SLOVENSKI STANDARD
SIST HD 60364-6:2016/A11:2017

01-junij-2017

Nizkonapetostne električne inštalacije - 6. del: Preverjanje - Dopolnilo A11

Low-voltage electrical installations - Part 6: Verification

Rahmenspezifikation: Leiterplatten mit Leiterbildern auf einer oder auf beiden Seiten ohne metallisierte Löcher

Installations électriques à basse tension - Partie 6: Vérification

Ta slovenski standard je istoveten z: **HD 60364-6:2016/A11:2017**

ICS:

91.140.50 Sistemi za oskrbo z elektriko Electricity supply systems

SIST HD 60364-6:2016/A11:2017 **en,de**

HARMONIZATION DOCUMENT

DOCUMENT D'HARMONISATION

HARMONISIERUNGSDOKUMENT

HD 60364-6:2016/A11

March 2017

ICS 91.140.50

English Version

Low-voltage electrical installations - Part 6: Verification

Installations électriques à basse tension - Partie 6: Vérification

Errichten von Niederspannungsanlagen - Teil 6: Prüfungen

This amendment A11 modifies the Harmonization Document HD 60364-6:2016; it was approved by CENELEC on 2016-06-16. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this amendment at national level.

Up-to-date lists and bibliographical references concerning such national implementations 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).

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, Serbia, 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. HD 60364-6:2016/A11:2017 E

European foreword

This document (HD 60364-6:2016/A11:2017) has been prepared by CLC/TC 64 "Electrical installations and protection against electric shock".

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) 2017-09-17
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-03-17

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.

Annexes which are additional to those in IEC 60364-6:2016 are prefixed “Z”.

***Add** the following new annexes:*

Annex ZB
(normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

<u>Clause</u>	<u>Special national condition</u>
6.4.3.1	**Ireland** The following additional test is made to verify erroneous connections between circuits: For each circuit, its protective device is disconnected and a test voltage in accordance with Table 6.1 applied between the line conductors of that circuit and the line conductors of the other circuits.
6.4.3.2	**Sweden** Replace the first paragraph of the clause with: An electrical continuity test shall be made on:
6.4.3.2	**Germany** Ring circuits are not applicable.
6.4.3.3	**Spain** The minimum insulation resistance for circuits up to and including 500 V is 0,5 MΩ.
6.4.3.3	**Spain** The insulation values given in Table 6.1 are designed for an installation in which the total length of the wiring systems, irrespective of the number of conductors it contains, does not exceed 100 m. Where the length of the wiring systems exceeds such a value and the installation may be divided, by isolation, into segments of approximately 100 m, each of the parts in which the installation has been divided shall comply with the relevant minimum insulation resistance. Where it is not possible to divide the installation as indicated above, the insulation resistance value of the entire installation may, with respect to the corresponding minimum, be inversely proportional to the overall length, in hectometres, of the wiring systems.
6.4.3.6	**Finland; Sweden** The verification of polarity may be achieved by inspection only.

6.4.3.7 Sweden

The verification of the effectiveness of measures applied for additional protection is carried out by visual inspection only.

6.4.3.7.1 a) and b) France

The following does not apply:

The effectiveness of automatic disconnection by RCDs shall be verified using suitable test equipment according to EN 61557-6 confirming that the relevant requirements in HD 60364-4-41 are met taking into account the operating characteristic of the device. The effectiveness of the protective measure is verified if disconnection occurs with a fault current lower than or equal to the rated residual operating current ($I_{\Delta n}$).

It is recommended that the disconnection times required by HD 60364-4-41 be verified. However, the requirements for disconnecting times shall be verified in case of additions and alterations to an existing installation where existing RCDs are also used as disconnecting devices for such additions and alterations.

6.4.3.7.1 United Kingdom

For TN and TT systems, verification of the characteristics and/or the effectiveness of a general type AC RCCB according to EN 61008 or RCBO according to EN 61009 providing automatic disconnection of supply is achieved by the following procedure:

- visual inspection to confirm adequacy in terms of rated current (I) and rated residual operating current ($I_{\Delta n}$);

– using an RCD test instrument according to EN 61557-6, the device should trip within 300 ms when a test current of $I_{\Delta n}$ is applied.

6.4.3.7.1 a) and b) Norway

Where an RCD is used for protection against electric shock by automatic disconnection of supply, the function of the “TEST” button of the device shall be verified.

If verification of the effectiveness of automatic disconnection of supply is required by the owner of the installations, such effectiveness shall be verified by using suitable test equipment according to EN 61557-6. The effectiveness of the protective measure is then verified if disconnection occurs with a fault current lower than or equal to the rated residual operating current $I_{\Delta n}$.

It is recommended that the disconnection times required by HD 60364-4-41 be verified.

6.4.3.7.1 Sweden

The verification of the effectiveness of a protective device may be carried out by means of inspection only.

6.4.3.7.2 Germany

Add the following sentence:

If the calculation of the resistance is made, the calculation shall be documented.

6.4.3.8 Norway

Where an RCD is required for additional protection, the function of the “TEST” button of the device shall be verified.

6.4.3.8 United Kingdom

For TN and TT systems, verification of the characteristics and/or the effectiveness of a general type AC RCCB according to EN 61008 or RCBO according to EN 61009 providing additional protection is achieved by the following procedure:

– visual inspection to confirm adequacy in terms of rated current (I) and rated residual operating current ($I_{\Delta n}$);

– using an RCD test instrument according to EN 61557-6:

– the device should trip within 40 ms when a test current of 5 $I_{\Delta n}$ is applied.

6.4.4.4 Sweden

The delivery of verification documents is subject to an agreement between the contractor and the customer. For this reason, the first paragraph is not published in the Swedish standard.

6.4.4.5 Germany; Finland; Hungary; Italy; Netherlands; Norway

Annexes E, F and G are replaced by amended national annexes with a required national minimum.

Annex ZC
(informative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CENELEC national member.

This Harmonization Document does not fall under any Directive of the EU.

In the relevant CENELEC countries, these A-deviations are valid instead of the provisions of the Harmonization Document until they have been removed.

Clause	Deviation
General	**France**
	Initial and periodic verifications are requested and defined by law: "décret n°2010-1016 du 30 août 2010" and "arrêté du 26 décembre 2011"
6.4.4.5	**Austria**
	Electrotechnical Ordinance 2002 – Federal gazette Part II No. 222/2002 amended by Electrotechnical Ordinance 2002/A1 – Federal gazette Part II No. 33/2006 amended by Electrotechnical Ordinance 2002/A2 – Federal gazette Part II No. 223/2010:
	In Austria, Annexes E, F and G are replaced by amended national annexes with a required national minimum.
6.4.4.5	**Estonia**
	Regulation of the Estonian Minister of Economic Affairs and Communications, No 86, 03 July 2015, "Electrical installations with an auditing obligation and requirements for audit and the presentation of its results", Paragraph 8:
	In Estonia, required national minimum data concerning electrical installation and results of verification shall be entered to national electronic database.
6.5.3.6	**Estonia**
	Regulation of the Estonian Minister of Economic Affairs and Communications, No 86, 03 July 2015, "Electrical installations with an auditing obligation and requirements for audit and the presentation of its results", Paragraph 8:
	In Estonia, required national minimum data concerning electrical installation and results of verification shall be entered to national electronic database.