

16670S01-LIGHTNING / SURGE PROTECTION

1. GENERAL

1. Any electric and/or electronic electro-mechanical system, or component thereof, provided to meet this spec must be protected against voltage transients, electromagnetic interference (EMI), electric field interference (EFI), radio frequency interference (RFI), power line carriers, data line interference and any other type of transient interference if susceptible to damage and/or operational malfunction as a result of such exposure.
2. Protection should be internally or externally provided on all external power feeder and input/output connections subject to voltage transients. Inputs and outputs of the system are susceptible to transients if those connections are connected to conductors which extend beyond the interior of the building walls or if they share a conduit, raceway, or duct route that has wire extending beyond the interior walls. Tunnels are considered beyond the interior walls unless they are located directly under the building foundation the equipment is installed in.

2. LIGHTNING PROTECTION

1. All protection to be designed for voltage transients of the magnitude generated by lightning.
2. Provide high speed clamping elements which meet IEEE. STD. 472 (SWC) on all digital or analog data channels.
3. Power and all inputs and outputs of systems which are to be installed in underground pits require transient surge and lightning protection.

3. POWER LINE CARRIER PROTECTION

1. System shall not malfunction when subjected to power line carrier signals.
2. Two common power line carrier frequencies used by the University are the 2340 Hz. clock synchronizing signal and the 3218 Hz. bell ringing signal.

4. RFI PROTECTION

1. All components of system shall be equipped with RFI suppression devices and shielding to prevent false nuisance alarms.
2. Common radio frequencies used by the University range from 0 Hz to the UHF Band.

5. EMI PROTECTION

1. All components of system shall be equipped with EMI suppression devices and shielding to prevent false nuisance alarms.