

7-16 Series Connectors

Product Facts

- Designed for cellular base-stations, control component, antenna and broadcast applications
- Available in White Bronze plating
- Minimizes Intermodulation Distortion by the use of non-ferrous materials
- Hex knurl for wrench tightening
- Available for several popular RG cable sizes in solder-clamp and crimp-crimp attachment styles



Tyco Electronics offers a comprehensive range of 7-16 Connectors to suit today's challenging Wireless Infrastructure Market. This market demands reliable, intermodulation sensitive connectors that accommodate higher power.

Tyco Electronics 7-16 Coaxial Connector Series provides reliable, intermodulation-minimizing solutions that also provide a logical alternative to N Series connectors in high power applications where a more rugged interface design is required. Typical examples of this include transmitter to antenna links and channel switching networks.

The 7-16 Series conforms to CECC 22190 and IEC 169-4 specification standards and has a 2.7kV working voltage at the connector interface and maximum power handling capability of 4kW.

The series has been designed for these demanding environments and can withstand a minimum of 500 mating cycles. Popular RG cable sizes are covered in both solder/clamp and crimp attachment styles. Two piece combination connectors adapt to straight or right-angle configurations, minimizing the number of different part codes needed by the customer. Series N to 7-16 between series adapters facilitate the transition between system interfaces as well as providing a test interface.

The increased customer demand for greater channel capacity combined with increased sensitivity of receivers has exposed the IMD (Intermodulation Distortion) phenomenon. To address this problem 7-16 Connectors have been

designed to reduce IMD through the use of non-ferrous base materials and by silver plating of the electrical path. The proprietary White Bronze plating technique is standard, providing high corrosion resistance, low porosity, scratch resistance, low RF loss and a non-magnetic finish. Incorporation of hex-knurl coupling nuts allow for hand or wrench tightening of connectors, depending upon the application.

Tyco Electronics is a global ISO 9001 certified manufacturer and maintains a complete in-house Intermodulation Testing facility. Connector part numbers shown form just a small part of the extensive interconnect package that Tyco Electronics offers for the professional wireless and telecom markets.

Related Product Data

N Connectors — Pages 20-25

Application Notes —

White Bronze — Appendix B
Intermodulation — Appendix C

Between Series Adapters

For 7-16 Series Between Series Adapters, see pages 251-260.

7-16 Series Connectors (Continued)

General Specifications

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
Other Metal Parts	White Bronze

Electrical

Frequency Range	DC-7GHz
Impedance	50 Ohms
Insulation Resistance	10,000 Megohms Minimum 2.7kV (connector)
Maximum Working Voltage rms (sea level)	1.4kV (versions for RG 213, 214 and 393)
Maximum Proof Voltage rms (sea level)	2.7kV (connector) 1.4kV (versions for RG 213, 214 and 393)
Center Contact Resistance	0.8 milliohm (max.) after conditioning
Insertion Loss	<1.5dB to 5 GHz
VSWR	1.02 + 0.03f up to 7 GHz where f is measured in GHz
Intermodulation	Better than -150dBc

Mechanical

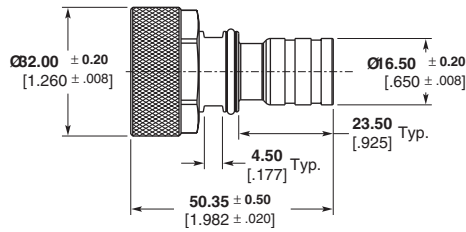
Coupling Torque	18.5 – 22 ft.-lbs.
Proof Torque	25 ft.-lbs.
Mechanical Endurance	500 mating cycles

Environmental

Temperature Rating	-55°C to +155°C
--------------------	-----------------

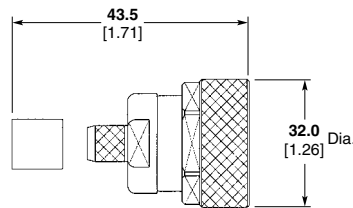
7-16 Series Connectors (Continued)

**Straight Cable Plug
Solder/Solder**



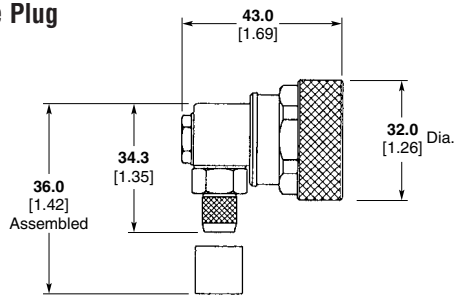
Cable Type	Body Plating	Part No.
1/2" Corrugated	White Bronze/ Gold	1460159-1

**Straight Cable Plug
Crimp/Crimp**

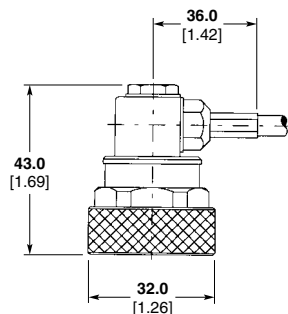


Cable Type	Body Plating	Part No.
RG 8A/U, RG 213/U	White Bronze	6331959-1
RG 9B/U, RG 214/U	White Bronze	6362765-1

**Right-Angle Cable Plug
Solder/Crimp**



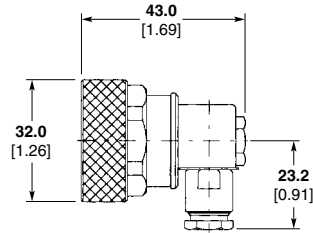
Cable Type	Body Plating	Part No.
RG 58C/U, RG 141A/U	White Bronze	6408028-1
RG 213/U	White Bronze	6408030-1
RG 214/U	White Bronze	6312113-1



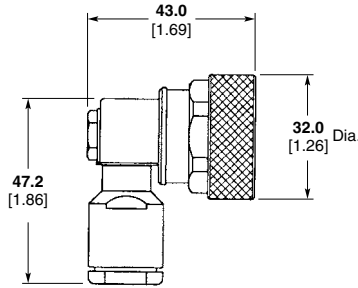
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

7-16 Series Connectors (Continued)

Right-Angle Cable Plug Solder/Clamp

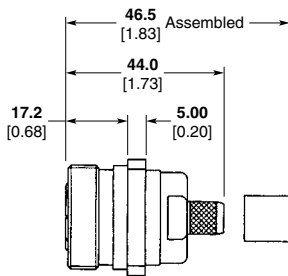


Cable Type	Body Plating	Part No.
RG 55B/U, RG 58C/U, RG 141A/U, RG 142B/U, RG 223/U, RG 400/U	White Bronze	6408026-1
T-Flex 402	Silver	6328873-1

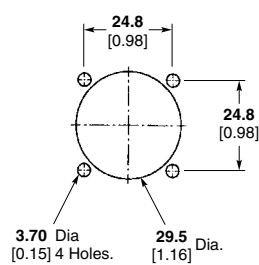


Cable Type	Body Plating	Part No.
RG 213/U, RG 214/U, RG 393/U	White Bronze	6408027-1
RG 8A/U, RG 9B/U, RG 213/U, RG 214/U	White Bronze	6408038-1

Straight Panel Mount Cable Jacks Crimp/Crimp



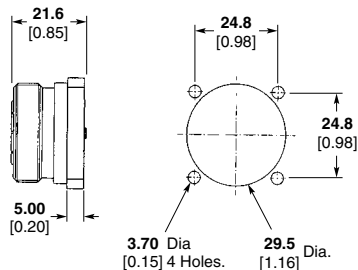
Mounting Detail



Cable Type	Body Plating	Part No.
RG 8A/U, RG 213/U	White Bronze	6408032-1
RG 9B/U, RG 214/U	White Bronze	6408033-1

Panel Socket Launcher

Mounting Detail

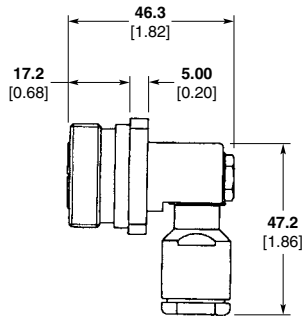


Body Plating	Part No.
White Bronze	6311225-1
White Bronze	1460052-2

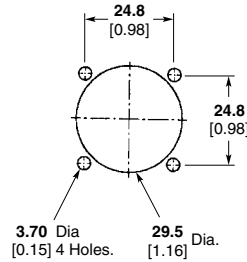
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

7-16 Series Connectors (Continued)

Right-Angle Panel Jack Solder/Clamp

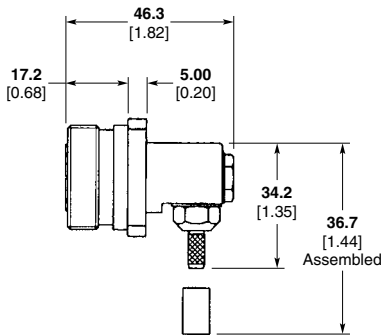


Mounting Detail

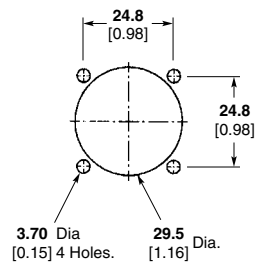


Cable Type	Body Plating	Part No.
RG 213/U, RG 214/U, RG 393	White Bronze	6408036-1
RG 58C/U, RG 142B/U, RG 223/U, RG 400/U	White Bronze	6363527-1

Combination Panel Jack Solder/Crimp

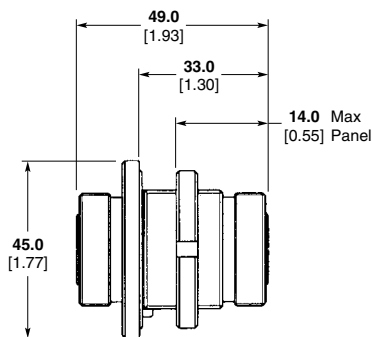


Mounting Detail



Cable Type	Body Plating	Part No.
RG 55B/U, RG 142B/U, RG 233/U, RG 400/U	White Bronze	6363524-1
RG 8A/U, RG 213/U	White Bronze	6363525-1
RG 9B/U, RG 214/U	White Bronze	6363526-1

Bulkhead Adapter Jack/Jack



Body Plating	Part No.
White Bronze	6408037-1

Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.