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STN	**Námorné navigačné a rádiokomunikačné zariadenia a systémy. Digitálne rozhrania. Časť 460: Mnohonásobné vysielače údajov a mnohonásobné prijímače údajov. Ethernetové prepojenie. Bezpečnosť a ochrana.**	**STN EN 61162-460** 32 6790

Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 460: Multiple talkers and multiple listeners - Ethernet interconnection - Safety and security

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/16

Obsahuje: EN 61162-460:2015, IEC 61162-460:2015

122548

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61162-460

November 2015

ICS 47.020.70

English Version

Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 460: Multiple talkers and multiple listeners - Ethernet interconnection - Safety and security (IEC 61162-460:2015)

Matériels et systèmes de navigation et de radiocommunication maritimes - Interfaces numériques - Partie 460 : Emetteurs multiples et récepteurs multiples - Interconnexion Ethernet - Sûreté et sécurité (IEC 61162-460:2015)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Digitale Schnittstellen - Teil 460: Mehrere Datensender und mehrere Datenempfänger - Ethernet Verbund - Funktionale und Informationssicherheit (IEC 61162-460:2015)

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

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 61162-460:2015 E

European foreword

The text of document 80/764/FDIS, future edition 1 of IEC 61162-460, prepared by IEC/TC 80 "Maritime navigation and radiocommunication equipment and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61162-460:2015.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2016-06-22
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-09-22

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61162-460:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60812	NOTE	Harmonized in EN 60812.
IEC 61162 series	NOTE	Harmonized in EN 61162 series.
IEC 61162-1	NOTE	Harmonized in EN 61162-1.
IEC 61162-2	NOTE	Harmonized in EN 61162-2.
IEC 62439 series	NOTE	Harmonized in EN 62439 series.
IEC 62439-1	NOTE	Harmonized in EN 62439-1.
IEC 62439-2	NOTE	Harmonized in EN 62439-2.
IEC 62439-3	NOTE	Harmonized in EN 62439-3.
IEC 62439-4	NOTE	Harmonized in EN 62439-4.
IEC 62439-5	NOTE	Harmonized in EN 62439-5.
IEC 62439-6	NOTE	Harmonized in EN 62439-6.
ISO 9241-12	NOTE	Harmonized in EN ISO 9241-12.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60945	-	Matériels et systèmes de navigation et de radiocommunication maritimes - Spécifications générales - Méthodes d'essai et résultats exigibles	EN 60945	-
IEC 61162-450	2011	Maritime navigation and radiocommunication equipment and systems - Digital interfaces -- Part 450: Multiple talkers and multiple listeners - Ethernet interconnection	EN 61162-450	2011
IEC 61924-2	2012	Matériels et systèmes de navigation et de radiocommunication maritimes - Systèmes de navigation intégrés -- Partie 2: Structure modulaire pour les INS - Exigences d'exploitation et de fonctionnement, méthodes et résultats d'essais exigés	EN 61924-2	2013
IEC 62288	2014	Maritime navigation and radiocommunication equipment and systems - Presentation of navigation-related information on shipborne navigational displays - General requirements, methods of testing and required test results	EN 62288	2014
IEEE 802.1D	2004	IEEE Standard for local and metropolitan area networks - Media Access Control (MAC) Bridges	-	-
IEEE 802.1Q	2005	IEEE Standard for Local and Metropolitan Area Networks - Virtual Bridged Local Area Networks	-	-
ISOC RFC 792	-	Internet Control Message Protocol (ICMP), Standard STD0005 (and updates)		
ISOC RFC 1112	-	Host Extensions for IP Multicasting		
ISOC RFC 2236	-	Internet Group Management Protocol, Version 2		

Publication	Year	Title	EN/HD	Year
ISOC RFC 3411	-	An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks		
ISOC RFC 4604	-	Using Internet Group Management Protocol Version 3 (IGMPv3) and Multicast Listener Discovery Protocol Version 2 (MLDv2) for Source-Specific Multicast		
ISOC RFC 5424	-	The Syslog Protocol	-	-

IEC 61162-460

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INTERNATIONAL STANDARD

colour inside

Maritime navigation and radiocommunication equipment and systems – Digital interfaces –
Part 460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security

IEC 61162-460:2015-08(en)

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INTERNATIONAL STANDARD

colour inside

Maritime navigation and radiocommunication equipment and systems – Digital interfaces –
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FOREWORD

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International Standard IEC 61162-460 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:

FDIS	Report on voting
80/764/FDIS	80/769/RVD

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.

This International Standard is to be used in conjunction with IEC 61162-450:2011.

A list of all parts in the IEC 61162 series, published 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 stability 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DIGITAL INTERFACES –

Part 460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security

1 Scope

This part of IEC 61162 is an add-on to the IEC 61162-450 standard where higher safety and security standards are needed, e.g. due to higher exposure to external threats or to improve network integrity. This standard provides requirements and test methods for equipment to be used in an IEC 61162-460 compliant network as well as requirements for the network itself and requirements for interconnection from the network to other networks. This standard also contains requirements for a redundant IEC 61162-460 compliant network.

This standard extends the informative guidance given in Annex D of IEC 61162-450:2011. It does not introduce new application level protocol requirements to those that are defined in IEC 61162-450.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60945, *Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results*

IEC 61162-450:2011, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 450: Multiple talker and multiple listeners – Ethernet interconnection*

IEC 61924-2:2012, *Maritime navigation and radiocommunication equipment and systems – Integrated navigation systems – Part 2: Modular structure for INS – Operational and performance requirements, methods of testing and required test results*

IEC 62288:2014, *Maritime navigation and radiocommunication equipment and systems – Presentation of navigation-related information on shipborne navigational displays – General requirements, methods of testing and required test results*

IEEE 802.1D-2004, *IEEE Standards for Local Area Networks: Media Access Control (MAC) Bridges*

IEEE 802.1Q-2005, *Virtual Bridged Local Area Networks*

ISOC RFC 792, *Internet Control Message Protocol (ICMP), Standard STD0005 (and updates)*

ISOC RFC 1112, *Host Extensions for IP Multicasting*

ISOC RFC 2236, *Internet Group Management Protocol, Version 2*

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ISOC RFC 5424, *The Syslog Protocol*