



Pragati Electrocom Pvt. Ltd.

POWER LINE PROTECTION

Stage I Protection Primary Lightning Protection System protects sensitive electronic equipment, functioning on high-density chips and PCB technology, against direct or indirect lightning currents. The protection system assembled in a wall-mounted box is connected to power line circuit of the installation at the building entry point. The primary lightning protection unit is a Class B protection device, operating on RADAX Technology is concealed between phase to neutral and neutral to earth and does not need any back-up fuse. These arresters in normal condition maintain high insulation state and get activated at 4kV threshold.

The device offers multi strike protection even in the worst case of 10/350ms 100kA direct lightning. Stage II Protection Secondary Power Protection System comprises of the Class C surge arresters rated for 8/20ms, 20kA multi-strike. They permit let through voltage of ~700V as its output, at stage II. The surge protection has been designed using arresters, working on latest technology and capable of handling follow-on current upto 20kA under lightning / fault conditions. The system is mounted 15 meters away from Class B unit or is supplied with energy co-ordination coil of 15 μ H inbuilt in stage I. Single phase / Three phase units are available in desired current capacity. Stage I Protection Protection against Lightning Electromagnetic Impulse (LEMP) & other high surges shall be provided at the distribution panel in the power plant room. This protection has to be supplied by the power plant equipment vendors as part of the power plant equipment in the separate enclosure with clear instructions of installation. This protection shall be in compliance of IEC 61312, IEC 61024 & VDE- 0100-534 for the following values of the current: It is recommended for ≥ 50 kA (10/350 μ s) between R.Y.B. & N and ≥ 100 kA (10/350 μ s) between N & PE.

Stage II Protection Protection against low voltage surges shall be provided at the power plant level. This protection shall be equipped with thermal disconnection and potential free contact for arrestor(s) connected between live & neutral. This protection shall be in compliance of IEC 61312, IEC 61024 & VDE-0100-534 for the following value of current: It is recommended for ≥ 10 kA (8/20 μ s) between R.Y.B. & N and ≥ 20 kA (8/20 μ s) between N & PE. International Specifications: IEC 61312-1 for lightning current shall be followed.

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