

STN	Lavínové majáky pracujúce na frekvencii 457 kHz Systémy vysielač-prijímač Časť 1: Harmonizovaná norma na prístup k rádiovému spektru	STN EN 300 718-1 V2.1.1 87 0718
------------	---	---

Avalanche Beacons operating at 457 kHz; Transmitter-receiver systems; Part 1: Harmonised Standard for access to radio spectrum

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/19

Obsahuje: EN 300 718-1 V2.1.1:2018

128095

ETSI EN 300 718-1 V2.1.1 (2018-01)



**Avalanche Beacons operating at 457 kHz;
Transmitter-receiver systems;
Part 1: Harmonised Standard for access to radio spectrum**

Reference

REN/ERM-TG28-512-1

Keywords

harmonised standard, radio, testing

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2018.

All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M logo is protected for the benefit of its Members.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	5
Foreword.....	5
Modal verbs terminology.....	6
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references.....	7
3 Definitions, symbols and abbreviations	8
3.1 Definitions.....	8
3.2 Symbols.....	8
3.3 Abbreviations	9
4 Technical requirements specifications	9
4.1 Environmental profile.....	9
4.2 Conformance requirements for transmitters	9
4.2.1 Modulation and carrier keying.....	9
4.2.1.1 Definition	9
4.2.1.2 Method of measurement.....	9
4.2.1.3 Limits	9
4.2.2 Frequency error.....	10
4.2.2.1 Definition	10
4.2.2.2 Method of measurement.....	10
4.2.2.3 Limits	10
4.2.3 Output field strength (H-field).....	10
4.2.3.1 Definition	10
4.2.3.2 Method of measurement.....	10
4.2.3.3 Limits	10
4.2.3.3.1 Minimum transmitted field.....	10
4.2.3.3.2 Maximum transmitted field	10
4.2.4 Transmitter spurious emissions.....	11
4.2.4.1 Definition	11
4.2.4.2 Radiated H-field.....	11
4.2.4.2.1 Method of measurement (< 30 MHz).....	11
4.2.4.2.2 Limits	11
4.2.4.3 Effective radiated power	11
4.2.4.3.1 Method of measurement (≥ 30 MHz).....	11
4.2.4.3.2 Limits	12
4.3 Conformance requirements for receivers parameters	12
4.3.1 Receiver sensitivity.....	12
4.3.1.1 Definition	12
4.3.1.2 Method of measurement.....	12
4.3.1.3 Limits	13
4.3.2 Receiver spurious emissions.....	13
4.3.2.1 Definition	13
4.3.2.2 Radiated H-field.....	13
4.3.2.2.1 Method of measurement (< 30 MHz).....	13
4.3.2.2.2 Limits	13
4.3.2.3 Effective radiated power	13
4.3.2.3.1 Method of measurement (≥ 30 MHz).....	13
4.3.2.3.2 Limits	14
4.3.3 Receiver blocking	14
5 Test conditions, power sources and ambient temperatures	15
5.1 Normal and extreme test conditions	15
5.2 External test power source.....	15
5.3 Normal test conditions.....	15

5.3.1	Normal temperature and humidity	15
5.3.2	Normal test voltage	15
5.4	Extreme test conditions	15
5.4.1	Extreme temperatures	15
5.4.2	Extreme test voltages	16
5.4.2.1	General requirement	16
5.4.2.2	Procedure for tests at extreme temperatures	16
5.5	Measurement uncertainty	16
Annex A (informative):	Relationship between the present document and the essential requirements of Directive 2014/53/EU	17
Annex B (normative):	Test sites and general arrangements for measurements involving the use of radiated fields	18
B.1	General	18
B.1.1	Normal test signals	18
B.1.2	Test fixture	18
B.1.3	Measuring receiver	18
B.2	Outdoor test site	19
B.2.1	General requirements	19
B.2.2	Standard position	19
B.3	Test antenna	20
B.3.1	Below 30 MHz	20
B.3.2	Above 30 MHz	20
B.4	Substitution antenna	20
B.4.1	General	20
B.4.2	Optional additional indoor site	21
B.5	Guidance on the use of radiation test sites	22
B.5.1	General	22
B.5.2	Measuring distance	22
B.5.3	Test antenna	22
B.5.4	Substitution antenna	22
B.5.5	Artificial antenna	22
B.5.6	Auxiliary cables	22
B.6	Further optional alternative indoor test site using an anechoic chamber	23
B.6.1	General	23
B.6.2	Example of the construction of a shielded anechoic chamber	23
B.6.3	Influence of parasitic reflections in anechoic chambers	23
B.6.4	Calibration of the shielded RF anechoic chamber	24
Annex C (normative):	Spurious limits, radiated H-field at 10 m distances	26
Annex D (informative):	E-fields in the near field at low frequencies	27
Annex E (informative):	Change history	30
History		31

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.2] 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 1 of a multi-part deliverable covering avalanche beacons operating at 457 kHz transmitter-receiver systems, as identified below:

Part 1: "Harmonised Standard for access to radio spectrum";

Part 2: "Harmonised Standard for features for emergency services".

National transposition dates	
Date of adoption of this EN:	18 December 2017
Date of latest announcement of this EN (doa):	31 March 2018
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 September 2018
Date of withdrawal of any conflicting National Standard (dow):	30 September 2019

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.

1 Scope

The present document specifies technical characteristics and methods of measurements for avalanche beacons operating at 457 kHz transmitter-receiver systems.

NOTE: The relationship between the present document and essential requirements of article 3.2 of Directive 2014/53/EU [i.1] is given 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] CISPR 16-1-1 (2015): "Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus".
- [2] CISPR 16-1-4 (2010): "Part 1-4: Radio disturbance and immunity measuring apparatus - Antennas and test sites for radiated disturbance measurements".
- [3] CISPR 16-1-5 (2014): "Specification for radio disturbance and immunity measuring apparatus and methods; Part 1-5: Radio disturbance and immunity measuring apparatus - Antenna calibration sites and reference test sites for 5 MHz to 18 GHz".
- [4] ETSI EN 300 718-2 (V2.1.1) (01-2018): "Avalanche Beacons operating at 457 kHz; Transmitter-receiver systems; Part 2: Harmonised Standard for features for emergency services".

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 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.3] ITU Radio Regulations (2012), Appendix 1 (REV.WRC-12): "Classification of emissions and necessary bandwidths".

- [i.4] ETSI TR 100 028 (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

koniec náhľadu – text ďalej pokračuje v platenej verzii STN