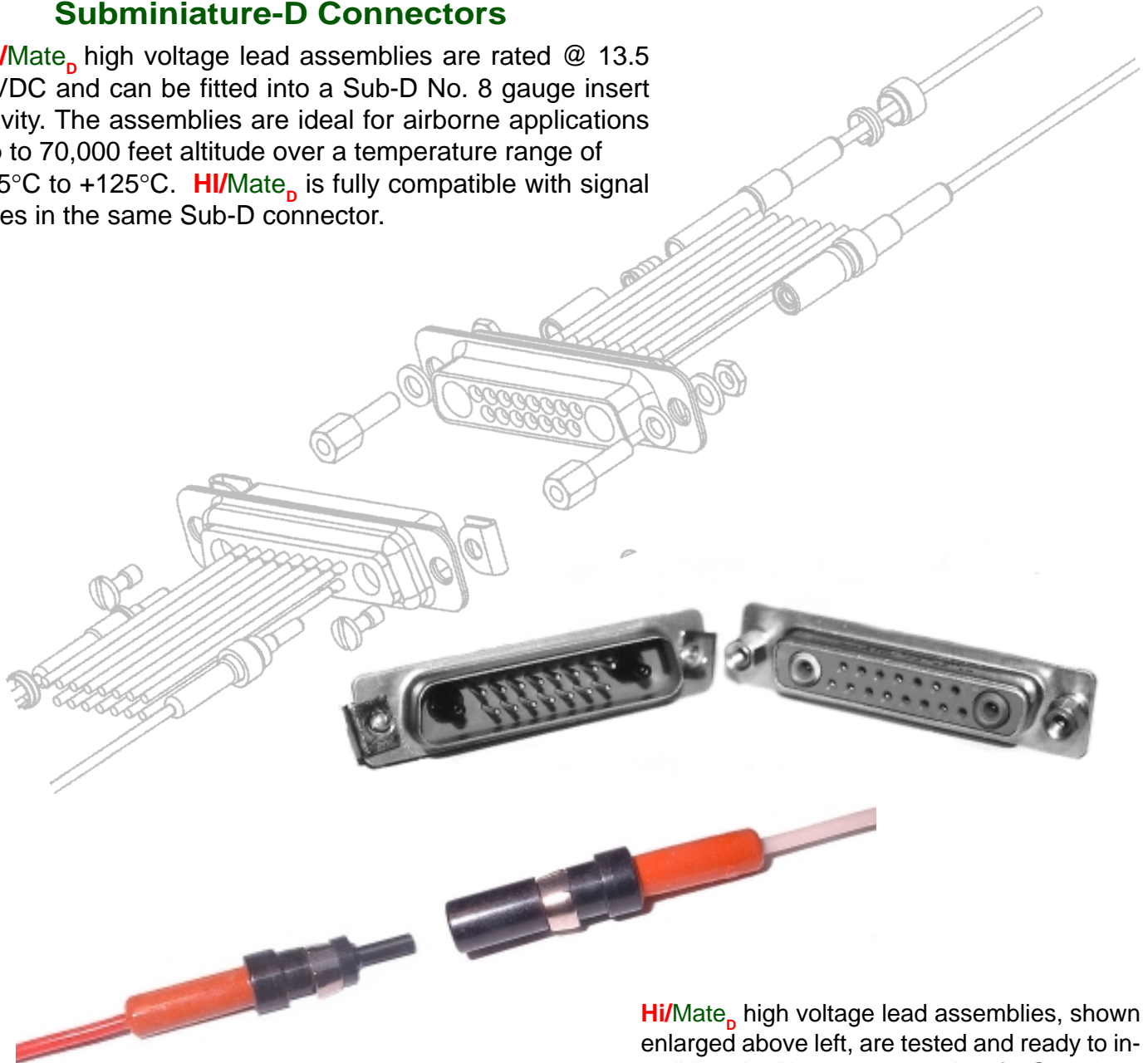




*Now!*

## A High Voltage Capability for Subminiature-D Connectors

**Hi/Mate<sub>D</sub>** high voltage lead assemblies are rated @ 13.5 KVDC and can be fitted into a Sub-D No. 8 gauge insert cavity. The assemblies are ideal for airborne applications up to 70,000 feet altitude over a temperature range of -55°C to +125°C. **Hi/Mate<sub>D</sub>** is fully compatible with signal lines in the same Sub-D connector.



**Hi/Mate<sub>D</sub>** high voltage lead assemblies, shown enlarged above left, are tested and ready to install into the No. 8 gauge cavity of a Subminiature-D connector.

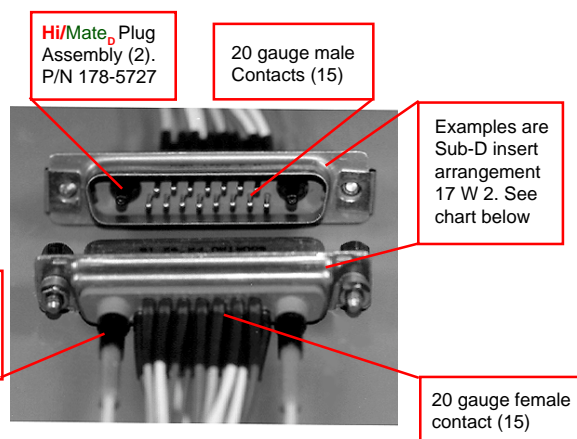
These lead assemblies are, in actuality, high voltage connectors and do not rely on the dielectric strength of the Sub-D insulator. The insert serves only to hold and retain the **Hi/Mate<sub>D</sub>** lead assembly. No adhesives, potting or bonding are required.



**Hi/Mate<sub>D</sub>** high voltage lead assemblies convert the No. 8 gauge insert cavities of a Positronic CBD series Subminiature-D connector to a high voltage line rated at 13.5 KVDC.

- Each **Hi/Mate<sub>D</sub>** lead assembly is tested @16 KVDC at a simulated altitude of 70,000 feet. When mated, each assembly is rated @ 13.5 KVDC over a temperature range of -55°C to +125°C at altitudes up to 70,000 feet.
- Complete cable assemblies with **Hi/Mate<sub>D</sub>** high voltage lead assemblies installed into Positronic series CBD Subminiature-D connectors, are available from Reynolds Industries as fully tested units.
- **Hi/Mate<sub>D</sub>** requires no potting or adhesives and is easily removed and replaced.
- **Hi/Mate<sub>D</sub>** operates in electrical isolation from other lines in a Subminiature-D connector. This provides compatibility between **Hi/Mate<sub>D</sub>** and signal lines.

A No. 8 gauge cavity in the insert arrangements shown below, can be converted to a 13.5 KVDC high voltage circuit simply by installing a Sub-D **Hi/Mate<sub>D</sub>** lead assembly into the appropriate male or female cavity.



**Note 1:**

1. Shell drawings are not to scale
2. Care must be taken to observe Male/Female gender of both the **Hi/Mate<sub>D</sub>** lead assembly and the Sub-D Shell/Insert arrangement

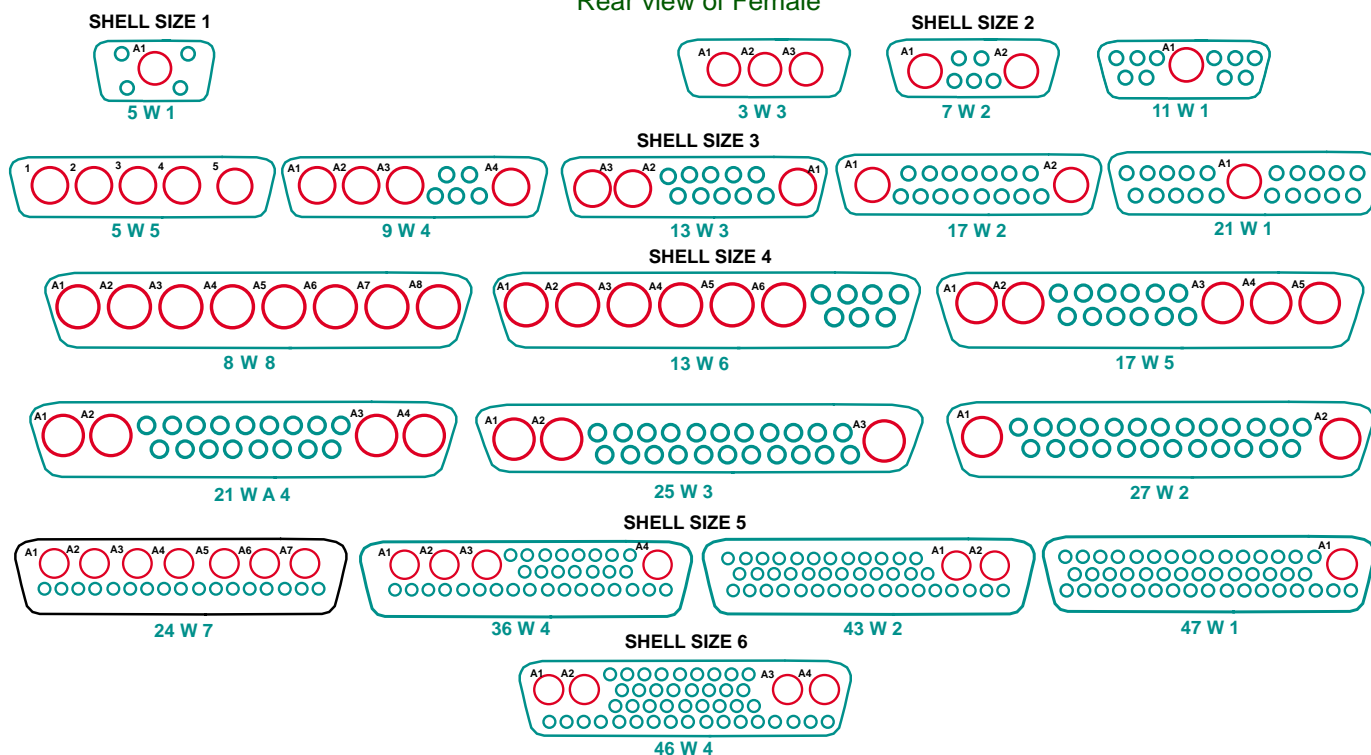
**To view detail shell dimensions\***

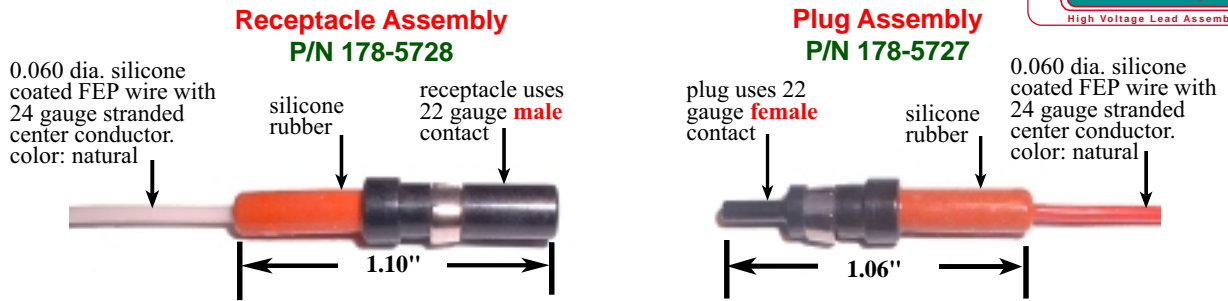
\*Courtesy of Positronic Industries

**Positronic CBD series Subminiature-D Insert Arrangements**

Face view of Male  
Rear view of Female

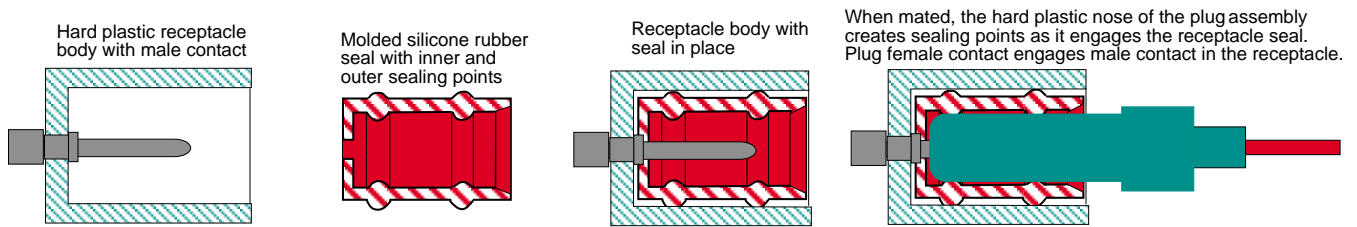
- No. 8 Gauge Insert Cavity for **Hi/Mate<sub>D</sub>** installation
- Size 20 fixed contacts





### The Advanced Interface Sealing System

Hi/Mate<sub>D</sub> uses the high voltage interface sealing developed by Reynolds for its proven, highly successful Advanced series of connectors. Illustrations not to scale.



#### Please Note

The Insertion and Removal of Hi/Mate<sub>D</sub> lead Assemblies into a Positronic Sub-D connector is presented in 4 steps in a 5 page [PDF document](#).

Please follow the instructions in this document when inserting or removing a Hi/Mate lead assembly into or from a Sub-D connector.

#### Design Verification Testing

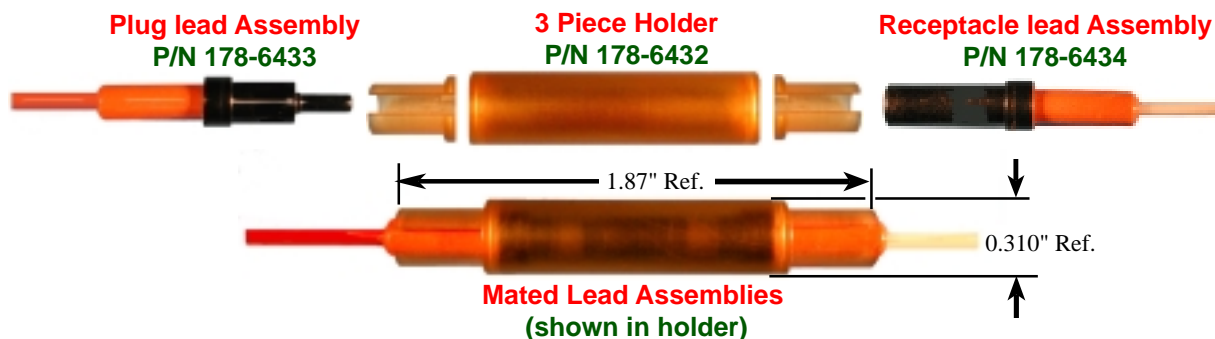
In house verification testing has been conducted on Hi/Mate<sub>D</sub> lead assemblies. The chart below describes the tests and the results. **Note:** Tests performed using Positronic CBD connectors.

Test Description	Results
Dielectric Withstanding Voltage: 18 KVDC @ 70,000 feet, ambient temperature	Passed. Leakage current: <10 μA
Altitude/Thermal Shock: 70,000 feet; -65°C To +125°C; 25 Cycles Operating at 15 KVDC	Passed. Leakage current: <10 μA
Contact Retention: 22 Pounds	Passed. See note

### New! Hi/Mate RB series for use as in-line connectors

Hi/Mate high voltage Lead Assemblies are excellent for use within power supplies or cabling to reliably connect and disconnect system components. Designed primarily for breadboard or prototype testing, the leads can also be used in a production system where DC high voltage interconnections are required.

Mated assemblies are rated at 13.5 KVDC from sea level to 70,000 feet, require no encapsulation or potting and can be mated and unmated numerous times. No tools are required for assembly or disassembly. A specification sheet and assembly instructions are available in [PDF format](#).



## Ordering Hi/Mate<sub>D</sub> High Voltage Lead Assemblies For Sub-D Connectors



Hi/Mate<sub>D</sub> high voltage lead assemblies can be ordered in 5 configurations :

1. A single ended plug assembly
2. A single ended receptacle assembly
3. A hybrid double ended assembly. (plug on one end; receptacle on the other)
4. A double ended plug assembly
5. A double ended receptacle assembly

### Available colors

Standard color (will be supplied unless otherwise specified): NATURAL

Optional colors:

BLACK • BROWN • BLUE • GREEN • ORANGE • RED • VIOLET • WHITE • YELLOW

### P/N 178-5727

#### Single Ended Plug Assembly

When ordering specify length and wire color  
Use 'F' for feet; 'N' for inches

Example: P/N 178-5727-6F-9N-RED



**Note:** Plug Assembly can only be installed into a Sub-D **male** insert

### P/N 178-5728

#### Single Ended Receptacle Assembly

When ordering specify length and wire color  
Use 'F' for feet; 'N' for inches

Example: P/N 178-5728-6F-9N-RED



**Note:** Receptacle Assembly can only be installed into a Sub-D **female** insert

### P/N 178-5729

#### Double Ended Plug/Receptacle Assembly

When ordering specify length and wire color  
Use 'F' for feet; 'N' for inches

Example: P/N 178-5729-6F-9N-RED



**Note:** Plug Assembly can only be installed into a Sub-D **male** insert

**Note:** Receptacle Assembly can only be installed into a Sub-D **female** insert

### P/N 178-5740

#### Double Ended Plug Assembly

When ordering specify length and wire color  
Use 'F' for feet; 'N' for inches

Example: P/N 178-5740-6F-9N-RED



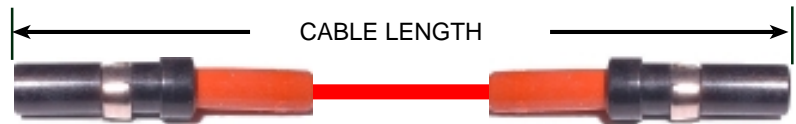
**Note:** Plug Assemblies can only be installed into a Sub-D **male** inserts

### P/N 178-5741

#### Double Ended Receptacle Assembly

When ordering specify length and wire color  
Use 'F' for feet; 'N' for inches

Example: P/N 178-5741-6F-9N-RED



**Note:** Receptacle Assemblies can only be installed into a Sub-D **female** insert

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