Alarm System Grading

Unlike the complex UL (Underwriters Laboratory) listings of the United States, the European Standards (i.e. European Norms) use easy to understand text that specifies performance criteria. EN specifications create grades of performance appropriate to the associated Risk. The grading of a system based on a structured risk analysis will determine the:

- Extent of the system
- Signaling
- Tamper security

Within the European Standards, there are four security grades:

- Grade 1 - low risk
- Grade 2 - low to medium risk
- Grade 3 - medium to high risk
- Grade 4 - high risk

For a **Grade 1** system, intruders are expected to have little knowledge of intruder alarm systems and be limited to a range of easily available tools.

A **Grade 2** system expects intruders to have a limited knowledge of intruder alarm systems and the use of a general range of tools.

A **Grade 3** system expects intruders to be conversant with intruder alarm systems and have access to a comprehensive range of tools.

Finally, a **Grade 4** system is where security takes precedence over all other factors. At this level, intruders are expected to have the ability and resources to plan an intrusion in detail and have a full range of specialized equipment, including means of substitution of vital components within the intruder alarm system.

As you can see systems are evaluated against the risk of the level of intruder that may attack the system hence the requirement that system design meets the appropriate grade. Appropriately, it follows that most commercial insurers will specify systems at Grades 3 and 4. A further inclusion in European Standards is the classification of components that are used within the alarm system installation. These devices are graded on a basis of catch performance, immunity to defeat techniques, sufficient tamper circuitry, and performance longevity criteria for each type of detection device, which in turn will determine the limitations where they are installed. For example, a Grade-1 detection device cannot be installed in a system designated to meet a superior Grade-2, Grade-3, or Grade-4 installation.