

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Alarm systems –

Part 2: Electromagnetic compatibility – Immunity requirements for components of fire and security alarm systems

Systemes d'alarme –

Partie 2: Compatibilité électromagnétique – Exigences relatives à l'immunité des composants des systèmes d'alarme de détection d'incendie et de sécurité



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ALARM SYSTEMS –**Part 2: Electromagnetic compatibility –
Immunity requirements for components of fire
and security alarm systems**

FOREWORD

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International Standard IEC 62599-2 has been prepared by IEC technical committee 79: Alarm and electronic security systems.

This standard is based on EN 50130-4 (1995) and its amendments 1 (1998) and 2 (2003), and integrates the most recent ACEC recommendations¹.

¹ ACEC: Advisory Committee on Electromagnetic Compatibility is an IEC committee.

The text of this standard is based on the following documents:

FDIS	Report on voting
79/277/FDIS	79/293/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62599 series, under the general title *Alarm systems*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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ALARM SYSTEMS –

Part 2: Electromagnetic compatibility – Immunity requirements for components of fire and security alarm systems

1 Scope

This part of IEC 62599 for immunity requirements applies to the components of the following alarm systems, intended for use in and around buildings in residential, commercial, light industrial and industrial environments:

- access control systems, for security applications;
- alarm transmission systems²;
- CCTV systems, for security applications;
- fire detection and fire alarm systems;
- intruder and hold-up alarm systems;
- social alarm systems.

The tests and severities that should be used are the same for indoor and outdoor applications of fixed, movable and portable equipment.

The levels do not cover extreme cases, which may occur in any location, but with an extremely low probability of occurrence, or in special locations close to powerful emitters (e.g. radar transmitters).

Equipment within the scope of this standard should be designed in order to operate satisfactorily in the environmental electromagnetic conditions of residential, commercial, light industrial and industrial environments. This implies particularly that it should be able to operate correctly within the conditions fixed by the electromagnetic compatibility levels for the various disturbances on the low voltage public supply system as defined by IEC 61000-2-2. The immunity tests in this standard only concern the most critical disturbance phenomena.

For equipment using radio signalling, mains signalling or with connections to the public telephone system, additional requirements, from other standards specific to these signalling media, may apply.

This standard does not specify basic safety requirements, such as protection against electrical shocks, unsafe operation, insulation coordination and related dielectric tests.

This standard does not cover EMC emission requirements. These are covered by other appropriate standards.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

² Apart from equipment which is part of a public telecommunication network.

IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*
Amendment 1 (1992)

IEC 61000-2-2:2002, *Electromagnetic compatibility (EMC) – Part 2-2: Environment – Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems*

IEC 61000-4-2:2008, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4:2004, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5:2005, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

IEC 61000-4-6:2008, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-11:2004, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*

ETSI EN 301 489 (all parts), *Electromagnetic compatibility and radio spectrum matters (ERM) – Electromagnetic compatibility (EMC) standard for radio equipment and services*

ETSI EN 300 339, *Electromagnetic compatibility and radio spectrum matters (ERM) – General Electromagnetic compatibility (EMC) for radio communications equipment*

3 Terms, definitions and abbreviations

For the purposes of this document, the following terms, definitions and abbreviations apply.

3.1 Terms and definitions

3.1.1

regional product performance standard

regional standard which specifies the product performance requirements

NOTE Such a standard may include EMC requirements but is not limited to EMC requirements. (e.g. series for fire alarm systems, series for intruder alarm systems).

3.1.2

basic EMC standard

standards giving the description of, and test and measurement methods for an EMC phenomenon, along with details of the test apparatus and test set-up

NOTE Although a basic EMC standard may give guidance on the choice of severity, it does not give the prescribed limits or criteria for compliance.

3.1.3

intruder alarm system

alarm system to detect and indicate the presence, entry or attempted entry of an intruder into supervised premises