



SLOVENSKI STANDARD

SIST ETS 300 718:1999

01-julij-1999

Radijska oprema in sistemi (RES) - Javljalniki iz plazov (lavinske žolne) - Sprejemno-oddajni sistemi

Radio Equipment and Systems (RES); Avalanche beacons; Transmitter-receiver systems

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

Transposition dates	
Date of adoption:	21 February 1997
Date of latest announcement of this ETS (doa):	30 June 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 December 1997
Date of withdrawal of any conflicting National Standard (dow):	31 December 1997

Introduction

There are currently two frequency allocations for the radio location of avalanche victims:

- 2 275 Hz; and
- 457 kHz.

It is expected that the allocation at 2 275 Hz will be removed after a transition period. This ETS therefore covers dual-frequency equipment and equipment intended to operate on 457 kHz only.

It is the purpose of this ETS to ensure the practical interoperability and reliability of products from different manufacturers.

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1 Scope

This European Telecommunication Standard (ETS) standard covers requirements for avalanche beacons. Avalanche beacons are radio location systems used for searching for and/or finding avalanche victims, for the purpose of direct rescue.

These systems comprise a transmitter as well as a receiver part.

This ETS distinguishes between two types of beacons:

- type 1: single frequency beacons (457 kHz);
- type 2: double frequency beacons (2 275 Hz and 457 kHz) temporary type, compatible to beacons with frequency 2 275 Hz.

2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETR 028: "Radio Equipment and Systems (RES); Uncertainties in the measurement of mobile radio equipment characteristics".
- [2] CISPR 16-1: "Specification for radio disturbance and immunity measuring apparatus and methods; Part 1: Radio disturbance and immunity measuring apparatus".
- [3] Radio Regulations (1994).

3 Definitions, abbreviations and symbols

3.1 Definitions

For the purposes of this ETS, the following definitions apply:

artificial antenna: A tuned reduced-radiating dummy load equal to the nominal impedance specified by the applicant.

conducted measurements: Measurements which are made using a direct connection to the equipment under test.

E-field: The electric component of the field measured as voltage per unit length.

H-field: The magnetic component of the field measured as current per unit length.

H-field test antenna: An electrically screened loop or equivalent antenna, with which the magnetic component of the field can be measured.

identification system: Equipment consisting of a transmitter(s), receiver(s) (or a combination of the two) and an antenna(e) to identify a transponder.

integral antenna: An antenna designed as an indispensable part of the equipment, with or without the use of an antenna connector.

portable station: Equipment intended to be carried.

radiated measurements: Measurements which involve the absolute measurement of a radiated field.

S/N ratio: The ratio, expressed in decibels, between the wanted signal and the noise floor.

type 1: An avalanche beacon intended to operate on 457 kHz only.

type 2: An avalanche beacon intended to operate on both 2 275 Hz and 457 kHz.

3.2 Abbreviations

For the purposes of this ETS, the following abbreviation applies:

RF Radio Frequency

3.3 Symbols

For the purposes of this ETS, the following symbols apply:

A1A	Class of emission (Radio Regulations [3], Article 4, Regulations 270-273)
E	Electrical field strength
E ₀	Reference electrical field strength, (see annex A)
f	Frequency
H	Magnetic field strength
H ₀	Reference magnetic field strength, (see annex A)
N	Newton
P	Power
R	Distance
R ₀	Reference distance, (see annex A)
t	Time
Z	Wave impedance
λ	Wavelength (see annex A)

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4 General

4.1 Presentation of equipment for testing

Each equipment submitted for conformance testing shall fulfil the requirements of this ETS on all frequencies over which it is intended to operate.

The applicant shall supply all relevant ancillary equipment needed for testing.

The applicant should also supply an operating manual for the device(s).

4.2 Mechanical and electrical design

4.2.1 General

The equipment shall be designed, constructed and manufactured in accordance with good engineering practice, and with the aim of minimizing harmful interference to other equipment and services.

Transmitter and receiver shall be combined in one unit and be capable of being attached to the user's clothing.

The equipment shall be portable and capable of being used for rescue operations, caused by avalanche, between persons that are in snowy, arctic areas or in similar areas.