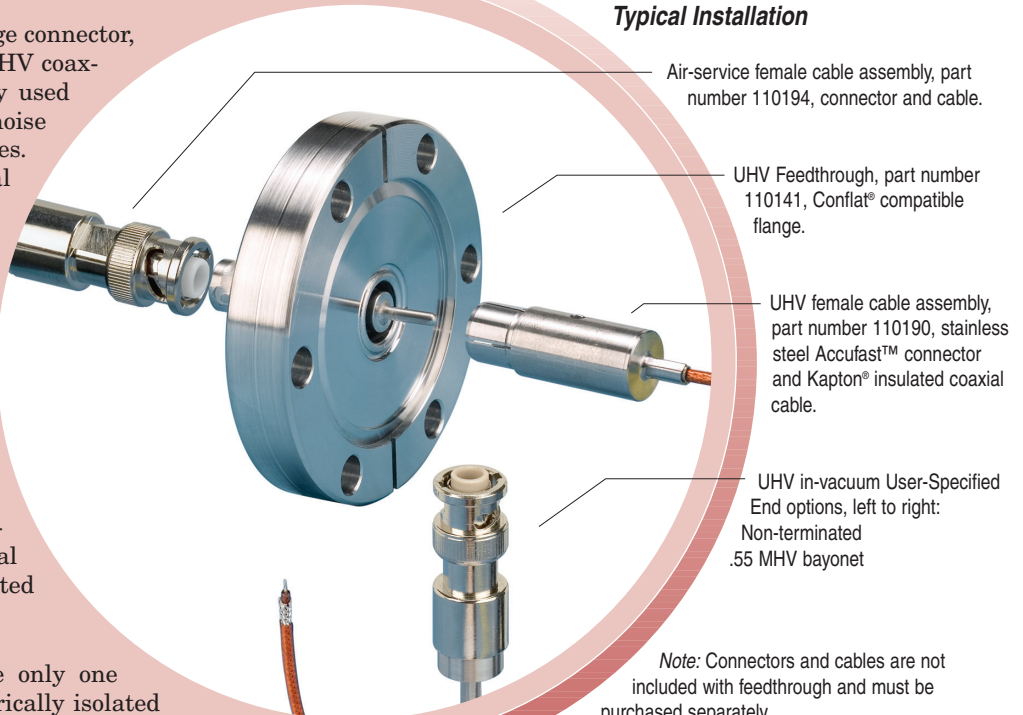


The Miniature High Voltage connector, usually referred to as an MHV coaxial connection, is commonly used in conjunction with low noise 50-ohm instrumentation lines. Accu-Glass MHV coaxial instrumentation feedthroughs are constructed with either floating shields or grounded shields.

Floating shields provide two concentric conductors: one outer metal tube or shield conductor concentric with, and enclosing, a cylindrical center conductor. Both electrical paths are electrically isolated from the vacuum flange.

Grounded shields provide only one electrical path that is electrically isolated from the vacuum flange. With grounded shields, the shield and vacuum flange are electrically common.

UHV compatible coaxial cable assemblies are available to meet the needs of most in-vacuum, low noise instrumentation cable applications. The vacuum side of a grounded and floating MHV feedthrough consists of a 0.094-inch (2.4-mm) diameter conductor pin that mates perfectly with Accu-Glass' grounded or floating Accufast™ connector interface.



Typical Installation

Air-service female cable assembly, part number 110194, connector and cable.

UHV Feedthrough, part number 110141, Conflat® compatible flange.

UHV female cable assembly, part number 110190, stainless steel Accufast™ connector and Kapton® insulated coaxial cable.

UHV in-vacuum User-Specified End options, left to right:
Non-terminated
.55 MHV bayonet

Note: Connectors and cables are not included with feedthrough and must be purchased separately.

Features

- Grounded and floating shield designs
- Single and double ended MHV designs
- Kapton® insulated, vacuum compatible 50-Ohm coaxial cables
- High temperature rated to 250°C
- UHV compatible construction
- Conflat® compatible flange mounts
- ISO compatible flange mounts
- Air side connectors available

Specifications Notes

- 1 Electrical ratings are maximum test values. Feedthroughs are intended for instrumentation applications carrying low level signal voltages and currents.
- 2 PEEK is a polyetheretherketone thermoplastic.
- 3 Overall assembly ratings must be adjusted to that of the lowest rated component.
All dimensions are in inches unless specified otherwise.

Specifications

Voltage¹	
Grounded shield	5000VDC maximum
Floating shield	2500VDC maximum
Current	3A maximum at 20°C
Material	
Shell	SST
Pins	SST, Ni-plt
Insulation	Alumina Ceramic
Cable Insulation	Kapton® Type-F Film
Connector, Air	Composite

Connector, Vacuum ²	
Accufast™	SST & PEEK
MHV Male Bayonet	SST, Ni-plt Brass & PEEK
Vacuum Range	
UHV, Ultrahigh vacuum	1x10 ⁻¹⁰ Torr
HV, High vacuum	1x10 ⁻⁸ Torr
Temperature Range³	
Flange, CF Style	450°C
Flange, ISO Style	150°C
Connector, Air	165°C
Connector, Vacuum	250°C
Thermal gradient	25°C / minute maximum