

### Sub D Type (MIL-C-24308) Connectors

CeramTec's hermetic Subminiature D type connectors are designed to meet MIL-C-24308 specifications. Standard configurations include 9, 15, 25, and 50 gold plated pin connectors, which are available as a weldable unit or in a ConFlat® or ISO flange. Custom configurations are commonplace and available upon request. CeramTec is able to achieve a very high pin/lead density (standard - up to 50 pins) using glass-ceramic sealing technology. The rugged stainless steel shell design is built to withstand severe environments and reduces seal failure due to overheating while welding. These connectors are used primarily to provide instrumentation signals, voltage and/or current into a high-vacuum or ultra-high vacuum environment, with an in-line connection to outside instrumentation.

### In-Vacuum Ribbon Cable

CeramTec's in-vacuum ribbon cable is designed to complement our Sub D Type (MIL-C-24308) hermetic multipin connector product line and therefore cable configurations include 9, 15, or 25 conductor cable. Note that 50 conductor cables are created by using two 25 conductor cables. Each of the Kapton® wrapped (19 x 0.0063) 22 AWG silver plated copper conductors are woven with a PEEK (polyether ether ketone) monofilament in order to achieve the ribbon cable form. The multistranded wrapped cable offers the most flexible solution and has a temperature range up to 200° C. All ribbon cable assembly materials are ultra-high vacuum (UHV) compatible. The ribbon cables are vacuum baked out prior to shipping. Additional vacuum bake out prior to use is also recommended. All cable assembly components are sold separately.

### Specifications

#### Materials

Shell: 304 Stainless steel  
 Pins: 300 Series Stainless steel (Gold Plated)  
 Insulation: Glass-ceramic  
 Magnetic Materials: No

**Voltage Rating** 500 V DC

**Current Rating** 5 Amps per pin

**Temperature Range** -269°C to 450°C, ISO KF -25°C to 205°C

**Pressure @ 20°C** ISO KF 0 PSIG

9 Pin - 1350 PSIG (93.1 Bar)	25 Pin - 1200 PSIG (82.7 Bar)
15 Pin - 1250 PSIG (86.2 Bar)	50 Pin - 900 PSIG (62.1 Bar)

### Vacuum Side Plug Specifications

#### Materials

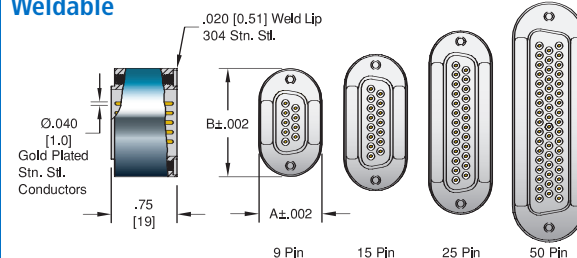
Shell/Insulation: PEEK (polyether ether ketone)  
 Crimp Contacts: Copper alloy (Gold Plated)  
 Magnetic Materials: No

**Voltage Rating** 500 V DC

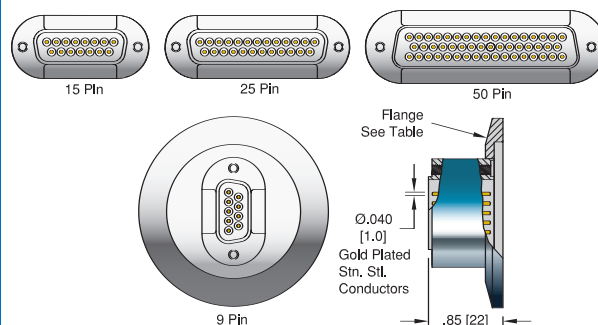
**Current Rating** 15 Amps

**Temperature Range** -269°C to 200°C

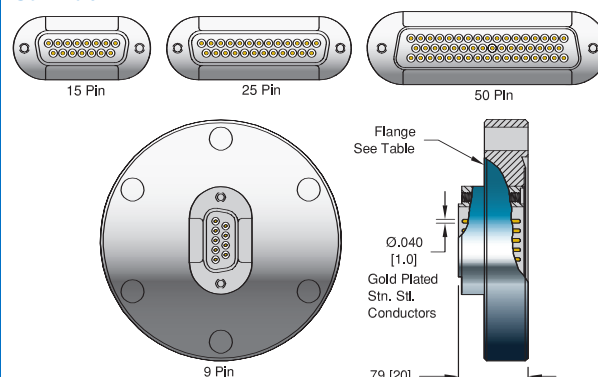
#### Weldable



#### ISO KF



#### ConFlat



### Ribbon Cable Specifications

#### Materials

Insulation: Kapton® Type FN  
 Weave: PEEK (polyether ether ketone) monofilament

**Number of Conductors** 9, 15, 25

#### Conductor

22 AWG 19 / 0.0063" stranded silver plated copper

**Voltage Rating** 600 V AC, 850 V DC

**Current Rating** 5 Amps per conductor

**Temperature Range** -55°C to 200°C

**Resistance @ 20°C** 119Ω/km

**Weldable**



NO. PINS	INSTALLATION	DIMENSIONS		PART NUMBER
		A	B	
9	Weld	0.720 [18.29]	1.234 [31.34]	16800-01-W
15	Weld	0.720 [18.29]	1.562 [39.67]	16801-01-W
25	Weld	0.720 [18.29]	2.102 [53.39]	16802-01-W
50	Weld	0.832 [21.13]	2.738 [69.54]	16804-01-W

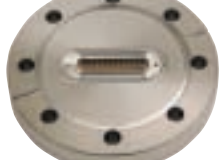
**ISO KF**



**ISO FLANGE**

9	NW40KF	-	-	18605-01-KF
15	NW50KF	-	-	18606-01-KF
25	NW63LF	-	-	20306-01-CLF
50	NW100LF	-	-	20307-01-CLF

**ConFlat**



**CONFLAT FLANGE**

9	2 3/4" (NW35CF)	-	-	18607-01-CF
15	3 3/8" (NW50CF)	-	-	18608-01-CF
15	4 1/2" (NW63CF)	-	-	21108-01-CF
25	4 1/2" (NW63CF)	-	-	18609-01-CF
50 (2x25)	4 1/2" (NW63CF)	-	-	21109-01-CF
50	6" (NW100CF)	-	-	18610-01-CF
100 (2x50)	6" (NW100CF)	-	-	21641-01-CF

**Air Side Plug**



TYPE	VOLTAGE DC	QTY	CONTACTS		DIMENSIONS			TEMPERATURE °C		MAGNETIC MATERIALS	PART NUMBER
			AMPS	MATERIAL	D	W	H	MIN	MAX		
Air Side	500 V	9	5	Copper Alloy	1.7 [43]	1.2 [31]	0.6 [15]	-55	105	Yes	18076-01-A
Air Side	500 V	15	5	Copper Alloy	1.6 [41]	1.6 [41]	0.6 [15]	-55	105	Yes	18076-02-A
Air Side	500 V	25	5	Copper Alloy	1.9 [48]	2.2 [56]	0.6 [15]	-55	105	Yes	18076-03-A†
Air Side	500 V	50	5	Copper Alloy	2.0 [51]	2.6 [66]	0.7 [18]	-55	105	Yes	18076-04-A
Vacuum Side-Female	500 V	9	5	Copper Alloy	1.3 [33]	0.4 [11]	0.63 [16]	-200	200	No	16810-01-A
Vacuum Side-Female	500 V	15	5	Copper Alloy	1.6 [40]	0.4 [11]	0.63 [16]	-200	200	No	16811-01-A
Vacuum Side-Female	500 V	25	5	Copper Alloy	2.2 [55]	0.4 [11]	0.63 [16]	-200	200	No	16812-01-A†
Vacuum Side-Female	500 V	50	5	Copper Alloy	2.7 [69]	0.5 [14]	0.63 [16]	-200	200	No	16814-01-A
Vacuum Side-Male	500 V	9	5	Copper Alloy	1.3 [33]	0.4 [11]	0.63 [16]	-200	200	No	19827-01-A
Vacuum Side-Male	500 V	15	5	Copper Alloy	1.6 [40]	0.4 [11]	0.63 [16]	-200	200	No	19828-01-A
Vacuum Side-Male	500 V	25	5	Copper Alloy	2.2 [55]	0.4 [11]	0.63 [16]	-200	200	No	17411-01-A
Vacuum Side-Male	500 V	50	5	Copper Alloy	2.7 [69]	0.5 [14]	0.63 [16]	-200	200	No	19829-01-A

Note that contacts are included with all plugs.

**Vacuum Side Plugs**



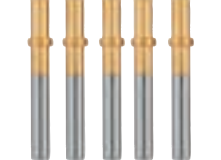
**Ribbon Cable 22 AWG**



CONDUCTOR QUANTITY*	CABLE LENGTH	CABLE WIDTH	INSULATION DIAMETER	WIRE DIAMETER	PART NUMBER
9	19"	0.4	Ø .035	19 X 0.0063	20370-19-WW
9	39"	0.4	Ø .035	19 X 0.0063	20370-39-WW
15	19"	0.7	Ø .035	19 X 0.0063	20371-19-WW
15	39"	0.7	Ø .035	19 X 0.0063	20371-39-WW
25	19"	1.2	Ø .035	19 X 0.0063	20372-19-WW
25	39"	1.2	Ø .035	19 X 0.0063	20372-39-WW
Adjustable Wire Stripper	For 20 - 30 AWG (0.25 - 0.80 mm) Cable				21128-01

\*The 50 conductor cables are created by using two 25 conductor cables. Contact CeramTec for custom lengths.

**Contacts**



TYPE	MATERIAL	DESCRIPTION	PART NUMBER
0.040 Female Crimp Contacts	Copper Alloy	Female accepts wire up to 0.040 [1.0]	16757-02-A
0.040 Male/Pin Crimp Contacts	Copper Alloy	Male/Pin contact - 0.040 [1.0] Pin	17412-02-A
Crimp Tool		For 0.025" - 0.075" Crimp Diameters	2840-05

\*\*Contacts priced and sold in packages of 5. See the Accessories section for more information on all accessories.