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Application Note
DWG# 11090210
Subject: Plug in, crowbar surge suppression in CATV amplifiers

Amplifier manufacturers and aftermarket manufacturers of replacement amplifier modules are offering plug in surge protectors to protect amplifiers. The units consist of a plug in crowbar surge protector. A crowbar device consists of 2 SCRS and a diode to trigger the device. The device senses an overvoltage and shunts it to ground, much like a Sidactor. These units are offered by the amplifier manufactures as a solution to damage to the amplifier circuitry caused by surges.

This solution has several weaknesses:.

- Installing surge protection in an amplifier draws the overvoltage into the equipment you are trying to protect.
- The plug in device relies on a ground path through the circuit board foil to the case ground as a means of grounding. During a surge, the foil will be unable to handle the surge.
- The device is not properly heat sinked. In order for the crowbar device to work properly it must be heat sinked. Surge components not properly heat sinked will not be able to handle high currents in the on state, thus increasing the potential of the surge device and the equipment it's protecting to fail.
- The crowbar device is an outdated technology. This design was replaced in our products over 15 years ago by Sidactor technology.
- Device only handles 500 amps during surge and that is reduced by improper heat sink. That's less protection than the our DLPS series provides the drop.

This is a very poor solution to preventing amplifier damage from surges and offers no protection for other actives and passives on the line. The CLPS series of products offers better technology, fully heat sinked 5000 amp surge protection and most importantly draws the surge away from the equipment that needs protection.

For questions or comments please contact:
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