AS/NZS IEC 60092.353:2020
IEC 60092-353:2016

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Australian/New Zealand Standard™

Electrical installations in ships

Part 353: Power cables for rated voltages 1 kV and 3 kV

AS/NZS IEC 60092.353:2020

This Joint Australian/New Zealand Standard™ was prepared by Joint Technical Committee EL-003, Electric Wires And Cables. It was approved on behalf of the Council of Standards Australia on 26 November 2019 and by the New Zealand Standards Approval Board on 18 December 2019.

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The following are represented on Committee EL-003:

Australian Cablemakers Association
Australian Industry Group
Electrical Compliance Testing Association of Australia
Electrical Regulatory Authorities Council (Australia)
Engineers Australia
Institute of Electrical Inspectors (Australia)
Master Electricians (New Zealand)
National Electrical and Communications Association (Australia)
Queensland University of Technology
WorkSafe New Zealand

This Standard was issued in draft form for comment as DR AS/NZS IEC 60092.353:2019.

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Part 353: Power cables for rated voltages 1 kV and 3 kV

First published as AS 60092.353—2005.
Jointly revised and redesignated as AS/NZS IEC 60092.353:2020.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-003, Electric Wires and Cables, to supersede AS 60092.353—2005, *Electrical installations in ships, Part 353: Single and multicore non-radial field power cables with extruded solid insulation for rated voltages 1 kV and 3 kV*.

The objective of this Standard is to specify requirements for shipboard and offshore non radial field power cables with extruded solid insulation, having a voltage rating of 0.6/1 (1.2) kV or 1.8/3 (3.6) kV intended for fixed installations.

Cables designed to maintain circuit integrity during fire are included.

The various types of power cables are given in Clause 5.1. The constructional requirements and test methods are aligned with those indicated in AS/NZS IEC 60092-350, unless otherwise specified in this document.

This document covers the following:

(a) Standardizes cables whose safety and reliability is ensured when they are installed in accordance with the requirements of IEC 60092-352 or IEC 61892-4.

(b) Lays down standard manufacturing requirements and characteristics of such cables directly or indirectly bearing on safety.

(c) Specifies test methods for checking conformity with those requirements.

This Standard is identical with, and has been reproduced from, IEC 60092-353:2016, *Electrical installations in ships — Part 353: Power cables for rated voltages 1 kV and 3 kV.*

As this document has been reproduced from an International Standard, the following applies:

(i) In the source text “this part of IEC 60092” should read “this Australian/New Zealand Standard”.

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

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

NOTES

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTRICAL INSTALLATIONS IN SHIPS –

Part 353: Power cables for rated voltages 1 kV and 3 kV

FOREWORD

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International Standard IEC 60092-353 has been prepared by Subcommittee 18A: Electric cables for ships and mobile and fixed offshore units of IEC Technical Committee 18: Electrical installations of ships and of mobile and fixed offshore units.

This fourth edition cancels and replaces the third edition published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) updated references to IEC 60092-350 for general construction and test methods and IEC 60092-360 for insulating and sheathing materials.

The text of this document is based on the following documents:

FDIS	Report on voting
18A/399/FDIS	18A/400/RVD

Full information on the voting for the approval of this document can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts of the IEC 60092 series, under the general title *Electrical installations in ships*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

ELECTRICAL INSTALLATIONS IN SHIPS –

Part 353: Power cables for rated voltages 1 kV and 3 kV

1 Scope and object

This part of IEC 60092 is applicable to shipboard and offshore non radial field power cables with extruded solid insulation, having a voltage rating of 0,6/1 (1,2) kV or 1,8/3 (3,6) kV intended for fixed installations.

Cables designed to maintain circuit integrity during fire are included.

The various types of power cables are given in 5.1. The constructional requirements and test methods are aligned with those indicated in IEC 60092-350, unless otherwise specified in this document.

The object of this document is

– to standardize cables whose safety and reliability is ensured when they are installed in accordance with the requirements of IEC 60092-352 or IEC 61892-4,

– to lay down standard manufacturing requirements and characteristics of such cables directly or indirectly bearing on safety, and

– to specify test methods for checking conformity with those requirements.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-461, *International Electrotechnical Vocabulary – Part 461: Electric cables*

IEC 60092-350:2014, *Electrical installations in ships – Part 350: General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications*

IEC 60092-360, *Electrical installations in ships – Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables*

IEC 60228*, Conductors of insulated cables*

IEC 60331-1, *Tests for electric cables under fire conditions – Circuit integrity – Part 1: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0,6/1,0 kV and with an overall diameter exceeding 20 mm*

IEC 60331-2, *Tests for electric cables under fire conditions – Circuit integrity – Part 2: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0,6/1,0 kV and with an overall diameter not exceeding 20 mm*