



# CONBNC002

**BNC Jack PCB Through-Hole Connector** 

The CONBNCO04 is a BNC jack panel-mount bulkhead connector which includes a washer and hex nut for installation. The CONBNCO04 combines superior performance, compact size, and a convenient bayonet-style (push-twist) mating interface to provide a reliable, easy-to- use connector. Additionally, all Linx connectors meet RoHS and REACH lead free standards and are tested to meet requirements for corrosion resistance, vibration, mechanical and thermal shock

#### **FEATURES**

- BNC jack (female socket) connection
  - Gold plated brass center contact
  - Bayonet-style (push-twist) connection
- Direct PCB attachment
- Reflow- or hand-solder assembly
- Isolated ground

#### **ORDERING INFORMATION**

Part Number	Description
CONBNC004	BNC jack (female socket) panel-mount connector

Available from Linx Technologies and select distributors and representatives.

#### **APPLICATIONS**

- Audio/Video
- Broadcasting
- Test Equipment
- Surveillance Systems
- Ethernet
- Industrial, Commercial, Enterprise

#### PERFORMANCE

Table 1 shows the electrical specifications, insertion loss and VSWR values for the CONBNC004 connector at commonly used frequencies.

### **TABLE 1. ELECTRICAL SPECIFICATIONS**

Band	Sub-1 GHz	2 GHz
Frequency Range	0 Hz to 1 GHz	1 GHz to 2 GHz
Insertion Loss (dB max.)	0.48	0.52
VSWR (max.)	1.3	1.3
Impedance	50 Ω	

Insertion loss is the loss of signal power (gain) resulting from the insertion of a device in a transmission line (Figure 1). VSWR (Figure 2) describes how efficiently power is transmitted through the connector. A lower VSWR value indicates better performance at a given frequency.



Figure 1. Insertion Loss for CONBNC004 Connector



Figure 2. VSWR for the CONBNC002 Connector

## **TABLE 2. MECHANICAL SPECIFICATIONS**

Parameter	Value
Mounting Type	Panel-Mount, Solder Cup
Fastening Type	Bayonet-style Coupling (Push/Twist)
Interface in Accordance with	MIL-STD-348B
Weight	6.8 g (0.24 oz)

## **TABLE 3. ENVIRONMENTAL SPECIFICATIONS**

MIL-STD, Method, Test Condition		
Corrosion (Salt spray)	MIL-STD-202 Method 101 test condition B	
Thermal Shock	MIL-STD-202 Method 107 test condition C	
Vibration	MIL-STD-202 Method 204 test condition B	
Mechanical Shock	MIL-STD-202 Method 213 test condition B	
Moisture Resistance	MIL-STD-202 Method 106 test condition D	
Temperature Range	-20 °C to +105 °C	
Environmental Compliance	RoHS, REACH	

#### **PRODUCT DIMENSIONS**



Figure 3. Product Dimensions for the CONBNC004 Connector

Parameter	Va	lue
Connector Part	Material	Finish
Connector Body	Brass	Nickel
Center Contact	Brass	Gold
Insulator	ABS	-
Washer	Brass	Nickel
Hex Nut	Brass	Nickel

#### **RECOMMENDED MOUNTING DIMENSIONS**

Figure 4 shows the recommended enclosure mounting dimensions. The maximum enclosure wall thickness should be no greater than 2.4 mm (0.94 in).



Figure 4. Recommended Mounting Dimensions

#### **PACKAGING INFORMATION**

The CONBNC004 connector is packaged in plastic bags of 100 pcs, 2500 Pcs per carton. Distribution channels may offer alternative packaging options.

#### **CONNECTOR & ADAPTER DEFINITIONS AND USEFUL FORMULAS**

**VSWR -** Voltage Standing Wave Ratio. VSWR is a unitless ratio that describes how efficiently power is transmitted through the connector. A lower VSWR value indicates better performance at a given frequency. VSWR is easily derived from Return Loss.

$$VSWR = \frac{10\left[\frac{Return \ Loss}{20}\right] + 1}{10\left[\frac{Return \ Loss}{20}\right] - 1}$$

**Insertion Loss -** The loss of signal power (gain) resulting from the insertion of a device in a transmission line. Insertion loss can be derived from the power transmitted to the load before the insertion of the component  $P_{T}$  and the power transmitted to the load after the insertion of the component  $P_{R}$ .

Insertion Loss (dB) = 
$$10 \log_{10} \frac{P_T}{P_R}$$

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