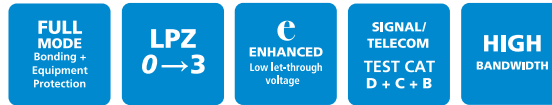


Specific systems protection

ESP RF Series



Combined Category D, C, B tested protector (to BS EN 61643) suitable for RF systems using coaxial cables at frequencies between DC and 2.7 GHz and where DC power is present. Suitable for RF systems with power up to 2.3 kW. For use at boundaries up to LPZ 0 to protect against flashover (typically the service entrance location) through to LPZ 3 to protect sensitive electronic equipment.

Features & benefits

- Very low let-through voltage (enhanced protection to IEC/BS EN 62305) between all lines - Full Mode protection
- Full Mode design capable of handling partial lightning currents as well as allowing continual operation of protected equipment
- Repeated protection in lightning intense environments
- Superior transient protection to both Gas Discharge Tube (GDT) and Quarter Wave Stub (QWS) based protectors
- Wide bandwidth means a single product is suitable for a range of applications
- Very low attenuation and near unity VSWR over a wide range of frequencies ensure the protectors do not impair system performance
- Available with N, 7/16 DIN and BNC connectors
- Easily mounted and earthed via fixtures on the base of the unit that accept M3 and M5 screws or via mounting brackets
- Additional mounting plates give increased flexibility
- Robust white bronze plated aluminium housing (silver plate option)

Application

Use on coaxial cables to protect RF transmitter and receiver systems, including electronics located at the antenna or dish. Typical examples include cell sites, military communications, satellite earth stations, pager systems and emergency services communications systems.

Installation

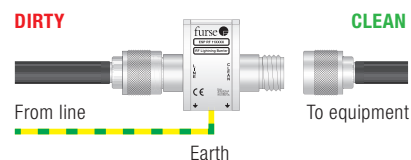
In a building, connect in series with the coaxial cable near where it enters or leaves the structure, or close to the equipment being protected. This should be as close as possible to the system's earth star point (to enable a good connection to earth). On a mast, connect in series with the coaxial cable near the antenna/dish being protected. Install in a radio communications room, an existing cabinet or a suitable enclosure.

Accessories

- ESP RF BK1** Straight mounting plates
- ESP RF BK2** 90° angled mounting plates
- ESP RF BK3** Bulkhead through mounting plate (single)
- ESP RF BK4** Bulkhead through mounting plate (for 4 products)
- ESP RF GDT-x** Replacement gas discharge tubes (Where x is the correct GDT part code digit for your system).

Full product range order codes can be found on pages 17/8-17/9

ESP RF 111A21 with N female connectors installed in series



PART NUMBERING SYSTEM: Furse RF protectors have six digit part codes, prefixed with ESP RF. The selected digits define the exact specification of the required protector, e.g. **ESP RF AABCDE**

Connector type - ESP RF AAxxxx The first 2 digits refer to the connector type: **11** - N type female, **AA** - 7/16 DIN type female, **44** - BNC female

Line impedance - ESP RF xxBxxx 3rd digit refers to the line impedance. Currently only one option: **1** - 50 Ω transmission line.

Gas Discharge Tube (GDT) selection - ESP RF xxxCxx Select the 4th digit from the table at the bottom (opposite). Selection of the correct GDT is critical

in the effectiveness of using these protectors. For the correct GDT, take the maximum RF power or voltage of the system and select a GDT with a voltage/power handling greater than the system.

IMPORTANT NOTE: When using the peak RF voltage to select the GDT, if the system is a multi-carrier system the (in phase) peak RF voltage can be calculated as the total of all the single carrier peak voltages on the transmission line.

Protector rating - ESP RF xxxxDx 5th digit specifies the protector rating: **1** - Higher specification, **2** - Standard specification **Case plating - ESP RF xxxxE** 6th digit specifies the case plating: **1** - White bronze, **2** - Silver

NOTE: These protectors are based on a continuous transmission line with a GDT connected between this line and screen/earth, and are suited for applications where DC is required to pass to the equipment. For RF applications where the connected equipment is very sensitive to transient overvoltages, use the higher specification RF protectors. ESP CCTV/B and ESP CCTV/T are suitable for use on coaxial (or twisted pair) CCTV lines. For coaxial CATV lines, use the CATV/F.