
Gospodinjski in podobni električni aparati - Varnost - 2-86. del: Posebne zahteve za električne ribiške stroje - Dopnilo A11

Household and similar electrical appliances - Safety - Part 2-86: Particular requirements for electric fishing machines

Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke - Teil 2-86: Besondere Anforderungen für elektrische Fischereigeräte

Appareils électrodomestiques et analogues - Sécurité - Partie 2-86: Règles particulières pour les équipements électriques de pêche

<https://standards.iteh.ai/catalog/standards/sist/76b2770a-03a9-434c-95fa-d3009830e53c/sist-en-60335-2-86-2003-a11-2016>

Ta slovenski standard je istoveten z: EN 60335-2-86:2003/A11:2016

ICS:

65.150	Ribolov in ribogojstvo	Fishing and fish breeding
--------	------------------------	---------------------------

SIST EN 60335-2-86:2003/A11:2016 **en,fr**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60335-2-86:2003/A11:2016

<https://standards.iteh.ai/catalog/standards/sist/76b2770a-03a9-434c-95fa-d3009830e53c/sist-en-60335-2-86-2003-a11-2016>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60335-2-86:2003/A11

January 2016

ICS 65.150

English Version

**Household and similar electrical appliances - Safety - Part 2-86:
Particular requirements for electric fishing machines**

Appareils électrodomestiques et analogues - Sécurité -
Partie 2-86: Règles particulières pour les équipements
électriques de pêche

Sicherheit elektrischer Geräte für den Hausgebrauch und
ähnliche Zwecke - Teil 2-86: Besondere Anforderungen für
elektrische Fischereigeräte

This amendment A11 modifies the European Standard EN 60335-2-86:2003; it was approved by CENELEC on 2015-11-16. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre 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, 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

EN 60335-2-86:2003/A11:2016 (E)

European foreword

This document (EN 60335-2-86:2003/A11:2016) has been prepared by CLC/TC 61 "Safety of household and similar electrical appliances".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-11-16
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2018-11-16

This amendment supplements or modifies the corresponding clauses of EN 60335-1:2012 and EN 60335-2-86:2003 + A1:2005.

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.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive 2006/42/EC, see informative Annex ZZ, which is an integral part of this document.

[SIST EN 60335-2-86:2003/A11:2016](https://standards.iteh.ai/catalog/standards/sist/76b2770a-03a9-434c-95fa-d3009830e53c/sist-en-60335-2-86-2003-a11-2016)

<https://standards.iteh.ai/catalog/standards/sist/76b2770a-03a9-434c-95fa-d3009830e53c/sist-en-60335-2-86-2003-a11-2016>

Introduction

Replace the last paragraph:

The principle objectives of Low Voltage Directive 2006/95/EC are covered in this standard. The Essential Health and Safety Requirements of the Machinery Directive 2006/42/EC, which can be applicable to some appliances, covered by this part have also been taken into account.

1 Scope

Add the following after the fifth paragraph:

Additional requirements for **electric fishing machines** with an internal combustion engine are given in Annex ZE.

2 Normative references

Replace the text by the following:

This clause of Part 1 is applicable except as follows.

Add the following standards:

EN ISO 3744, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane (ISO 3744)*

EN ISO 4871:2009, *Acoustics — Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 11203:2009, *Acoustics — Noise emitted by machinery and equipment — Determination of emission sound pressure levels at a work station and at other specified positions from the sound power level (ISO 11203:1995)*

EN ISO 22867, *Forestry and gardening machinery — Vibration test code for portable hand-held machines with internal combustion engine — Vibration at the handles (ISO 22867)*

7 Marking and instructions

This clause of Part 1 is applicable except as follows.

7.12

Add the following after the warning:

The instructions for **battery-operated electric fishing machines** shall give instructions how to charge safely the battery.

Electric fishing machines, except **stationary electric fishing machines**, shall state that the operators have to wear waistcoats, printed with symbol 5036 of IEC 60417 and the following text “caution electro fishing”. The symbol and the text on the waistcoat shall be clearly visible for fishermen and observers. The height of this symbol shall be at least 250 mm and the height of the letters shall be at least 50 mm.

The operator of the catching electrode (anode) shall wear a waistcoat in such a manner that the warning is clearly visible. If the operator of the catching electrode is fishing out of sight of the return electrode (cathode), the return electrode (cathode) has to be supervised by a further person wearing a waistcoat. This further person shall be able to communicate with the operator of the catching electrode.

NOTE Z101 The communication between the operator and the further person can be done by using mobile phones or similar means.

Unless there are national and local regulation, the instructions of **stationary electric fishing machines** and electric fish barriers shall state that the dangerous area shall be marked with signs printed with symbol 5036 of IEC 60417 with a height of at least 250 mm and the following text "Caution electric fishing machine/electric fish barrier – Keep away!". For fish barriers, additional signs with the following text shall be placed near the water: "Before work in contact with water is carried out, switch off the electric fish barrier". The height of the letters shall be at least 100 mm.

The colour of the background of the sign shall be yellow and the text shall be in black.

NOTE Z102 The dangerous area depends of the topology of the system, the conductivity of the water, the waveform and value of the used voltage. Recommendations of the manufacturer are necessary to define the dangerous area.

22 Construction

22.112

Add the following in the first paragraph:

The **biased-off switch** may also be located separately from the electrodes; in this case, the **biased-off switch** shall be operated by foot or hand.

Add the following new subclause:

22.Z101 Machines with batteries shall be designed in such a way that electrolyte leakage from the battery shall not impair compliance with this standard; in particular, there shall be no possibility of the electrolyte coming in contact with insulation, which could result in a reduction of **clearances** and **creepage distances** below the values specified in Clause 29.

The battery housing shall be designed and constructed in such a way as to prevent the electrolyte being ejected on to the user and to avoid the accumulation of harmful fumes in places occupied by the user.

Compliance is checked by inspection and test.

Annexes

The annexes of Part 1 are applicable except as follows.

Annex ZE (normative)

Specific additional requirement for electric fishing appliances including an internal combustion engine

Annex ZE of Part 1 is applicable with the following modifications:

Introduction

Replacement:

For the verification of compliance of appliances or machines intended for commercial use and that include a portable internal combustion engine with the Essential Health and Safety Requirements (EHSR) of the Directive 2006/42/EC, the requirements in this Annex ZE shall additionally apply.

1 Scope

Replacement:

Annex ZE deals with additional requirements concerning **electric fishing appliances** intended for commercial use and that include a portable internal combustion engine.

3 Terms and definitions

This clause of Annex ZE of Part 1 is applicable.

4 General requirement

This clause of Annex ZE of Part 1 is applicable with the following modification:

Addition of a new paragraph:

For the purpose of Annex ZE, the term 'appliance' as used in Part 1 is to be read as 'machine'.

7 Marking and instructions

This clause of Annex ZE of Part 1 is applicable with the following modifications:

7.1

Add a new dashed item:

- gross weight of the machine as ready for use in kilograms;

7.12

Add the following:

The front cover of the instruction manual shall include the substance of the following warning:

CAUTION Read the instruction manual before using the appliance.

This wording may be replaced by symbols 0434 and 1641 of ISO 7000.

Add the following dashes to the dashed list:

- the intended use of the appliance and the auxiliary equipment as covered by the scope of this standard;
- the essential characteristics of the auxiliary equipment which may be fitted to the appliance;

EN 60335-2-86:2003/A11:2016 (E)

- the meaning of the symbols used on the appliance and in the instruction manual;
- information regarding personal protective equipment to be used when operating the appliance;
- the operating method to be followed in the event of accident.

If applicable, the instructions shall indicate the parts subject to wear and the criteria for replacement if they affect the health and safety of the **operator**.

7.12.ZE1

In the sixth dashed item, replace the words “the relevant Part 2” by “Annex ZAA”.

In the sixth dashed item, replace the first sub-dashed item by:

- “the A-weighted emission sound pressure level at workstations, where this exceeds 70 dB(A). If the A-weighted sound pressure level is below 70 dB, no value need be given, but the instructions shall state that the A-weighted sound pressure level is below 70 dB.”

Add the new subclause:

7.12.ZE.101 The instructions shall give the following information concerning vibrations transmitted by the appliance to the hand-arm system:

- the weighted r.m.s. acceleration value to which the **operators**’ arms are subjected in m/s^2 , separately for each arm (if applicable), measured in accordance with EN ISO 22867 for arm vibrations, the appliance being supplied at **rated voltage** or at the maximum **rated voltage** for appliances with a range of voltages, if it exceeds $2,5 \text{ m/s}^2$. Where this value does not exceed $2,5 \text{ m/s}^2$, this shall be mentioned;
- the uncertainty of measurement.

9 Starting of motor-operated appliances

Replacement:

It shall only be possible to start the appliance by intended actuation of a control device provided for this purpose. The same requirement applies when restarting the appliance after a stoppage, whatever the cause is.

Compliance is checked by practical test.

11 Heating

This clause of Part 1 is applicable with the following addition:

11.8 Addition

The temperature rise of external enclosure of motor-operated appliances, except handles held in normal use is not considered for the cylinder of the motor, a length of 20 cm of the exhaust pipe after the motor, and the opening of the exhaust pipe and surfaces.

20 Stability and mechanical hazards

This clause of Annex ZE of Part 1 is applicable with the following new subclause:

20.ZE.101 Vibrations

The appliance with backpack internal combustion engine shall be designed and constructed in such a way that vibration produced by the appliance are reduced to the lowest level, taking account of technical progress and the availability of means of reducing vibration, in particular at source.

NOTE The main sources causing vibration are the:

- oscillating forces from the engine;
- unbalanced moving parts;
- interaction between **operator** and appliance;
- appliance design related to mobility.

Compliance is checked by inspection and by the relevant tests of EN ISO 22867 whenever appropriate.

22 Construction

This clause of Annex ZE of Part 1 is applicable with the following modifications:

22.ZE.1 is not applicable.

32 Radiation, toxicity and similar hazards

This clause of Part 1 is applicable with the following modifications:

Addition:

When the electric fishing appliance is in normal operation position, the exhaust pipe shall direct the gas in a direction away from the user.

Compliance is checked by inspection.