



***Society of Cable
Telecommunications
Engineers***

**ENGINEERING COMMITTEE
Interface Practices Subcommittee**

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**Test Method for
DC Loop Resistance**

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1.0 SCOPE

- 1.1 This method is intended for use in determining the DC Loop Resistance of coaxial cables. Due to low resistances a four-wire test method is used.

2.0 EQUIPMENT

- 2.1 Fluke PM 6304 Programmable Automatic RCL Meter, or equivalent.
- 2.2 Four wire test leads as required.

3.0 PROCEDURE

- 3.1 Strip approximately 1 inch (2.54 cm) of the insulation exposing the inner conductor on both ends of the cable under test. Also, expose enough outer conductor or braid to make a good connection with the test leads. Cables tested on a reel must be constructed with outer jacket insulation.
- 3.2 Calibrate the RCL meter by connecting the leads together and performing the appropriate trim or calibration as required by the manufacturer.
- 3.3 Connect the measurement leads, see Figure 1, one lead to the center conductor on one end of the cable, and the other lead directly to the same conductor on the opposite end. Measure DC resistance. Record this value as R_{cc} .
- 3.4 Following the same procedure connect one test lead to the outer conductor of the cable, and the other directly to the same conductor on the opposite end. Measure DC resistance. Record this value as R_{oc} .
- 3.5 After both conductors of the cable have been measured, determine temperature of test in degrees F.

Note: Cable should stabilize in its environment for 24 hours.