



Designation: F 855 – 97^{ε1}

Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment¹

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^{ε1} NOTE—Editorial changes were made in February 2000.

1. Scope

1.1 These specifications cover the equipment making up the temporary grounding system used on de-energized electric power lines, electric supply stations, and equipment.

1.2 It is common practice for the users of protective grounding equipment to prepare complete instructions and regulations to govern in detail the correct use and maintenance of such equipment.

1.3 The uses and maintenance of this equipment are beyond the scope of these specifications.

1.4 These specifications for a system of protective grounding utilizing copper cables are covered in four parts, as follows:

	Sections
Clamps for Temporary Protective Grounds	4-16
Ferrules for Temporary Protective Grounds	17-30
Cables for Temporary Protective Grounds	31-39
Protective Grounds (Complete Assembly With Clamps, Ferrules, and Cable)	40-52

1.5 Each of the four parts is an entity of itself, but is listed as a part of the system for completeness and clarification.

1.6 The values stated in Newton-Meter units are to be regarded as the standard. The values in parentheses are the inch-pound units.

1.7 Currents presented in Table 1 and Table 2 are based upon cable melting times, as determined from equations by I. M. Onderdonk. See Appendix X3.

1.7.1 Currents presented in Table 3 were determined by use of EPRI Project RP2446 Computer Program RTGC “A Desktop Computer Program for Calculating Rating of Temporary Grounding Cables”.

1.7.2 See Appendix X3 and Appendix X4 for a discussion of these values.

1.8 The following precautionary caveat pertains to the test method portions, Sections 12 and 25 of these specifications: *This standard does not purport to address all of the safety*

concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 ASTM Standards:

B 172 Specification for Rope-Lay-Stranded Copper Conductors Having Bunch-Stranded Members, for Electrical Conductors²

B 173 Specification for Rope-Lay-Stranded Copper Conductors Having Concentric-Stranded Members, for Electrical Conductors²

B 263 Test Method for Determination of Cross-Sectional Area of Stranded Conductors²

D 470 Test Methods for Cross-linked Insulations and Jackets for Wire and Cable³

D 753 Specification for General-Purpose Polychloroprene Jacket for Wire and Cable³

D 2219 Specification for Poly(Vinyl Chloride) Insulation for Wire and Cable, 60 Operation³

D 2633 Methods of Testing Thermoplastic Insulations and Jackets for Wire and Cable³

D 2768 Specification for General-Purpose Ethylene Propylene Rubber Jacket for Wire and Cable³

D 2770 Specification for Ozone-Resisting Ethylene Propylene Rubber Integral Insulation and Jacket for Wire and Cable³

E 8 Test Methods of Tension Testing of Metallic Materials⁴

E 380 Practice for Use of the International System of Units (SI) (the Modernized Metric System)⁵

2.2 ANSI Standard:

C 37.09 Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Basis⁶

2.3 ICEA/NEMA Standard:

² Annual Book of ASTM Standards, Vol 02.03.

³ Annual Book of ASTM Standards, Vol 10.01.

⁴ Annual Book of ASTM Standards, Vol 03.01.

⁵ Annual Book of ASTM Standards, Vol 14.02.

⁶ Available from American National Standards Institute, 11 West 42nd St., 13th Floor, New York, NY 10036.

¹ These specifications are under the jurisdiction of ASTM Committee F-18 on Electrical Protective Equipment for Workers and are the direct responsibility of Subcommittee F18.45 on Mechanical Apparatus.

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