

**Inland navigation vessels - Electrical shore connection,
three-phase current 400 V, up to 63 A, 50 Hz - Part 2:
Onshore unit, safety requirements**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 15869-2:2010 sisaldab Euroopa standardi EN 15869-2:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.03.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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ICS 47.020.60, 47.060, 93.140

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ICS 47.020.60; 47.060; 93.140

English Version

**Inland navigation vessels - Electrical shore connection, three
phase current 400 V, up to 63 A, 50 Hz - Part 2: Onshore unit,
safety requirements**

Bateaux de navigation intérieure - Connexion au réseau
électrique terrestre, courant triphasé 400 V, à 63 A, 50 Hz -
Partie 2: Unité terrestre, exigences de sécurité

Fahrzeuge der Binnenschifffahrt - Elektrischer
Landanschluss, Drehstrom 400 V, bis 63 A, 50 Hz - Teil 2:
Landseitiger Teil, sicherheitstechnische Anforderungen

This European Standard was approved by CEN on 25 December 2009.

CEN 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 CEN Management Centre or to any CEN 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 CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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Contents		Page
Foreword.....		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	6
4	Safety requirements	7
4.1	General.....	7
4.2	Mechanical safety	8
4.3	Electrical safety.....	8
4.4	Other provisions	9
5	Designation	9
6	Marking	9
7	Manufacturer’s declaration of conformity.....	9
Bibliography		10
Figures		
Figure 1 — Block diagram of an electrical power-supply station with two connector units		7

Foreword

This document (EN 15869-2:2010) has been prepared by Technical Committee CEN/TC 15 “Inland navigation vessels”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2010, and conflicting national standards shall be withdrawn at the latest by August 2010

EN 15869, *Inland navigation vessels — Electrical shore connection — Three-phase current 400 V, up to 63 A, 50 Hz* comprises:

- *Part 1: General requirements*
- *Part 2: Onshore unit, safety requirements*
- *Part 3: On-board unit, safety requirements*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Inland navigation vessels are equipped with a variety of electrical loads operating at 230 V or 400 V. While underway, continuous electrical power supply is provided by the onboard system from generators driven by diesel engines. When the vessel is berthed, these generators have to remain in operation if there is no suitable onshore power supply available. In some cases, this leads to intense noise pollution both for the crew on the vessel itself and on other vessels lying alongside and also for residents ashore. The exhaust fumes are an additional pollution factor.

The electrical shore connections specified in this standard make it possible to provide the vessels with an electrical power supply while berthed and to eliminate noise and exhaust pollution. This calls for a uniform Europe-wide connection that can be activated and deactivated by the vessel's crew in all ports and berths, if possible, without requiring any assistance from shore-based personnel. This standard contains electrical safety requirements for the prevention of hazards in making, using and breaking the shore connection.

Furthermore, cashless settlement for the electricity used shall be possible, ideally a standard Europe-wide payment system.

Electrical shore connections with a permissible current of over 63 A as used for passenger ships with a hotelling function are not covered by this standard.

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1 Scope

This European Standard specifies requirements applicable to equipment for shore-to-vessel supply of three-phase 400 V electrical power up to 63 A and a frequency of 50 Hz to berthed inland navigation vessels.

This part of the European Standard specifies safety requirements for the onshore unit of the electrical shore connection.

This part of the European Standard applies only to the supply of inland navigation vessels in ports and berths for commercial shipping. Supply stations for leisure craft and houseboats in marinas or similar locations have to meet the requirements of IEC 60364-7-709.

For low-voltage electrical installations, the requirements specified in the HD 60364 and HD 384 series are applicable generally. The requirements in this part of EN 15869 supplement, amend or supersede some of the requirements in HD 60364/HD 384 Parts 1 to 6. Where no requirements are given in this part of EN 15869, the requirements specified in the HD 60364 and HD 384 are applicable; a detailed list is given in the Bibliography.

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.

EN 15869-1, *Inland navigation vessels — Electrical shore connection, three-phase current 400 V, up to 63 A, 50 Hz — Part 1: General requirements*

EN 14145, *Holders for lifebuoys*

EN 60309-1, *Plugs, socket-outlets and couplers for industrial purposes — Part 1: General requirements (IEC 60309-1:1999)*

EN 60309-2, *Plugs, socket-outlets and couplers for industrial purposes — Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories (IEC 60309-2:1999)*

EN 60309-4, *Plugs, socket-outlets and couplers for industrial purposes — Part 4: Switched socket-outlets and connectors with or without interlock (IEC 60309-4:2006, modified)*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

EN 60898-1, *Electrical accessories — Circuit-breakers for overcurrent protection for household and similar installations — Part 1: Circuit-breakers for a.c. operation (IEC 60898-1:2002, modified)*

EN 61008-1, *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) — Part 1: General rules (IEC 61008-1:1996 + A1:2002, modified)*

HD 22.16.S2, *Cables of rated voltages up to and including 450/750 V and having cross-linked insulation — Part 16: Water resistant polychloroprene or equivalent synthetic elastomer sheathed cables*