AS 2362.22—1990

Australian Standard®

Automatic fire detection and alarm systems—Methods of test for actuating devices

Method 22: Sound pressure level test

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

2 REFERENCED DOCUMENTS The following document is referred to in this Standard:

AS
1259 Sound level meters

3 PRINCIPLE The actuating device is installed in its normal orientation within a prescribed environment, and appropriate sound pressure levels measured.

4 APPARATUS 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.

Actuating devices for multiple station connection shall be tested in configuration with the maximum line resistance.

4.1 Indoor testing. When tested indoors, mount the actuating device on a wooden surface 305 mm × 305 mm 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.

4.2 Outdoor testing. When tested out of doors, free field conditions may be simulated by mounting the actuating device on a wooden surface of 305 mm × 305 mm not less than 3 m above the ground, and with the microphone located 3 m from the actuating device.

5 TEST SAMPLES Four test samples should be used for this test.

6 PROCEDURE The procedure shall be as follows:

6.1 General Deplete the batteries to a point just above or at the trouble signal level. If the batteries are depleted to just above the trouble signal level, the measurement shall be recorded after 4 min in alarm. If the batteries are depleted to the trouble signal level, then the measurement shall be taken after 1 min and shall be repeated after 4 min.

If the test is to be conducted outdoors, conduct the test on a clear day with a wind velocity of not more than 8 km per hour and an ambient temperature of 15°C to 20°C.

6.2 Indoor testing Proceed as follows:

(a) Mount the actuating device, according to the manufacturer's instructions, to the backing board located in the anechoic chamber.

(b) Locate the sound level meter in a horizontal plane in line with the axis of the actuating device at a radial distance of 3 m in front of the actuating device.

(c) Initiate the actuating device operation and measure the sound pressure level at angles of 45° on each side of the actuating device.

(d) Repeat Steps (a) to (c) for each test sample.