

Wireless Telecom Market

7/16 Series Connectors



The 7/16 connector series is a high quality, 50 Ohm product designed to achieve excellent RF performance and withstand the vibration, shock, moisture and temperatures of adverse outdoor environments. They are a rugged, solid brass bodied connector with a M29 x 1.5 mating thread. The typical use is in high power, single and multi-channel base stations, antennas and broadcast communication systems operating at 100 watts per channel. These connectors have few components to handle and are easily assembled to cable.

Kings product line consists of cable connectors, receptacles, adapters within series, adapters to series "N" and accessories.

In addition to the 7/16 connectors contained in this flyer, Kings offers an extensive product line of type "N" series connectors. For detailed information, be sure to visit Kings Electronics' website at www.kingselectronics.com .

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www.kingselectronics.com



SPECIFICATIONS

Electrical	
Nominal Impedance	50 Ohms
Frequency Range	DC to 6 GHz
Voltage Rating	2,700V RMS
Dielectric withstanding Voltage (Test, 1 min.)	4,000V RMS
Peak Power	40 KW
Average Power (at 800 MHz)	3 KW
Typical 3rd order IMP @910 MHZ two +43 dBm carriers	-125 dBm (-168 dBc)
VSWR (on 1/2in. Corrugated Cable)	DC to 2 GHz: 1.06 max. 2 to 3 GHz: 1.09 max. 3 to 4 GHz: 1.12 max.
Insulation Resistance	10,000 Megohms min.
Insertion Loss	0.05/Freq, GHz dB max.
Environmental	
Temperature Range	-65° to +165°C
Vibration	MIL-Std-202, Method 204, Test Cond. B
Shock	MIL-Std-202, Method 213, Test Cond. 1
Corrosion (Salt Spray)	MIL-Std-202, Method 101, Test Cond. B
Compression Seals (where applicable)	50 PSI
Moisture Resistance	MIL-Std-202, Method 106
Mechanical	
Interface	Per IEC 169-4
Mating	M29 x 1.5 Thread
Connector Durability	500 Cycles min.
Center Contact Attachment	Direct Solder
Outer Conductor Attachment	Collet Clamp/Compression for Helical Crimp for Braided Cables Direct Solder for Tubular
Coupling Nut Torque	15-20 ft.lbs.
Coupling Nut Retention	200 lbs.min.
Cable Retention (on 1/2 in. Corrugated Cable)	150 lbs.min.
Materials	
Body Parts and Outer Contact	Brass, ASTM-B-16
Center Contacts; Male	Brass, ASTM-B-16
Center Contacts; Female	Beryllium Copper, ASTM-B-196 (heat treated)
Insulators	PTFE ASTM-D-4894
Gaskets and Seals	Silicone Rubber, ZZ-R-765
Crimp Sleeves	Commercial Bronze, Alloy 220
Finishes *	
All Center Contacts and Outer Conductor Parts	Silver Plate .0002 min. Electro deposited per QQ-S-365A plus KINGS TR-4®
Coupling Nuts and Cable Clamp Nuts	TR-5® Kings tamish resistant alloy electrodeposit finish

Note: Values shown are typical for 7-16 series and may not apply to all connectors.

* White bronze plating on all body, coupling, and clamp nut parts is available. For white bronze plating add "MJ3" suffix to part numbers shown, for example 3155-2-5 MJ3 .

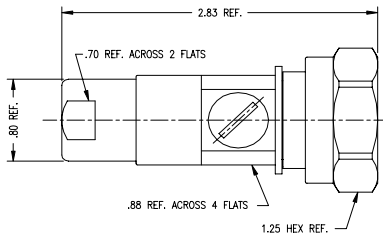
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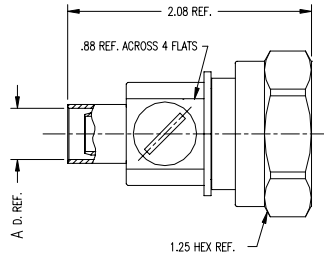


Cable Connectors

Kings Part Number	Description	Cable Usage	Cabling Method	Cable Procedure
3155-2-5	Straight Plug	Andrew 1/2" Heliax FSJ4-50B FSJ4RN-50B	Collet Clamp w/direct solder to center contact	3-654-1
3156-2-5	Right Angle Plug			3-654-2
3152-2-5	Panel Jack (4 Hole Mtg)			3-654-1
3152-4-5	Right Angle Panel Jack			3-654-2
3153-3-5	Straight Jack			3-654-1
3152-5-5	Bulkhead Jack (D Hole Mtg)			3-654-1
3155-3-5	Straight Plug	Times LMR 400	K-Grip Crimp w/direct solder to center contact	3-696
3155-4-5	Straight Plug	Times LMR 600		3-696
3153-1-5	Straight Jack	Times LMR 400		3-696
3153-2-5	Straight Jack	Times LMR 600		3-696
3155-5-101	Straight Plug	CommScope 3/8" CR50396PE	Direct Solder	3-692
3155-6-101	Straight Plug	CommScope 1/2" CR50540PE		3-692

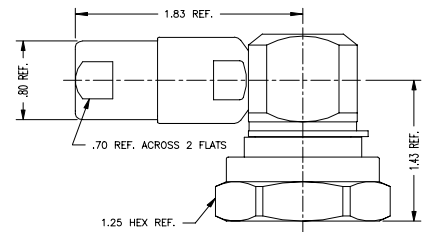


3155-2-5 Straight Plug

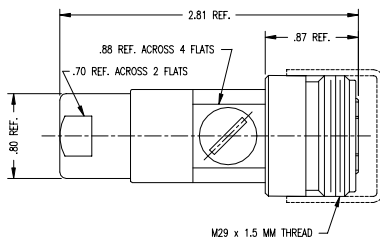


3155-3-5 Straight Plug A = .44

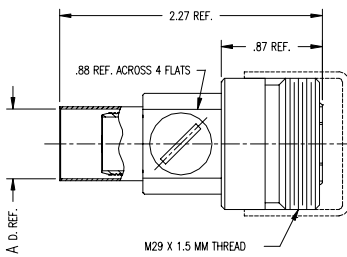
3155-4-5 Straight Plug A = .61



3156-2-5 Right Angle Plug

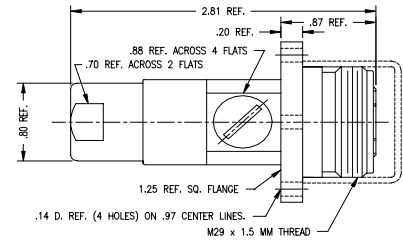


3153-3-5 Straight Jack

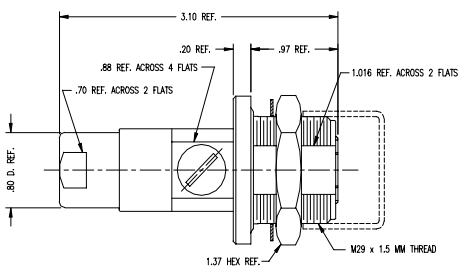


3153-1-5 Straight Jack A = .44

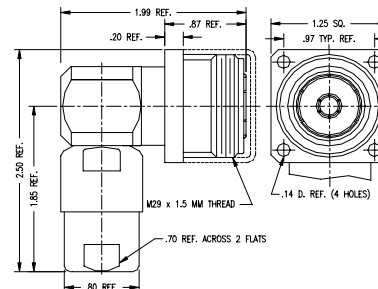
3153-2-5 Straight Jack A = .61



3152-2-5 Panel Jack (4 Hole Mtg)



3152-5-5 Bulkhead Jack (D Hole Mtg)



3152-4-5 Right Angle Panel Jack

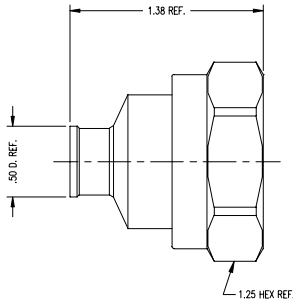
Note: All dimensions are in inches

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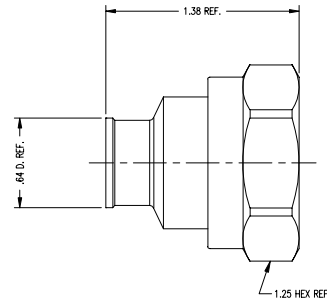
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7/16 Series Special

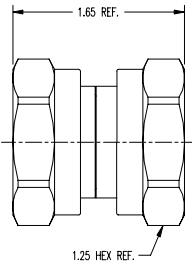


3155-5-101 Straight Plug (3/8" Cable)

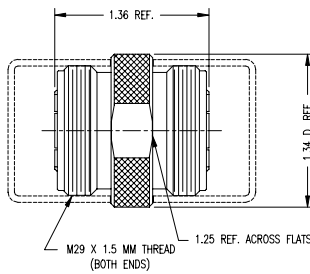


3155-6-101 Straight Plug (1/2" Cable)

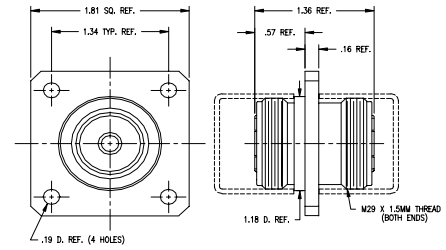
Within Series Adapters



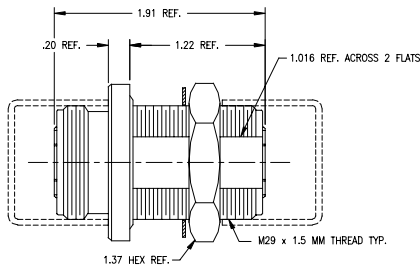
3159-5-5 Straight Adapter M-M



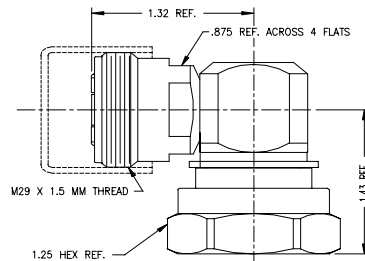
3159-6-5 Straight Adapter F-F



3159-7-5 Panel Adapter F-F (4 Hole Mtg)



3159-8-5 Bulkhead Panel Adapter F-F
(D Hole Mtg) Pressurized



3159-9-5 Right Angle Adapter (M-F)

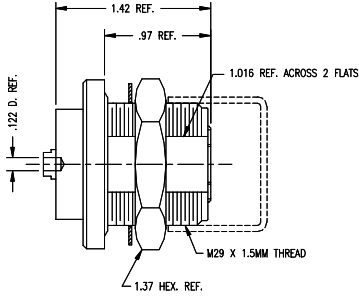
Note: All dimensions are in inches

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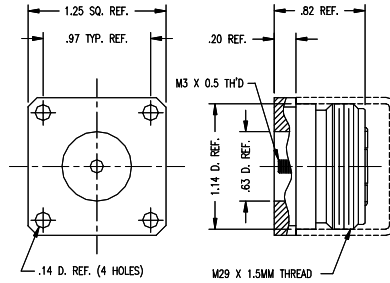
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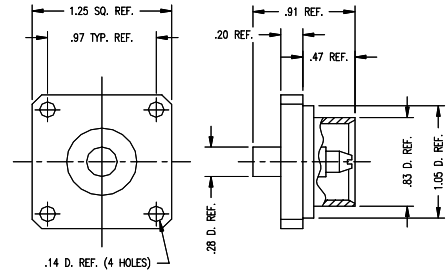
Receptacle Types



**3154-1-5 Bulkhead Receptacle
(D Hole Mtg) Pressurized**

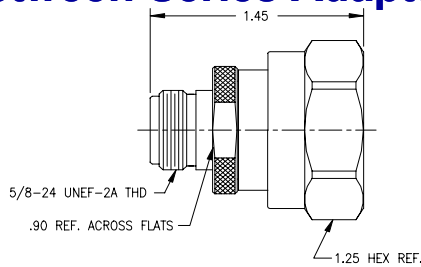


**3157-1-5 Panel Receptacle (4 Hole Mtg)
M3 x 0.5 MM TH'D Contact**

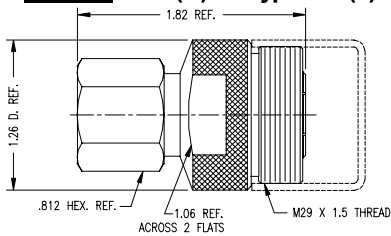


**3157-2-5 Push-On Male Receptacle
(4 Hole Mtg)**

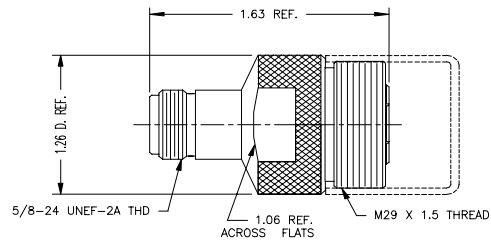
Between Series Adapters



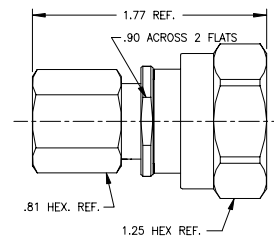
3159-1-5 7-16 (M) To Type "N" (F)



3159-4-5 7-16 (F) To Type "N" (M)

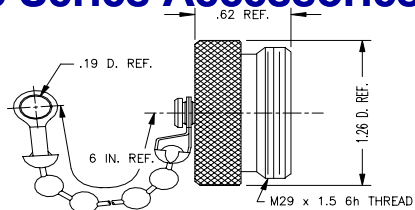


3159-2-5 7-16 (F) To Type "N" (F)

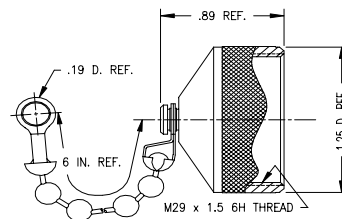


3159-3-5 7-16 (M) To Type "N" (M)

7/16 Series Accessories



3158-2-9 Dust Cap w/Bead Chain (F)



3158-1-9 Dust Cap w/Bead Chain (M)

Note: All dimensions are in inches

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CABLE PROCEDURES

CABLING PROCEDURE 3-654: FOR CONNECTORS USING HELICAL CORRUGATED COPPER OUTER CONDUCTOR CABLE (EX. ANDREW FSJ4-50B)

LIST OF COMPONENTS

CABLE TRIM DIMENSIONS

DRAWING NO.	A	B	C	D REF.
3-654-1	1.63	.31	.10	.41
3-654-2	1.85	.51	.10	.61

1

CUT CABLE END SQUARE USING A FINE TOOTH SAW. TRIM JACKET TO DIMENSION "A". TAKE CARE THAT JACKET END IS CUT SQUARE. CUT OUTER CONDUCTOR AND FOAM DIELECTRIC TO DIMENSION "B". DO NOT CUT INTO CENTER CONDUCTOR.

2

ASSEMBLE GASKET ONTO OUTER CONDUCTOR AGAINST EDGE OF JACKET AS SHOWN. APPLY A THIN COATING OF SILICONE GREASE TO OUTSIDE OF GASKET AND INSIDE SURFACE OF CLAMP NUT.

3

THREAD COLLET CLAMP ASSEMBLY ONTO CORRUGATED OUTER CONDUCTOR UNTIL LENGTH "C" IS EXPOSED.

4

POSITION CABLE IN FLARING TOOL AS SHOWN AND CLOSE HANDLE FULLY TO MOVE FLARING BUSHING UNDER OUTER CONDUCTOR.

5

REMOVE FROM TOOL, TRIM AWAY EXPOSED FOAM DIELECTRIC AND REMOVE ADHESIVE MATERIAL FROM CENTER CONDUCTOR WITH ABRASIVE CLOTH OR A SHARP PLASTIC "KNIFE" EDGE. BREAK SHARP CORNER ON CENTER CONDUCTOR AS SHOWN. CENTER CONDUCTOR LENGTH WILL NOW BE "D" LENGTH. CLEAN DIELECTRIC SURFACE IF NEEDED. APPLY A SMALL AMOUNT OF SILICONE GREASE TO O-RING.

6

THREAD CLAMP NUT INTO BODY ASSEMBLY AND TIGHTEN TO 80-90 IN.-LBS. CABLE MUST NOT TURN. CHECK CABLE POSITION IN CONNECTOR CONTACT THEN SOFT SOLDER THROUGH ACCESS HOLE. CLEAN ANY RESIDUE. APPLY SILICONE GREASE TO O-RING ON CAP THEN THREAD CAP IN PLACE TO CLOSE ACCESS HOLE.

CABLING PROCEDURE 3-696: FOR CONNECTORS USING LMR CABLES (EX. TIMES LMR 400 & 600 CABLES)

LIST OF COMPONENTS

CABLE TRIM DIMENSIONS

A	B	C	D REF.
.51	.40	.50	.41

1

CUT CABLE END SQUARE. SLIDE K-GRIP SLEEVE OVER JACKET AND MAKE CUTS 1 AND 2 IN JACKET.

2

REMOVE JACKET TO DIMENSION "A". FLARE OR BULGE BACK BRAID AND TRIM WITH SCISSORS AT EDGE OF JACKET.

3

REMOVE JACKET TO DIMENSION "B".

4

TRIM DIMENSION "C" TO REMOVE FOAM DIELECTRIC. EXPOSED CENTER CONDUCTOR LENGTH WILL BE EQUAL TO DIMENSION "D" OF TRIM CODE.

5

INSERT CONNECTOR ASSEMBLY OVER DIELECTRIC AND UNDER BRAID UNTIL DIELECTRIC BOTTOMS IN CONNECTOR. CHECK CABLE CONDUCTOR POSITION IN CONNECTOR CONTACT AND THEN SOFT SOLDER THROUGH ACCESS HOLE. CLEAN ANY RESIDUE.

6

APPLY SILICONE GREASE TO O-RING ON CAP THEN THREAD CAP IN PLACE TO CLOSE ACCESS HOLE. SLIDE K-GRIP SLEEVE AGAINST SHOULDER ON BODY AND FORM HEX BY CRAMPING. FOR ITEMS SUPPLIED WITH SHRINK TUBING, POSITION AS SHOWN AND HEAT SHRINK.

CABLING PROCEDURE 3-692: FOR CONNECTORS USING CELL REACH® CABLES (EX. COMMSCOPE CR 50 540 PE & CR 50 396 PE CABLES)

- 1) TRIM CABLE AS SHOWN. CARE MUST BE TAKEN TO AVOID METAL PARTICLES ON DIELECTRIC FACE.
- 2) BOTTOM CABLE CENTER CONDUCTOR IN CONTACT WIRE HOLE. HOLD IN POSITION AND SOFT SOLDER.
- 3) INSERT CONTACT INTO BODY ASSEMBLY AND PUSH CONTACT BARB INTO TEFLON INSULATOR UNTIL CABLE BOTTOMS IN BODY.
- 4) SOFT SOLDER BODY TO CABLE OUTER CONDUCTOR.