



**Short Range Devices (SRD) operating
in the frequency range 25 MHz to 1 000 MHz;
Part 3-2: Harmonised Standard covering the essential
requirements of article 3.2 of Directive 2014/53/EU;
Wireless alarms operating in designated LDC/HR
frequency bands 868,60 MHz to 868,70 MHz,
869,25 MHz to 869,40 MHz, 869,65 MHz to 869,70 MHz**

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Foreword

This final draft Harmonised European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM), and is now submitted for the Vote phase of the ETSI standards EN Approval Procedure.

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.4] to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [i.1].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A.1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

The present document is part 3-2 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

For non EU countries the present document may be used for regulatory (Type Approval) purposes.

Proposed national transposition dates

| | |
|--|---------------------------------|
| Date of latest announcement of this EN (doa): | 3 months after ETSI publication |
| Date of latest publication of new National Standard or endorsement of this EN (dop/e): | 6 months after doa |
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Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Introduction

The present document is part 3-2 of a multi-part deliverable covering wireless alarm Short Range Devices (SRD) operating in the designated LDC/HR frequency range 868,60 MHz to 868,70 MHz, 869,25 MHz to 869,40 MHz, 869,65 MHz to 869,70 MHz.

The present document is structured as follows:

- Clause 2 provides references.
- Clause 3 provides definitions of terms and abbreviations used.
- Clause 4 provides technical requirements.
- Annex A (informative): provides relationship between the present document and essential requirements of Directive 2014/53/EU [i.1].
- Annex B (normative): EU designated frequency bands for wireless alarm equipment.
- Annex C (informative): Application form for testing.
- Annex D (informative): Selection of parameters.
- Annex E (informative): Change History.

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1 Scope

The present document specifies technical characteristics and methods of measurements for LDC/HR wireless alarm equipment types:

- LDC/HR category is defined by the EU Commission Decision 2013/752/EU [i.2] as:

"The low duty cycle/high reliability device category covers radio devices that rely on low overall spectrum utilisation and low duty cycle spectrum access rules to ensure highly reliable spectrum access and transmissions in shared bands. Typical uses include alarm systems that use radio".

The present document covers equipment intended for fixed, mobile or nomadic use, e.g.:

- stand-alone radio equipment;
- plug-in radio devices intended for use with or within a variety of host systems;
- plug-in radio devices intended for use within combined equipment.

These radio equipment types are capable of operating in the LDC/HR designated frequency bands given in table 1.

Table 1: Wireless alarm LDC/HR designated frequency bands

| | Frequency band |
|----------------------|------------------------|
| Transmit and Receive | 868,600 to 868,700 MHz |
| Transmit and Receive | 869,250 to 869,400 MHz |
| Transmit and Receive | 869,650 to 869,700 MHz |

The present document covers the essential requirements of article 3.2 of Directive 2014/53/EU [i.1] under the conditions identified in annex A.

2 References

2.1 Normative references

References are specific, identified by date of publication and/or edition number or version number. Only the cited version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference/>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

- [1] ETSI EN 300 220-1 (V3.1.1) (11-2016): "Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 1: Technical characteristics and methods of measurement".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.
- [i.2] Commission Decision 2013/752/EU on harmonisation of the radio spectrum for use by short-range devices as amended by subsequent Commission Decisions.
- [i.3] ETSI EG 203 336: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Guide for the selection of technical parameters for the production of Harmonised Standards covering article 3.1(b) and article 3.2 of Directive 2014/53/EU".
- [i.4] Commission Implementing Decision C(2015) 5376 final of 4.8.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.
- [i.5] Commission Decision 2000/299/EU on harmonisation of the radio spectrum for use by short-range devices as amended by subsequent Commission Decisions.

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in the RE-Directive [i.1] and ETSI EN 300 220-1 [1] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in ETSI EN 300 220-1 [1] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in ETSI EN 300 220-1 [1] apply.

4 Technical requirements specifications

4.1 Environmental profile

The technical requirements of the present document apply under the environmental profile for operation of the equipment, which shall be declared by the manufacturer. The equipment shall comply with all the technical requirements of the present document which are identified as applicable in annex A at all times when operating within the boundary limits of the declared operational environmental profile. Normal and extreme tests conditions are defined in ETSI EN 300 220-1 [1], clauses 4.3.3 and 4.3.4.

4.2 All equipment conformance requirements

4.2.0 Compliance

When an operational frequency band is selected from table B.1 from annex B for the equipment under test, the equipment shall comply with all parameters, exclusions and notes from the row in table B.1 unless a different National Radio Interface applies.

4.2.1 Operating frequency

4.2.1.0 Applicability

Clause 4.2.1 applies to all equipment.

4.2.1.1 Description

For the purpose of the present document, the description in ETSI EN 300 220-1 [1], clause 5.1.1 applies.

4.2.1.2 Limits

The manufacturer may declare either one or more operating frequencies and operating channels.

Operating channel(s) shall be entirely within operational frequency bands allowed by annex B.

4.2.1.3 Conformance

The conformance for this requirement shall be as defined in ETSI EN 300 220-1 [1], clause 5.1.2.

4.2.2 Unwanted emissions in the spurious domain

4.2.2.0 Applicability

Clause 4.2.2 applies to all equipment.

4.2.2.1 Description

For the purpose of the present document, the description in ETSI EN 300 220-1 [1], clauses 5.9.1.1 and 5.9.1.2 apply.

4.2.2.2 Limits

The EUT shall comply with reference limits defined in ETSI EN 300 220-1 [1], clause 5.9.2.

4.2.2.3 Conformance

The conformance tests for this requirement shall be as defined in ETSI EN 300 220-1 [1], clause 5.9.3.

Conformance shall be established under normal test conditions.

4.3 Transmitters conformance requirements

4.3.1 Effective Radiated Power

4.3.1.0 Applicability

Clause 4.3.1 applies to all transmitters.