

NAVSEA  
STANDARD ITEM

FY-16

ITEM NO: 009-22  
DATE: 18 JUL 2014  
CATEGORY: II

1. SCOPE:

1.1 Title: Shipboard Electric Cable; test

2. REFERENCES:

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

3. REQUIREMENTS:

3.1 Accomplish an insulation resistance test of each electric cable  
conductor using a 500 volt, direct current megger.

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

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 (Teflon) dielectric	100 (or less)	40,000
	200	20,000
	500	8,000
	1,000	4,000
Synthetic rubber dielectric	Up to 1,000	1,000

Coax cable with...	Length (feet)	Insulation resistance in megohms (To equal or exceed)
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.

3.3 Submit one legible copy, in hard copy or approved transferrable media, of a report listing results of the requirements of 3.1 and 3.2, including circuit number, lead numbers, and readings obtained, to the SUPERVISOR within **3 days** of completion of tests.

3.3.1 Identify defective cables by circuit number, lead numbers, type, size, approximate length, and readings obtained.

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.