

Electrical isolation

Electrical isolation shall withstand at least one of the following electrical ~~isolation~~ strength tests:

- a) 1500 V rms at 50 Hz to 60 Hz. This test voltage amplitude is raised from zero to the prescribed voltage and held at that value for 60 s.
- b) 2250 V dc. This test voltage is raised from zero to the prescribed voltage and held at that value for 60 s.
- c) A sequence of ten 2400 V impulses of alternating polarity, applied at intervals of not less than 1 s. The shape of the impulses is 1.2/50 (1.2 μ s virtual front time, 50 μ s virtual time to half value), or one produced by a 1.2/50-8/20 combination wave generator, as defined in Recommendation ITU-T K.44.

There shall be no ~~failure of the isolation barrier or~~ insulation breakdown during the test. ~~Failure of the isolation barrier or i~~nsulation breakdown is considered to have occurred when the current that flows as a result of the application of the test voltage, rapidly increases in an uncontrolled manner; that is, the ~~isolation barrier or~~ insulation does not restrict the flow of the current. Corona discharge is not regarded as insulation breakdown. The resistance after the test shall be at least 2 M Ω , measured at 500 V dc.

Note: IEEE Std 802.3-2018 and previous revisions provided references to various editions of the IEC 60950-1 standards for guidance in performing the isolation test for options a and b. IEC 60950-1 has been withdrawn. References to IEC standards are not essential to performing the isolation test specified in J.1. No technical change is implied by the removal of these references.