

### **HN** Connectors

#### **General Description**

Delta HN series connectors are medium-size, 50  $\Omega$  impedance connectors with <sup>3/4</sup>-20 threaded coupling and good power handling capability. They are best suited for use with cables in the range of .350" to .450" diameter, but are available for other cables from .200" to over 1" diameter. Our extensive line of HN receptacles includes configurations for virtually any packaging requirement, and we can supply any adapter or accessory you need to complete your system design. Adapters between HN and other series are shown starting on page 176.

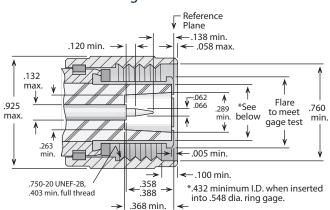
Our HN series product line is still growing, so please call if you don't see what you need.

#### **HN** Configurations

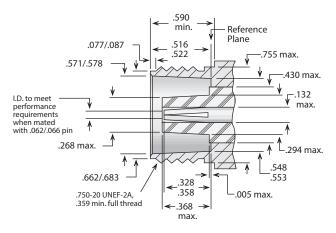
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#### **HN Specifications\***



#### Jack Interface\*\*



\*\*Some proportions altered to illustrate detail.

#### Electrical:

Nominal Impedance: 50 ohms. Frequency Range: DC–4 GHz. Voltage Rating: 1,500 volts RMS. Dielectric Withstanding Voltage: 5,000 VRMS. Insulation Resistance: 5,000 megohms.

#### Materials/Finishes:

- Insulators: Teflon per ASTM D1710, or Rexolite per MIL-P-77.
- Male Contacts: Brass per ASTM B16.
- Female Contacts: Beryllium Copper per ASTM B196.
- Contact Plating: Silver per ASTM B700, or Gold per MIL-DTL-45204.
- Gaskets: Silicone rubber per ZZ-R-765, Class II, Grade 50.
- Other Metal Parts: Brass per ASTM B16, plated: Silver - ASTM B700, or Nickel - AMS-QQ-N-290.

All other specifications are in accordance with the latest issues of MIL-PRF-39012, or MIL-C-3643, or other applicable MIL specifications, and interfaces are in accordance with MIL-STD-348.

\*These specifications are typical and may not apply to all connectors. Detailed specifications for individual connectors are available on request.

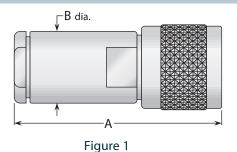
### 1 Delta Electronics Mfg. Corp. deltarf.com 978-927-1060 sales@deltarf.com

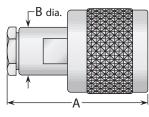
#### Plug Interface\*\*



## HN Cable Plugs

#### Straight Plug - Military Clamp For Flexible Cable





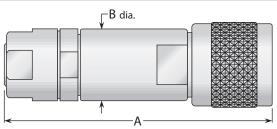
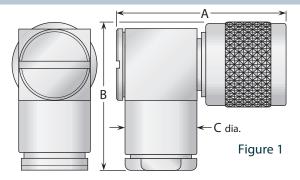


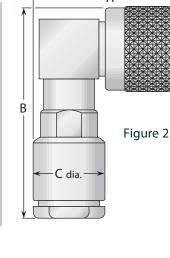
Figure 2

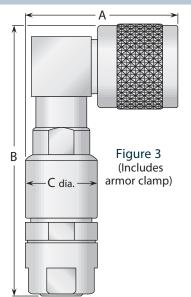
Figure 3 (Includes armor clamp)

	J						
Cable	Figure	Dimensions		Plat	ting	Delta P/N	Assembly Procedure/
Group	rigure	А	В	Body	Contact	Della F/N	Trim Code
2, 3	1	2.38	.690	Nickel	Silver	UG-59B/U	***
2, 3	1	2.25	.750	Nickel	Silver	UG-59E/U	A/26
2, 3	1	2.81	.690	Nickel	Silver (C)	UG-1213/U	***
4	1	2.23	.750	Nickel	Silver (C)	1601079N001-000	***
5, 6	2	1.50	.500	Nickel	Silver	1601015N000-000	A/17
15	3	2.84	.750	Nickel	Silver	UG-925B/U	D/05
16	1	2.41	.880	Nickel	Silver	UG-494B/U	A/27
17	1	2.59	1.31	Nickel	Silver	UG-495D/U	A/28
17	3	3.53	1.31	Nickel	Silver	UG-1148/U	***
20	3	3.20	1.31	Nickel	Silver	UG-926A/U	D/06

### Right Angle Plug - Military Clamp For Flexible Cable







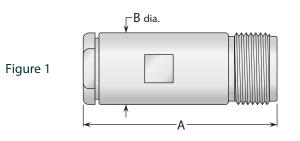
Cable	<b>Figure</b>	Dimensions		Plating	g	Delta P/N	Assembly Procedure/	
Group	Figure	А	В	С	Body	Contact	Della P/N	Trim Code
2, 3	1	1.73	1.63	.750	Nickel	Silver (C)	1605004N001-002	A/29
2, 3	2	1.53	2.25	.690	Nickel	Silver (C)	1604004N001-000	***
2, 3	2	1.56	2.48	.750	Nickel	Silver	1604005N000-000	A/27
4	2	1.56	2.48	.750	Nickel	Silver (C)	1604079N001-001	***
15	3	1.56	3.05	.750	Nickel	Silver	1604006N000-000	D/05

See page 209 for cable groups. • Assembly procedures start on page 210. • \*\*\*Contact factory for cable assembly instructions. (C) in contact plating column indicates captive contact. • See page 6 for alternate body plating information.



### **HN** Cable Jacks

#### Straight Jack - Military Clamp For Flexible Cable



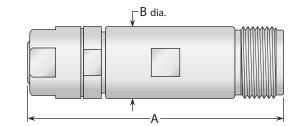
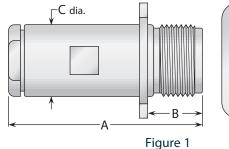


Figure 2 (Includes armor clamp)

Cable Figure		Dimer	nsions	Plat	ing	Delta P/N	Assembly Procedure/	
Group	Figure	А	В	Body	Contact	Della P/N	Trim Code	
2, 3	1	2.53	.690	Nickel	Silver	UG-60B/U	***	
2, 3	1	2.03	.750	Nickel	Silver	UG-60E/U	A/26	
2, 3	1	2.94	.690	Nickel	Silver (C)	UG-1214/U	***	
15	2	2.63	.750	Nickel	Silver	UG-927B/U	D/05	
17	1	2.53	1.31	Nickel	Silver	UG-333C/U	A/28	

#### Panel Jack - Military Clamp For Flexible Cable





Cable	Figure	Dimensions			Mounting	Plat	ing	Delta P/N	Assembly Procedure/	
Group	Fig.	А	В	B C Figu		Body	Contact	Delta P/N	Trim Code	
2, 3	1	2.53	.590	.690	40	Nickel	Silver	UG-61B/U	***	
2, 3	1	2.03	.590	.750	40	Nickel	Silver	UG-61E/U	A/26	
2, 3	1	2.03	.590	.750	36	Nickel	Silver	UG-427C/U	A/26	

See page 209 for cable groups. • Assembly procedures start on page 210.

\*\*\*Contact factory for cable assembly instructions.
See page 208 for mounting dimensions.
See page 6 for alternate body plating information.



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### HN Receptacles / Accessories

#### Panel & Bulkhead Receptacles

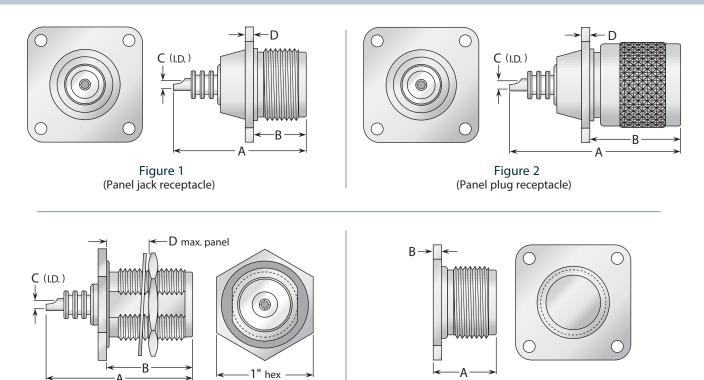


				Figure 3 d jack reco			Figure 4 (Dummy receptacle)			
	Eiguro	Dimensions Mounting					Pla	ting	Delta P/N	
	Figure	А	В	С	D	Figure	Body	Contact	Della F/N	
	1	1.50	.590	.106	.080	40	Nickel	Silver (C)	UG-496/U	
	2	1.88	.940	.106	.080	40	Nickel	Silver (C)	1623000N401-000	
	3	1.55	.890	.106	.250	69	Nickel	Silver (C)	1621000N691-000	
-	4	.875	.125	_	_	34*	Nickel	_	1663000N340-000	

\* Except mounting holes are .120 diameter.

#### **Dust Caps**

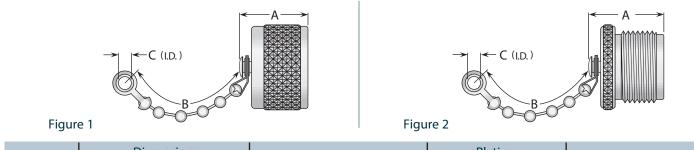


Figure	Dimensions			Fosturor	Plat	ing	Delta P/N
Figure	А	В	С	Features	Body	Contact	
1	.700	3.50	.144	Bead chain	Nickel		1632000N000-000
2	.700	3.50	.144	Bead chain	Nickel	_	1633000N000-000

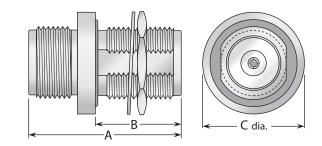
• See page 208 for mounting dimensions. • (C) in contact plating column indicates captive contact.

• See page 6 for alternate body plating information. • Dust caps available with other chain styles and lengths.



### **HN Adapters**

#### Bulkhead Jack - Jack Adapter



(Connects two plugs, pressurized)

	Dimensions		Max.	Mounting	Pla	ting	Delta P/N	
А	В	С	Panel	Figure	Body	Contact	Delta P/IN	
1.94	1.06	1.06	.250	69	Nickel	Silver (C)	UG-1019A/U	

#### **Straight Adapters**

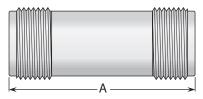


Figure 1 (Straight jack–jack; connects two plugs)

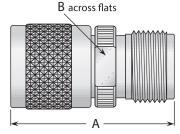


Figure 2 (Straight plug–jack; connects one plug and one jack)

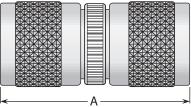


Figure 3 (Straight plug–plug; connects two jacks)

Eiguro	Dime	ension	Plat	ing	Delta P/N	
Figure	A B		Body	Contact	Delta P/N	
1	2.00	_	Nickel	Silver (C)	1628000N000-000	
2	1.63	.750	Nickel	Silver (C)	1634000N001-000	
3	1.94	—	Nickel	Silver (C)	1627000N000-000	

See page 208 for mounting dimensions.
 (C) in contact plating column indicates captive contact.
 See page 6 for alternate body plating information.



4

5

1.94

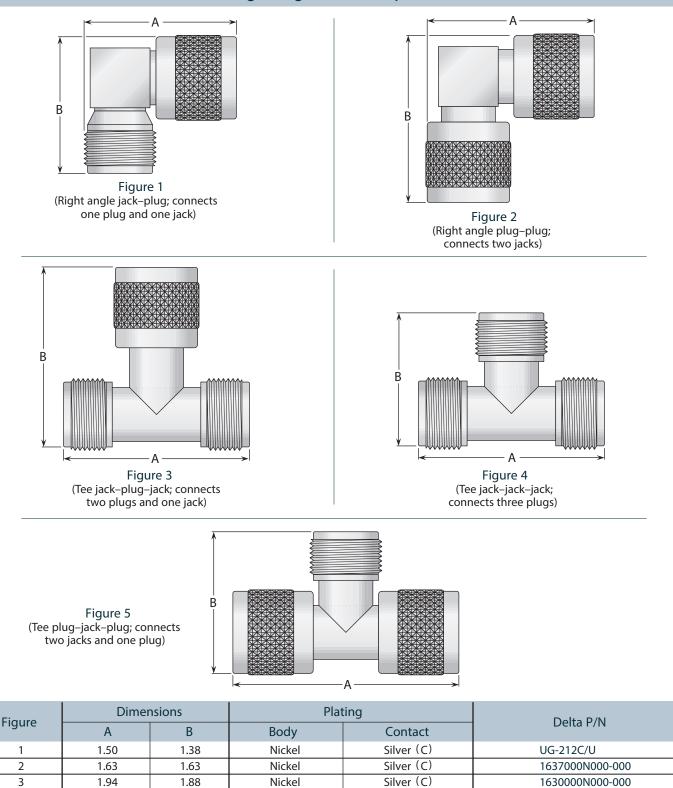
2.33

1.28

1.50

### **HN Adapters**

#### **Right Angle & Tee Adapters**



• (C) in contact plating column indicates captive contact. • See page 6 for alternate body plating information.

Nickel

Nickel

Silver (C)

Silver (C)

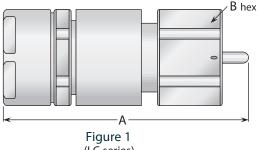
1638000N000-000

UG-1109/U

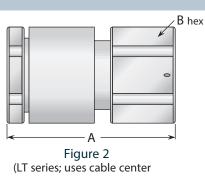
### LC / LT Connectors



#### **Panel Receptacles**







conductor as contact)

Cable	Figure	Dimensions		Plat	ing	Delta P/N	Assembly Procedure/	
Group	Figure	А	В	Body	Contact	Delta P/N	Trim Code	
17, 18	1	3.50	1.50	Nickel	Silver	UG-154B/U	***	
20	2	3.03	1.50	Nickel	—	UG-532A/U	***	

#### **Straight Plug - For Flexible Cable**

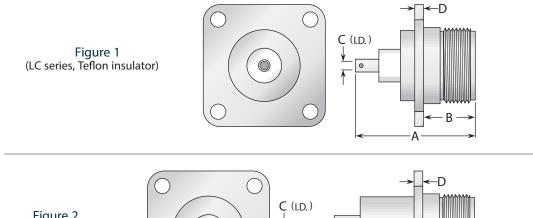


Figure 2 (LC series, pressurized, Rexolite insulator)

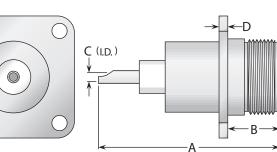


Figure		Dime	nsions		Mounting	Plat	ing	Delta P/N
	А	В	С	D	Figure	Body	Contact	Delta P/N
1	2.25	1.13	.187	.125	45	Nickel	Silver (C)	UG-352/U
2	3.06	.880	.203	.125	45	Nickel	Silver (C)	UG-352B/U

• See page 209 for cable groups. • \*\*\*Contact factory for cable assembly instructions.

• (C) in contact plating column indicates captive contact. • See page 208 for mounting dimensions.

See page 6 for alternate body plating information.

Note: Not all LC series plugs and jacks are intermateable. Contact factory for compatibility information on specific plug/jack combinations.

### LC & LT Adapters



#### **LC Series Adapters**

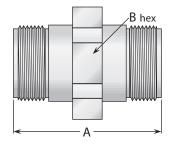


Figure 1 (Straight jack–jack; connects two plugs)

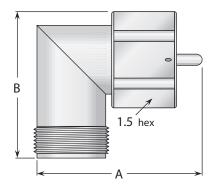


Figure 2 (Right angle plug–jack; connects one plug and one jack)

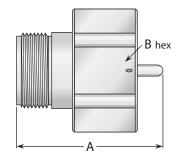


Figure 3 (Straight LC jack– large LC plug; connects one LC plug and one large LC jack)

Figuro	Dimensions		Plating		Delta P/N	
Figure	A	В	Body	Contact	Delta P/N	
1	2.50	1.875	Nickel	Silver (C)	UG-157B/U	
2	2.72	2.60	Nickel	Silver (C)	UG-216B/U	
3	2.22	2.09	Nickel	Silver (C)	UG-220B/U	

#### **LT Series Adapters**

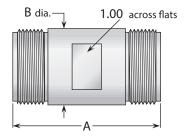


Figure 1 (Straight jack–jack; connects two plugs)

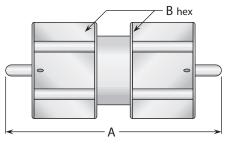


Figure 2 (Straight plug–plug; connects two jacks)

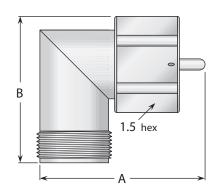


Figure 3 (Right angle plug–jack; connects one plug and one jack)

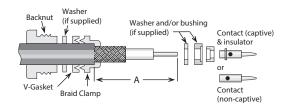
Figuro	Dimensions		Pla	ting	Delta P/N
Figure	А	В	Body	Contact	Delta P/N
1	2.50	1.25	Nickel	Silver (C)	UG-533B/U
2	3.70	1.50	Nickel	Silver (C)	3527000N001-000
3	2.81	2.56	Nickel	Silver (C)	UG-534B/U

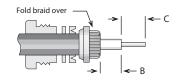
(C) in contact plating column indicates captive contact. • See page 6 for alternate body plating information. Note: Not all LC series plugs and jacks are intermateable. Contact factory for compatibility information on specific plug/jack combinations.

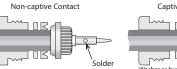


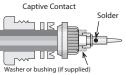


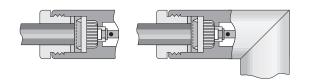
- 1) Trim cable jacket to dimension A. Slide backnut, washer, V-gasket, and braid clamp onto cable as shown. Cable jacket should bottom on step in braid clamp.
- 2) Comb braid wires out straight and fold back over front shoulder of braid clamp (braid wires should not overlap one another after folding). Trim braid wires flush with step of braid clamp. Trim cable dielectric and center conductor to dimensions B and C.
- 3) If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Assemble rear bushing or washer (if supplied), rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end. For right angle connectors with access cap, omit this step entirely.
- 4) Insert prepared cable and hardware into body and tighten backnut. For right angle connectors with access cap, solder center conductor into slot in contact and tighten access cap.











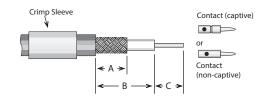
			III Codes For		ASSEMBLY I			
Code	A	В	с		Code	A	В	С
A/01	.375 (3/8)	.047 (3/64)	.203 (13/64)		A/20	.375 (3/8)	.047 (3/64)	.172 (11/64
A/02	.375 (3/8)	.109 (7/64)	.203 (13/64)		A/21	.500 (1/2)	.313 (5/16)	.172 (11/64
A/03	.438 (7/16)	.250 (1/4)	.188 (3/16)		A/22	.375 (3/8)	.188 (3/16)	.141 (9/64)
A/04	.281 (9/32)	.047 (3/64)	.125 (1/8)		A/23	.438 (7/16)	.078 (5/64)	.172 (11/64
A/05	.313 (5/16)	.125 (1/8)	.109 (7/64)		A/24	.500 (1/2)	.094 (3/32)	.141 (9/64)
A/06	.594 (19/32)	.391 (25/64)	.156 (5/32)		A/25	.438 (7/16)	.141 (9/64)	.172 (11/64
A/07	.375 (3/8)	.047 (3/64)	.125 (1/8)		A/26	.625 (5/8)	.281 (9/32)	.250 (1/4)
A/08	.281 (9/32)	.109 (7/64)	.094 (3/32)		A/27	.688 (11/16)	.281 (9/32)	.125 (1/8)
A/09	.344 (11/32)	.109 (7/64)	.094 (3/32)		A/28	.656 (21/32)	.297 (19/64)	.250 (1/4)
A/10	.406 (13/32)	.109 (7/64)	.203 (13/64)		A/29	.688 (11/16)	.125 (1/8)	.313 (5/16)
A/11	.500 (1/2)	.281 (9/32)	.156 (5/32)		A/30	.688 (11/16)	.469 (15/32)	.156 (5/32)
A/12	.343	.040	.219		A/31	.700 (21/32)	.453 (29/64)	.250 (1/4)
A/13	.375 (3/8)	.125 (1/8)	.156 (5/32)		A/32	.313 (5/16)	.078 (5/64)	.188 (3/16)
A/14	.355	.090	.188 (3/16)		A/33	.250 (1/4)	.078 (5/64)	.094 (3/32)
A/15	.425	.094 (3/32)	.259		A/34	.250 (1/4)	.062 (1/16)	.109 (7/64)
A/16	.328 (21/64)	.094 (3/32)	.188 (3/16)		A/35	.837	.575	.150
A/17	.375 (3/8)	.109 (7/64)	.125 (1/8)		A/36	.450	.250	.150
A/18	.375 (3/8)	.062 (1/16)	.172 (11/64)		A/37	.281	.038	.188
A/19	.375 (3/8)	.188 (3/16)	.094 (3/32)		A/38	.281	.069	.156

Trim Codes For Assembly Procedure A



#### **Assembly Procedure B**

1) Trim cable per chart. Slide crimp sleeve back onto cable.



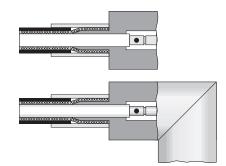
 If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Solder contact onto center conductor; back of contact flush with trimmed end of cable dielectric (omit this step for right angle connectors with access caps).
 Flare cut end of braid slightly by rotating dielectric.



- Insert cable/contact into rear of body, with all braid wires on outside of crimp tail.
   a) For captive contact connectors, push cable in until contact snaps into insulator.
  - b) For noncaptive contact connectors, push cable in until cable dielectric bottoms in connector.
  - c) For right angle or tee connectors with access caps, push cable in until end of braid touches connector body shoulder, and cable center conductor rests in contact slot.

Trim excess braid wires even with shoulder of body. Slide crimp sleeve forward until flush with body and crimp (see page 211 for hex die sizes).

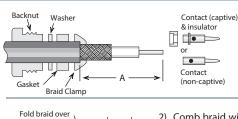
For right angle or tee connectors with access caps: Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.



	Trim Codes For Assembly Procedure B						
Code	A	В	с	Code	A	В	С
B/01	.320	.470	.140	B/20	.250	.375	.156
B/02	.422	.578	.172	B/21	.425	.550	.156
B/03	.406	.500	.187	B/22	.375	.500	.156
B/04	.285	.505	.140	B/23	.281	.469	.125
B/05	.335	.460	.140	B/24	.250	.700	.109
B/06	.187	.437	.219	B/25	.343	.775	.125
B/07	.422	.610	.156	B/26	.343	.437	.109
B/08	.422	.562	.219	B/27	.313	.437	.187
B/09	.313	.610	.203	B/28	.219	.271	.078
B/10	.280	.436	.187	B/29	.200	.320	.060
B/11	.430	.542	.156	B/30	.500	.650	.219
B/12	.300	.434	.156	B/31	.350	.840	.150
B/13	.300	.447	.156	B/32	.175	.260	.095
B/14	.420	.645	.187	B/33	.195	.270	.045
B/15	.300	.420	.120	B/34	.150	.250	.105
B/16	.312	.609	.125	B/35	.195	.280	.170
B/17	.250	.500	.156	B/36	.150	.325	.090
B/18	.437	.562	.109	B/37	.195	.295	.075
B/19	.343	.437	.156	B/38	.150	.225	.095
			•	B/39	.250	.300	.135



### **Assembly Procedure C**



B

Non-captive

olde

Captive

C→

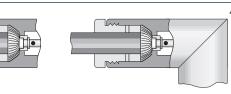
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1) Trim cable jacket to dimension A. Slide backnut, washer, gasket, and braid clamp onto cable as shown. Cable jacket should bottom on step in braid clamp.

2) Comb braid wires out straight and fold back over front
shoulder of braid clamp (braid wires should not overlap
one another after folding). Trim braid wires flush with
edge of braid clamp. Trim cable dielectric and center
conductor to dimensions B and C.

3) If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Assemble rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end.

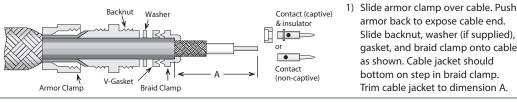


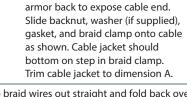
B

oldei

Captive 4) Insert prepared cable and hardware into body and tighten backnut. For right angle connectors with access cap, solder cable center conductor to slot in contact and tighten access cap.

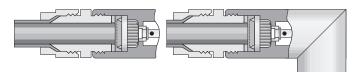
### **Assembly Procedure D**





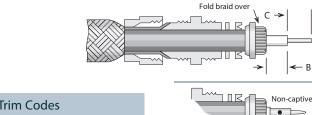
2) Comb braid wires out straight and fold back over front shoulder of braid clamp (braid wires should not overlap one another after folding). Trim braid wires flush with edge of braid clamp. Trim cable dielectric and center conductor to dimensions B and C.

3) Assemble rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end.



4) Insert prepared cable and hardware into body and tighten backnut. Trim armor to fit between armor clamp and braid clamp. Tighten armor clamp.

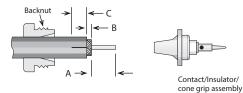
Trim Codes						
Code	А	В	С			
C/01	.656 (21/32)	.141 (9/64)	.250 (1/4)			
C/02	.500 (1/2)	.125 (1/8)	.250 (1/4)			
C/03	.450	.136	.187			
C/04	.375 (3/8)	.109 (7/64)	.125 (1/8)			
C/05	.375 (3/8)	.062 (1/16)	.250 (1/4)			
C/06	.500 (1/2)	.188 (3/16)	.125 (1/8)			
C/07	.575	.438	.094			
C/08	.625 (5/8)	.141 (9/64)	.219 (7/32)			



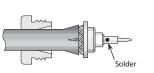
Trim Codes						
Code	А	В	С			
D/01	.375 (3/8)	.047 (3/64)	.250 (1/4)			
D/02	.500 (1/2)	.188 (3/16)	.219 (7/32)			
D/03	.344 (11/32)	.047 (3/64)	.219 (7/32)			
D/04	.313 (5/16)	.047 (3/64)	.172 (11/64)			
D/05	.625 (5/8)	.281 (9/32)	.250 (1/4)			
D/06	.313 (5/16)	.062 (1/16)	.109 (7/64)			



#### Assembly Procedure E

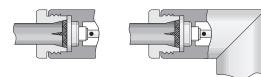


 Slide backnut onto cable as shown. Trim cable to dimensions A and B as shown. Slit jacket to dimension C in two places, 180° apart.



Trim Codes Code В С А E/01 .250 (1/4) .141 (9/64) .313 (5/16) .250 (1/4) E/02 .219 (7/32) .063 (1/16) E/03 .250 (1/4) .031 (1/32) .250 (1/4)

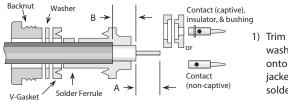
 Slide cone/insulator/contact assembly under braid until braid is flush with shoulder. Solder contact to center conductor.

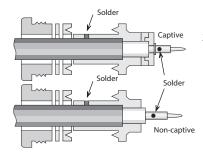


 Insert prepared cable and hardware into body; tighten assembly by holding nut stationary and turning body.

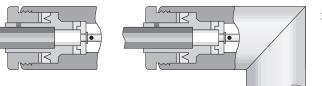
#### Assembly Procedure F

Trim Codes						
Code	A	В				
F/01	.250 (1/4)	.219 (7/32)				
F/02	.250 (1/4)	.172 (11/64)				
F/03	.188 (3/16)	.188 (3/16)				
F/04	.109 (7/64)	.265 (17/64)				
F/05	.156 (5/32)	.250 (1/4)				
F/06	.219 (7/32)	.250 (1/4)				
F/07	.156 (5/32)	.172 (11/64)				
F/08	.109 (7/64)	.219 (7/32)				





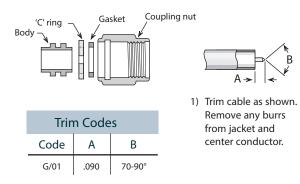
- Trim cable per chart. Slide backnut, washer, v-gasket, and solder ferrule onto cable. Trimmed end of cable jacket should bottom on step in solder ferrule.
- 2) Solder ferrule to cable jacket as shown. Retrim cable dielectric to proper length if it has extruded from soldering heat. Slide bushing and rear insulator over cable dielectric if captive contact. Solder contact onto center conductor; back of contact flush with trimmed end of cable dielectric.

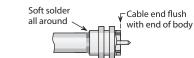


 Insert prepared cable and hardware into body and tighten backnut.

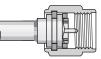


#### **Assembly Procedure G**

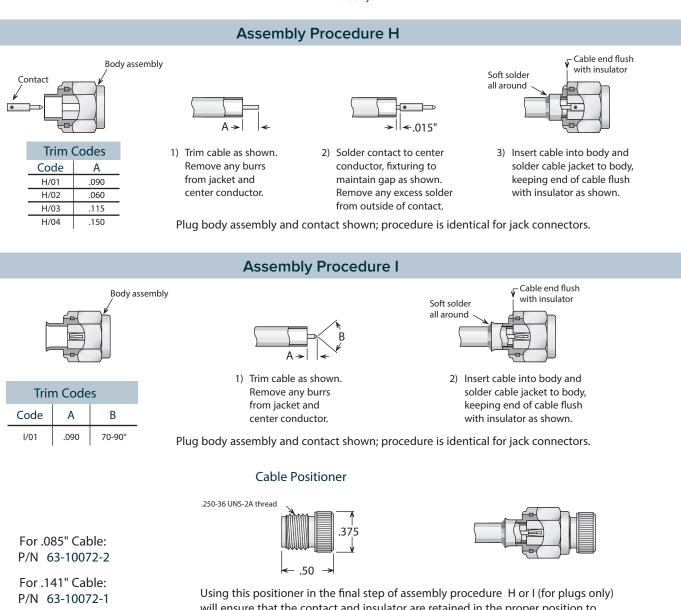




 Soft solder cable jacket to body, making sure that end of cable is flush with end of body. After solder joint has cooled, retrim any protruding dielectric flush with end of body.



 Assemble 'C' ring and gasket to body. Compress 'C' ring and slide body assembly into coupling nut until ring is seated in groove.



Using this positioner in the final step of assembly procedure H or I (for plugs only) will ensure that the contact and insulator are retained in the proper position to meet MIL-C-39012 requirements. The positioner should be screwed finger-tight into the mating end of the connector (as shown at right) before the cable jacket is soldered to the body assembly.

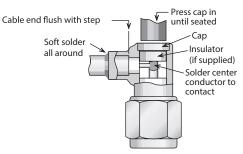


#### Assembly Procedure J

Trim Codes						
Code	А	В				
J/01	.109	.047				
J/02	.059	.039				
J/03	.059	.079				
J/04	.050	.059				

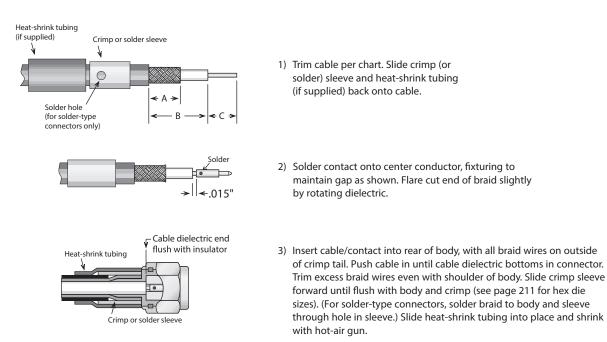
→ | <- B

 Trim cable as shown. Remove any burrs from jacket and center conductor.



 Soft solder cable jacket to body, making sure that end of cable is flush with step in body.
 Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.

#### **Assembly Procedure K**



Plug body assembly and contact shown; procedure is identical for jack connectors.

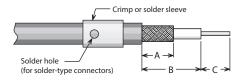
	Trim Codes							
Code	А	В	С	Code	А	В	С	
K/01	.250	.270	.110	K/07	.220	.290	.135	
K/02	.200	.270	.140	K/08	.420	.620	.090	
K/03	.225	.290	.110	K/09	.090	.135	.160	
K/04	.225	.330	.110	K/10	.250	.415	.115	
K/05	.250	.330	.110	K/11	.250	.400	.150	
K/06	.250	.315	.095	K/12	.282	.390	.140	



#### Assembly Procedure L

Trim Codes					
Code	А	В	С		
L/01	.250	.438	.109		
L/02	.125	.219	.109		
L/03	.234	.344	.109		
L/04	.195	.270	.050		
L/05	.095	.155	.050		
L/06	.281	.390	.070		

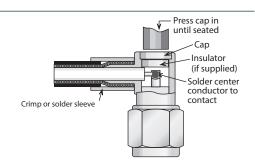
1) Trim cable per chart. Slide crimp (or solder) sleeve onto cable.



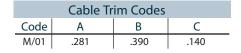
2) Insert cable into rear of body, with all braid wires on outside of crimp tail. Push cable in until end of braid touches connector body shoulder and center conductor rests in contact slot.

Slide crimp sleeve forward until flush with body and crimp (see page 211 for hex die sizes). (For solder-type connectors, solder braid to body and sleeve through hole in sleeve)

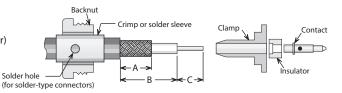
Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.



#### Assembly Procedure M

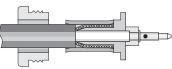


1) Trim cable per chart. Slide crimp (or solder) sleeve and backnut onto cable.

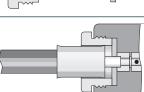


2) Flare cut end of braid slightly by rotating dielectric. Insert cable into rear of clamp, with all braid wires on outside of crimp tail.Slide insulator over cable dielectric until it is flush with front of clamp, and cable insulation bottoms inside insulator. Slide contact onto center conductor, with contact shoulder flush with front of insulator. Solder contact to center conductor.

- 3) Slide crimp sleeve forward until flush with clamp shoulder; crimp as close to shoulder as possible. (see page 211 for hex die sizes). (For solder-type connectors, solder braid to body and sleeve through hole in sleeve.)



4) Insert prepared cable into back of body. Slide nut forward and tighten to 12–15 inch-pounds.





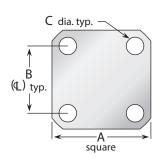
\* For Delta cable groups. See MIL-PRF-39012 specifications for dies sizes used with M39012 cable groups.

#### Crimp Tools For Flexible Cable

Frame only—P/N M22520/5-01 —Use with interchangeable dies listed below. Cable Group\* Hex Die Size Die Set P/N Closure 2, 3, 4 .429 hex, .400 wide M22520/5-61 А 5,6 .213 hex, .400 wide M22520/5-19 В 7 .255 hex, .400 wide M22520/5-19 A 9 .128 hex, .400 wide M22520/5-35 В В 10 .151 hex, .400 wide M22520/5-37 11 .105 hex, .400 wide M22520/5-33 В



#### **Connector Flanges** (Panel Mounted Connectors)

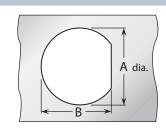


4-hole flanges						
Figure	А	В	С			
04	1/2	.360	.089			
05	1/2	.340	.102			
07	11/16	.500	#3-56 tap			
08	11/16	.500	.136			
09	11/16	.500	.125			
10	11/16	.500	.120			
12	11/16	.500	.109			
18	3/4	.531	.136			
26	1	.718	#6-32 tap			
27	1	.718	#4-40 tap			
30	1	.718	.166			
32	1	.718	.136			
32A	1	.718	.136*			
33	1	.718	.125			
34	1 <sup>3</sup> /32	.812	.150			
36	1 <sup>3</sup> /16	.906	#6-32 tap			
39	1 <sup>3</sup> /16	.906	.152			
40	1 <sup>3</sup> /16	.906	.125			
45	2	1.437	.257			
91	.375	.250	.067			
91A	.375	.232	.093			
* Countersunk to .245 dia.						

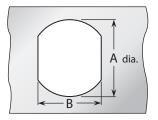
D dia. typ. B (⊈) Ċ ←A

	2-hole flanges			
Figure	A	В	С	D
92	.223	.481	.625	.102
92A	.260	.481	.625	.102
95	.640	1.015	1.30	.125

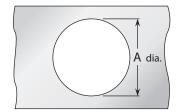
#### **Panel Cutouts** (Bulkhead Mounted Connectors)



D-Hole				
Figure	А	В		
51	.755	.723		
54	.630	.598		
55	.630	.583		
57	.557	.531		
59	.505	.473		
62	.442	.410		
63	.407	.362		
65	.380	.348		
66	.319	.292		
67	.255	.236		
68	.195	.176		



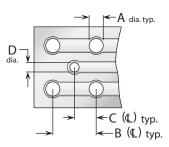
	Double D-Ho	le
Figure	А	В
69	.755	.692
72	.630	.536
75	.380	.341
84	.319	.278



	Round Hole
Figure	A
82	.255
89	.380

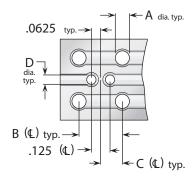
### **Mounting Figures**

#### P.C. Board Drilling



(PCB traces are shown for illustrative purpose only, and are not representative of actual circuitry.)

	Coaxial connectors			
Figure	А	В	С	D
PCB01	.067	.400	.200	.045
PCB02	.045	.500	.250	.045
PCB03	.067	.300	.150	.035
PCB05	.067	.200	.100	.055
PCB06	.067	.200	.100	.045
PCB07	.045	.177	.088	.045
PCB08	.032	.100	.050	.032



(PCB traces are shown for illustrative purpose only, and are not representative of actual circuitry.)

	Twinax	Connec	tors	
Figure	A	В	С	D
PCB04	.045	.500	.250	.045



I.

### Cable Groups

#### **Delta Cable Groups**

Gro	oup	Cables
	1A	RG-5, 5A, 5B, 21, 21A; M17/73, /162
1	1B	RG-6, 6A; M17/2
	1C	RG-143, 143A, 212, 222; M17/73, /112, /162
		RG-8, 8A, 213; M17/74
2	2B	RG-11, 11A; M17/6
	3A	RG-9, 9A, 9B, 214; M17/75
3	3B	RG-13A, 216; M17/77
	3C	RG-225; M17/127
	4	RG-393; M17/127
	5	RG-58, 58A, 58C, 141, 141A; M17/28, /111
6	6A	RG-55A, 142, 142A, 223, 400; M17/60, /84, /128
6	6B	RG-55, 55B, 142B; M17/60, /84
7	7A	RG-59, 59A, 59B, 62, 62A, 62B, 62C, 210; M17/29, /30, /97
	7B	RG-71, 71A, 71B; M17/90
8	8A	RG-122; M17/54
0	8B	RG-180, 180A, 180B, 195; M17/95, /137
9	9A	RG-174, 188, 188A, 316; M17/152
9	9B	RG-179A, 179B, 187, 187A; M17/94, /136
1	0	Double-Shielded RG-174, 316; M17/152
1	1	RG-178, 178A, 178B, 196, 196A; M17/93
1	2	.250" semi-rigid; RG-401; M17/129
1	3	.141" semi-rigid; RG-402; M17/130
1	4	.085" semi-rigid; RG-405; M17/133
1	5	RG-10, 12, 215; M17/6, /74
1	6	RG-14A, 217; M17/78, /165
1	7	RG-17A, 218
1	8	RG-18A, 219
1	9	RG-115A
2	0	RG-118A, 228A
2	1	RG-126
2	2	RG-302
2	3	RG-303
2	4	RG-304
2	5	Special 8X cable; contact factory for details.
2	6	Belden 8281
2	7	RG-108, 108A; M17/45
2	8	RG-22, 22A, 22B; M17/15
2	9	Belden 9207; Dearborn 6207; IBM 7362211
3	0	M17/176
3	1	AT&T 735A

Cable	Group	Cable	Group
RG-5, 5A, B	1A .	RG-225	3C
RG-6, 6A	1B	RG-228A	20
RG-8, 8A	2A	RG-302	22
RG-9, 9A, B	3A	RG-303	23
RG-10	15	RG-304	24
RG-11, 11A	2B	RG-316	9A
RG-12	15	RG-316DS	10
RG-13A	3B	RG-393	4
RG-14A	16	RG-400	6A
RG-17A	17	RG-401	12
RG-18A	18	RG-402	13
RG-21, 21A	1A	RG-405	14
RG-22, 22A, B	28	M17/2	1B
RG-55, 55B	6B	M17/6	2B
RG-55A	6A	M17/15	28
RG-58, 58A, C	5	M17/28	5
RG-59, 59A, B	7A	M17/29	7A
RG-62, 62A, B, C	7A	M17/30	7A
RG-71, 71A, B	7B	M17/45	27
RG-108, 108A	27	M17/73	1A
RG-115A	19	M17/162	1A
RG-118A	20	M17/112	1C
RG-122			2A
RG-126	21 M17/75		3A
RG-141, 141A	5	M17/127	3C
RG-142, 142A	6A	M17/77	3B
RG-142B	6B	M17/60	6A
RG-143, 143A	1C	M18/84	6A
RG-174	9A	M17/128	6A
RG-174DS	10	M17/97	7A
RG-178, 178A, B	11	M17/54	8A
RG-179A, 179B	9B	M17/95	8B
RG-180, 180A, B	8B	M17/137	8B
RG-187, 187A	9B	M17/152	9A
RG-188, 188A	9A	M17/93	11
RG-195	8B	M17/129	12
RG-196, 196A	11	M17/130	13
RG-210	7A	M17/133	14
RG-212	1C	M17/78	16
RG-213	2A	M17/165	16
RG-214	3A	M17/176	30
RG-215	15	AT&T 735A	31
RG-217	16	Belden 8281	26
RG-218	17	Belden 9207	29
RG-219	18	Dearborn 6207	29
RG-222	1C	IBM 7362211	29

Note: MIL-PRF-39012 QPL connectors have cable groups defined by the MIL specification, not the Delta cable groups shown here. See page 185 for M39012 cable groups.



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