Specifications for TNC Connectors

TNC Series connectors are miniature sized, and weatherproof and are electrically similar to BNC Series, except that they have a coupling method which utilizes a screw system giving them additional resistance against shock and vibration. They are especially designed for use from DC to 18 GHz, in vibration exposed equipment like in commercial and military radio telecommunications systems and avonics equipment. These connectors are particularly useful for applications in computer and medical equipment and test instrumentation. TNC Series have a constant impedance of 50 ohms and are available in a variety of cable configurations.

MATERIALS		
Connector Parts	**Material**	**Equivalent Standard †**
Connector Body and Parts	Brass	ISOCuZn38Pb2 Body Part
Male Contact Pin	Brass	QQ-B-626
Commercial Grade	Zinc Alloy/Brass	
Outer Contact	Brass	QQ-B-750
Socket Contact	Beryllium Copper	QQ-C-530/MIL-H-7199
	Phosphor Bronze	CuBe2
Crimp Ferrule	Annealed Copper	QQ-C-576
Insulators, Standard Versions	Teflon	L-P403/BS4271
	Delrin	Grade B
Rubber Gaskets	Silicone Rubber	ASTM-E1418PSI
Plating	Nickel (Silver Optional)	MIL-G-45204

ELECTRICAL			
Requirement	**Performance**		**Test † Specification**
Impedance	50 Ω	75Ω	
Frequency Range	0-18 GHz	0-1 GHz	
VSWR	1.30 Max.		MIL- C-39012
RF Insertion Loss	0.2 dB Max. at 3 GHz		MIL- C-39012
RF Leakage	-60 dB Min. at 3 GHz		MIL- C-39012
Test Voltage (At Sea Level)	1500V rms		MIL-STD-202
Working Voltage (At Sea level)	500V rms		MIL-STD-202
Insulation Resistance	5000 Megohms Min.		MIL-STD-202
Contact Resistance *Center Contact *Outer Contact *Screen to Body	 5mΩ Maximum 2mΩ Maximum 0.1mΩ Maximum		MIL-C-39012

MECHANICAL & ENVIRONMENTAL		
Requirement	**Performance**	**Test † Specification**
Durability	500 Insertions & Extractions Min.	MIL-C-39012
Shock	50 G	MIL-STD-202
Vibration	20 G from 80-2000 Hz	MIL-STD-202
Cable Retention (Cable Types)	60 lbs. Minimum Pull Test	MIL-C-39012
Coupling Nut	60 lbs. Maximum	MIL-C-39012
Temperature Range	Teflon: -55 to +199 C	
	Delrin: -40 to +85 C	
Moisture Resistance	Continuous Test	MIL-STD-202
Salt Spray	48 Hours	MIL-STD-202

†Products are made to conform to the Mil standard but are for commercial applications and not QPL

3 Piece Crimp

TNC three piece crimp connectors feature the same semi-captive contacts as the BNC which "click" into place assuring perfect installation. Each crimp pin has a vent hole for optional soldering. Soldering is recommended for all stranded conductors 26 AWG or smaller.

Part Number	RG/U Cable	Fig. No.
510A205F	58A/U, 58C/U, Stranded, 141/U	57
510A204G	59/U, 62/U, 210/U	57
510A204FV	58A/U, 58C/U, Stranded, 141/U	58
510A204T	59/U, 62/U, 210/U	58

Fig. 57

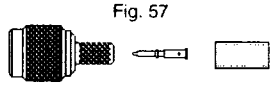
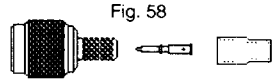


Fig. 58



Standard Clamp & Taper Grip

TNC standard clamp style is a simplified version of the original military style. It is required that the contact be soldered to the center conductor of the cable. The Taper Grip style connectors require little cable preparation. Strip off all but a length of center conductor, push the taper under the cable's shield, solder the contact , and assemble.

Fig. 51

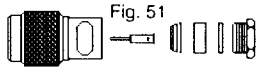
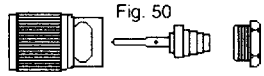


Fig. 50



Part Number	RG/U Cable	Fig. No.
510A104F	58A/U, 58C/U, Stranded, 141/U	51
510A104G	59/U, 62/U, 210/U	51
510A304F	58A/U, 58C/U, Stranded, 141/U	50
510A304G	59/U, 62/U, 210/U	50

Twist-On

TNC Twist-On connectors are field installable and require no tooling other that a stripping tool for the cable preparation. The center conductor is inserted into Bomar's unique Posi-Con™ contact, as the connector twists firmly onto the cable's outer jacket.

Part Number	Gender	RG/U Cable	Fig. No.
510A405F	Male	58A/U, 58C/U, Stranded, 141/U	53
510A405G	Male	59/U, 62/U, 210/U	53
520A405F	Female	58A/U, 58C/U, Stranded, 141/U	52
520A405G	female	59/U, 62/U, 210/U	52

Fig. 53

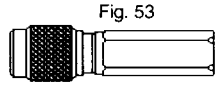
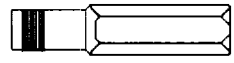


Fig. 52



Bulkhead Jacks

Versions are available for front mounting (F/M), rear mounting (R/M) , crimp types, bulkhead mount grounded, or bulkhead mount isolated. These jacks are held into the panel by a hex-nut and lock washer. All units feature nickel plated, brass bodies, and gold plated phosphor bronze contacts.

Fig. 56

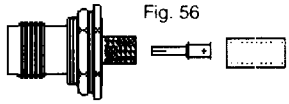


Fig. 54

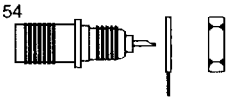
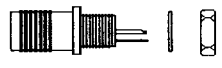


Fig. 55



Part Number	RG/U Cable	Fig. No.
521A245F	58A/U, 58C/U, Stranded, 141/U	56
521A245G	RG59/U, RG62/U, RG210	56
526A515	Any Cable Size Non Isolated	54
526R515	Any Cable Size **Isolated**	55

Adapters

These sturdy within-series TNC adapters are available in all standard designs. All connector bodies are plated with bright nickel. Male contacts are brass, female contacts are phosphor bronze. All contacts are plated with 5 microinches of gold.

Part Number	Description	Fig. No.
532A505	Female/Female Inline Splice	60
535A544	Female/Female Bulkhead Inline	61
535R544	Female/Female Bulkhead Inline, ***Isolated***	61
543A505	Female/Male/Female "T" Adapter	62
545A505	Female/Female/Female "T" Adapter	63
551A505	Female/Male Right Angle"	64

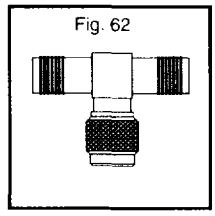


Fig. 62

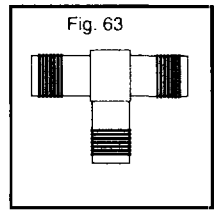


Fig. 63

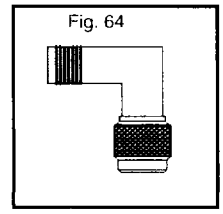


Fig. 64

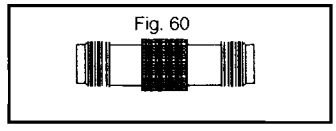


Fig. 60

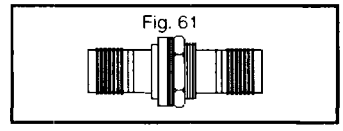


Fig. 61

PC Board Jacks

These TNC jacks are manufactured to the highest standards to assure stability in maintaining impedance matching at rated frequencies. Applications are in cellular communications, broadcast, and computer data. Contacts are phosphor bronze and will remain resilient even after 500 insertions.

Part Number	Body Material	Description	Contact Plating	Fig. No.
564A595	White Valox	Standard Profile W/ Posts	Gold	66
564A595B	BlackValox	Standard Profile W/Posts	Gold	67
564A595BL	White Valox	Low Profile W/ Posts	Gold	68
564A595BLB	Black Valox	Low Profile W/Posts	Gold	69
564A595M	Metal	Standard Profile W/ Posts	Gold	70
564S595	White Valox	Vertical Mounting	Gold	71
564S595B	Black Valox	Vertical Mounting	Gold	72
564S595M	Metal	Vertical Mounting	Gold	73

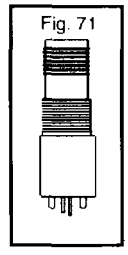


Fig. 71

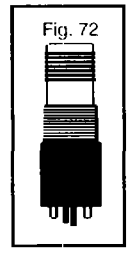


Fig. 72

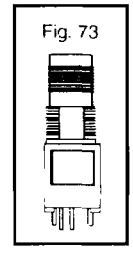


Fig. 73

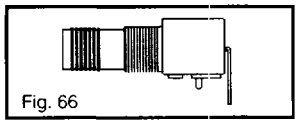


Fig. 66

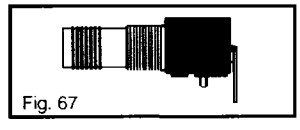


Fig. 67

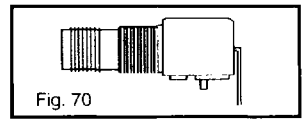


Fig. 70

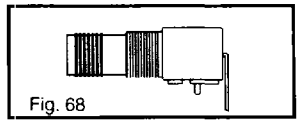


Fig. 68

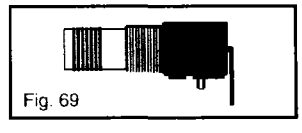


Fig. 69