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**Search Results for:** Straight Crimp Plug - Captive Contact

*Please note: Images are for reference only*



**Part Number:** 172101  
**Family/Series:** Type N Coaxial Connectors  
**Product Type:** CRIMP/SOLDER ATTACHMENTS FOR FLEXIBLE AND SEMI-RIGID CABLE  
**Description:** Straight Crimp Plug - Captive Contact  
**Cable:** 59/62/140/210 \*\*

**Cable Group:** 03  
**Finish:** Nickel  
**Insulation:** Teflon  
**Impedance:** 50 ohms  
**Crimp Tool:** [J](#)

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## Type N connector series

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Named after Paul Neill of Bell Labs after being developed in the 1940's, the Type N offered the first true microwave performance. The Type N connector was developed to satisfy the need for a durable, weatherproof, medium-size RF connector with consistent performance through 11 GHz.



There are two families of Type N connectors: Standard N (coaxial cable) and Corrugated N (helical and annular cable). Their primary applications are the termination of medium to miniature size coaxial cable, including RG-8, RG-58, RG-141, and RG-225. RF coaxial connectors are the most important element in the cable system. Corrugated copper coaxial cables have the potential to deliver all the performance your system requires, but they are often limited by the performance of the connectors.

Intermodulation distortion, a major concern in today's communications systems, is consistently low with corrugated cable connectors. Typical performance is -125 dBm (-168 dBdc). In-house IMD measurement capability gives Amphenol the unique ability to understand the effects of connector design elements on IMD generation and to design the best performing connectors in the industry. Self-flaring designs are easily attached with standard hand tools in the field, and are highly resistant to pull off and twist off. All corrugated cable connectors are optimally matched to their cables for low VSWR and insertion loss.

### Type N Coaxial Connectors

#### CRIMP/SOLDER ATTACHMENTS FOR FLEXIBLE AND SEMI-RIGID CABLE

- [Straight Crimp Plug - Captive Contact](#)
- [Straight Solder Plug - Semi-Rigid Cable](#)
- [Crimp Plug - Ethernet Cable](#)
- [Right Angle Crimp Plugs](#)
- [Right Angle Solder Plug - Semi-Rigid Cable](#)
- [Straight Crimp Jack - Captive Contact](#)
- [Straight Solder Jack - Semi-Rigid Cable](#)
- [Bulkhead Crimp Jack - Captive Contact - Standard Cables](#)
- [Bulkhead Solder Jack - Semi-Rigid Cable](#)
- [Bulkhead Crimp Jack - Ethernet Cable](#)
- [Bulkhead Clamp Jack - Rear Mount - Miniature Cable](#)
- [Bulkhead Clamp Jack - Front Mount- Miniature Cable](#)
- [Straight Crimp Panel Jack- Captive Contact - Standard Cable](#)
- [Straight Solder Panel Jack - Semi-Rigid Cable](#)

#### CLAMP ATTACHMENTS FOR FLEXIBLE CABLE

- [Straight Solder Plug - Captive Contact](#)
- [Straight Solder Plug - Captive Contact](#)
- [Straight Solder Jack - Captive Contact](#)
- [Straight Solder Jack - Captive Contact](#)

#### BULKHEAD MOUNT SOLDER RECEPTACLES

- [Bulkhead Receptacle - Front Mount](#)
- [Bulkhead Receptacle - Front Mount](#)

#### PANEL MOUNT/SOLDER RECEPTACLES

- [Panel Receptacle Jack - Exposed TFE Type](#)
- [Panel Receptacle Plug - Exposed TFE Type](#)
- [Panel Receptacle Plug - Solder Pot Terminal](#)
- [Panel Receptacle Jack - Solder Pot Terminal](#)
- [Panel Mount - Round Flange](#)
- [Panel Receptacle Plug - Slot Terminal](#)

- [Panel Receptacle Jack - Slot Terminal](#)
- [Panel Receptacle Jack - Extended Teflon](#)
- [Panel Receptacle - Extended Body](#)
- [Panel Receptacle- Extended Body - Post Contact](#)
- [Panel Receptacle - Tab Post](#)
- [Printed Circuit Board Receptacle](#)
- [Press Fit Receptacle](#)
- [Right Angle Printed Circuit Board Receptacle](#)

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## FEEDTHROUGH ADAPTERS

- [Plug-To-Plug Adapter](#)
- [Jack-To-Jack Adapter](#)
- [Jack-To-Jack Bulkhead Adapter](#)

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## TEE ADAPTERS/ANGLE ADAPTERS

- [Tee Adapter - Jack-To-Plug-To-Jack](#)
- [Tee Adapter - Jack-To-Jack-To-Jack](#)
- [Tee Adapter - Plug-To-Jack-To-Jack](#)
- [Angle Adapter - Plug-To-Jack](#)
- [Angle Adapter - Plug-To-Plug](#)

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## TERMINATORS

- [N Terminator Plug](#)
- [N Terminator Jack](#)

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## ACCESSORIES

- [N Male Cap & Chain](#)

### Features & Benefits

- Accommodates a wide range of medium to miniature-sized RG coaxial cables in a rugged medium-sized design
- Broad line of Military (M39012), Industrial (UG) and Commercial (RFX) grade products available, giving customers choices in weighing cost versus performance benefits
- Meets many customer application demands with plug styles available in straight and right angle and jack styles available in panel mount, bulkhead mount, and receptacle

### Applications

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>■ Antennas</li> <li>■ Cable assemblies</li> <li>■ Instrumentation</li> <li>■ PCS</li> <li>■ Satcom</li> </ul> | <ul style="list-style-type: none"> <li>■ Base stations</li> <li>■ Cellular</li> <li>■ Microwave Radio</li> <li>■ Radar</li> <li>■ Surge Protection</li> </ul> | <ul style="list-style-type: none"> <li>■ Broadcast</li> <li>■ Components</li> <li>■ Mil-Aero</li> <li>■ Radios</li> <li>■ WLAN</li> </ul> |
|--|---|---|

### Type N Standard Specifications

<b>Electrical</b>	
Impedance	50 Ω
Frequency Range	0 - 11 GHz
Voltage Rating	1,500 volts peak
VSWR	MIL-C-39012 straight connectors: 1.3 max 0-11 GHz MIL-C-39012 right angle connectors: 1.35 max 0-11 GHz
Dielectric Withstanding Voltage	2,500 volts rms
Insulation Resistance	5,000 MΩ minimum
Center Contact Resistance	1.0 mΩ
Outer Contact Resistance	0.2 mΩ
RF Leakage	-90 dB minimum at 3 GHz
Insertion Loss	.15 dB maximum at 10 GHz
<b>Mechanical</b>	

Mating	5/8-24 threaded coupling
Braid or Jacket Cable Affixment	All crimps: hex braid crimp Clamps: screw-thread nut and braid clamp
Center Conductor Cable Affixment	Crimp: crimp or solder All others: solder only
Captivated Contact	All crimps unless specified otherwise
Cable Retention	Crimps: 60-120 lbs Clamps: 30-70 lbs
<b>Material</b>	
Male Contacts	Brass, silver or gold plated
Female Contacts	Phosphorous bronze or beryllium copper, silver or gold plated
Other Metal Parts	Brass with ASTROplate® finish; M39012 has silver finish
Insulators	TFE, copolymer of styrene or glass-TFE (hermetic seal)
Weatherproof Gaskets	Silicone rubber or synthetic rubber
Crimp Ferrule	Copper
<b>Environmental</b>	
Temperature Range	TFE: -65°C to +165°C
Weatherproof	All series N with gaskets are weatherproof
Hermetic Seals	Pass helium leak test of 2x10 <sup>-8</sup> cc/sec
Pressurized Shock	Compression seal MIL-STD-202, method 213
Vibration	MIL-STD-202, method 204, test condition B
Moisture Resistance	MIL-STD-202, method 106
Corrosion	MIL-STD-202, method 101, test condition B
Temperature Cycling	MIL-STD-202, method 102, test condition C
Altitude	MIL-STD-202, method 105, test condition C
<b>Military</b>	
MIL-C-39012 MIL-A-55339	Where applicable

Note: These characteristics are typical but may not apply to all connectors.

### Corrugated Type N Specifications

<b>Electrical</b>	
Impedance	50 Ω
Frequency Range	11.0 GHz
Return Loss	33 dB (1-2 GHz) 28 dB (2-3 GHz)
Operating Voltage	Maximum 707 rms
Dielectric Withstanding Voltage	2,000 vdc
Insulation Resistance	5,000 MΩ minimum
Insertion Loss	.05 frequency GHz
Shielding Effectiveness	Minimum 125 dB
Peak Power	Maximum 10 kW
Average Power	Maximum .60 kW
3rd Order IM Product	Typical -125 dBm (-168 dBc)
<b>Mechanical</b>	
Mating	MIL-STD-348
Inner Attachment Method	Solder or captivated
Outer Attachment Method	Compression
Assembly Torque	18/22 lb-ft (25/30 N-m)
Coupling Torque	15.00 lb-in (1.70 N-m)
Coupling Nut Retention Force	100.00 lbs (444.80 N)
Connector Durability	500 cycles, 12 cycles/minute
<b>Material</b>	
Body	Brass, silver plated