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AC Power Supply Protection

Y08SV-312B

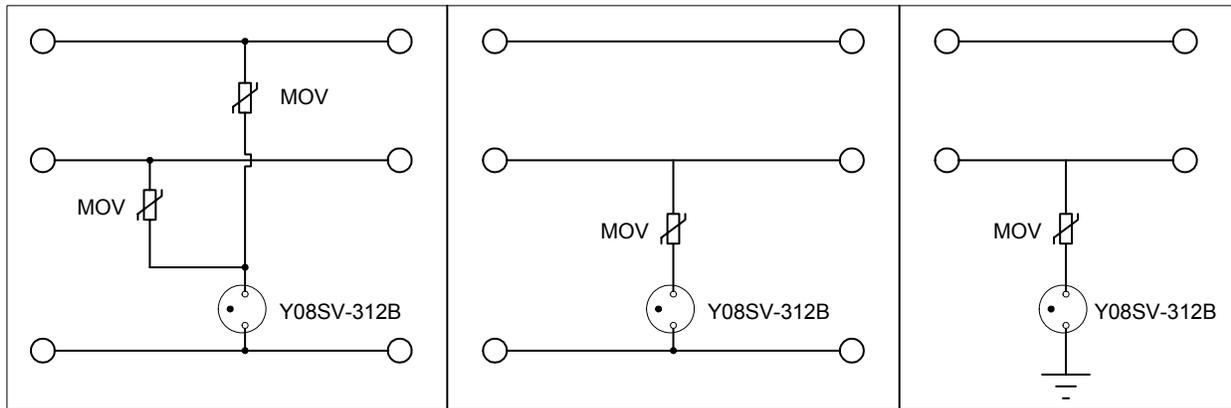
Sankosha's Gas Tube Arrester Model **Y08SV-312B** was developed to provide the highest level of protection possible for consumer electronic and other equipment while also meeting the IEC and UL requirements for line isolation from ground. The 3700V maximum Impulse Breakdown Voltage of the Y08SV-312B is well below the typical withstand voltage of protected equipment and its minimum DC Breakdown Voltage of 2850V enables this gas tube to pass the stringent Class Y2 requirements of the Sixth Edition of UL 1414.

Power Supply manufacturers must develop protection circuitry on the input side but the IEC (IEC60950) and Underwriters Laboratories (UL 1414) both require line isolation from ground to protect people from possible hazard. Recent changes in UL 6500, for example, dictate the use of *double* or *reinforced insulation* to achieve the required additional level of safety. Equipment must be designed so that accessible conductive parts cannot become *hazardous live* in the event of a failure of the *basic insulation*. The UL 1414 Y2 Recognized Y08SV-312B provides this reinforced isolation.

Power supply equipment isolation must be maintained during 1.5kV AC Hi Pot testing and circuitry must be protected when impulse breakdown waveforms as defined by IEC61000-4-5 are applied. The Y08SV-312B is designed to meet these conflicting requirements winning regulatory agency approval while providing maximum surge protection.

Because the zero crossing of the AC line is not sufficient to de-ionize the gas tube, one or two metal oxide varistors (rated at 300 VRMS) are required in series with the gas tube to limit AC Follow-On Current.

Typical Circuits



Y08SV-312B

Characteristic		Y08SV-312B
DC Breakdown Voltage	5000 V/sec.	2850-3500 V
Impulse Breakdown Voltage	100 V/usec	≤ 3,700 V
Insulation Resistance	DC 1,000 V	≥ 100MΩ
Capacitance	1 MHz	≤1.0 pF
Impulse Life	8/20 usec, 100A	300 Times
Impulse Discharge Current	Repeat 20 Times (10 times each polarity)	3 kA

Samples and complete specifications are available upon request.

Note: The Y08SV-312B is UL 1449 (File No. E96234) and UL 1414 Y2 (File No. E165829) Recognized