

Australian Standard®

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

Method 18: Air velocity stability test

1 SCOPE. This Standard sets out the test method for evaluating the effects of air velocity on the stability of ionization type actuating device. (See performance requirements in the appropriate device Standard.)

2 PRINCIPLE. The actuating device is exposed to a stream of air at a set velocity and observed for alarm or fault state.

3 APPARATUS. The following apparatus is required:

- (a) A duct of cross-sectional area not less than 0.1 m^2 in which the flow of air is laminar equipped with an air compressor or blower capable of maintaining an air velocity of approximately 5 m/s in the vicinity of the actuating device.
- (b) Mounting facilities shall be provided to mount the actuating device in each of the three orthogonal directions at the centre of the duct.

4 PROCEDURE. The procedure shall be as follows:

- (a) Adjust the actuating device to its maximum sensitivity setting if applicable.
- (b) Prepare and mount the actuating device in the duct normal to the air stream.
- (c) Gradually increase the air velocity in the duct from less than 0.1 m/s to 5 m/s over a period of 1 min, then maintain at 5 m/s for 5 min and observe whether the actuating device enters an alarm or fault state.
- (d) Repeat Clauses 4(b) and 4(c) with the actuating device mounted in the other two orthogonal directions.

5 REPORTING OF RESULTS. The following shall be reported.

- (a) Information identifying the actuating device.
- (b) Whether the actuating device generated a fault signal or entered an alarm state during the tests.
- (c) Reference to this test method.

