
Omarice in ohišja za električno opremo za gospodinjstvo in podobne nepremične električne inštalacije - 24. del: Posebne zahteve za ohišja stanovanjskih zaščitnih naprav in druge električne opreme, ki porablja energijo - Dopolnilo A11

Boxes and enclosures for electrical accessories for household and similar fixed electrical installations - Part 24: Particular requirements for enclosures for housing protective devices and other power dissipating electrical equipment

Dosen und Gehäuse für elektrische Installationsgeräte für Haushalt und ähnliche ortsfeste elektrische Installationen - Teil 24: Besondere Anforderungen für Gehäuse zur Aufnahme von Schutzgeräten und ähnlichen energieverbrauchenden Geräten

<https://standards.iteh.ai/catalog/standards/sist/18e7e4c2-3e9d-4abc-86f5-e710d34cc0/sist-en-60670-24-2013-a11-2023>

Boîtes et enveloppes pour appareillage électrique pour installations électriques fixes pour usages domestiques et analogues - Partie 24: Exigences particulières pour enveloppes pour appareillages de protection et autres appareillages électriques ayant une puissance dissipée

Ta slovenski standard je istoveten z: EN 60670-24:2013/A11:2023

ICS:

| | | |
|-----------|---------------------------------|------------------------------|
| 29.120.99 | Druga električna dodatna oprema | Other electrical accessories |
|-----------|---------------------------------|------------------------------|

SIST EN 60670-24:2013/A11:2023 **en,fr,de**

EUROPEAN STANDARD

EN 60670-24:2013/A11

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2023

ICS 29.120.10

English Version

**Boxes and enclosures for electrical accessories for household
and similar fixed electrical installations - Part 24: Particular
requirements for enclosures for housing protective devices and
other power dissipating electrical equipment**

Boîtes et enveloppes pour appareillage électrique pour
installations électriques fixes pour usages domestiques et
analogues - Partie 24: Exigences particulières pour
enveloppes pour appareillages de protection et autres
appareillages électriques ayant une puissance dissipée

Dosen und Gehäuse für elektrische Installationsgeräte für
Haushalt und ähnliche ortsfeste elektrische Installationen -
Teil 24: Besondere Anforderungen für Gehäuse zur
Aufnahme von Schutzgeräten und ähnlichen
energieverbrauchenden Geräten

This amendment A11 modifies the European Standard EN 60670-24:2013; it was approved by CENELEC on 2023-01-26. 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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

This document (EN 60670-24:2013/A11:2023) has been prepared by CLC/TC 23BX "Switches, boxes and enclosures for household and similar purposes, plugs and socket outlet for D.C."

The following dates are fixed:

- latest date by which this document has to be (dop) 2023-11-05 implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards (dow) 2026-05-05 conflicting with this document have to be withdrawn

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

This Part 24 is read in conjunction with EN IEC 60670-1:2021 and EN IEC 60670-1:2021/A11:2021. It lists the changes necessary to convert that standard into a specific standard for housing protective devices and other power dissipating electrical equipment

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

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

EN 60670-24:2013/A11:2023 (E)

1 Modification to Clause 1, “Scope”

Add the following paragraph before NOTE 1:

“This document does not apply to surface type boxes, flush and semi-flush type boxes suitable for the housing of accessories for household and similar use such as switches, electronic switches, socket- outlets, which are covered by EN 60670-1 only.”

2 Modification to Clause 3, “Definitions”

Replace the definition 3.106 with the following:

“3.106

rated current

I_n

maximum current assigned by the manufacturer of the enclosure which can be distributed by the enclosure”

3 Modification to Clause 7, “Classification”

Replace the 3rd line with:

“Classification criteria 7.6, 7.8.1 and 7.9 do not apply.”

4 Modifications to Clause 8, “Marking”

In 8.1, delete item i).

In 8.1, replace the sentence before item g) with:

“The following information shall be marked on the boxes and enclosures or provided by the manufacturer on the smallest package unit or in the manufacturer’s instructions which need not be provided with the product:”

5 Modifications to Clause 10, “Protection against electric shock”

Delete the sentence “Deletion of the 2nd paragraph.”

Deletion of the 6th and 7th (penultimate) paragraphs.

In 10.101, replace item a) with:

“a) covers live parts of the installed equipment with insulation material, and”

In 10.101, replace the paragraph after “Tests shall be carried out on parts which are accessible after installation.” with:

“In addition, all enclosures according to 7.1.1, 7.1.3 and 7.1.4 with parts of thermoplastic or elastomeric material shall be subjected for 1 min to a force applied through the tip of test probe C of IEC 61032 but at an ambient temperature of (35 ± 2) °C, the enclosure being at this temperature.”

6 Modifications to Clause 12, “Construction”

This clause is applicable with following modification:

12.2.3 Non-screw-type fixing operable without the use of a tool or a key

Addition at the end of the clause of following sentence:

“This clause is not applicable for blanking plates”

12.2.4 Non screw-type fixing operable with the use of a tool or a key

Addition at the end of the clause of following sentence:

“This clause is not applicable for blanking plates”

Replace the title numbering and the title of 12.11 with:

“12.12 Fixing of flush type and semi-flush type enclosures classified according to 7.2.2.1”

In 12.12, replace the paragraph below “Replacement:” with:

“Enclosures for hollow walls classified according to 7.2.2.1 shall provide suitable means for fixing the enclosure to hollow walls.”

7 Modification to Clause 15, “Mechanical strength”

In 15.101, add at the end:

“After the test, the specimens shall show no damage leading to non-compliance with the standard.

Damage to the finish, small dents and small chips which do not adversely affect the protection against electric shock or harmful ingress of water are disregarded.

Cracks passing through the material not visible with normal or corrected vision without magnification, surface cracks in fibre-reinforced mouldings and small indentations are disregarded.”

8 Modification to Clause 16, “Resistance to heat”

Replace the text of Clause 16 with:

“This clause of Part 1 is applicable with following modification:

Delete 16.3 “Boxes and enclosures of insulation materials classified according to 7.2.2 or 7.2.2.3”

9 Modification to Clause 18, “Resistance of insulating material to abnormal heat and to fire”

Replace the text of Clause 18 with:

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

Replace the bullet points with the following:

- By test made at 960 °C
 - for parts of insulating material necessary to retain current-carrying parts in position.
- By the test made at 850 °C
 - for parts of insulating material, necessary to retain parts of the earthing circuit in position (with the exception of parts of insulating material needed to retain the earth terminal in position in an enclosure), and
 - for parts of insulating material of boxes and enclosures classified according to 7.2.2.1, with the exception of parts protruding from the wall and additional and/or removable internal parts of enclosure (e.g. separator) not necessary to retain current carrying parts in position.
- By the test made at 650 °C
 - for parts of insulating material not necessary to retain current-carrying parts in position (even though they are in contact with them), and
 - for parts of insulating material retaining earthing terminal in position.

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- for parts of insulating material of boxes and enclosures classified according to 7.2.2.1, protruding from the wall and additional and/or removable internal parts of enclosure (e.g. separator) not necessary to retain current carrying parts in position.

NOTE Accessories complying with other standards, e.g. connecting devices incorporated but not integrated into the enclosure, are not considered as part of the enclosures.”

10 Modifications to Clause 101, “Verification of the maximum capability to dissipate power (P_{de})”

Replace the 10th, 11th and 12th sentence with:

“For enclosures according to 7.2.1.1 and 7.2.2.1 the test is carried out with the specimen mounted as declared by the manufacturer.

For enclosures according to 7.2.3 the specimen is mounted on a minimum 19 mm thick plywood painted black.

For enclosures according to 7.2.1.2 and 7.2.1.3 the test is carried out with the specimen cast in a concrete wall of thickness not less than 100 mm on each surface; it is allowed to cast the specimen in walls of different material, with equivalent thermal conductivity.”

11 Modifications to Clause 102, “Verification of temperature rise”

Replace the 7th, 8th and 9th sentence with:

“For enclosures according to 7.2.1.1 and 7.2.2.1 the test is carried out with the specimen mounted as declared by the manufacturer.

For enclosures according to 7.2.3 the specimen is mounted on a minimum 19 mm thick plywood painted black.

For enclosures according to 7.2.1.2 and 7.2.1.3 the test is carried out with the specimen cast in a concrete wall of thickness not less than 100 mm on each surface; it is allowed to cast the specimen in walls of different material, with equivalent thermal conductivity.”

In the Keys to Figures 103 and 104, add the following additional line:

“= the resistor is placed at equal distance from both sides with a tolerance on the difference of ± 5 mm.”

Replace the paragraph before Table 102 with the following:

“The specimen is loaded with its rated current (I_n). This current shall be distributed amongst the smallest possible number of outgoing circuits, with a minimum of 2, so that each of these circuits is loaded with its rated current multiplied by the rated diversity factor, as stated in Table 102. In the case where the exact total load cannot be obtained by a number of devices loaded to this current, only the last loaded circuit shall be loaded to a lower value to give the correct total.”

Add the following paragraph before Table 102:

“When only one circuit is possible, the specimen is loaded at I_n with one device. The device rating is selected taking into consideration the diversity factor as given in Table 102 and the value adjusted to the closest higher rating.

NOTE As an example, a 50 A enclosure would be tested with a 63 A device.”

Replace the content of the first cell of the second line of Table 102 with the following:

“1, 2 and 3”

Replace the second paragraph after Table 102 with the following:

“The temperature rise measured on the terminals for external conductors of the outgoing devices shall not exceed the values defined in the relevant standard in a steady-state condition (variation less than 1 K/h).”

12 Addition of Clause Z1, "Electromagnetic fields (EMF) requirements"

Add the following clause Z1:

"Z1 Electromagnetic fields (EMF) requirements

This clause of Part 1 is applicable."

13 Modifications to Annex AA, "Instructions to be given by the manufacturer of the GP enclosure to the installer how to integrate accessories, and example of calculation"

In AA.1, replace the second equation with:

$$P_{\text{tot}} = P_{\text{dp}} + 0,2 P_{\text{dp}} + P_{\text{Au}} + P_{\text{el}} + 0,2 P_{\text{el}}$$

and in the term definition for this equation, add:

"

P_{el} is the power loss of electronic accessories, in watt, taking into account the utilization factor (K_e) for multi way devices

$0,2 P_{\text{el}}$ is the increase of P_{el} to consider power lost by connections of the power circuit of electronic devices

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Replace the title of AA.4 as follows:

"AA.4 Example of calculation without electronic devices"

In AA.4.1 add the following figure title after the figure: 24:2013/A11:2023

"Figure AA.1 — Diagram of the equipped GP enclosure without electronic devices"

Add the following subclause AA.5:

"

AA.5 Example of calculation to take into account the power loss of electronic devices

AA.5.1 General

The calculation is based on the following steps (AA.5.2 to AA.5.5):

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AA.5.2 Diagram of the equipped GP enclosure

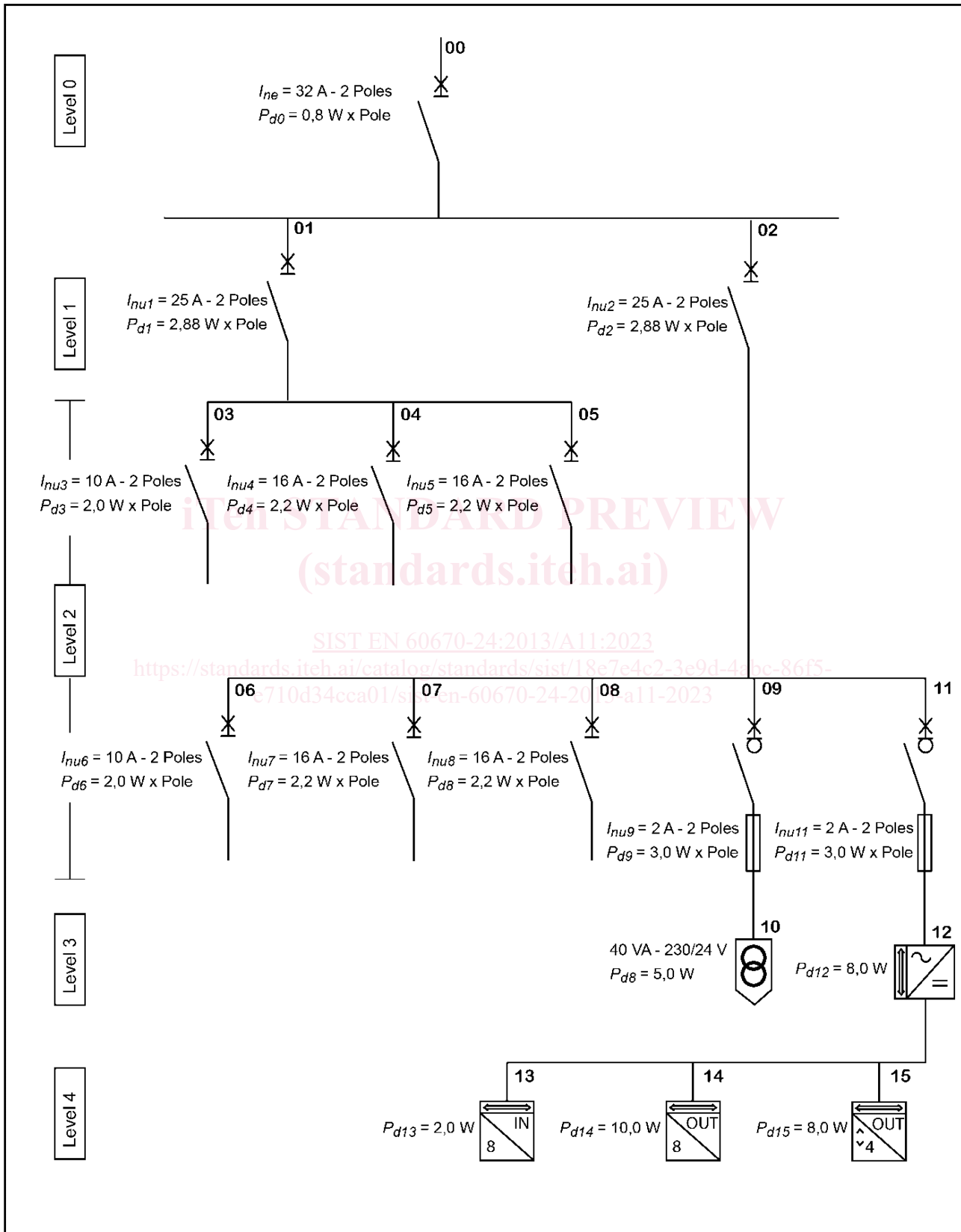


Figure AA.2 — Diagram of the equipped GP enclosure