

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

This document is a preview generated by EVS

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 15869-1:2010 sisaldab Euroopa standardi EN 15869-1:2010 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.03.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 03.02.2010.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15869-1:2010 consists of the English text of the European standard EN 15869-1:2010.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.03.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 03.02.2010.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

ICS 47.020.60, 47.060

### 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](http://www.evs.ee); Telefon: 605 5050; E-post: [info@evs.ee](mailto: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](http://www.evs.ee); Phone: +372 605 5050; E-mail: [info@evs.ee](mailto:info@evs.ee)

---

ICS 47.020.60; 47.060

English Version

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

Bateaux de navigation intérieure - Connexion au réseau électrique terrestre, courant triphasé 400 V, à 63 A, 50 Hz - Partie 1: Exigences générales

Fahrzeuge der Binnenschifffahrt - Elektrischer Landanschluss, Drehstrom 400 V, bis 63 A, 50 Hz - Teil 1: Allgemeine 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

**Contents**

Page

Foreword.....	3
Introduction .....	4
1 <b>Scope</b> .....	5
2 <b>Normative references</b> .....	5
3 <b>Terms and definitions</b> .....	5
4 <b>Requirements</b> .....	5
4.1 <b>Components</b> .....	5
4.2 <b>Characteristic values</b> .....	6
4.3 <b>Readiness for operation</b> .....	7
4.4 <b>Consumption recording and settlement</b> .....	7
4.5 <b>Deviations from 4.3 and 4.4</b> .....	7
<b>Annex A (informative) Electrical power-supply stations — Possible payment methods</b> .....	8
A.1 <b>Transponder card — Prepaid card</b> .....	8
A.2 <b>Money card</b> .....	8
A.3 <b>EC-card (Giro card)/credit card</b> .....	9
A.4 <b>GPRS fleet cards</b> .....	9

## Foreword

This document (EN 15869-1:2010) 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/GENELEC 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.

## 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 general requirements and contains information on the settlement method.

## 2 Normative references

This document does not contain any normative references.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **electrical shore connection**

<inland navigation> equipment consisting of electrical power-supply station, cable set and feed unit for the supply of electrical power to inland navigation vessels in ports and at berths

### 3.2

#### **electrical power-supply station**

shore-side part of the electrical shore connection with one or more connector units

### 3.3

#### **connector unit**

<inland navigation> unit for connecting an inland navigation vessel

### 3.4

#### **activation medium**

<inland navigation> system for activating the supply of power and cashless settlement of the costs

### 3.5

#### **feed unit**

<inland navigation> all the onboard devices for receiving the electrical power on board

## 4 Requirements

### 4.1 Components

The electrical shore connection comprises (see Figure 1):

- a) electrical power-supply station, see Part 2 of the standard;
- b) cable set, see Part 3 of the standard;
- c) feed unit, see Part 3 of the standard..