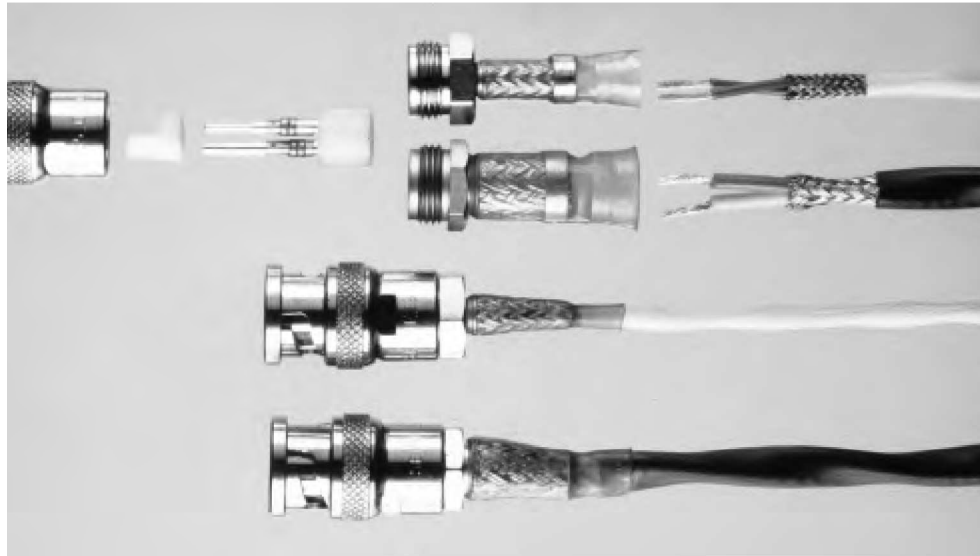


RF One-Step BNC/TNC Connectors

Product Facts

- Easy, quick installation
- Outstanding cable-retention force
- Solder-solder connection type (center conductor and braid)
- One-step termination for easy, quick installation and lower installed cost
- Exceptional cable retention force to withstand high vibration and frequent mates and unmates
- Fully soldered center conductor and braid
- Excellent built-in strain relief against vibration and excessive handling
- Long-term reliability
- Controlled soldering termination
- Use with standard RG/U cables and Raychem Cheminax cables
- Three product sizes to accommodate a wide range of cables
- Meets performance requirements of MIL-C-39012 up to 2.8 GHz



Applications

One-Step BNC/TNC connectors are single-piece assemblies for terminating the center conductor and the braid of a broad range of coaxial cables.

The connectors are fully intermateable with MIL-C-39012 connectors and are available in 50-ohm and 75-ohm versions.

Specifications

Installation

Raychem  
RB-115

For proper installation of these devices, the correct heating tool and reflector attachment must be used. Any one of the following Raychem heating tools is recommended:

- Steinel® Model HL1802E
- CV-1981

Refer to Raychem installation procedure RPIP 683-00 for detailed instructions.

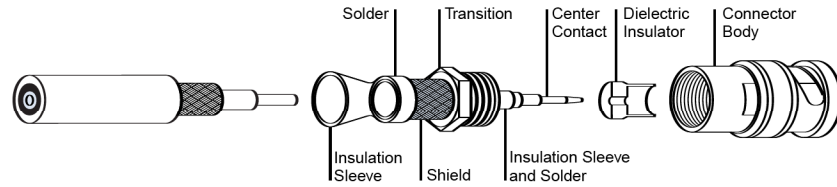
RF One-Step BNC/TNC Connectors (Continued)

Product Options and Part Numbering System

RXX - XX - X - XX	Connector Style		Connector Type		
	Dash No. -XX	Style	TNC	BNC	
	-00	Straight plug			
	-01	Right-angle plug			
	-02	Straight bulkhead jack			
	-03	Straight jack			
	-04	Straight panel jack			
	<b>Connector size</b>		4 x M2.5 x 0.45		
	L = Large				
	M = Medium				
	S = Small				
	50 = 50 ohms				
	75 = 75 ohms				
	D = Nickel-plated brass body, gold-plated brass pin				
	B = BNC				
	T = TNC				

Example: RBD-50-L-00 is a BNC connector, 50 ohms, large size, with straight plug body.

**Product Characteristics**



**Material**

Center contact	Gold-plated beryllium copper (female)
Dielectric insulator	Gold-plated brass (male)
Transition	PTFE
Connector body	Silver-plated brass
Solder and flux	Nickel-plated brass
Braided shield	Sn63Pb37, RMA flux
Insulation sleeve	Tin-plated copper wire per ASTM B3
Strain relief/sealing sleeve	Radiation-crosslinked, heat-shrinkable polyvinylidene fluoride, transparent blue
	Radiation-crosslinked, heat-shrinkable modified polyolefin with adhesive, black

**Typical Performance**

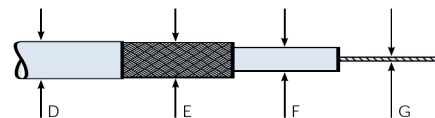
Dielectric withstand voltage	1500 V
Insulation resistance	5000 megohms
Temperature rating	-55°C to 150°C [-67°F to 302°F]
Contact resistance-straight	Inner = 1.5 milliohms, outer = 1.0 milliohm
Contact resistance — right-angle	Inner = 2.5 milliohms, outer = 1.5 milliohms
Cable retention force	295N (66 lb) to 822N (196 lb)
Voltage rating	500 V RMS
Connector durability	500 mating cycles minimum

**Electrical Performance**

Nominal impedance	50 and 75 ohms
Frequency range	Up to 2.8 GHz

**Part Selection Process**

1. From Product Options and Part Numbering System on page 2-36, select the connector style you need (BNC or TNC, plug or jack, male or female contacts).
  2. From the tables that follow, find the appropriate table for the connector style you selected.
  3. From the appropriate table, select the connector part number based on the RG cable type or Raychem cable part number. For cable types not shown use the cable dimensions.
- Note: The cable dimensions in each table are keyed to the diagram below.



RF One-Step BNC/TNC Connectors (Continued)

Impedance (ohms)	Cable Type		Cable Dimensions				Part No.
	RG Cables	Raychem Cables	D (Min.-Max.)	E (Min.-Max.)	F (Max.)	G (Max.)	
<b>BNC Straight Plugs, Male Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-50-S-00
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RBD-50-M-00
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-50-L-00
75	RG-179, RG-187	7530A1317	1.50-5.00 [.060-.217]	5.090-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-75-S-00
75	—	7524A1311, 7528A1317	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.70 [.126]	1.25 [.050]	RBD-75-M-00
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.3 [.287]	2.45 [.100]	RBD-75-L-00
<b>BNC Right-Angle Plugs, Male Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-50-S-01
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RBD-50-M-01
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.00-12.50 [.197-.500]	4.1-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-50-L-01
75	RG-179, RG-187	7530A1317	1.50-5.50 [.060-.217]	0.9-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-75-S-01
75	—	524A1311, 7528A1317	3.50-7.00 [.138-.276]	2.1-5.00 [.083-.197]	3.70 [.146]	1.25 [.050]	RBD-75-M-01
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.00-12.50 [.197-.500]	4.1-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-75-L-01
<b>BNC Straight Bulkhead Jacks, Female Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-50-S-02
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RBD-50-M-02
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-50-L-02
75	RG-179, RG-187	7530A1317	1.50-5.00 [.060-.217]	5.090-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-75-S-02
75	—	75 7524A1311, 7528A1317	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.70 [.146]	1.25 [.050]	RBD-75-M-02
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-75-L-02
<b>BNC Straight Jacks, Female Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-50-S-03
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RBD-50-M-03
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-50-L-03
75	RG-179, RG-187	7530A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-75-S-03
75	—	75 7524A1311, 7528A1317	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.70 [.146]	1.25 [.050]	RBD-75-M-03
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-75-L-03
<b>BNC Straight Panel Jacks, Female Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-50-S-04
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RBD-50-M-04
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-50-L-04
75	RG-179, RG-187	7530A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RBD-75-S-04
75	—	7524A1311, 7528A1317	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.70 [.146]	1.25 [.050]	RBD-75-M-04
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RBD-75-L-04

RF One-Step BNC/TNC Connectors (Continued)

TNC Coaxial Connectors

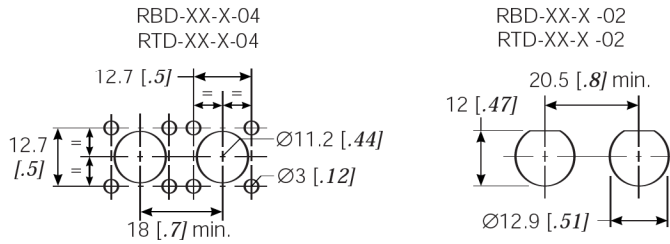
Impedance (ohms)	Cable Type		Cable Dimensions				Part No.
	RG Cables	Raychem Cables	D (Min.-Max.)	E (Min.-Max.)	F (Max.)	G (Max.)	
<b>TNC Straight Plugs, Male Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-50-S-00
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RTD-50-M-00
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RTD-50-L-00
75	RG-179, RG-187	7530A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-75-S-00
75	—	7524A1311, 7528A1317	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.70 [.146]	1.25 [.050]	RTD-75-M-00
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RTD-75-L-00
<b>TNC Straight Jacks, Female Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.5-5.5 [.060-.217]	0.9-3.0 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-50-S-03
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.5-7.0 [.138-.276]	2.1-5.0 [.083-.197]	3.0 [.118]	1.25 [.050]	RTD-50-M-03
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.0-12.5 [.197-.500]	4.1-9.5 [.161-.375]	7.3 [.287]	2.45 [.100]	RTD-50-L-03
75	RG-179, RG-187	7530A1317	1.5-5.5 [.060-.217]	0.9-3.0 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-75-S-03
75	—	7524A1311, 7528A1317	3.5-7.0 [.138-.276]	2.1-5.0 [.083-.197]	3.7 [.146]	1.25 [.050]	RTD-75-M-03
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.0-12.5 [.197-.500]	4.1-9.5 [.161-.375]	7.3 [.287]	2.45 [.100]	RTD-75-L-03
<b>TNC Straight Panel Jacks, Female Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.5-5.5 [.060-.217]	0.9-3.0 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-50-S-04
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.5-7.0 [.138-.276]	2.1-5.0 [.083-.197]	3.0 [.118]	1.25 [.050]	RTD-50-M-04
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.0-12.5 [.197-.500]	4.1-9.5 [.161-.375]	7.3 [.287]	2.45 [.100]	RTD-50-L-04
75	RG-179, RG-187	7530A1317	1.5-5.5 [.060-.217]	0.9-3.0 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-75-S-04
75	—	7524A1311, 7528A1317	3.5-7.0 [.138-.276]	2.1-5.0 [.083-.197]	3.7 [.146]	1.25 [.050]	RTD-75-M-04
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.0-12.5 [.197-.500]	4.1-9.5 [.161-.375]	7.3 [.287]	2.45 [.100]	RTD-75-L-04

2  
RF Connectors

RF One-Step BNC/TNC Connectors (Continued)

TNC Coaxial Connectors

Panel thickness: 3.2 [.125] max.



Impedance (ohms)	Cable Type		Cable Dimensions				Part No.
	RG Cables	Raychem Cables	D (Min.-Max.)	E (Min.-Max.)	F (Max.)	G (Max.)	
<b>TNC Straight Bulkhead Jacks, Female Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-50-S-02
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.5-7.0 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RTD-50-M-02
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.0-12.5 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RTD-50-L-02
75	RG-179, RG-187	7530A1317	1.5-5.5 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-75-S-02
75	—	7524A1311, 7528A1317	3.5-7.0 [.138-.276]	2.10-5.00 [.083-.197]	3.70 [.146]	1.25 [.050]	RTD-75-M-02
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.0-12.5 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RTD-75-L-02
<b>TNC Right-Angle Plugs, Male Contacts</b>							
50	RG-174, RG-178, RG-188, RG-196, RG-316	5026A1311, 5028A1317, 5030A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-50-S-01
50	RG-58, RG-141, RG-142, RG-303, RG-400	5019D3318, 5021D1331, 5020A1311	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.00 [.118]	1.25 [.050]	RTD-50-M-01
50	RG-165, RG-215, RG-213, RG-225, RG-214	5012F3332, 5012A3311	5.00-12.50 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RTD-50-L-01
75	RG-179, RG-187	7530A1317	1.50-5.50 [.060-.217]	0.90-3.00 [.035-.118]	1.55 [.060]	0.65 [.025]	RTD-75-S-01
75	—	7524A1311, 7528A1317	3.50-7.00 [.138-.276]	2.10-5.00 [.083-.197]	3.70 [.146]	1.25 [.050]	RTD-75-M-01
75	RG-6, RG-11, RG-12, RG-59, RG-144, RG-216	—	5.0-12.5 [.197-.500]	4.10-9.50 [.161-.375]	7.30 [.287]	2.45 [.100]	RTD-75-L-01