Datasheet

CONSMB012-G
SMB Plug Cable-Mount Connector

The CONSMB012-G is an SMB plug right angle connector designed for use with RG-174, 316 or equivalent coaxial cable using the provided crimp ferrule and heat shrink tubing. Operating from 0 GHz to 12 GHz, the CONSMB012-G combines superior performance, compact size, and a convenient snap-on mating interface to provide a reliable, easy-to-use connector. Additionally, all Linx connectors meet RoHS lead free standards and are tested to meet requirements for corrosion resistance, vibration, mechanical and thermal shock.

Features

- 0 to 12 GHz operation
- Right angle design for connection in tight spaces
- Gold plating
  - Superior corrosion resistance
- SMB plug (female socket) connection
  - Gold plated beryllium copper center contact
- Crimp type coaxial cable mount for use with
  - RG-174, 316
  - Crimp ferrule and heat shrink tubing provided

Applications

- LPWA
  - LoRaWAN®, Sigfox®, WiFi HaLow™ (802.11ah)
- Cellular IoT
  - LTE-M (Cat-M1), NB-IoT
- Cellular
  - 5G/4G LTE/3G/2G
- GNSS
  - GPS, Galileo, GLONASS, BeiDou, QZSS
- Industrial/Commercial/Enterprise
- ISM

Table 1. Electrical Specifications

Impedance	50 Ω	
Frequency Range	0 to 12 GHz	
Voltage Rating	750 V RMS	
Contact Resistance	Center: ≤ 6.0 mΩ Outer: ≤ 1.0 mΩ	
Select Frequencies	**400 MHz to 960 MHz**	**2.4 GHz**
Insertion Loss (dB max)	-0.15	-0.24
VSWR (max)	1.1	1.1

Ordering Information

Part Number	Description
CONSMB012-G	SMB plug (female socket) cable-mount connector

Available from Linx Technologies and select distributors and representatives.

Product Dimensions

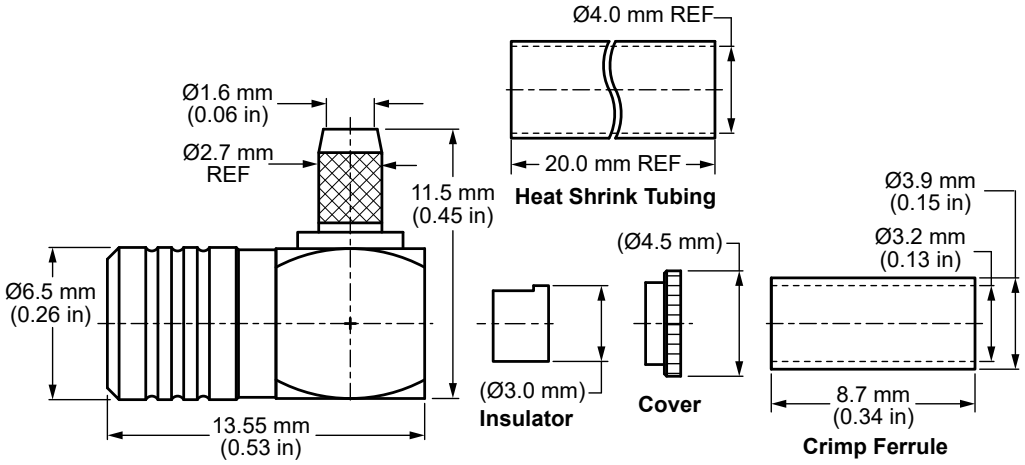

Figure 1. Product Dimensions for the CONSMB012-G Connector

Table 2. Connector Components

Model	CONSMB012-G	
Connector Part	**Material**	**Finish**
Connector Body	Brass	Gold
Center Contact (socket)	Beryllium Copper	Gold
Insulator	PTFE	–
Crimp Ferrule	Brass	Gold

Coaxial Cable Installation

The CONSMB012-G provides a crimp type coaxial cable retention system for installation to the connector using the provided crimp ferrule and heat shrink tubing. The coaxial cable trim dimensions are provided below in Table 3 for supported coaxial cable types, and recommended hex crimp tool sizes for CONSMB012-G are shown in Table 4.

Table 3. Coaxial Cable Trim Dimensions for the CONSMB012-G Connector

Coaxial Cable Types	A	B	C
RG-174/U, 316	1.0 mm (0.04 in)	4.5 mm (0.18 in)	9.0 mm (0.35 in)

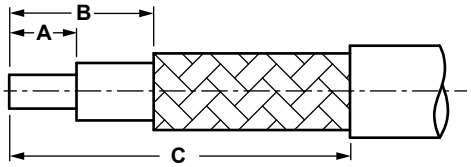

Table 4. Recommended Hex Crimp Tool Sizes for the CONSMB012-G

Connector Part	Crimp Tool Size
Crimp Ferrule	3.25 mm (0.128 in)
Center Contact	Crimping not recommended

Connector Performance

Table 5 shows insertion loss and VSWR values for the CONSMB012-G connector at commonly used frequencies.

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

Table 5. Insertion Loss and VSWR for the CONSMB012-G Connector

Band	Low-Band Cellular/ ISM/LPWA	Midband Cellular/ GNSS	WiFi/ISM	WiFi 6
Frequency Range	400 MHz to 960 MHz	1164 MHz to 5000 MHz	2.4 GHz	5 GHz to 7.125 GHz
Insertion Loss (dB max)	-0.15	-0.36	-0.24	-0.64
VSWR (max)	1.1	1.2	1.1	1.5

Table 6. Mechanical Specifications

Model	CONSMB012-G
Mounting Type	Cable Mount (crimp type)
Fastening Type	Snap-on Coupling
Interface in Accordance with	MIL-STD-348A
Connector Durability	500 cycles min.
Weight	3.4 g (0.12 oz)

Table 7. 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 B
Vibration	MIL-STD-202 Method 204 test condition B
Mechanical Shock	MIL-STD-202 Method 213 test condition I
Temperature Range	-65 °C to +165 ° C
Environmental Compliance	RoHS

Packaging Information

The CONSMB012-G connector is placed in a clear plastic bag. Individual bags are sealed in a bulk plastic bag of 50 pcs. Bulk bags are packaged in a carton (800 pcs). Distribution channels may offer alternative packaging options.

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