

Maritime navigation and radiocommunication equipment and systems - Bridge navigational watch alarm system (BNWAS)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 62616:2010 sisaldab Euroopa standardi EN 62616:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.05.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 16.04.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 62616:2010 consists of the English text of the European standard EN 62616:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.05.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 16.04.2010.

The standard is available from Estonian standardisation organisation.

ICS 47.020.70

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

**Maritime navigation and radiocommunication
equipment and systems -
Bridge navigational watch alarm system (BNWAS)
(IEC 62616:2010)**

Equipements et systèmes de navigation
et de radiocommunication maritimes -
Système d'alarme pour la surveillance
de l'activité de navigation sur le pont
(CEI 62616:2010)

Navigations- und
Funkkommunikationsgeräte und -systeme
für die Seeschifffahrt -
Wachalarmsystem
für die Kommandobrücke (BNWAS)
(IEC 62616:2010)

This European Standard was approved by CENELEC on 2010-04-01. 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 three official versions (English, French, 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 80/577/FDIS, future edition 1 of IEC 62616, 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 62616 on 2010-04-01.

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

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) 2011-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2013-04-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62616:2010 was approved by CENELEC as a European Standard without any modification.

This document is a preview generated by EVS

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	-	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	-
IEC 61162	Series	Maritime navigation and radiocommunication equipment and systems - Digital interfaces	EN 61162-1	Series
IEC 61162-1	-	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners	EN 61162-1	-
IEC 62288	-	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	-
IMO Resolution A.694(17)	-	General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids	-	-
IMO Resolution A.813(19)	-	General requirements for electromagnetic compatibility (EMC) for all electrical and electronic ship's equipment	-	-
IMO Resolution A.830(19)	-	Code on alarms and indicators	-	-
IMO MSC/Circular 982	-	Guidelines on ergonomic criteria for bridge equipment and layout	-	-
IMO Resolution MSC.128(75)	-	recommendation on performance standards for a bridge navigational watch alarm system (BNWAS)	-	-

CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Performance requirements	7
3.1 Functionality.....	7
3.1.1 Operational modes	7
3.1.2 Operational sequence of indications and alarms	7
3.1.3 Reset function	8
3.1.4 Emergency call facility and transfer of alarms	9
3.2 Accuracy.....	9
3.3 Security.....	9
3.4 Malfunctions, alarms and indications	10
4 Ergonomic criteria requirements	10
4.1 Operational controls.....	10
4.2 Presentation of information.....	10
4.2.1 Operational mode.....	10
4.2.2 Visual indications	10
4.2.3 First stage bridge audible alarm.....	10
4.2.4 Second and third stage remote audible alarm	10
5 Design and installation requirements	11
5.1 General.....	11
5.2 Specific requirements	11
5.2.1 System physical integrity	11
5.2.2 Reset devices.....	11
5.3 Power supply.....	11
5.4 Installation documentation.....	11
6 Interfacing requirements	11
6.1 Inputs.....	11
6.2 Outputs	12
7 Methods of testing and required test results	12
7.1 General.....	12
7.2 General requirements.....	12
7.3 Display of information.....	13
7.4 Operational tests.....	13
7.4.1 Operational modes	13
7.4.2 Dormant period.....	13
7.4.3 Alarms.....	13
7.4.4 Alarm alternatives.....	13
7.4.5 Description of reset function	13
7.4.6 Initiation of reset function	13
7.4.7 Continuous activation	14
7.4.8 Emergency call facility and transfer of alarms	14
7.4.9 Accuracy	14
7.4.10 Security.....	14
7.4.11 Malfunction.....	14
7.4.12 Operational controls	14

7.4.13 Operational mode	14
7.4.14 Visual indications	15
7.4.15 First stage bridge audible alarm.....	15
7.4.16 Second and third stage remote audible alarm	15
7.4.17 Design and installation general.....	15
7.4.18 System physical integrity	15
7.4.19 Reset devices.....	15
7.4.20 Power supply.....	15
7.4.21 Installation documentation	15
7.4.22 Interfacing	15
Annex A (normative) Installation considerations.....	16
Bibliography.....	17
Figure 1 – Alarm sequence without acknowledgements.....	7

This document is a preview generated by EVS

MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM (BNWAS)

1 Scope

This International Standard specifies the minimum performance requirements, technical characteristics and methods of testing, and required test results, for a bridge navigational watch alarm system (BNWAS) as required by Chapter V of the International Convention for the Safety of Life at Sea (SOLAS), as amended. It takes account of the general requirements given in IMO resolution A.694(17) and is associated with IEC 60945. When a requirement in this International Standard is different from IEC 60945, the requirement in this standard takes precedence.

This standard incorporates the parts of the performance standards included in IMO resolution MSC.128(75).

NOTE 1 All text of this standard, whose wording is identical to that of IMO resolution MSC.128(75), is printed in italics, and the resolution and associated performance standard paragraph numbers are indicated in brackets.

(128/A1) The purpose of a bridge navigational watch alarm system (BNWAS) is to monitor bridge activity and detect operator disability which could lead to marine accidents. The system monitors the awareness of the Officer of the Watch (OOW) and automatically alerts the Master or another qualified OOW if for any reason the OOW becomes incapable of performing the OOW's duties. This purpose is achieved by a series of indications and alarms to alert first the OOW and, if he is not responding, then to alert the Master or another qualified OOW. Additionally, the BNWAS may provide the OOW with a means of calling for immediate assistance, if required. The BNWAS should be operational whenever the ship is underway at sea (SOLAS VI/19.2.2.3).

NOTE 2 BNWAS may not, in practice, be realised as a stand alone equipment. It may be integrated in other equipment such as radar, ECDIS, etc.

2 Normative references

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.

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

IEC 61162 (all parts), *Maritime navigation and radiocommunication equipment and systems – Digital interfaces*

IEC 61162-1, *Maritime navigation and radiocommunication equipment and systems – Digital interfaces – Part 1: Single talker and multiple listeners*

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

IMO Resolution A.694(17), *General requirements for shipborne radio equipment forming part of the Global maritime distress and safety system and for electronic navigational aids*

IMO Resolution A.813(19), *General requirements for electromagnetic compatibility (EMC) for all electrical and electronic ship's equipment*

IMO Resolution A.830(19), *Code on alarms and indicators*

IMO Resolution MSC.128(75), *Recommendation on performance standards for a bridge navigational watch alarm system (BNWAS)*

IMO MSC/Circ.982, *Guidelines on Ergonomic Criteria for Bridge equipment and Layout*

3 Performance requirements

3.1 Functionality

3.1.1 Operational modes

(See 7.4.1)

(128/A4.1.1.1) *The BNWAS shall incorporate the following operational modes:*

- *Automatic (Automatically brought into operation whenever the ship's heading or track control system is activated and inhibited when this system is not activated)*
- *Manual ON (In operation constantly)*
- *Manual OFF (Does not operate under any circumstances)*

NOTE The Automatic mode is not suitable for use on a ship conforming with regulation SOLAS V/19.2.2.3 which requires the BNWAS to be in operation whenever the ship is underway at sea.

3.1.2 Operational sequence of indications and alarms

3.1.2.1 Dormant period

(See 7.4.2)

(128/A4.1.2.1) *Once operational, the alarm system shall remain dormant for a period of between 3 and 12 min (T_d). See Figure 1.*

(128/A4.1.2.2) *At the end of this dormant period, the alarm system shall initiate a visual indication on the bridge.*

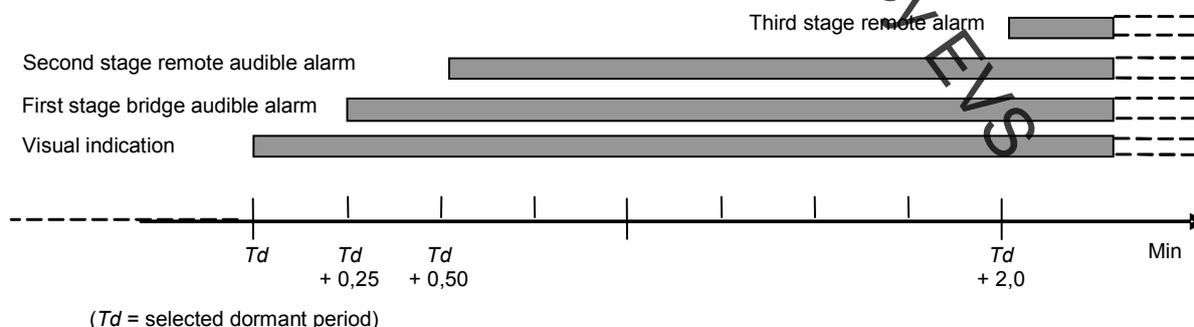


Figure 1 – Alarm sequence without acknowledgements