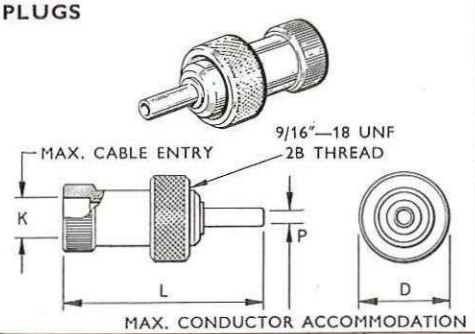
# 1

This catalogue embraces some of the lower cost, general purpose co-axial connectors produced by Cannon. Cannon co-axial plugs are used in thousands of military, industrial and commercial applications. They are designed to connect and terminate co-axial lines used in radio frequency transmission with a minimum loss of energy.

Special plating finishes on shells are available upon request.

- Shells of brass, cadmium plated.
- Screw thread type coupling.
- Polythene, P.T.F.E., or ceramic insulators.
- Contacts machined from brass, silver plated, with solder terminations.
- Free plugs with cable entries of .250, .300 and .375.
- Inexpensive, miniature co-axial not designed for constant impedance, use should be limited for frequencies below 200 MHz.

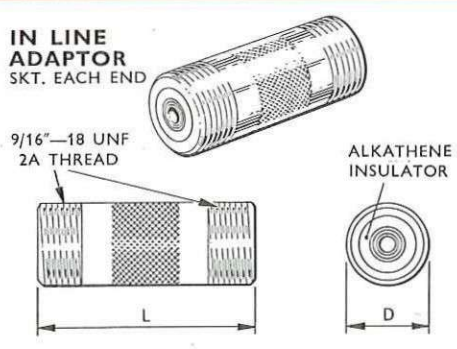
**PLUGS**




MAX. CONDUCTOR ACCOMMODATION

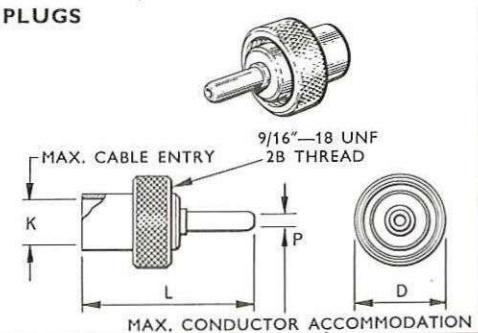
| PART NUMBER | D | K | L | P | INSERT MATL. |
|---|---|---|---|---|---|
| JP1-250-CCT | 11/16 | .250 | 1.5/8 | .078 | P.T.F.E. |
| JP1-300-CCT | 11/16 | .295 | 1.5/8 | .078 | P.T.F.E. |

**IN LINE ADAPTOR**
SKT. EACH END




| PART NUMBER | D | L |
|---|---|---|
| JS-1-DE | 9/16 | 1.5/8 |

**PLUGS**

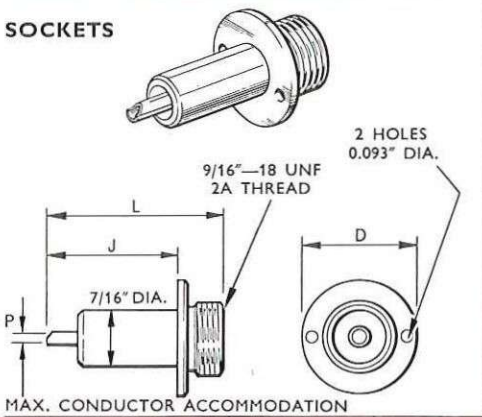



MAX. CONDUCTOR ACCOMMODATION

| PART NUMBER | D | K | L | P | INSERT MATL. |
|---|---|---|---|---|---|
| JP-1-250 | 11/16 | 1/4 | 1.17/64 | .078 | CERAMIC |
| JP-1-375 | 11/16 | 3/8 | 1.11/32 | .078 | CERAMIC |

# Jones Co-axials.

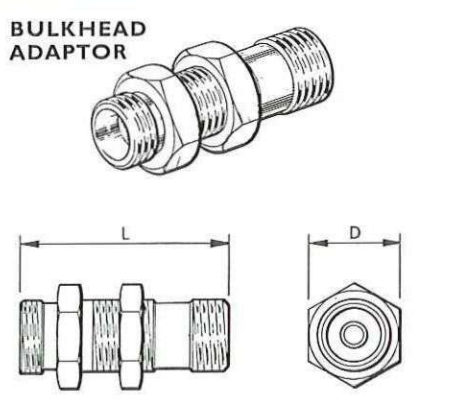
**SOCKETS**




MAX. CONDUCTOR ACCOMMODATION

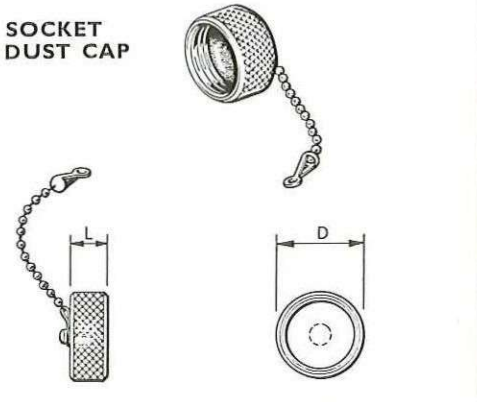
| PART NUMBER | D | J | L | P | INSERT MATL. |
|---|---|---|---|---|---|
| JS-1-PF | 7/8 | 1.1/32 | 1.3/8 | .096 | ALKATHENE |
| JSF-1-PF | 7/8 | 1.1/32 | 1.3/8 | .096 | P.T.F.E. |

**BULKHEAD ADAPTOR**




| PART NUMBER | D | L | INSERT MATL. |
|---|---|---|---|
| JS-1-BHF | 11/16 A/F | 1.5/8 | ALKATHENE |

**SOCKET DUST CAP**

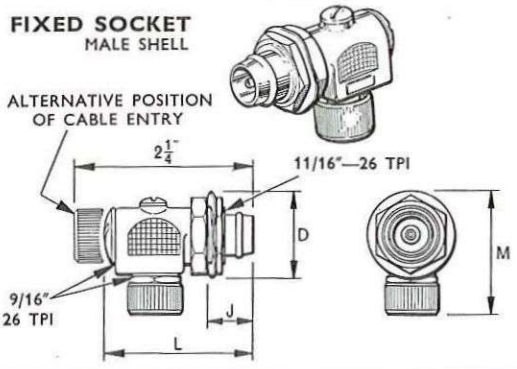



| PART NUMBER | D | L |
|---|---|---|
| JS-1-DC | 11/16 | 3/16 |

# RF Co-axials

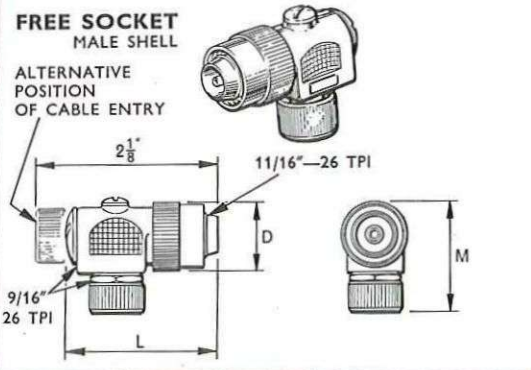
- Aluminium alloy shells with alkathene insulators.
- Silver plated brass contacts, sockets with beryllium copper spring.
- Nominal 60 ohm impedance when free units are potted with suitable sealing compound, such as Okerin Wax No. 3700.
- Insulation resistance not less than 100 megohms, at 500V. D.C.
- Voltage proof 2,000V peak, working voltage 500V peak, measured at 750mm.Hg.
- Contact resistance—better than 2 milliohms and screen continuity better than 1 milliohm.
- Fulfils requirements of DEF.5322 with respect to V.S.W.R.
- Temperature range of —40°C to +85°C, Humidity requirements to DEF. 5322, Class H.1.

## FIXED SOCKET
MALE SHELL



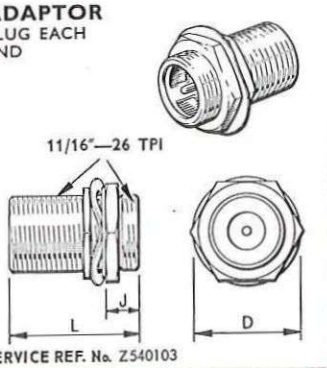

| PART NUMBER | D | J | L | M | SERVICE REF. No. |
|---|---|---|---|---|---|
| RFS-1-PF-CT | 1 | 35/64 | 1.7/8 | 1.7/16 | Z 549027 |

## FREE SOCKET
MALE SHELL




| PART NUMBER | D | L | M | SERVICE REF. No. |
|---|---|---|---|---|
| RFS-1-CF-CT | 13/16 | 1.3/4 | 1.11/32 | Z 549028 |

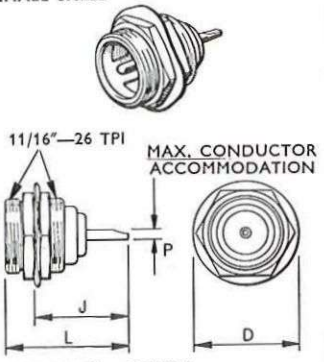
## ADAPTOR
PLUG EACH END




SERVICE REF. No. Z540103

| PART NUMBER | D | J | L |
|---|---|---|---|
| RFP-1-BHF | 1 | 9/32 | 1.3/16 |

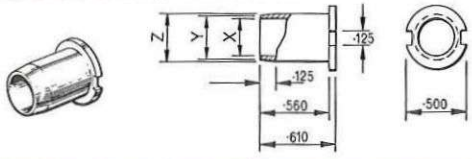
## PLUG FIXED
FEMALE SHELL




SERVICE REF. No. Z 540101

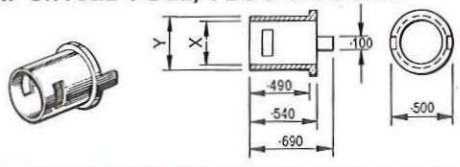
| PART NUMBER | D | J | L | P |
|---|---|---|---|---|
| RFP-1-PF | 1 | 29/32 | 1.3/16 | .0635 DIA. |

## SLEEVE INNER, RF SINGLE POLE, PLUG & SOCKET




| CABLE SIZE | "X" DIA | "Y" DIA | "Z" DIA | J.S.CAT.No. 5935-99- | CANNON P/No. |
|---|---|---|---|---|---|
| UNIRADIO No.31 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.39 | .210 | .230 | .250 | 054-9015 | 252-7556-000 |
| UNIRADIO No.41 | .137 | .150 | .167 | 054-9017 | 252-7555-000 |
| UNIRADIO No 42 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.43 | .125 | .138 | .155 | 054-9019 | 252-7557-000 |
| UNIRADIO No.54 | .137/.131 | .152/.146 | .164/.161 | 054-9021 | 252-7558-000 |
| UNIRADIO No.55 | .137/.134 | .152/.146 | .164/.161 | 054-9023 | 252-7559-000 |
| UNIRADIO No.56 | .137 | .150 | .167 | 054-9017 | 252-7555-000 |
| UNIRADIO No.57 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.58 | .300 | .315 | .330 | | 252-7554-000 |
| UNIRADIO No.59 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.60 | .293/.290 | .303/.300 | .336/330 | 054-9025 | 252-7560-000 |
| UNIRADIO No.64 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.65 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.67 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.70 | .137 | .152 | .167 | 054-9017 | 252-7555-000 |
| UNIRADIO No.71 | .293/.290 | .303/.300 | .336/330 | | 252-7560-000 |
| UNIRADIO No.72 | .125 | .140 | 155 | 054-9019 | 252-7557-000 |
| UNIRADIO No.73 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.78 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| UNIRADIO No.81 | .300 | .315 | .330 | 054-9013 | 252-7554-000 |
| PT. 1. YM | .140 | .154 | .168 | | 252-7562-000 |
| PT.II. YM | .210 | .230 | .250 | | 252-7556-000 |
| AS.50.M | .191 | .206 | .220 | | 252-7563-000 |
| AS.95.M | .157 | .170 | .187 | | 252-7564-000 |
| T.3188 | .104 | .119 | .133 | | 252-7565-000 |
| K.16M | .096 | .111 | .125 | | 252-7566-000 |
| MINIATURE I.C. 14/.0076 | .085 | .100 | .115 | | 252-7567-000 |
| C.I.T. | .230 | .245 | .260 | | 252-7568-000 |
| E.T.6.M. | .104 | .119 | .133 | | 252-7565-000 |

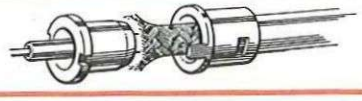
## SLEEVE OUTER, RF SINGLE POLE, PLUG & SOCKET



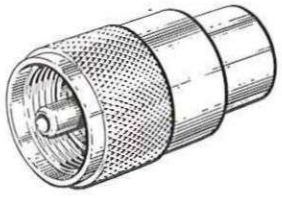

| CABLE SIZE | "X" DIA | "Y" DIA | J.S.CAT.No. 5935-99- | CANNON P/No. |
|---|---|---|---|---|
| UNIRADIO No.31 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.39 | .281 | .325 | 054-9016 | 252-7571-000 |
| UNIRADIO No.41 | .199 | .237 | 054-9018 | 252-7570-000 |
| UNIRADIO No.42 | .367 | .400 | | 252-7569-000 |
| UNIRADIO No.43 | .185 | .220 | 054-9020 | 252-7577-000 |
| UNIRADIO No.54 | .270/.267 | .310 | 054-9022 | 252-7573-000 |
| UNIRADIO No.55 | .223/.220 | .250 | 054-9024 | 252-7574-000 |
| UNIRADIO No.56 | .199 | .237 | 054-9018 | 252-7570-000 |
| UNIRADIO No.57 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.58 | .435 | .465 | | 252-7576-000 |
| UNIRADIO No.59 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.60 | .403/.397 | .440 | 054-9026 | 252-7575-000 |
| UNIRADIO No.64 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.65 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.67 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.70 | .199 | .237 | 054-9018 | 252-7570-000 |
| UNIRADIO No.71 | .403/.397 | .440 | | 252-7575-000 |
| UNIRADIO No.72 | .185 | .220 | 054-9020 | 252-7578-000 |
| UNIRADIO No.73 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.78 | .367 | .400 | 054-9014 | 252-7569-000 |
| UNIRADIO No.81 | .367 | .400 | 054-9014 | 252-7569-000 |
| PT. 1. YM | .277 | .307 | | 252-7579-000 |
| PT.II. YM | .320 | .350 | | 252-7580-000 |
| AS.50.M | .257 | .287 | | 252-7581-000 |
| AS.95.M | .209 | .239 | | 252-7582-000 |
| T.3188 | .172 | .202 | | 252-7583-000 |
| K.16M | .161 | .191 | | 252-7584-000 |
| MINIATURE I.C. 14/.0076 | .130 | .160 | | 252-7585-000 |
| C.I.T. | .320 | .350 | | 252-7586-000 |
| E.T.6.M. | .161 | .191 | | 252-7584-000 |

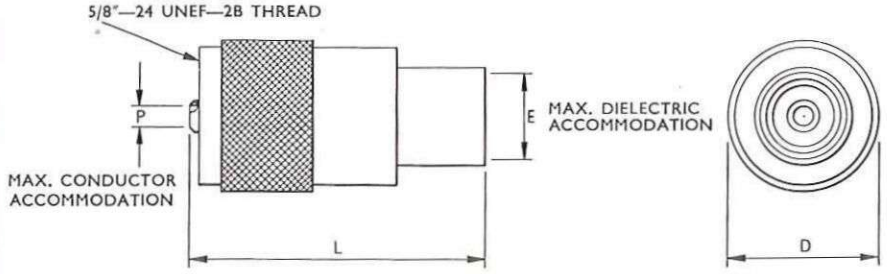
## SKETCH OF TYPICAL ASSY. INNER & OUTER SLEEVES

NOTE: 1 INNER SLEEVE AND 1 OUTER SLEEVE MUST BE USED WITH EVERY RFS-1-PF-CT AND RFS-1-CF-CT



## PLUGS



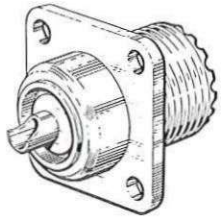


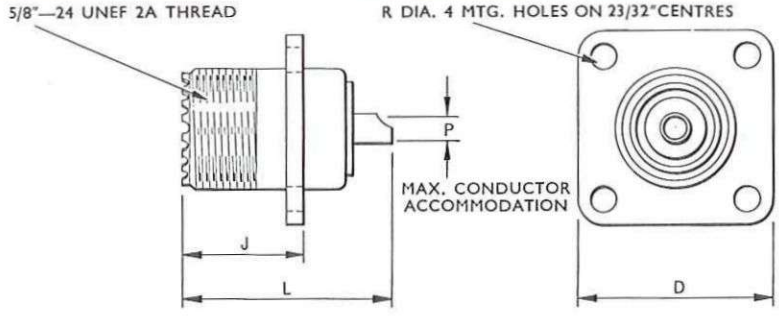

NOTE: FOR REDUCING ADAPTORS SEE PAGE 5

NOTE: TYPE AF HAS IMPROVED CLAMPING MEANS

| PART NUMBER | D | L | E | P | INSERT MATL. |
|---|---|---|---|---|---|
| PL 259/F | 3/4 | 1.1/2 | .390 | .120 | P.T.F.E. |
| PL 259/AF | 3/4 | 1.1/2 | .350 | .120 | P.T.F.E. |
| PL 259/BF | 3/4 | 1.1/2 | .350 | .120 | P.T.F.E. |

## RECEPTACLES






| PART NUMBER | D | J | L | P | R | INSERT MATL. |
|---|---|---|---|---|---|---|
| SO 239 | 1 | 5/8 | 1.1/16 | .110 | .125 | ALKATHENE |
| SO 239F | 1 | 5/8 | 1.1/8 | .110 | .125 | P.T.F.E. |

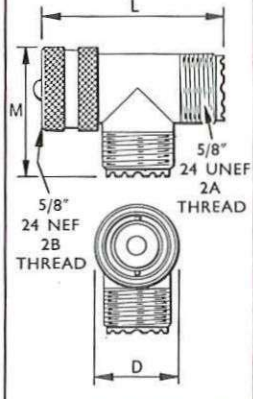
# UHF Co-axial

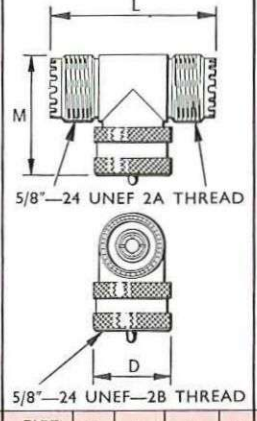
- Silver plated brass, aluminium alloy or mazak shells.
- Solder type, silver plated brass contacts.
- Insulators of polythene or P.T.F.E.
- Seven basic shell styles. Screw thread type coupling.
- Not designed as constant impedance connectors.
- Designed for frequencies up to 200 MHz and can be used with caution up to 500 MHz.
- Working voltage of co-ax, up to 500V peak.

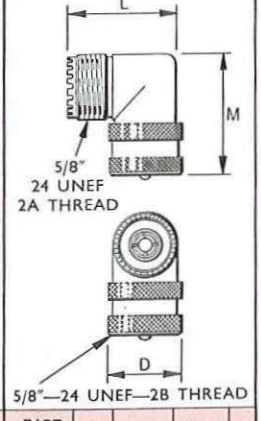
## ADAPTORS



NOTE: PL 259D.E. HAS NICKEL PLATED SHELL




| * = INSERT MATL. |
|---|
| 1 = ALKATHENE |
| 2 = PTFE |

| PART NUMBER | D | L | * |
|---|---|---|---|
| PL 258 | 5/8 | 1.1/8 | 1 |
| PL 258F | 11/16 | 1.1/8 | 2 |

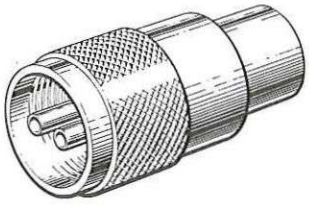
| PART NUMBER | D | L | * |
|---|---|---|---|
| PL 274E | 11/16 A/F | 1.5/8 | 1 |
| PL 259DE | 11/16 A/F | 1.5/8 | 1 |

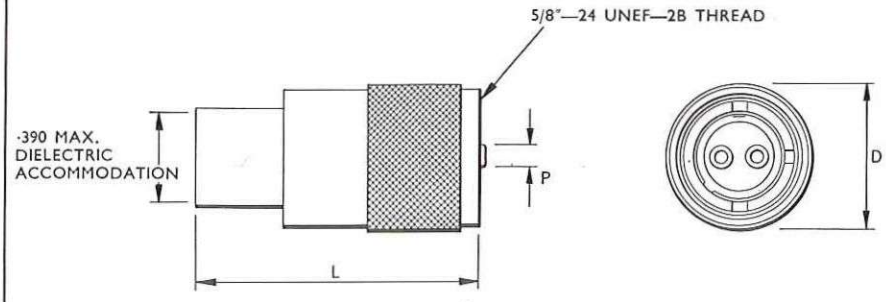
| PART NUMBER | D | L | M | * |
|---|---|---|---|---|
| M358SP | 3/4 | 1.45/64 | 1.3/16 | 1 |

| PART NUMBER | D | L | M | * |
|---|---|---|---|---|
| M358 | 3/4 | 1.5/8 | 1.3/16 | 1 |

| PART NUMBER | D | L | M | * |
|---|---|---|---|---|
| M359 | 3/4 | 1.13/64 | 1.7/32 | 1 |
| M359F | 3/4 | 1.13/64 | 1.7/32 | 2 |

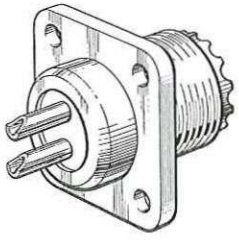
## PLUGS

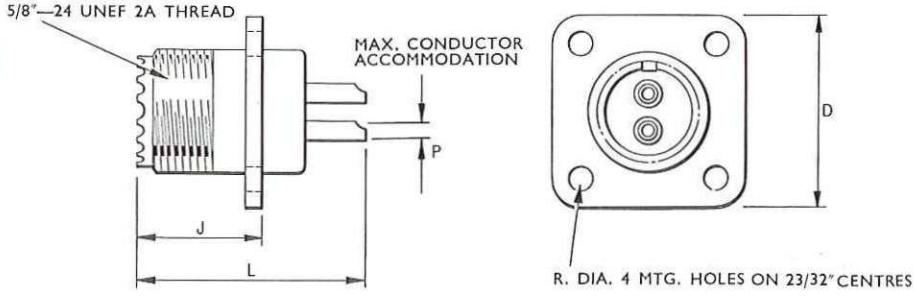





| PART NUMBER | D | L | P | INSERT MATL. |
|---|---|---|---|---|
| PL 284F | 3/4 | 1.1/2 | .069 | P.T.F.E. |

## RECEPTACLES



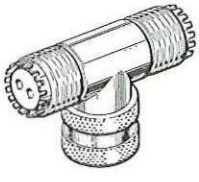


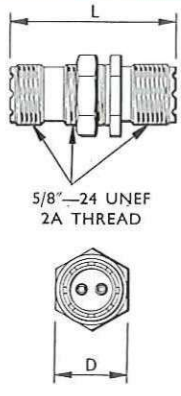

| PART NUMBER | D | J | L | P | R | INSERT MAT |
|---|---|---|---|---|---|---|
| SO 264 | 1 | 5/8 | 1.1/8 | .067 | .125 | ALKATHEN |
| SO 264F | 1 | 5/8 | 1.1/8 | .067 | .125 | P.T.F.E. |

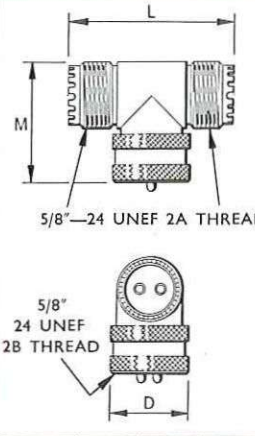
# UHF Twin-axial

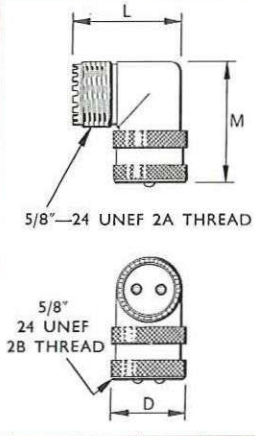
- Silver plated brass, aluminium alloy or mazak shells.
- Solder type, silver plated brass contacts.
- Insulators of polythene or P.T.F.E.
- Six basic shell styles. Screw thread type coupling.
- Not designed as constant impedance connectors.
- Designed for frequencies up to 200 MHz and can be used with caution up to 500 MHz.
- Working voltage of co-ax, up to 500V peak.

## ADAPTORS



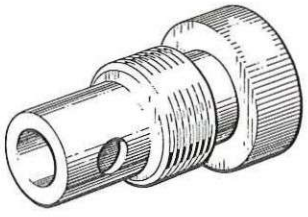



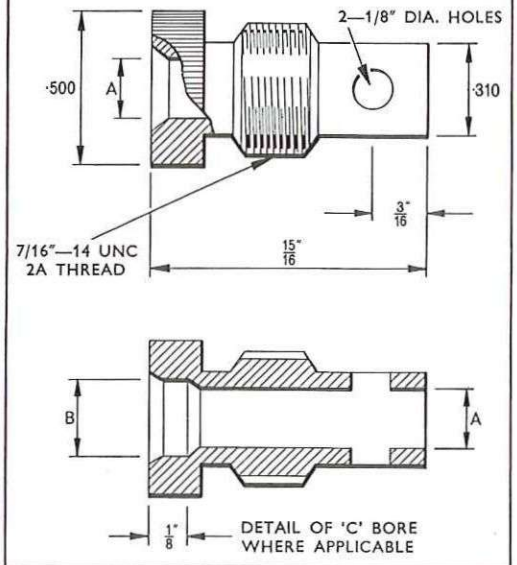

| ✳ = INSERT MATL. | PART NUMBER | D | L | ✳ | PART NUMBER | D | L | ✳ | PART NUMBER | D | L | M | ✳ | PART NUMBER | D | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 = ALKATHENE | PL 285 | 5/8 | 1.1/8 | 1 | PL 275 | 11/16 A/F | 1.5/8 | 1 | UG/196/U | 3/4 | 1.5/8 | 1.3/16 | 1 | PL 293 | 3/4 | 1.3/16 | 1.7/32 |

# 5

## REDUCING ADAPTORS FOR PLUGS

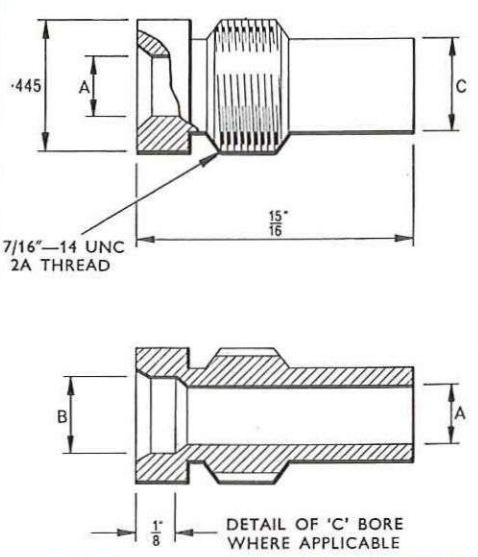


### ADAPTORS FOR PL259F AND PL284F




| PART NUMBER | MILITARY NUMBER | U.S. PART No. | 'A' DIA | 'B' DIA | CABLE |
|---|---|---|---|---|---|
| AD-259-255 | UG 176/U | 83-168 | .255 | | U/R 32 |
| AD-259-209 | UG 175/U | 83-185 | .209 4 DRILL | | U/R 43, P.T.9 |
| AD-259-277 | | | .277 'J' DRILL | | D/R 28, BA3, K12 |
| AD-259-323 | | | .255 | .323 'P' DRILL | U/R 39, P.T.11M |
| AD-259-290 | | | .220 | .290 | DURADIO 68 |
| AD-259-219 | | | .219 | | |

### ADAPTORS FOR PL259A/F



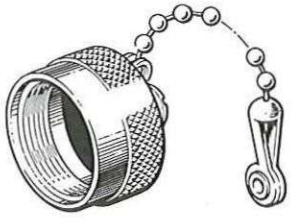

| PART NUMBER | MILITARY NUMBER | 'A' DIA | 'B' DIA | 'C' DIA | CABLE |
|---|---|---|---|---|---|
| AD-259A/F-255 | | .255 | | .310 .305 | U/R 32 |
| AD-259A/F-209 | | .209 4 DRILL | | .310 .305 | U/R 43, P.T.9 |
| AD-259A/F-277 | | .277 J DRILL | | .310 .305 | D/R 28, BA3, K12 |
| AD-259A/F-323 | | .255 | .323 'P' DRILL | .310 .305 | U/R 39, P.T.11M |
| AD-259A/F-296 | UG 173/U | .296 | | .328 | RG-38, 39/U |
| AD-259A/F-203 | | .203 | | .312 | RG- 58/U |
| AD-259A/F-250 | | .250 | | .312 | RG-59, 62, 71/U |

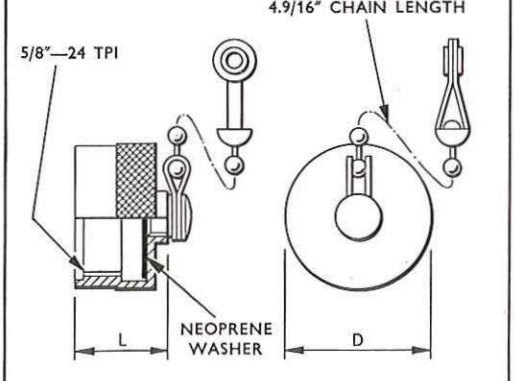
# U.H.F. Co-ax./Twin-ax. Accessories

### CONVERSION TABLE

| | | | |
|---|---|---|---|
| ins. 1/32 - 0.7937 mm | ins. 9/32 - 7.1437 mm | ins. 17/32 - 13.4937 mm | ins. 25/32 - 19.8437 mm |
| 1/16 - 1.5875 | 5/16 - 7.9375 | 9/16 - 14.2875 | 13/16 - 20.6375 |
| 3/32 - 2.3812 | 11/32 - 8.7312 | 19/32 - 15.0812 | 27/32 - 21.4312 |
| 1/8 - 3.1750 | 3/8 - 9.5250 | 5/8 - 15.8750 | 7/8 - 22.2250 |
| 5/32 - 3.9687 | 13/32 - 10.3187 | 21/32 - 16.6687 | 29/32 - 23.0187 |
| 3/16 - 4.7625 | 7/16 - 11.1125 | 11/16 - 17.4625 | 15/16 - 23.8125 |
| 7/32 - 5.5562 | 15/32 - 11.9062 | 23/32 - 18.2562 | 31/32 - 24.6062 |
| 1/4 - 6.3500 | 1/2 - 12.7000 | 3/4 - 19.0500 | 1 - 25.4000 |

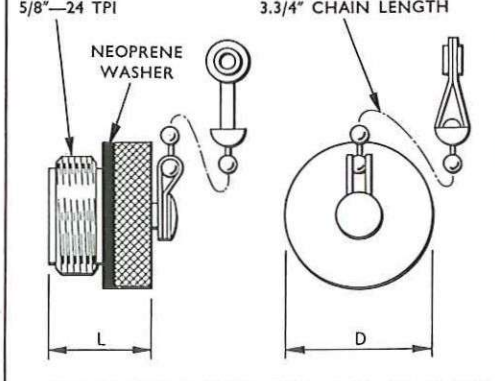
## DUST CAPS






MATERIAL—ALUMINIUM ALLOY

| PART NUMBER | D | L |
|---|---|---|
| DC. 239 | 3/4 | 13/32 |




NOTE: CANNOT BE USED WITH PL 284 OR PL 284F

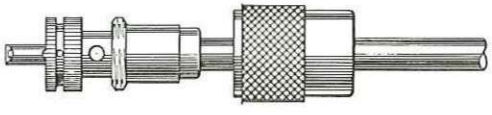
| PART NUMBER | D | L |
|---|---|---|
| DC. 259 | 3/4 | 17/32 |

**SERIES UHF**
**ASSEMBLY OF CABLES TO PL259/F PLUG**
**USING REDUCING ADAPTORS**

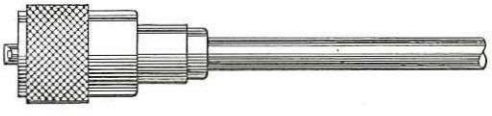

Cut end of cable even. Remove vinyl jacket $\frac{3}{4}$". Slide coupling ring and adaptor on cable.

Fan braid slightly and fold back as shown.


Position adaptor to dimension shown. Press braid down over body of adaptor and trim to $\frac{3}{8}$". Bare $\frac{5}{8}$" of conductor. Tin exposed centre conductor.



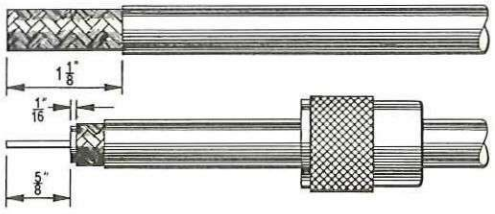
Screw plug sub-assembly on adaptor. Solder braid to shell through solder holes. Use enough heat to create bond of braid to shell. Solder conductor to contact.



For final assembly, screw coupling ring on plug sub-assembly.

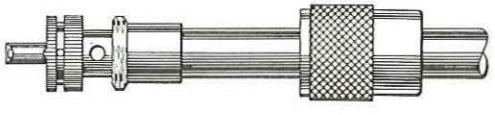
# Assembly Instructions

**ASSEMBLY OF CABLES TO PL259/F PLUG WITHOUT REDUCING ADAPTORS**

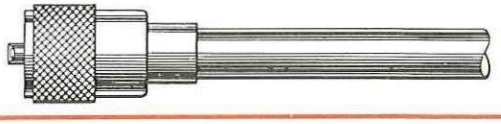



Cut end of cable even. Remove vinyl jacket $1\frac{1}{8}$".

Bare $\frac{5}{8}$" of centre conductor. Trim braided shield. Slide coupling ring on cable. Tin exposed centre conductor and braid.



Screw the plug sub-assembly on cable. Solder assembly to braid through solder holes. Use enough heat to create bond of braid to shell. Solder centre conductor to contact.



For final assembly, screw coupling ring on plug sub-assembly.