Australian/New Zealand Standard™

406 MHz satellite distress beacons

Part 1: Marine emergency position-indicating radio beacons (EPIRBs) (IEC 61097–2:1994, MOD)

Standards Australia

STANDARDS NEW ZEALAND

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee RC-004, Radiocommunications Equipment—Maritime and Safety of Life. It was approved on behalf of the Council of Standards Australia on 12 November 2001 and on behalf of the Council of Standards New Zealand on 28 November 2001. It was published on 11 January 2002.

The following interests are represented on Committee RC-004:

Australian Communications Authority
Australian Electrical and Electronic Manufacturers Association
Australian Federal Police
Australian Maritime Safety Authority
Australian Yachting Federation
Department of Defence, Australia
Ministry of Economic Development, New Zealand
New Zealand Maritime Safety Authority
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee RC-004, Radiocommunications Equipment—Maritime and Safety of Life to supersede, in part, AS/NZS 4280:1995.

The objective of this Standard is to provide manufacturers, suppliers and testing facilities of 406 MHz satellite distress beacons with the minimum radiofrequency and environmental requirements and associated test methods to enable design and confirmation of compliance with Australia and New Zealand radiofrequency spectrum and maritime regulatory requirements.

The committee intends to develop relaxed requirements for a 406 MHz EPIRB designed for use on vessels not subject to the International Convention for the Safety of Life at Sea 1974 (SOLAS) applications.

This Standard is Part One of AS/NZS 4280, *406 MHz satellite distress beacons*, which is published in parts as follows:

Part 1: Marine emergency position-indicating beacons (EPIRBS) (this Standard)
Part 2: Personal locator beacons (PLBs)

This Standard covers 406 MHz satellite distress beacons (EPIRBs) operating in maritime service. It is reproduced from IEC 61097-2:1994, *Global maritime distress and safety system (GMDSS)*—Part 2: *COSPAS-SARSAT EPIRB—Satellite emergency position-indicating radio beacon operating on 406 MHz—Operational and performance requirements, methods of testing and required test results*. Some variations have been made for Australian/New Zealand conditions and Annexes ZA, ZB and ZC have been added.

Variations to IEC 60197-2:1994 are indicated at the appropriate places throughout this Standard. Strikethrough (~~example~~) identifies IEC tables, figures and passages of text which, for the purposes of this Australian/New Zealand Standard, are deleted. Where Australian/New Zealand tables, figures or passages of text are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text ‘this standard’ should read ‘this Australian/New Zealand Standard’.

(c) A full point should be substituted for a comma when referring to a decimal marker.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A normative annex is an integral part of a Standard, whereas an informative annex is only for information and guidance.

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Any IEC table, figure or passage of text that is struck-through is not part of this Standard. Any Australian/New Zealand table, figure or passage of text that is added (and identified by shading) is part of this Standard.

1 Scope

This part of IEC 61097 specifies the minimum performance requirements, technical characteristics and type-testing requirements of the satellite emergency position-indicating radio beacon used in the COSPAS-SARSAT satellite system (satellite EPIRB), as required by Regulation IV/7.1.6 of the 1988 amendments to the 1974 International Convention for Safety of Life at Sea (SOLAS), and which is associated with IEC 60945 (General requirements). When a requirement in this standard is different from IEC 60945, the requirement in this standard shall take precedence.

This standard also includes minimum performance standards for a manually activated satellite EPIRB without float-free release mechanism (see annex C).

This standard incorporates the performance standards of IMO Resolutions ~~A.763(18)~~ A.810(19) *Performance Standards for float-free satellite emergency position-indicating radio beacons operating on 406 MHz and A.662(16) Performance Standards for float-free release and activation arrangements for emergency radio equipment*, the International Telecommunication Union (ITU) Radio Regulations as well as the technical characteristics for such transmitters contained in Recommendation ITU-R ~~M.633-1~~ M.633-2 (as amended), and takes account of the general requirements contained in IMO Resolution A.694(17).

All texts of this standard, whose wording is identical to that in the IMO SOLAS Convention 1974 as amended in 1988 and Resolutions A.658(16), A.662(16), A.689(17), A.694(17), A.696(17), A.702(17) and ~~A.763(18)~~ A 810(19) and Recommendation ITU-R ~~M.633-1~~ M.633-2 (as amended) will be printed in italics and the Resolution/Recommendation and paragraph number indicated between brackets.

NOTES

1 Classes of satellite EPIRB's considered in this document are:

- Class 1: Float-free (-40 C to +55°C). The float-free release mechanism (A.662 (16)) shall be capable of operating throughout the temperature range of -40°C to +65°C.

  This class is not required by IMO Resolutions but (633.1, annex I) *may be applied at the discretion of each Administration*.

- Class 2: Float-free (-20°C to +55°C). The float-free release mechanism (A.662 (16)) shall be *capable of operating throughout the temperature range of -30°C to +65°C.*

2 Non-float-free, manually activated satellite EPIRB's in both classes are considered in annex C.

3 All classes shall include a 121,5 MHz homing device, described in annex D.

User experience of COSPAS-SARSAT EPIRB operation leading to some clarification of IMO performance standards is included in annex E.