Load Suppressor: 30160

A high voltage, short duration pulse is generated when power to an inductive load is interrupted. This is often referred to as a “load transient spike”. The amplitude of the spike depends more on how the coil of the load is wound, rather than how much power it consumes. Even the smallest solenoids may be able to generate spikes measuring several thousand volts.

This high voltage causes an arc to occur across the output contacts, eroding the contacts. Erosion will eventually damage the contacts to a point that they will no longer be able to function.

Since it’s the load that creates the transient spike, suppressors are installed across the load. The 30160 suppressor contains a metal oxide varistor (MOV) that limits the amplitude of transient spikes. It also contains an R/C snubber that limits the slew rate of the load and absorbs the spike. These two components work to protect each other, giving the suppressor long life.

Note: The condition of a load suppressor cannot be determined by using an ohm meter. To test the suppressor, disconnect it from the load and measure it using a capacitance meter.

Specifications

Maximum operating voltage	150 VAC
Nominal shunt voltage	212 (peak)
Maximum power absorption	30 joules for 1ms
Maximum shunt current	4000 amps @ 20us.
Typical power consumption	.3 watts
Typical capacitance	.04 to .05uf
Physically size (lwd)	1.75” x 1” x .75”
Mounting holes	.18” dia., 1 3/8” centers

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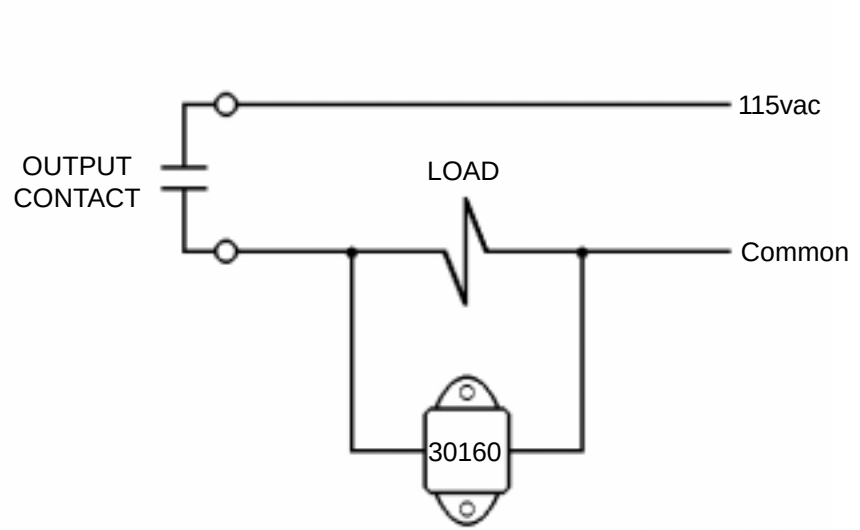
Installation:

1. Cut the wire loop to form two leads of the desired length.

2. Strip insulation from the end of each lead and connect the suppressor in parallel with the load. (See illustration).

3. Mount the module to a panel by using two #6 screws. It can also be mounted to a wiring harness by running a wire-tie around the harness and through the mounting flanges.



WARNING

Never install the suppressor module across the output contact because unpredictable and dangerous machine motion may occur if the suppressor should fail. Therefore, always install the suppressor in parallel with the load device as illustrated above.

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