

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

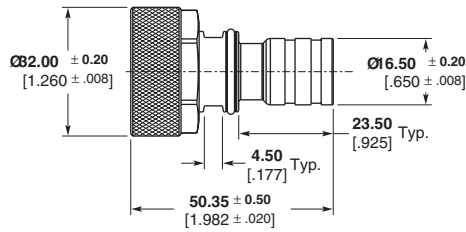
Coupling Torque	18.5 – 22 ft.-lbs.
Proof Torque	25 ft.-lbs.
Mechanical Endurance	500 mating cycles

Environmental

Temperature Rating	-55°C to +155°C
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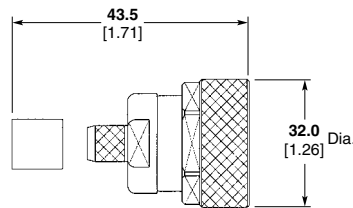
7-16 Series Connectors (Continued)

**Straight Cable Plug
Solder/Solder**



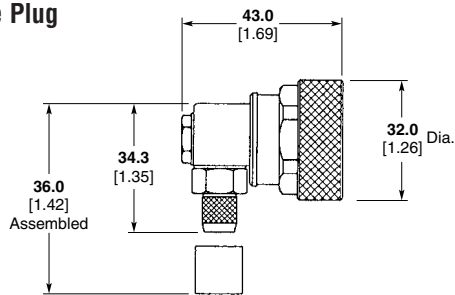
Cable Type	Body Plating	Part No.
1/2" Corrugated	White Bronze/ Gold	1460159-1

**Straight Cable Plug
Crimp/Crimp**

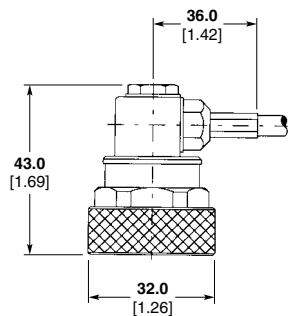


Cable Type	Body Plating	Part No.
RG 8A/U, RG 213/U	White Bronze	6331959-1
RG 9B/U, RG 214/U	White Bronze	6362765-1

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



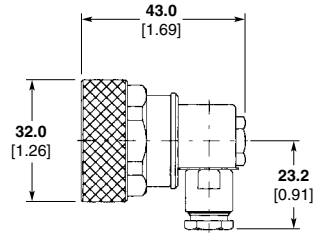
Cable Type	Body Plating	Part No.
RG 58C/U, RG 141A/U	White Bronze	6408028-1
RG 213/U	White Bronze	6408030-1
RG 214/U	White Bronze	6312113-1



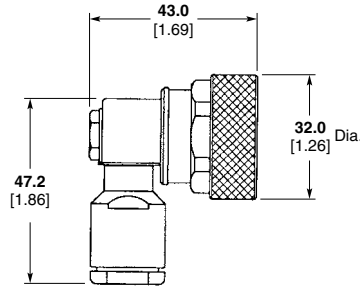
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

7-16 Series Connectors (Continued)

Right-Angle Cable Plug Solder/Clamp

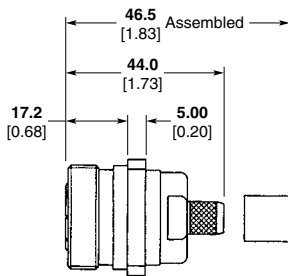


Cable Type	Body Plating	Part No.
RG 55B/U, RG 58C/U, RG 141A/U, RG 142B/U, RG 223/U, RG 400/U	White Bronze	6408026-1
T-Flex 402	Silver	6328873-1

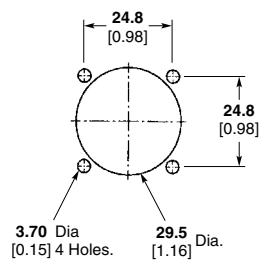


Cable Type	Body Plating	Part No.
RG 213/U, RG 214/U, RG 393/U	White Bronze	6408027-1
RG 8A/U, RG 9B/U, RG 213/U, RG 214/U	White Bronze	6408038-1

Straight Panel Mount Cable Jacks Crimp/Crimp



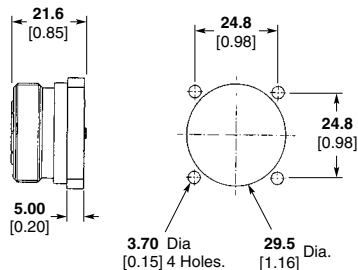
Mounting Detail



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

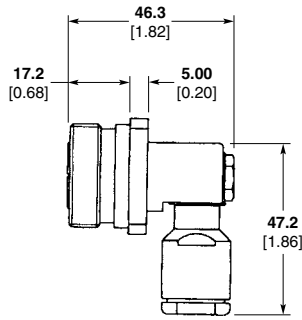


Body Plating	Part No.
White Bronze	6311225-1
White Bronze	1460052-2

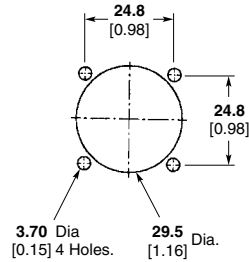
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

7-16 Series Connectors (Continued)

Right-Angle Panel Jack Solder/Clamp

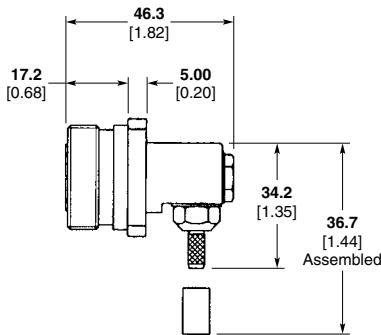


Mounting Detail

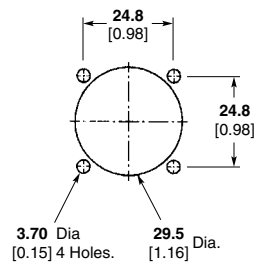


Cable Type	Body Plating	Part No.
RG 213/U, RG 214/U, RG 393	White Bronze	6408036-1
RG 58C/U, RG 142B/U, RG 223/U, RG 400/U	White Bronze	6363527-1

Combination Panel Jack Solder/Crimp

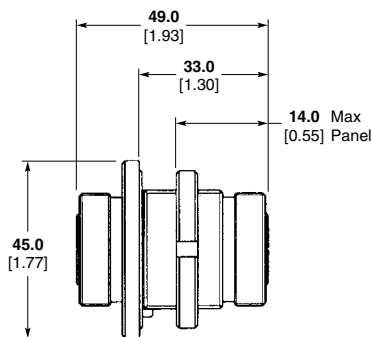


Mounting Detail



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.

Lightning and EMP Protection Devices

Product Facts

- Cellular operator protection against EMP (electro-magnetic pulses) caused by lightning strikes
- Two different categories: Surge protectors and Quarter wave stub tuners
- For use in cellular infrastructure including GSM, DCS 1800, and PCS 1900 systems
- Incorporates Gas Discharge Tube (GDT) technology



Tyco Electronics has developed a unique series of Lightning and EMP protection devices for use in cellular infrastructure including GSM, DCS 1800, and PCS 1900 systems. These devices are designed to offer the cellular operator protection against EMP (electro-magnetic pulses) caused by lightning strikes. Direct or even near strikes produce fast rising electric fields within micro-seconds. These fields generate high voltage pulses through unprotected antennas and transmission lines which lead to the primary communication equipment. High voltage pulses can cause extensive damage leading to costly repairs as well as significant loss of service to

subscribers. These protective devices come in two different categories: surge protectors and quarter wave stub tuners.

To ensure that proper, low level contact resistance is established between the LP device and mounting wall, it is recommended that a minimum torque of 50 in/lbs / 5.65 n/m be applied to tighten the connector mounting nut. A recommended minimum torque of 35 in/lbs / 3.95 n/m should also be applied for installation of replacement surge protector capsules to ensure proper protection performance.

In order to ensure that resultant currents from lightning or EMP strikes do not

interfere with parallel transmission lines within protected electronic equipment, surge protector devices must be installed with proper orientation. The surge protector side of the device should be mounted in the unprotected side of the equipment while the mounting nut is positioned internally in the protected area.

It is important when planning lightning protection, that the user can estimate the potential number of direct strikes. This information may influence the type of device selected or the requirement for routine maintenance checks. Significant attention must be paid to the height of sup-

porting structure as this, when related to the typical number of thunderstorms in a particular region, allows us to estimate the probability of a direct strike taking place. To assist our customers in this, the following table and chart has been included in this note. This should enable lightning protection planners to establish the likelihood of direct strikes across a network anywhere in the world.

Detailed application notes are available for proper selection of lightning protection devices (surge protectors & stub tuners) as well as intermodulation and White Bronze plating.

Selecting your RF Coaxial Lightning Protection Device

Between Series Adapters

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

Number of Thunderstorm Days per year	hmax/m 10%	hmax/m 20%	hmax/m 50%
05	28	39	61
10	18	26	40
15	14	20	31
20	12	17	26
30	9.4	13	20
40	7.9	11	17
50	6.9	9.5	15
70	5.6	8.0	12
90	4.8	7.0	10.6
130	3.9	5.5	8.5
150	3.5	5.0	7.7
180	3.1	4.4	6.9

Table 1: Maximum height of supporting building for a given number of thunderstorm days (when hmax is exceeded, probability of direct strike to supporting building within 15 years is greater than 10% for hmax values given in second column, 20% for hmax values given in third column and 50% for hmax values given in the fourth column).

Surge Protectors

Product Facts

- Excellent for Broadband Frequency Applications
- Field Replaceable Gas Discharge Tube
- Available Interfaces Facilitate Retrofit Capabilities
- Low VSWR up to 2.5GHz
- Specialized White Bronze Finish



Selection of a Lightning Protection Device

At right are the basic advantages and limitations for both types of protection to use in the proper selection for your application.

Advantages

- Broadband
- Allows DC bias on the transmission line. (critical for applications using mast top electronics.)
- No harmonic passband
- Ease of retrofitting antenna sights
- GDT easily accessible for replacement

Limitations

- Routine maintenance recommended
- 3 GHZ maximum frequency
- Initial pass-through voltage

These devices incorporate Gas Discharge Tube (GDT) technology. A GDT is a hermetically sealed tube containing an inert gas. The tube is inserted in the side of the device through an easily accessible weather sealed port. During normal operation the tube is inactive. When an installation is struck by lightning, a high voltage impulse will appear on the coaxial line. As the impulse amplitude rises, a level is reached where the impulse surpasses the dynamic voltage threshold of the tube and the electrodes arc over to discharge the energy to ground. Prior to activation of the tube, there will be a short period of time where energy will be present on the line. This *residual pulse* is equal to the dynamic voltage threshold of the tube. The maximum impulse voltage a tube can handle without discharging is referred to as the *impulse sparkover voltage*. This capacity of the GDT is quoted as follows:

Characteristic	Symbol	Definition	Impulse	Typical Value
Impulse sparkover voltage	U_{zdyn}	Dynamic voltage threshold	1kV/ μ S	650V

In the case of the referenced chart, the voltage will rise at one kilovolt per microsecond and the tube will fire after 650 nanoseconds. During activation a small percentage of voltage (called arc voltage) will still pass through. This will be approximately 30 volts. When the pulse subsides, the tube again becomes inactive leaving a small *residual voltage* on the line. A direct lightning strike results in an impulse current of high amplitude. The capability of a device to protect a system is defined as the *impulse discharge current* rating. This is defined as the peak current of an impulse which the device can withstand ten times (5 at each polarity at fixed intervals) without affecting the device. *maximum impulse discharge current* is the peak current of an impulse the device can withstand once.

Surge protectors are often used in applications requiring a standing DC line voltage. This is typical in applications with mast top electronics. The maximum voltage capacity of a surge protector prior to it surpassing the static voltage threshold and discharging it to ground is defined as its D.C.

Surge Protectors (Continued)

sparkover voltage. This capacity is quoted as follows:

Characteristic	Symbol	Definition	Impulse	Typical Value
d.c. sparkover voltage	U_{zstat}	Static voltage threshold	n/a	230V

In these applications it is important to select a device that will assure the tube can return to its inactive state after the passage of a surge. This feature of the Surge protector is known as the *holdover voltage*. If the device continues to conduct, the protected line will be short circuited and the tube will heat up (glow mode). If left in this state, the tube can overheat and

destruct. GDT's have a finite life span which is inversely proportional to the energy dissipated. At extremes it is possible to reach a level where the tube is unable to discharge all the energy and is destroyed. It is therefore necessary to schedule routine maintenance checks and periodically replace the tube within the surge protector.

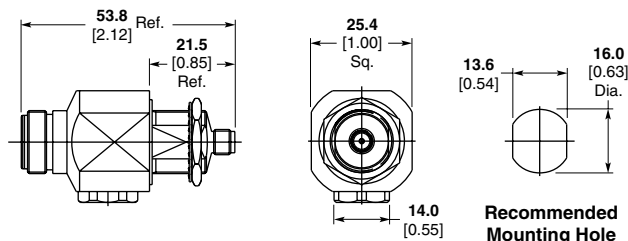
Surge protectors offer excellent lightning protection for broadband systems and are usable up to 3 GHz. Standard interfaces include 7-16, N, and SMA. Configurations include straight and bulkhead mounted adapters which allows for ease of assimilation into existing systems.

Specifications

Requirement	Detail
Electrical	
Frequency Range	DC to 3GHz
Impedance	50Ω
VSWR Performance	≤ 1.33:1
Insertion Loss (Typical)	0.45dB
Impulse Discharge Current (8/20μs, multiple strike)	20kA
Maximum Impulse Discharge Current (8/20μs, single strike)	50kA
Dynamic Sparkover Voltage, NEMP (1kV/μs)	2,000V
Dynamic Sparkover Voltage, LEMP (1kV/μs)	800V
Dynamic Sparkover Voltage, Static (<100V/μs)	90V*
Materials	
Body Parts	Brass
Gaskets	Silicone Rubber
Female Contacts	Beryllium Copper
Male Contacts	Brass
Insulators	P.T.F.E.
Environmental	
Operating Temperature Range	-45° C to +85° C
Relative Humidity	up to 100%

* Determined by gas tube used, can be higher than value shown.

N Series Jack to SMA Bulkhead Jack Adapter



Recommended Mounting Hole

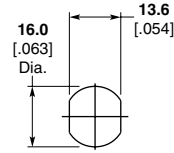
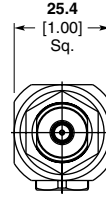
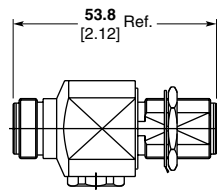
Frequency Range	DC to 3GHz
Contact Plating	Gold
Body Plating	White Bronze
Max Panel	10.00mm
Compliant With	CECC22210/ CEC22110
Coupling Torque	0.7-1.1Nm
Proof Torque	1.7Nm both ends
Endurance	500 Matings

Part Number
6312079-1

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

Surge Protectors (Continued)

N Series Jack to N Series Bulkhead Jack Adapter



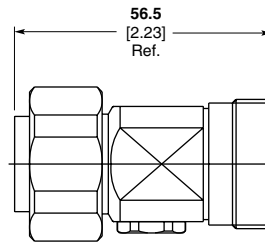
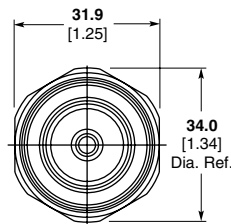
Recommended Mounting Hole

Frequency Range	DC to 3.0 GHz
Contact Plating	Gold
Body Plating	White Bronze
Max Panel	10.00mm
Compliant With	CECC22210
Coupling Torque	0.7-1.1 Nm
Proof Torque	1.7 Nm
Endurance	500 Matings

Part Number

6312138-1

7-16 Plug to 7-16 Jack Adapter



Frequency Range	DC to 3.0 GHz
Contact Plating	Silver
Body Plating	White Bronze
Compliant With	CECC22190
Coupling Torque	25 - 30 Nm
Proof Torque	35Nm
Endurance	500 Matings

Part Number

6312121-1

Gas Discharge Tube Replacement



Part Number

1402314-1

d.c. Sparkover Voltage:	230V ± 46V
Impulse Sparkover Voltage:	700V typ.
(1kV/mS)	(900V max)
Glow Discharge Voltage:	72V
Arc Discharge Voltage:	10V
a.c. Discharge Current:	20A
(1 sec, 50Hz)	
Impulse Discharge Current:	20kA (50kA for
(8/20mS waveform)	one strike)
Insulation Resistance (@100V):	10GW
Capacitance:	2pF

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

$\lambda/4$ Stub Tuners

Product Facts

- Ideal for use with GSM, PCS and DCS
- Maintenance Free Operation
- Low VSWR Within Specified Bandwidth
- Configurations include direct attachments to Cable variants
- Optional White Bronze Finish



Advantages

- Low VSWR in pass-band
- Minimal maintenance
- Pass-through voltage eliminated
- No sparkover or residual voltage concerns
- Ease of retro-fitting antenna sights

Limitations

- Frequency specific
- Harmonic passband
- Does not allow DC bias on transmission line

These devices are three port coaxial connectors. The third port extending from the main through path is terminated in a short circuit at a pre-determined distance calculated to be exactly one quarter wavelength at the desired center frequency (see graph).

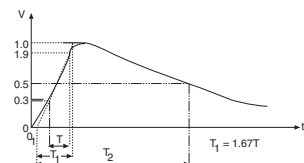
Unlike surge protectors, this design eliminates concerns about residual pulse, sparkover voltage and residual voltage ensuring greater protection for sensitive electronic equipment. As opposed to surge protectors, stub tuners will absorb lightning strikes without need for replacing components. These devices yield very low VSWR and feature high attenuation within a relatively narrow pass-band (± 70 MHz) but are application specific. Stub tuners also pass energy in bands that are harmonically related to the fundamental center frequency. The graphs below show a typical test impulse and the response of a stub tuner.

Stub tuners are classified into two broad categories—simple and broadband. The simple stub tuner exhibits a V-shaped response on the VSWR vs. frequency plot. The trough of the V is designed to occur at the required F_0 and the bandwidth is restricted to approximately 8%. The broadband tuner employs extra RF techniques, similar to multiple cavity filtering, which increase the effective bandwidth by approximately 20%.

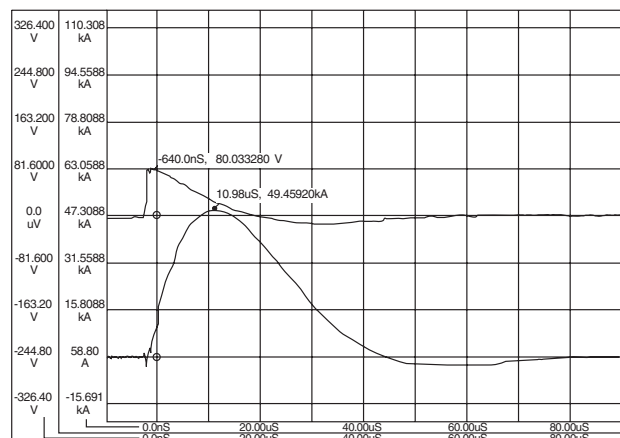
Tyco Electronics offers a wide variety of stub tuners for the most popular frequency bands to facilitate purchase without need for custom design and manufacturing. Designs exist for GSM, PCS 1900, DCS 1800

frequencies with standard industry interfaces including SMA, 7-16, and Type N. Configurations include cable assemblies, cabled connectors, and adapters for ease of assimilation into existing systems. Stub tuners are maintenance free since they incorporate no active components though it is recommended that a check of the stub tuner affixment be made following heavy discharges at an installation.

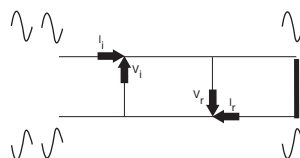
Typical Test Impulse



Typical $\lambda/4$ Test Response



$\lambda/4$ Shorting Stub Basics

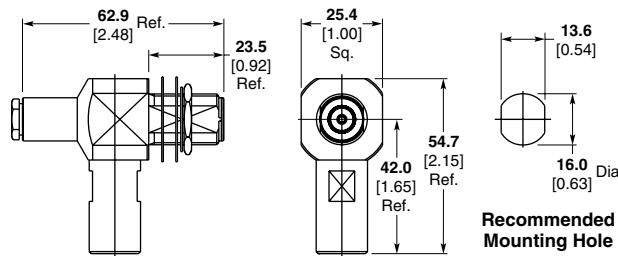


$\lambda/4$ Stub Tuners (Continued)

Requirement	Detail (Type-N, 7-16)
Electrical	
Impedance	50 Ω
VSWR Performance in Band	$\leq 1.2:1$
Insertion Loss (Typical)	0.2dB
DC Resistance (stub outer to inner)	1m Ω
Dynamic Voltage @ 250A/ms	$\leq 15V$
Residual Voltage @ 2500A, 8/20 μ s	$\leq 15V$
Outer Conductor Contact Resistance	10m Ω
DC Resistance (through-path center contact)	100m Ω
Materials	
Body parts	Brass
Gasket	Silicone Rubber
Female contacts	Beryllium Copper
Male Contacts	Brass
Insulators	P.T.F.E.
Environmental	
Operating temperature range	-45°C to +85°C
Relative humidity (non-condensing)	up to 100%

DCS 1800

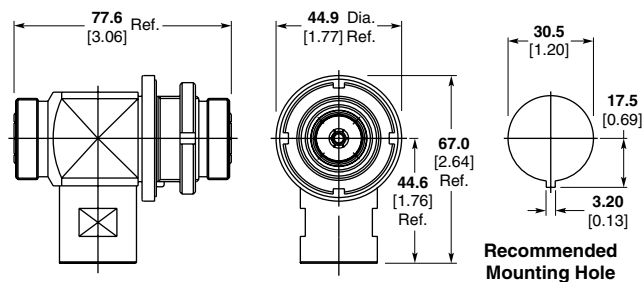
**Type N Clamp
Bulkhead Jack**



Bandwidth	± 70 MHz
Center Frequency	1795 MHz
Contact Plating	Silver
Body Plating	Silver
Max Panel	10.00mm
Compliant With	CECC22210
Coupling Torque	0.7-1.1Nm
Proof Torque	1.7Nm
Endurance	500 Matings

Cable	Part No.
T-Flex402	6329818-1

**7-16 Jack to 7-16
Bulkhead Jack Adapter**



Bandwidth	± 70 MHz
Center Frequency	1795 MHz
Contact Plating	Silver
Body Plating	White Bronze
Max Panel	8.00mm
Compliant With	CECC22190
Coupling Torque	25 - 30Nm
Proof Torque	35Nm
Endurance	500 Matings

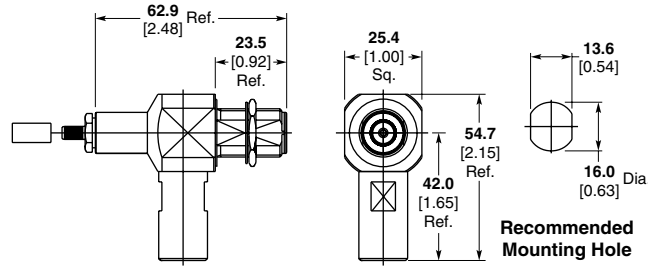
Part Number
6361137-1

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

$\lambda/4$ Stub Tuners (Continued)

DCS 1800 (Continued)

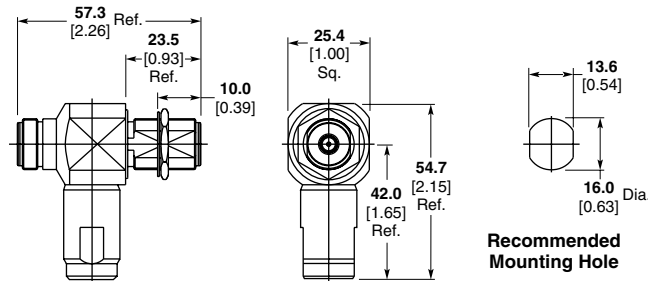
Type N Crimp Bulkhead Jack



Cable	Part No.
RG58C/U	1329819-1

Bandwidth	± 70 MHz
Center Frequency	1795 MHz
Contact Plating	Silver
Body Plating	Silver
Max Panel	10.00mm
Compliant With	CECC22210
Coupling Torque	0.7-1.1Nm
Proof Torque	1.7Nm
Endurance	500 Matings

Type N Jack to Type N Bulkhead Jack Adapter

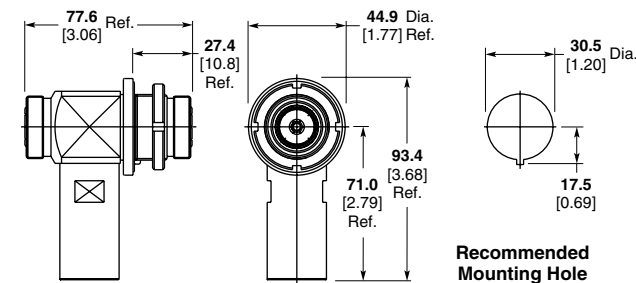


Part Number
1361138-1

Bandwidth	± 70 MHz
Center Frequency	1795 MHz
Contact Plating	Silver
Body Plating	Silver
Max Panel	10.00mm
Compliant With	CECC22210
Coupling Torque	0.7-1.1Nm
Proof Torque	1.7Nm
Endurance	500 Matings

GSM

7-16 Bulkhead Jack to 7-16 Bulkhead Jack

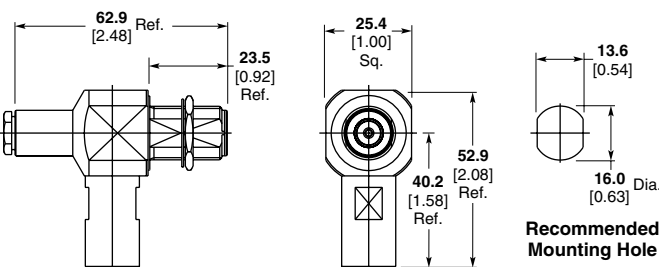


Cable	Part No.
T-Flex 402 Cable	6408399-1

Bandwidth	± 70 MHz
Center Frequency	925 MHz
Contact Plating	Silver
Body Plating	White Bronze
Max Panel	8.00mm
Compliant With	CECC22190
Coupling Torque	25 - 30Nm
Proof Torque	35Nm
Endurance	500 Matings

PCS 1900

Type N Clamp Bulkhead Jack



Cable	Part No.
T-Flex 402	1312137-1

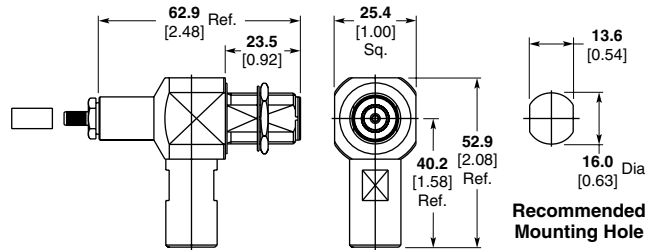
Bandwidth	± 70 MHz
Center Frequency	1920 MHz
Contact Plating	Silver
Body Plating	Silver
Max Panel	10.00mm
Compliant With	CECC22210
Coupling Torque	0.7-1.1Nm
Proof Torque	1.7Nm
Endurance	500 Matings

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

$\lambda/4$ Stub Tuners (Continued)

PCS 1900 (Continued)

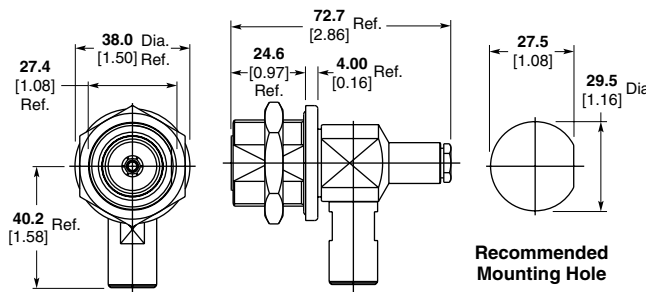
Type N Crimp Bulkhead Jack



Cable	Part No.
RG58 C/U	6312139-1

Bandwidth	± 70 MHz
Center Frequency	1920 MHz
Contact Plating	Silver
Body Plating	Silver
Max Panel	10.00mm
Compliant With	CECC22210
Coupling Torque	0.7-1.1Nm
Proof Torque	1.7Nm
Endurance	500 Matings

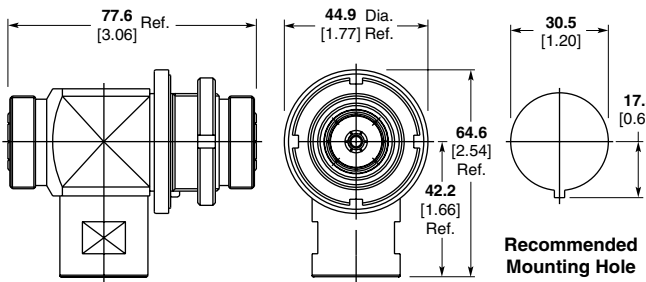
7-16 Clamp Bulkhead Jack



Cable	Part No.
T-Flex402	6312123-1

Bandwidth	1920 MHz
Center Frequency	± 70 MHz
Contact Plating	Silver
Body Plating	Silver
Max Panel	8.00mm
Compliant With	CECC 22190
Coupling Torque	25-30 Nm
Proof Torque	35 Nm
Endurance	500 Matings

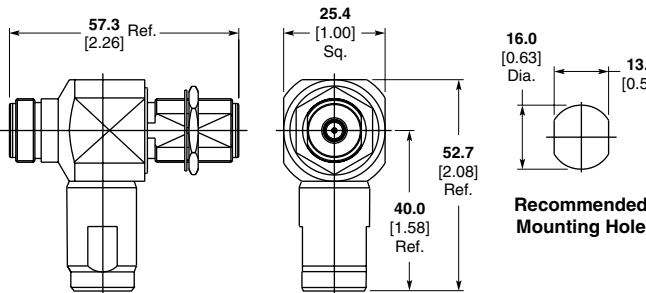
7-16 Bulkhead Jack to 7-16 Bulkhead Jack Adapter



Part Number
6312124-1

Bandwidth	1920 MHz
Center Frequency	± 70 MHz
Contact Plating	Silver
Body Plating	White Bronze
Max Panel	8.00mm
Compliant With	CECC 22190
Coupling Torque	25-30 Nm
Proof Torque	35 Nm
Endurance	500 Matings

Type N Bulkhead Jack to Type N Bulkhead Jack Adapter






Part Number
6361139-1

Bandwidth	± 70 MHz
Center Frequency	1920 MHz
Contact Plating	Silver
Body Plating	Silver
Max Panel	10.00mm
Compliant With	CECC22210
Coupling Torque	0.7-1.1Nm
Proof Torque	1.7Nm
Endurance	500 Matings

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

N Series Connectors

Product Facts

- Designated connectors are MIL-C-39012, Class II, Category B qualified
- Captive center contacts
- Completely crimpable application – one hand tool crimps all cables with single or double braided shields of a given size
- Impedance matching crimps
- Broad band performance – low VSWR
- Superior cable retention
- PTFE dielectric
- Silver or nickel finish
- Fully intermateable with MIL-C-39012 connectors
- Listed under the Component Program of Underwriters Laboratories Inc., File No. E81956 
- Recognized under the Component Program of Underwriters Laboratories Inc., File No. E81956 
- Certified by Canadian Standards Association File No. LR 7189 

The Tyco Electronics N Connector, featuring a 15.88 [5/8] - 24 threaded coupling for optimum stability, is highly suited for critical applications and environments. This medium sized connector can withstand shock and vibration to assure a low noise level and has a constant impedance of 50 ohms. It also features a captive center contact and provides excellent performance at frequencies up to 11 GHz, with voltages to 1000 volts rms.

This Tyco Electronics connector offers the added benefits of low overall applied cost with a labor-saving two-crimp assembly. The contact is simply crimped to the cable's center conductor, then both braid and cable support are simultaneously crimped to complete the termination.

N Series Connectors are available in standard plug, jack, panel jack, bulkhead jack and right-angle plug configurations. Those connectors with a military designation (M39012) are furnished in accordance with all requirements of specification MIL-C-39012, Class II, Category B.

Materials

- Brass**— QQ-B-626
- Beryllium Copper**— QQ-C-530
- Dielectric**— PTFE
- PTFE**— MIL-P-19468
- Copper, Annealed**— QQ-C-576
- Phosphor Bronze**— QQ-B-750
- Silicone Rubber**— ZZ-R-765

Plating

- Body**—
Silver per QQ-S-365
Nickel per QQ-N-290
- Center Contact**—
Gold per MIL-B-45204



Electrical Characteristics

- Nominal Impedance**— 50 ohms
- Working Voltage**— 1000 volts, rms at sea level
- Frequency Range**— 0 to 11 GHz
- Voltage Standing Wave Ratio (VSWR)**—
Straight Plug or Jack — 1.3:1 max.
Right-Angle Plug —
1.35 max. at 0 to 9.0 GHz
1.50 max. at 9.0 to 11.0 GHz
- Contact Resistance**—
Outer Contact— 0.2 milliohms
Center Contact— 1.0 milliohms
Right-Angle— 2.5 milliohms
- Insulation Resistance**— 5000 megohms min.
- Dielectric Withstanding Voltage**— 2500 Volts, rms at sea level
- RF Leakage**— MIL Type, -90 dB min. at 2 to 3 GHz
- RF Insertion Loss**— MIL Type, 0.15 dB max. at 10 GHz
Right-Angle Plug, 0.3 dB max. at 10 GHz
- Corona Level**— MIL Type, 500 volts min. at 21 336 m [70,000 ft.]
- Terminator**—
Resistance— 50 ohms \pm 1%
Power Rating— 1.0 watt max.

Mechanical Characteristics

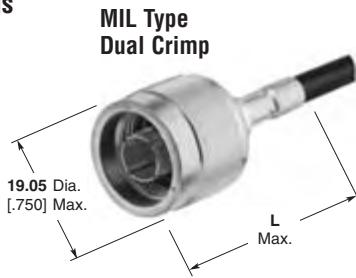
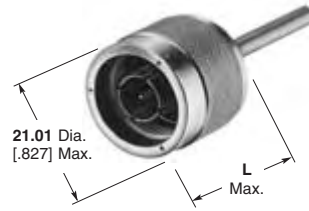
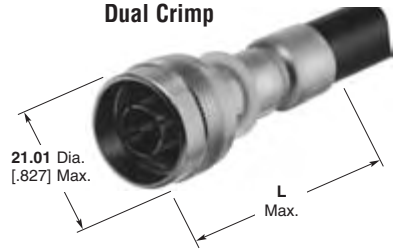
- Mating/Unmating**— Threaded coupling
- Cable Attachment**— Crimp type - center contact and braid
- Coupling Nut Retention**— 445 N [100 lbs.] min.
- Cable Retention**— 400 N [90 lbs.] min. RG 214/U Cable
- Durability**— 500 cycles per MIL-C-39012
- Captive Contact**— 27 N [6 lbs.] min. axial retention, either direction

Environmental Characteristics

- Temperature Range**—
MIL Type, -65°C to +165°C
Commercial, -55°C to +85°C
- Vibration**— MIL-STD-202, Method 204, Test Cond. B
- Shock**— MIL-STD-202, Method 213, Test Cond. I
- Moisture Resistance**— MIL-STD-202 Method 106
- Salt Spray**— MIL-STD-202, Method 101, Test Cond B
- Temperature Cycling**— MIL-STD-202, Method 107, Test Cond. B (except high temperature is +85°C)
- Note:** All data pertains to use with MIL-C-39012 specified cables only.

Between Series Adapters

For N Series Between Series Adapters, see pages 251-260.

N Series Connectors, 50 Ohm (Continued)
Plugs

Semi-Rigid Cable

Hex Dual Crimp


RG/U Cable	Termination Type	Body Plating	M39012/ Military No. and/ or Comments	Dim. L	Integral Die Hand Tool	Hex Across Flats		Notes	Part No.
						Center	Braid		
58, 58A, 58B, 58C	O Crimp	Nickel	Knurl Collar	42.85 1.687	220045-2	—	—	1	1-5225661-2
	O Crimp	Silver	Knurl Collar	42.85 1.687	220045-2	—	—	1	5225361-1
223, 55, 55A, 55B	O Crimp	Nickel	Knurl Collar	42.85 1.687	220045-2	—	—	1	1-5225661-3
	O Crimp	Silver	Knurl Collar	42.85 1.687	220045-2	—	—	1	5225361-2
142, 142A, 142B, 400	O Crimp	Silver	Knurl Collar	42.85 1.687	220045-2	—	—	1, 3	5225392-2
			Knurl Collar	42.85 1.687	220045-2	—	—	1	5225361-4
142, 142A, 142B	O Crimp	Nickel	Knurl Collar	41.35 1.628	220045-2	—	—	3	5225699-1
	Hex Crimp	Nickel	Knurl Collar	39.40 1.550	58436-1	1.73 .068	5.41 .213	2	5415232-4
115A, BELDEN 89880, 9880	O Crimp	Nickel	Knurl Collar	42.85 1.687	220015-1	—	—	3	5225092-8
BELDEN 9880	Hex Crimp	Nickel	Knurl Collar	39.40 1.550	58485-1	2.54 .100	10.90 .429	2	1-415232-0
402 Semi Rigid (.141)	Solder	Nickel	Knurl Collar	24.6 .970	—	—	—	—	6057088-1
405 Semi Rigid (.085)	Solder	Nickel	Knurl Collar	24.6 .970	—	—	—	—	6057094-1
8, 8A, 213	O Crimp	Nickel	Knurl Collar	42.85 1.687	220015-1	—	—	—	1-5227086-0
	O Crimp	Nickel	Knurl Collar	42.85 1.687	220015-1	—	—	—	5225661-2
	O Crimp	Silver	01B007 Knurl Collar	42.85 1.687	220015-1	—	—	3	51692-2
	O Crimp	Nickel	Knurl Collar	47.22 1.859	220015-1	—	—	3	5225662-2
11, 11A, 216	O Crimp	Silver	01B0013 Knurl Collar	42.85 1.687	220015-1	—	—	3	51692-4
BELDEN 9292	O Crimp	Nickel	—	47.22 1.859	220015-1	—	—	3	1-5225662-8
393	Hex Crimp	Nickel	Hex Collar	39.40 1.550	58485-2	3.25 .128	10.90 .429	2	5414160-5
BELDEN 8214	O Crimp	Nickel	Knurl Collar	42.85 1.687	220015-1	—	—	—	1-5225661-6
9, 9A, 9B, 214	O Crimp	Nickel	Knurl Collar	42.85 1.687	220015-1	—	—	—	5225661-1
	O Crimp	Silver	01B0008 Knurl Collar	42.85 1.687	220015-1	—	—	3	51692-1
9, 214	Hex Crimp	Nickel	Hex Collar	39.40 1.550	58485-1	2.54 .100	10.90 .429	2	5415232-7
LMR 240	Hex/Solder	Silver	Hex Collar	29.74 1.171	—	—	6.81 .268	—	6274532-1

Notes: ¹ Hand Tool 69710-1, with Die Insert 220062-1, is available to terminate these connectors. The 626 Pneumatic tool system can also be used.

² Die Set Crimp Tool — PRO-CRIMPER II Hand Tool, P/N 354940-1 or 626 Series Pneumatic Tool with 679304-1.

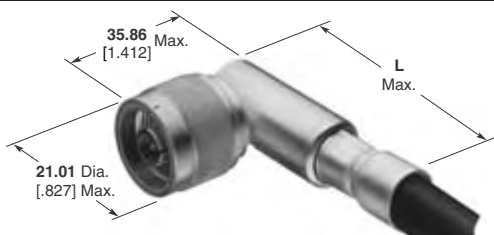
³ Weatherproof.

BELDEN is a trademark of Belden Wire and Cable Company.

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

N Series Connectors, 50 Ohm (Continued)

**Right-Angle Plugs,
Crimp**



RG/U Cable	Termination Type	Body Plating	M39012/ Military No. and/ or Comments	Dim. L	Integral Die Hand Tool	Hex Across Flats		Notes	Part No.
						Center	Braid		
58A, 58C	Hex Crimp	Nickel	Hex Collar	57.79 2.275	58436-1	1.73 .068	5.41 .213	1	5415255-1
142, 142A, 142B	Hex Crimp	Nickel	Hex Collar	57.79 2.275	58436-1	1.73 .068	5.41 .213	1	5415255-2
8, 8A, 213	O Crimp	Nickel	Knurl Collar	57.79 2.275	220015-1	—	—	—	5225669-2
	O Crimp	Silver	05B0002 Knurl Collar	57.79 2.275	220015-1	—	—	—	225014-2
8, 213	Hex Crimp	Nickel	Hex Collar	57.79 2.275	58485-1	2.54 .100	10.90 .429	1	5415255-3
393	O Crimp	Silver	Knurl Collar	62.31 2.453	220015-1	—	—	1,3	225389-6
9, 9A, 9B 214	O Crimp	Nickel	Knurl Collar	57.79 2.275	220015-1	—	—	—	5225669-1
	O Crimp	Silver	05B0003 Knurl Collar	57.79 2.275	220015-1	—	—	—	225014-3
9, 214	Hex Crimp	Nickel	Hex Collar	57.79 2.275	58485-1	2.54 .100	10.90 .429	1	5415255-4

Notes: 1 Die Assembly compatible with Crimp Tool — PRO-CRIMPER III Hand Tool, P/N 354940-1, 626 Series Pneumatic Tool 1213855-1, SDE Battery Tool Kit 1725837-1, or SDE Electric Terminator 1490076-2.
3 Weatherproof.

Jacks



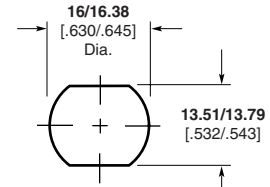
RG/U Cable	Termination Type	Body Plating	M39012/ Military No. and/ or Comments	Dim. L	Integral Die Hand Tool	Hex Across Flats		Notes	Part No.
						Center	Braid		
58A, 58C	O Crimp	Nickel	—	44.83 1.765	220045-2	—	—	2, 3	1-5225664-2
142, 142A, 142B	Hex Crimp	Nickel	—	41.28 1.625	58436-1	1.73 .068	5.41 .213	2	5415242-2
8, 8A, 213	O Crimp	Silver	02B0008	49.20 1.937	220015-1	—	—	3	225093-2
8, 213	O Crimp	Nickel	—	49.20 1.937	220015-1	—	—	2, 3	5225664-2
9, 9A, 9B, 214	O Crimp	Silver	02B0009	49.20 1.937	220015-1	—	—	—	225093-1
9, 214	O Crimp	Nickel	—	49.20 1.937	220015-1	—	—	2, 3	5225664-1
393	Hex Crimp	Nickel	—	41.28 1.625	58485-1	2.54 .100	10.90 .429	2	5415242-6
402 Semi Rigid (.141)	Solder	Nickel	—	26.70 1.051	—	—	—	—	6057116-1

Notes: 1 Hand Tool 69710-1, with Die Insert 220062-1, is available to terminate these connectors. The 626 Pneumatic tool system can also be used.
2 Die Assembly compatible with Crimp Tool — PRO-CRIMPER III Hand Tool, P/N 354940-1, 626 Series Pneumatic Tool 1213855-1, SDE Battery Tool Kit 1725837-1, or SDE Electric Terminator 1490076-2.
3 Weatherproof.

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

N Series Connectors, 50 Ohm (Continued)

**Bulkhead Jacks,
Crimp**



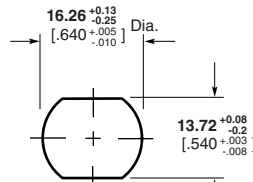
Maximum Panel Thickness 6.35 [.250]
Recommended Panel Cutout

RG/U Cable	Termination Type	Body Plating	Dim. L	Integral Die Hand Tool	Hex Across Flats		Notes	Part No.
					Center	Braid		
58, 58A, 58B, 58C, LMR195	O Crimp	Silver	49.61 1.953	220045-2	—	—	1	5225363-1
58A, 58C	Hex Crimp	Nickel	45.72 1.800	58436-1	1.73 .068	5.41 .213	2	5415248-1
142, 142A, 142B	Hex Crimp	Nickel	45.72 1.800	58436-1	1.73 .068	5.41 .213	2	5415248-7
124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269, 89269	O Crimp	Nickel	49.61 1.953	220045-3	—	—	—	1-5225667-6
8, 213	O Crimp	Silver	53.98 2.125	220015-1	—	—	2, 3	225094-2
393	O Crimp	Nickel	53.98 2.125	220015-1	—	—	2, 3	1-225668-1
9, 214	O Crimp	Silver	53.98 2.125	220015-1	—	—	2, 3	225094-1

Notes: 1 Hand Tool 69710-1, with Die Insert 220062-1, is available to terminate these connectors. The 626 Pneumatic tool system can also be used.
2 Die Assembly compatible with Crimp Tool — PRO-CRIMPER III Hand Tool, P/N 354940-1, 626 Series Pneumatic Tool 1213855-1, SDE Battery Tool Kit 1725837-1, or SDE Electric Terminator 1490076-2.
3 Weatherproof.

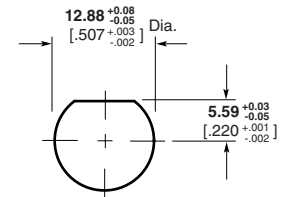
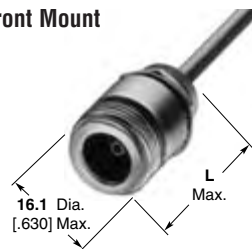
**Bulkhead Jacks for
Semi-Rigid Cable**

Rear Mount



Maximum Panel Thickness 6.35 [.250]
Recommended Panel Cutout

Front Mount



Maximum Panel Thickness 6.35 [.250]
Recommended Panel Cutout

RG/U Cable	Termination Type	Body Plating	M39012/ Military No. and/or Comments	Dim. L	Integral Die Hand Tool	Part No.
402 Semi-Rigid/.141	Crimp	Nickel	Rear Mount	29.37 1.156	*	228658-1
	Solder	Pass. Gold	Rear Mount	—	*	6057159-1
	Solder	Nickel	Rear Mount	25.4 1.00	—	6057176-1
405 Semi-Rigid/.085	Solder	Nickel	Rear Mount	33.9 1.335	—	6057165-1

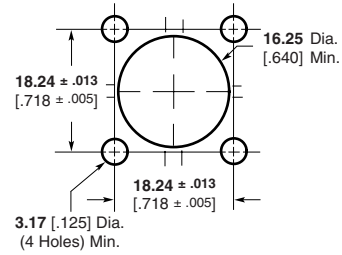
*Tooling—Hand Tool No. 59980-1, Requires (2) Crimping Dies No. 312253-1 and (1) Locator No. 220220-2.

BELDEN is a trademark of Belden Wire and Cable Company.

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

N Series Connectors, 50 Ohm (Continued)

Jack, Panel Mount

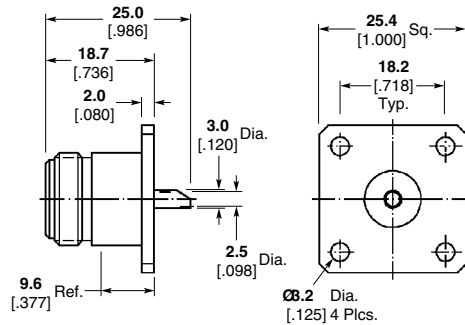


Recommended Panel Cutout

RG/U Cable	Termination Type	Body Plating	Dim. L	Integral Die Hand Tool	Hex Across Flats		Notes	Part No.
					Center	Braid		
58A, 58C	Hex Crimp	Nickel	41.28 1.625	58436-1	1.73 .068	5.41 .213	—	5415252-1
142, 142A, 142B	Hex Crimp	Nickel	41.28 1.625	58436-1	1.73 .068	5.41 .213	—	5415252-2
8, 213	Hex Crimp	Nickel	41.28 1.625	58485-1	2.54 .100	10.90 .429	—	5415252-3
9, 214	Hex Crimp	Nickel	41.28 1.625	58485-1	2.54 .100	10.90 .429	—	5415252-4
RG 225	O Crimp	Silver	49.20 1.937	220015-1	—	—	3	5225089-4

Note: ³ Weatherproof.

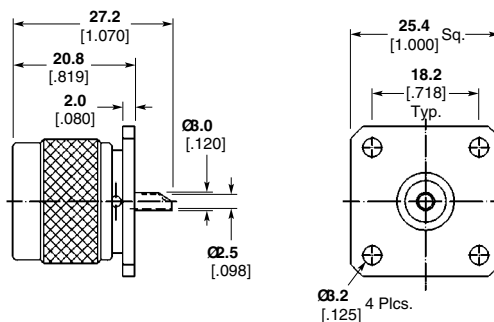
Panel Jacks, Solder



Body Plating	Part No.
Nickel	1057284-1
Nickel	1057290-1*

*No solder cup — dielectric protrudes.

Panel Plug, Solder



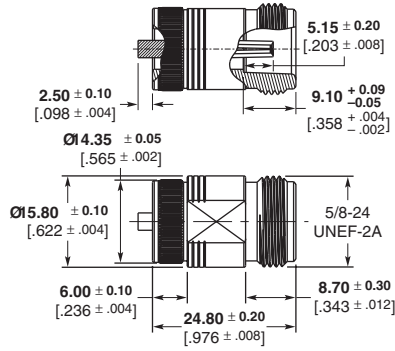
Body Plating	Part No.
Nickel	1057275-1
Nickel	1057279-1*
Nickel	1057277-1*

*No solder cup — dielectric protrudes.

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

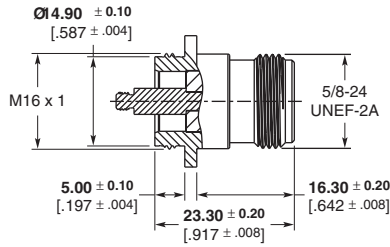
N Series Connectors, 50 Ohm (Continued)

Panel Mount Jack, Press-Fit



Body Plating	Contact	Dielectric	Part No.
White bronze	Gold	PTFE	1460055-1

Panel Mount Jack, Screw-In



Body Plating	Contact	Dielectric	Part No.
White bronze	Gold	PTFE	1460118-1 ¹
White bronze	Gold	PTFE	1460118-2 ²
White bronze	Gold	PTFE	1460118-3 ³

Notes: 1. Without TUF-LOC Adhesive
2. With TUF-LOC Adhesive around M3 thread
3. With TUF-LOC Spot on M3 thread

Feedthru Jack Adapter
(Jack-Jack)

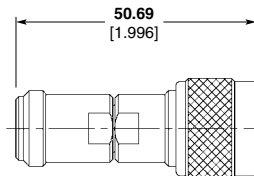
Plating

Body — Nickel
Dielectric — General purpose polypropylene
Contact — Gold plated



Part Number
227945-2

Inter-Series Adapters



Jack-Plug

Type	Body Plating	Contact	Dielectric	Part No.
Jack-Plug	Stainless steel/passivate	Gold	PTFE	1057374-1

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

Quick Lock N (QLN) Series Connectors

Product Facts

- Similar performance and applications to standard N Series
- Time saving and user friendly snap on/off mating
- Excellent performance to 6 GHz
- No torquing of connector required
- Free rotation of mated connection
- Higher packaging density can be achieved
- Fully compatible with Huber&Suhner and Radiall QN Series QLF® connectors*



Description

Snap-on version of the popular N Series connector

- Snap-on interface facilitates assembly
- Same dependable performance as standard N connector

Applications

- Cellular & PCS Base Stations
- Broadcast equipment
- Telephony applications, WLAN
- Instrumentation and remote measuring equipment
- Mil Aero, SatCom, Radar

Material and Finish

Shell — Brass, plated white bronze
Male Pin Center Contact — Brass, plated gold
Female Socket Center Contact — Beryllium copper, plated gold
Outer Contact — Phosphor bronze, plated white bronze
Insulators — PTFE or PFA

Electrical Characteristics

Characteristic Impedance — 50 ohms
Frequency Range — DC to 6 GHz
Voltage Standing Wave Ratio (VSWR) — 1.12 max. DC to 3 GHz
Insertion Loss — 0.15 dB max. DC to 3 GHz
Rated Voltage — 1000 VAC rms, 50 Hz (at sea level)
Insulation Resistance — 5000 megohms min.
Contact Resistance — Center Contact — 1.5 milliohms max. Outer Contact — 1.5 milliohms max.

Mechanical Characteristics

Engagement Force — 30 N typical
Disengagement Force — 30 N typical
Interface Retention Force — 450 N min.
Contact Captivation — 28 N min.
Durability — 100 cycles min.

Environmental Characteristics

Operating Temperature — -40°C to +125°C (cable dependent)
Thermal Shock — IEC 60169 para. 16.4
Corrosion — MIL-STD-202, Method 101, Condition B
Vibration — IEC-1169-1 para. 9.3.3 (10-500 Hz, 5g)
IP Rating for Interface — IP68 (connector dependent)

Related Product Data

Internet — <http://tycoelectronics.com/products/rfcoax>

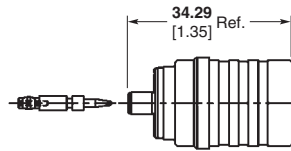
Product Specification/Design Objectives — 108-2281

* QN and QLF are registered trademarks of Huber&Suhner, Inc. and Radiall S.A.. Huber&Suhner, Inc. and Radiall S.A. are not affiliated with the QLN product.

Quick Lock N (QLN) Series Connectors (Continued)

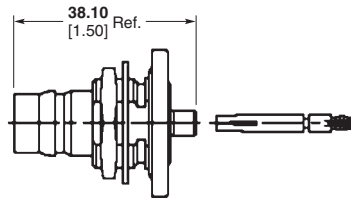
**Semi-Rigid Cable —
Direct Solder Attachment**

Straight Cable Plug



Cable	Part No.
RG 402	1274805-1

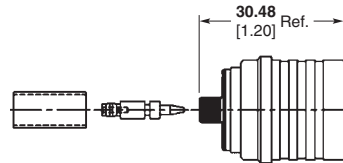
Bulkhead Cable Jack



Cable	Part No.
RG 402	1274806-1

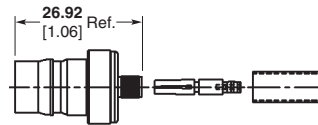
**Flexible Cable —
Crimp Attachment**

Straight Cable Plug



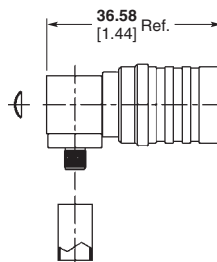
Cable	Part No.
RG 58	1274688-1
RG 142	1274688-2
LMR 240	1274688-3

Straight Cable Jack



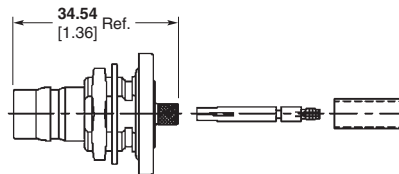
Cable	Part No.
RG 58	1274689-1
RG 142	1274689-2
LMR 240	1274689-3

Right-Angle Cable Plug



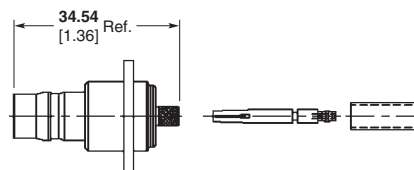
Cable	Part No.
RG 58	1274804-1
RG 142	1274804-2
LMR 240	1274804-3

Bulkhead Cable Jack



Cable	Part No.
RG 58	1274734-1
RG 142	1274734-2
LMR 240	1274734-3

**4-Hole Square Flange
Cable Jack**



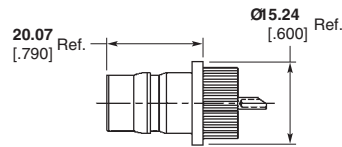
Cable	Part No.
RG 58	1274735-1
RG 142	1274735-2
LMR 240	1274735-3

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

Quick Lock N (QLN) Series Connectors (Continued)

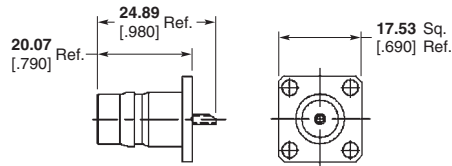
Panel Mount Receptacles

Press-Fit Bulkhead Jack Receptacle — Solder Terminal



Part Number
1274807-1

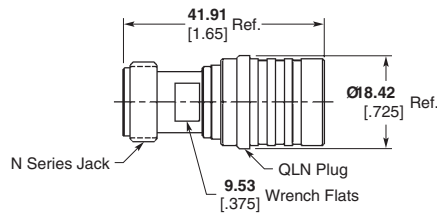
4-Hole Flange Jack Receptacle — Solder Terminal



Part Number
1274662-1

Adapters — Between Series

QLN Plug to N Series Jack



Part Number
1274808-1

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

TNC Connectors

Product Facts

Hex Crimp and O Crimp Connectors

- 50 and 75 ohm commercial versions available
- Provides excellent performance at frequencies up to 7 GHz
- Low cost commercial type available
- Commercial type is smaller and lighter weight
- Tarnish resistant nickel finish
- Choice of dielectric materials
- Standard and weatherproof versions available
- Plugs available for high temperature cable

Single Crimp Connectors

- Fast application—one crimping operation terminates inner conductor, outer braid and cable support
- Low application cost

Connectors for Semi-Rigid Cable

- Crimp and solder versions available
- Standard cable stripping dimensions
- Universal cable termination common to all configurations

Listed under the Component Program of Underwriters Laboratories Inc., 
File No. E81956

PC Board connectors are recognized under the Component Program of Underwriters Laboratories Inc., 
File No. E81956

Certified by Canadian Standards Association 
File No. LR 7189

Between Series Adapters

For TNC Between Series Adapters, see pages 251-260.

The Tyco Electronics TNC RF connector family, with 7/16-28 threaded couplings, provides low noise levels and optimum stability, and can withstand the shock and vibration often present in hostile environments.

Available in both 50 and 75 ohm versions, these connectors feature numerous styles including cable plugs and jacks, adapters and printed circuit board connectors. These connectors accept a wide range of coaxial cables and are intermateable with industry standard connectors designed to MIL-C-39012 specifications.

Single crimp connectors provide reduced application time and lower applied costs. This is accomplished by using Tyco Electronics one-crimp operation tooling which simultaneously terminates the inner conductor, outer braid and cable support with one controlled stroke.

Tyco Electronics can also supply low-cost alternatives with a commercial type product line. These connectors are designed around the mil-specifications, offering comparable mechanical and electrical performance.



Related Product Data

Military Category — All crimp connectors are Category B Type (Tyco Electronics Crimp Tooling), unless otherwise noted.

Packaging — All Mil-Type connectors are packaged individually and all Commercial connectors are bulk packaged unless otherwise noted.

TNC Connectors (Continued)

Specifications

Characteristics	Single Crimp (MIL Type)	Category B O Crimp (MIL Type)	Commercial O Crimp & Hex Crimp 50 & 75 Ohm	Commercial PCB	Commercial Solder Jacks	Semi-Rigid	Solder Clamp
Electrical							
Impedance, Nom. (Ohms)	50	50	50	50	50	50	50
Working Voltage (Volts RMS)	500	500	500	500	500	335	500
Contact Resistance (Milliohms)	Inner: 1.5 Outer: 3	Inner: 1.5 Outer: 0.2	Inner: 2.0 Outer: 0.3	Inner: 6.0 Outer: 3.0	Inner: 2.75 Outer: 1.0	Inner: 1.5 Outer: 0.2	Inner: 1.5 Outer: 0.2
Initial Insulation Resistance (Megohms)	5000	5000	5000	5000	5000	5000	5000
Dielectric Withstanding Voltage (VAC)	1500	1500	1500	1500	1500	1500	1500
Corona Level at 70,000 ft. (Picocoulombs)	5 max. @ 375 VRMS	5 max. @ 375 VRMS	5 max. @ 375 VRMS	—	—	5 max. @ 375 VRMS	5 max. @ 375 VRMS
RF Leakage, Max. (dB)	—	60 @ 2-3 GHz	55 @ 2-3 GHz	—	—	60 @ 2-3 GHz	55 @ 2-3 GHz
RF Insertion Loss, Max. (dB)	—	0.18 @ 9 GHz	0.2 @ 3 GHz	—	—	0.06 @ 3-6 GHz	0.2 @ 3 GHz
Frequency Range (GHz)	0-4	0-11	0-7	0-4	0-4	0-15	0-11
VSWR in Frequency Range Max.	1.35	1.3	1.40	—	—	1.35	1.30 @ 4 GHz
Mechanical							
Force to Engage/ Couple, lbs. [N]	10/2 [44.5/8.9]	2/2 [8.9/8.9]	6/6 [26.7/26.7]	—	—	2 [.023]	2 [.023]
Coupling Nut Retention, Min. lbs. [N]	100 [444.8]	100 [444.8]	60 [266.9]	—	—	100 [444.8]	100 [444.8]
Cable Retention, lbs. [N]	60 [266.9] RG 58C/U	60 [266.9] RG 58C/U	60 [266.9] RG 58C/U	60 [266.9] (PCB Ret)	—	60 [266.9]	40 [178.0]
Durability (Cycles)	500	500	500	500	500	500	500
Jam Nut Mounting Torque, Max. lbs. [N•m]	25 [2.8]	25 [2.8]	25 [2.8]	25 [2.8]	25 [2.8]	25 [2.8]	25 [2.8]
Environmental							
Temperature Range, Operating (C°)	-65 to +85	-65 to +165 ¹ -55 to +85 ²	-55 to +85	-55 to +85	-65 to +165	-65 to +105	-65 to +165
Vibration	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 201A Cond. A	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 202 Cond. B	MIL-STD-202 Method 202 Cond. B
Physical Shock	MIL-STD-202 Method 213 Cond. G, (50 G's)	MIL-STD-202 Method 213 Cond. I, (100 G's)	MIL-STD-202 Method 213 Cond. I, (100 G's)	MIL-STD-202 Method 213 Cond. I, (100 G's)	MIL-STD-202 Method 213 Cond. I, (100 G's)	MIL-STD-202 Method 213 Cond. I	MIL-STD-202 Method 213 Cond. I
Thermal Shock	MIL-STD-202 Method 107	MIL-STD-202 Method 107 Cond. B	MIL-STD-202 Method 107 Cond. A	MIL-STD-202 Method 107	MIL-STD-202 Method 107	MIL-STD-202 Method 107	MIL-STD-202 Method 107
Moisture Resistance	MIL-STD-202 Method 106	MIL-STD-202 Method 106	MIL-STD-202 Method 106 Type II	MIL-STD-202 Method 106	MIL-STD-202 Method 106	MIL-STD-202 Method 106	MIL-STD-202 Method 106
Salt Spray	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B
Product Specification	—	108-12001	108-12046	—	—	108-12032	—

¹Assembled to cable with polytetrafluorethylene dielectric.

²Assembled to cable with polyethylene dielectric.

TNC Connectors (Continued)

Specifications (Continued)

Characteristics	Single Crimp (MIL Type)	Category B O Crimp (MIL Type)	Commercial O Crimp & Hex Crimp 50 & 75 Ohm	Commercial PCB	Commercial Solder Jacks	Semi-Rigid	Solder Clamp
Connector Material							
Collar	Brass QQ-B-626	Brass QQ-B-626	Brass QQ-B-626	—	—	Brass QQ-B-626	Brass QQ-B-626
Outer Contact (Plug)	Phos. Bronze QQ-B-750 Beryl. Copper QQ-C-530	Phos. Bronze QQ-B-750 Beryl. Copper QQ-C-530	Brass MIL-C-21768	—	—	Brass QQ-B-626	Brass QQ-B-626
Outer Contact (Jack)	Brass QQ-B-626	Brass QQ-B-626	Zinc QQ-Z-363	Zinc QQ-Z-363	Zinc QQ-Z-363	Brass QQ-B-626	Brass QQ-B-626
Dielectric	PTFE MIL-P-19468	PTFE MIL-P-19468	Polyethylene Polypropylene Gen. Purpose	Polypropylene Gen. Purpose ¹	PTFE MIL-P-19468 Polyester PBT MIL-P-24519	PTFE MIL-P-19468	PTFE MIL-P-19468
Center Contact (Plug)	Brass QQ-B-626	Brass QQ-B-626	Brass QQ-B-626	—	—	Brass QQ-B-626	Brass QQ-B-626
Center Contact (Jack)	Beryl. Copper ASTM-B-643, QQ-C-530	Beryl. Copper ASTM-B-643, QQ-C-530	Beryl. Copper QQ-C-530	Phos. Bronze QQ-B-570	Phos. Bronze QQ-B-570	Beryl Copper QQ-C-530	Beryl Copper QQ-C-530
Gasket	Silicon Rubber QQ-R-765	Silicon Rubber QQ-R-765	Silicon Rubber QQ-R-765	—	—	Silicone Rubber QQ-R-765	Silicone Rubber QQ-R-765
Ferrule	Copper QQ-C-576	Copper QQ-C-576	Copper QQ-C-576	—	—	—	—
Connector Primary Finishes²							
Collar	Silver QQ-S-365	Silver QQ-S-365	Bright Nickel QQ-N-290	—	—	Nickel QQ-N-290	Nickel QQ-N-290
Outer Contact (Plug & Jack)	Silver QQ-S-365	Bright Nickel QQ-N-290	Bright or Matte Nickel QQ-N-290	Bright Nickel QQ-N-290	Bright Nickel QQ-N-290	Nickel QQ-N-290	Nickel QQ-N-290
Center Contact (Plug & Jack)	Gold MIL-G-45204	Silver QQ-S-365	Tin Lead, ASTM-B-545 Silver, QQ-S-365 Gold, MIL-G-45204	Tin Lead, ASTM-B-545 Silver, QQ-S-365 Gold, MIL-G-45204	Tin Lead, ASTM-B-545 Silver, QQ-S-365 Gold, MIL-G-45204	Gold MIL-G-45204	Gold MIL-G-45204
Ferrule	Silver QQ-S-365	Gold MIL-G-45204	Tin Lead ASTM-B-5	—	—	—	—

¹Several pc board connectors have an outer polyester PBT insulator per MIL-P-24519.

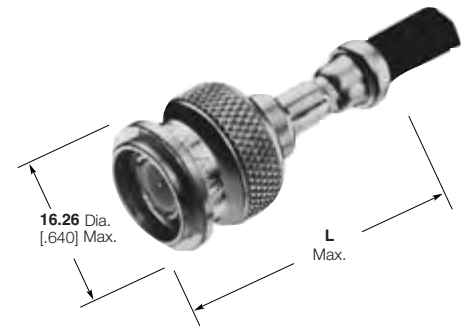
²If several finishes are listed, refer to individual catalog page(s) or customer drawings for exact specifications.

TNC Connectors, 50 Ohm

Plugs, Crimp

Hex Crimp and O Crimp

MIL Type O Crimp Weatherproof



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Comments	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
174, 188, 188A, 316	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	31.24 1.230	—	58436-3	5222506-5
179, 179A, 179B, 161, 187, 187A, BELDEN 9221	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	31.24 1.230	—	58436-3	5222506-6
58, 58A, 58B, 58C	Hex Crimp	Gold	Nickel	Polypropylene	Commercial	—	31.25 1.230	—	58436-1 ¹	5222506-1
	O Crimp	Gold	Nickel	PTFE	MIL Type	Weatherproof	34.93 1.375	220045-2	—	5225555-2
142, 142A, 142B, 400	O Crimp	Gold	Nickel	PTFE	MIL Type	Weatherproof	34.93 1.375	220045-2	—	5225555-6
8, 8A, 213	O Crimp	Gold	Nickel	PTFE	MIL Type	Weatherproof	50.8 2.000	220015-1	—	5225555-7
9, 9A, 9B, 214	O Crimp	Gold	Nickel	PTFE	MIL Type	Weatherproof	50.8 2.000	220015-1	—	5225555-8

¹Order Tyco Electronics PRO-CRIMPER Coaxial Hex Crimp Hand Tool assembly 58433-2, which includes dies 58436-1.

BELDEN is a trademark of Belden Wire and Cable Company.

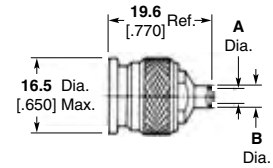
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

TNC Connectors, 50 Ohm (Continued)

Plugs for Semi Rigid-Cable



Solder Type

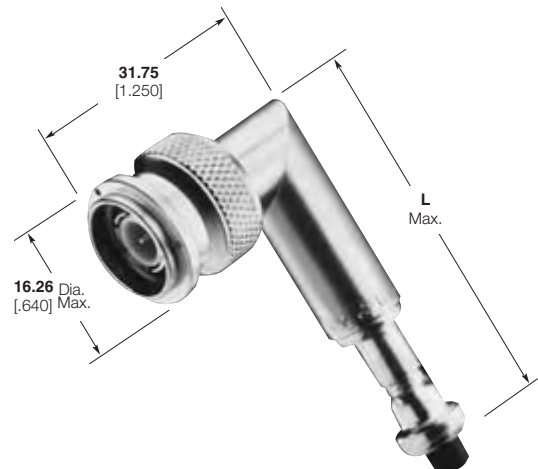


RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Comments	Dim. A	Dim. B	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
405 Semi-Rigid/ 2.18 [.086]	Solder	Gold	Passivate	Solid PTFE	MIL Type	—	2.3 .089	3.0 .120	—	3	1057635-1
402 Semi-Rigid/ 3.66 [.141]	Crimp	Gold	Nickel	PTFE	Commercial	Weather proof	—	—	1	2	228179-3
RG 402/U .141 3.66 [.141]	Solder	Gold	Gold	Solid PTFE	MIL Type	—	3.7 .144	4.6 .180	—	3	1057631-1

¹Hand Tool 59980-1, Requires (2) Crimping Dies 312253-1 and (1) Locator 312644-1.
²Pneumatic Tool 58318-1, Requires (2) Crimping Dies 313720-1 and (1) Locator 312645-1.
³Refer to Recommended Assembly Tools in Tool Section.

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

TNC Connectors, 50 Ohm (Continued)
**Right-Angle Plugs,
Crimp**
O Crimp

**MIL Type
O Crimp
Weatherproof**


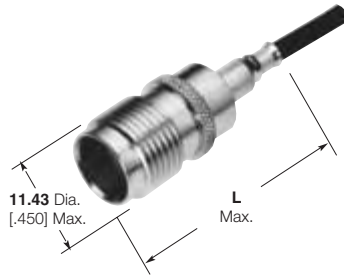
RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Comments	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
174, 174A, 188 188A, 316	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	38.23 1.505	—	318450-2	5414173-3
58, 58A, 58B 58C	O Crimp	Gold	Nickel	PTFE	MIL Type	Weatherproof	47.63 1.875	220045-2	—	5225559-2
55, 55A, 55B 223	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	38.23 1.505	—	220189-1	5414173-6
142, 142A, 142B 400	O Crimp	Gold	Silver	PTFE	MIL Type	Weatherproof	47.63 1.875	220045-2	—	5225554-6
8, 8A, 213	O Crimp	Gold	Nickel	PTFE	MIL Type	Weatherproof	63.5 2.500	220015-1	—	5225559-8
393, 225	O Crimp	Gold	Silver	PTFE	MIL Type	Weatherproof	63.5 2.500	220015-1	—	1-5225554-1
9, 9A, 9B, 214	O Crimp	Gold	Silver	PTFE	MIL Type	—	59.52 2.343	220015-1	—	5225349-9

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

TNC Connectors, 50 Ohm (Continued)

Jacks, Crimp

O Crimp



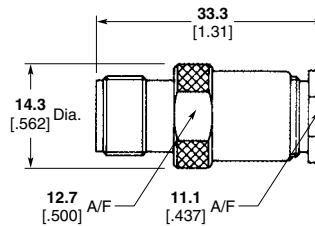
MIL Type O Crimp Weatherproof



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Comments	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
174, 174A, 188, 188A, 316	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	30.48 1.200	—	318450-2	5414171-3
58, 58A, 58B, 58C	O Crimp	Gold	Silver	PTFE	MIL Type	Weatherproof	35.72 1.406	220045-2*	—	225551-2
141, 141A, 303	O Crimp	Gold	Silver	PTFE	MIL Type	Weatherproof	35.72 1.406	220045-2*	—	225551-5
55, 55A, 55B, 223	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	—	29.85 1.175	—	220189-1	414171-6
142, 142A, 142B, 400	O Crimp	Gold	Silver	PTFE	MIL Type	Weatherproof	35.72 1.406	220045-2*	—	225551-6

*Battery, Pneumatic

Jacks, Solder/Clamp



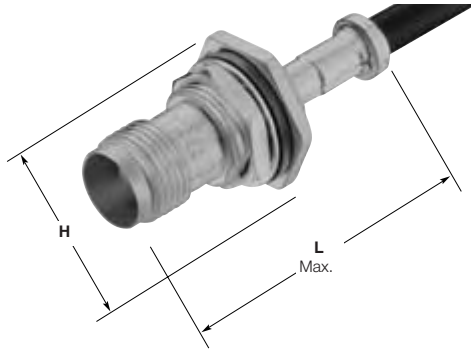
RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Part No.
RG 58C/U, RG 141 A/U	Solder/Clamp	Gold	Silver	PTFE	MIL Type	1312569-1

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

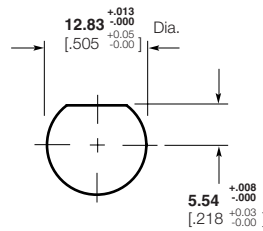
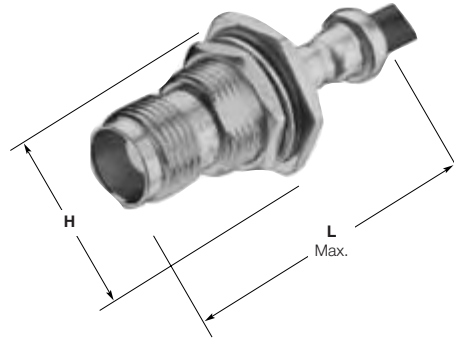
TNC Connectors, 50 Ohm (Continued)

Bulkhead Jacks, Crimp

Single Crimp



O Crimp



Maximum Panel Thickness Single Crimp **3.18** [.125];
Dual Crimp **6.35** [.250]

**Recommended
Panel Cutout**

H= **11/16** [.6875] max. across flats, **20.32** [.800] max. across points.

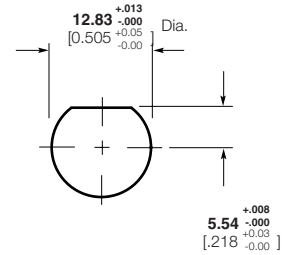
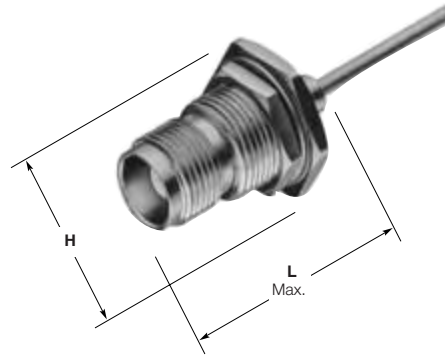
RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Comments	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
174, 174A, 316 188, 188A	O Crimp	Gold	Nickel	Polymethyl- pentene	Commercial	—	34.93 1.375	—	318450-2	5414168-3
179, 179A, 179B 161, 187, 187A BELDEN 9221	Single Crimp	Gold	Nickel	PTFE	MIL Type	—	38.1 1.500	—	91910-1	5331238
RD 188, 316 Double Braid	O Crimp	Gold	Nickel	Polymethyl- pentene	Commercial	—	34.93 1.375	—	58539-1	5414168-4
58, 58A, 58B, 58C 141, 141A, 303	O Crimp	Gold	Nickel	Polymethyl- pentene	Commercial	—	34.93 1.375	—	220189-1	5414168-1
223 55, 55A, 55B	O Crimp	Gold	Nickel	Polymethyl- pentene	Commercial	—	34.93 1.375	—	220189-1	5414168-6
142, 142A 142B, 400	O Crimp	Gold	Nickel	Polymethyl- pentene	Commercial	—	34.93 1.375	—	220189-1	5414168-5
	O Crimp	Gold	Nickel	PTFE	MIL Type	Weatherproof	38.1 1.500	220045-2	—	5225557-6

BELDEN is a trademark of Belden Wire and Cable Company.

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

TNC Connectors, 50 Ohm (Continued)

**Bulkhead Jacks for
Semi-Rigid Cable,
Rear Mount**



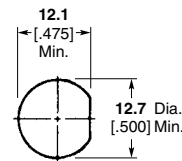
Maximum Panel Thickness **6.35** [.250]

**Recommended
Panel Cutout**

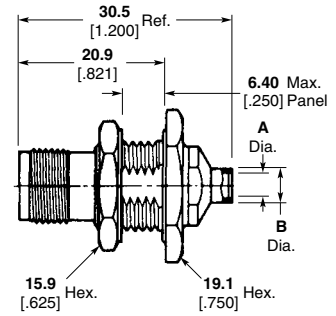
H = **17.45** [.687] max. across flats, **20.32** [.800] max. across points.

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	Part No.
402 Semi-Rigid/ 3.66 [.141]*	Crimp	Gold	Nickel	PTFE	MIL Type	25.4 1.000	228502-1

*Tooling—Hand Tool 59980-1, Requires (2) Crimping Dies 312253-1 and (1) Locator 220220-2.



**Recommended
Panel Cutout**

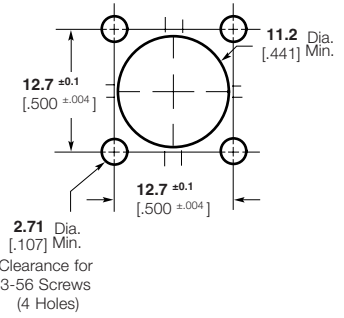
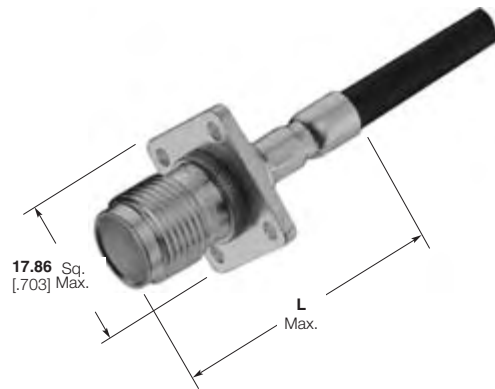


RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. A	Dim. B	Part No.
RG 402/U 3.66 [.141]	Solder	Gold	Pass. Stainless Steel	Solid PTFE	MIL Type	3.7 .144	4.6 .180	1057676-1
RG 405/U 2.16 [.085]	Solder	Gold	Pass. Stainless Steel	Solid PTFE	MIL Type	2.3 .089	3.0 .120	1057679-1

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

TNC Connectors, 50 Ohm (Continued)

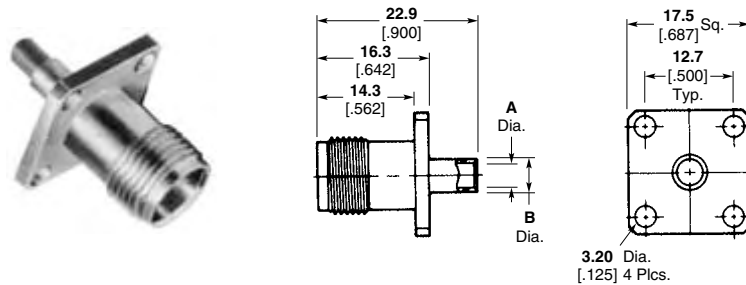
Panel Jacks, Crimp



Recommended Panel Cutout

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	CERTI-CRIMP Hand Tool With Integral Die	Part No.
58, 58A, 58B, 58C	Crimp	Gold	Silver	PTFE	MIL Type	34.93 1.375	220045-2	225348-2

Panel Jacks for Semi-Rigid Cable

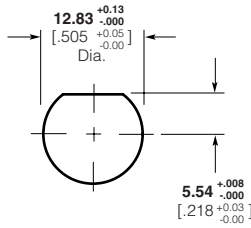


RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. A	Dim. B	Part No.
RG 402/U 3.66 [.141]	Solder	Gold	Gold	PTFE	MIL Type	3.7 .144 Min.	4.6 .180	1057697-1
RG 405/U 2.16 [.085]	Solder	Gold	Gold	PTFE	MIL Type	2.3 .089 Min.	3.0 .120	1057699-1

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

TNC Connectors, 50 Ohm (Continued)

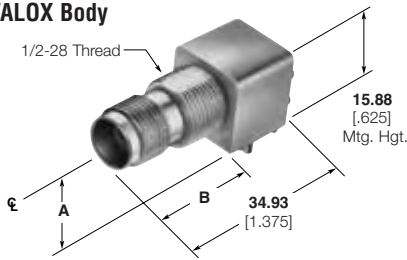
**Right-Angle PC Board/
Panel Mount Jacks**



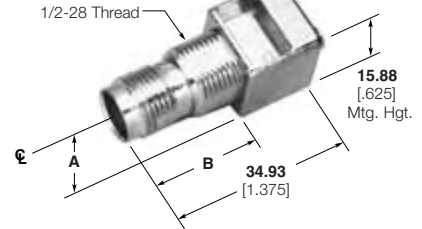
Maximum Panel Thickness 6.1 [.240]

**Recommended
Panel Cutout**

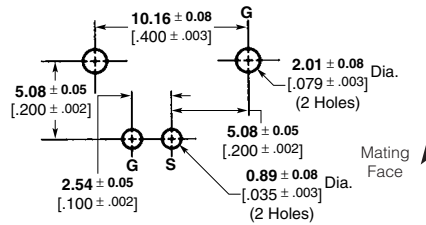
VALOX Body



Metal Body



Body Material	Ω	Center Contact Plating	Dimensions		Part Numbers
			A	B	
VALOX, White	50	Gold	8.56 .337	21.21 .835	5227818-1
Metal	50	Gold	8.26 .325	20.83 .820	5227839-1



(Top View)

Recommended PC Board Layout

**Vertical PC Board/
Panel Mount Jacks**

*2-56 Self-Tapping Screws:
For 1.57 [3/32] or greater panel thickness
Part No. **221108-2**
For less than 1.57 [3/32] panel thickness
Part No. **221108-4**

Lockwasher and Jam Nut

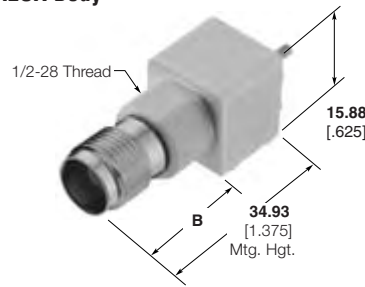


Part No.
1-329632-2

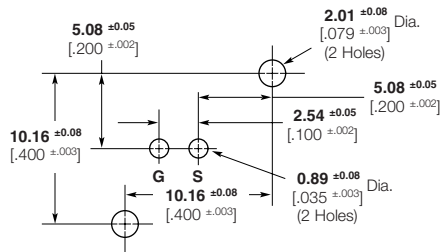


Part No.
1-329631-2

VALOX Body



Body Material	Center Contact Plating	Dimension B	Part Number
VALOX, White	Gold	21.21 .835	5227820-1



(Top View)

Recommended PC Board Layout

VALOX is a trademark of General Electric Company.

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

TNC Connectors, 50 Ohm (Continued)

**Right-Angle PC Board/
Mount Jacks**

Plating

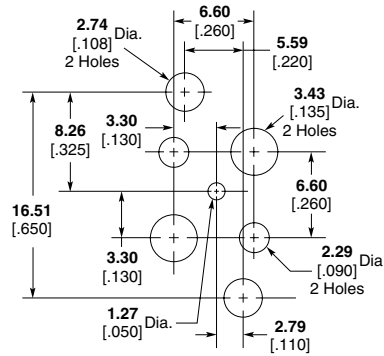
Body — Nickel

Center Contact — Gold

Dielectric — PTFE



Part No. 5413933-1



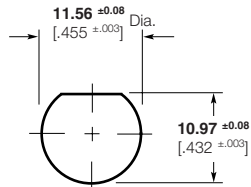
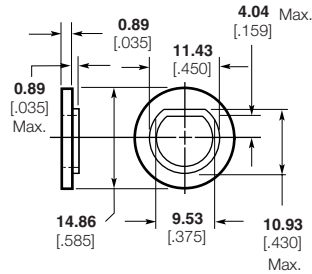
Recommended PC Board Cutout

Bulkhead Solder Jacks

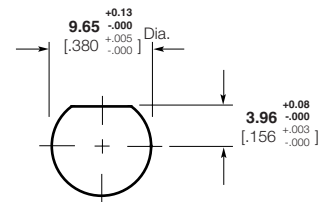
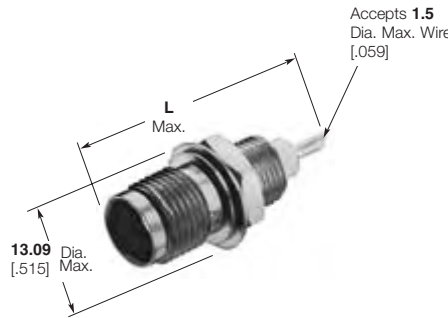
Insulation Bushing

Material — Nylon

Part No. 227223-1



**Recommended Panel Cutout
(Bushing)**



**Recommended
Panel Cutout
(Jack)**

Panel Thickness Refer to chart below.

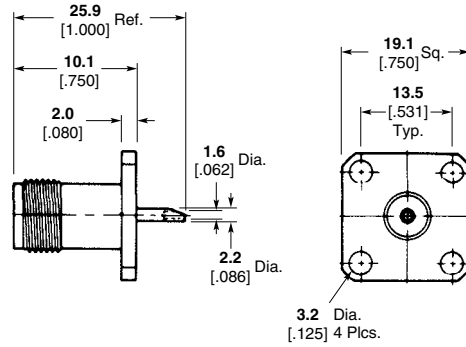
Body Plating	Center Contact Plating	Dielectric	Dim. L	Panel Thickness	Part Number
Nickel	Gold	VALOX	33.33 1.312	1.17-6.35 .046-.250	5227764-2

VALOX is a trademark of General Electric Company.

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

TNC Connectors, 50 Ohm (Continued)

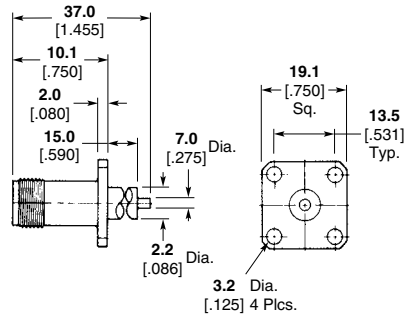
Panel Mount Jack Receptacles



Shell	Part No.
Nickel Plated Brass	1057775-1 ¹

¹Captured Center Contact

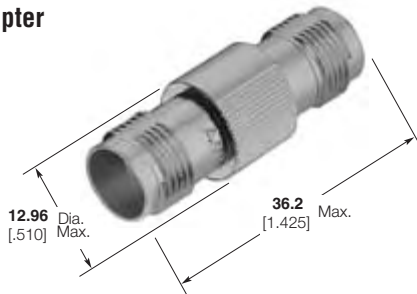
Flange Mount Receptacles



Shell	Part No.
Nickel Plated Brass	1057780-11

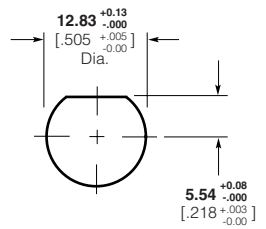
¹Captured Center Contact

Jack-Jack Adapter



Center Contact Plating	Body Plating	Dielectric	Part No.
Gold	Nickel	Polypropylene	5221325-1

Bulkhead Jack-Jack Adapter



Maximum Panel Thickness 6.35 [.250]

Recommended Panel Cutout

Center Contact Plating	Body Plating	Dielectric	Part No.
Gold	Nickel	Acetal	221500-1

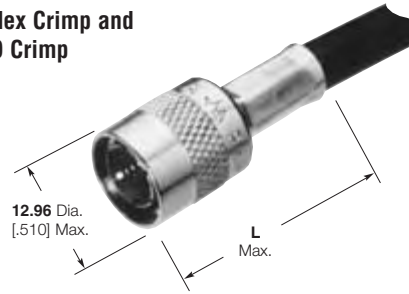
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

TNC Connectors, 75 Ohm

Plugs, Crimp

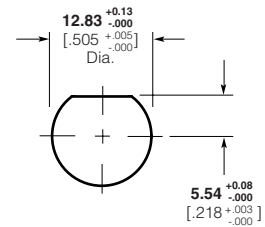
These connectors have been designed for optimum performance and have a true 75 ohm impedance the complete length of the connector. The crimp die tooling listed below is different from the equivalent 50 ohm connectors.

**Hex Crimp and
O Crimp**



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
179, 179A, 179B, 187, 187A, BELDEN 9221	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	27.79 1.094	318451-2	5221506-3
AT&T 735A	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	29.46 1.160	58174-1	5221506-5
302 BELDEN 88241 89269 Hi-Temp 62A Times PL62, BERK-TEK BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	31.75 1.250	58425-1	5413591-1
BELDEN 8281 9141, 9231	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	32.9 1.295	58538-1	5221506-2

Bulkhead Jack, Crimp



Maximum Panel Thickness **6.35** [.250]

**Recommended
Panel Cutout**

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. H	Tooling	Part No.
210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9169, 89269	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	11/16 across flats, 20.32 .800 max. across points	Use Hand Tool 354940-1 with Die Set 58536-1	221509-1

AT&T is a trademark of AT&T Corporation.

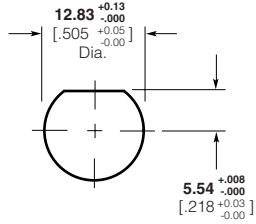
BELDEN is a trademark of Belden Wire and Cable Company.

BERK-TEK is a trademark of Nexans, Inc.

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

TNC Connectors, 75 Ohm (Continued)

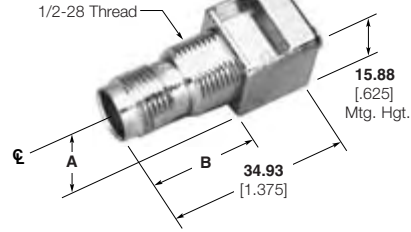
**Right-Angle PC Board/
Panel Mount Jacks**



Maximum Panel Thickness 6.1 [.240]

**Recommended
Panel Cutout**

Metal Body



Body Material	Ω	Center Contact Plating	Dimensions		Part Numbers	
			A	B	Without Mounting Posts	With Mounting Posts
Metal	75	Gold	8.26 .325	20.83 .820	—	5413506-1

**Bulkhead Jack-Jack
Adapter**






Center Contact Plating	Body Plating	Dielectric	Part No.
Gold	Nickel	Polymethylpentene	414396-1

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

BNC Connectors (50 ohm/75 ohm)

Product Facts

- Bayonet lock coupling for quick connect/disconnect
- Various connectors available in 50 and 75 ohm versions
- Fully intermateable with comparable BNC UG/U connectors
- Full range of Hex Crimp and O Crimp Products for common coaxial cables.
- Low VSWR
- Single crimp connectors offer one crimping operation for fast application
- Twist-on connectors require no special tooling for application to the cable
- Field serviceable (Category A) connectors qualified to MIL-C-39012
- Field replaceable (Category C) plugs with captivated center contact
- Field replaceable plugs can be terminated with industry standard tooling
- Tarnish resistant Nickel finish available
- Choice of different dielectrics
- Listed under the Component Program of Underwriters Laboratories Inc., File No. E81956 
- PC Board soldered connectors are recognized under the Component Program of Underwriters Laboratories Inc., File No. E81956 
- Certified by Canadian Standards Association File No. LR 7189 

Between Series Adapters

For BNC Between Series Adapters, see pages 251-260.



The Tyco Electronics BNC RF connector family with bayonet locking coupling provides highly reliable, quick connect/disconnect coaxial connections. Exclusive single and O crimp terminations allow positive insulation grip and require no soldering, providing terminations at a very low overall applied cost.

Available in both 50 and 75 ohm versions, these con-

nectors feature numerous styles including cable plugs and jacks, adapters and printed circuit board connectors. In addition to a variety of crimp type terminations, connectors are furnished in field replaceable and twist-on styles. These connectors accept a wide range of coaxial cables and are intermateable with industry standard connectors designed to MIL-C-39012 specifications.

Tyco Electronics can also supply low cost alternatives with an extensive commercial type product line. A lower cost consumer series product offers the capability to supply center contacts in strip form and allow for automated center contact crimp technology. All connectors are designed around the mil-specifications, but utilize low-cost materials, offering comparable mechanical and electrical performance.

Related Product Data

Product Specifications —

- 108-1275 — BNC Ohm Terminators
- 108-12020 — BNC O Crimp Connectors
- 108-12044 — BNC Commercial Hex Crimp
- 108-12047 — BNC Commercial and Hex Crimp Connectors
- 108-12074 — BNC Solder Jacks
- 108-12075 — BNC Connectors (Category A)
- 108-12078 — BNC Commercial PCB Panel-Mount Jacks

- 108-12002 — BNC Commercial T Adapter
- 108-12095 — BNC Commercial 75 Ohm Connectors
- 108-12096 — BNC Commercial Feed-Thru and Bulkhead Adapters
- 108-12079 — BNC Commercial 50 Ohm Solder Jacks
- 108-12103 — BNC Commercial PCB Press Fit Jacks

Application Specifications —

- 114-12001 — BNC Commercial PCB Jack Press Fit

Performance Specifications —

Page 45

Material Specifications — Page 46

Tooling — Pages 266-268

Military Category — All MIL type O crimp connectors are Category B Type (Tyco Electronics Crimp Tooling), unless otherwise noted.

Packaging — All MIL Type connectors are packaged individually, all O crimp connectors are bulk packaged and all Hex crimp connectors are individually packaged unless otherwise noted.

BNC Connectors (50 ohm/75 ohm) Performance Specifications

Characteristics	Single Crimp (MIL Type)	Category B O Crimp (MIL Type)	Straight Solder Clamp	Right-Angle Solder Clamp	Commercial O Crimp & Hex Crimp 50 Ohms	Commercial O Crimp & Hex Crimp 75 Ohms	Commercial PC Board 50 & 75 Ohms	Commercial Solder 50 Ohm Jacks
Electrical								
Impedance, Nom. (Ohms)	50	50	50	50	50	75	50 & 75	50 & 75
Working Voltage (Volts RMS)	500	500	500	500	500	500	500	500
Contact Resistance (Milliohms)	Inner: 1.5 Outer: 0.3	Inner: 1.5 Outer: 0.2	Inner: 1.5 Outer: .20	Inner: 1.5 Outer: .20	Inner: 2.0 Outer: 1.0	Inner: 2.0 Outer: 2.0	Inner: 6/1.5 Outer: 3/0.2	Inner: 2.75 Outer: 1.0
Initial Insulation Resistance (Megohms)	5000	5000	5000	5000	5000	5000	5000	5000
Dielectric Withstanding Voltage (VAC)	1500	1500	1500	1500	1500	1500	1500	1500
Corona Level at 70,000 ft. (Volts, RMS)	375	375	375	375	375	375	—	375
RF Leakage, Max. (dB)	—	-55 at 2-3 GHz	-55 at 2-3 GHz	-55 at 2-3 GHz	-55 at 2-3 GHz	-55 at 1-2 GHz	—	—
RF Insertion Loss, Max. (dB)	—	0.2 at 3 GHz	0.2 at 3 GHz	0.3 at 3 GHz	0.2 at 3 GHz	0.15 at 2 GHz	—	—
Frequency Range (GHz)	0-2.5	0-4	0-4	0-4	0-4	0-2	0-4 and 0-2	0-4
VSWR in Frequency Range Max.	1.35	1.30	1.30	1.35	1.30	1.30	—	—
Mechanical								
Force to Engage (lbs. [N])/couple, (in-lbs. [N·m]) max.	13.3/11.12 [3/2.5]	13.3/11.12 [3/2.5]	13.3/.028 [3/2.5]	13.3/.028 [3/2.5]	26.7/26.69 [6/6.0]	26.7/26.69 [6/6.0]	—	—
Coupling Nut Retention, Min. N [lbs.]	444.8 [100]	444.8 [100]	444.8 [100]	444.8 [100]	266.9 [60]	266.9 [60]	—	—
Cable Retention, N [lbs.]	266.9 [60] (RG58C/U)	266.9 [60] (RG58C/U)	177.9 [40] (RG58C/U)	177.9 [40] (RG58C/U)	266.9 [60] (RG58C/U)	266.9 [60] (RG58C/U)	266.9 [60] (PCB Ret)	—
Durability (Cycles)	500	500	500	500	500	500	500	500
Jam Nut Mounting Torque, Max. [N·m] (in. lbs.)	25 [2.8]	25 [2.8]	25 [2.8]	—	25 [2.8]	25 [2.8]	25 ³ /12 ⁴ [2.8/1.4]	25 [2.8]
Environmental								
Temperature Range, Operating (C°)	-65 to +85	-65 to +165 ¹ -55 to +85 ²	-65 to +165	-65 to +165	-55 to +85	-55 to +85	-55 to +85	-65 to +165
Vibration	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 204 Cond. B	MIL-STD-1344 Method 2005 Cond. III	MIL-STD-202 Method 204 Cond. B	MIL-STD-202 Method 201A	MIL-STD-202 Method 204 Cond. B
Physical Shock	MIL-STD-202 Method 213 Cond. G, 50 G's	MIL-STD-202 Method 213 Cond. G, 50 G's	MIL-STD-202 Method 213 Cond. G	MIL-STD-202 Method 213 Cond. G	MIL-STD-1344 Method 2004 Cond. G, 100 G's	MIL-STD-202 Method 213 Cond. I, 100 G's	MIL-STD-202 Method 213 Cond. I or A, 50 G's	MIL-STD-202 Method 213 Cond. I, 100 G's
Thermal Shock	MIL-STD-202 Method 107	MIL-STD-202 Method 107	MIL-STD-202 Method 107	MIL-STD-202 Method 107	MIL-STD-1344 Method 1003 Cond. A	MIL-STD-202 Method 107	MIL-STD-202 Method 107	MIL-STD-202 Method 107
Moisture Resistance	MIL-STD-202 Method 106	MIL-STD-202 Method 106	MIL-STD-202 Method 106	MIL-STD-202 Method 106	MIL-STD-1344 Method 1002 Type II	MIL-STD-202 Method 106	MIL-STD-202 Method 106	MIL-STD-202 Method 106
Salt Spray	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-1344 Method 1001 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B	MIL-STD-202 Method 101 Cond. B
Product Specification	108-12002	108-12020	—	—	108-12044 108-12047	108-12095	108-12078	108-12079

¹Assembled to cable with polytetrafluorethylene dielectric.

²Assembled to cable with polyethylene dielectric.

³For Metal Threads

⁴For Polyester Threads

BNC Connectors (50 ohm/75 ohm) Performance Specifications (Continued)

Connector Component	Single Crimp (MIL Type)	Category B & C O Crimp (MIL Type)	Straight Solder Clamp	Right-Angle Solder Clamp	Commercial O Crimp Hex Crimp & Terminators	Commercial PCB Solder	Commercial PCB Press Fit	Commercial Solder Ohm Jacks	Adapters
Connector Material									
Collar	Brass QQ-B-626	Brass QQ-B-626	Brass	Brass	Brass QQ-B-626 Zinc QQ-Z-363	—	—	—	Brass QQ-B-626
Outer Contact (Plug)	Brass QQ-B-626 Beryl. Copper QQ-C-530	Phos. Bronze QQ-B-750	Brass	Brass	Brass MIL-C-21768	—	—	—	Brass QQ-B-626 Beryl. Copper QQ-C-530
Shell (Jack)	Brass QQ-B-626	Brass QQ-B-626	Brass	—	Zinc QQ-Z-363	Zinc QQ-Z-363	Zinc Zinc QQ-Z-363	QQ-Z-363 Brass QQ-B-626	Brass QQ-B-626
Dielectric	PTFE MIL-P-19468 Polypropylene Gen. Purpose	PTFE MIL-P-19468	PTFE	PTFE	Polyethylene Polypropylene Polymethylpentene Gen. Purpose	Polymethylpentene Gen. Purpose ¹	PTFE MIL-P-19468	PTE MIL-P-19468 Polyester PBT MIL-P-24519	PTFE MIL-P-19468 Polypropylene, Gen. Purpose
Center Contact (Plug)	Brass QQ-B-626	Brass QQ-B-626	Brass	Brass	Brass QQ-B-626	—	—	—	Brass QQ-B-626 Beryl. Copper QQ-C-530
Center Contact (Jack)	Beryl. Copper ASTM-B-643 QQ-C-530	Beryl. Copper ASTM-B-643 QQ-C-530	Beryl. Copper	Beryl. Copper	Beryl. Copper QQ-C-530	Phos. Bronze QQ-B-750	Beryl. Copper QQ-C-530	Phos. Bronze QQ-B-570 Beryl. Copper QQ-C-530	Phos. Bronze QQ-B-570 Beryl. Copper QQ-C-530
Gasket	Silicon Rubber QQ-R-765	Silicon Rubber QQ-R-765	Silicon Rubber	Silicon Rubber	Silicon Rubber QQ-R-765	—	—	—	Silicon Rubber QQ-R-765
Ferrule	Copper QQ-C-576	Copper QQ-C-576	—	—	Copper QQ-C-576	—	—	—	—
Connector Primary Finishes²									
Collar	Silver QQ-S-365 Bright Nickel QQ-N-290	Silver QQ-S-365 Bright Nickel QQ-N-290	Silver/ Bright Nickel	Silver/ Bright Nickel	Bright Nickel QQ-N-290	—	—	—	Silver QQ-S-365 Bright Nickel QQ-N-290
Outer Contacts (Plug & Jack)	QQ-S-365 Gold	Silver QQ-S-365 Bright Nickel QQ-N-290	Silver/ Bright Nickel	Silver/ Bright Nickel	Bright or Matte Nickel QQ-N-290	Bright Nickel QQ-N-290	Bright Nickel QQ-N-290	Bright Nickel QQ-N-290	Silver QQ-S-365 Bright Nickel QQ-N-290
Center Contacts (Plug & Jack)	MIL-G-45204 Silver	Gold MIL-G-45204	Gold	Gold	Tin Lead ASTM-B-545 Silver, QQ-S-365 Gold, MIL-G-45204	Tin Lead ASTM-B-545 Silver, QQ-S-365 Gold, MIL-G-45204	Gold MIL-B-45204	Tin Lead ASTM-B-545 Silver, QQ-S-365 Gold, MIL-G-45204	Silver QQ-S-365 Gold MIL-G-45204
Ferrule ³	QQ-S-365	Silver QQ-S-365 Tin Lead ASTM-B-545	—	—	Tin Lead ASTM-B-545	—	—	—	—

¹Several pc board connectors have an outer polyester PBT insulator per MIL-P-24519.

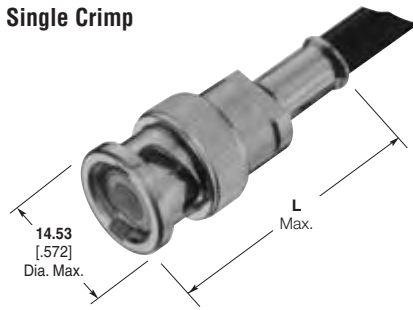
²If more than one finish is listed, refer to individual catalog page(s) or customer drawings for exact specification.

³Ferrules with tin-lead finish are used with nickel plated outer contacts.

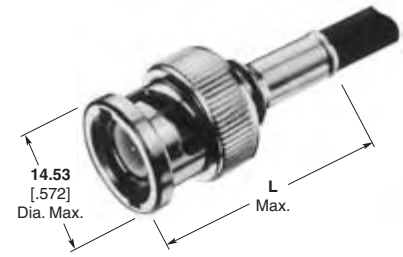
BNC Connectors, 50 Ohm

Plugs, Crimp

Single Crimp



Hex and O Crimp



RG/U Cable	Termination Type	Body Plating	Dielectric	Style	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
178, 178A, 178B, 196, 196A	Single Crimp	Silver	PTFE	MIL Type	33.33 1.312	69245-4	—	69471	5330876
174, 188, 188A, 316	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-3	—	2-5221128-1
	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	220009-5	318450-2	220217-3	1-5227079-6
	O Crimp	Nickel	PTFE	MIL Type	30.18 1.188	—	1424050-1	220026-1	5225395-7
	Single Crimp	Silver	PTFE	MIL Type	33.33 1.312	69245-2	—	69422	2-5330061-1
179, 179A, 179B, 161, 187, 187A, BELDEN 9221	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-3	—	2-5221128-3
	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	—	1424050-1	220217-3	2-5227079-2
	O Crimp	Nickel	PTFE	MIL Type	30.18 1.188	—	—	220026-1	5225395-8
	Single Crimp	Silver	PTFE	MIL Type	33.33 1.312	—	91910-1	69408	2-5329446-1
RD 316, 188, Double Braid	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	69477-4	58539-1	—	8-5227079-2
BELDEN 8219	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-1 ²	—	2-5221128-7
	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	220187-1	58435-1 ¹	220217-1	6-5227079-7³
BELDEN 9907, 89907 COMM/SCOPE 2104	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	220187-1	318452-2	220217-1	6-5227079-8⁴
BELDEN 8218	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	69477-4	58539-1	58376-1	1-5227079-9
	O Crimp	Nickel	PTFE	MIL Type	30.18 1.188	—	91904-1	69669-2	1-5225395-0

¹Order Tyco Electronics PRO-CRIMPER Coaxial "O" Crimp Hand Tool assembly 58433-1, which includes dies 58435-1.

²Order Tyco Electronics PRO-CRIMPER Coaxial Hex Crimp Hand Tool assembly 58433-2, which includes dies 58436-1.

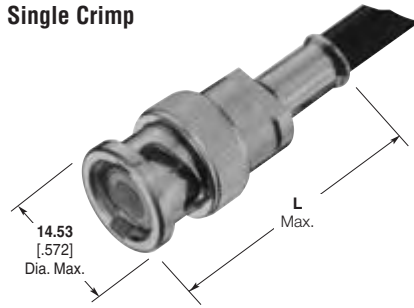
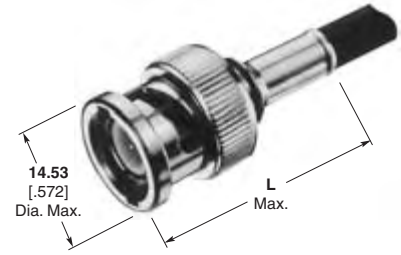
³For use with BELDEN 9907 cable, COMM/SCOPE 3104 cable, and BELDEN 8219 cable only.

⁴For use with BELDEN 89907 cable, and COMM/SCOPE 2104 cable only.

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

BNC Connectors, 50 Ohm (Continued)
Plugs, Crimp (Continued)
Single Crimp

Hex and O Crimp


RG/U Cable	Termination Type	Body Plating	Dielectric	Style	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
58, 58A, 58B, 58C	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-12	—	5221128-13
	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	220187-1	58435-11	220217-1	5227079-5
	O Crimp	Nickel	PTFE	MIL Type	33.74 1.328	69478-1	220189-3	69727	5225395-1
	Single Crimp	Silver	PTFE	MIL Type	33.33 1.312	—	91904-4	69223-1	2-5329444-1
BELDEN 88240, BERK-TEK BTDC-58, COMM/SCOPE 2135	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-12	—	1-5221128-0
	O Crimp	Nickel	Polyethylene	Commercial	33.33 1.312	220187-1	58435-11	220217-1	4-5227079-3
	O Crimp	Nickel	PTFE	MIL Type	33.33 1.312	69478-1	220189-3	69727	4-5225395-2
223, 55, 55A, 55B	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.280	220187-1	58435-11	220217-1	5227079-6
	O Crimp	Nickel	PTFE	MIL Type	43.64 1.718	69478-1	220189-3	69727	5225395-3
	Single Crimp	Silver	PTFE	MIL Type	33.33 1.312	—	91904-3	69424	2-5329444-2
142, 142A, 142B, 400	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	220187-1	58435-11	220217-1	6-5227079-1
	O Crimp	Nickel	PTFE	MIL Type	30.18 1.188	69478-1	220189-3	69727	5225395-6
	Single Crimp	Silver	PTFE	MIL Type	33.33 1.312	69331-1	—	69429-1	2-5330358-2

Consult Tyco Electronics for recommended crimp tooling.

¹Order Tyco Electronics PRO-CRIMPER Coaxial "O" Crimp Hand Tool assembly 58433-1, which includes dies 58435-1.

²Order Tyco Electronics PRO-CRIMPER Coaxial Hex Crimp Hand Tool assembly 58433-2, which includes dies 58436-1.

³Bulk packaged.

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BERK-TEK is a trademark of Nexans, Inc.

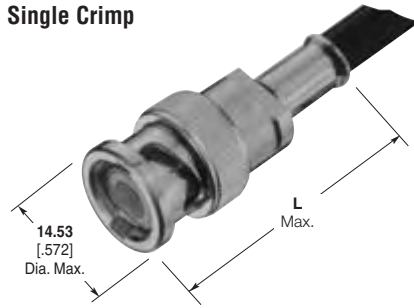
COMM/SCOPE is a trademark of Commscope, Inc.

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

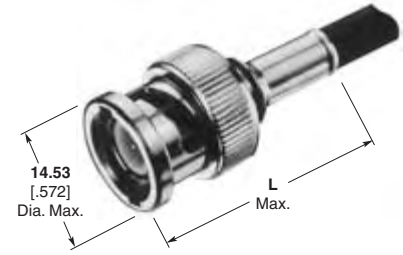
BNC Connectors, 50 Ohm (Continued)

Plugs, Crimp (Continued)

Single Crimp



Hex and O Crimp



RG/U Cable	Termination Type	Body Plating	Dielectric	Style	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-12	—	1-5221128-1
	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	220187-2	58435-11	220217-2	5227079-7
	O Crimp	Nickel	Polyethylene	Commercial	27.69 1.090	220187-2	58435-11	220217-2	1-5227079-1
	O Crimp	Nickel	PTFE	MIL Type	30.18 1.188	—	58537-1	—	5225395-2
	Single Crimp	Silver	PTFE	MIL Type	33.33 1.312	69141-1	—	—	2-5329445-1
302, BELDEN 88241, 89269, Hi-Temp 62A, Times PL62, BERK-TEK, BTDC-59, BTDC-62	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-12	—	1-5221128-1
	O Crimp	Nickel	PTFE	MIL Type	34.14 1.344	69477-1	58537-1	69669-1	4-5225395-1
Hi-Temp 59, Times PL59, PLF59 (20 AWG C.C.)	O Crimp	Nickel	Polyethylene	Commercial	33.33 1.312	—	58537-1	—	5-5227079-3
BELDEN 9104, 9240, 9112, 9167, 9259, 9266, Times FM-59	Hex Crimp	Nickel	Polyethylene	Commercial	33.53 1.320	—	58436-12	—	1-5221128-7
	O Crimp	Nickel	PTFE	MIL Type	30.94 1.218	—	58537-1	69669-1	2-5225395-0
BELDEN 8281, 9141, 9231, Western Electric 724, 728, 3049	Single Crimp	Silver	Polypropylene	MIL Type	41.50 1.634	69652	—	220000	5330878
8, 8A, 213	O Crimp	Silver	PTFE	MIL Type	27.31 1.075	220015-1	—	—	5225886-1
11, 11A	O Crimp	Silver	PTFE	MIL Type	47.63 1.875	220015-1	—	—	5225886-4
BELDEN 9914, Times FM-8	O Crimp	Silver	PTFE	MIL Type	47.63 1.875	220015-1	—	—	5225886-7
Alpha 9847, BELDEN 8213, 9292	O Crimp	Silver	PTFE	MIL Type	47.63 1.875	220015-1	—	—	225886-5 ♦
9, 9A, 9B, 214	O Crimp	Silver	PTFE	MIL Type	52.38 2.062	220015-1	—	—	5225886-1

¹Order Tyco Electronics PRO-CRIMPER Coaxial "O" Crimp Hand Tool assembly 58433-1, which includes dies 58435-1.
²Order Tyco Electronics PRO-CRIMPER Coaxial Hex Crimp Hand Tool assembly 58433-2, which includes dies 58436-1.
 Tyco Electronics PRO-CRIMPER II Hand Tool Frame without dies Part No. 354940-1

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 BERK-TEK is a trademark of Nexans, Inc.

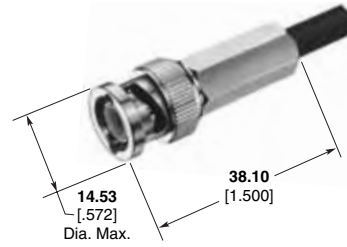
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

Plugs, Twist-On

Related Product Data

Twist-On plugs must be used with cable that has a solid conductor. These plugs are not recommended for applications where the cable frequently moves or flexes.

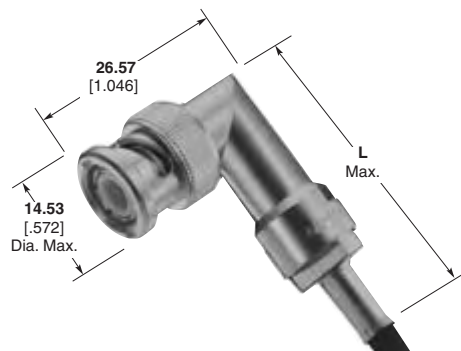


Mating Twist-On Jack — Page 52

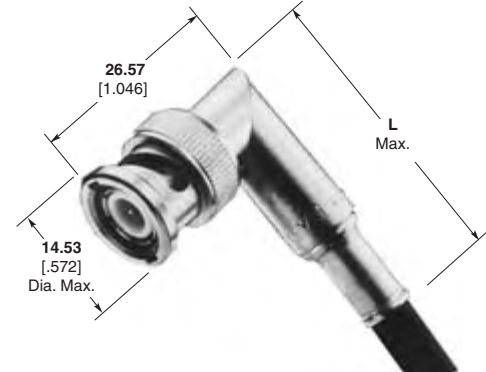
RG/U Cable	Contact Plating	Body Plating	Dielectric	Style	Part No.
59, 59A, 59B	Gold	Nickel	Polymethyl-pentene	Commercial	5414265-3

Right-Angle Plugs, Crimp

Single Crimp



Hex and O Crimp

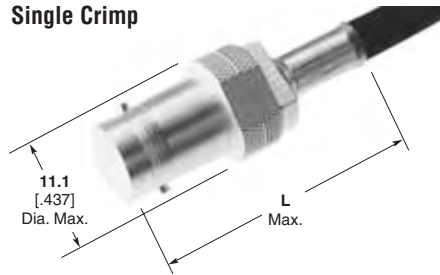
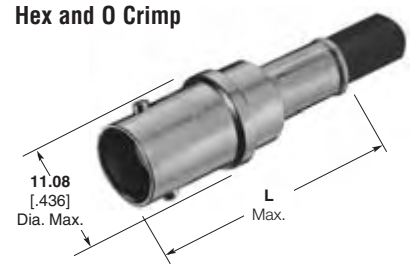


RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
174, 188, 188A, 316	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	—	58436-3	—	5413959-3
	Single Crimp	Gold	Silver	PTFE	MIL Type	44.45 1.750	—	91910-1	69422	5331178
179, 179A, 179B, 161, 187, 187A, BELDEN 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	—	58436-3	—	5413959-4
180, 180A, 180B, 195, 195A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	—	58436-3	—	5413959-5
BELDEN 9907, 89907, 8219, COMM/SCOPE 2104, 3104	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	—	58436-1	—	5413959-6
58, 58A, 58B, 58C	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	—	58436-1	—	5413959-1
	O Crimp	Gold	Nickel	PTFE	MIL Type	37.29 1.468	69478-1	220189-3	69727-1	5225974-1
55, 55A, 55B, 223	Single Crimp	Gold	Silver	PTFE	MIL Type	44.45 1.750	—	91904-1	69223-1	5331175
	O Crimp	Gold	Nickel	PTFE	MIL Type	37.29 1.468	69478-1	220189-3	69727-1	5225974-2
142, 142A, 142B, 400	Single Crimp	Gold	Silver	PTFE	MIL Type	44.45 1.750	69331-1	—	69429-1	5331182
	O Crimp	Gold	Nickel	PTFE	MIL Type	37.29 1.468	—	58537-1	69669-1	5225974-5

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

BNC Connectors, 50 Ohm (Continued)

Jacks, Crimp
Single Crimp

Hex and O Crimp


RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
174, 188, 188A, 316	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	33.02 1.300	—	58436-3	—	5413779-3
	O Crimp	Gold	Nickel	Polypropylene	Commercial	30.48 1.200	—	1424050-1	220217-3	5228979-7
	O Crimp	Gold	Nickel	PTFE	MIL Type	30.48 1.200	—	1424050-1	220026-1	5225396-7
	Single Crimp	Gold	Silver	PTFE	MIL Type	33.33 1.312	—	—	69422	2-5330062-1
179, 179A, 179B, 161, 187, 187A, BELDEN 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	33.02 1.300	—	58436-3	—	2-5413779-4
58, 58A, 58B, 58C	O Crimp	Gold	Nickel	Polypropylene	Commercial	30.48 1.200	220187-1	58435-1 ¹	220217-1	5228979-5
	O Crimp	Gold	Nickel	PTFE	MIL Type	30.48 1.200	—	91901-1	69727	5225396-1
223, 55, 55A, 55B	Single Crimp	Gold	Silver	PTFE	MIL Type	33.33 1.312	69140-2	91904-3	69424	2-5329452-2
124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269	O Crimp	Gold	Nickel	Polypropylene	Commercial	30.48 1.200	220187-2	58435-1 ¹	220217-2	5228979-6
	O Crimp	Gold	Nickel	PTFE	MIL Type	30.48 1.200	—	58537-1	69669-1	5225396-2

¹Order Tyco Electronics PRO-CRIMPER Coaxial "O" Crimp Hand Tool assembly 58433-1, which includes dies 58435-1.

BELDEN is a trademark of Belden Wire and Cable Company.

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

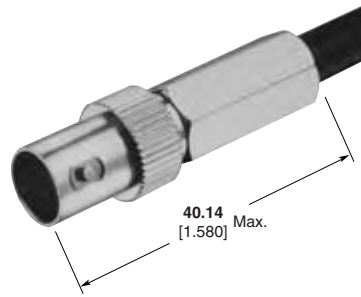
BNC Connectors, 50 Ohm (Continued)

Jacks, Twist-On

Related Product Data

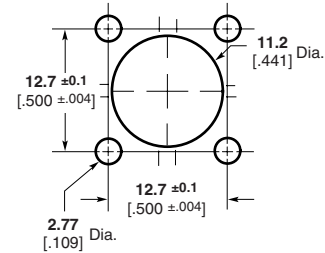
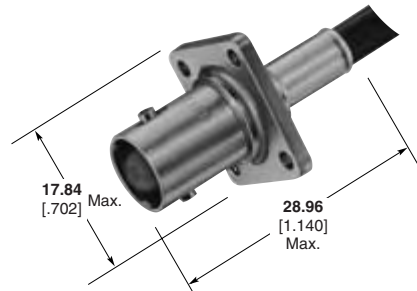
Twist-on jacks must be used with cable that has a solid conductor. These jacks are not recommended for applications where the cable frequently moves or flexes.

Mating Twist-On Plug — Page 50



RG/U Cable	Center Contact	Body Plating	Dielectric	Style	Part No.
59, 59A, 59B	Gold	Nickel	Acetal	Commercial	222428-1

Panel Jacks, Crimp



Recommended Panel Cutout

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
174, 188, 188A, 316	O Crimp	Gold	Nickel	PTFE	MIL Type	—	1424050-1	220026-1	5225397-7
58, 58A, 58B, 58C	O Crimp	Gold	Nickel	PTFE	MIL Type	69478-1	91901-1	69727	5225397-1
124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269, 89269	O Crimp	Gold	Nickel	PTFE	MIL Type	69477-1	58537-1	69669-1	5225397-2

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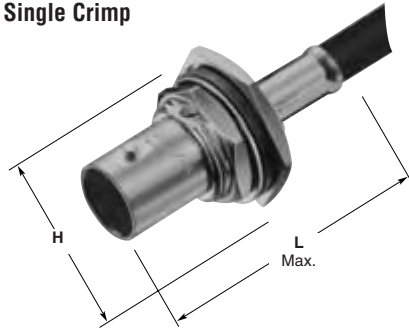
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

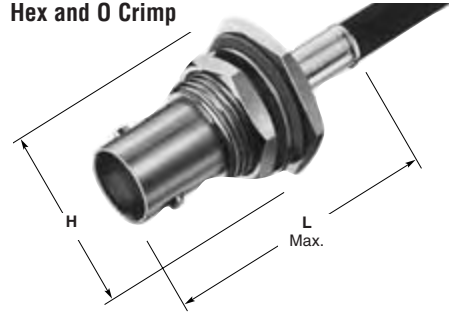
Bulkhead Jacks, Crimp

Note: Panel Insulating Bushings — Page 54

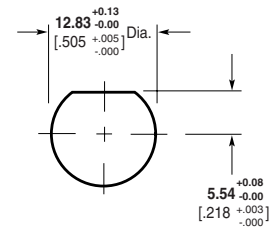
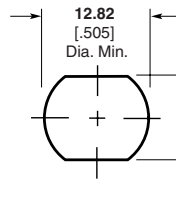
Single Crimp



Hex and O Crimp



Recommended Panel Cutouts
Maximum Panel Thickness 3.18 [.125]



H = 11/16" across flats, 20.32 [.800] Max. across points

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	CERTI-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
174, 188, 188A, 316	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	36.83 1.450	—	58436-3	—	5413771-3
	O Crimp	Gold	Nickel	Polypropylene	Commercial	34.93 1.375	—	—	220217-3	5228980-7
	O Crimp	Gold	Nickel	PTFE	MIL Type	35.71 1.406	—	—	220026-1	5225398-7
	Single Crimp	Gold	Silver	PTFE	MIL Type	32.13 1.265	—	—	69422	2-5330063-1
179, 179A, 179B, 161, 187, 187A, BELDEN 9221	O Crimp	Gold	Nickel	PTFE	MIL Type	35.71 1.406	—	1424050-1	220026-1	5225398-8
	Single Crimp	Gold	Silver	PTFE	MIL Type	32.13 1.265	—	91910-1	69408	2-5329458-1
Times RD316	O Crimp	Gold	Nickel	PTFE	MIL Type	35.71 1.406	—	91904-1	69669-2	1-5225398-5

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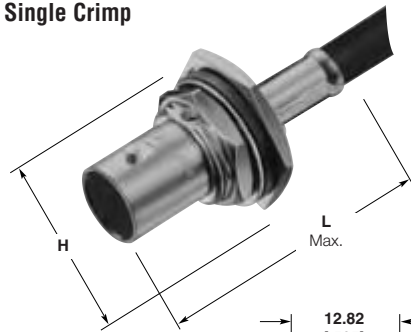
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

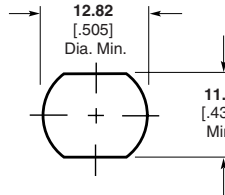
Bulkhead Jacks, Crimp (Continued)

Note: Panel Insulating Bushings— at the bottom of this page

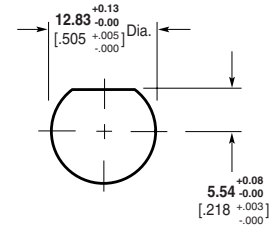
Single Crimp



Recommended Panel Cutouts
Maximum Panel Thickness 3.18 [.125]



Hex and O Crimp



H = 11/16" across flats, 20.32 [.800] Max. across points

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	CERT-CRIMP Hand Tool with Integral Die	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
58, 58A, 58B, 58C, BELDEN 88240, BERK-TEK BTDC-58, COMM/SCOPE 2135	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	36.83 1.450	—	58436-1	—	5413771-1
58, 58A, 58B, 58C	O Crimp	Gold	Nickel	Polypropylene	Commercial	34.93 1.375	220187-1	58435-11	220217-1	5228980-5
	O Crimp	Gold	Nickel	PTFE	MIL Type	41.28 1.625	—	91901-1	69727	5225398-1
	Single Crimp	Gold	Silver	PTFE	MIL Type	32.13 1.265	—	91904-4	69223-1	2-5329456-1
223, 55, 55A, 55B	O Crimp	Gold	Nickel	PTFE	MIL Type	35.71 1.406	—	91901-1	69727	5225398-3
142, 142A, 142B, 400	O Crimp	Gold	Nickel	PTFE	MIL Type	35.71 1.406	—	91901-1	69727	5225398-6
124, 140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269	O Crimp	Gold	Nickel	Polypropylene	Commercial	34.93 1.375	220187-2	58435-11	220217-2	5228980-6

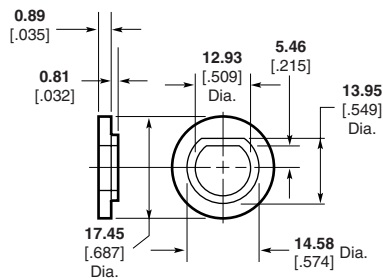
¹Order Tyco Electronics PRO-CRIMPER Coaxial "O" Crimp Hand Tool assembly 58433-1, which includes dies 58435-1.

Panel Insulating Bushings for Bulkhead Jacks

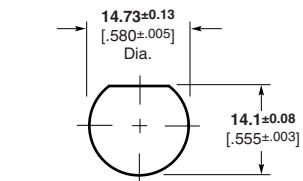
Material — Nylon

Note: Can not be used with single crimp bulkhead jacks.

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COMM/SCOPE is a trademark of Commscope, Inc.



Part No. 330620 (2 Required)



Recommended Panel Cutout

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

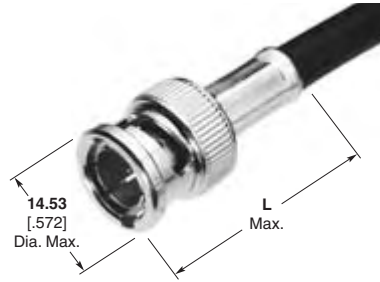
BNC Connectors, 50 Ohm (Continued)

Plugs, for JIS Cables, Crimp

Plating

Body — Nickel

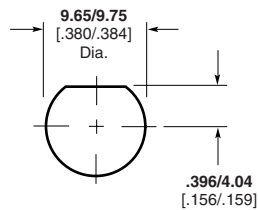
Center Contact — Gold



JIS Cable	Termination Type	Dielectric	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
3D-2V	Hex Crimp	Polyethylene	33.53 1.320	58436-1	3-5221128-1

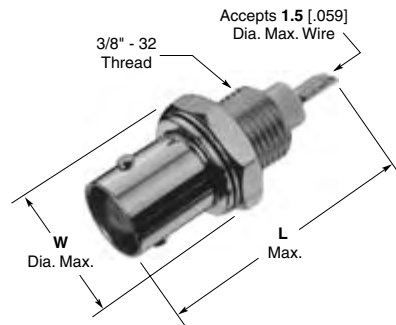
Bulkhead Solder Jacks, Front Mount

Body Plating — Nickel

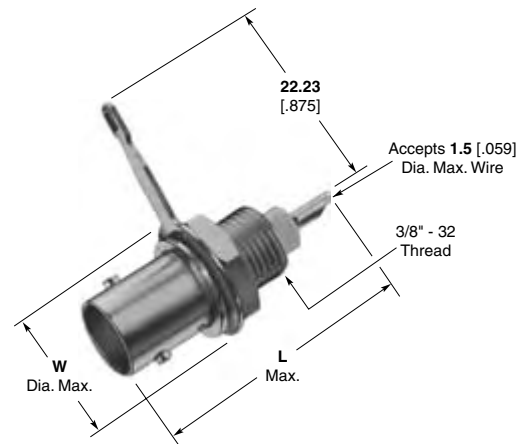


Recommended Panel Cutout

Without Solder Terminal



With Solder Terminal



Contact Material	Dielectric	Dimensions		Panel Thickness	Insulating Bushing	Part No.	
		L	W			Without Solder Terminal*	With Solder Terminal**
Silver	VALOX	26.93	13.09	1.17-3.18	227223-1 or 221951-1	5227754-3	5227755-3
		1.060	.515	.046-.125			
Gold	VALOX	33.33	13.09	1.17-6.35	227223-1 or 221951-1	—	5227169-7
		1.312	.515	.046-.250			
	26.93	13.09	1.17-3.18	227223-1 or 221951-1	5227754-2	5227755-2	
	1.060	.515	.046-.125				
PTFE		33.33	13.09	1.17-6.35	227223-1 or 221951-1	5227169-4	5227169-8
		1.312	.515	.046-.250			
Tin	VALOX	26.93	13.09	1.17-3.18	227223-1 or 221951-1	5227715-3	5227716-3
		1.060	.515	.046-.125			
		33.33	13.09	1.17-6.35	227223-1 or 221951-1	—	5227169-5
		1.312	.515	.046-.250			
		26.93	13.09	1.17-3.18	227223-1 or 221951-1	5227754-1	5227755-1
		1.060	.515	.046-.125			

*Includes lockwasher and jam nut.

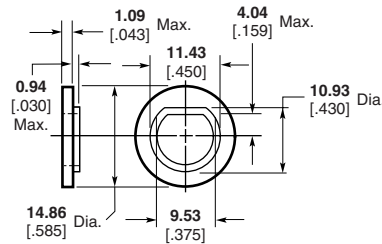
**Includes solder terminal and jam nut.

VALOX is a trademark of General Electric Company.

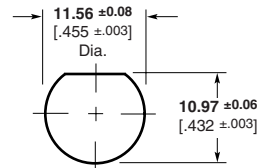
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

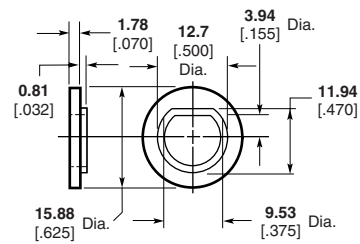
Insulating Bushings



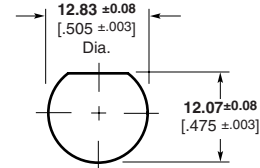
Part No. 227223-1



Recommended Panel Cutout



Part No. 221951-1



Recommended Panel Cutout

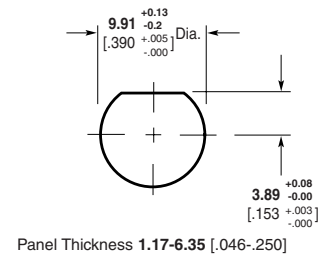
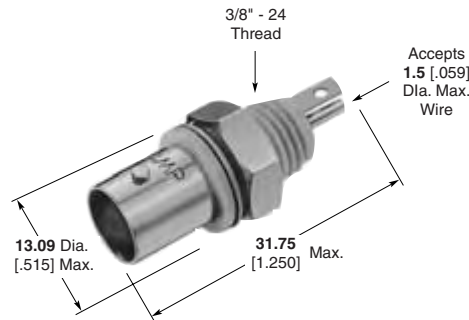
Isolated Bulkhead Solder Jacks, Front Mount

Plating

Body — Nickel

Dielectric — White VALOX

Center Contact Plating	Flange & Thread Material	Part No.
Tin	VALOX	5227726-1
Silver	VALOX	5227726-2
Gold	VALOX	5227726-3



Recommended Panel Cutout

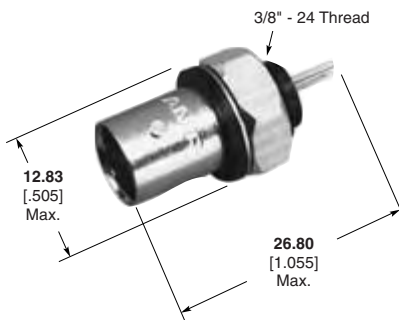
Plating

Body — Nickel

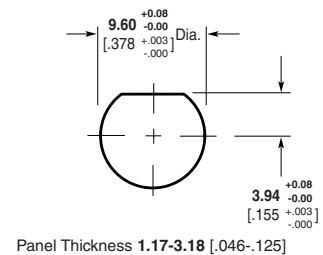
Center Contact — Silver

Dielectric — Black VALOX

Flange & Thread Material — Black VALOX



Part No. 5414194-1



Recommended Panel Cutout

Sealed Bulkhead Solder Jack, Rear Mount

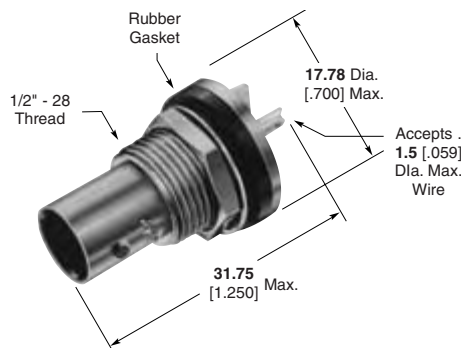
Plating

Body — Nickel

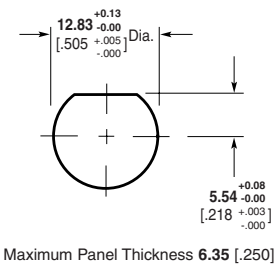
Center Contact — Gold

Dielectric — Polymethylpentene

This connector is designed to prevent moisture from entering the interface from the rear of the connector.



Part No. 5227426-1



Recommended Panel Cutout

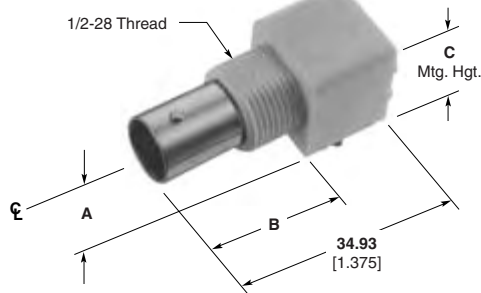
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

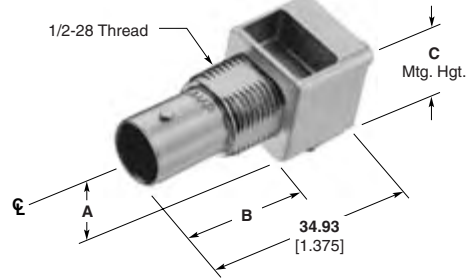
**Right-Angle Jacks
PC Board/Panel Mount**

Body — Nickel
Dielectric — Polymethylpentene

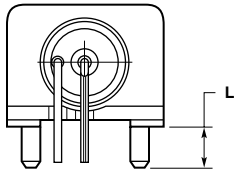
VALOX Body



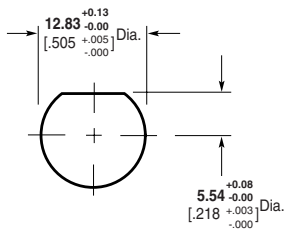
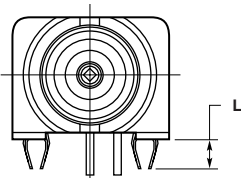
Metal Body



Mounting Post Style



Compliant Post



Maximum Panel Thickness 6.1 [.240]

Recommended Panel Cutout

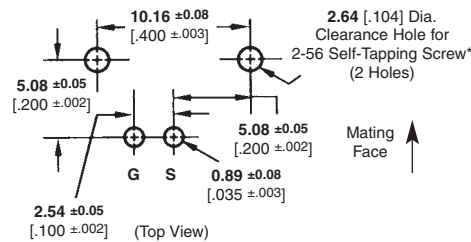
Lockwasher and Jam Nut



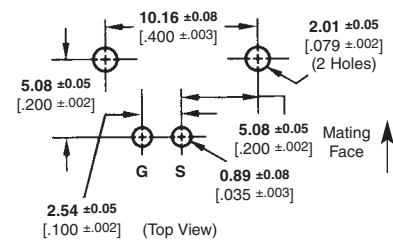
Part No.
1-329632-2

Part No.
1-329631-2

Without Mounting Posts



With Mounting Posts



Recommended PC Board Layouts

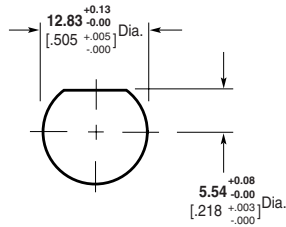
VALOX is a trademark of General Electric Company.

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

BNC Connectors, 50 Ohm (Continued)

**Vertical Jacks
PC Board/Panel Mount**

Plating
Body — Nickel
Dielectric — Polymethylpentene



Maximum Panel Thickness 6.1 [.240]

Recommended Panel Cutout

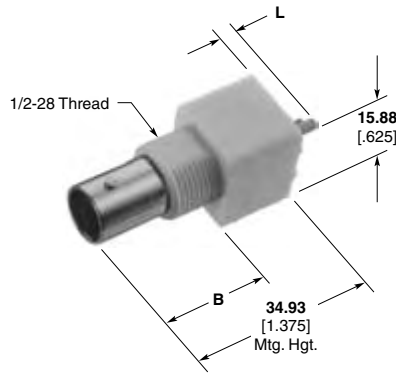
Lockwasher and Jam Nut



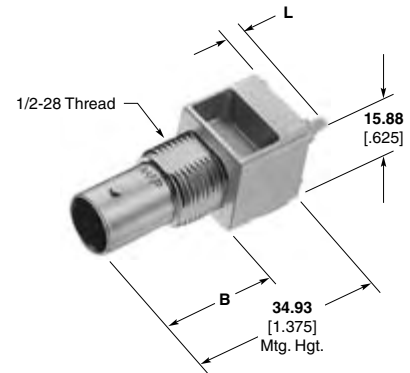
Part No.
1-329632-2

Part No.
1-329631-2

VALOX Body



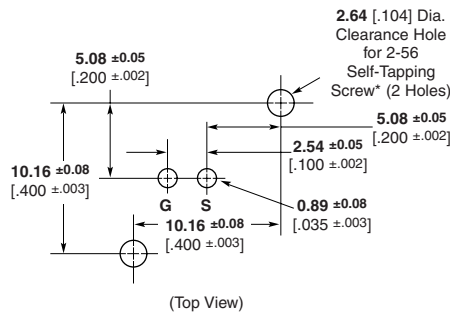
Metal Body



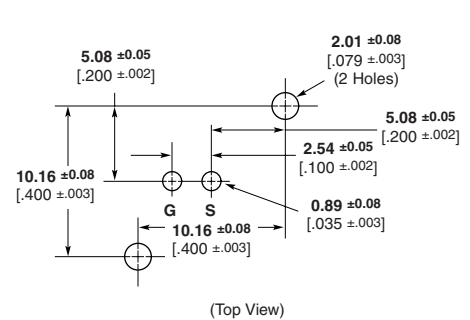
Body Material	Center Contact Plating	Dim. B	Dim. L	Part No.	
				Without Mounting Posts	With Mounting Posts
VALOX, White	Tin	21.21 .835	3.48 .137	5226993-1	5227222-1
	Gold	21.21 .835	3.48 .137	5226993-3	5227222-3
VALOX, Black	Tin	21.21 .835	3.48 .137	5226993-2	5227222-2
	Gold	21.21 .835	3.48 .137	5226993-6	5227222-6
Metal	Tin	20.83 .820	3.48 .137	—	5227671-1
	Gold	20.83 .820	3.48 .137	—	5227673-1

Note: If an Insulating Bushing is required see part number 330620 and Panel Cutout on page 54.

Without Mounting Posts



With Mounting Posts



Recommended PC Board Layouts

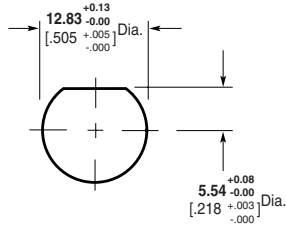
* Screw for board thickness of 2.38 [.093] or greater **Part No. 221108-2**.
Screw for thickness of less than 2.38 [.093] **Part No. 221108-4**.

VALOX is a trademark of General Electric Company.

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

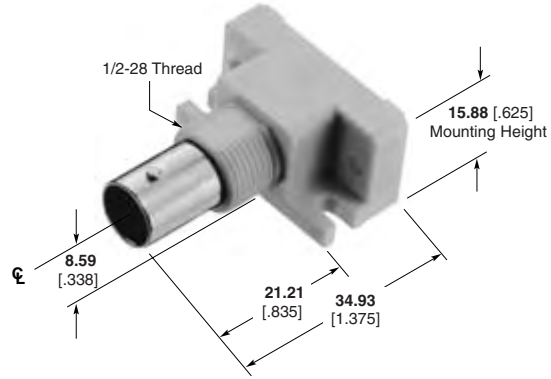
BNC Connectors, 50 Ohm (Continued)

**Jacks with
Mounting Flanges
PC Board/Panel Mount**



Maximum Panel Thickness 6.1 [.240]

Recommended Panel Cutout



Body Material	Center Contact Plating	Part No.
VALOX, White	Tin	5226978-1
	Gold	5226978-3

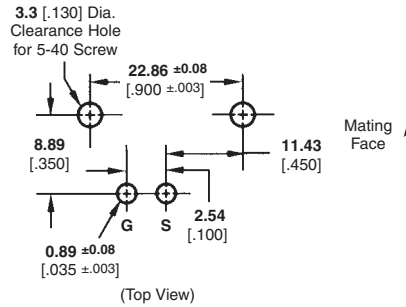
Lockwasher and Jam Nut



Part No.
1-329632-2



Part No.
1-329631-2



Recommended PC Board Layout

VALOX is a trademark of General Electric Company.

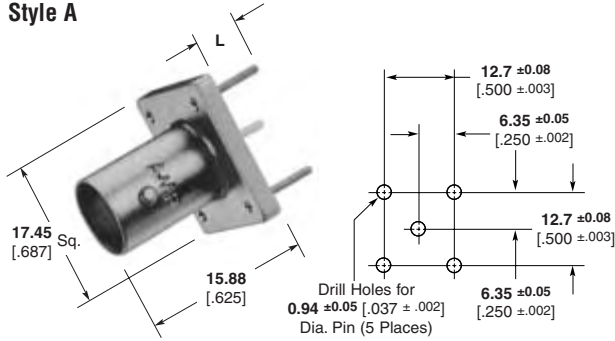
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

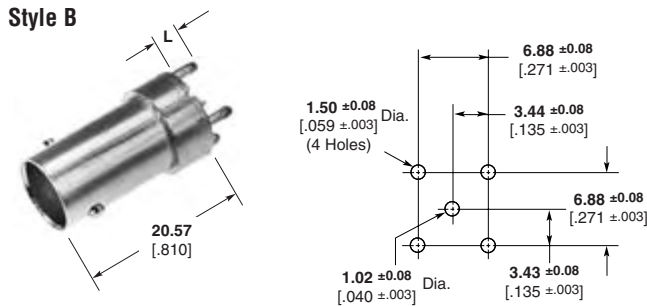
**Vertical Metalized Jacks
PC Board Mount**

Recommended PC Board Layouts

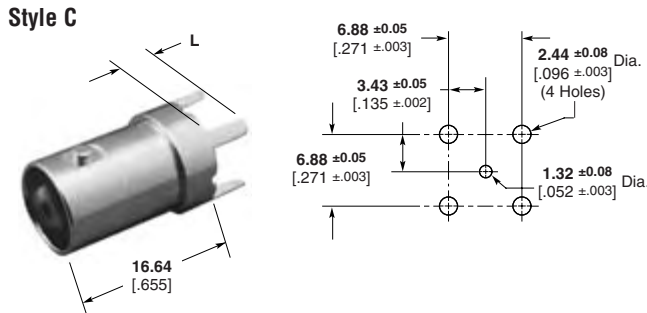
Style A



Style B



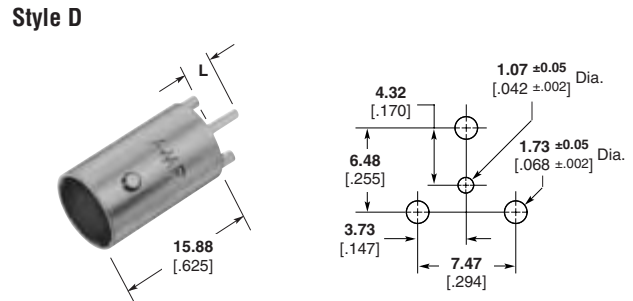
Style C



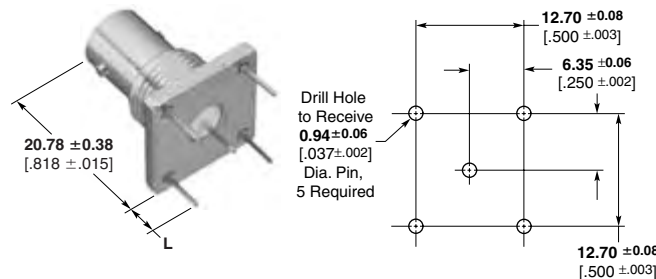
Body Plating	Center Contact Plating	Dielectric	Style	Leg Length L	Part No.
	Silver	VALOX	A	6.35 .250	5227699-1
	Gold	VALOX	A	6.35 .250	5227699-2
	Tin	VALOX	A	6.35 .250	5227699-3
Nickel	Gold	VALOX	A	3.81 .150	5414460-1 ¹
	Silver	VALOX	C	4.45 .175	5222420-1
	Gold	VALOX	E	6.35 .250	5415189-1
	Gold	PTFE	B	3.30 .130	5413969-2
Tin-Lead	Silver	VALOX	C	3.18 .125	5414305-1
	Gold	VALOX	D	3.43 .135	5221123-2

¹With .76 [0.03] standoffs on top of legs.

Style D



Style E (Panel Mount)

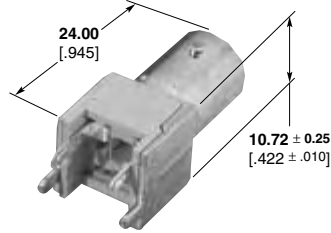


VALOX is a trademark of General Electric Company.

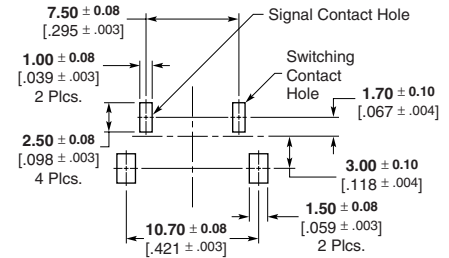
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

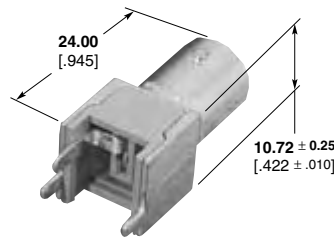
**Vertical Metalized Jacks,
PC Board Mount**



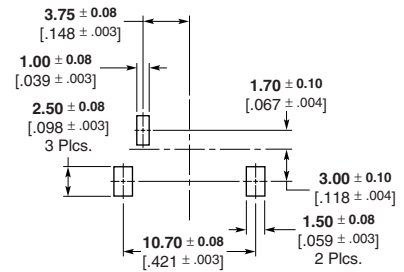
**Part No. 1274314-1
(Switching)**



**Recommended
PC Board Layout**



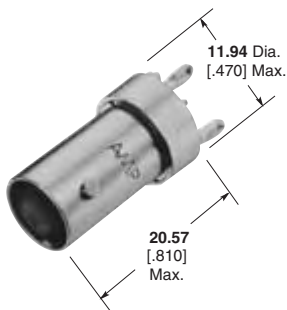
Part No. 1274315-1



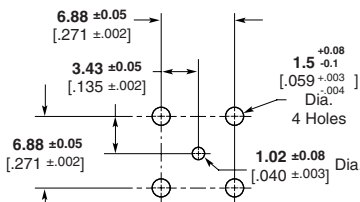
**Recommended
PC Board Layout**

Body Plating	Contact Plating	Dielectric	Part No.
Tin	Silver	Polyphenylene	6274314-1
Tin	Silver	Polyphenylene	6274315-1

**Press Fit Vertical Metalized Jack,
PC Board Mount**



Part No. 5222006-1

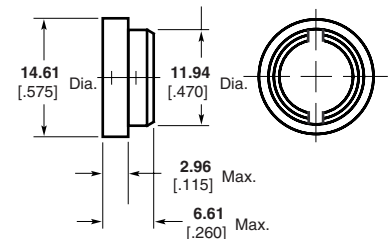


Recommended PC Board Layout
PC Board Thickness Not Less Than 0.99 [0.093]

Insulating Bushing

Material — Polypropylene
Part No. 222163-1

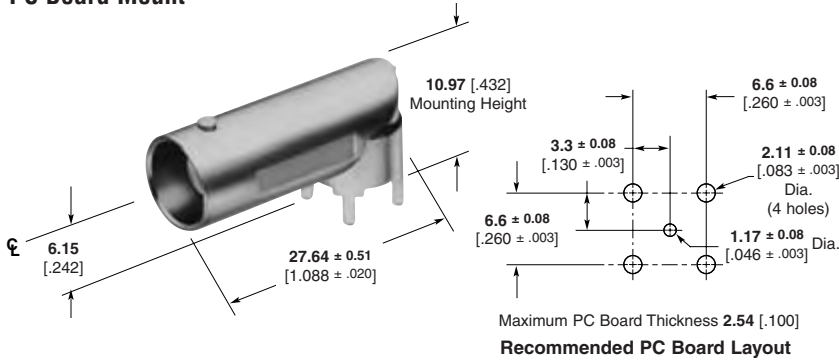
Only to be used on Part Nos. 5222006-1 & 5222462-1



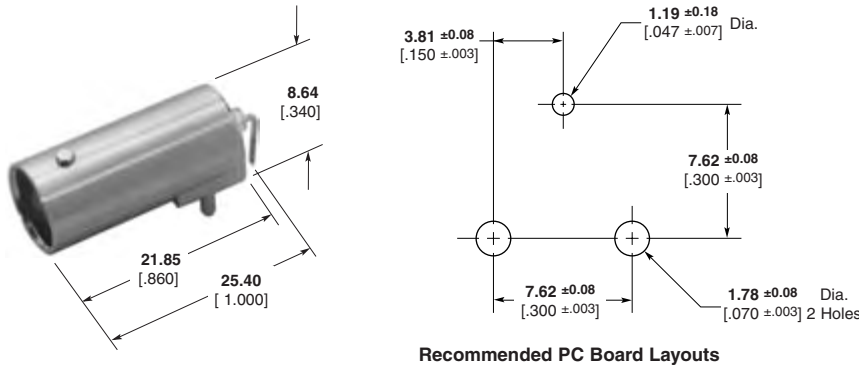
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

**Right-Angle Metalized Jacks,
PC Board Mount**

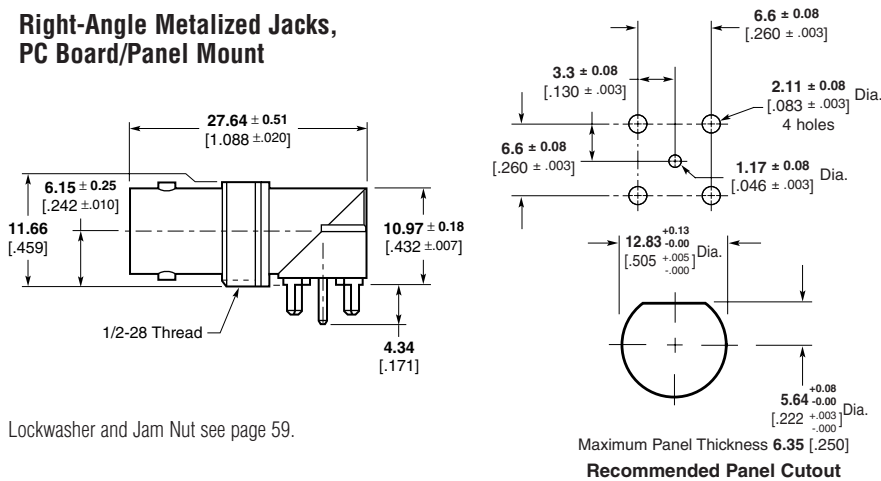


Body Plating	Dielectric	Center Contact Length	Part No.
Nickel	Polymethyl-pentene	4.34 .171	5413631-1
Tin	PTFE	4.34 .171	5413631-2
Nickel	Polymethyl-pentene	3.33 .131	5413631-3



Body	Dielectric	Contact	Part No.
Nickel	TPX	Gold	5414373-1

**Right-Angle Metalized Jacks,
PC Board/Panel Mount**



Body Plating	Dielectric	Part No.
Tin	PTFE	5415025-2
Tin	TPX	5415025-1

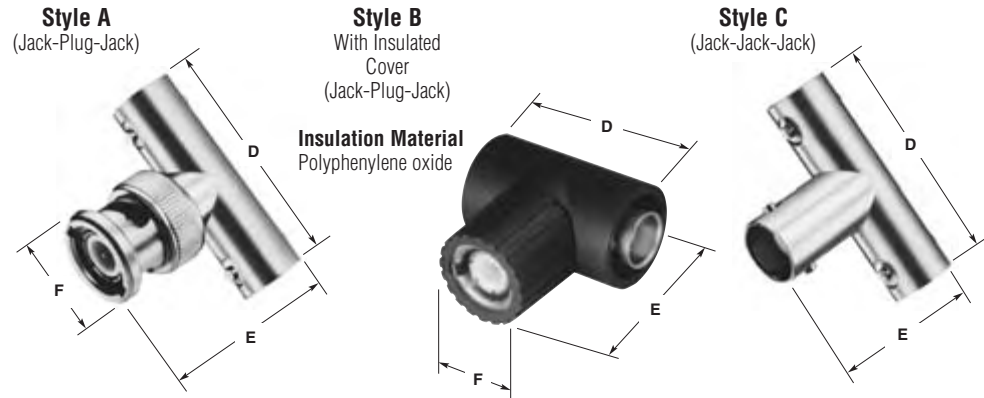
Lockwasher and Jam Nut see page 59.

TPX is a trademark of Mitsui Chemicals America, Inc.

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

BNC Connectors, 50 Ohm (Continued)

Tee Adapters



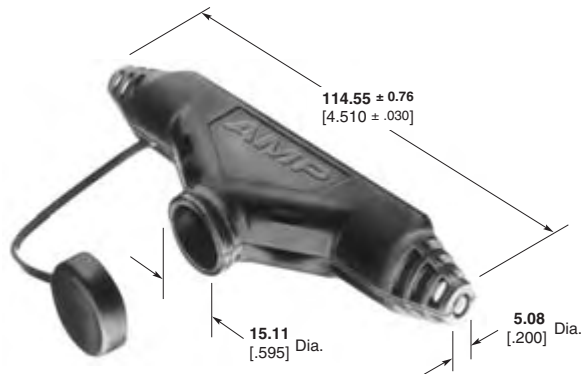
Style	Body Material and Plating	Center Contact Material and Plating	Dielectric	Dimensions			Comparable UG/U Connector	Packaging No. Per Pkg.	Part No.
				D	E	F			
A	Brass, Nickel	BE CU, Gold (30) ²	PTFE	32.54 1.281	26.19 1.031	14.27 .562	274A	Bulk (100)	221543-2
		PH BR, Gold (15) ²	Acetal	33.02 1.300	27.31 1.075	14.50 .571	—	Bulk (100)	5413592-2
	Zinc, Nickel	BE CU, Gold (30) ²	Acetal	33.02 1.300	27.31 1.075	14.50 .571	—	Bulk (100)	5413592-6
		PH BR, Gold (15) ²	Acetal	33.02 1.300	27.31 1.075	14.50 .571	—	Individual (1) ³	5413592-9
		BE CU, Silver (200) ²	Acetal	33.02 1.300	27.31 1.075	14.50 .571	—	Individual (1)	1-5413592-1
B	Zinc, Nickel	BE CU, Gold (30) ²	Acetal	32.54 1.281	31.12 1.225	17.15 .675	—	Bulk (100)	5413366-21
C	Brass, Nickel	BE CU, Silver (200) ²	PTFE	32.54 1.281	23.37 .920	—	—	Bulk (100)	221988-1
	Zinc, Nickel	PH BR, Gold (50) ²	Acetal	32.54 1.281	23.62 .930	—	—	Bulk (100)	5414311-1

¹Gray insulation cover
²(Microinches min thickness)
³(Special graphics)

Tee Adapter Covers

Material — Polypropylene, general purpose

Color	Part No.
Black	221586-1
Ivory	221586-3

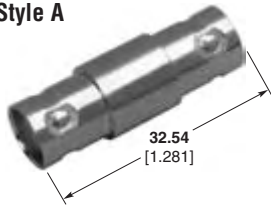


Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

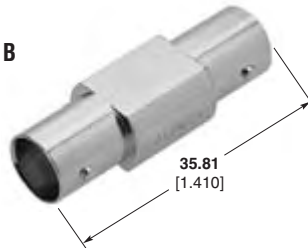
BNC Connectors, 50 Ohm (Continued)

Jack-Jack Adapters

Style A

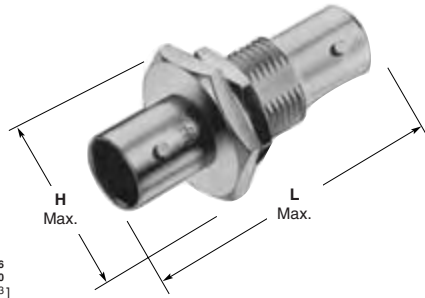
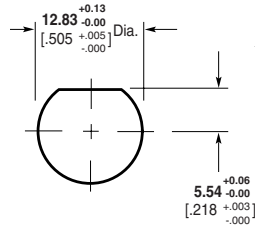


Style B



Body Plating	Center Contact Plating	Dielectric	Style	Part No.
Nickel	Silver	PTFE	A	221551-1
Nickel	Gold	PTFE	A	221551-3
Nickel	Gold	Polymethylpentene	B	5414414-1

Bulkhead Jack-Jack Adapters



Body Plating	Center Contact Plating	Dimensions		Dielectric	Part No.
		H	L		
Nickel	Silver	17.45 .687	38.10 1.500	PTFE	330024
Nickel	Gold1	17.78 .700	36.07 1.420	Polyethylene	5228226-1
Nickel	Gold2	17.78 .700	36.07 1.420	Polyethylene	5228226-3

Plating:

Gold1—0.00127 [.000050] thick Gold2—0.00076 [.000015] thick

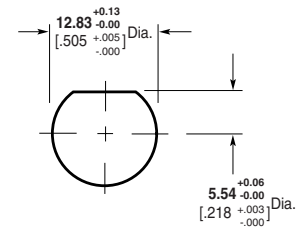
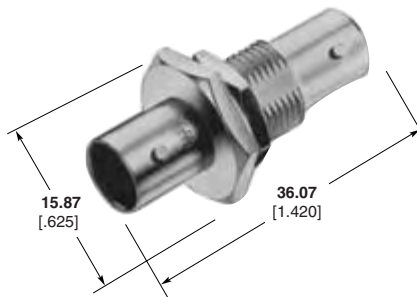
Note: If an Insulating Bushing is required see part number 330620 and Panel Cutout on page 54.

Recommended Panel Cutout

H= 11/16 across flats, 20.32 [.800] across points.

Isolated Bulkhead Jack-Jack Adapter

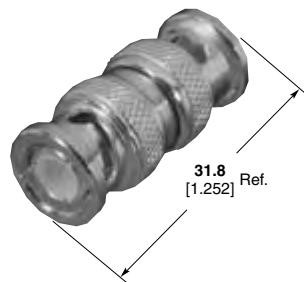
Body Plating	Center Contact Plating	Dielectric	Part No.
Nickel	Gold	Polymethylpentene	5414105-1



Recommended Panel Cutout

H= 11/16 across flats, 20.32 [.800] across points.

Plug-Plug Adapter

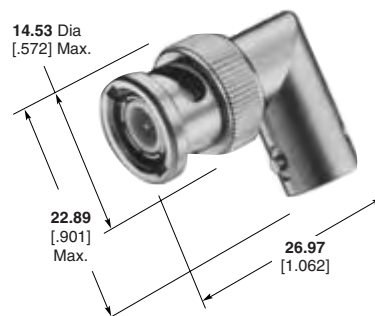


Contact Plating	Body Plating	Part No.
Gold	Nickel	415796-1

Right-Angle Adapters

(Jack-Plug)

Body Plating	Center Contact Plating	Dielectric	Part No.
Nickel	Silver	PTFE	5329517
Nickel	Gold	PTFE	5222165-2
Nickel	Gold	Polymethylpentene	5414666-1



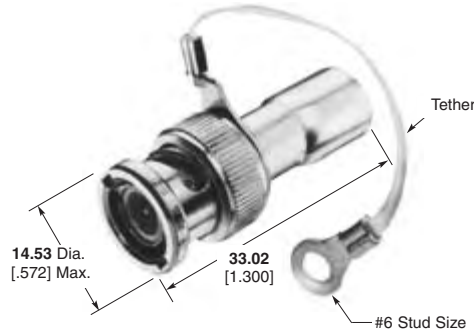
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 50 Ohm (Continued)

**Terminator Plugs
50, 75, 93 Ohm**

Plating

Body—Nickel
Center Contact—Gold
Dielectric—Polyethylene



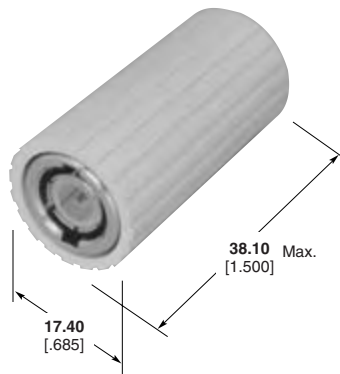
Resistor Specification	Part No.	
	With Tether	Without Tether
1 Watt, 50 Ohm	5221629-1	5221629-4
1 Watt, 75 Ohm	5221629-2	5221629-5
1 Watt, 93 Ohm	—	5221629-6
0.5 Watt, 75 Ohm	—	—
1 Watt, 50 Ohm	1-5221629-6 ¹	—

¹ Tether is conductive with #4 stud size

Insulated Terminators

Insulation Material
Polyphenylene oxide

Long Cover



Register Specification	Color	Cover Style	Part No.
1 Watt, 50 Ohm	Gray	Long	5413557-1
		Short	5413364-2
	Black	Long	5413557-2

* The Short Cover is required when mating the Terminator with a Tee Adapter.

Jack Covers

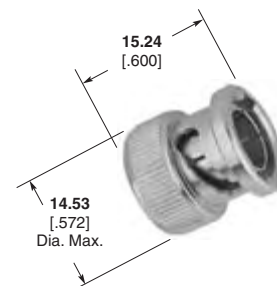
Body Plating	Part No.
Silver	330022
Nickel	1-330022-2



Shorting Caps

Plating

Body—Nickel
Center Contact—Gold



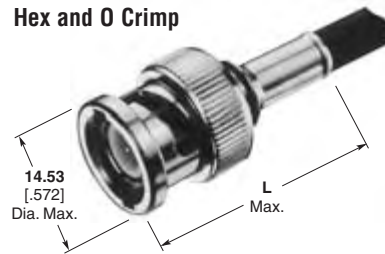
Part No. 413453-1

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

BNC Connectors, 75 Ohm

Plugs, Crimp

These connectors have been designed for optimum performance and have a true 75 ohm impedance the complete length of the connector. The crimp die tooling listed below is different from the equivalent 50 ohm connectors.



Plugs

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
179, 179A, 179B, 187, 187A, 161, BELDEN 9221	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-2	—	5413589-8
	O Crimp	Gold	Nickel	Polyethelene	Commercial	35.56 1.140	318451-2	—	5221185-8
AT&T 735A	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-2	—	1-5413589-0
	O Crimp	Gold	Nickel	Polyethelene	Commercial	27.69 1.090	58174-1	58248-3	1-5221185-8
BELDEN 8218	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-2	—	5413589-3
	O Crimp	Gold	Nickel	Polyethelene	Commercial	27.69 1.090	58174-1	58248-3	5221185-3
140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-1	—	5413589-2
	O Crimp	Gold	Nickel	Polyethelene	Commercial	27.69 1.090	58536-1	58248-2	5221185-2
302, BELDEN 89269, 88241, Hi-Temp 62A, Times PL-62, Berk Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-1	—	5413589-1
	O Crimp	Gold	Nickel	Polyethelene	Commercial	27.69 1.090	58536-1	58248-2	5221185-9
BELDEN 8212, 9104, 9112, 9167, 9240, 9259, 9266, Times FM-59, (RG 59 Type with 20 AWG C.C.)	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-1	—	5413589-7
	O Crimp	Gold	Nickel	Polyethelene	Commercial	27.69 1.090	58536-1	—	1-5221185-0
BELDEN 9145, AT&T 734A	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-1	—	5413589-7
	O Crimp	Gold	Nickel	Polyethelene	Commercial	27.69 1.090	58536-1	—	1-5221185-0
BELDEN 9248, 9114	O Crimp	Gold	Nickel	Polyethelene	Commercial	25.65 1.010	58536-1	—	5221185-1
6, 6A	O Crimp	Gold	Nickel	Polyethelene	Commercial	37.85 1.490	58538-1	58248-1	5221185-7
BELDEN 8281, 9141, 9231, Western Electric 724, 728, 3049	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	29.46 1.160	58425-3	—	5413589-5
	O Crimp	Gold	Nickel	Polyethelene	Commercial	28.45 1.120	58538-1	58248-1	5221185-5
COMM/SCOPE S59 Hec	O Crimp	Gold	Nickel	Polyethelene	Commercial	28.96 1.140	58536-1	—	2-5221185-9
COMM/SCOPE F59 Hec-z	O Crimp	Gold	Nickel	Polyethelene	Commercial	28.96 1.140	58536-1	—	3-5221185-1

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COMM/SCOPE is a trademark of Commscope, Inc.

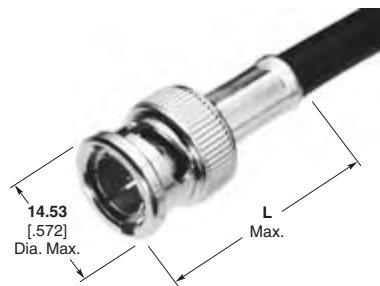
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 75 Ohm (Continued)

Plugs for JIS Cables, Crimp

Plating

Body — Nickel
Center Contact — Gold

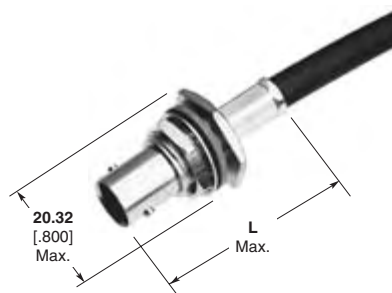


JIS Cable	Termination Type	Dielectric	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
3C-2V	Hex Crimp	Polymethylpentene	29.46 1.160	58425-1	1-5413589-1
2.5C-2V	Hex Crimp	Polymethylpentene	29.46 1.160	58425-2	1-5413589-6

Bulkhead Jacks for JIS Cables, Crimp

Plating

Body — Nickel
Center Contact — Gold
Dielectric — Polymethylpentene



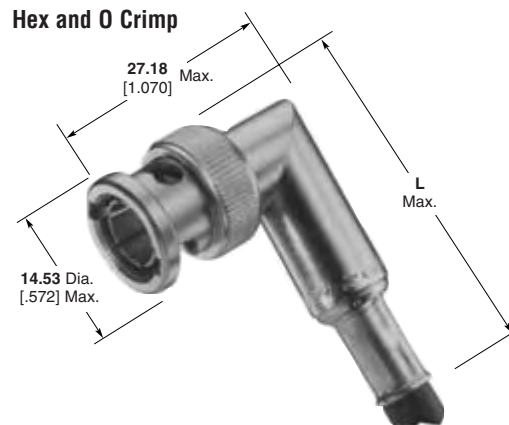
JIS Cable	Termination Type	Dielectric	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Part No.
1.5C-2V	Hex Crimp	75Ω	36.83 1.450	58425-2	5413590-4*

*Packaged in 100 pieces per bag.

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

BNC Connectors, 75 Ohm (Continued)

Right-Angle Plugs, Crimp



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
179, 179A, 179B, 187, 187A, 161 BELDEN 9221	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	58425-2	—	5413588-8
AT&T 735A	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	58425-2	—	1-5413588-0
AT&T KS 19224 L2, RD179 Double Braid	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	58425-2	—	5413588-4
140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	58425-1	—	5413588-2
	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.88 1.570	58536-1	58248-2	5221402-2
BELDEN 8212, 9104, 9112, 9240, 9167, 9259, 9266, Times FM-59, (RG 59 Type with 20 AWG C.C.)	Hex Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.45 1.553	58425-1	—	5413588-9
BELDEN 9145, AT&T 734A	O Crimp	Gold	Nickel	Polymethyl-pentene	Commercial	39.88 1.570	58536-1	—	5221402-4

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

BNC Connectors, 75 Ohm (Continued)

Jacks, Crimp

Hex and O Crimp



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
179, 179A, 179B, 161, 187, 187A, BELDEN 9221	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	33.02 1.300	58425-2	—	5413760-8
	O Crimp	Gold	Nickel	Polyethylene	Commercial	30.48 1.200	318451-2	—	5221199-5
BELDEN 8218	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	33.02 1.300	58425-2	—	5413760-3
140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269	O Crimp	Gold	Nickel	Polyethylene	Commercial	30.48 1.200	58536-1	58248-2	5221199-2
302, BELDEN 88241, 89269, Hi-Temp 62A, Times PL-62, Berk Tek BTDC-59, BTDC-62	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	33.02 1.300	58425-1	—	5413760-1
BELDEN 8212, 9104, 9112, 9240, 9167, 9259, 9266, Times FM-59, (RG 59 Type with 20 AWG C.C.)	Hex Crimp	Gold	Nickel	Polyethylene	Commercial	33.02 1.300	58425-1	—	5413760-9
BELDEN 9248, 9114	O Crimp	Gold	Nickel	Polyethylene	Commercial	30.48 1.200	58536-1	—	5221199-1

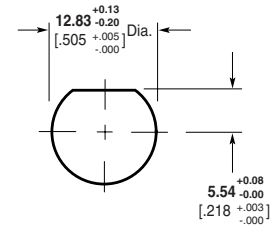
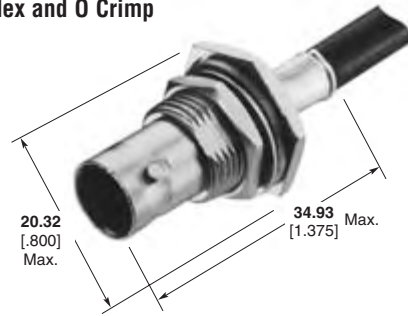
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Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 75 Ohm (Continued)

Bulkhead Jacks, Crimp

Hex and O Crimp



Maximum Panel Thickness 6.1 [0.240]

Recommended Panel Cutout

RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Dim. L	Interchangeable Dies for PRO-CRIMPER Hand Tool 354940-1 or PRO-CRIMPER Adapter 679304-1	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
179, 179A, 179B, 161, 187, 187A, BELDEN 9221	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	36.83 1.450	58425-2	—	5413590-8
	O Crimp	Gold	Nickel	Polyethelene	Commercial	34.93 1.375	318451-2	—	5221221-5
AT&T KS 19224 L2, RD179 Double Braid	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	36.83 1.450	58425-2	—	5413590-4
BELDEN 8218	Hex Crimp	Gold	Nickel	Polyethelene	Commercial	36.83 1.450	58425-2	—	5413590-3
140, 210, 62, 62A, 62B, 59, 59A, 59B, BELDEN 9291, 9209, 9269	O Crimp	Gold	Nickel	Polyethelene	Commercial	34.93 1.375	58536-1	58248-2	5221221-2
BELDEN 8212, 9104, 9112, 9240, 9167, 9259, 9266, Times FM-59 (RG 59 Type with 20 AWG C.C.)	O Crimp	Gold	Nickel	Polyethelene	Commercial	34.93 1.375	58536-1	58248-2	5221221-7
BELDEN 9114, 9248	O Crimp	Gold	Nickel	Polyethelene	Commercial	34.93 1.375	58536-1	—	5221221-1

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

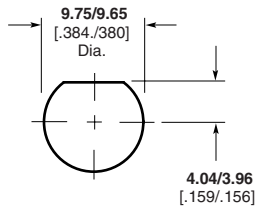
BNC Connectors, 75 Ohm (Continued)

**Bulkhead Solder Jacks
Front Mount**

Plating

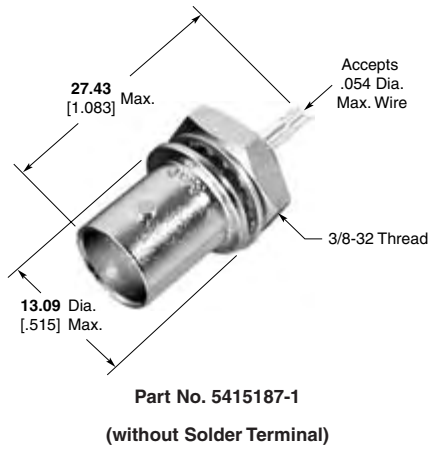
Body—Nickel

Center Contact—Silver

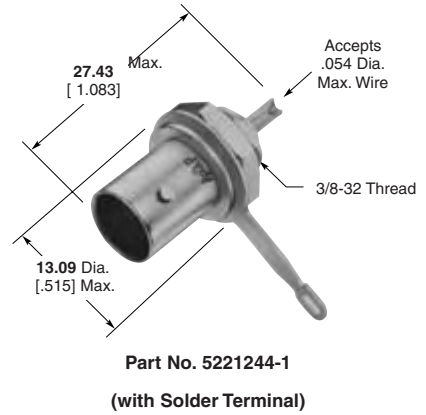


Maximum Panel Thickness **3.18** [.125]

Recommended Panel Cutout

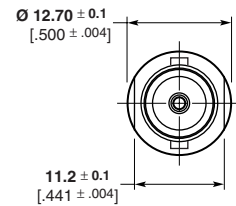
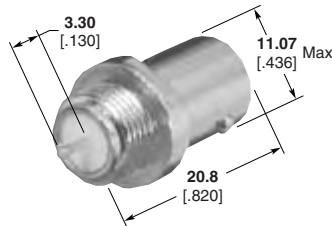


Note: If insulating bushing required use part no. 227223-1 or 221951-1 (for details, reference page 55).



Note: If insulating bushing required use part no. 227223-1 or 221951-1 (for details, reference page 55).

**Bulkhead Jack
PC Board Mount**



**Bulkhead Solder Jack
Rear Mount**

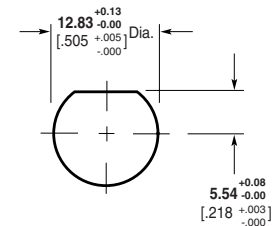
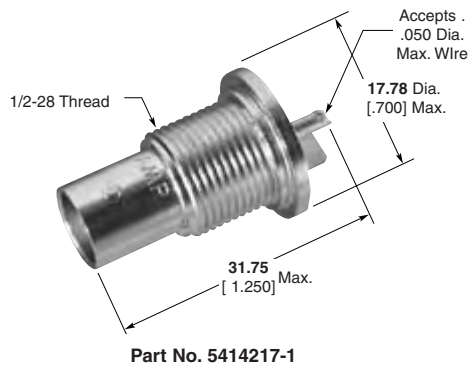
Lockwasher and Jam Nut see page 73.

Plating

Body—Nickel

Center Contact—Gold

Dielectric—Polymethylpentene



Maximum Panel Thickness **6.35** [.250]

Recommended Panel Cutout

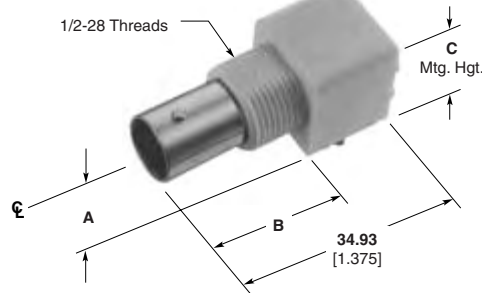
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 75 Ohm (Continued)

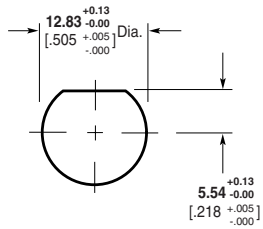
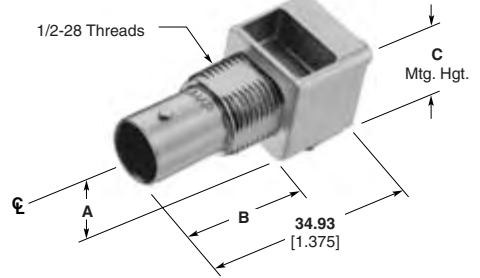
**Right-Angle Jacks
PC Board/Panel Mount**

Outer Shell — Nickel
Dielectric — Polymethylpentene
Lockwasher and Jam Nut see page 73.

VALOX Body

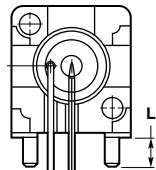


Metal Body



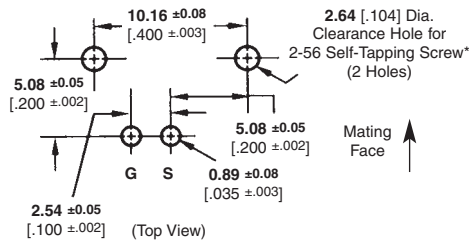
Maximum Panel Thickness 6.1 [240]

Recommended Panel Cutout

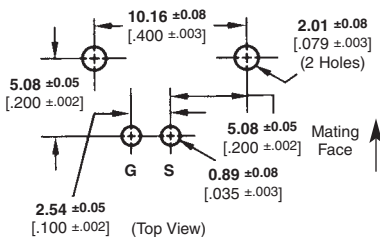


Recommended PC Board Layouts

Without Mounting Posts



With Mounting Posts



* Screw for panel thickness of **2.38** [3/32] or greater
Part No. 221108-2.
Screw for panel thickness of less than **2.38** [3/32]
Part No. 221108-4.

Body Material	Center Contact Plating	Dimensions				Part No.	
		A	B	C	L	Without Mounting Posts	With Mounting Posts
VALOX, Black w/ Compliant Posts (Economy)*	Gold3	6.17 .243	21.21 .835	11.68 .460	2.79 .110	—	5415105-2
VALOX, Black (Economy)*	Gold3	6.17 .243	21.21 .835	11.68 .460	4.01 .158	—	5415105-1
VALOX, White	Gold1	6.91 .272	21.21 .835	13.88 .519	3.48 .137	—	5413194-1
VALOX, White (Economy)*	Gold1	6.91 .272	21.21 .835	13.88 .519	3.48 .137	—	5415634-2
VALOX, Black	Gold1	6.91 .272	21.21 .835	13.88 .519	3.48 .137	—	5413194-2
VALOX, Black (Economy)*	Gold1	6.91 .272	21.21 .835	13.88 .519	3.48 .137	—	5415634-1
VALOX, Black (Economy)*	Gold1	8.59 .338	21.21 .835	15.88 .625	3.48 .137	—	5415633-1
VALOX, White	Gold2	8.59 .338	21.21 .835	15.88 .625	3.48 .137	—	5414459-1
Metal	Gold1	8.25 .325	20.83 .820	15.88 .625	2.16 .085	—	5222092-1
Metal	Gold1	8.25 .325	20.83 .820	15.88 .625	—	5222093-1	—
Metal (Economy)*	Gold1	8.25 .325	20.83 .820	15.88 .625	3.48 .137	—	5414409-1
Metal with Compliant Posts (Economy)*	Gold1	6.91 .272	20.83 .820	12.70 .500	3.48 .137	—	5415417-1
Metal with Compliant Posts (Economy)*	Tin	8.56 .337	21.21 .835	15.88 .625	3.48 .137	—	5415419-1
Metal	Gold1	8.25 .325	20.83 .820	15.88 .625	3.48 .137	—	5222092-3
Metal	Gold1	6.91 .272	20.83 .820	12.70 .500	3.48 .137	—	5414907-1
Metal	Gold1	6.91 .272	20.83 .820	12.70 .500	—	6274072-1	—
Metal (Economy)*	Gold1	6.91 .272	20.83 .820	12.70 .500	3.48 .137	—	6274084-1

*Economy connector uses 50 Ω part with smaller dielectric and stamped and formed contact, Phosphor Bronze contact material (Compare to regular connector which is 75 Ω, screw machined Beryllium Copper).

Plating:

Gold1 — 0.00076 [0.00030] thick
Gold2 — 0.00127 [0.00050] thick

Note: If an Insulating Bushing is required see part number 330620 and Panel Cutout on page 54.

VALOX is a trademark of General Electric Company.

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

BNC Connectors, 75 Ohm (Continued)

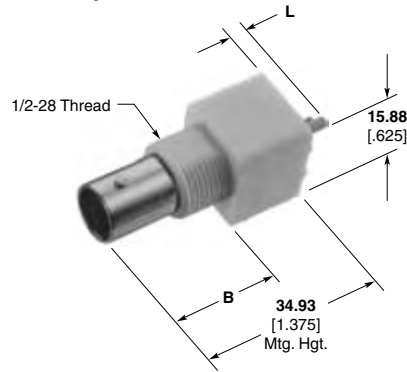
**Vertical Jacks
PC Board/Panel Mount**

Plating

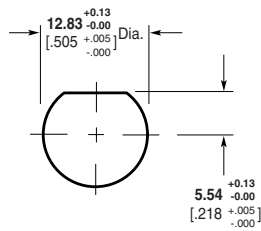
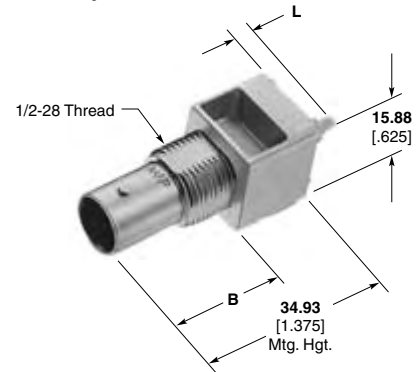
Outer Shell — Nickel

Dielectric — Polymethylpentene

VALOX Body



Metal Body



Maximum Panel Thickness 6.1 [.240]

Recommended Panel Cutout

Body Material	Contact Plating	Dim. B	Dim. L	Part No.
VALOX, Black (Economy)*	Gold1	21.21 .835	3.48 .137	5415632-1
VALOX, White (Economy)*	Gold1	21.21 .835	3.48 .137	5415632-2
Metal	Gold1	20.83 .820	3.48 .137	5222132-1
Metal (Economy)*	Tin	21.21 .835	3.48 .137	5415520-1

*Economy connector uses 50 Ω part with smaller dielectric and stamped and formed contact, Phosphor Bronze contact material (Compare to regular connector which is 75 Ω, screw machined Beryllium Copper).

Plating:

Gold1 — 0.00076 [.000030] thick

Note: If an Insulating Bushing is required see part number 330620 and Panel Cutout on page 54.

Lockwasher and Jam Nut



Part No.
1-329632-2



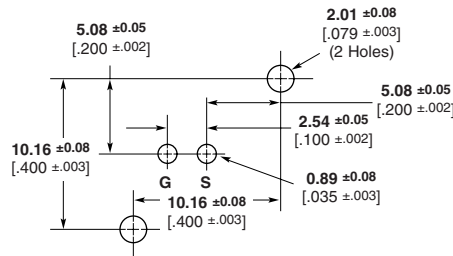
Part No.
1-329631-2

* Screw for panel thickness of 2.38 [3/32] or greater

Part No. 221108-2.

Screw for panel thickness of less than 2.38 [3/32]

Part No. 221108-4.



(Top View)

Recommended PC Board Layout

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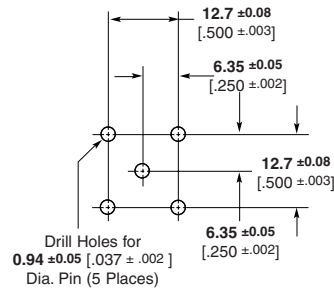
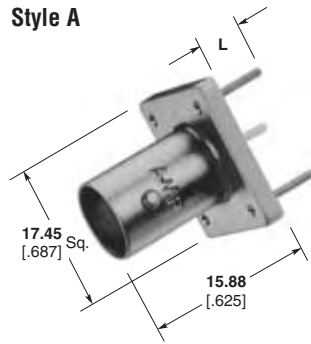
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 75 Ohm (Continued)

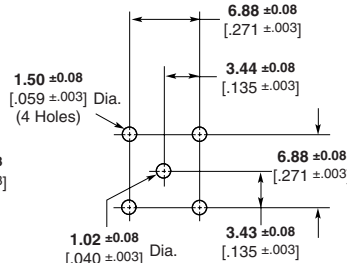
**Vertical Metalized Jacks
PC Board Mount**

Plating
Dielectric — PTFE

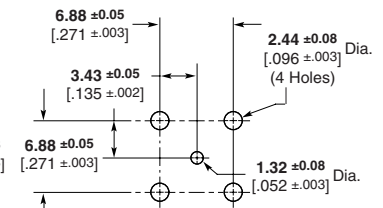
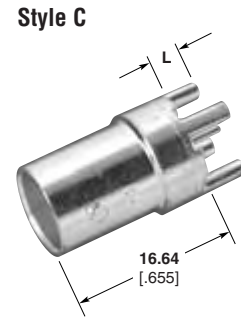
Style A



Style B

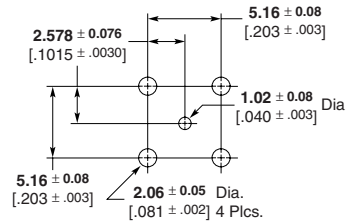
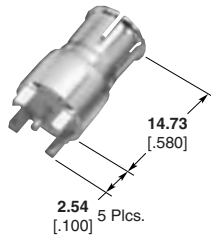


Style C



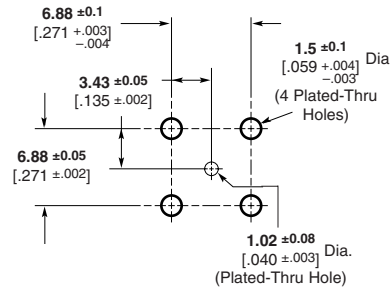
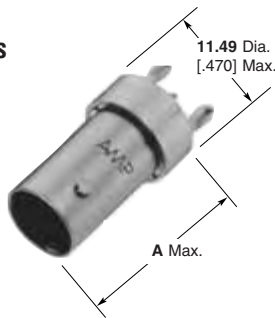
Recommended PC Board Layout

Style F (Push-On)



Body Plating	Center Contact Plating	Style	Leg Length L	Part No.
Nickel	Gold	B	3.30 .130	6274291-2
Tin	Gold	B	3.30 .130	6274291-1
Tin	Gold	B	6.35 .250	6274359-1
Tin	Gold	C	4.44 .175	5414394-1
Nickel	Silver	A	6.35 .250	5413986-1
Tin	Gold	F	2.54 .100	6274360-1

**Press Fit
Vertical Metalized Jacks
PC Board Mount**

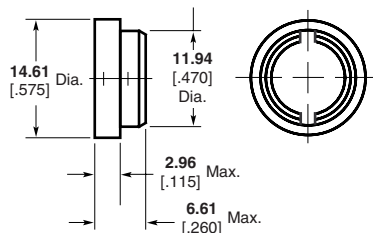


Recommended PC Board Layout

Dim. A	Part No.
20.57 .810	5222462-1
16.26 .640	5414088-1

Insulating Bushing

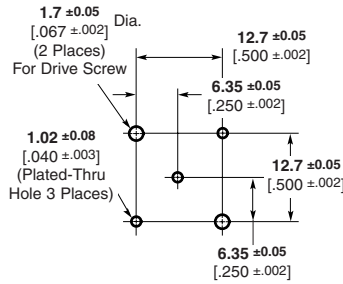
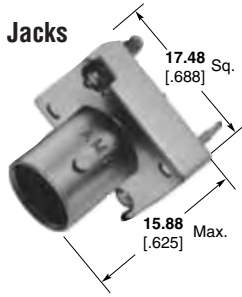
Material — Nylon
Part No. 222163-1
Only to be used on Part Nos.
5222462-1 and 5222006-1



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

BNC Connectors, 75 Ohm (Continued)

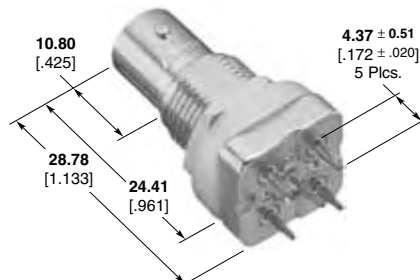
Press Fit Vertical Metalized Jacks PC Board Mount
(Continued)



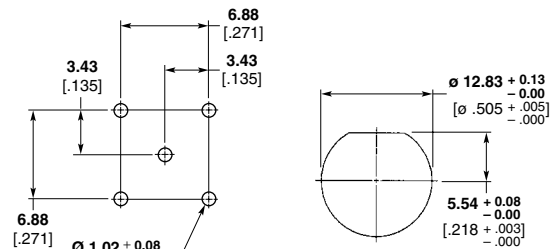
Recommended PC Board Layout

PC Board Thickness (Min.)	Part No.
2.36 .093	5221336-3
3.17 .125	5221336-4

Press Fit, Bulkhead Vertical Metalized Jack includes hardware

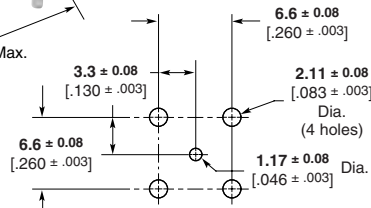
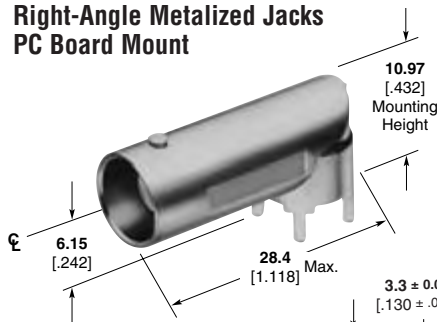


Part No. 6274124-2



Recommended PC Board Layout

Right-Angle Metalized Jacks PC Board Mount

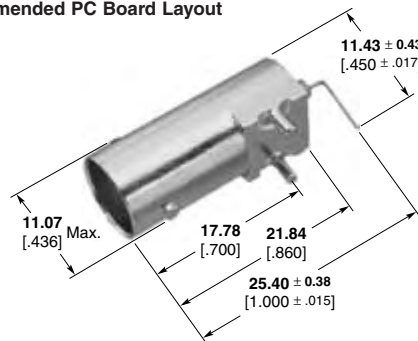


Maximum PC Board Thickness 2.54 [0.100]

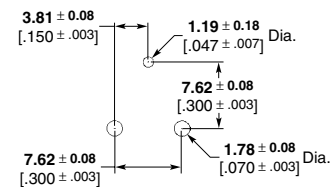
Recommended PC Board Layout

Body Plating	Dielectric	Contact Plating	Center Contact Dimension	Part No.
Nickel	TPX	Gold2	.171 [0.007]	5413558-1
Tin	PTFE	Gold2	.171 [0.007]	5413558-2
Nickel	TPX	Gold2	.131 [0.005]	5413558-3
Nickel	TPX	Gold1	.171 [0.007]	5413558-5

Gold1—0.00076 [0.000030] thick
Gold2—0.00127 [0.000050] thick



Part No. 6274127-1

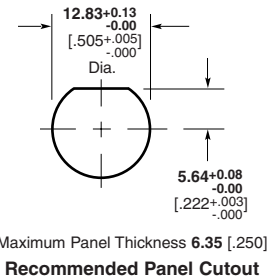
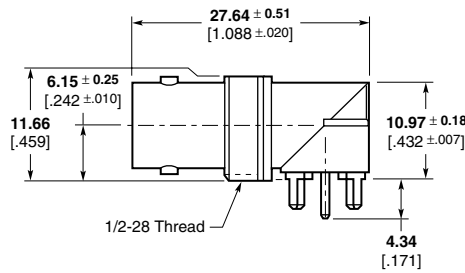


TPX is a trademark of Mitsui Chemicals America, Inc.

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

BNC Connectors, 75 Ohm (Continued)

**Right-Angle Metalized
Jacks
PC Board/Panel Mount**

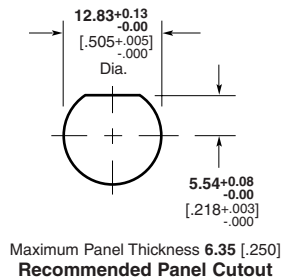
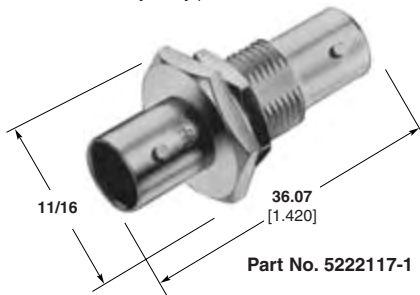


Body Plating	Dielectric	Part No.
Tin	PTFE	6274425-2

**Bulkhead Jack-Jack
Adapter**

Plating

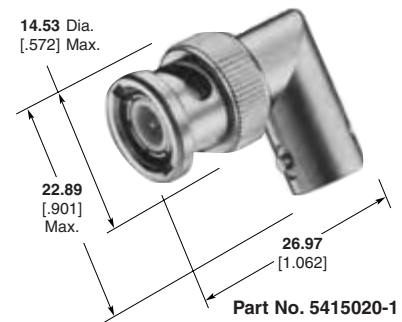
Body — Nickel
Center Contact — Gold
Dielectric — Polymethylpentene



**Right-Angle Adapter
(Jack-Plug)**

Plating

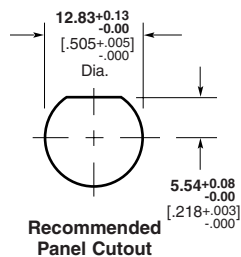
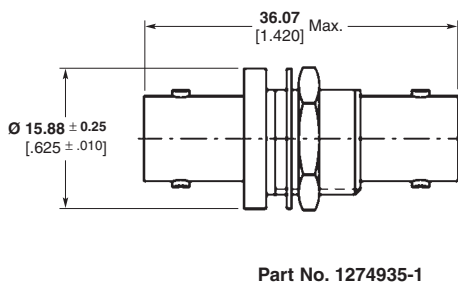
Body — Nickel
Center Contact — Gold
Dielectric — Polymethylpentene



**Bulkhead Jack-Jack
Adapter**

Plating

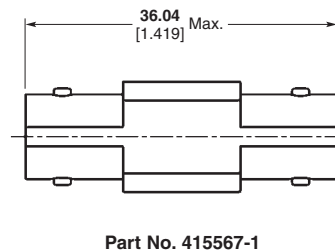
Body — Nickel
Center Contact — Gold
Dielectric — Polymethylpentene



Jack-Jack Adapter

Plating

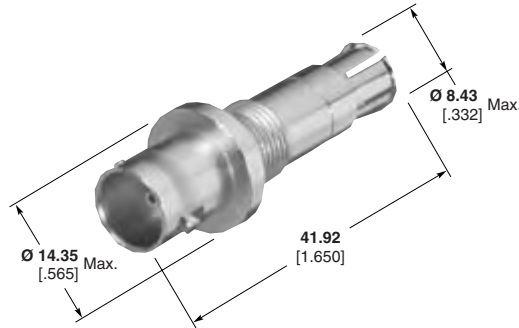
Body — Nickel
Center Contact — Gold
Dielectric — Polymethylpentene



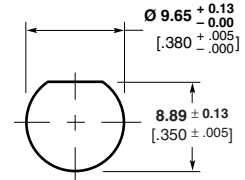
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

BNC Connectors, 75 Ohm (Continued)

Bulkhead Jack-Push On Plug Adapter



Part No. 1274007-1



Recommended Panel Cutout

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

Mini BNC Connectors, 75 Ohm

Product Facts

- Bayonet locking coupling mechanism
- 40% more interconnects in the same area
- Compatible with TROMPETER tooling
- Ideal for telecommunications and broadband applications



Tyco Electronics introduces the Mini BNC series of RF connectors to meet the growing demand for next generation telecommunications and broadband applications where higher connector densities are needed. Preserving the characteristics that have made the standard BNC so popular, the Mini BNC offers the same high performance currently found in standard Tyco Electronics BNC series, but offers 40% more interconnects in the same area.

The Mini BNC offering is an excellent fit for 75 Ohm systems, offering 500 mating cycles, electrical performance through 2 GHz, and is completely interchangeable with competitive miniature BNC offerings. Tyco Electronics' Mini BNC product offers the same advantage of the bayonet locking mechanism as our standard BNC, allowing quicker connect and disconnects than standard

threaded interfaces. It uses standard BNC installation tooling meaning there is no need for retraining of field telco installers, and it utilizes the same PCB footprint on the jack side, providing a drop in replacement for DS3 telco applications.

Mini BNC connector configurations currently available include PCB, panel mount, and flexible cable. Other options can be reviewed as well, including additional cable sizes, adapters, PCB surface mounting, and tape and reel packaging. Call your local sales office or authorized distributor for additional information or samples of the Mini BNC connector series.

Tyco Electronics is a leading supplier of RF and Microwave connectors and cable assemblies, and provides advanced technology products from well known and industry leading brands, including AMP and M/A-COM.

Material and Finish

- Shells, Bodies, Mtg Nuts** — Brass, nickel plated
- Washers** — Stainless Steel, nickel plated
- Ferrule** — Copper or Brass, tin plated
- Center Contacts** — Phos Bronze and Brass, gold plated
- Dielectrics** — PTFE

Electrical Characteristics

- Frequency** — DC – 2 GHz
- Nominal Impedance** — 75 ohms
- Voltage Rating** — 300 Volts (VRMS maximum) @ Sea Level
- VSWR** —
1.10 max to 500 MHz (Return Loss -26.4 dB)
1.16 max to 1 GHz (Return Loss -22.6 dB)
- Insulation Resistance** — 1,000 megohms minimum
- Dielectric Withstanding Voltage** — 1,000 Volts (VRMS maximum) @ Sea Level
- Contact Resistance** — 12 milliohms maximum

Mechanical Characteristics

- Connector Durability** — 500 mating cycles
- Force to Engage** — 7 pounds maximum
- Force to Disengage** — 1 pound minimum
- Center Contact Retention** — 2 pounds minimum
- Cable Retention** — 20 pounds minimum
- Vibration** — EIA-364-28, Test Condition VII, Condition D
- Shock** — EIA-364-27, Method H

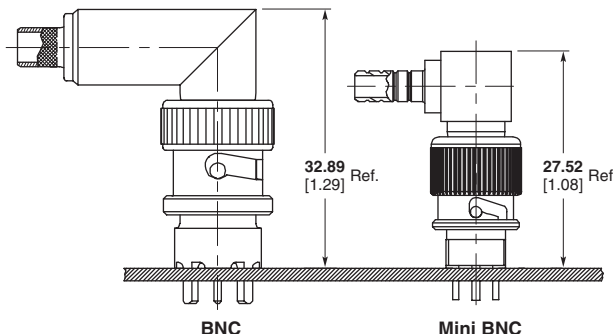
Environmental Characteristics

- Temperature Rating** — -40 to +85°C
- Moisture Resistance** — EIA-364-31, Method II, Condition C
- Thermal Shock** — EIA-364-32

Note: Performance specifications are typical, but may not apply to all connector types.

Related Product Data

- Product Specification** — 108-2159
- Sample Kit** — 1773042

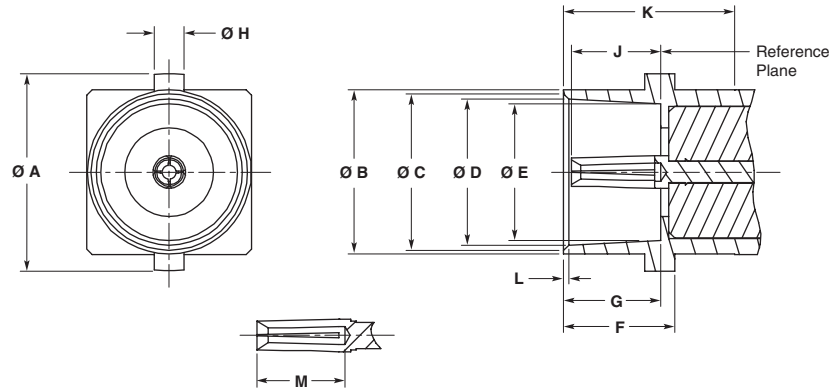


TROMPETER is a trademark of Trompeter Electronics, Inc.

Mini BNC Connectors, 75 Ohm (Continued)

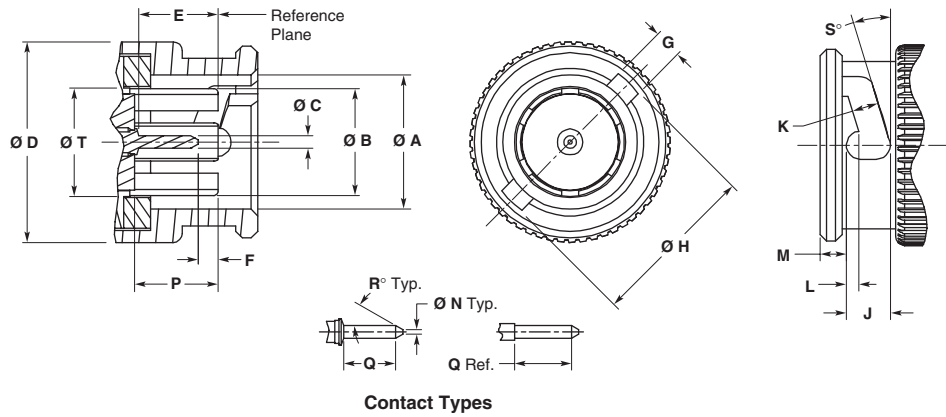
Interface Dimensions

Mini BNC Jack



Dimensions											
A	B	C	D	E	F	G	H	J	K	L	M
8.89–9.14	7.37–7.62	7.11–7.21	6.63–6.73	6.20–6.30	5.03–5.13	4.39–4.50	1.32–1.42	3.86–4.27	7.70	0.18–0.30	4.01
.350–.360	.290–.300	.280–.284	.261–.265	.244–.248	.198–.202	.173–.177	.052–.056	.152–.168	.303 Min.	.007–.012	.158 Min.

Mini BNC Plug



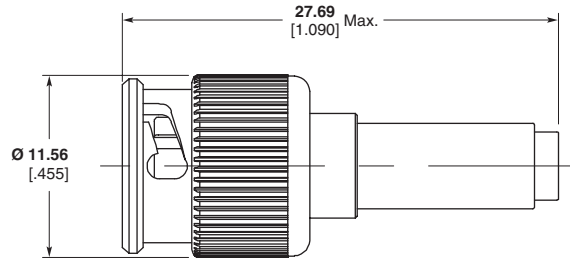
Dimensions									
A	B	C	D	E	F	G	H	J	
7.70–7.80	—	0.71–0.76	11.43–11.68	4.27–4.93	0.94–1.35	1.57–1.68	9.60–9.70	2.50–2.59	
.303–.307		.028–.030	.450–.460	.168–.194	.037–.053	.062–.066	.378–.382	.098–.102	

Dimensions									
K	L	M	N	P	Q	R	S	T	
1.57–1.68	0.64–0.74	1.47–1.57	0.20–0.30	4.62–4.93	2.84–3.38	29°–31°	14°–16°	6.20–6.30	
.062–.066	.025–.029	.058–.062	.008–.012	.182–.194	.112–.133			.244–.248	

Mini BNC Connectors, 75 Ohm (Continued)

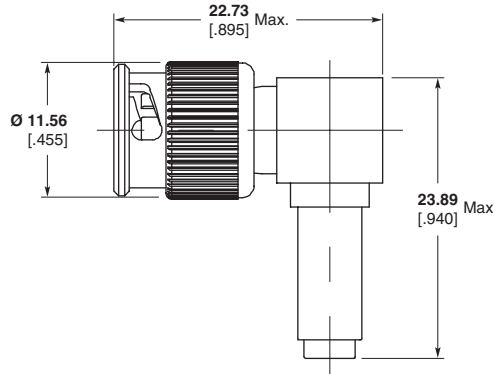
Flexible Cable — Crimp Attachment

Straight Cable Plug



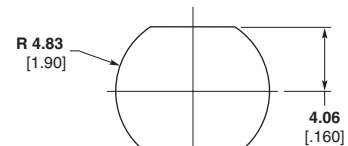
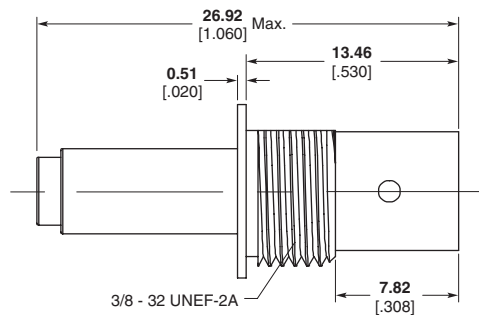
Cable	Part Number
735A	1274563-1
734A	1274563-2
RG 179	1274563-3

Right-Angle Cable Plug



Cable	Part Number
735A	1274566-1
734A	1274566-2
RG 179	1274566-3

Bulkhead Cable Jack



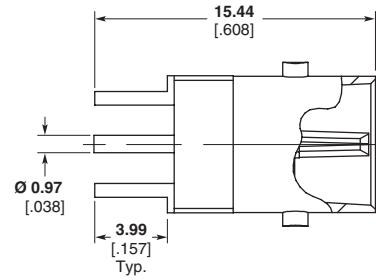
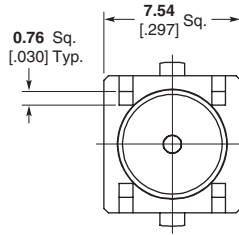
Recommended Panel Cutout
Tolerance: ± 0.08 [.003]

Cable	Part Number
735A	1274568-1
734A	1274568-2
RG 179	1274568-3

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

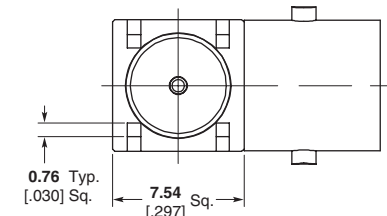
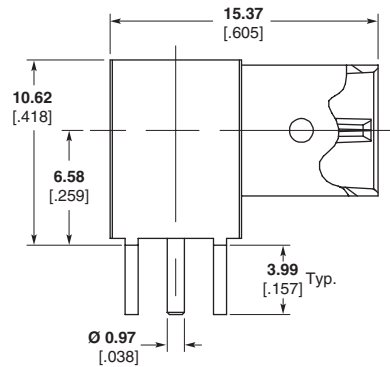
Mini BNC Connectors, 75 Ohm (Continued)

**Printed Circuit Board
Straight Jack Receptacle**



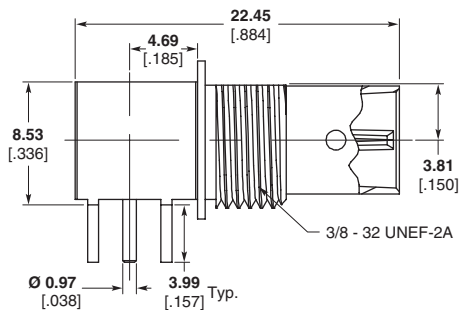
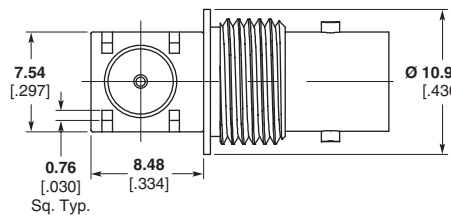
Part Number
1274571-1

Right-Angle Jack Receptacle



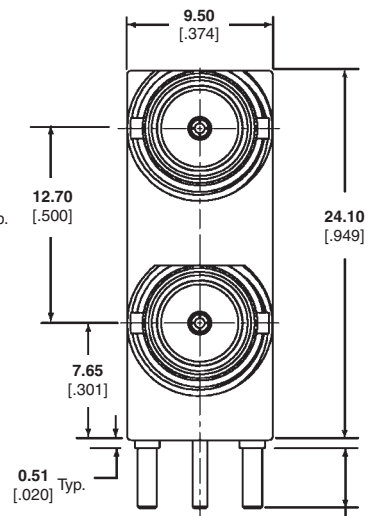
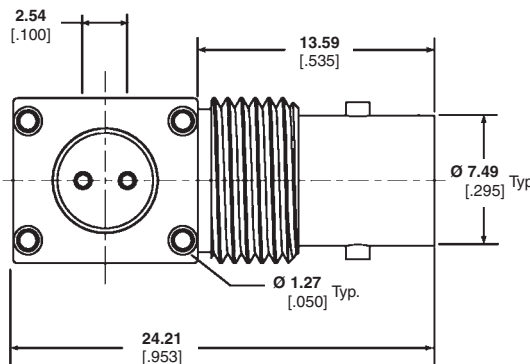
Part Number
1274572-1

Right-Angle Bulkhead Jack Receptacle



Part Number
1274584-1

**2 Position, Right-Angle,
Bulkhead Jack Receptacle**



Description	Part Number
With Hardware	1274663-2
Without Hardware	1274684-1

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

3.94 [.155] Typ.

Decoupled Connectors

Product Facts

- Built-in chip capacitors filter high-frequency noise to panel ground
- PC board mounting with vertical and standard or low-profile right-angle configurations
- Cable mount bulkhead BNC version available
- Drop-in replacement for Tyco Electronics standard BNC printed circuit board connectors
- One-piece design and robotic capacity to reduce assembly time



Tyco Electronics capacitively decoupled connectors provide the fast, better way to reduce noise and reduce ground loops on coaxial interconnections. The high-frequency noise generated by fast rise times can cause both false triggering of circuits as well as emissions that can be radiated or conducted outside the equipment. Such emissions can interfere with nearby equipment. Ground loops are also a problem for networked systems. Ground loops are caused when two interconnected units are at different voltage potentials.

The typical way to handle such EMI and ground loop problems is to decouple the cable shield from the ground panel by soldering a ceramic disk capacitor between the cable shield and the panel. The capacitor shunts high-frequency noise to ground. While effective, this approach is time consuming and expensive.

The Capacitively Decoupled connector has built-in chip capacitors. These capacitors establish the electrical contact between the outer shield and a clip. This clip provides a short electrical

path between the capacitors and panel. As a result, high-frequency noise is effectively shunted to ground, while the DC path is blocked.

The connectors offer compatibility in design and manufacture. The same footprint and dimensional envelope make them a drop-in replacement for Tyco Electronics standard BNC or TNC printed circuit board connectors. In addition, they can be robotically picked and placed for high-speed automated assembly to pc boards.

Product Specification

108-1263 — BNC Decoupled PCB Press-Fit Connection

108-1269 — BNC Decoupled PCB Connectors

108-1490 — BNC Decoupled Cable Mount

Decoupled Connectors (Continued)

**PC Board/Panel Mount
Jacks Decoupled to Panel**

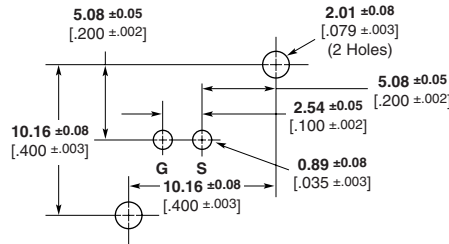
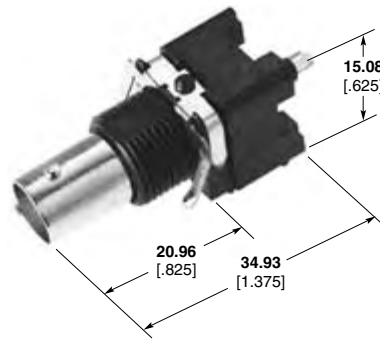
**Style A
Vertical BNC**

Material

Body — VALOX, black
Dielectric — Polymethylpentene

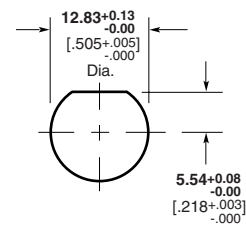
Note: Both styles are shown with a standard clip. See next page for other clip styles.

For height dimensions see chart on page 85.



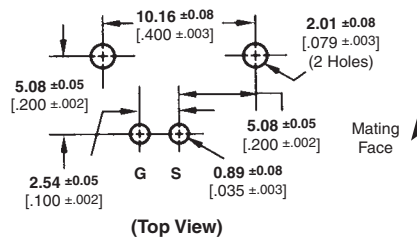
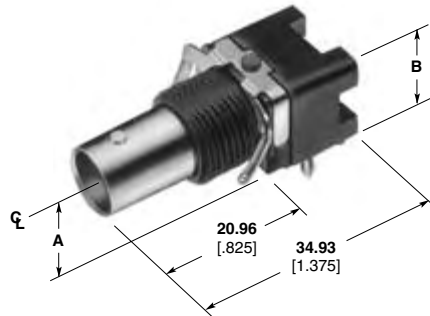
(Top View)

Recommended PC Board Layout



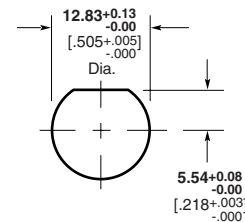
Maximum Panel Thickness 6.1 [0.240]
Recommended Panel Cutout

**Style B
Right-Angle BNC**



(Top View)

Recommended PC Board Layout

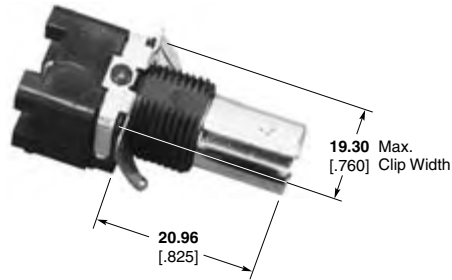


Maximum Panel Thickness 6.1 [0.240]
Recommended Panel Cutout

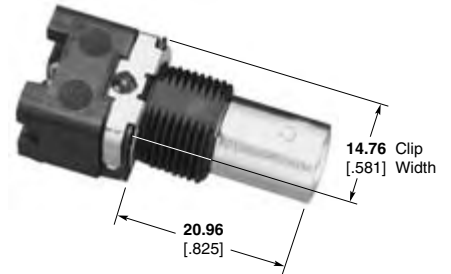
VALOX is a trademark of General Electric Company.

Decoupled Connectors (Continued)

Clip Styles

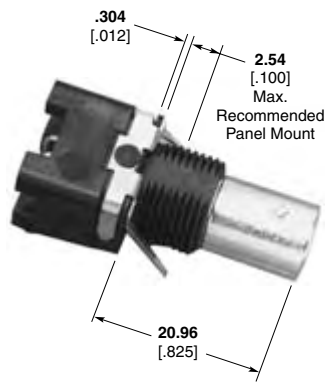


Standard



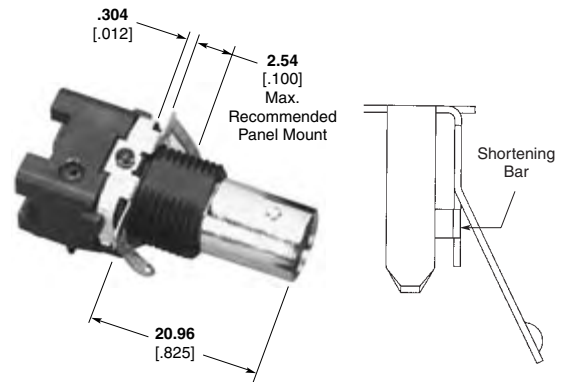
Flush

For closer centerline-to-centerline connector spacing



Extended

For use with or without a jam nut



Short Electrical Path

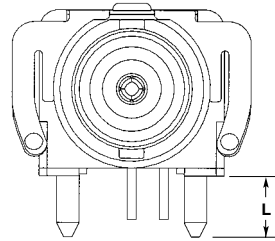
For reduced series inductance in ground path

Decoupled Connectors (Continued)

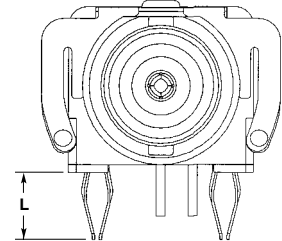
**PC Board/Panel Mount
Jacks Decoupled to Panel**

(Continued)

Mounting Post Styles



Standard



Compliant

BNC

Description	Capacitance/ Voltage	Clip	Mounting Post	L Mounting Post Length	B*	A*	Style ¹	Part No.
Vertical 50Ω	9400pF 1500VDC	Standard	Standard	3.48 .137	—	—	A	5413476-2
Standard Right-Angle 50Ω	9400pF 1500VDC	Standard	Standard	4.01 .158	15.88 .625	8.59 .338	B	5413524-2
	9400pF 1500VDC	Standard	Compliant	2.79 .110	15.88 .625	8.59 .338	B	5413524-5
Standard Right-Angle W/O Mounting Post 50Ω ²	9400pF 1500VDC	Standard	—	—	15.88 .625	8.59 .338	B	5414215-1
Low Profile Right-Angle 50Ω	9400pF 1500VDC	Standard	Standard	4.01 .158	13.18 .519	6.91 .272	B	5413515-2
	20000pF 500VDC	Standard	Standard	4.01 .158	13.18 .519	6.91 .272	B	5413515-3
	7900pF 1600VDC	Standard	Compliant	2.79 .110	13.18 .519	6.91 .272	B	5413515-7
	9400pF 1500VDC	Standard	Compliant	4.70 .185	13.18 .519	6.91 .272	B	5413515-8
	9400pF 1500VDC	Standard	Compliant	2.79 .110	13.18 .519	6.91 .272	B	5413515-9
Low Profile Right- Angle W/Special Clip & High Temperature Housing 50Ω	9400pF 500VDC	Extended	Compliant	2.79 .110	13.18 .519	6.91 .272	B	5414284-2
Low Profile Right-Angle W/High Temperature Housing 50Ω	9400pF 500VDC	Flush	Compliant	4.70 .185	13.18 .519	6.91 .272	B	5414352-1
Low Profile Right-Angle 75Ω	9400pF 1500VDC	Standard	Standard	4.01 .158	13.18 .519	—	B	5414094-2
Ultra Low Profile Right-Angle 75 Ω	9400pF 1500VDC	Standard	Standard	4.01 .158	6.17 .243	11.68 .460	—	5415103-1
	9400pF 1500VDC	Standard	Compliant	2.79 .110	6.17 .243	11.68 .460	—	5415103-2

¹See pages 83 and 84 for Connector Styles.

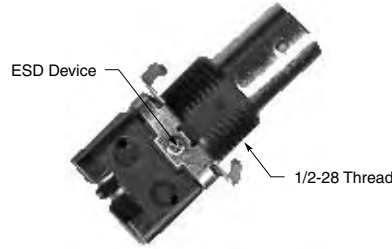
²See customer drawing for PC Board Layout.

*See page 83 for dimension reference.

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

Decoupled Connectors (Continued)

**Right-Angle BNC Jack
PC Board/Panel Mount
Decoupled to Panel
ESD Protected**



See page 83 Style B for panel cutout and recommended PC board configuration.

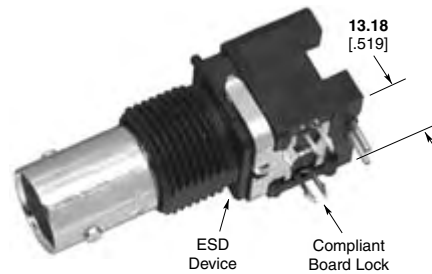
Note: See Tyco Electronics Customer drawing for voltage breakdown rating.

Description	Capacitance/ Voltage	Contact Plating	Clip	Mounting Post	L Mounting Post Length	B*	A*	Part No.
50Ω Product								
Low Profile Right-Angle W/ ESD Protection	7900pF 1500VDC	Gold1	Standard	Compliant	2.79 .110	13.18 .519	6.91 .272	5414651-3
75Ω Product								
Standard Right-Angle W/ ESD Protection	9400pF 1500VDC	Gold1	Standard	Standard	4.01 .158	15.88 .625	8.59 .338	5415085-1
Low Profile Right-Angle ESD Protected	9400pF 1500VDC	Gold1	Flush	Compliant	2.79 .110	13.18 .519	6.91 .272	5415216-1

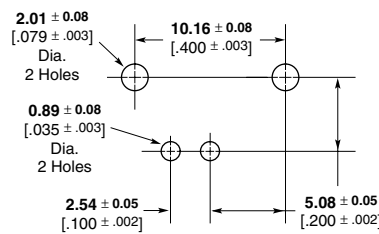
*See page 83 for dimension reference.

**Right-Angle BNC Jack
PC Board/Panel Mount
Decoupled to Board
ESD Protected**

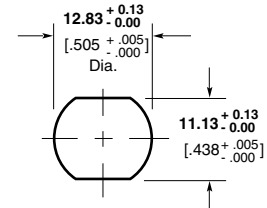
Capacitance	Voltage
9400pF	1500VDC



Part No. 5415205-1



Recommended PC Board Layout



Recommended Panel Cutout

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

Decoupled Connectors (Continued)

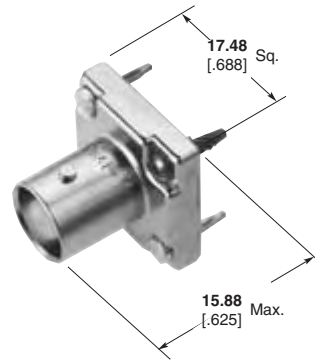
**Press-Fit, Vertical BNC
Jacks, PC Board Mount
Decoupled to Board**

Material

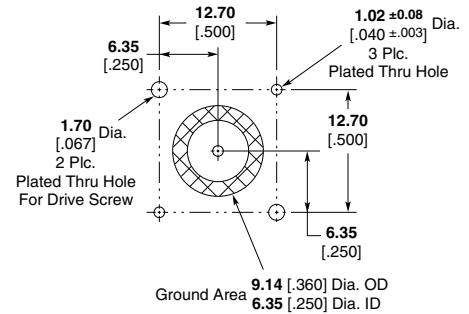
Dielectric—PTFE
Isolation Pad—Polyester

Plating

Body—Nickel
Ground Clip—Nickel
Center Contact—Gold
Action Pin Legs—Gold

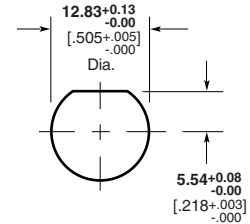
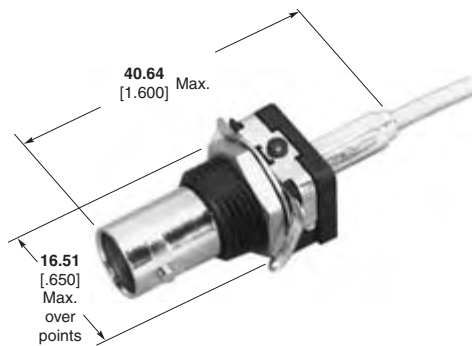


Part No. 5414553-1 50 Ohm
Part No. 5414493-4 75 Ohm



Recommended PC Board Layout

**BNC Bulkhead Jacks,
Crimp**



Recommended Panel Cutout

Description	RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Dielectric	Style	Interchangeable Dies for Hand Tool 69710-1 & 626 Pneu. Head 318161-1	Part No.
50Ω	RG 58, 58A, 58B, 58C	Hex Crimp	Gold	Nickel	Polymethylpentene	Commercial	58436-1	5414758-1
50Ω	RG 174, 174A, 316, 188, 188A	Hex Crimp	Gold	Nickel	Polymethylpentene	Commercial	58436-3	5414758-2
50Ω	RG 174, 174A, 316, 188, 188A	Hex Crimp	Gold	Nickel	Polymethylpentene	Commercial	58436-3	5414758-3
75Ω ESD	RG 179, 187	Hex Crimp	Gold	Nickel	Polymethylpentene	Commercial	58425-2	5415779-1

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

Self-Terminating PC Board Connectors

Product Facts

- Built-in chip resistor terminates the signal line to the proper characteristic impedance when in the unmated state
- Can be ordered with standard resistance values (50, 75 and 100 Ohms)
- Fits into printed circuit board footprint of standard BNC PCB connectors
- One-piece design is compatible with robotic insertion and wave soldering

Tyco Electronics Self-Terminating printed circuit board BNC connectors provide the capability to automatically terminate an input-output port to the system characteristic impedance. This feature eliminates the need for external terminators when an I/O port is not being used. The Self-Terminating BNC jack contains a chip resistor which bridges the signal and ground paths when the connector is not mated to a BNC plug. When mated, the resistor is switched out of the circuit for direct signal transmission to the board.

The footprint of this connector is compatible with standard BNC connectors, allowing it to be easily installed into existing circuit board designs and suitable for robotic insertion for high speed automated assembly onto the PC board.

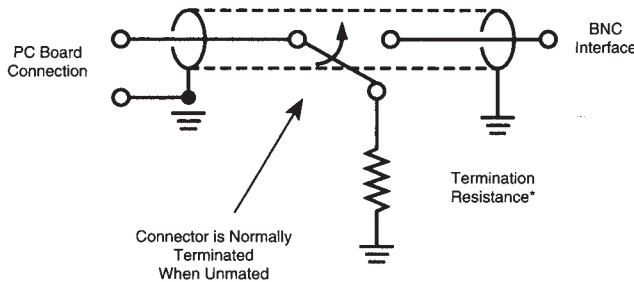
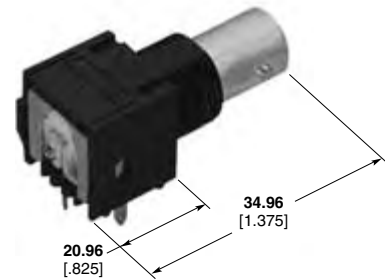
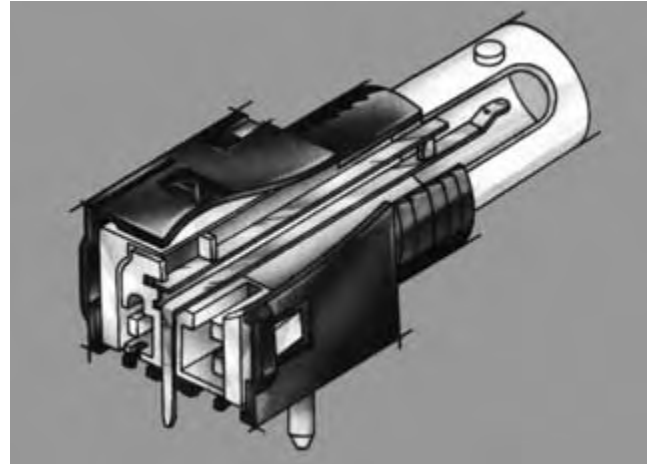
The Self-Terminating BNC is available in standard resistance values for use in networking and video systems. Contact Tyco Electronics for new designs that include switching and capacitively decoupled versions.

Material

Body — Polyester, PBT, black
Dielectric — Polyester, PBT, natural

Plating

Shell — Tin
Center Contact — Gold on mating end and Tin on solder tails






Product	Termination Resistance	Part Number
Self-Terminating BNC PCB	75Ω	5414367-2

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

Twin BNC Connectors

Product Facts

- Crimp connectors require only one-stroke crimping of both conductors, plus braid and cable support
- Lower installed cost with one-stroke crimp
- Reduced noise levels because of Tyco Electronics solderless crimping techniques
- Captive inner contact stability
- No danger of heat damage to coaxial cable
- Ease of inspection
- Listed under the Component Program of Underwriters Laboratories Inc., File No. E81956 
- PC Board soldered connectors are recognized under the Component Program of Underwriters Laboratories Inc., File No. E81956 
- Certified by Canadian Standards Association File No. LR 7189 

The Twin BNC Connector is a quick connect/disconnect, weatherproof connector designed in accordance with MIL-C-39012 to meet the stringent requirements of MIL-STD-1553 Multiplex Data Bus.

These twin coaxial cable connectors are a unique development by Tyco Electronics which has resulted in the production of high level RF components. Termination of these connectors to twin conductor cable is made with Tyco Electronics exclusive one crimp method which simultaneously terminates inner conductors, outer braid and cable support with one stroke of the matching Tyco Electronics tool.

These rugged connectors accommodate today's most commonly used twin conductor cable sizes.

Materials

- Brass** — QQ-B-626
- Beryllium Copper** — QQ-C-530
- PTFE** — MIL-P-19468
- Polypropylene** — General purpose
- Copper, Annealed** — QQ-C-576
- Phosphor Bronze** — QQ-B-750
- Silicone Rubber** — ZZ-R-765

Plating

- Silver** — QQ-S-365
- Nickel** — QQ-N-290
- Tin** — ASTM-B-545



Electrical Characteristics

- Nominal Impedance** — Non-constant
- Working Voltage** — 500 volts rms sea level
- Insulation Resistance** — 5000 megohms min.
- Dielectric Withstanding Voltage** — 1500 volts rms sea level

Mechanical Characteristics

- Mating/Unmating** — Bayonet lock-quick connect/ disconnect
- Cable Attachment** — Crimp type - Simultaneous center and braid
- Coupling Nut Retention** — 100 lbs. [444 N] min.
- Cable Retention** — 25 lbs. [111 N] min., RG 108A/U cable
- Durability** — 200 cycles per MIL-C-39012

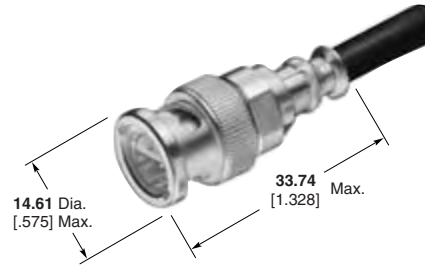
Environmental Characteristics

- Temperature Range** — -55°C to +85°C
- Vibration** — MIL-STD-202, Method 204, Condition B
- Shock** — MIL-STD-202, Method 213, Condition I, 100 G's
- Salt Spray** — MIL-STD-202, Method 101, Condition B
- Temperature Cycling** — MIL-STD-202, Method 102, Condition C

Packaging — All connectors are packaged individually unless otherwise noted.

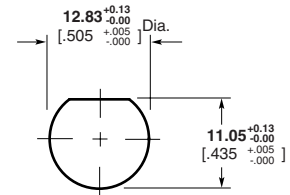
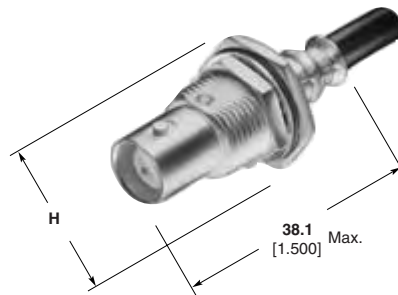
Twin BNC Connectors (Continued)

Plugs



RG/U Cable	Center Contact Plating	Body Plating	Dielectric	Integral Die Hand Tool	Part No.
108, 108A	Silver	Silver	PTFE	69667	5332225
BELDEN 9272, 89272	Silver	Nickel	Polypropylene	69667	5332225-5
TROMPETER TWC-124-2	Silver	Silver	PTFE	69667	5332225-3
ROLM 49D2401 RAYCHEM 7824D013	Silver	Nickel	Polypropylene	69667	5332225-6

Bulkhead Jack



Maximum Panel Thickness 3.18 [.125]

Recommended Panel Cutout

H = 17.45 [.687] Max. across flats, 20.32 [.800] Max. across points

RG/U Cable	Center Contact Plating	Body Plating	Dielectric	CERTI-CRIMP Hand Tool with Integral Die	Integral Die Hand Tool	Die Insert for Tools: Hand Tool-69710-1, 626 Pneu. Head 318161-1	Part No.
108, 108A BELDEN 9272, 89272	Silver	Silver	PTFE	—	69667	69708	5332342

BELDEN is a trademark of Belden Wire and Cable Company.

ROLM is a trademark of the Rolm Corp.

TROMPETER is a trademark of Trompeter Electronics, Inc.

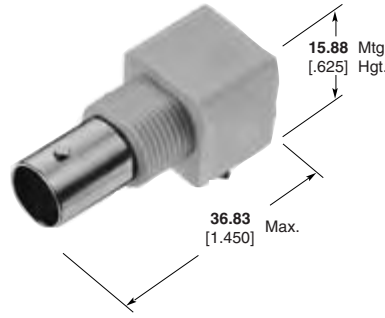
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

Twin BNC Connectors (Continued)

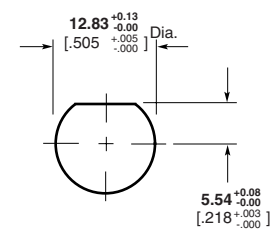
**Right-Angle
PC Board/
Panel Mount Jacks**

Material

Body — VALOX, White
Center Contacts — Gold
Dielectric — Polymethylpentene

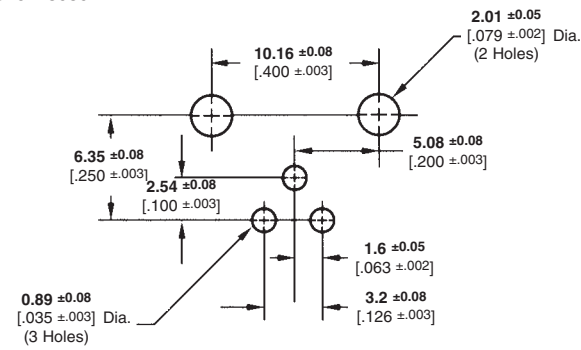


**With Mounting Posts
Part No. 5228686-1**



Maximum Panel Thickness 6.1 [0.240]

Recommended Panel Cutout



Recommended PC Board Layout

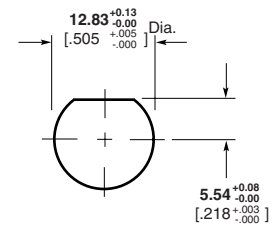
**Vertical
PC Board/
Panel Mount Jacks**

Material

Body — VALOX, White
Center Contacts — Gold
Dielectric — Polymethylpentene

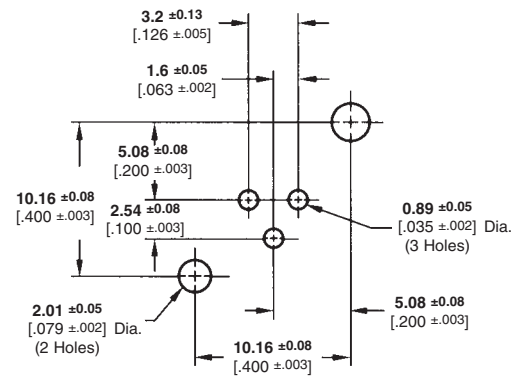


**With Mounting Posts
Part No. 5221198-1**



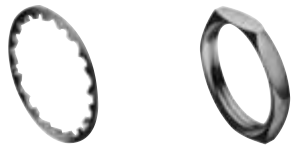
Maximum Panel Thickness 6.1 [0.240]

Recommended Panel Cutout



Recommended PC Board Layout

Lockwasher and Jam Nut



**Part No.
1-329632-2**

**Part No.
1-329631-2**

VALOX is a trademark of General Electric Company.

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

Twin BNC Connectors (Continued)

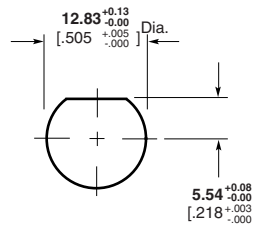
**Vertical
PC Board Mount
Jack**

Plating

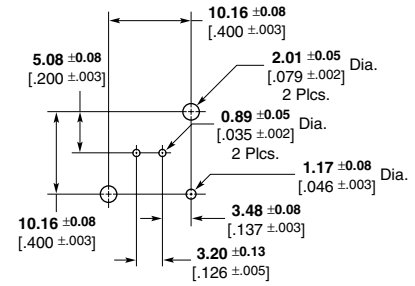
Body — Nickel

Center Contacts — Gold

Dielectric — Polymethylpentene



Part No. 5415832-1
Recommended Panel Cutout



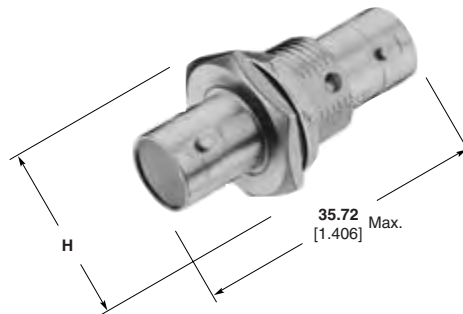
PCB Configuration

**Bulkhead Jack
Adapter**

Plating

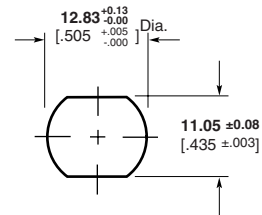
Body — Silver

Center Contacts — Silver



H = 17.45 [.687] Max. across flats, 20.32 [.800] Max. across points

Part No. 5332215



Maximum Panel Thickness 3.18 [.125]

Recommended Panel Cutout

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

F Series and G Series Connectors

Product Facts

- Designs meet SCTE requirements where applicable
- Plugs, jacks and adapters available
- Board mount and cable mount available
- Surface mount connectors available
- Sealed product available
- High current carrying capabilities



Tyco Electronics F Series connectors offer performance, which is driven by evolving OEM requirements and expectations. Improved VSWR beyond 1 GHz, high current carrying capability, and pressure sealed products are now part of the standard product offering. Designs compliant with ANSI/SCTE, Bellcore, UL/CSA, and various other

industry and agency standards are also available.

Both cable applied and PCB terminated products are offered in a variety of styles. The cable connectors are designed for fast, accurate termination with tools common to the industry. Application cost reductions can be achieved using Tyco Electronics PCB terminated products; press-fit designs eliminate the

need for soldering. Center of gravity control and PCB retention designs prevent tipping and eliminate fixturing during soldering. Integral mechanical keys and "D flats" prevent rotation in panels.

These products provide the highly reliable, cost-effective solutions demanded by today's evolving marketplace.

Product Specification

- 108-1518 — Connector Coaxial, F Series, RF, Single Crimp Plug
- 108-1643 — Connector Coaxial, F Series, RF, PCB Mounted
- 108-1755 — Connector Economy, F Series, RF Coaxial, PCB
- 108-1757 — Connector, 15 amp, G Series Jack, PCB
- 108-1758 — Connector, F Series Jack, PCB, Surface Mount
- 108-1629 — Feedthrough, Sealed F Port Jack

Instruction Sheets

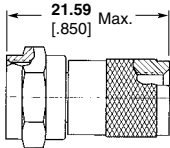
- 408-9221 — Coaxial Series F Plug Connectors
- 408-4402 — Series F & G Coaxial Cable Bulkhead Jack Connector
- 408-4291 — PRO-CRIMPER II Hand Tool Assembly 58622-1 and 58622-2

F Series Connectors

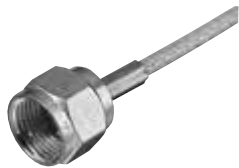
Plugs



RG/U Cable	Termination Type	Body Plating	Style	"B" Threads	PRO-CRIMPER† Hand Tool Assembly	Part No.
6	Crimp	Nickel	A	—	58425-3, 58436-2, or 58621-2	221539-2
6	Screw-On	Nickel	B	M7x1	—	221540-2
59 BELDEN 9104, 9100*	Crimp	Nickel	C	—	58425-3, 58436-2, or 58621-2	414766-1
59	Crimp	Nickel	C	—	58425-3, 58436-2, or 58621-2	414766-8

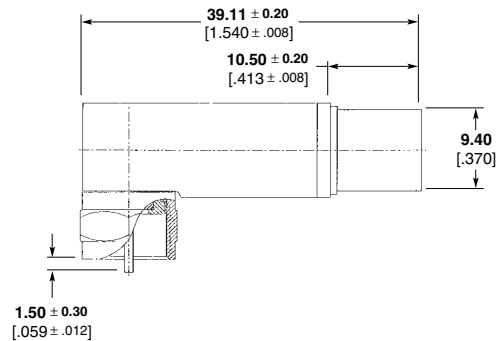


*NID to inside cable.
† 8.23 [.324] Hex Crimp.



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Termination Tooling	Part No.
179 Headend Patch Panel	Crimp	Tin	Nickel	Braid: M 22520/5-01 w/ DANIELS Die Set Hx4-1637 (.128 Hex) Contact: M 22520/2-01 w/ DANIELS Positioner K727, Pos. 2	5415226-1

Right-Angle Plugs, Crimp



RG/U Cable	Termination Type	Center Contact Plating	Body Plating	Termination Tooling	Part No.
6 Std. Cable	Crimp	Tin	Nickel	use .324 inch Hex	887098-1

BELDEN is a trademark of Belden Wire and Cable Company.
DANIELS is a trademark of Daniels Manufacturing Corporation.

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

F Series Connectors (Continued)

**Bulkhead Jacks, Crimp,
Rear Mount**



RG/U Cable	Center Contact Plating	Body Plating	Die Set	Part No.
179	Bright Tin	Nickel	220210-1*	5415712-1

*Use with hand tool 354940-1

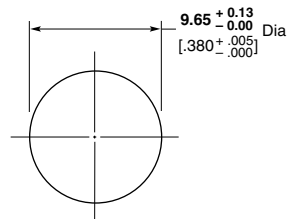
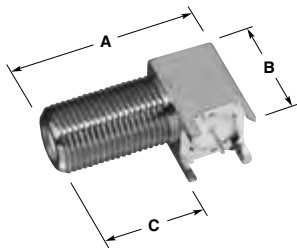
**Bulkhead Jacks, Crimp,
Splash Resistant,
Front Mount**



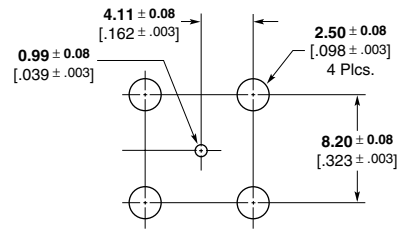
RG/U Cable	Center Contact Plating	Body Plating	Die Set	Part No.
179	Bright Tin	Nickel	220210-1*	5415569-2

*Use with hand tool 354940-1

**Right-Angle
PC Board Mount
Jacks**

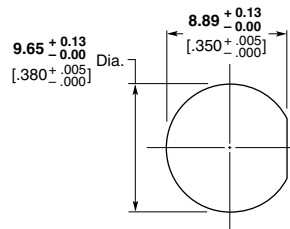
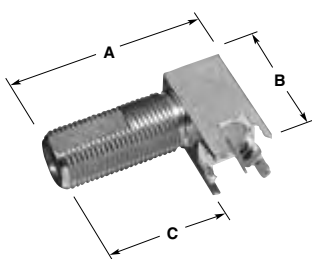


Recommended Panel Cutout

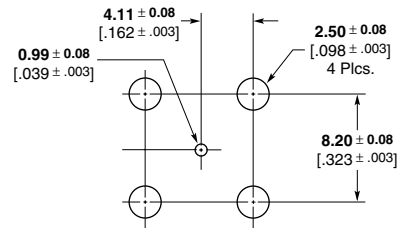


PC Board Layout

Body Plating		Center Contact Plating	Dimensions			Part No.
Barrel	Base		A	B	C	
Nickel	Tin	Tin	25.40 1.00	14.48 .570	15.90 .626	5415302-1
Nickel	Tin	Tin	31.75 1.250	14.48 .570	22.25 .876	5415302-2



Recommended Panel Cutout



PC Board Layout

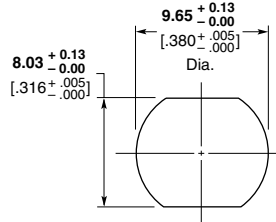
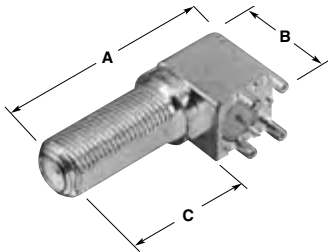
Body Plating		Center Contact Plating	Dimensions			Part No.
Barrel	Base		A	B	C	
Nickel	Tin	Tin	29.97 1.180	17.53 .690	12.19 .480	5887078-1

*Connectors will accept a center conductor, diameter of **0.51-1.19** [.020-.047]

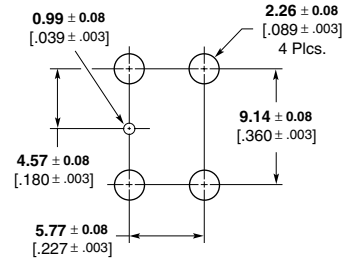
Note: Part Numbers are RoHS compliant except: ♦ Indicates non-RoHS compliant.

F Series Connectors (Continued)

**Right-Angle
PC Board Mount
Jacks (Continued)**



Recommended Panel Cutout



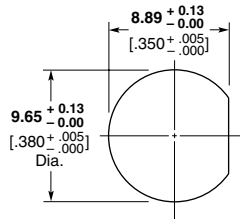
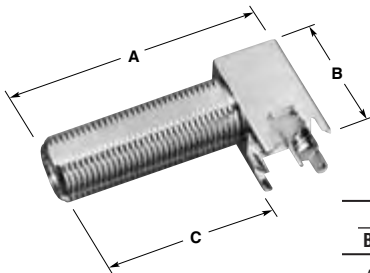
PC Board Layout

Body Plating		Center Contact Plating	Dimensions			Part No.
Barrel	Base		A	B	C	
Nickel	Tin	Tin	33.81 1.331	15.75 .620	19.86 .782	5415276-2*

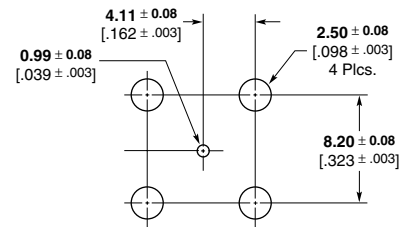
*Connector will accept center conductor diameter range of 0.56-1.19 [.022-.047].

**Right-Angle
PC Board Mount Jack,
High Temperature**

*High temperature versions use PTFE dielectric (see table)



Recommended Panel Cutout



PC Board Layout

Bottom	Dielectric		Solder Post Plating	Dimensions			Part No.
	Middle	Front		A	B	C	
Acetal	Acetal	Polypropylene	Nickel	35.61 1.402	16.89 .665	26.11 1.028	5415024-1
Acetal	Acetal	Polypropylene	Tin	35.61 1.402	16.89 .665	26.11 1.028	5415024-3
PTFE	PTFE	PTFE	Tin	25.40 1.00	17.91 .705	14.99 .590	5415214-1*

*Pin in paste reflow / high temperature processing.

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

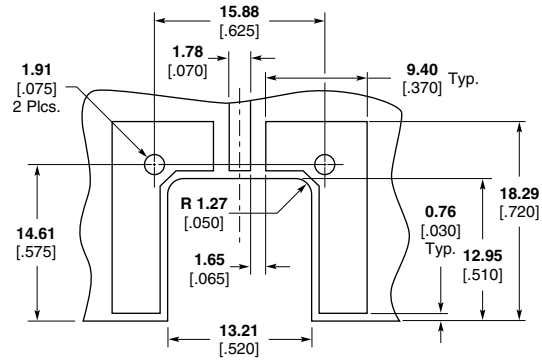
F Series Connectors (Continued)

Surface Mount, Straddle Jack

Contact will accept center conductor diameter range **0.56–1.19** [.022–.047]
Center of gravity balanced for automated pick and place and anti-tipping during solder reflow process.



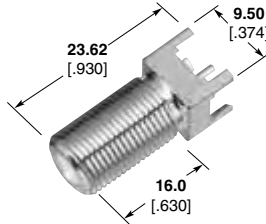
Part No. 5415322-2



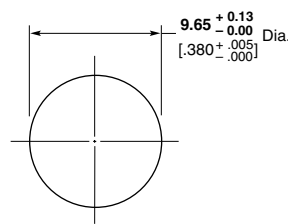
Recommended PC Board Layout

Vertical PC Board Mount Jacks

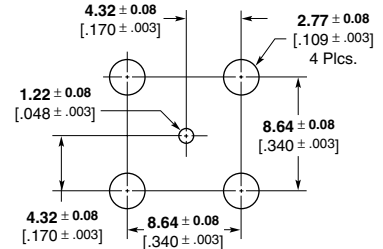
Connector will accept a center conductor diameter of **0.56–1.19** [.022–.047]



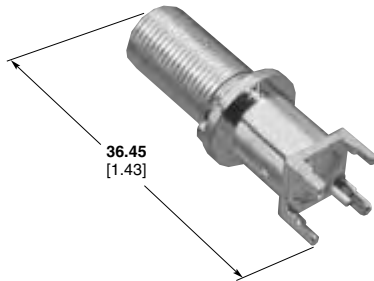
Part No. 5887046-1



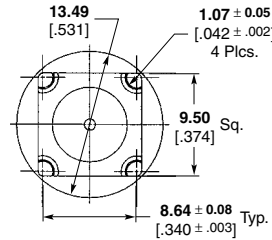
Recommended Panel Cutout



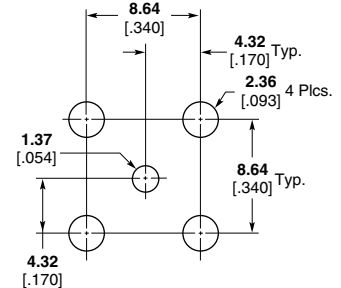
PC Board Layout



Part No. 6274020-1



Recommended Panel Cutout



PC Board Layout

Adapters

Jack to Jack Feed through Adapter



Part No. 282938-2

Jack to Plug Right-Angle Adapter



Part No. 5887089-1

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

G Series Connectors

Bulkhead Jack, Crimp



RG/U Cable	Termination Type	Body Plating	Part No.
179	Crimp	Nickel	5415683-1

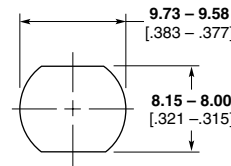
Termination Tooling: Use 220210-1 die set for Contact only.
Use Certi-Crimp Hand Tool 220009-1 for ferrule.

Bulkhead Jack, PC Board

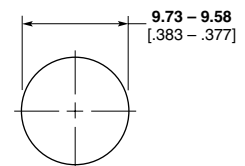
Connector will accept center conductor diameter range **0.97–1.65** [.038–.065] (415332-1 only)



Part No. 5415332-1 (15 Amp)
Part No. 6274032-1



Recommended Panel Cutout for 5415332-1



Recommended Panel Cutout for 6274032-1

Jack, Bulkhead PC Board

Connector will accept center conductor diameter range **0.97–1.07** [.038–.042]



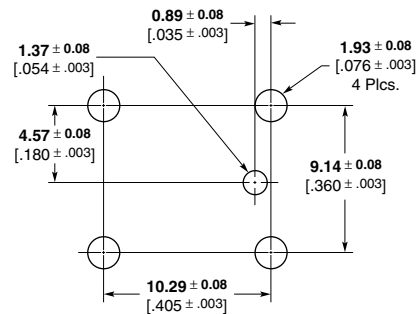
Part No. 5887000-1

Right-Angle PC Board Mount Plug

Includes board retention feature to prevent tipping during solder process.



Part No. 5415406-2

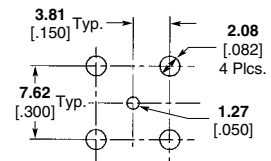
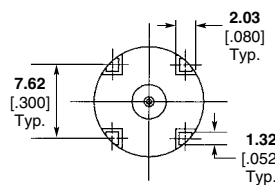


PC Board Layout

Vertical PC Board Mount Plug



Part No. 6274045-1



PC Board Layout

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

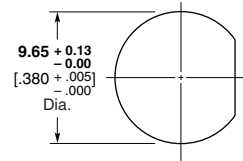
G Series Connectors (Continued)

Adapters

**F Jack to G Jack
Bulkhead Adapter**



Part No. 415327-1



Recommended Panel Cutout

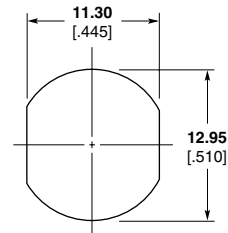
**F Jack to G Plug
Bulkhead Adapter**

Connector will accept center conductor diameter range of **0.51–1.19** [.020–.047].

Panel nut 887003-3 available for float mounting.



Part No. 415523-1



Recommended Panel Cutout

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