

SLOVENSKI STANDARD

SIST EN 61162-3:2008

01-november-2008

Pomorska navigacijska in radiokomunikacijska oprema in sistemi - Digitalni vmesniki - 3. del: Instrumentno omrežje s serijskimi podatki (IEC 61162-3:2008)

Maritime navigation and radiocommunication equipment and systems - Digital interfaces
-- Part 3: Serial data instrument network

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt -
Digitale Schnittstellen - Teil 3: Serielles Dateninstrumentenetz

Matériels et systèmes de navigation et de radiocommunication maritimes - Interfaces
numériques - Partie 3: Réseau par liaison de données série d'instruments

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Ta slovenski standard je istoveten z: EN 61162-3:2008

ICS:

33.060.01	Radijske komunikacije na splošno	Radiocommunications in general
47.020.70	Navigacijska in krmilna oprema	Navigation and control equipment

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en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61162-3

September 2008

ICS 47.020.70

English version

**Maritime navigation and radiocommunication equipment and systems -
Digital interfaces -
Part 3: Serial data instrument network
(IEC 61162-3:2008)**

Matériels et systèmes de navigation
et de radiocommunication maritimes -
Interfaces numériques -
Partie 3: Réseau par liaison de données
série d'instruments
(CEI 61162-3:2008)

Navigations- und
Funkkommunikationsgeräte und -systeme
für die Seeschifffahrt -
Digitale Schnittstellen -
Teil 3: Serielles Dateninstrumentenetz
(IEC 61162-3:2008)

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This European Standard was approved by CENELEC on 2008-06-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in two official versions (English and German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 80/496/CDV, future edition 1 of IEC 61162-3, prepared by IEC TC 80, Maritime navigation and radiocommunication equipment and systems, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61162-3 on 2008-06-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2009-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2011-06-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61162-3:2008 was approved by CENELEC as a European Standard without any modification.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60945	- ¹⁾	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	2002 ²⁾
ISO 11783	Series	Tractors and machinery for agriculture and forestry - Serial control and communications data network	-	-
ISO 11783-3	- ¹⁾	Tractors and machinery for agriculture and forestry - Serial control and communications data network - Part 3: Data link layer	-	-
ISO 11783-5 + corr. 1	2001 2002	Tractors and machinery for agriculture and forestry - Serial control and communications data network - Part 5: Network management	-	-
NMEA 2000 Main document, Version 1.200	2004	Serial-Data Networking of Marine Electronic Devices	-	-
NMEA 2000, Appendix A, Version 1.200	2004	Serial-Data Networking of Marine Electronic Devices - Application Layer (Parameter Group Definitions)	-	-
NMEA 2000, Appendix B, Version 1.210	2006	Serial-Data Networking of Marine Electronic Devices - Data Base	-	-
NMEA 2000, Appendix C, Version 1.200	2004	Serial-Data Networking of Marine Electronic Devices - Certification Criteria and Test Methods	-	-
NMEA 2000, Appendix D, Version 1.200	2004	Serial-Data Networking of Marine Electronic Devices - Application Notes	-	-
IMO amended	1974	International Convention for the Safety of Life at Sea (SOLAS) - Chapter V: Safety of navigation	-	-

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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IEC 61162-3

Edition 1.0 2008-05

INTERNATIONAL STANDARD

**Maritime navigation and radiocommunication equipment and systems –
Digital interfaces –
Part 3: Serial data instrument network**

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DIGITAL INTERFACES –

Part 3: Serial data instrument network

FOREWORD

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International Standard IEC 61162-3 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

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

CDV	Report on voting
80/496/CDV	80/526/RVC

Full information on the voting for the approval of this standard 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 parts of the IEC 61162 series, under the general title *Maritime navigation and radiocommunication equipment and systems – Digital interfaces*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site 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.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

This part of IEC 61162 has been developed by the IEC technical committee 80 working group 6, to meet the requirement for a versatile and economic means of connecting a wide range of marine navigation and radiocommunications equipment aboard SOLAS vessels. The National Marine Electronics Association's Standard Committee has developed the NMEA 2000®¹ standard. The NMEA² 2000 Standard provides for capabilities across all classes of vessels. The development of NMEA 2000 began in 1994 and was completed in 1999. More than a dozen manufacturers worldwide conducted a two-year beta test. The finalised NMEA 2000 standard version 1.000 was published in 2001. IEC and NMEA have worked together since 1999 to ensure that the NMEA 2000 standard fully supports SOLAS applications. NMEA 2000 version 1.200 was published in 2004, with expanded support for redundant messaging and for equipments such as AIS.

The need for an improved standard, compared with IEC 61162-1 and IEC 61162-2, has arisen due to the increased complexity of the latest equipment and systems. This requires multiple links between equipment and greatly improved communication speed.

The parts 400 of the IEC 61162 series have already been issued and cater for the most complex systems to be found on board a ship.

This new part 3 of IEC 61162 adopts the controller area network (CAN) technology, already well established for many industrial systems. This permits a versatile system to be established with the minimum of effort and reasonable cost. The equipment types supported and the sentence data content developed for IEC 61162-1 has been retained.

IEC 61162-3 describes a low cost, moderate capacity, bi-directional multi-transmitter/multi-receiver instrument network to interconnect marine electronic equipment. The connectors and cables used are compatible with industrial bus systems for instance DeviceNet^{TM3} and Profibus^{TM4}.

IEC 61162-3 provides for the application of NMEA 2000 aboard SOLAS vessels. Exceptions, additions and specific requirements for implementation upon SOLAS vessels are contained in this document.

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