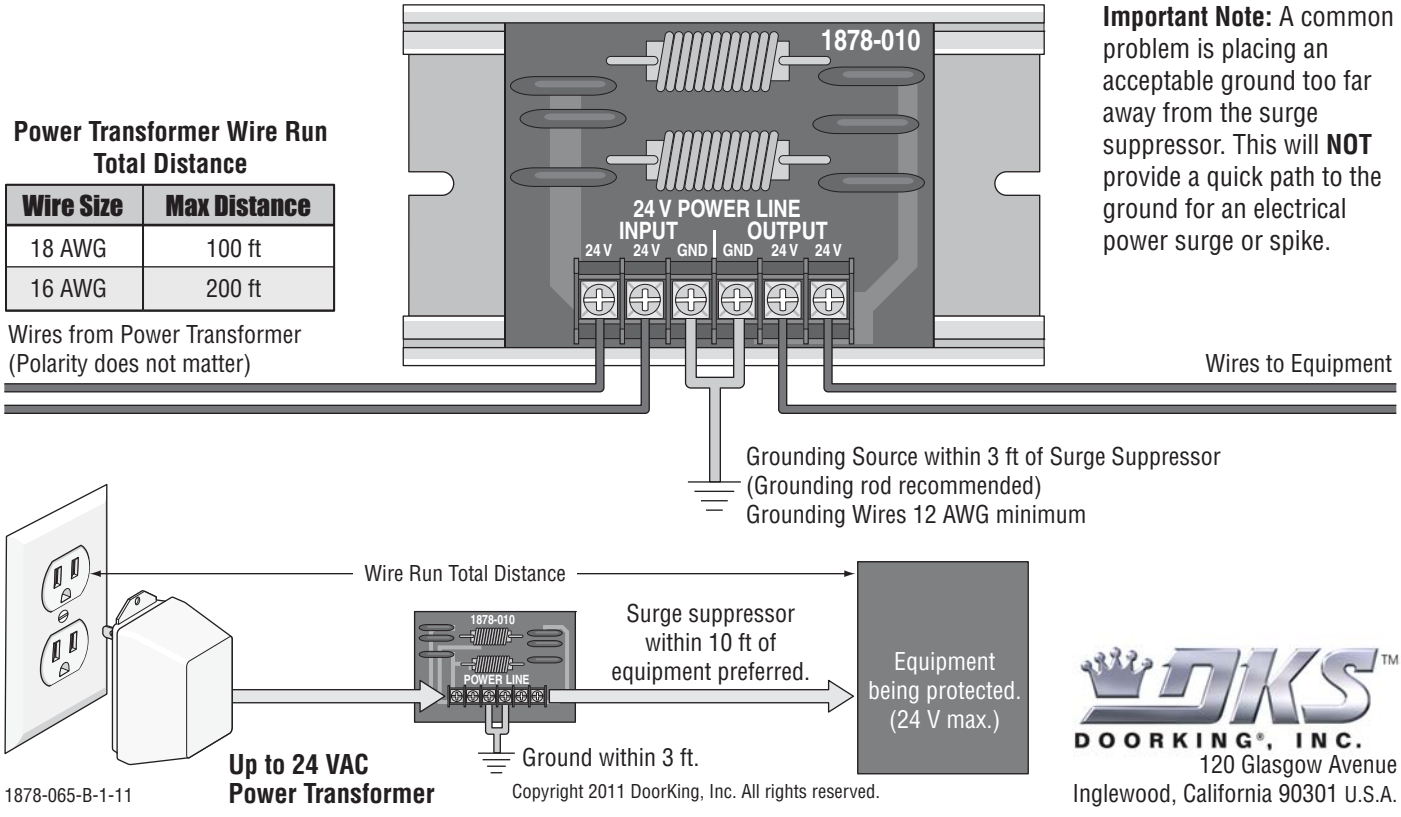
1. **Telephone Entry Systems -** The "Green Wire" from the existing electrical panel may carry a 60 Hz "Hum", inducing noise into the phone entry system.
2. **Surge Suppressor Ground -** The "Green Wire" from the existing electrical panel is typically not close enough to provide proper electrical dissipation to the ground during an extreme power surge.

Installation of the Surge Suppressor

Good Mounting Rule: DO NOT place the surge suppressor **INSIDE** the equipment you are trying to protect. If placed **INSIDE** the equipment, you will be routing the "potential lightning voltage" directly to the equipment **BEFORE** it can go to the grounding source. If the surge suppressor is installed outdoors, use a water protected enclosure (not supplied) to protect the surge suppressor from direct exposure to landscape sprinklers, rain, snow and other elements.

Power Transformer Wire Run Total Distance

Wire Size	Max Distance
18 AWG	100 ft
16 AWG	200 ft



Important Note: A common problem is placing an acceptable ground too far away from the surge suppressor. This will **NOT** provide a quick path to the ground for an electrical power surge or spike.

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