The Hi/Mate™ Series are miniature insertable/removeable high voltage contact assemblies for use in MIL-C-38999 Series I, III and IV off-the-shelf connectors having a 12 gauge, rear release, contact retention cavity.

Hi/Mate™ expands the capability of MIL-C-38999 Series I, III and IV connectors, by adapting them to carry 13.5 kVDC from sea level to airborne applications up to 70,000 feet altitude over a temperature range of -55° to 125°C.

Hi/Mate™ contact assemblies are insertable into four standard shell sizes and eight insert arrangements in accordance with MIL-STD-1560. These contact assemblies are, in actuality, independent high voltage connectors, and do not rely upon the dielectric properties of the MIL-C-38999 insert; making the Hi/Mate™ ideally suited to be combined in inserts with fiber optic, coaxial or low voltage pins. The insert is merely a holder for the Hi/Mate™ contact and Advanced Interface Seal™.

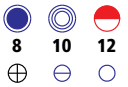
Hi/Mate™
The MIL-C-38999 compatible high voltage interface

The Advanced Interface Seal™ was patented by Teledyne Reynolds and has been highly successful in numerous connectors designed for use in the harshest of environments from sea level to Deep Space.

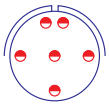
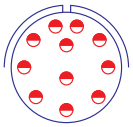
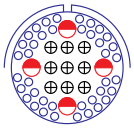
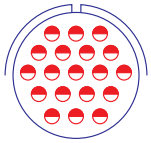
INSERT ARRANGEMENTS

Any 12 gauge cavity in the insert arrangements shown below, can be converted to a 13.5 kVDC high voltage circuit without modification to the insert, by installing a Hi/Mate™ contact assembly in the appropriate pin and socket combination. Insert arrangements are in accordance with MIL-STD-1560. 12 gauge cavities are identified in the Contact Legend.

Contact Legend

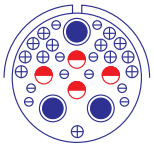
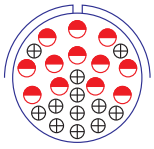
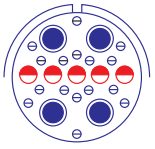


Front face of pin inserts illustrated

Insert Arrangement	17-6	21-11	23-54			25-19
Service Rating	I	I		M		I
Number of Contacts	6	11	40	9	4	19
Contact Size	12	12	22D	16	12	12

Front face of pin inserts illustrated

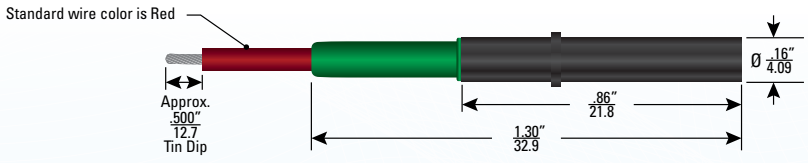




Note:
Custom inserts are available for high voltage, low voltage, fiber optic and coaxial pins, as well as combinations of these pins

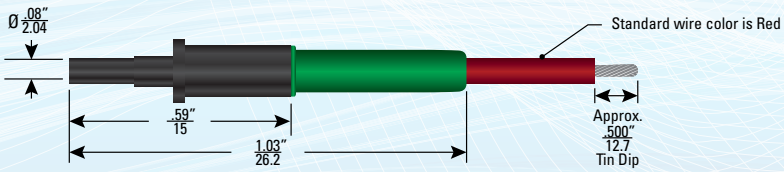
Insert Arrangement	25-20				25-24		25-26		
Service Rating			N			I		I	
Number of Contacts	10	13	3	4	12	12	16	5	4
Contact Size	20	16	8 Twinax	12 Coax	16	12	20	12	8 Coax

PLUG AND RECEPTACLE CONTACT ASSEMBLY DIMENSIONS

Receptacle Contact Assembly



Plug Contact Assembly



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Approved for Public Release: MP/039/17

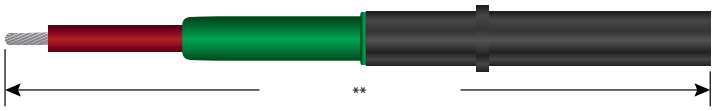
PLUG CONTACT ASSEMBLIES

Single-Ended
178-5237

Double-Ended
178-5240

RECEPTACLE CONTACT ASSEMBLIES

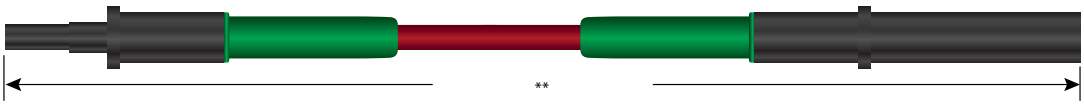
Single-Ended
178-5238



Double-Ended
178-5241

PLUG-RECEPTACLE CONTACT ASSEMBLY

Double-Ended
178-5239



SERIES SPECIFICATIONS

(• = Same value as above)

Series	Voltage Rating (kVDC)	Altitude Rating (ft)	Operating Temp. (°C)	Current Rating (Amp)	Receptacle Insulator Material	Plug Insulator Material	Coupling Style	Coupling Nut Material/ Finish	Plug Contact Material/Finish (Socket)	Recept. Contact Material/Finish (Pin)	Wire Type	Wire Insulation	Braid Termination	Test Voltage @ 70,000 ft (kVDC)	Test Voltage @ Sea Level (kVDC)
Hi/Mate™	13.5	70,000	-55 to 125	5	Plastic	Plastic	MIL-DTL-38999	MIL-DTL-38999	BeCu/Au	Brass/Au	Non-shielded	FEP	N/A	18	NA

WIRE SPECIFICATIONS

Part Number	Operating Voltage (kVDC)	Conductor			Insulation		Shielding			Jacket		Impedance Ω	Attenuation dB/100 ft @ 400 MHz	Capacitance pF/ft (Nom.) @ 1 kHz
		AWG	Strands	Plating	Material	ø in./mm	AWG	Plating	ø in./mm	Material	ø in./mm			
178-8410	18	24	19/36	SPC	Silicone Coated FEP	.058 / 1.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Cable Assembly Ordering Information: All cable assembly cable lengths are to be specified in inches only. For example, to order part number 178-6027 with a cable length of 10 feet 8 inches the cable assembly part number would be specified as 178-6027-128N.

• **Note:** Product numbers and specs subject to change without notice. • Products listed represent only a small selection of Teledyne Reynolds' products please visit www.teledynereynolds.com for the most up to date product information. • Contact Teledyne Reynolds' Engineering to discuss custom designs. **WARNING: Connectors should NEVER be handled mated or unmated when voltage is applied.**