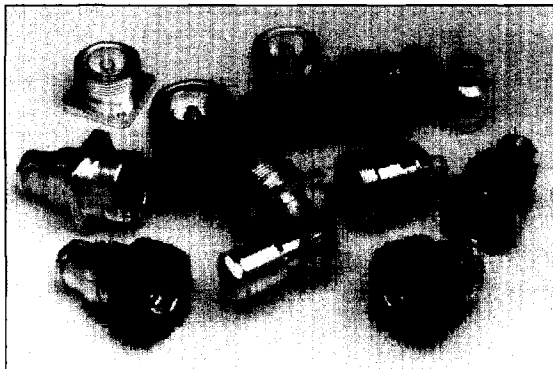


7-16 Series

Features

- All Connectors Are Manufactured in an ISO-9001 Qualified Facility
- M/A-COM 7-16 Series Connectors Conform to CECC 22190 and IEC 169-4 Specification Standards
- Intermodulation Distortion is Better Than -150 dBc
- Hexagon Shaped Coupling Nut for Wrench Tightening

M/A-COM's 7-16 series connectors are designed for medium to high power applications such as cellular base stations, control components, antenna and broadcast. The 7-16 series minimizes intermodulation distortion by silver plating the electrical path. Hexagon shaped coupling nuts allow for wrench tightening, further reducing distortion by providing a strong butt joint. Tested performance is better than -150 dBc per mated pair. The metric M29x1.5 threaded coupling mechanism assures a rigid coaxial termination with extremely low leakage. The 7-16 series connectors are available for several popular RG cable sizes in both solder-clamp and crimp-crimp attachment styles.



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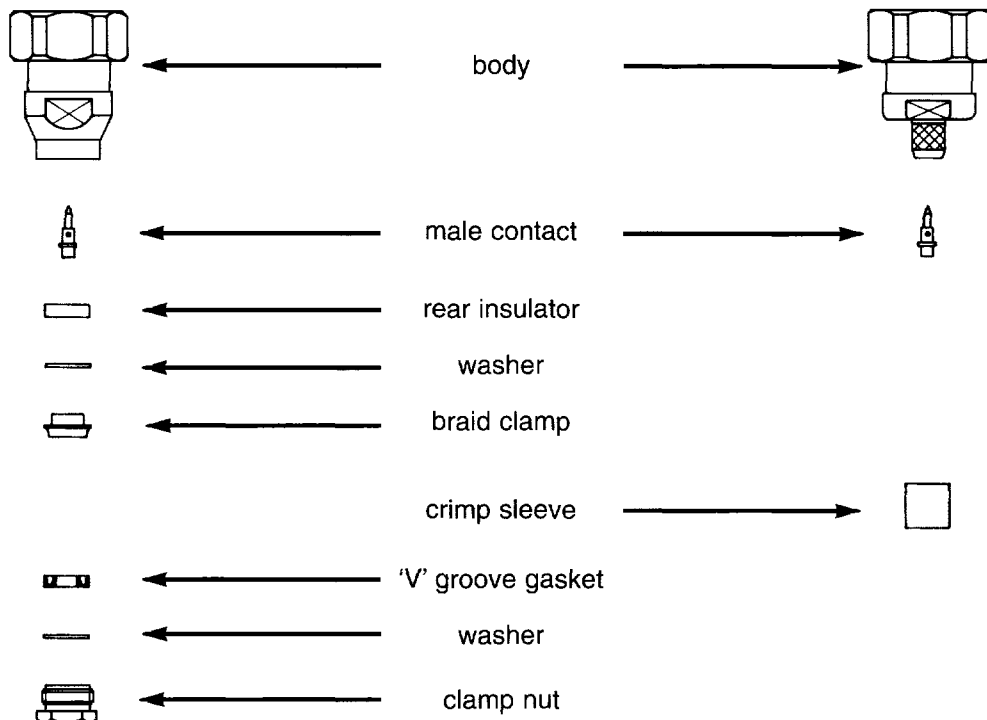
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TYPICAL PIECE PARTS IN SOLDER/CLAMP AND CRIMP/CRIMP CONNECTORS

Solder/clamp connectors

Crimp/crimp connectors



The piece parts indicated above are typical for 7-16 series connectors. For assembly information and to assist recognition and checking of parts supplied, consult our Sales Office.

Methods of Cable Retention

Solder/clamp

The clamp method of fastening connector to coaxial cable requires mechanical clamping of the braid. This is achieved by trapping the braid between two metal surfaces, the force is applied using a threaded nut. The contact is soldered directly to the center conductor. The advantage of the solder/clamp connector assembly is that there is a no special tooling required. The clamp may also be inspected or remade. The RF performance is also superior compared to that of a crimp type assembly.

Crimp

A crimped connector comprises only a few piece parts typically only three, a center contact, body and crimp sleeve. It produces a fast consistent and reliable connection at a low applied cost. Consistency is assured by using ratchet controlled crimp tools that do not release until the die set has bottomed. Crimp connector are not reusable. If re-termination is required the unwanted connector must be cut from the cable.

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7-16 Series Specifications

All the information included within this page is typical for the series but will not necessarily apply to every style or version.

Mechanical Data	
Coupling torque:	18.5 - 22 ft.-lbs
Proof torque:	25 ft.-lbs
Mechanical endurance:	500 mating cycles
Environmental Data	
Temperature Rating:	-55°C to +155°C
Electrical Data:	
Frequency Range:	dc - 7 GHz
Impedance:	50 ohms
Insulation resistance (min.):	10,000 megohms min. 2.7 kV (connector)
Max. working voltage rms (sea level):	1.4 kV (versions for RG 213, 214, and 393) 2.7 kV (connector)
Max. proof voltage rms (sea level):	1.4 kV (versions for RG 213, 214, and 393)
Center contact resistance (max.):	0.8 milliohm after conditioning
Insertion loss:	<1.5 dB to 5 GHz
VSWR:	1.02 + 0.03f up to 7 GHz where f is measured in GHz
Intermodulation:	Better than -150 dBc
Materials	
Female contacts (inner and outer):	Beryllium copper
Other metal parts:	Brass
Insulators:	Fluorocarbon polymer
Gaskets:	Silicone rubber
Finishes	
Parts in the electrical path	Silver over copper
7-16 coupling nut:	Nickel over copper
Other metal parts:	Silver over copper

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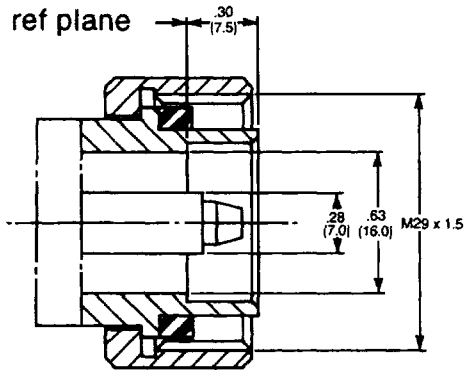
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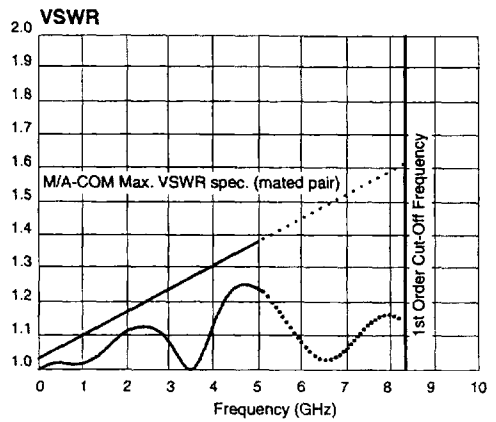
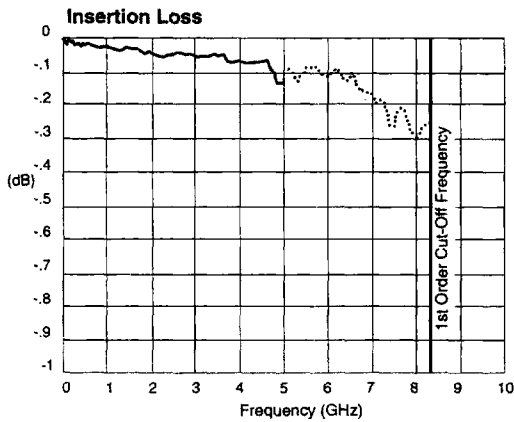
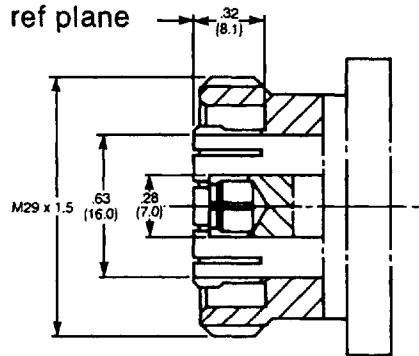
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INTERFACE MATING DIMENSIONS AND PERFORMANCE GRAPHS TYPICAL VSWR AND INSERTION LOSS CHARACTERISTICS

PLUG



JACK



Typical performance for 7-16 mated pair on RG 213 (clamp style)

in
mm

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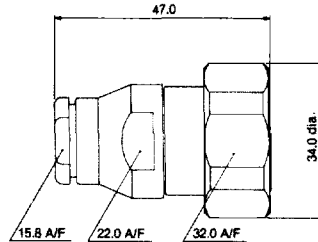
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7-16 Series

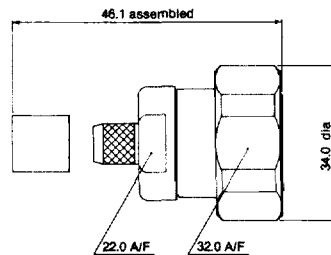
STRAIGHT PLUGS

**Solder center contact,
clamp outer**



Cable group ①	Part Number	Notes	Body Finish ③
001/004/B04	D75 A01 E004 X99	Captive contact, V groove gasket braid clamp	Silver
001/004/B04	D75 A01 B004 X99	As above	White bronze

**Crimp center contact,
crimp outer**



Cable group ①	Part Number	Crimp tool ②	Body Finish ③
001	D75 A02 E001 X99	G30051 or G30074	Silver
001	D75 A02 B001 X99	G30051 or G30074	White bronze
004	D75 A02 E004 X99	G30051 or G30074	Silver
004	D75 A02 B004 X99	G30051 or G30074	White bronze
B04	D75 A02 EB04 X99	G30051 or G30074	Silver
B04	D75 A02 BB04 X99	G30051 or G30074	White bronze

① For cable group to cable type cross reference refer to page 200.
 ② Crimp tool 30051 requires separate dies, for all details on tooling, see page 194.
 ③ For plating finish specification refer to page 3.

All measurements are in millimeters unless otherwise specified.

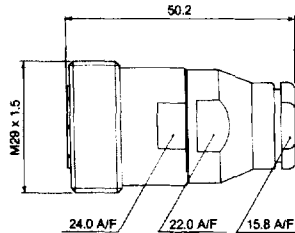
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7-16 Series

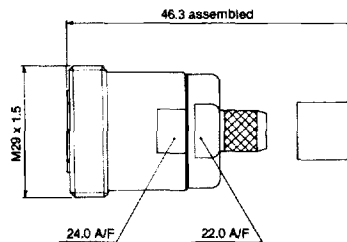
STRAIGHT JACKS

**Solder center contact,
clamp outer**



Cable group ①	Part Number	Notes	Body Finish ③
001/004/B04	D75 E01 E004 X99	Captive contact. V groove gasket, braid clamp	Silver
001/004/B04	D75 E01 B004 X99	As above	White bronze

**Crimp center contact,
crimp outer**



Cable group ①	Part Number	Crimp tool ②	Body Finish ③
001	D75 E02 E001 X99	G30051 or G30074	Silver
001	D75 E02 B001 X99	G30051 or G30074	White bronze
004	D75 E02 E004 X99	G30051 or G30074	Silver
004	D75 E02 B004 X99	G30051 or G30074	White bronze
B04	D75 E02 EB04 X99	G30051 or G30074	Silver
B04	D75 E02 BB04 X99	G30051 or G30074	White bronze

① For cable group to cable type cross reference refer to page 200.

② Crimp tool 30051 requires separate dies, for all details on tooling, see page 194.

③ For plating finish specification refer to page 3.

All measurements are in millimeters unless otherwise specified.

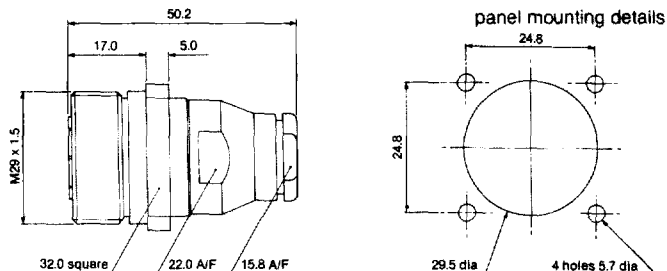
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7-16 Series

PANEL JACKS

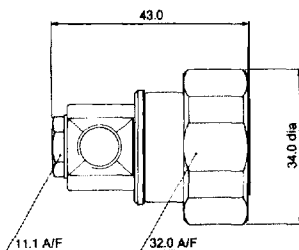
Solder center contact, clamp outer



Cable group ①	Part Number	Notes	Body Finish ③
001/004/B04	D75 G01 E004 R99	Captive contact, V groove gasket, braid clamp	Silver
001/004/B04	D75 G01 B004 R99	As above	White bronze

COMBINATION PLUGS

Solder center contact



Part Number	Notes	Body Finish ③
D75 A03 E999 X99	Requires additional cable entry	Silver
D75 A03 B999 X99	As above	White bronze

① For cable group to cable type cross reference refer to page 200.

② Crimp tool 30051 requires separate dies, for all details on tooling, see page 194.

③ For plating finish specification refer to page 3.

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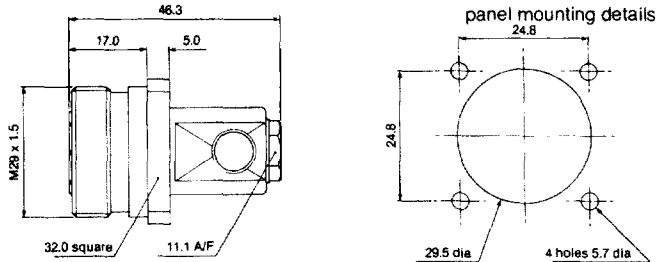
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7-16 Series

COMBINATION PANEL JACKS

Solder center contact



Part Number

D75 G02 E999 R99
D75 G02 B999 R99

Notes

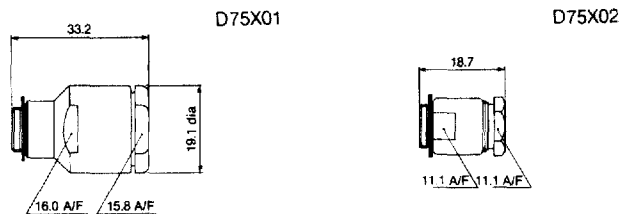
Requires additional cable entry
As above

Body Finish ③

Silver
White bronze

CABLE ENTRIES

Clamp outer



Cable group ①

001/004/B04
001/004/B04
010/060
010/060

Part Number

D75 X01 E004 X99
D75 X01 B004 X99
D75 X02 E010 X99
D75 X02 B010 X99

Notes

V groove gasket, braid clamp
As above
As above
As above

Body Finish ③

Silver
White bronze
Silver
White bronze

- ① For cable group to cable type cross reference refer to page 200.
② Crimp tool 30051 requires separate dies, for all details on tooling, see page 194.
③ For plating finish specification refer to page 3.

All measurements are in millimeters unless otherwise specified.

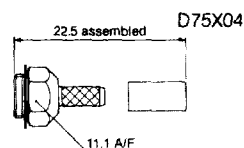
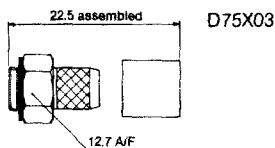
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CABLE ENTRIES

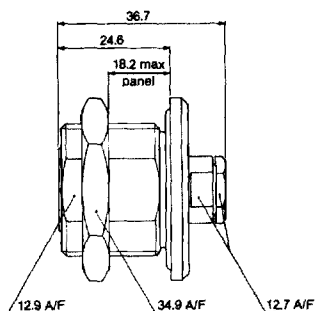
Crimp outer



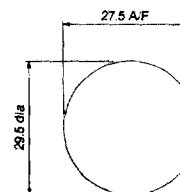
Cable group ①	Part Number	Crimp tool	Body Finish ③
001	D75 X03 E001 X99	G30051 or G30074	Silver
001	D75 X03 B001 X99	G30051 or G30074	White bronze
004	D75 X03 E004 X99	G30051 or G30074	Silver
004	D75 X03 B004 X99	G30051 or G30074	White bronze
B04	D75 X03 EB04 X99	G30051 or G30074	Silver
B04	D75 X03 BB04 X99	G30051 or G30074	White bronze
010	D75 X04 E010 X99	G30039 or G30040 or G30074	Silver
010	D75 X04 B010 X99	G30039 or G30040 or G30074	White bronze
060	D75 X04 E060 X99	G30039 or G30040 or G30074	Silver
060	D75 X04 B060 X99	G30039 or G30040 or G30074	White bronze

BULKHEAD JACKS

Direct solder attachment



panel mounting details



Cable group ①	Part Number	Body Finish ③
277	D75 H02 E277 X99	Silver

① For cable group to cable type cross reference refer to page 200.

② Crimp tool 30051 requires separate dies, for all details on tooling, see page 194.

③ For plating finish specification refer to page 3.

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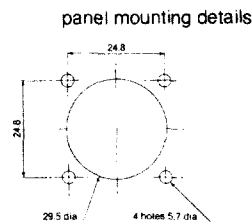
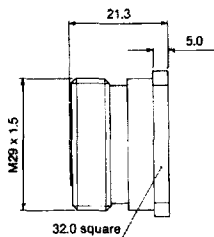
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7-16 Series

PANEL SOCKETS

Screw attachment



Part Number

D75 K01 E999 R99

D75 K01 B999 R99

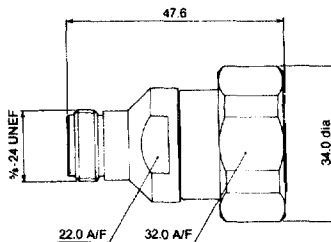
Body Finish ③

Silver

White bronze

INTER SERIES ADAPTERS

Straight 7-16 plug to N jack



Part Number

A55 P21 E999 X99

- ① For cable group to cable type cross reference refer to page 200.
- ② Crimp tool 30051 requires separate dies, for all details on tooling, see page 194.
- ③ For plating finish specification refer to page 3.

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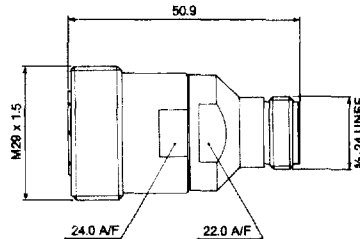
7-16 Series

INTER SERIES ADAPTERS

Straight 7-16 jack to N jack

Part Number

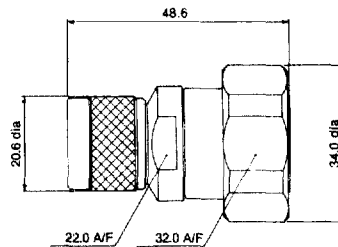
A55 P22 E999 X99



Straight 7-16 plug to N plug

Part Number

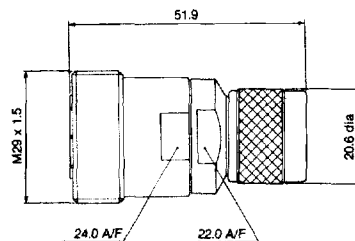
A55 P23 E999 X99



Straight 7-16 jack to N plug

Part Number

A55 P24 E999 X99



- ① For cable group to cable type cross reference refer to page 200.
- ② Crimp tool 30051 requires separate dies, for all details on tooling, see page 194.
- ③ For plating finish specification refer to page 3.

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