



SPINNER Surge Protectors

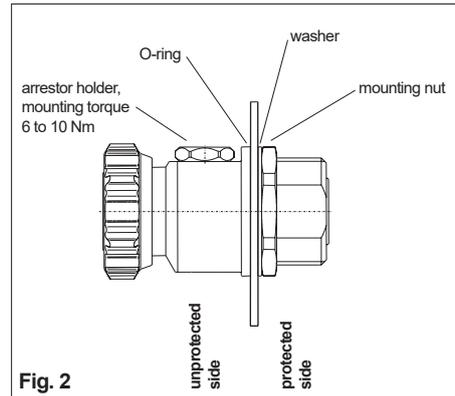
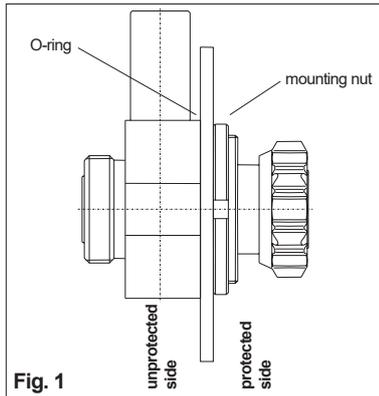
Installation and Grounding Instructions M30814C

These instructions are written for qualified and experienced personnel. Please study them carefully before starting any work. Any liability or responsibility for the results of improper or unsafe installation practices is disclaimed. Please respect valid environmental regulations for assembly and waste disposal.

SPINNER Surge Protectors provide reliable protection against any surge signals on coaxial transmission lines when installed and grounded correctly according to these instructions. Surges led from the inner to the outer conductor by the arrester have to be led to the ground by suitable measures carried out according to the rules of IEC 62305.

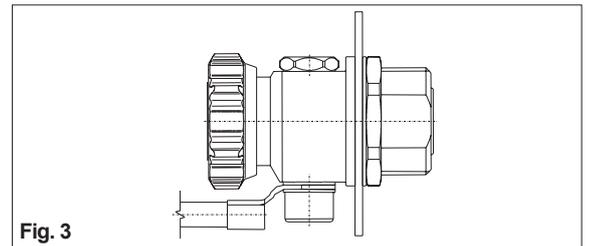
Installation

In accordance with IEC 62305 the installation of a bulkhead flange in a well-conducting grounded metal wall is recommended. The stub or gas discharge arrester should be outside the wall in the unprotected side so that the wall protects the zone inside like a Faraday cage. For proper contact between the protector and the wall use the washer according to the figures below and tighten the mounting nut with the specified torque.



If there is no suitable wall available or for protectors without bulkhead flange the installation of a grounding cable is essential (see Fig. 3). For effective lightning protection the cable or cord shall have a cross section of minimum 16 mm² / AWG 5. For general surge protection (no lightning) or as potential equalisation a cross section of 6 mm² / AWG 9 is sufficient. The grounding cable shall not be longer than 0.6 m (2 ft). Both types of ready to install cables are available at Spinner optionally.

The installation directly onto a grounding bar should be preferred to a cable. An array of several protectors on an adequate bar is possible (see Fig. 4).



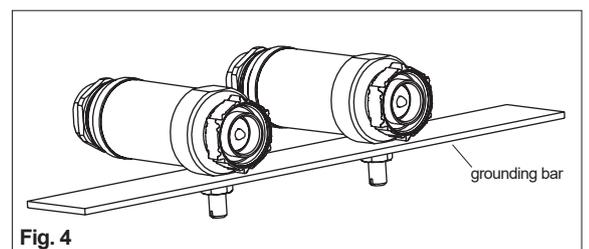
Installation for Outdoor Applications

Notice the correct placement of the sealing O-ring (see Fig. 1 and 2)!

The mating connector (with sealing) has to be suitable for outdoor installation and must be connected with the specified coupling torque of the manufacturer.

General Remarks and Recommendations

- Be sure that all contacts are clean and smooth (important for surge protection and water proofness) before installation.
- The path of grounding current shall be the shortest possible.
- Mounting torque for bulkhead mounting / grounding:
 - AF ≤ 19 mm: 8 to 12 Nm
 - AF ≤ 27 mm: 18 to 22 Nm
 - AF > 27 mm: 30 to 35 Nm
- The bending torque applied by connected components must not exceed the specified value (N type 1 Nm max. / 7-16 type 50 Nm max.).



Warnings

- Notice that only a complete grounding and protection system according to IEC 61024 and IEC 62305 perfectly protects equipment and personnel.
- Notice that Spinner surge protectors protect only the entrance of RF lines into the protection zone. All other lines (mains, telephone, data etc.) must be protected separately.
- Never handle or maintain surge protectors with RF power on the transmission line.
- Protectors for gas discharge arrestors are normally delivered without arrester. Be sure an arrester with suitable spark over voltage is inserted in the protector body before taking it into operation. Without arrester no protection is provided and VSWR performance is degraded.
- For protectors with gas discharge arrestors notice to respect the specified maintenance rate. Change arrester insert after a lightning stroke having destroyed components ahead (e.g. antenna).