Australian Standard™

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

Method 10: Low temperature test

1 SCOPE

This Standard sets out the method for testing the stability of an actuating device under low temperature conditions. (See performance requirements in the appropriate device Standard.)

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

IEC
60068 Environmental testing
60068-2-1 Part 2: Tests—Tests A: Cold

3 PRINCIPLE

The actuating device is exposed to the specified environment for a specified period of time and monitored for alarm state and fault signal. The manufacturer's actuating device compatibility parameters are verified at the end of the exposure period while the specified environment is maintained.

4 APPARATUS

A test chamber, constructed so that the position at which the actuating devices are located can be exposed to the specific temperature throughout the test period.

If it is necessary for the air to be circulated, the flow velocity in the vicinity of the actuating device shall not exceed 0.5 m/s.

5 PROCEDURE

The procedure shall be as follows:

(a) Mount the actuating device in its normal orientation inside a suitable test chamber, and connect the leads to a power supply and monitoring equipment.

(b) Energize the actuating device and allow to stabilize for a period of not less than 10 min.

(c) Expose the actuating device to the specified temperature for a period of not less than 16 h, in accordance with IEC 60068-2-1. When cooling the actuating device, ensure that condensation or icing-up does not occur.

(d) After the end of the test period, measure the compatibility parameters while the actuating device is still exposed to the specified environment.

NOTE: The actuating device may be removed momentarily from the test chamber to set it into the alarm state and to simulate a fault if applicable.