

## 512H

Heavy Duty, High Frequency Surge Suppression Device

Rack Mounted, Cat.5, Multiple Wire Protection for Instrumentation, Telecom and Telco Equipment.

### 1.0 GENERAL

#### 1.1 DESCRIPTION

These specifications describe the electrical and mechanical requirements for a rapid- responding transient voltage surge suppressor. The specified surge protective device shall provide effective high-energy surge diversion of transient over-voltages on Instrumentation, Telecom and Telco conductors. Tested & certified per UL 497. The specified surge protective device shall provide:

- 400 Amps surge protection/line
- Category 5 data rate.
- 12 protected ports, RJ45 “In”(8 pins protected) IDC110 (punch-down)”out”
- UL 497B listed.
- Mountable to standard 19” equipment rack.
- TEN-YEAR WARRANTY. Replacement units are sent from factory, located in Deer Park, New York, USA.

#### 1.2 STANDARDS

The specified suppressor shall be designed, manufactured, tested and installed in compliance with:

- Institute of Electrical and Electronic Engineers IEEE-472
- Federal Communications Commission Docket 68
- Bellcore standards 974 and 1089
- National Fire Protection Association (NFPA 20, 70, 75 and 78)
- Underwriters Laboratories 497B listed
- CAN/C22.2 No. 8-M1986; CSA Electrical Certification Notice No. 516

#### 1.3 PROTECTED EQUIPMENT ELECTRICAL REQUIREMENTS

##### 1.3.1 Environmental Requirements

###### A. Operating Requirements:

1. Operating temperature range shall be -40 to +71 degrees C (-40 to +160 degrees F).
2. Storage temperature range shall be -40 to +85 degrees C.
3. Operation shall be reliable in an environment with 0% to 95% non-condensing relative humidity.
4. The system shall be capable of operation up to an altitude of 13,000 feet above sea level.

##### 1.3.2 Electrical Requirements

###### A. Electrical Requirements:

1. Preferred method of ground connection is protector to rack, 6” or less.
2. Clamp voltages available shall be 6,25,60 and 200 Volts and the attenuation less than 1 db @ 70 MHz.

3. The transient suppression capability shall be bi-directional and suppress both positive and negative impulses.
4. The suppressor shall be designed so as to minimize the internal surge path impedance. Direct point-to-point internal wiring is inherently inductive and not acceptable. Connection to the protected device shall be constructed as shown in the installation notes for best performance.
5. Equipment shall be as manufactured by MCG Surge Protection; Model: 512H or engineering department approved equal with supporting data.

## **2.0 High Frequency Circuit Protection:**

**A. Protection:** The protection circuits shall be constructed with high-speed diode bridge and clamping crowbar to permit Cat.5 data rate. twelve RJ45 connectors assembled on a standard 19" equipment rack mounting plate, with all eight pins protected and brought to twelve IDC110 punch-down type connector. Protector will be made available, with no additional cost to user, UL 497B. Care should be taken to adhere to installation notes supplied with protector for optimum protection.

**B. Dimensions:** 1.75" x 19.0" x .75 (1U)

## **3.0 INSTALLATION AND MAINTENANCE**

- A. The unit shall be installed in accordance with the manufacturer's printed instruction to maintain warranty. All local and national codes must be observed.
- B. Ground wire provided to assure connection to rack.
- C. Units shall be installed as close as possible to the device to which it is connected
- D. Detailed installation/maintenance notes shall be provided to insure safety of maintenance personnel.
- E. Repair time should not exceed 5 minutes.

## **4.0 10 YEAR WARRANTY**

Manufacturer to provide 10-year warranty to cover repair or replacement with a new device. Manufacturer to provide no cost replacement of 512H. Restrictions apply. See "Warranty & Limitations of Liability", document part No. 299-200-06.