

NAVSEA
STANDARD ITEM

FY-17

ITEM NO: 009-22
DATE: **30 JUL 2015**
CATEGORY: II

1. SCOPE:

1.1 Title: Shipboard **Electrical/Electronic** Cable; test

2. REFERENCES:

2.1 SE000-01-IMB-010, Navy Installation and Maintenance Book (NIMB),
Section IX, Installation Standards (Source CD: N0002400003)

2.2 S9086-KC-STM-010/CH-300, Electric Plant - General

3. REQUIREMENTS:

3.1 Accomplish an insulation resistance test of each electric cable conductor using the **appropriate** direct current megger **using Table 300-3-4 of 2.2 for guidance.**

3.1.1 Disconnect low voltage equipment associated with circuits to be tested to prevent damage during tests.

3.1.2 Minimum acceptable readings of each cable conductor to ground and between conductors:

Lighting Circuit	0.5 Megohm
Power Circuit	1.0 Megohm
Degaussing Circuit	0.1 Megohm
Interconnecting Control Circuit	1.0 Megohm
Interior Communication Circuit	0.2 Megohm
Sound Powered Telephone Circuit (with telephone disconnected)	0.05 Megohm
Multiconductor Cables (with circ mil less than 1700)	0.05 Megohm

3.1.3 Minimum acceptable reading of coaxial cable in accordance with Section 2.8.3.3 of 2.1:

Coax cable with...	Length (feet)	Insulation resistance in megohms (To equal or exceed)
Polyethylene or polytetrafluorethylene	100 (or less)	40,000
	200	20,000

Coax cable with...	Length (feet)	Insulation resistance in megohms (To equal or exceed)
(Teflon) dielectric	500	8,000
	1,000	4,000
Synthetic rubber dielectric	Up to 1,000	1,000
Magnesium oxide dielectric	Up to 1,000	10,000
Dielectric material arranged in layers of conducting and non-conducting rubber	Up to 1,000	500

3.1.4 Discharge coaxial cable to ground following insulation resistance test.

3.2 Test each cable conductor for continuity and complete circuit. Ensure terminal connections are tight.

4. NOTES:

4.1 A new circuit is defined as a cable not previously installed.

4.2 Pulled-back cables are those which are disconnected and physically removed from a wireway, conduit, or cableway to protect the cable from industrial work.

4.3 Reused cables are those cables disconnected from the equipment to facilitate equipment removal.