AS/NZS 4280.1:2017
(Incorporating Amendment No. 1)

AS/NZS 4280.1:2017

Australian/New Zealand Standard™

406 MHz satellite distress beacons

Part 1: Marine emergency position-indicating radio beacons (EPIRB) (IEC 61097-2, Ed. 3.0 (2008), MOD)

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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 13 December 2016 and by the New Zealand Standards Approval Board on 20 January 2017.
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The following are represented on Committee RC-004:

Australian Communications and Media Authority
Australian Industry Group
Australian Maritime Safety Authority
Australian Volunteer Coast Guard Association
Boating Industry Alliance Australia
Civil Aviation Safety Authority
Consumer Electronics Suppliers Association
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Part 1: Marine emergency position-indicating radio beacons (EPIRB) (IEC 61097-2, Ed. 3.0 (2008), MOD)

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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
A1 | AS/NZS 4280.1:2003, *406 MHz satellite distress beacons*, Part 1: *Marine emergency position-indicating beacons (EPIRB) (IEC 61097-2:2002, MOD)*.

This Standard incorporates Amendment No. 1 (December 2017). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

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 requirement.

This Standard is an adoption with national modifications; it has been reproduced from IEC 61097-2, Ed. 3.0 (2008), *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* and has been varied as indicated to take account of Australian/New Zealand conditions.

This Standard is structured as follows:

(a) Preface.

(b) IEC 61097-2, Ed. 3.0 (2008) unedited from the contents page to the final clause of the source document.

(c) Appendix ZZ—Australian/New Zealand variations to the source document.

(d) Appendices ZA, ZB, ZC and ZC, which provide information and requirements that are referred to from Appendix ZZ.

The variations listed in Appendix ZZ address issues including the following:

(i) Enable manually activated Class 3 EPIRBs and specify the requirements throughout the Standard.

(ii) Replace the Australian beacon registration form with a registration card.

(iii) Update the contact details for AMSA and JRCC New Zealand.

(iv) Manufacturer to affix an information label for Australian coded beacons.

(v) Requirement for EPIRBs to be returned to a manufacturer’s approved service centre.

(vi) Add the requirements of checksum.

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

(A) In the source text ‘this part of IEC 61097’ should read ‘this Australian/New Zealand Standard’.

(B) A full point substitutes for a comma when referring to a decimal marker.

None of the normative references in the source document have been adopted as Australian or Australian/New Zealand Standards.

The NOAA checksum calculation method for 15-character hexadecimal ID (UIN) codes has been reproduced as a new Appendix ZD.

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

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AUSTRALIAN/NEW ZEALAND STANDARD

406 MHz satellite distress beacons

Part 1:
Marine emergency position-indicating radio beacons (EPIRB)
(IEC 61097-2, Ed. 3.0 (2008), MOD)

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. When a requirement in this standard is different from IEC 60945, the requirement in this standard takes precedence.

This standard incorporates the performance standards of IMO Resolution A.810(19), the International Telecommunication Union (ITU) Radio Regulations as well as the technical characteristics for such transmitters contained in Recommendation ITU-R M.633, and takes account of the general requirements contained in IMO Resolution A.694(17). This standard further takes account of IMO Resolution A.696(17) concerning the type approval of satellite EPIRBs.

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

NOTE 1 Although a number of the requirements and tests may be similar this standard is not intended to be used with 406 MHz Ship Security Alert System (SSAS) Beacons.

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

NOTE 2 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)) should be capable of operating throughout the temperature range of –30 °C to +65 °C.

This class is not required by IMO Resolutions but 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)) should be *capable of operating throughout the temperature range of –30 °C to +65 °C.*

NOTE 3 Non float-free, satellite EPIRB's in both classes are considered in Annex C.

NOTE 4 All classes include a 121,5 MHz homing device, described in Annex D.

NOTE 5 All classes may include beacon position data, obtained from a navigation device internal or external to the satellite EPIRB as described in Annex B.

NOTE 6 User experience of COSPAS-SARSAT satellite EPIRB operation leading to some clarification of IMO performance standards, and providing some useful information for satellite EPIRB users is included in Annex E.

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