

## 302. Product certification

The following list of standards and codes of practice are applicable to Integrated Security Systems including Access Control:

### Information Technology Equipment Standards

There are no universally recognised standards for access control equipment. Therefore for electromagnetic compatibility (EMC) and safety certification, our access control products are evaluated under the following standards for IT equipment:

BS EN 55022: Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement. This is the EMC emissions standards for IT equipment.

BS EN 55024: Information technology equipment - Immunity characteristics - Limits and methods of measurement. This is the EMC immunity standard for IT equipment.

EN 60950- 1: Information technology equipment – Safety. This is the safety standard for IT equipment.

### Radio Equipment Standards

In addition to the IT Equipment Standards, Radio equipment standards are employed when our products contain a radio transceiver (e.g. proximity readers, hands free and Net2Air products):

ETSI EN 300 330: Electromagnetic compatibility and Radio spectrum Matters (9KHz to 25MHz). This is the radio performance standard used for our 125 KHz readers.

ETSI EN 300 328: Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques. This is the radio performance standard used for our Net2Air products.

ETSI EN 300 440: Electromagnetic compatibility and Radio spectrum Matters (ERM); Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range. This is the radio performance standard used for our hands free products.

ETSI EN 302 291: Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Close Range Inductive Data Communication equipment operating at 13,56MHz. This is the radio performance standard for our mifare/dual frequency readers.

ETSI EN 301 489: Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services. This is the EMC immunity standard for all radio equipment.

### Low Voltage Directive

All electrical equipment supplied in the EU must comply with the Low Voltage Directive (LVD). Voltages covered by the LVD are 50 – 1000 Vac (rms) and 75 – 1500 Vdc.

LVD DIRECTIVE 2006/95/EC

## Alarm System Equipment Standards

The following standards apply to equipment that is integrated into alarm systems for use in security applications. Note, our access control products do not automatically meet the EMC and Environmental standards as they are tested against the IT standards:

BS EN 50130- 4: Alarm Systems Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder and social alarm systems.

BS EN 50130-5: Alarm systems Part 5: Environmental test methods

BS EN 50133: Alarm systems -Access control systems for use in security applications. Please see KB 540 for how this standard relates to Net2, Switch2 and Compact systems.

BS 7807- Code of practice for Design, installation and servicing of integrated systems incorporating fire detection and alarm systems and/or other security systems for buildings

DD CLC/TS 50398- Alarm systems - Combined and integrated alarm systems - General requirements

DD 243- Installation and configuration of intruder alarm systems designed to generate confirmed alarm conditions - Code of practice

## ISO standards for ID cards

The following standards apply to our magstripe and Net2 ISO cards.

EN ISO/IEC 7810:- Identification cards - physical characteristics

ISO/IEC 7810- 1 - "Physical characteristics of credit card size document"

ISO/IEC 7811- 1 - "Identification cards - Recording technique. Part 1: Embossing"

ISO/IEC 7811- 2 - "Identification cards - Recording technique. Part 2: Magnetic stripe -Low coercivity"

ISO/IEC 7811- 6 - "Identification cards - Recording technique. Part 6: Magnetic stripe - High coercivity" Marine StandardsThe marine reader will comply with the environmental parts of BS EN 60945:2002 -Maritime navigation and radio communication equipment and systems - General requirements.