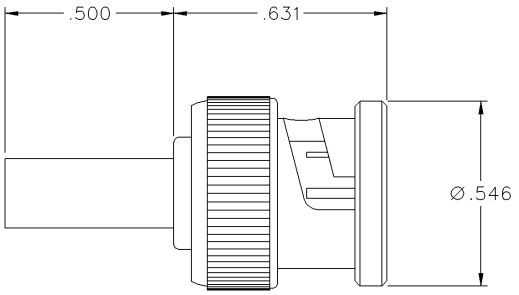
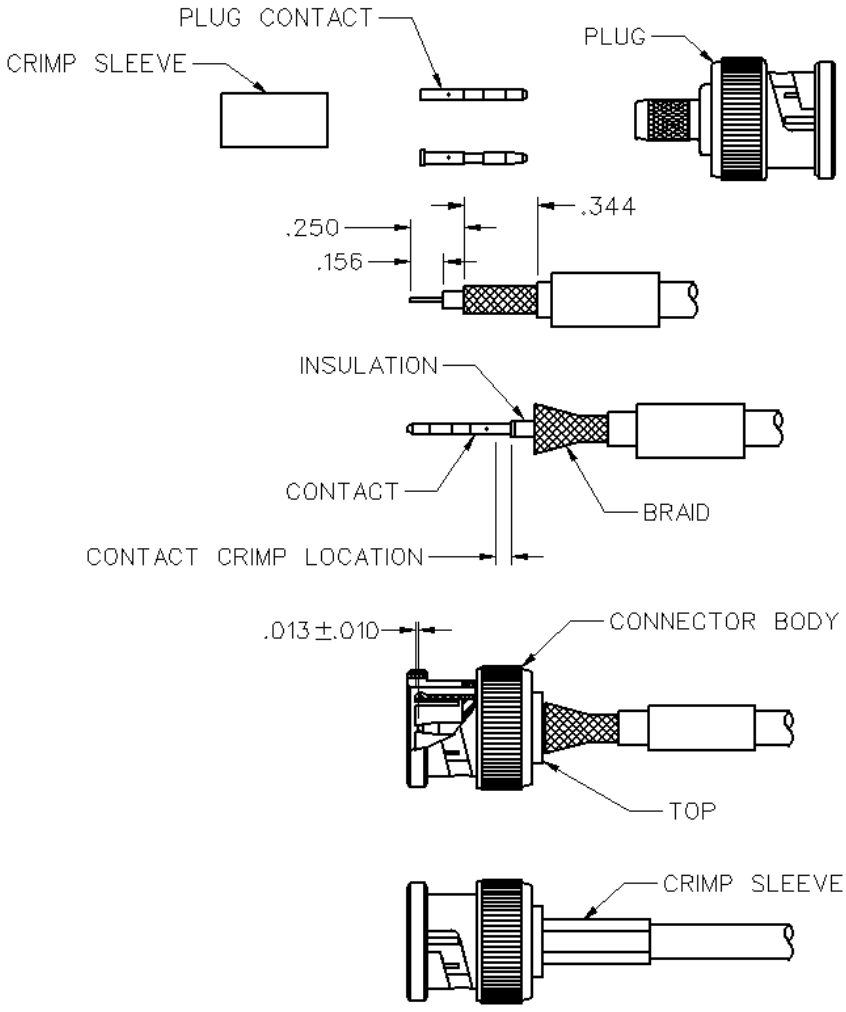
# True 75 Ohm BNC Straight Cabled Plug - 3 Piece Solder or Crimp Captivated Contact

CAMBRIDGE PRODUCTS

INCHES (MILLIMETERS)
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST




| PART NUMBER | CABLE TYPE | CONTACT I.D. | BODY I.D. | FERRULE I.D. |
|---|---|---|---|---|
| CPMC-68-20 | RG-179, 187<br>Belden 1520A | .016 (0.41) | .067 (1.70) | .128 (3.25) |




1. Identify connector parts. (3 piece parts)
2. Slide crimp sleeve over the cable as shown.
3. Strip cable per dimensions given and loosen braid.
4. Place contact over cable center conductor and position against insulation.
5. Crimp (.042 crimp hex) or solder contact. If crimping the contact, crimp the contact as close as possible to the cable insulation as shown.
6. Push the cable with the attached contact into the connector body until contact is captured by internal rib within connector body. Contact location shall be per dimension shown. Slide crimp sleeve over braid until it rests against top of connector body. Finish assembly by crimping with appropriate crimp hex die as indicated for each connector by the table.

| Part Number | Cable Type | Crimp Sleeve Hex | Contact Crimp Hex | Recommended Crimp Tool |
|---|---|---|---|---|
| CPMC-68-20 | RG-179, 187, Belden 1520A | .128 (3.25) | .042 (1.07) | 24-9963P |

# BNC Connectors - True 75 Ohm

Specifications

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### Electrical Characteristics

**Impedance:** 75 Ohm
**Frequency range:** 0-3 GHz
**VSWR:**
BNC Cabled Plugs (except CPMC-68-18) ..... 1.10 + .03 F (F in GHz)
CPMC-68-18 ..... 1.22 + .01 F (F in GHz)
BNC Adapters (In-series and Between-series) 1.03 + .02 F (F in GHz)
**Working voltage:** BNC Cabled Plugs and Adapters
(except CPMC-88-18, 20 and 33) ..... 500 VRMS at sea level
CPMC-88-18, 20 and 33 ..... 335 VRMS at sea level
**Dielectric withstanding voltage:**
BNC Cabled Plugs and Adapters
(except CPMC-88-18, 20 and 33) ..... 1500 VRMS at sea level
CPMC-88-18, 20 and 33 ..... 1000 VRMS at sea level
**Insulation resistance:** 5000 megohms minimum
**Contact resistance:**
Outer - Nickel plated initial 1.0 milliohm max,
after environmental 1.5 milliohm max
Center - Initial 3 milliohm max,
after environmental 4 milliohm max
Braid to Body - 2.5 milliohm max (nickel plated), after environmental not applicable
**Corona level:** 375 volts minimum at 70,000 feet
**RF High Potential Withstanding Voltage:** 700 VRMS at 4 MHz

### Environmental Characteristics

(meets or exceeds the applicable paragraph of MIL-C-39012)
**Thermal shock:** MIL-STD-202, Method 107
**Operating temperature:** -65° C to 165° C
**Corrosion:** MIL-STD-202, Method 101, Condition B
**Shock:** MIL-STD-202, Method 213, Condition B
**Vibration:** MIL-STD-202, Method 204, Condition B
**Moisture resistance:** MIL-STD-202, Method 106

### Mechanical Characteristics

**Durability:** 500 cycles min
**Force to engage/disengage:** 5 lbs. max, after durability 5 lbs max; 1 lb. min.
**Coupling nut retention:** 75 lbs. min
**Contact retention:** 6 lbs. min axial force

### Material Specifications

**Body:** Brass, nickel plated .0001 min over copper plated .00005 min
**Contact:** Brass, gold plated .00005 min over nickel plated .00005 min over copper plated .00005 min
**Crimp Sleeve:** Copper, nickel plate .0001 min over copper plated .00005 min
**Nut:** Zinc, nickel plated over copper plated
**Insulator:** Teflon
**Spring Washer:** Beryllium Copper (unplated)
**Flat Washer:** Steel, nickel plated
**Gasket:** Silicone rubber

## True 75 Ohm BNC Plug and Jack Mating Engagement