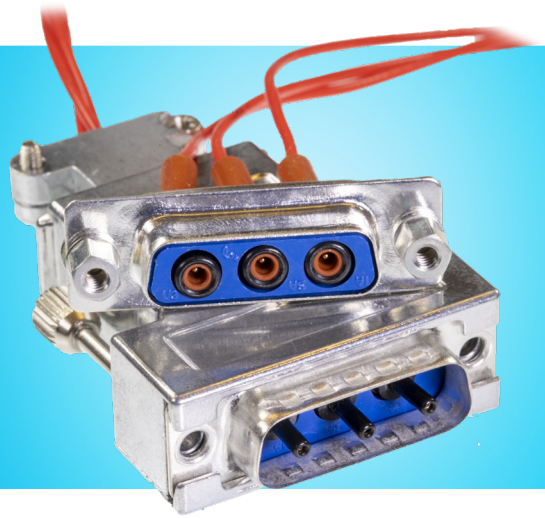
DHM

Technical Specifications

High-Voltage Cable Assemblies



Leveraging 13.5 kVDC Hi/Mate™ Technology

Teledyne Reynolds designs and manufactures high-voltage interconnects for high-reliability systems, including airborne military and space equipment. Hi/Mate™ inserts are self-contained high-voltage interconnects that fit standard D-Sub shells, which puts high-voltage and mixed-signal contacts in one connector. We sell Hi/Mate connectors and also design and assemble custom Hi/Mate interconnects to customer requirements. The D-Sub Hi/Mate (DHM) series covers the standard case: pre-wired and factory-assembled cable assemblies that use Hi/Mate inserts in a range of D-Sub shells. DHM assemblies are rated at 13.5 kVDC mated and 100% tested at 18 kVDC at a simulated altitude of 70,000 ft.

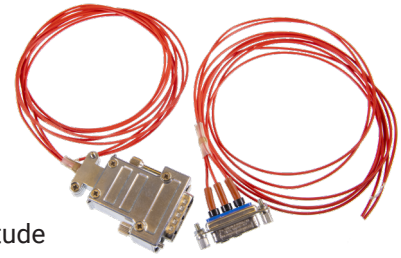
Overview

- High-voltage functionality in a standard connector platform
- Mixed-signal performance all in one connector
- Multiple connector layouts and sizes
- Captive jack screws for reliable and secure connector mating
- Single-ended flying leads, double-ended assemblies available



Applications

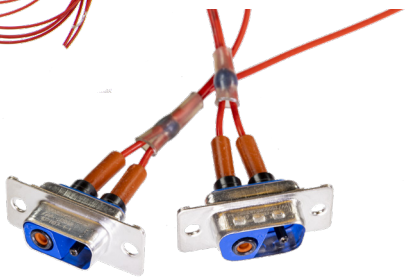
- Semiconductor equipment
- Power supplies
- Airborne military systems
- Analytical equipment



Specifications

- Rated Voltage (mated): 13.5 kVDC*
- Test Voltage (mated): 18 kVDC at 70,000 ft. simulated altitude
- Altitude: 0 to 70,000 ft (21,336 m)
- Temperature Range: -55°C to +125°C (-67°F to +257°F)
- Operating Current: 5.9 A (27°C/80°F free air)

*Contact-to-contact and contact-to-shell at altitude and rated temperature range.



Teledyne Reynolds
Aerospace & Defense Electronics

TELEDYNE

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE | TELEDYNE PROPRIETARY | EAR99 TECHNICAL DATA

Plug Cable Assemblies

- Single- or double-ended
- Equipped with a backshell for strain relief
- Equipped with rotating jack screws for connector mating

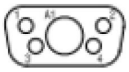
Receptacle Cable Assemblies

- Single- or double-ended
- Can be front- or rear-mounted to a panel
- Equipped with a jack post kit for connector mating

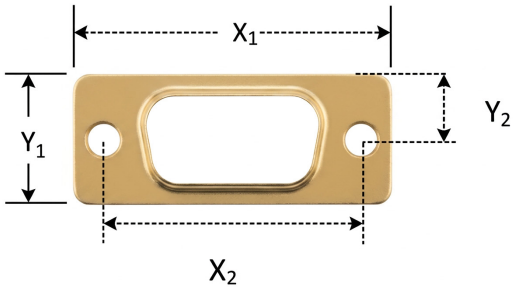
Material Specifications (Typical)

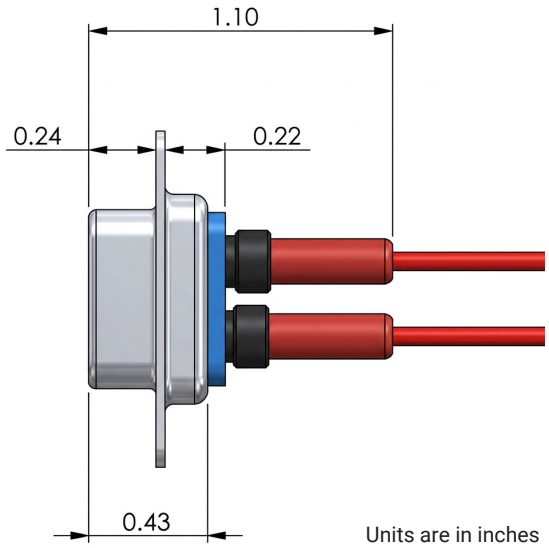
- Wire Conductor: Silver-plated Copper (SPC)
- Wire Insulation: Fluoropolymer
- Insulator Body: Thermoplastic
- Dielectric Seal & Overmold Material: Silicone
- Backshell: Steel with Tin plate

Standard Insert Configurations

Shell Size	High-Voltage Options	Mixed-Signal Options	X_1 (in.), ±0.015 in.	X_2 (in.), ±0.005 in.	Y_1 (in.), ±0.015 in.	Y_2 (in.), ±0.015 in.
1	2WK2 	5W1 	1.213	0.984	0.494	0.247
2	3W3 	11W1 	1.541	1.312		
3	5W5 	Options available upon request	2.088	1.852		
4	8W8 	Options available upon request	2.729	2.500		

Hi/Mate plugs and receptacles fit into the largest (size 8) cavity





Units are in inches

Ordering

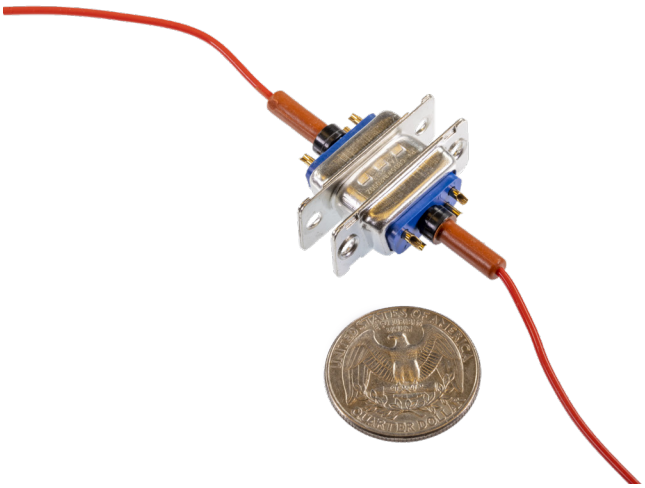
Use the following to designate the DHM assembly desired.

DHM - P1 - 2WK2 - XXX

Step 1: Connector Selection[1]
P1: Plug, Single-Ended
P2: Plug, Double-Ended
R1: Receptacle, Single-Ended
R2: Receptacle, Double-Ended

Step 2: Insert Configuration
Shell Size 1: 2WK2, 5W1[2]
Shell Size 2: 3W3, 11W1[3]
Shell Size 3: 5W5
Shell Size 4: 8W8

Step 3: Assembly Length[4]
XXX = Length (in inches)



Example:
DHM - P1 - 2WK2 - 012 = Single-ended plug (2WK2), 12-inch length.

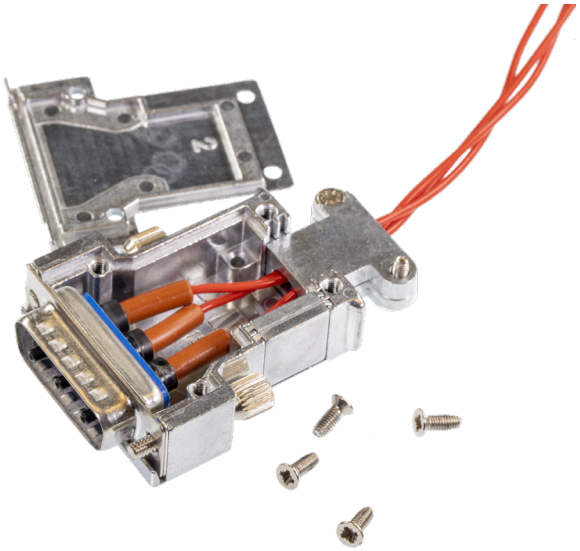
[1] For mixed plug-receptacle assemblies, please contact the factory.

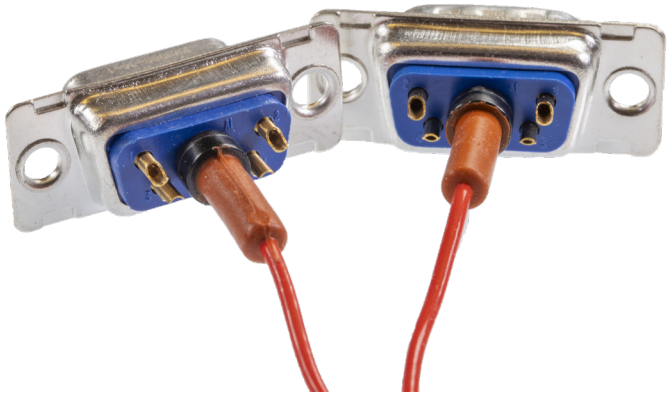
[2] For mixed signal assemblies, please contact the factory.

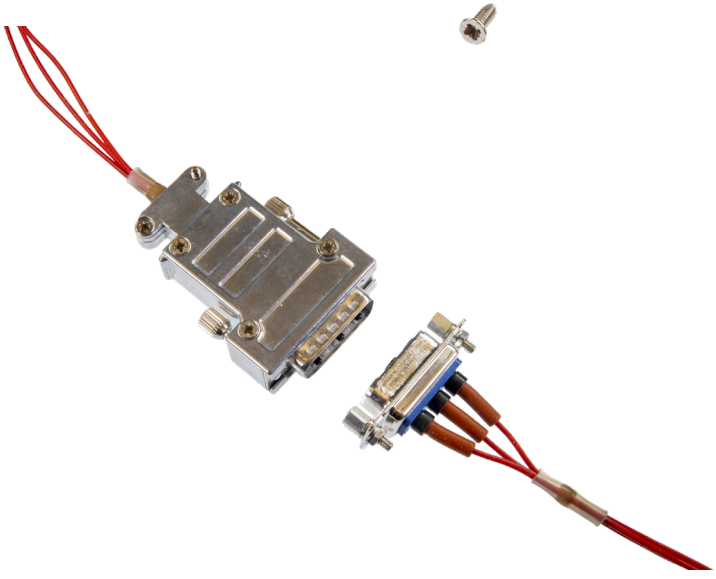
[3] Standard product is supplied without backshell. For assemblies with backshells, please contact the factory.

[4]

Length (in.)	Tolerance
0-90	±0.50
91-150	±1.00
151-600	±3.00
600+	±6.00







Why Buy DHM Assemblies

Having us manufacture complete assemblies means they are built with decades of high-voltage experience, using original tools and jigs, and screened in the as-used configuration to confirm operation within the specified ratings.



Precision Measurement



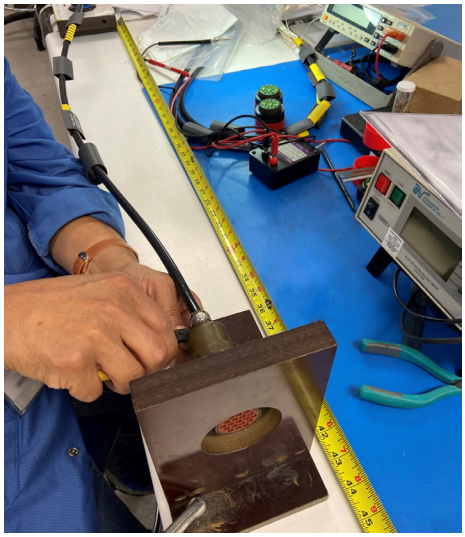
Etching, Coating & Curing HV Wire



Low PD Testing



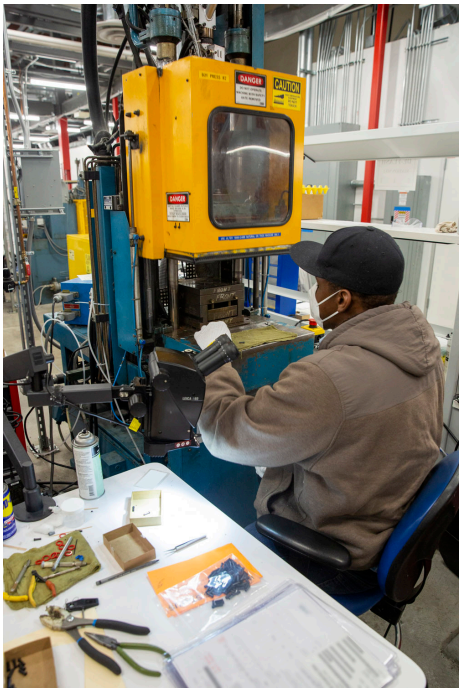
Harness Inspection



Harness Assembly



Epoxy Mixing



Injection Molding



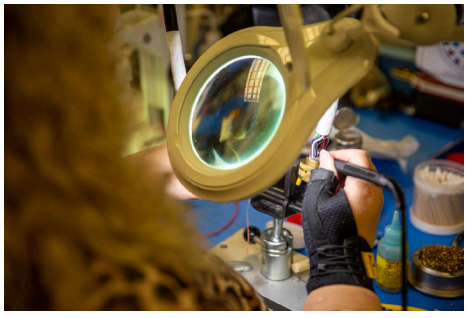
Curing Ovens



Autoclave & Curing Ovens

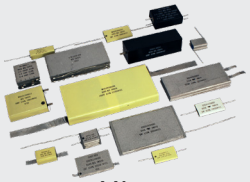


Connector Assembly



Harness Soldering

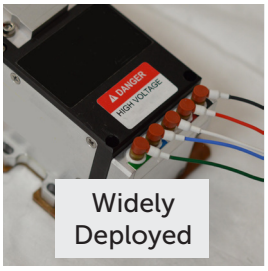
About Us



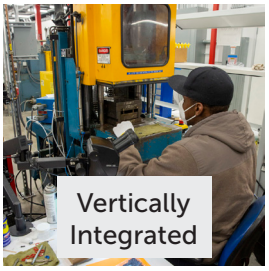
Mica Capacitors



Radar



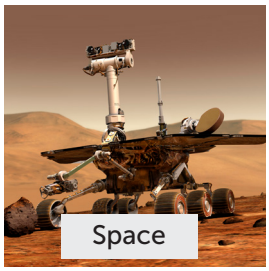
Widely Deployed



Vertically Integrated

75+

Years of Heritage



Space



Single-Pin



Hermetic



In-House Test



U.S. Facility



Multi-Pin



EW



UAVs



HV Wire



Semiconductor



Space Qualified



Airborne



Missiles



Nuclear



Spark Gaps