21-032904-121 (PIN)
21-032905-121 (SOCKET)

Contact, Pin and Socket, Octonet, Type D38999 Series I & III, Size 8, Installation Instructions

See table for 4 pair cable recommended, crimp tool settings, crimping tools, positioners and insertion/removal tool information.

A 1. Cut cable for assembly of Octonet contacts. Note: contact assemblies of opposite gender should be assembled at cable junction adjacent ends, to have inner wire pairs in correct orientation during contact assembly. Crossing of inner wire pairs from their natural position is not recommended at this step in the termination process.

B 1. Rubber end first, Slide piggyback seal over cable jacket (not illustrated). Depending on diameter of outer jacket, isopropyl alcohol may be used to ease movement of seal over cable.
2. After the piggyback seal, slide on the outer crimp ferrule.
3. If cable has a wrapped jacket, with a razor or scalpel, slit and flair open cable jacket end (.500 approx. length).

C 1. Using a needle nose pliers or stub tip of wire stripper, grab cable jacket slit end corner and pull jacket back over itself until .780 of cable braid is exposed.
2. Cut away folded back cable jacket, ensure .780 of the braid is exposed.
3. Unravel and cut away any polyimide binder wrap as close to cable jacket edge as possible.
4. Unravel and cut away any PTFE binder wrap as close to cable jacket edge as possible, to expose cable braid.
5. Fold cable braid firmly back over cable jacket to expose inner wire pair bundle.

D 1. Carefully splay wire pairs 45° approx. to axis of cable.
2. Trim cable center filler as close to cable braid as possible.
3. Remove any foil wrap over wire pairs if applicable.

E 1. Carefully untwist cable inner wire pairs until they lay straight and untwisted as illustrated.
2. Strip away any outer insulation layer if applicable as close to breakout as possible.

F 1. Splayed inner wire pairs should match one of the illustrated wire color patterns shown. If not, grasp any non-conforming wire pair/s and untwist 180° (as close to breakout location as possible) to match the illustrated wire color pattern.

G 1. Splay inner wire pairs firmly back over cable as shown, leaving one wire extended.
2. Strip extended inner wire insulation .115 to expose inner conductor as shown.

H 1. Assemble inner contact over cable center conductor until fully seated against inner wire insulation. Observe center conductor through contact's wire inspection hole, to make certain conductor is properly positioned.
2. Crimp inner contact to center conductor using tools listed in table (make certain contact is seated firmly against wire insulation before crimping).
3. Splay crimped contact and wire back over shield extension and extend second inner wire of wire pair.
4. Repeat stripping of wire insulation per step G2.
5. Repeat crimping of inner contact per steps H1 and H2
6. Splay crimped contact and wire back over entire cable and extend another inner wire.
7. Repeat stripping of wire insulation and crimping of inner contacts per step H2 through H6 until all inner contacts are crimped (8 total).

L-2119-JD **FSCM77820**
February 2024

21-032904-121 (PIN)
21-032905-121 (SOCKET)

I 1. Lay each wire pair into shield extension trench, ensure wire pair is oriented correctly. The shield extension shall be orientated as shown in figure I the inner wire pair color pattern of view F must be maintained (suggested assembly procedure: pinch wire pairs against the base/bottom of the shield extension. Small amount of tape may be used to hold the pair within the trench).

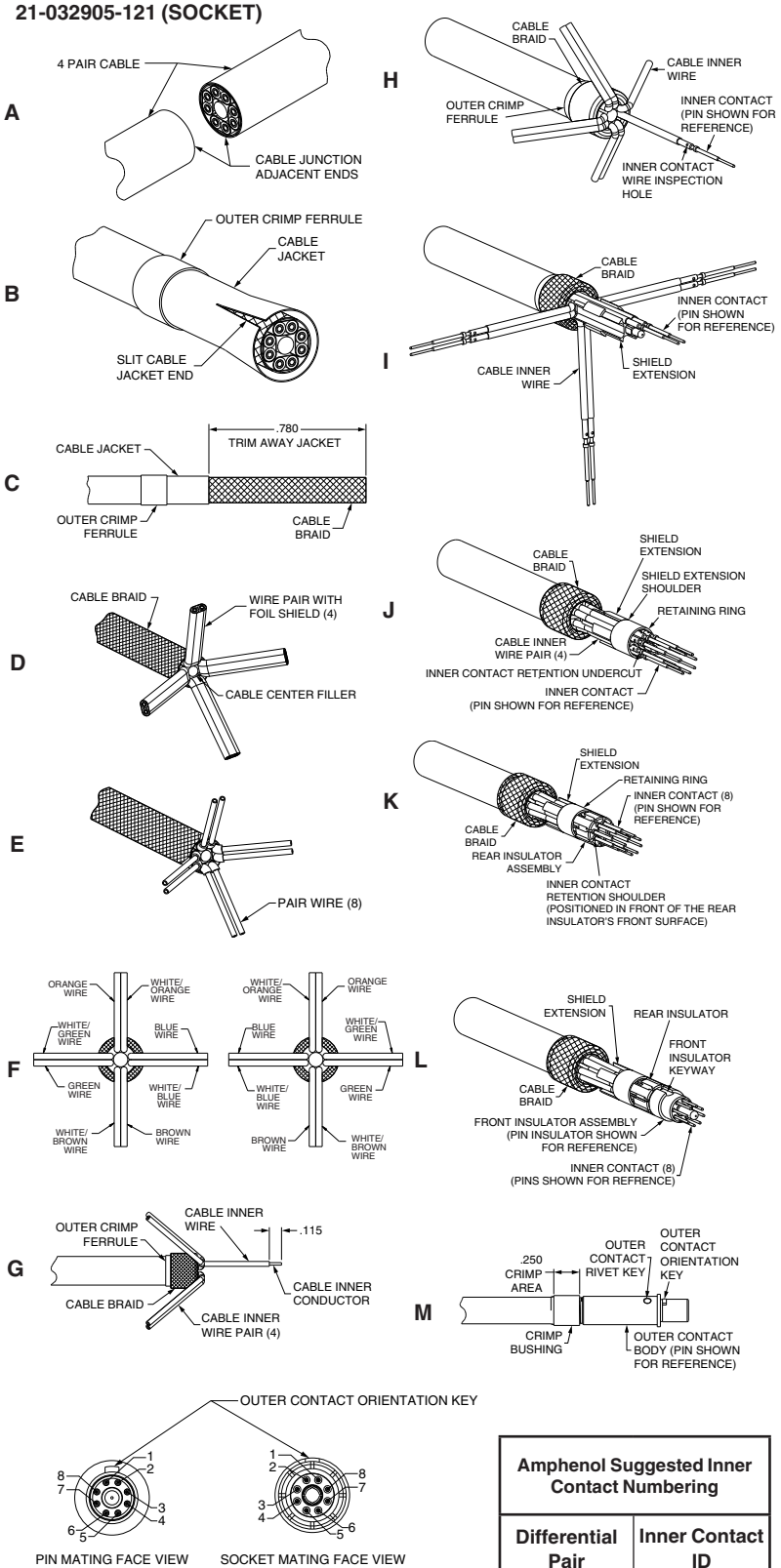
J 1. While holding the wire pairs in the trench of the shield extension, assemble the retaining ring over the inner contacts and wire pairs until it butts on the shield extension shoulder.

K 1. One-by-one, assemble wired inner contacts into rear insulator slots until fully seated as shown. Inner contact's retention undercut (shown in view I) must be positioned to capture rear insulator's retention shoulder (shown in view I), before fully seating inner contact. When contacts are properly seated, inner contact's retention shoulder will be positioned in front of rear insulator's front surface as shown. It is recommended that the two inner contacts of a wire pairs be assembled into insert.

L 1. Assemble front insulator assembly over inner contacts until rear surface of front insulator butts retention shoulder of inner contacts as shown. the front insulator keyway must be centrally aligned with the contact pair desired at contact positions 1 & 2 (shown in mating face view).
2. While the braid is folded back, cut away excess cable braid until the braid measures .260.

M 1. Align front insulator keyway (shown in view I) with outer contact's rivet key. Slide inner contact assembly inside outer contact assembly until fully seated. Observe contact's mating end to make certain inner contacts are aligned as shown in mating face view.
2. Fold outer braid over outer body, slide crimp ferrule forward over outer braid and contact outer body. Needle nose pliers or other tools may be used to push crimp ferrule forward. Combing out the outer braid may ease the assembly of the crimp ferrule over the braid.
3. Crimp outer contact body and crimp bushing in area shown using tools listed in table. After completing a full cycle of the crimp tool, rotate contact 45 degrees and complete another crimp cycle. Pin contacts will rotate freely within the crimp tool positioner. A socket contact is rationally controlled within the crimp tool positioner.

Amphenol Part Number	Description	Twinax Cable Recommended	Inner Crimp Tools		Outer Crimp Tools	
			Tool (Setting)	Positioner	Tool	Die Set (Location)
21-032904-121	OCTONET PIN (100 OHMS)	W.L. GORE RCN8966-24 & OTHERS	M22520/2-01 (2)	DANIELS K1958	DANIELS GS206	DANIELS G2P1907
21-032905-121	OCTONET SOCKET (100 OHMS)					



Contact Insertion into Connector

Contacts are inserted by hand. Insert the contact assembly into the proper rear grommet hole. Contact must be aligned with hole and not inserted at an angle. The contact'sorientation key must be in vertical alignment with the connector's main key or keyway (holding contact key and connector key/keyway at "12 o'clock" orientation position is recommended). Push forward until contact is felt to snap into position within the insert. Contact may need to be slightly rotated to properly align contact orientation key with connector insert keyway. Gently tug on cable to assure retention. Slide piggyback grommet seal into position inside the connector grommet and over the crimped end of the contact.

Contact Removal from Connector

Remove piggyback grommet seal from the connector grommet. Position removal tool part number MIL-I-81969/14-12, Daniels DRK-264-8, around cable and slide tool toward connector until tool tips enter rear grommet and comes to a positive stop on the contact. Grip cable and simultaneously remove tool, contact and cable.

Amphenol Suggested Inner Contact Numbering	
Differential Pair	**Inner Contact ID**
1	1
	2
2	3
	4
3	5
	6
4	7
	8

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40-60 Delaware Avenue
Sidney, New York 13838-1395
Website: www.amphenol-aerospace.com

21-032904-121 (PIN)
21-032905-121 (SOCKET)

Contact, Pin and Socket, Octonet,
Type D38999 Series I & III, Size 8,
Installation Instructions

See table for 4 pair cable recommended, crimp tool settings, crimping tools, positioners and insertion/removal tool information.

A 1. Cut cable for assembly of Octonet contacts. Note: contact assemblies of opposite gender should be assembled at cable junction adjacent ends, to have inner wire pairs in correct orientation during contact assembly. Crossing of inner wire pairs from their natural position is not recommended at this step in the termination process.
B 1. Rubber end first, Slide piggyback seal over cable jacket (not illustrated). Depending on diameter of outer jacket, isopropyl alcohol may be used to ease movement of seal over cable.
2. After the piggyback seal, slide on the outer crimp ferrule.
3. If cable has a wrapped jacket, with a razor or scalpel, slit and flair open cable jacket end (.500 approx. length).
C 1. Using a needle nose pliers or stub tip of wire stripper, grab cable jacket slit end corner and pull jacket back over itself until .780 of cable braid is exposed.
2. Cut away folded back cable jacket, ensure .780 of the braid is exposed.
3. Unravel and cut away any polyimide binder wrap as close to cable jacket edge as possible.
4. Unravel and cut away any PTFE binder wrap as close to cable jacket edge as possible, to expose cable braid.
5. Fold cable braid firmly back over cable jacket to expose inner wire pair bundle.
D 1. Carefully splay wire pairs 45° approx. to axis of cable.
2. Trim cable center filler as close to cable braid as possible.
3. Remove any foil wrap over wire pairs if applicable.
E 1. Carefully untwist cable inner wire pairs until they lay straight and untwisted as illustrated.
2. Strip away any outer insulation layer if applicable as close to breakout as possible.
F 1. Splayed inner wire pairs should match one of the illustrated wire color patterns shown. If not, grasp any non-conforming wire pair/s and untwist 180° (as close to breakout location as possible) to match the illustrated wire color pattern.
G 1. Splay inner wire pairs firmly back over cable as shown, leaving one wire extended.
2. Strip extended inner wire insulation .115 to expose inner conductor as shown.
H 1. Assemble inner contact over cable center conductor until fully seated against inner wire insulation. Observe center conductor through contact's wire inspection hole, to make certain conductor is properly positioned.
2. Crimp inner contact to center conductor using tools listed in table (make certain contact is seated firmly against wire insulation before crimping).
3. Splay crimped contact and wire back over shield extension and extend second inner wire of wire pair.
4. Repeat stripping of wire insulation per step G2.
5. Repeat crimping of inner contact per steps H1 and H2
6. Splay crimped contact and wire back over entire cable and extend another inner wire.
7. Repeat stripping of wire insulation and crimping of inner contacts per step H2 through H6 until all inner contacts are crimped (8 total).

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L-2119-JD
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FSCM77820

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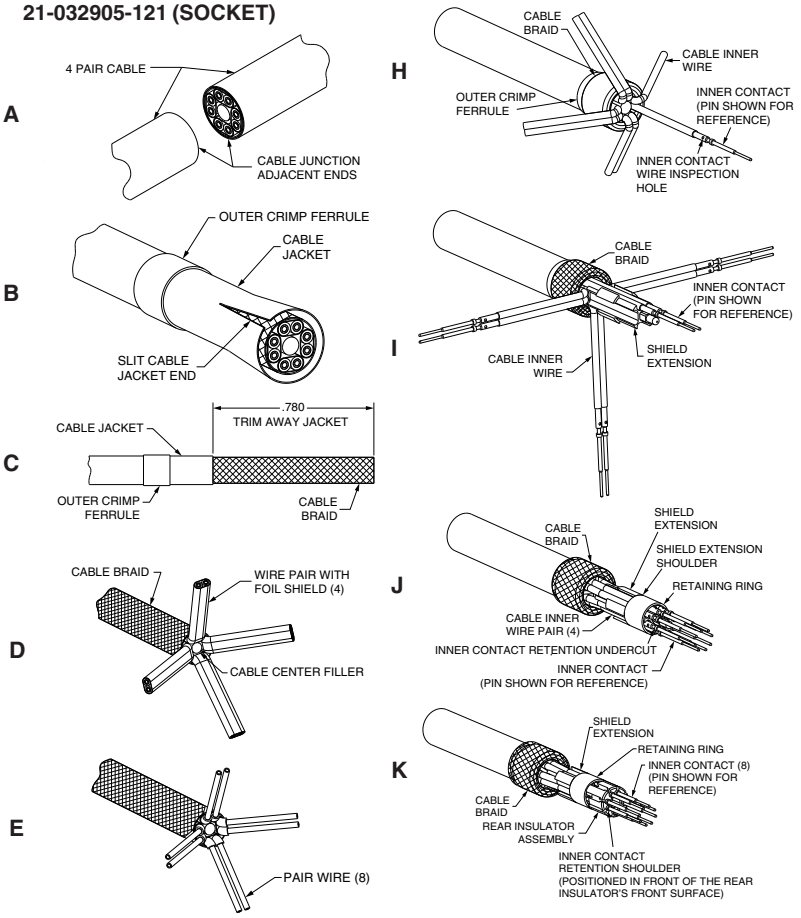

21-032904-121 (PIN)
21-032905-121 (SOCKET)

I 1. Lay each wire pair into shield extension trench, ensure wire pair is oriented correctly. The shield extension shall be orientated as shown in figure I the inner wire pair color pattern of base/bottom of the shield extension. Small amount of tape may be used to hold the pair within the trench).

J 1. While holding the wire pairs in the trench of the shield extension, assemble the retaining ring over the inner contacts and wire pairs until it butts on the shield extension shoulder.

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L 1. Assemble front insulator assembly over inner contacts until rear surface of front insulator butts retention shoulder of inner contacts as shown. the front insulator keyway must be centrally aligned with the contact pair desired at contact positions 1 & 2 (shown in mating face view).

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Amphenol Suggested Inner Contact Numbering	
Differential Pair	Inner Contact ID
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	2
	3
2	4
	5
3	6
	7
4	8