

SINGAPORE STANDARD

**Code of practice for installation and
servicing of electrical fire alarm systems**



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Foreword

This Singapore Standard is a revision of CP 10 : 1993 and was prepared by the Technical Committee on Emergency Alarm and Communication Systems under the purview of the Electrical and Electronic Standards Committee. The Code provides recommendations for the installation and servicing of fire alarm systems in buildings.

In this revision, existing requirements were reviewed and revised to bring the Code in line with the latest fire alarm concept and technology. The principal changes made in this revision are as follows:

- a) The requirements for locations where fire protection is not required have been updated (1.4.2);
- b) A new requirement for permitted extension of zones extending beyond a single fire compartment has been added (1.4.3.2);
- c) New features and requirements for main/sub alarm panels and repeater panel have been included, in line with new technology (1.3.18, 2.2.1, 2.2.5, 2.2.6, 2.2.7, 2.5.8 and 3.1.2);
- d) The requirements for zone chart/mimic panel have been included, as advised by the regulatory authority (2.2.2);
- e) New requirements for the alarm verification feature (AVF) have been added (2.5.11);
- f) The requirements for spacing between detectors have been updated to be in line with AS 1670.1 : 1995. The previous edition of CP 10 was based on AS 1670 : 1986 (2.7 and 2.8);
- g) Guidelines on the design process and maintenance of the fire alarm system and the selection of detectors to limit false alarms are provided (2.1.5, 3.4.2 and A.2.2);
- h) The design requirement for beam-type smoke detectors is provided (2.8.3.2.2 and 2.8.3.8).

In the preparation of the standard, reference was made to the following standards:

AS 1670.1 : 1995	Automatic fire detection and alarm systems – System design, installation, and commissioning
BS 5839-1 : 2002	Fire detection and fire alarm systems for buildings – Part 1 : Code of practice for system design, installation, commissioning and maintenance
BS EN 54-2 : 1998	Fire detection and fire alarm systems – Part 2 : Control and indicating equipment

In particular, the following requirements have been based on the AS 1670.1 : 1995:

- a) The spacing, location and mounting of heat, smoke and flame detectors;
- b) Optical beam line-type smoke detector and aspirating smoke detection systems.

Acknowledgement is made to Standards Australia and British Standards Institute for the use of the information in the above standards.

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

NOTE

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
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Code of practice for installation and servicing of electrical fire alarm systems

Section One – Scope and general requirements

1.1 Scope

This Code of Practice applies to the installation and servicing of electrical fire alarm system in buildings. It covers alarm systems using manual call points, heat detectors, smoke detectors and flame detectors.

1.2 Application

All installations of automatic fire detection and alarm systems shall comply with the general requirements of Clause 1.4, with the additional requirements of Section 2 according to the detector type, and with the installation and maintenance requirements of Section 3. Manual call points installed in conjunction with an automatic fire detection and alarm system or as a separate system shall comply with the general installation requirements of Section 2 with the additional requirements of Clause 2.6.

Where an automatic fire detection and alarm system is ancillary to an automatic fire-extinguishing system and/or an engineered smoke control system, the detection system shall comply with the appropriate requirements of this Code.