

LC 50 Ω / 5 KV	DC - 5 000 MHz
LC 50 Ω / 10 KV	
LC 75 Ω / 5 KV	



GENERAL

These three series of power connectors are not interchangeable with each other.

The connectors of these series are interchangeable with connectors corresponding to the same US Specifications.

APPLICABLE STANDARDS

- MIL-C-3650
- MIL-C-3650 A

APPLICATIONS

- Navy equipment

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LC

CHARACTERISTICS

ELECTRICAL CHARACTERISTICS

	LC 50 Ω Series	LC 10 kV Series	LC 75 Ω Series
Impedance	50 Ω	50 Ω	75 Ω
Max. operating frequency	5000 MHz	5000 MHz	5000 MHz
V.S.W.R. at 1000 MHz	< 1.10	< 1.10	< 1.15
Test voltage	5000 V.r.m.s. - 50 Hz	10 000 V.r.m.s. - 50 Hz	5000 V.r.m.s. - 50 Hz
Max. peak operating voltage	5000 Volts	10 000 Volts	5000 Volts
Max. peak power	60 kW	250 kW	40 kW
	Frequency	Polythene cables connector insulator polythene	Teflon cable RG. 119/U connector insulator PTFE
Ambient temperature : 40° C max.	at 50 MHz	5400 W	10 000 W
	at 100 MHz	3200 W	6 800 W
	at 500 MHz	900 W	4 600 W
	at 1000 MHz	540 W	1 600 W
	at 3000 MHz	240 W	800 W
	at 5000 MHz	—	500 W

MECHANICAL CHARACTERISTICS

Life : 500 matings

ENVIRONMENTAL

Temperature range

- PTFE insulator : - 55° C + 155° C
silicone rubber gasket
- polythene insulator : - 40° C + 70° C
neoprene gasket : - 55° C + 125° C

Salt spray : 48 H

MATERIALS

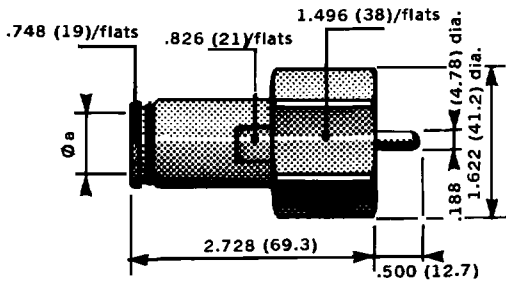
Contacts and interfaces : Bronze

Other parts : Brass

Insulators : PTFE or polythene

Gaskets : Rubber, silicone or neoprene

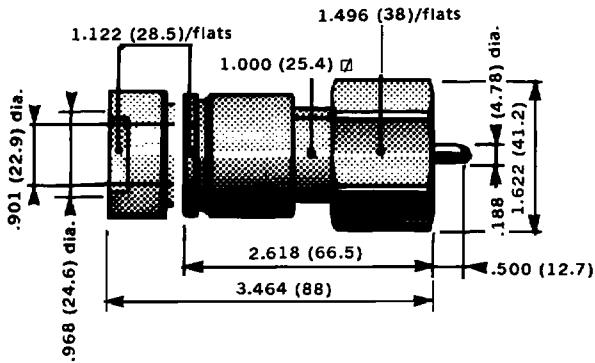
STRAIGHT PLUGS



(Cable clamp)

CABLE	.393(10)Dia .433(11)Dia 50 Ω	RG 119 /U
PART NUMBER	R 181 020	R 181 021
a Dia.	.440 (11.2)	.480 (12.2)
Assembly	M 07	M 07
Gasket	Neoprene	Silicone rubber
Insulator	PTFE	

STRAIGHT PLUGS

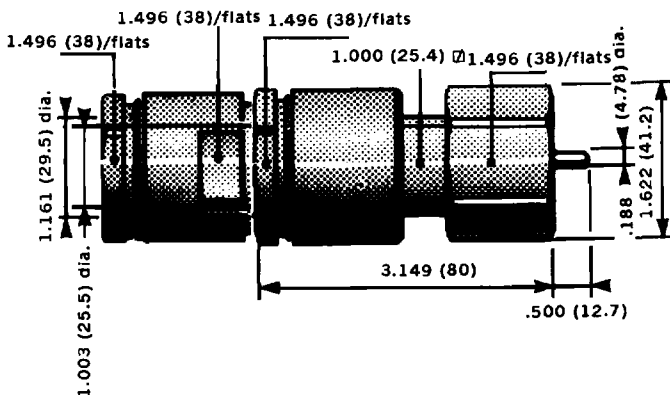


CABLE	RG 218 /U	RG 18 A/U RG 219 /U
PART NUMBER	R 181 029	R 181 029 + R 280 129 *
Assembly	M 01	M 02
Gasket	Neoprene	

* Cable clamp + armored clamp

In these two connectors the center contact and insulator are made out of the center conductor and dielectric of the cable.

STRAIGHT PLUGS

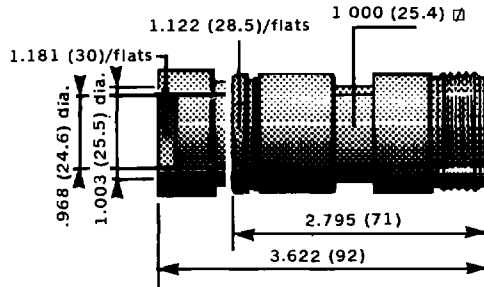


CABLE	50 GD	50 GD armored	50 GP
PART NUMBER	R 181 032	R 181 032 + R 280 132 *	R 181 032 + R 280 131 *
Assembly	M 08	M 09	M 09
Gasket	Silicone rubber	Neoprene	
Insulator	Polythene		

* Cable clamp + armored clamp

50 Ω LC

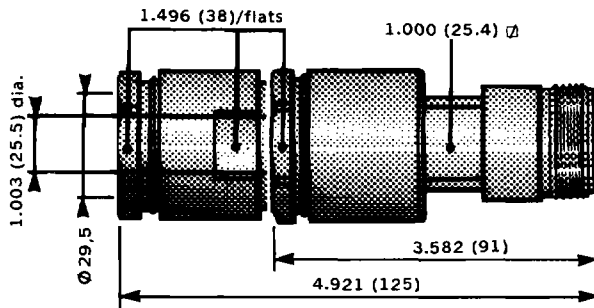
STRAIGHT JACKS



CABLE	RG 218 /U	RG 18 A/U RG 219 /U
PART NUMBER	R 181 209	R 181 209 + R 280 129 ☆
Assembly	M 05	M 06
Gasket	Silicone rubber	
Insulator	Polythene	

☆ Cable clamp + armored clamp

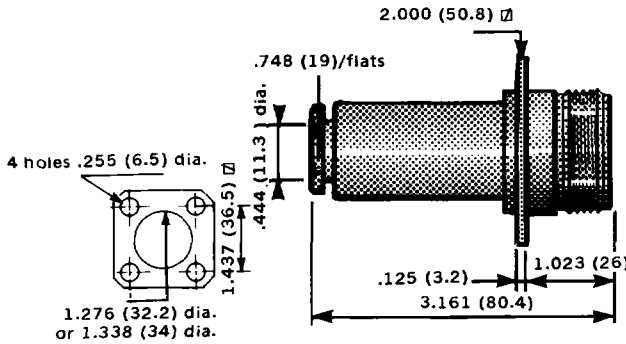
STRAIGHT JACKS



CABLE	50 GD	50 GP	50 GD armored
PART NUMBER	R 181 212	R 181 212 + R 280 131 ☆	R 181 212 + R 280 132 ☆
Assembly	M 08	M 09	M 09
Gasket	Neoprene		
Insulator	Polythene		

☆ Cable clamp + armored clamp

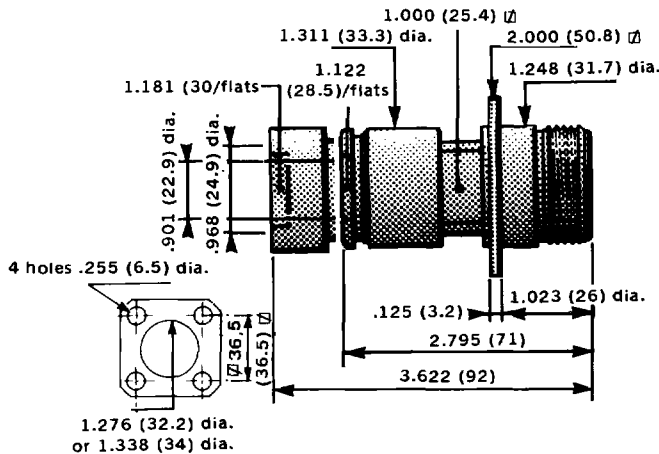
STRAIGHT JACK



(Square flange, cable clamp)

CABLE	.393 (10)/.433(11)Dia. 50 Ω
PART NUMBER	R 181 256
Assembly	M 10
Gasket	Neoprene
Insulator	PTFE

STRAIGHT JACKS

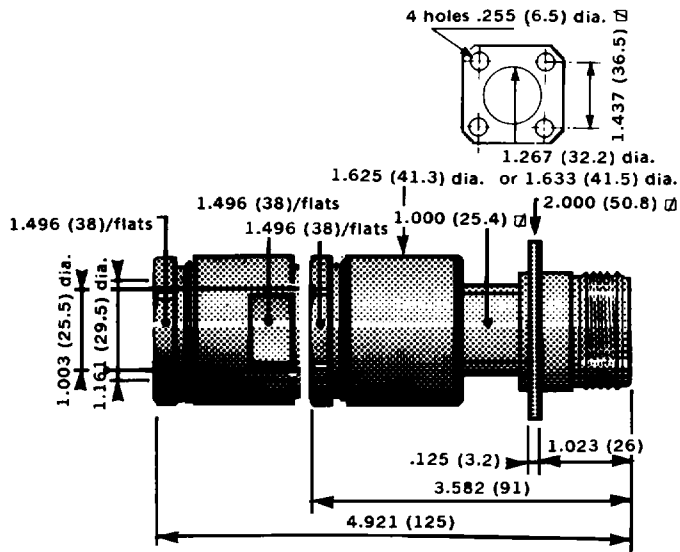


(Square flange, cable clamp)

CABLE	RG 218 /U KX 14	RG 18 A/U RG 219 /U
PART NUMBER	R 181 259	R 181 259 + R 280 129 ☆
Assembly	M 05	M 06
Gasket	Silicone rubber	
Insulator	Polythene	

☆ Cable clamp + armored clamp

FLANGE JACKS

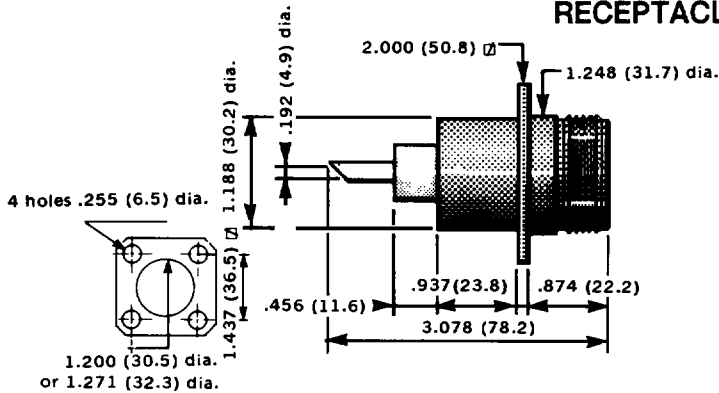


(Square flange cable clamp)

CABLE	50 GD	50 GD armored	50 GP
PART NUMBER	R 181 262	R 181 262 + R 280 132 ☆	R 181 262 + R 280 131 ☆
Assembly	M 08	M 09	M 09
Gasket	Neoprene		
Insulator	Polythene		

☆ Cable clamp + armored clamp

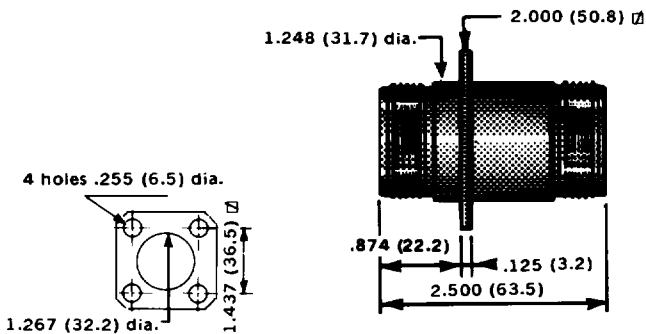
RECEPTACLE



Square flange solder pot

PART NUMBER	R 181 404
Insulator	PTFE

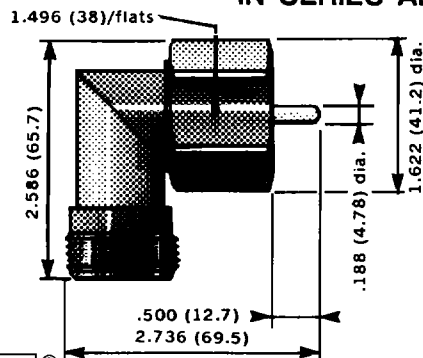
IN SERIES ADAPTER



Flange female-female

PART NUMBER	R 181 715
UG Ref.	UG 287 /U
Insulator	Polythene

IN SERIES ADAPTER



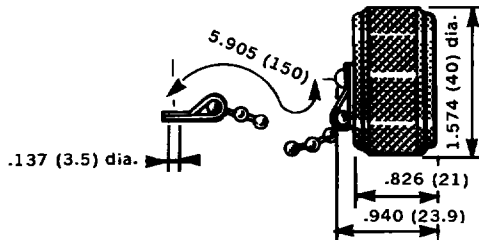
Right angle male-female

PART NUMBER	R 181 770
UG Ref.	UG 216 /U
Gasket	Neoprene
Insulator	Polythene

50 Ω LC

These items can be used with all
3 series :
LC 50 Ω - LC 10 kV - LC 75 Ω

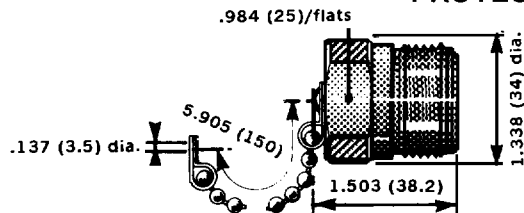
PROTECTION CAP



For female connectors

PART NUMBER	R 181 811
Gasket	Neoprene

PROTECTION CAP

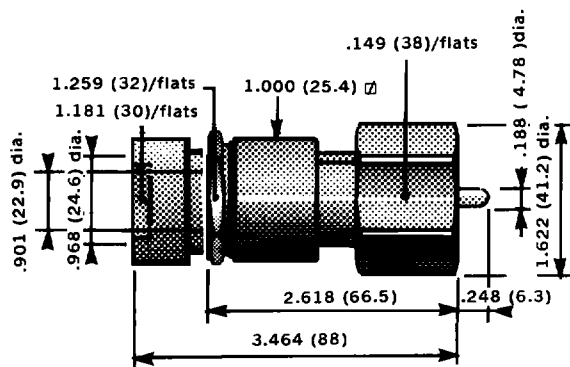


For male connectors

PART NUMBER	R 181 841
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10 kV LC

STRAIGHT PLUGS

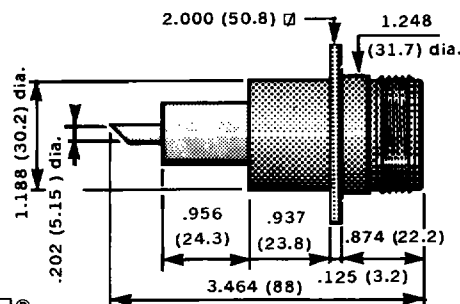
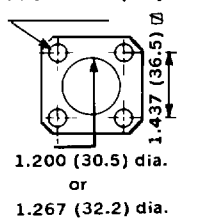


CABLE	RG 18 A/U KX 14	RG 18 A/U RG 219 /U
PART NUMBER	R 181 029	R 181 029 + R 280 129
Assembly	M 03	M 04
UG Ref.	UG 125 B/U	
Gasket	Silicone rubber	

In these two connectors the center contact and insulator are made out of the center conductor and dielectric of the cable.

RECEPTACLE

4 holes .255 (6.5) dia.

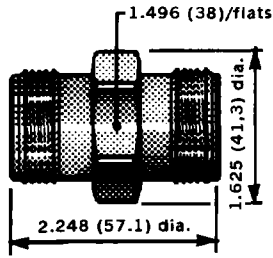


Square flange solder pot

PART NUMBER	R 182 404
Gasket	PTFE

10 kV LC

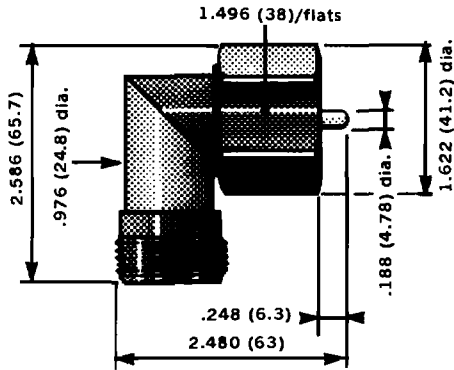
IN SERIES ADAPTER



(Straight female - female)

PART NUMBER	R 182 705
UG Ref.	UG 155 /U
Insulator	Polythene

IN SERIES ADAPTER

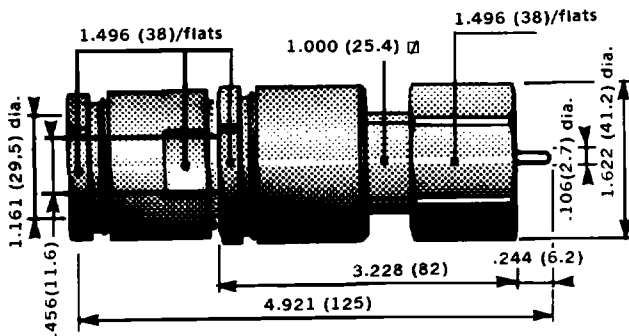


(Right angle male-female)

PART NUMBER	R 182 770
UG Ref	UG 208 /U
Gasket	Neoprene
Insulator	Polythene

75 Ω LC

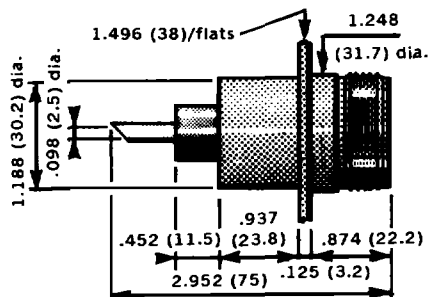
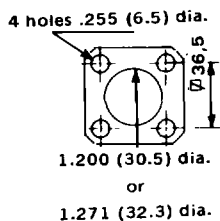
STRAIGHT PLUGS



CABLE	75 GD	75 GD	75 GP
PART NUMBER	R 183 032	R 183 032 + R 280 132 ☆	R 183 032 + R 280 131 ☆
Assembly	M 08	M 09	M 09
Gasket	Neoprene		
Insulator	Polythene		

☆ Cable clamp + armored clamp

RECEPTACLE

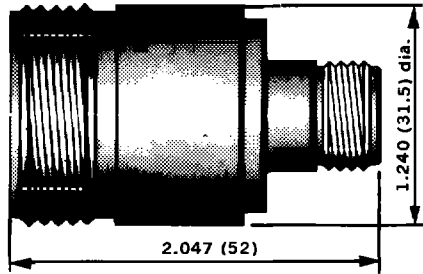


(Square flange solder pot)

PART NUMBER	R 183 404
Insulator	PTFE

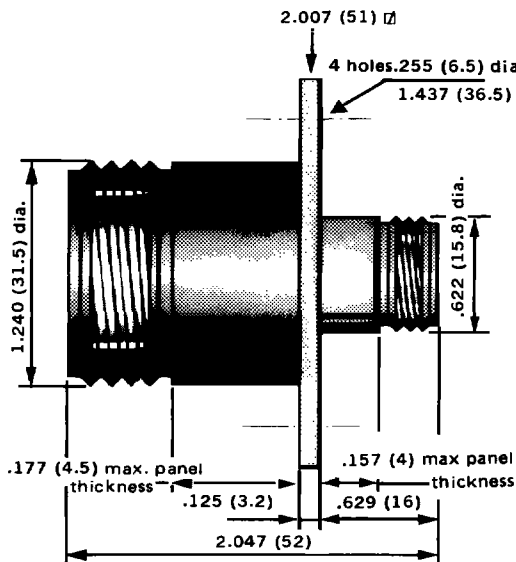
ADAPTERS

ADAPTER LC female – N female



PART NUMBER	R 191 741
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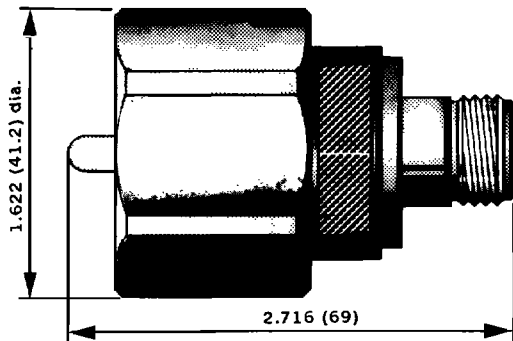
ADAPTER LC female – N female



(With square flange)

PART NUMBER	R 191 742
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ADAPTER LC male – N female



PART NUMBER	R 191 745
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Also available : R 191 941 LC male – HN female bulkhead mounting with panel seal.

MOUNTING INSTRUCTIONS

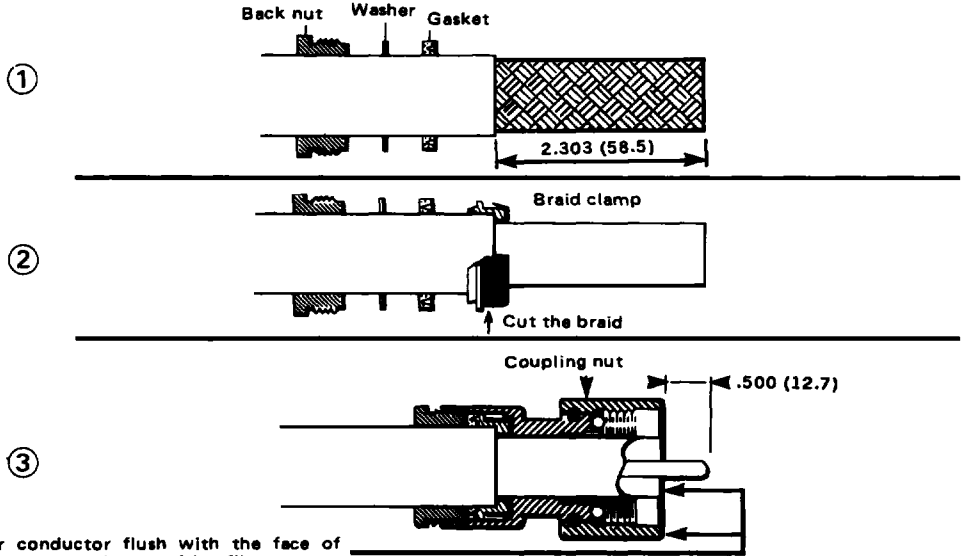
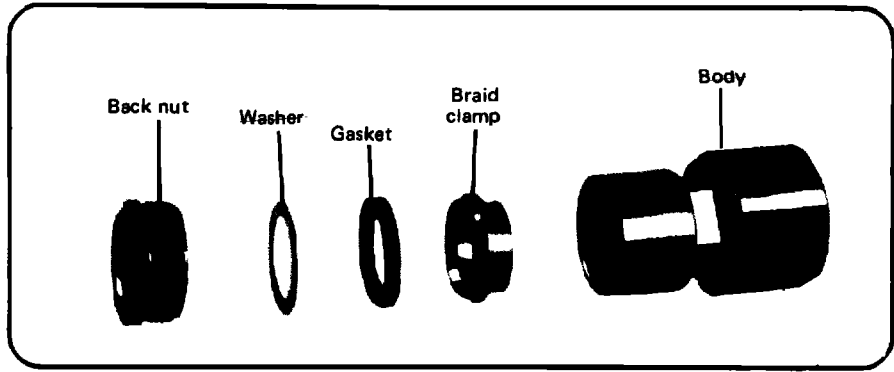
M 01

50 Ω IMPEDANCE

R 181 029

TOOLING

- Sharp knife
- Scissors
- File



Strip the dielectric from the solid center conductor flush with the face of the coupling nut. Round off the end of the center conductor with a file.

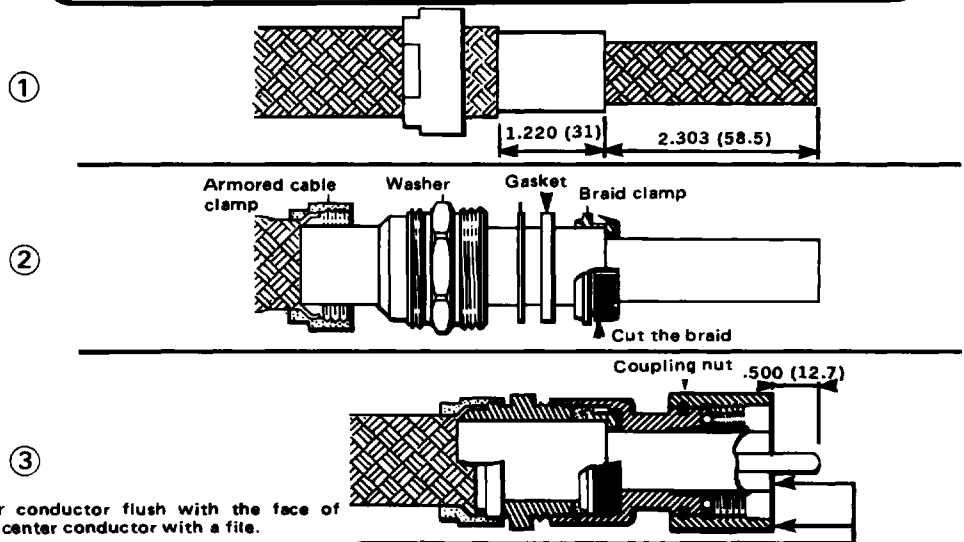
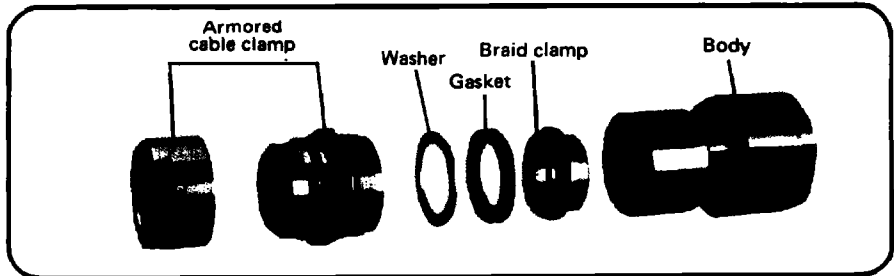
M 02

50 Ω IMPEDANCE

R 181 029
+
R 280 129

TOOLING

- Sharp knife
- Scissors
- File

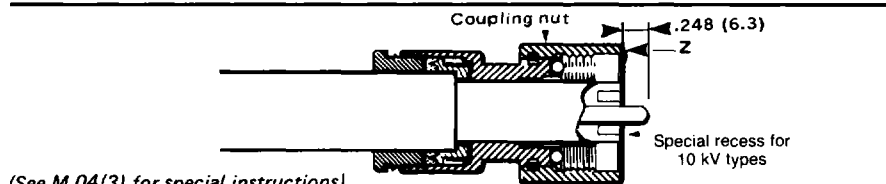
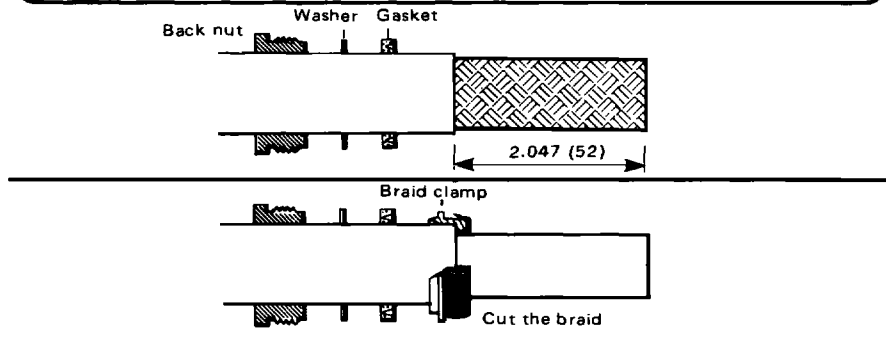
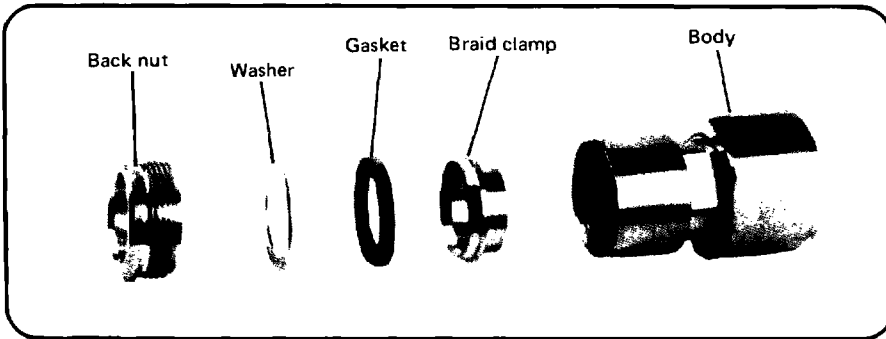


Strip the dielectric from the solid center conductor flush with the face of the coupling nut. Round off the end of the center conductor with a file.

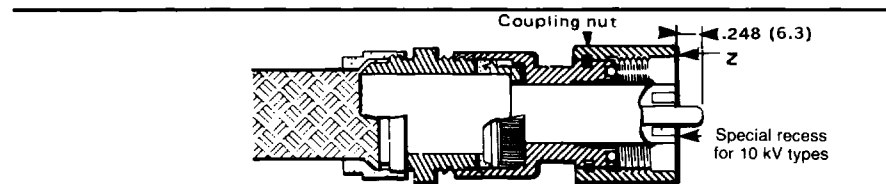
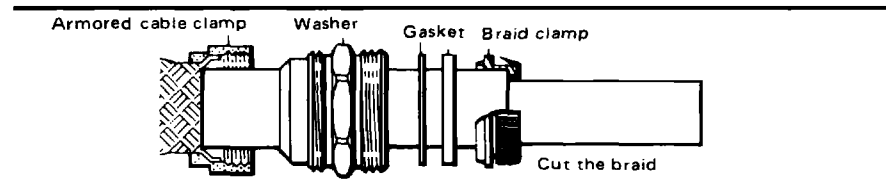
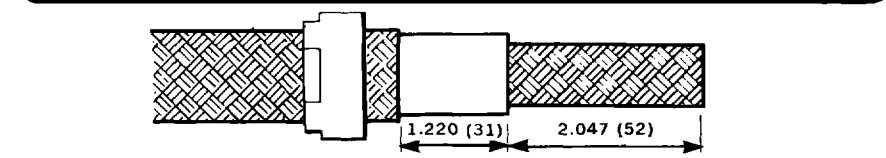
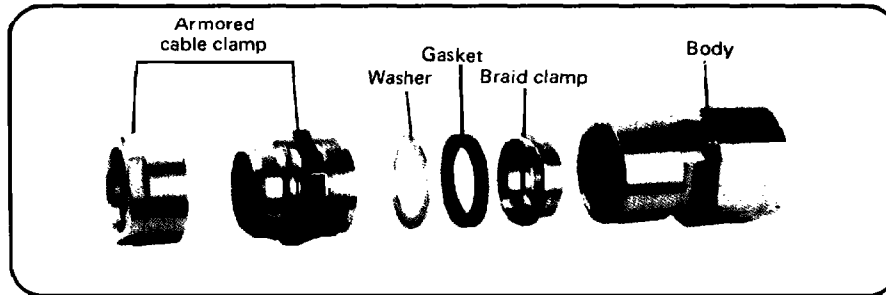
XIV

MOUNTING INSTRUCTIONS

M 03



(See M 04(3) for special instructions)



Strip the dielectric from the solid center conductor to within 1 mm of face Z. Trim the dielectric using cutter R 282 915. Trimming is complete when cutter meets face Z. Trim and round off the end of the center conductor with a file to a length of .248" (6.3 mm) from face of dielectric.

50 Ω IMPEDANCE

R 181 029

TOOLING

①

- Sharp knife
- Scissors
- R 282 915 dielectric cutter
- File

②

③

M 04

50 Ω IMPEDANCE

R 181 029
+
R 280 129

TOOLING

①

- Sharp knife
- Scissors
- R 282 915 dielectric cutter
- File

②

③

MOUNTING INSTRUCTIONS

M 05

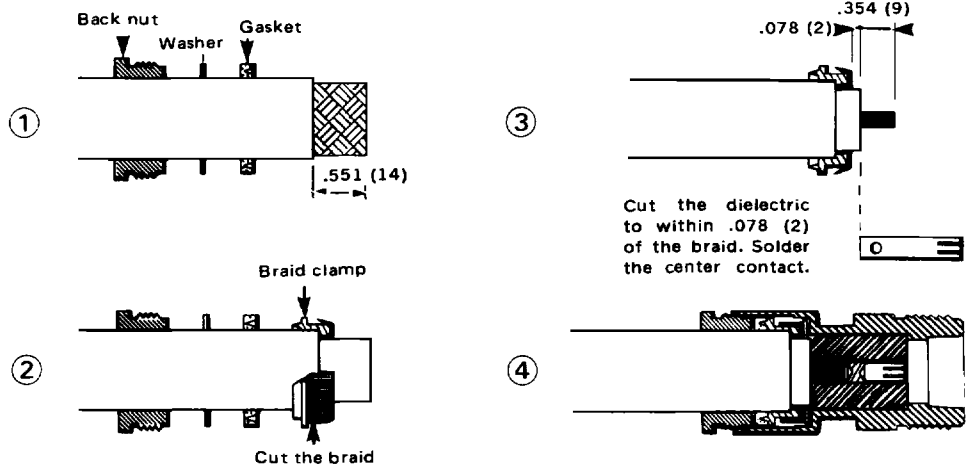
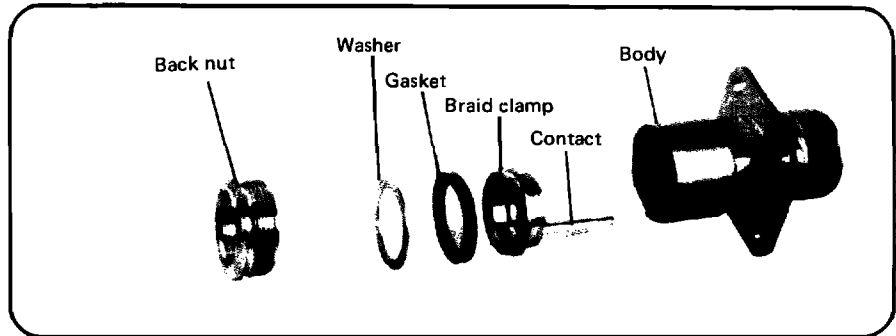
50 Ω IMPEDANCE

R 181 209

R 181 259

TOOLING

- 100 or 250 W Resistance soldering iron with soldering tweezers (alternatively 30 W soldering iron)
- Tin solder (Pb + Ag) 180 ° C, .019 (0.5) dia.
- Sharp knife
- Scissors



M 06

50 Ω IMPEDANCE

R 181 209

+

R 281 129

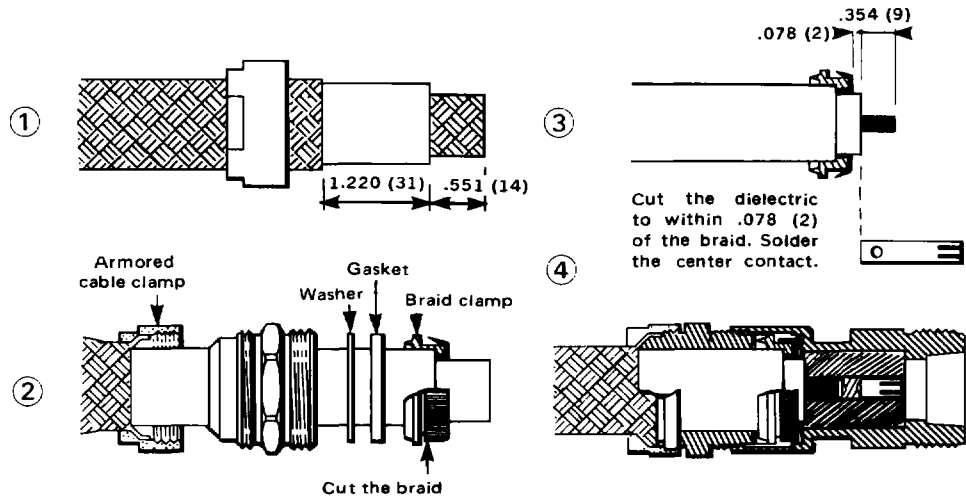
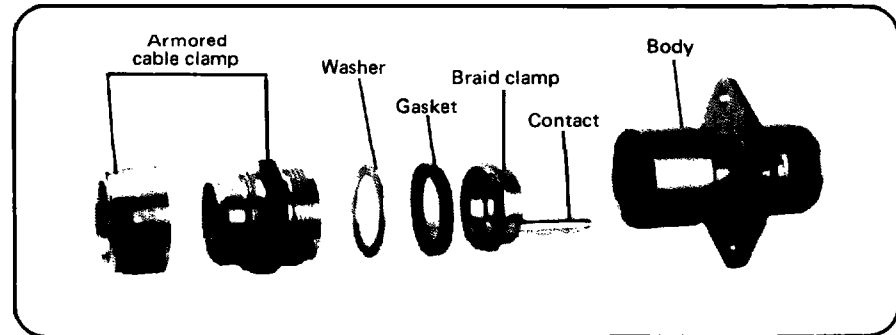
R 181 259

+

R 280 129

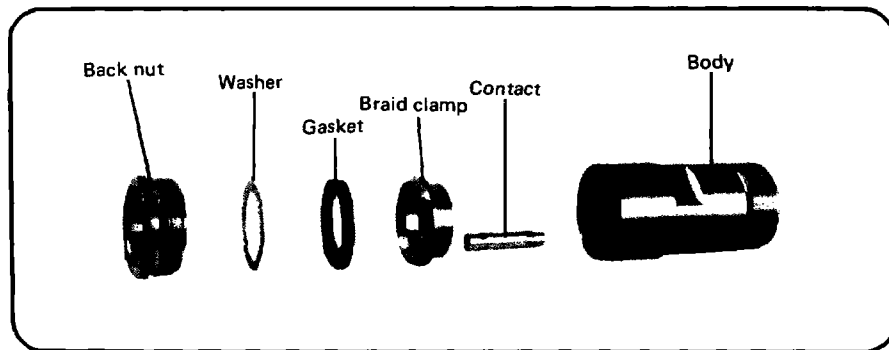
TOOLING

- 100 or 250 W Resistance soldering iron with soldering tweezers (alternatively 30 W soldering iron)
- Tin solder (Pb + Ag) 180 ° C, .019 (0.5) dia.
- Sharp knife
- Scissors



XIV

MOUNTING INSTRUCTIONS



M 07

50 Ω IMPEDANCE

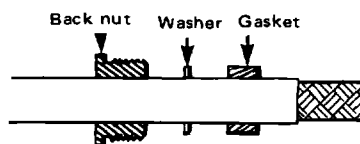
R 181 020

R 181 021

TOOLING

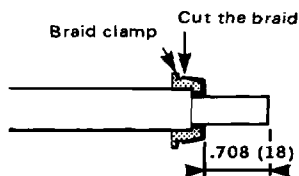
- 100 or 250 W Resistance soldering iron with soldering tweezers (alternatively 30 W soldering iron)
- Tin solder (Pb + Ag) 180° C, .019 (0.5) dia.
- Sharp knife
- Scissors

①



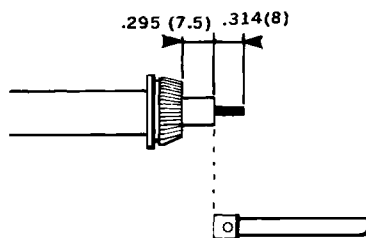
- Slide the back nut, washer and gasket over the cable.

②



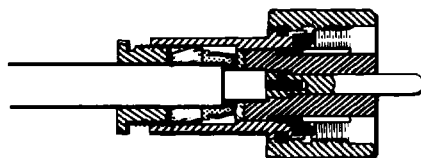
- Fold back the braid over the braid clamp and trim it.

③



- Strip off dielectric from center conductor
- Solder the center contact.

④

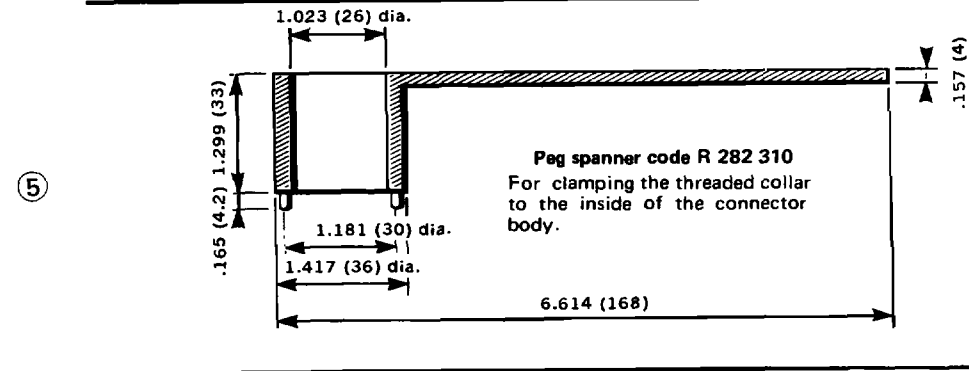
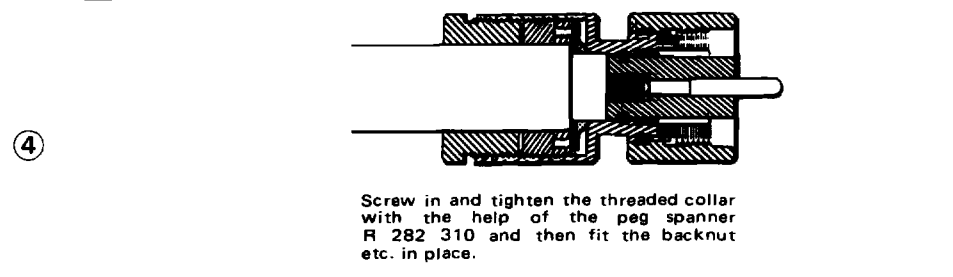
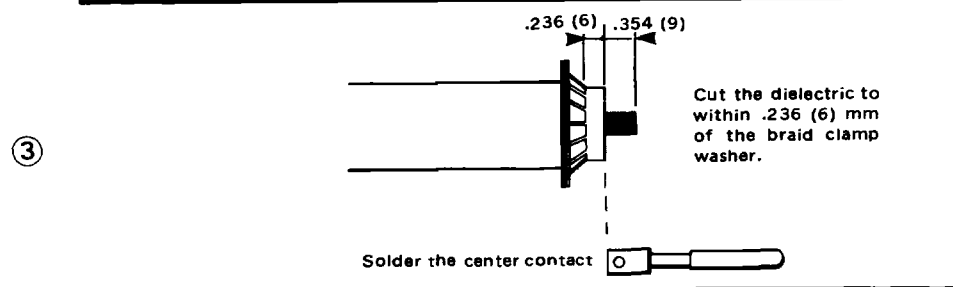
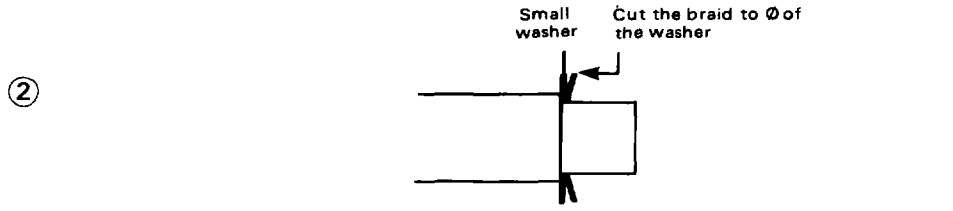
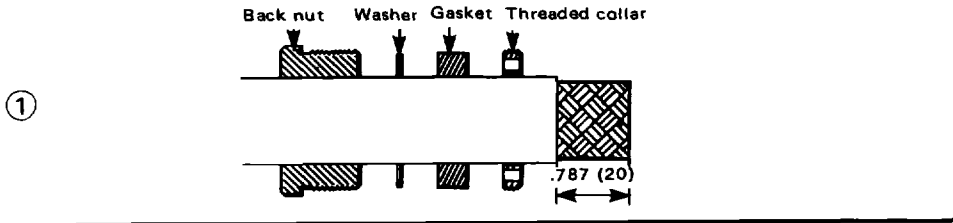
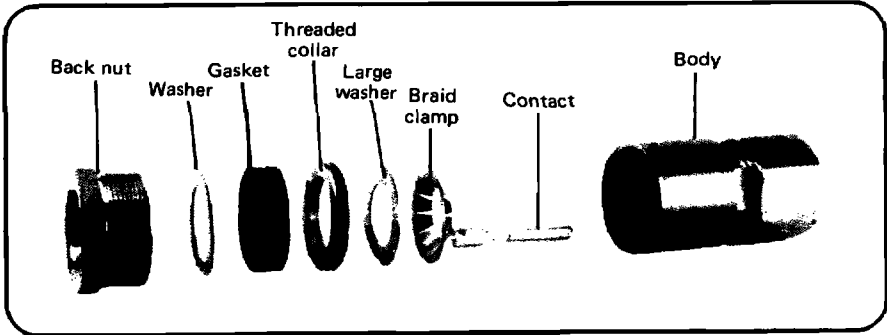


- Screw the back nut into the body.

MOUNTING INSTRUCTIONS

M 08

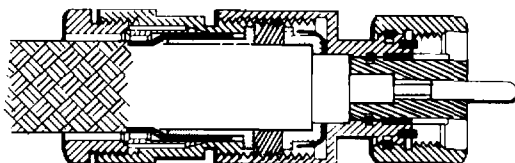
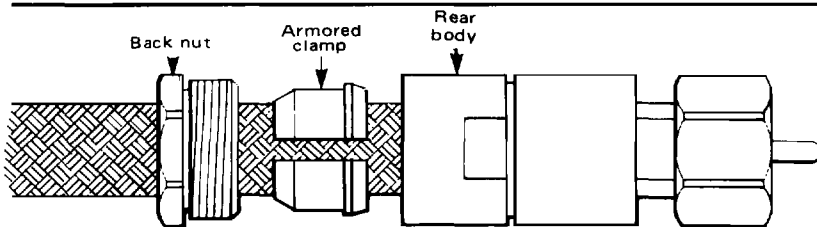
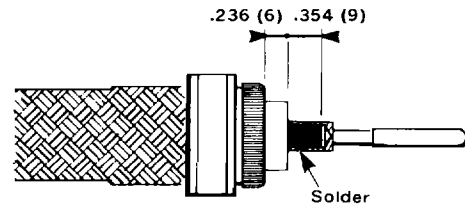
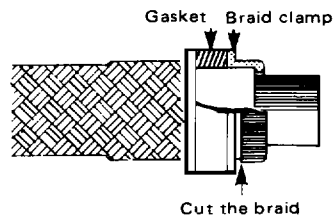
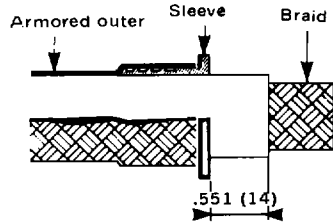
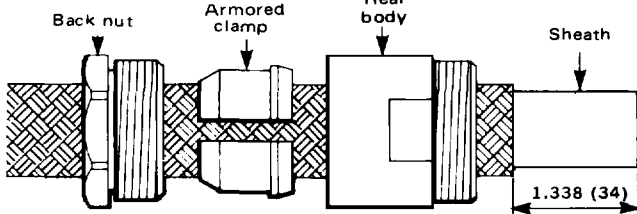
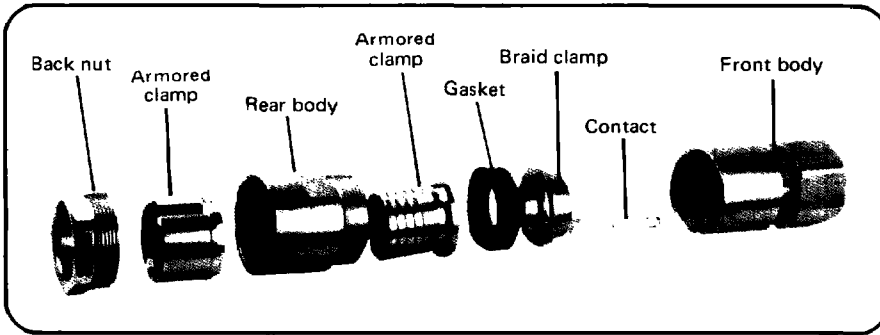
50 Ω IMPEDANCE
R 181 032 R 181 212 R 181 262
75 Ω IMPEDANCE
R 183 032
TOOLING
<ul style="list-style-type: none"> - 100 or 250 W Resistance soldering iron with soldering tweezers (alternatively 30 W soldering iron) - Tin solder (Pb + Ag) 180° C, .019 (0.5) dia. - Sharp knife - Scissors



XIV

MOUNTING INSTRUCTIONS

M 09



- Screw the rear body into the body of the connector
- Push home the armored clamp
- Screw the backnut into the body

50 Ω IMPEDANCE

R 181 032
+
R 280 132
R 181 032
+
R 280 131
R 181 212
+
R 280 132
R 181 212
+
R 280 131
R 181 262
+
R 280 132
R 181 262
+
R 280 131

75 Ω IMPEDANCE

R 183 032
+
R 280 132
R 183 032
+
R 280 131

TOOLING

- 100 or 250 W Resistance soldering iron with soldering tweezers (alternatively 30 W soldering iron)
- Tin solder (Pb + Ag) 180 ° C, .019 (0.5) dia.
- Sharp knife
- Scissors

MOUNTING INSTRUCTIONS

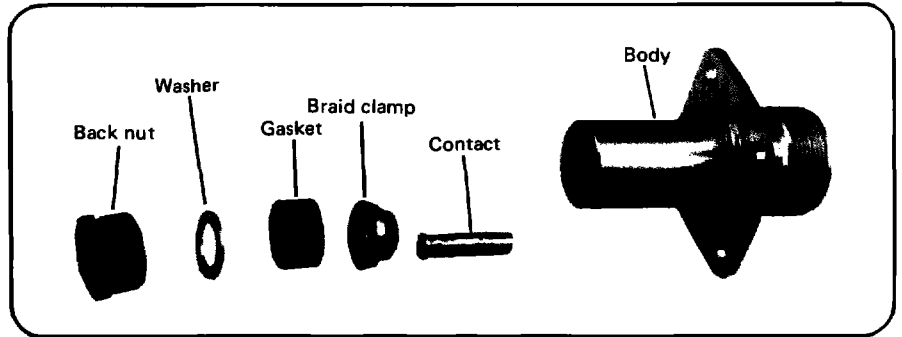
M 10

50 Ω IMPEDANCE

R 181 256

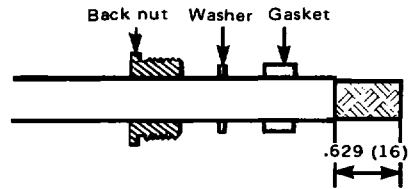
TOOLING

- 100 or 250 W Resistance soldering iron with soldering tweezers (alternatively 30 W soldering iron)
- Tin solder (Pb + Ag) 180 ° C, .019 (0.5) dia.
- Sharp knife
- Scissors



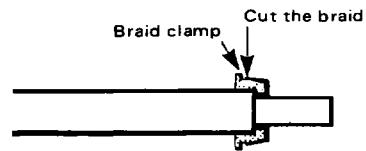
①

- Slide the back nut, washer and gasket over the cable.



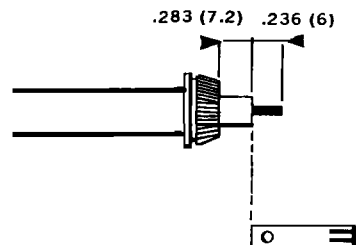
②

- Fold back the braid over the braid clamp and trim it.



③

- Strip off dielectric from center conductor
- Solder the center contact.



XIV