

# SERIES BNC 50 $\Omega$ Coaxial miniature connectors

#### Description

SUHNER BNC is still one of the most popular connector series, featuring a two stud bayonet coupling mechanism, which is particularly useful for frequently coupled and uncoupled RF connections with frequencies up to 4 GHz.

#### Compatibility

50  $\Omega$  BNC connectors and 75  $\Omega$  BNC connectors are intermateable without any restrictions.

#### **Interface Dimensions**



#### Interface Dimensions in mm / inches

|   | Plug              |                   | Jack               |                   |
|---|-------------------|-------------------|--------------------|-------------------|
|   | min.              | max.              | min.               | max.              |
| А | 4.83/.190         |                   |                    | 4.72/. <i>186</i> |
| В | 5.33/. <i>210</i> | 5.84/. <i>230</i> | 4.72/. <i>186</i>  | 5.23/. <i>206</i> |
| С | 5.28/. <i>208</i> | 5.79/. <i>228</i> | 4.78/. <i>188</i>  | 5.28/. <i>208</i> |
| D | 2.06/. <i>081</i> | 2.21/. <i>087</i> | 2.06/. <i>081</i>  | 2.21/. <i>087</i> |
| E | 9.78/. <i>385</i> | 9.91/. <i>390</i> | 9.60/. <i>378</i>  | 9.70/. <i>382</i> |
| F | 1.98/. <i>078</i> |                   | 4.95/. <i>195</i>  |                   |
| G | 1.32/. <i>052</i> | 1.37/. <i>054</i> | 8.31/. <i>327</i>  | 8.51/. <i>335</i> |
| Н | 0.08/.003         |                   | 8.10/. <i>319</i>  | 8.15/. <i>321</i> |
| I |                   |                   | 10.52/ <i>.414</i> |                   |

## Interface dimensions conformable to the Standards:

| International: | IEC 169-8                      |
|----------------|--------------------------------|
| Europe:        | CECC 22120                     |
| USA:           | MIL-C- 39012,                  |
|                | BNC Interface MIL-STD-348A/301 |
| Great Britain: | BS 9210 N 004                  |

### Technical Data

| ELECTRICAL DATA   |          | REQUIREMENTS  |          |            |
|---|----------|---|----------|------------|
| Impedance   |          | 50 Ω  |          |            |
| Frequency range (for connector interface)                 |          | DC 4 GHz  |          |            |
| RF-leakage (between 2 ÷ 3 GHz)                            |          | ≥ 55 dB   |          |            |
| Dielectric withstanding voltage<br>(at sea level)         |          | 1.5 kV rms, 50 Hz (depending on cable)                      |          |            |
| Working voltage (at sea level)                            |          | ≤ 500 V rms, 50 Hz (depending on cable)                     |          |            |
| Insulation resistance                                     |          | $\geq 5 \cdot 10^3 M\Omega$                                 |          |            |
| Contact resistance<br>- centre contact<br>- outer contact |          | $\leq 1.5 \text{ m}\Omega$<br>$\leq 1 \text{ m}\Omega$      |          |            |
| MECHANICAL DATA   |          | REQUIREMENTS  |          |            |
| Coupling nut torque                                       |          | 7 Ncm 28 Ncm / 0.6 in. lbs 2.5 in. lbs                      |          |            |
| Coupling nut retention force                              |          | $\geq$ 450 N / 101.2 lbs                                    |          |            |
| Contact captivation                                       |          | $\geq$ 27 N / 6.1 lbs                                       |          |            |
| Durability (matings)                                      |          | ≥ 500   |          |            |
| ENVIRONMENTAL DATA  |          | TEST CONDITIONS   |          |            |
| Temperature range   |          | – 65°C + 165°C /  – <i>85°F + 329°F</i>                     |          |            |
| Climatic category   |          | IEC → 55/155/21   |          |            |
| Thermal shock   |          | MIL-STD-202, Method 107, Condition B                        |          |            |
| Moisture resistance                                       |          | MIL-STD-202, Method 106                                     |          |            |
| Corrosion   |          | Saltspray test acc. to MIL-STD-202, Method 101, Condition B |          |            |
| Vibration   |          | MIL-STD-202, Method 204, Condition B                        |          |            |
| Shock   |          | MIL-STD-202, Method 213, Condition G                        |          |            |
| MATERIAL DATA   |          |   |          |            |
| CONNECTOR PART  | STANDAR  | DS  | MATERIAL | PLATING    |
| Bodies  | QQ-B-620 | 5   | brass    | SUCOPLATE® |

| CONTRECTOR FART       | JIANDARDJ                                     |  |                                |
|-----------------------|---|--|--------------------------------|
| Bodies<br>Pin contact | QQ-B-626                                      | brass                                      | SUCOPLATE <sup>®</sup><br>gold |
| Socket contact        | QQ-C-530                                      | beryllium-copper, hardened<br>copper alloy | gold                           |
| Crimp ferrules        | SUHNER <sup>®</sup> specification<br>QQ-B-626 | copper<br>brass                            | SUCOPLATE®                     |
| Insulators            |   | PTFE or PFA                                |                                |
| Gaskets               |   | silicone rubber                            |                                |

Some connectors may have a specification that differs from the above mentioned data.