*Calibration Solutions*

# BNC-TNC Connector Gage Kit

ACUDIAL-BNCTNC

## Features

- *Direct reading*
- *Quick startup*
- *Self-Calibration*
- *Dial Indication*
- *Accurate*
- *Easy to Use*


## Product Overview

Mini-Circuits' ACUDIAL-BNCTNC Series connector gage kit is a push on type gage designed to measure the center contact pin and dielectric location of type BNC and TNC female and male connectors per MIL-PRF-39012 class 2.

The ACUDIAL-BNCTNC Gage kit consists of:

(1) a dial indicator assembly graduated in 0.001 increments with integral female and male measurement bushings.
(2) female and male master gage
(3) calibration certificate*
(4) Instruction manual all contained in a solid wooden instrument case (12 x 7 x 3.5 inches)

Before checking the interface dimensions of any connector the dial indicator is set to zero by means of a master gage. After zeroing , the connector is engaged on the on the male or female bushing of the gage depending upon the gender of connector The resultant reading is the actual deviation from the nominal (mean) dimension as indicated in following table 1.

*Recommended duration of calibration is one year. However to ensure that the performance of gage and its accessories are in accordance to factory calibrated standards, actual need of calibration may vary based on use.

## Application

All the coaxial connectors mounted on device cables or any test equipment should always be gaged before mating to insure compliance. Such check helps in averting interfered matting and to assure proper electrical performance and produce accurate test data and preventing damage to the device being tested.

The ACUDIAL-BNCTNC Gage kit is the right tool for all of these situations, and can also be used for performing production checkout, incoming inspections, routine quality control, and general laboratory operations.

## Compliance

- Per ASME B89.1.10M-2001, C5.12
- Per ASME B89.1.10M-2001, Table 3
- Performance standards are in compliance with ANSI/NCSL Z540-1 and iso 10012-1

Notes
**A.** Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
**B.** Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
**C.** The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

## Specifications

Table 1. Contact Pin Location for BNC/TNC Connectors

| Specification | FP | | FD | |
|---|---|---|---|---|
| MIL-STD-348A CLASS 2 | 0.206 | 0.000 | 0.208 | 0.000 |
| | | -0.020 | | -0.020 |
| | MP | | MD | |
| | 0.210 | +0.020 | 0.208 | +0.020 |
| | | 0.000 | | 0.000 |

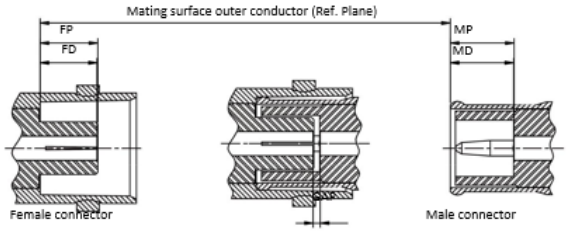
BNC Connector Gage Specifications

| Characteristics | Limits | Comments |
|---|---|---|
| Gage Resolution | 0.0001" | 1/5 Least dial graduation |
| Gage Calibration Accuracy | 0.00075" | 1 Least dial graduation plus 0.000250 measurement guardband |
| Gage Repeatability | 0.0001" | 1/5 Least dial graduation |
| Master Accuracy | 0.0000125" | 0.0001 Range |

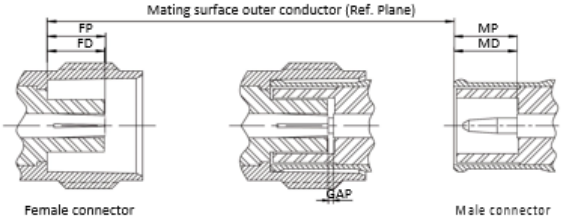
***Total Uncertainty***

| | | |
|---|---|---|
| RSS | 0.000763319 | (Root sum of squares) |
| Worst Case | 0.0009625 | (Sum of all units) |

## BNC Contact Pin Location




## TNC Contact Pin Location




## Master Gages

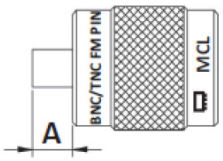



Fig 2. Gaging a Female BNC/TNC Connector

Table 2. Gage Dimensions Female

| Specification | | Min. "A" | Max. "A" | Mean "A" |
|---|---|---|---|---|
| 0.206 | +0.000 | 0.205 | 0.206 | 0.2055 |
| | -0.001 | | | |

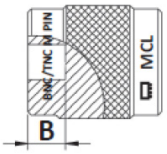



Fig 3. Gaging a Male BNC/TCN Connector

Table 3. Gage Dimensions Male

| Specification | | Min. "B" | Max. "B" | Mean "B" |
|---|---|---|---|---|
| 0.210 | +0.001 | 0.210 | 0.211 | 0.2105 |
| | -0.000 | | | |

Notes
**A.** Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
**B.** Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
**C.** The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp