Australian Standard™

AS 2362.22

Fire detection, warning, control and intercom systems—Methods of test

Method 22: Sound pressure level test

1 SCOPE

This Standard sets out the method of determining the sound pressure level emitted from an actuating device in the alarm state. (See the performance requirements in the appropriate device Standard).

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS
1217 Acoustics—Determination of sound power levels of noise sources.
1217.5 Part 5: Engineering methods for free-field conditions over a reflecting plane
1259 Acoustics—Sound level meters

3 PRINCIPLE

An actuating device is mounted in accordance with the manufacturer's instructions, within a prescribed environment, and sound pressure levels are measured. For the devices that are battery powered, the sound pressure shall be measured when the battery low condition is indicated.

4 APPARATUS

4.1 General

The measuring apparatus shall be equal to, or better than, a Type 2 sound level meter complying with AS 1259 and employing an 'A' weighted network and fast response characteristics.

An acoustical calibrator with an accuracy of ±0.5 dB to check the calibration of the entire measuring system.

A wooden backing board, 305 mm × 305 mm, to mount the actuating devices onto.

4.2 Indoor testing

When tested indoors, the actuating device shall be mounted on the backing board in an anechoic chamber of not less than 28.6 m^3, with no dimension less than 2.1 m, and with an absorption factor for all surfaces of not less than 0.99 between 100 Hz and 10 kHz.

The chamber shall accommodate the actuating device and the sound level meter, which shall be separated by 3 m.

4.3 Outdoor testing

When tested outdoors, free-field conditions may be simulated by mounting the actuating device on the backing board not less than 3 m above the ground, and with the microphone located 3 m from the actuating device.