

Introduction

Reynolds has developed a series of interconnect systems to connect the gun end elements of a CRT to a power supply and other video and control circuitry common to airborne information display systems. Each interconnect system consists of a receptacle adapter designed to be installed on the gun end of a CRT and a mating plug cable assembly. Each member of the Avvion series has one high voltage contact employing our Advanced interface seal for use in connecting the focus element to a high voltage power supply. All the pins are sealed against moisture and will operate over a temperature range of -55°C to $+125^{\circ}\text{C}$ at 70,000 feet. The connectors are designed to be mated and un-mated numerous times without degrading the integrity of the interface seals.

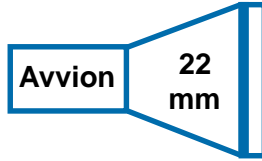
An optional feature is to incorporate the transient protection components and circuitry into the potted back shell of the plug connector. This replaces the need for an external circuit board on which to mount the spark gaps used in the transient protection circuit. Reynolds has the experience and facilities to design and manufacture a transient protection system based on the requirements of the individual display system.

Advantages of the Avvion Series Interconnect System.

The most commonly used method of terminating the gun end of a CRT for airborne applications consists of providing extra space between the focus pin, which typically operates at 7 KVDC, and the remaining pins which have applied voltages ranging from 6.0 volts to 800 volts DC. This effort to increase the creep path between the high and low voltage pins is not effective at reduced atmospheric pressure, and it is necessary to pot or encapsulate the gun end of the tube with silicone rubber after the cable leads have been attached. Figure 3B on page 13 illustrates this assembly.

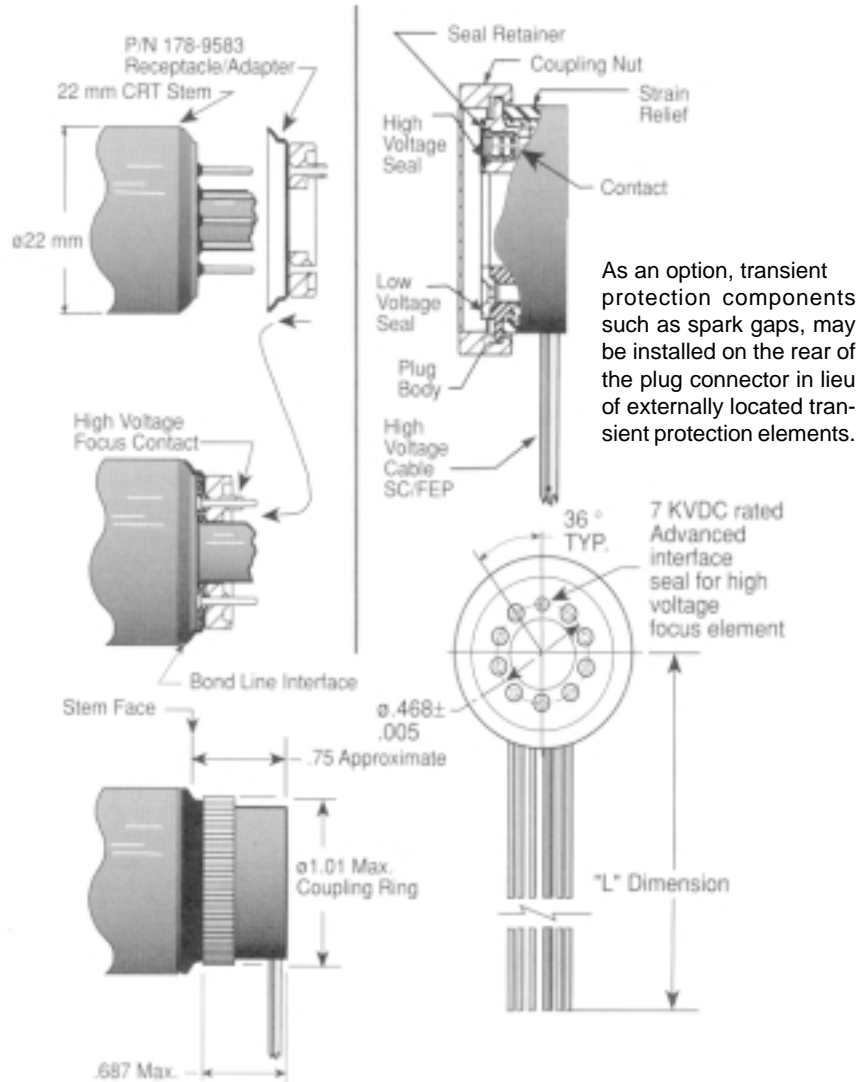
The Avvion series interconnections, as illustrated in Figure 3A on page 13, provides the system design engineer with the following distinct advantages over current termination methods:

- | | |
|---------------------------|---|
| CRT Testing: | CRT's can be acceptance tested by the tube manufacturer or the system integrator, or both, without potting or encapsulation. |
| Connector Testing: | Both the receptacle and the plug cable assembly can be tested at 150% of the rated voltage before installation into the system. |
| Failures: | In the event of a CRT, power supply, or any other component failure, it is possible to disconnect the plug assembly simply by unthreading the plug coupling nut and locate the failure by replacing components without costly de-potting. |
| Field Maintenance: | Maintaining adequate spares which can be easily replaced by un-plugging faulty components and plugging in pre-tested spares will assist in keeping information display systems up and running in the field. |

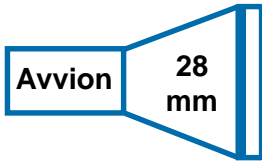


P/N: 178-9583
22 mm CRT Receptacle/Adapter
Mates with P/N 178-9711 Plug Cable Assembly

P/N: 178-9711
22 mm CRT Plug Cable Assembly
Mates with P/N 178-9583 Receptacle/ Adapter

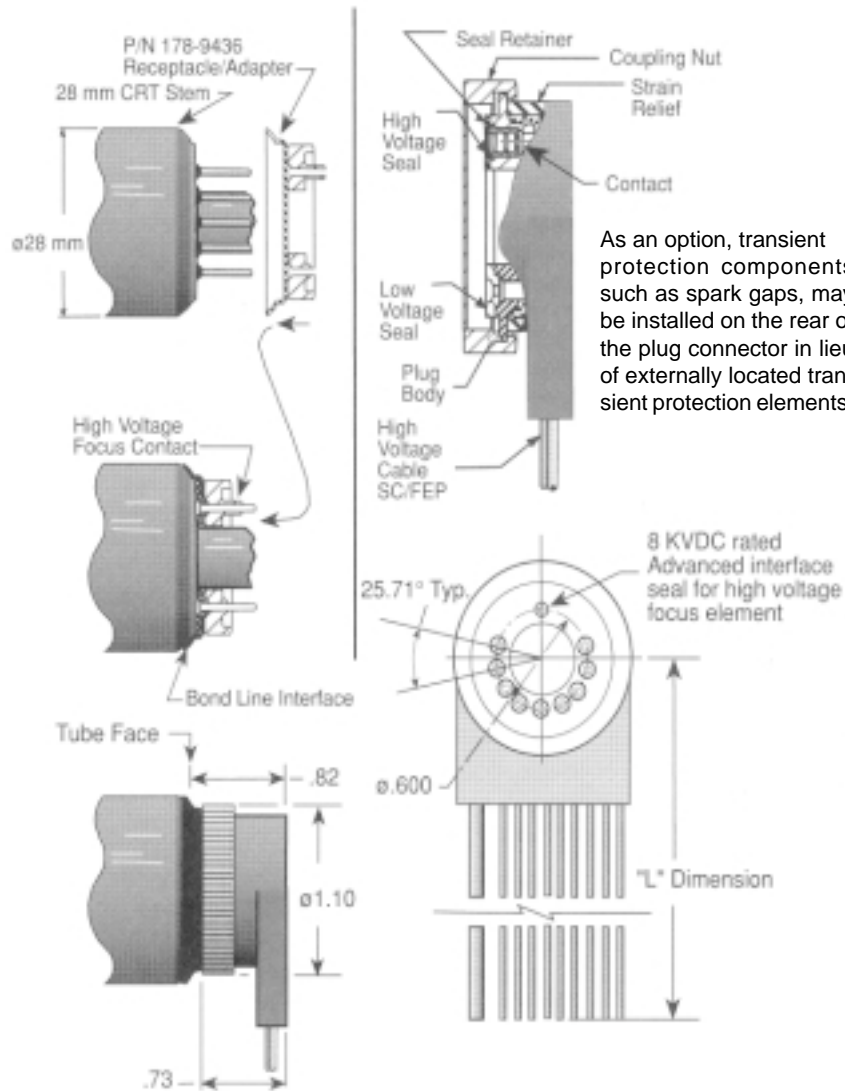


NOTE: For compatibility of the receptacle/adapter to a CRT pin pattern other than the one shown above, consult Reynolds Engineering Department



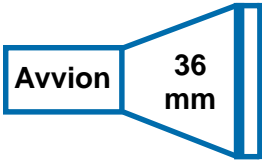
P/N: 178-9436 28 mm CRT Receptacle/Adapter Mates with P/N 178-9437 Plug Cable Assembly

P/N: 178-9437 28 mm CRT Plug Cable Assembly Mates with P/N 178-9436 Receptacle Adapter



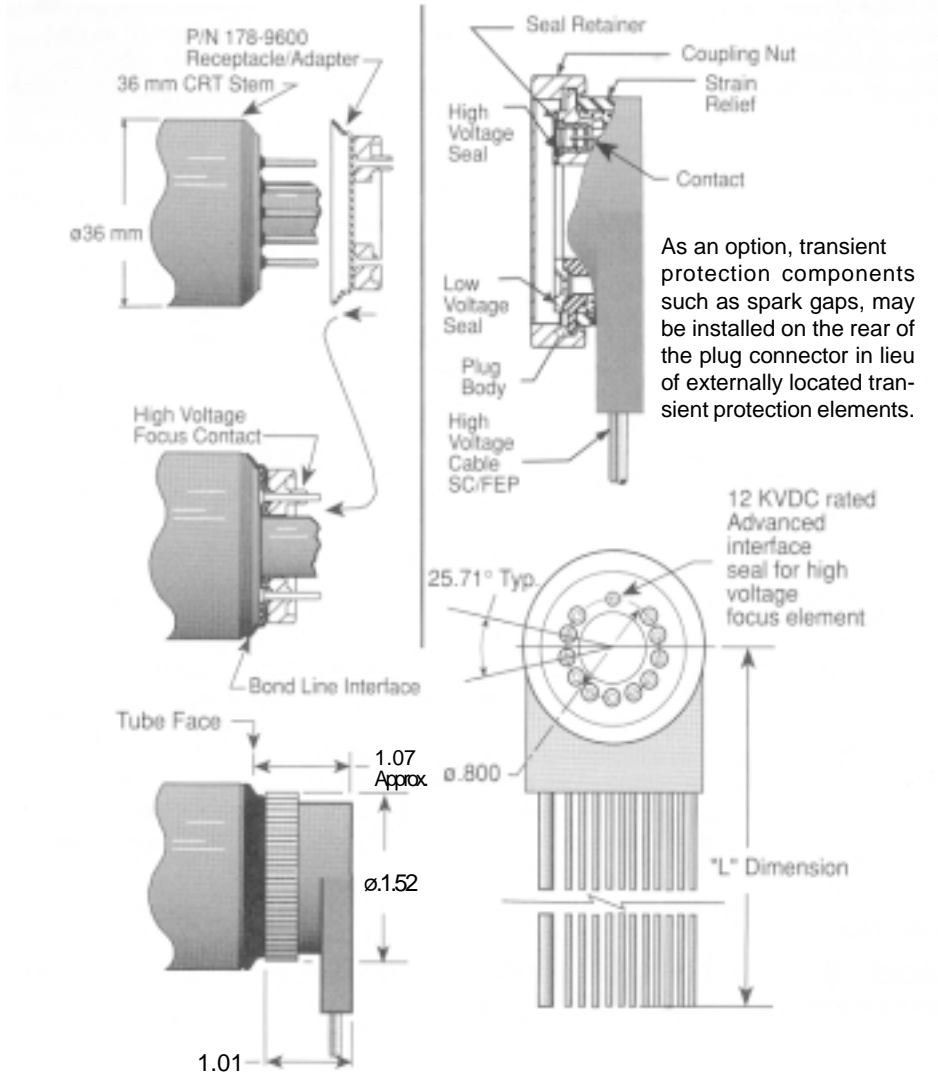
As an option, transient protection components such as spark gaps, may be installed on the rear of the plug connector in lieu of externally located transient protection elements.

NOTE: For compatibility of the receptacle/adapter to a CRT pin pattern other than the one shown above, consult Reynolds Engineering Department



P/N: 178-9600 36 mm CRT Receptacle/Adapter Mates with P/N 178-9601 Plug Cable Assembly

P/N: 178-9601 36 mm CRT Plug Cable Assembly Mates with P/N 178-9600 Receptacle Adapter



NOTE: For compatibility of the receptacle/adapter to a CRT pin pattern other than the one shown above, consult Reynolds Engineering Department