

Electrical isolation and general safety

J.1 Electrical Isolation

Electrical isolation ~~between the electrical conductors of the 802.3 interface under test and: PE, Mains input ports, any conductive surface, and any other interface ports on the system~~ shall withstand at least one of the following electrical ~~isolation~~ strength tests:

- a) 1500 V rms at 50 Hz to 60 Hz, ~~for 60 seconds~~ applied as specified in Section ~~5.4.9.1~~ of IEC 62368-1:2018.
- b) 2250 V dc, ~~for 60 seconds~~ applied as specified in Section ~~5.4.9.1~~ of IEC 62368-1:2018.
- 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 μ s (1.2 μ s virtual front time, 50 μ s virtual time or half value), ~~or a 1.2/50 μ s x 8/20 μ s as defined in ITU-T K.44 in Annex D of IEC 62368-1:2018.~~

There shall be no insulation breakdown, as defined in Section ~~5.4.9.1~~ of IEC 62368-1:2018, during the test. ~~Insulation breakdown is defined as a sudden increase in current caused by a failure of the isolation. Typically the breakdown of the isolation barrier will be in components, on a PCB, in a jack/connector, etc.~~

The resistance after the test ~~with the replacement of any components removed for AC or DC voltage testing~~ shall be at least 2 M Ω , measured at 500 V dc as specified in Table 23 of IEC 62368-1:2018.

J.2 General safety

All equipment meeting this standard is ~~intended to~~ shall conform to ~~the relevant safety standard for the equipment system that contains the IEEE 802.3 interface(s), such as the~~ applicable sections of IEC 62368-1:2018.