Three Phase Line Voltage Transient Suppressor

Customer Reference Sheet

Bonitron's M3460V Transient Suppressor offers a low cost protective solution for damaging line to line transients due to various reasons in 3 phase AC voltage networks.

Typical situations in which transients are generated are:

- Lightning strikes.
- Inductive loads such as motors, relay coils and contactors being switched on and off line.
- Non-synchronized power factor correction capacitors being switched on and off line.
- Utility grid transfer switching.
- Fuses clearing.

In the majority of cases, except for lightning strikes or other transients which could exceed 1200V/µsec., the M3460V Transient Suppressor will provide a high degree of line to line protection. The failure mode of these suppressors is to initially short circuit. During the course of this action, and depending on which fuse is selected, the suppressor should cause one or more fuses to clear, thereby protecting the load. Varistors provided with many drives are not sufficiently sized to clear the fuses. While they protect the drive from the first transient incident, they often rupture and offer no protection from successive transients. Varistors should be examined whenever fuse faults occur and they should be replaced if damaged.

The Bonitron suppressor modules consist of three varistors mounted on a circuit board and connected in a delta configuration across the incoming line. They have been tested for coordination with semiconductor fuses. The board is supplied with a mounting bracket and 8"of wires for connection to the fuse blocks.

PRECAUTIONS:

- Measure system voltage prior to installation to be within specified levels
- Keep leads as short as possible between the device to be protected and the transient suppressor.

RATINGS:

The following part numbers and ratings are typically available, although special requirements are also available upon request. Consult Bonitron Engineering.

Part Number	Nom System Voltage ±10%	Nom. Size MM	Varistors per Phase	Varistor Part Number	Maximum Continuous Rating VAC	Max Energy Single Pulse (10x1000 usec)	Peak Current Single Pulse Amps	Varistor Voltage VDC@1mA		Clamping Voltage @Current Shown	
								Vmin	Vmax	VCLmax	ICL
M3460V2-43	460VAC	32	1	Z32RD821	510	580	25000	510	670	1355	200
M3460V2-46	460VAC	32	2	Z32RD821	510	1160	25000	510	670	1355	200
M3460V2-49	460VAC	32	3	Z32RD821	510	1740	25000	510	670	1355	200

NOTE : Average power dissipation of transients not to exceed 1.5W for 32mm sizes.

WARNING:

To ensure proper protection, use only the following fuses:

Manufacturer	Fuse Type	Fuse Amperage
Bussman	KTK or KLM	0-40
Gould Shawmut	A60Q	0-30
Bussman	FWP	0-100
Gould Shawmut	A70Q	0-100