

TYPE N CONNECTOR GAGE KIT

A007A Series

Features

- **Direct Reading**
- **Self-Checking**
- **Dial Indicator Style**
- **Accurate**
- **Easy To Use**



A007A Type N Dial Indicator Precision Connector Gage Kit

Description

The model A007A connector gage kit is designed to measure the center contact pin location from the outer conductor mating surface of type N female and male connectors per MIL-C-39012 class 2. Refer to dimensions A and B in figure 1.

This gage kit provides a fast and accurate means for checking connectors for compliance to applicable interface specifications. Since it is basically a comparator, it can be used to check a variety of nominal dimensions. The indicator is zeroed by means of a master gage with the appropriate nominal dimensions; then, it is engaged to the connector being tested. The resultant reading is the actual deviation from the nominal dimension. The accuracy of the measurement is the tolerance of the master gage nominal dimension itself. This kit consists of a dial indicator assembly graduated in 0.001 increments, interchangeable female and male measurement bushings and a master gage supplied in a wood instrument case (size — 5.0 L x 3.0 W x 3.5 D) with complete operating instructions. All gage parts and the master gage are made from stainless steel for long wearing characteristics.

Application

Coaxial connectors should always be gaged before mating to insure compliance to applicable interface specifications, to prevent destruction interference when mated, and to insure proper electrical performance. Connectors on test equipment should be gaged on a routine basis in order to detect out-of-tolerance conditions that may impair electrical performance, produce inaccurate test data, or cause damage to the devices being tested or other test equipment.

The Maury A007A gage 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.

TABLE 1.

GAGE KIT MODEL	MASTER GAGE DIMENSIONS*			MILITARY SPECIFICATION
	FEMALE		MALE	
A007A	0.207	+0.000 -0.001	0.210	MIL-C-39012 CLASS 2

* Refer to data sheet 2Y-003 regarding the availability of additional master gages.



Connector Gage Specifications

TABLE 2.

CONTACT PIN LOCATIONS FOR COMMONLY USED TYPE N CONNECTORS

ITEM	SPECIFICATION	A	B	CENTER CONTACT GAP			COMMENTS
				MINIMUM	NOMINAL	MAXIMUM	
A	Maury Precision (per Maury data sheet 5E-049)	0.207 ^{+0.003} _{-0.000}	0.207 ^{+0.000} _{-0.003}	0.000	0.000	0.006	Maury high precision type N connector ¹
B	— — —	0.207 ^{+0.010} _{-0.000}	0.207 ^{+0.000} _{-0.010}	0.000	0.000	0.020	²
C	MIL-C-39012 Class 1	0.208 ^{+0.003} _{-0.000}	0.207 ^{+0.000} _{-0.003}	0.001	0.001	0.007	MIL-C-39012C standard test connector
D*	MIL-C-39012 Class 2	0.210 ^{+0.020} _{-0.000}	0.207 ^{+0.000} _{-0.020}	0.003	0.003	0.040	Type N general specification ³
E	Maury High Precision	0.2070 ^{+0.0005} _{-0.0000}	0.207 ^{+0.0000} _{-0.0005}	0.0000	0.0000	0.0010	Maury high precision type N connector

* The A007A kit is designed to measure this specification.

TABLE 3.

CHARACTERISTICS	LIMITS	COMMENTS
Gage Resolution	± 0.000200	1/5 Least dial graduation ⁴
Gage Calibration Accuracy ⁸	± 0.001500	1 Least dial graduation ⁵ plus 0.00050 measurement guardband
Gage Repeatability	± 0.000200	1/5 Least dial graduation ⁵
Master Accuracy	± 0.000500	0.0010 Range ⁶
Total Uncertainty ^{7, 8}		
RSS	± 0.001606	Root sum of the squares.
Worst Case	± 0.002400	Add resolution, repeatability, gage and master accuracy limits.

Notes

- Precision connector compatible with most precision type N connectors in use today.
- Maury general purpose type N connector per MIL-C-39012C except dimension A is reduced and the tolerances are tighter.
- Maury recommends that for better quality the following tolerances be used:
 $A = 0.210^{+0.010}_{-0.000}$ $B = 0.207^{+0.000}_{-0.010}$
- Per ASME B89.1.10M-2001, C5.1.2.
- Per ASME B89.1.10M-2001, Table 2.
- Per manufacturers specifications.
- Performance standards are in compliance with ANSI/NCSL Z540-1, MIL-STD-45662A and ISO 10012-1.
- Applies over the operating range for connector gaging 0.025" recession to 0.005" protrusion from master gage zero setting.

Dimensions (Inches)

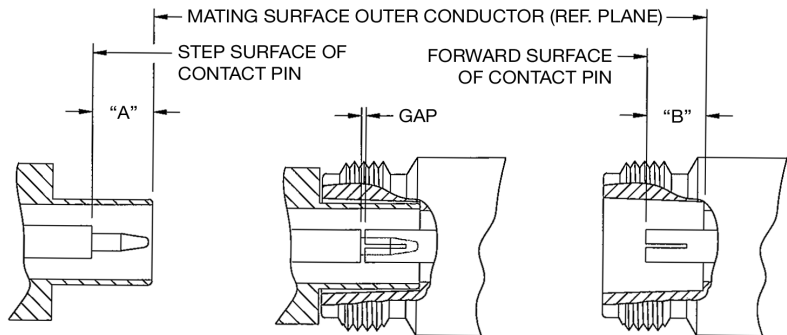


Figure 1 — Type N Contact Pin Location Dimensions