Guidelines for EN 50131 Certification

Introduction:

Audits of Intruder Alarm Systems (IAS) are carried out against the requirements of
I.S. EN 50131-1:2006 (Alarm Systems - Intrusion and Hold-Up Systems - Part 1: System
Requirements) and I.S. CLC/TS 50131-7:2003 (Alarm Systems-Intrusion Systems Part 7:
Application Guidelines).

Summary of EN 50131-1

The general requirements include requirements which must be met by equipment
manufacturers as well as equipment installers. The following is a summary of the
information which applies to installers.

Security Grading: All alarm components must meet the requirements of EN 50131. All
components meeting the requirements of the standard are assigned a security Grade (this
is either stamped on the product or included on back up documentation). The overall
grade of an alarm cannot be higher than the grade of the **Lowest** graded component
within the system. Installers must be able to prove the grade of all components in each
alarm installed. This is best done by keeping manufacturers documentation on file. If the
documentation with the component does not include the grade and class (and it is not
marked), this information should be requested from the manufacturer. If written evidence
of the grade and class is not available, the component should not be used.

To meet Grade 2, an alarm system must be connected to an Alarm Receiving Centre.
Where an alarm is installed in a premises awaiting a phone connection, it can be Graded
as Grade 2 once it is clear from the paperwork that the alarm will be connected to a
monitoring station as soon as the phone line is available (and all components meet Grade
2 or higher).

The grades are defined as follows

Grade 1: Low risk

An intruder or robber is expected to have little knowledge of Intruder Alarm Systems and
be restricted to a limited range of easily available tools.

Grade 2: Low to medium risk

An intruder or robber is expected to have a limited knowledge of Intruder Alarm Systems
and have the use of a general range of tools and portable instruments (e.g. a multi-meter).

Grade 3: Medium to high risk

An intruder or robber is expected to be conversant with Intruder Alarm Systems and have
a comprehensive range of tools and portable electronic equipment.

Grade 4: High risk

To be used when security takes precedence over all other factors. An intruder or robber is
expected to have the ability or resource to plan an intrusion or robbery in detail and have
a full range of equipment including means of substitution of components in an Intruder
Alarm System.

Environmental Classification: In addition to the security grade, each component is given an environmental classification. There is no overall environmental classification, each component must meet the classification for the location it is installed. Environmental classes are defined as follows

Class I – Indoor

Environmental influences normally experienced indoors when the temperature is well maintained (e.g. in a residential or commercial property).

Class II – Indoor – General

Environmental influences normally experienced indoors when the temperature is not well maintained (e.g. in corridors, halls or staircases and where condensation can occur on windows and in unheated storage areas or warehouses where heating is intermittent).

Class III – Outdoor – Sheltered or indoor extreme conditions

Environmental influences normally experienced out of doors when IAS components are not fully exposed to the weather or indoors where environmental conditions are extreme.

Class IV – Outdoor – General

Environmental influences normally experienced out of doors when I&HAS components are fully exposed to the weather

For most intruder alarm systems, all indoor components will be Class II with the External bell box Class IV. Class III components would be required if the Intruder Alarm includes barns or sheds which would be exposed to the weather (Class I components are generally not supplied on the market).

Detection of Intruders and the Recognition of Faults:

Requirement: The alarm system should be able to differentiate between an alarm signal and a tamper signal

Alarms supplied on the market will be able to meet this requirement, however, the installer needs to ensure that components have been wired correctly and the panel has been programmed correctly.

Access Levels:

In accordance with EN 50131, only the user is able to set and unset an alarm. Quick codes are not allowed as anyone could set an alarm with a quick code. Once an alarm is set to conform with EN 50131, the quick codes will not work (this is a good indication of whether the alarm is installed to EN 50131 or not).

In addition, it is not allowed to enter Engineering mode without the permission of the user. Different suppliers of alarms have different ways of meeting this requirement (eg. User code must be input after the engineer code, user must enter menu to allow the engineer to input the code, engineer code must be input within 30 seconds of the system being unset etc.).

Notification:

A Grade 1 alarm must have either 2 warning devices, a self powered warning device or be connected to an alarm receiving Centre (these are minimum requirements).

A Grade 2 alarm must be connected to an alarm receiving centre and have at least 1 self powered warning device or 2 remotely powered warning devices (warning devices are not required with certain higher grade Transmission Systems).

Interconnections:

Requirement: Interconnections shall be suitable for the purpose and shall be available to provide means of communication between intruder alarm system components.

This clause means that installers must use wiring (or wireless) in accordance with the requirements of the alarm manufacturer. Wiring must be neat and tidy.

Power Supply:

Requirement: The power supply shall be capable of supporting the Intruder Alarm System in all conditions including when recharging storage devices for 12 Hours for Grades 1 and 2.

In general, the manufacturers will supply batteries that can sustain the system for 12 hours, however, if a system has a large number of Zones, the installer should be able to verify that the battery is capable of sustaining the system for 12 hours (by looking at the current requirements for each piece of equipment, adding these up to get the load for the full system and confirming that the battery Amp Hours is sufficient to maintain this load for 12 hours).

Documentation:

Intruder Alarm System Component Documentation:

Requirement: Documentation relating to IAS components shall be concise, complete and unambiguous. The documentation shall be sufficient to ensure the correct installation, putting into operation and maintenance of IAS components. Sufficient information shall be provided to ensure the integration of each component with other IAS components.

Component documentation shall include the following:

- Name of manufacturer or supplier;
- Description of equipment;
- Standard to which component claims compliance;
- Security grade;
- Environmental class.

It is the manufacturers responsibility to ensure that the above documentation is provided with any components supplied. It is the duty of the installer to make sure they have a copy of this documentation on the day of the audit. If this documentation does not come with the component (eg. With packs of contacts), it must be requested from the wholesaler.

Intruder Alarm System Documentation:

Requirement: Documentation relating to an IAS shall be concise, complete and unambiguous. Information shall be provided sufficient to install, put into operation, operate and maintain an IAS. Instructions relating to the operation of an IAS shall be designed to minimise the possibility of incorrect operation and be structured to reflect the access level of the user.

It is the manufacturers responsibility to ensure that the above documentation is provided with an Intruder Alarm System. It is the duty of the installer to make sure they have a copy of this documentation on the day of the audit.

Conclusion:

The above is a basic summary of the requirements of the EN 50131-1:2006 standard. We would strongly advise all installers to purchase a copy of the standard from ILI standard sales (Tel: 01 857 6730) or www.standards.ie.

I.S. CLC/TS 50131-7:2003

This standard lists the requirements for the installation of alarm systems to EN 50131 standards.

While EQA (Ireland) will provide additional guidance documents to registered clients of the EN 50131 scheme (deposit paid), we strongly recommend that all installers purchase a copy of this standard.

ILI Standards Sales,
42/44 Northumberland Rd.,
Dublin 4
(Postal enquiries only)

www.standards.ie
mailto:info@standards.ie

Tel: 01 857 6730
Fax: 01 857 6729