



SLOVENSKI STANDARD
SIST EN 62606:2014/oprAB:2021

01-november-2021

Splošne zahteve za obločne detektorje

General requirements for arc fault detection devices

Allgemeine Anforderungen an Fehlerlichtbogen-Schutzeinrichtungen

Exigences générales des dispositifs pour la détection de défaut d'arcs

Ta slovenski standard je istoveten z: EN 62606:2013/prAB

[SIST EN 62606:2014/oprAB:2021](https://standards.iteh.ai/catalog/standards/sist/7cca059d-bcde-49ab-a095-e47dd3451826/sist-en-62606-2014-oprab-2021)

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ICS:

29.120.50	Varovalke in druga nadtokovna zaščita	Fuses and other overcurrent protection devices
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SIST EN 62606:2014/oprAB:2021

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
EN 62606:2013

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August 2021

ICS 29.120.01; 29.120.50

English Version

General requirements for arc fault detection devices

Exigences générales des dispositifs pour la détection de défaut d'arcs

Allgemeine Anforderungen an Fehlerlichtbogen-Schutzeinrichtungen

This draft amendment prAB, if approved, will modify the European Standard EN 62606:2013; it is submitted to CENELEC members for enquiry.

Deadline for CENELEC: 2021-11-05.

It has been drawn up by CLC/TC 23E.

If this draft becomes an amendment, 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.

This draft amendment was established by CENELEC 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 62606:2013/prAB (E)**European foreword**

This document (EN 62606:2013/prAB) has been prepared by CLC/TC 23E "Circuit breakers and similar devices for household and similar applications".

This document is currently submitted to the Enquiry.

The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

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.

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1 Modifications to Clause 1, "Scope"

Add after the Title "Scope":

"Replace in the first paragraph, modified by Amendment 1, "with rated frequencies of 50 Hz, 60 Hz or 50/60 Hz" with "with rated frequencies of 50 Hz"."

Add, before the last paragraph:

"Delete in the tenth paragraph, at the end of second dash "or 60 Hz""

Add at the end:

"Renumber Note 5, introduced by Amendment 1, to Note 4."

1 Modifications to Clause 4, "Classification"

Add the following:

"4.3 According to the number of poles and current paths

Delete the Note.

4.4 According to the method of mounting and connection

Replace the title of subclause "4.4" with "Void"

Delete the content of subclause 4.4."

2 Modifications to Clause 5, "Characteristics of AFDDs"

Below the title "5 Characteristics of AFDDs", add the following:

"5.3 Standard and preferred values

5.3.1 Preferred values of rated voltage (U_n)

Delete the first row "Single-pole (with two current paths)" from Table 22.

Delete the last column for "Rated voltage of AFDDs for use in systems 120/240 V or 240V" from Table 22.

Delete Note 3 and Note 4 of Table 22.

Delete the Note after Table 22."

2 Modification to 5.4, "Standard values of rated impulse withstand voltage (U_{imp})"

Below the title "5.4 Standard values of rated impulse withstand voltage (U_{imp})" add the following:

"In Table 4, delete the line with $U_{imp}=2,5kV$ and delete the 3rd column.

Reword footnote ^a of Table 4 as follows:

^a The value 5 kV is used for verifying the isolating distances across open contacts at the altitude of 2 000 m (see Table 16).

Delete footnotes b and c of Table 4."

3 Modification to Clause 6, "Marking and other product information"

Below the title "6 Marking and other product information", add the following:

"In Table 5, replace the second column of item d with:

"rated frequency"."

EN 62606:2013/prAB (E)**4 Modification to 7.1, "Standard conditions"**

Add the following:

"Remove footnote g of Table 6."

5 Modifications to Clause 8, "Requirements for construction and operation"

Add the following at the end of subclause 8.2.3, "Clearances and creepage distances (see Annex B)":

"In Table 7, delete the 2nd column with $U_{imp}=2,5kV$ and the 3rd column with $U_{imp}=4kV$ for 120/240V and 240V systems.

In Table 7, delete the 5th, 7th and 9th columns under "Rated Voltage V", corresponding to "Minimum creepage distances" and Item 4, for 120 / 240 and 1.5."

6 Modifications to 9.7.7, "Verification of impulse withstand voltages (across clearances and across solid insulation) and of leakage current across open contacts"

Above the title "9.7.7.5 Verification of the behaviour of components bridging the basic insulation", add the following:

"9.7.7.4.1 General

In Table 16, delete the two lines corresponding to single phase systems.

In Table 16, replace, "Three-phase" with "Single and three-phase".

In Table 16, delete footnotes a and b."

Below the title "9.7.7.5 Verification of the behaviour of components bridging the basic insulation", add the following:

"Replace the first sentence of the third paragraph with: <https://standards.iteh.ai/catalog/standards/sist/7cca059d-bcde-49ab-a095-449c00000000/en-62606-2014-oprab-2021>

The test voltage has a frequency of 50 Hz."

7 Modification to 9.9.1, "General"

Before the title "9.9.2 Series arc fault tests", add the following:

"9.9.1 General

In the third paragraph, delete the text in brackets and the brackets.

Delete the fourth paragraph."

8 Modification to 9.9.2.6, "Preparation of the cable specimens"

Before the title "9.9.2.8 Verification of correct operation ...with unbalanced load", add the following:

"9.9.2.6 Preparation of the cable specimens

Delete in fourth paragraph "a 100 W/120 V incandescent lamp starts to glow at 120 V or a resistance having an equivalent resistance value (with 100 W/120 V incandescent lamp) in series with the path draws 0,3 A at 120 V or".

9 Modifications to 9.9.3.2, "Verification of correct operation in case of parallel arc cable cutting test"

In the first paragraph, replace "sixth" with "fourth".

In the second paragraph, delete "1,2 mm thick (nominal) for a 120 V rated AFDD or" and "for a 230 V AFDD".

10 Modifications to 9.9.4.2, "Masking test with inhibition loads"

In the second paragraph, delete "single-pole AFDDs with two current paths".

Delete in item a) "for a 230 V rated voltage AFDD and at 10 A to 14 A for a 120 V rated voltage AFDD".

Delete in item b) "for a 230 V rated voltage AFDD and 5 A for a 120 V rated voltage AFDD".

Replace item c) with:

"c) a 2.2 kW capacitor start (air compressor type) motor (compressor operating with open valve to prevent pressure in the air tank)."

Delete the first sentence of item d) and "For AFDD with rated voltage of 230 V," at the beginning of the second sentence.

At the end of 9.9.4.2, add the following:

"Delete in the fourth paragraph after item g) "for a 230 V rated voltage AFDD"."

11 Modifications to 9.9.4.3, "Masking test with EMI filter", and 9.9.4.4, "Masking test with line impedance"

After 9.9.4.2, add the following:

9.9.4.3 Masking test with EMI filter

In the first paragraph, delete "for a 230 V rated voltage AFDD".

Delete in item a) "(or 50 feet)", "(or 12 AWG)", "(or 6 feet)" and "(or 16 AWG)".

Delete in item b) "(or 50 feet)", "(or 12 AWG)", "(or 6 feet)" and "(or 16 AWG)".

9.9.4.4 Masking test with line impedance

In the second paragraph, delete "(or 100 feet)" and "(or 12 AWG)".

In the second paragraph, delete "or a 230 V rated voltage AFDD".

12 Modification to 9.9.5.2, "Cross talk test"

After the title "9.9.5 Unwanted tripping test", add the following:

9.9.5.2 Cross talk test

Delete in the second paragraph, last sentence "or a duration of minimum 1 s for a 120 V circuit,".

13 Modifications to 9.9.5.4, "Test with various disturbing loads for single-pole AFDD with two current path and two-pole AFDD"

Replace the title of 9.9.5.4 as follows:

9.9.5.4 Test with various disturbing loads for two-pole AFDDs and four-pole AFDDs"

And add below this title:

"In 9.9.5.4, apply the following modifications:

Delete in item a) "for a 230 V rated voltage AFDD".

Delete in item b) "for a 230 V rated voltage AFDD".

Replace item c) with:

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"A 2,2 kW capacitor start motor (air compressor type) is to be started under load (compressor operating without any air pressure in the air tank) and operated."

Delete in item d) "for a 230 V rated voltage AFDD."

14 Modifications to 9.11.2.2, "General conditions for test"

Add after the title "9.11.2.2 General conditions for test", the following:

"Delete in 9.11.2.2 item a) the first indent "a single-pole AFDD with two current paths;".

Delete in the sixth paragraph after Table 18 the first indent "– across the terminals of the pole, for single-pole AFDDs;".

15 Modifications to 9.21.3.1, "General"

Add the following Note in Table 21:

"NOTE Test for immunity to conducted, differential mode disturbances and signaling in the frequency range 2 kHz to 150 kHz at a.c. power ports of IEC 61000-4-19 is under consideration."

16 Modifications to 9.21.3.4, "Conducted disturbances, induced by radio-frequency fields (T 3)"

At the end of the 1st paragraph, replace "level 2 (3V)" with "level 3 (10V)".

17 Modifications to 9.21.3.7, "Radiated, radio-frequency, electromagnetic field (T 6)"

Replace the last sentence of the 1st paragraph with:

"The test is performed at level 3 (10 V/m) for frequencies between 180 and 1000 MHz and at level 2 (3 V/m) for frequencies between 1,4 GHz and 6 GHz."
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18 Modifications to 9.23, "Verification of the behaviour in case of partial loss of supply connections"

Remove the incorrect modification in EN 62606:2013 to Figure 13, which states "Delete "and 470nF for 120 V"."

At the end of 9.21.3.10, add the following:

"9.23 Verification of the behaviour in case of partial loss of supply connections"

In Figure 14, "EMI filter description installed in Figure 13", delete "for 240 V and 470 nF ±10 % for 120 V".

19 Modification to Annex E, "Routine tests"

Before the title "E3 Electric strength test", add the following:

"E.2 Tripping test"

Delete "for a 230 V rated voltage AFDD".

20 Modification to Annex F, "Description of the shaker arc test in 9.10.2"

After the title of Annex F, add the following:

"Delete in the second paragraph: "(12 in)" and "(AWG 8)"."

21 Modifications to Annex IC, "Correspondence between ISO and AWG copper conductors"

Before Annex ID, add the following:

"

Annex IC
(informative)
Correspondence between ISO and AWG copper conductors

Delete Annex IC.

"

22 Modifications to Annex J, "Particular requirements for AFDDs with screwless type terminals for external copper conductors"

After Annex ID, add the following:

"

Annex J
(normative)

Particular requirements for AFDDs with screwless type terminals for external copper conductors

J.3.3 universal terminal

Delete in the Note 1 to entry: "CN".

J.1.8 Dimensions of connectable conductors

In Table J.1, delete the column for AWG.

In Table J.1, delete in the Note "and, for AWG conductors, on ASTM B 172-71, and ICEA publications S-19-81, S-66-524 and S-68-516".

"

23 Modifications to Annex K, "Particular requirements for AFDDs with flat quick-connect terminations"

After Annex J, add the following:

"

Annex K
(normative)

Particular requirements for AFDDs with flat quick-connect terminations

K.1 Scope

Delete in the NOTE: "and US".

K.8.3.2

Delete in the NOTE: "and US".

Figure K.2 — Dimensions of male tabs

Delete in Figure K.2 "(0,045 in) min.".

Delete in NOTE 5: "(0,045 in)".

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Delete in NOTE 6: "(0,001 in)" and "(0,051 in)".

Figure K.3 — Dimensions of round dimple detents (see Figure K.2)

Delete in Figure K.3 "(0,003 in) min." everywhere

Figure K.4 — Dimensions of rectangular dimple detents (see Figure K.2)

Delete in Figure K.4 "(0,003 in) min." everywhere and "(0,005 in)".

Figure K.5 — Dimensions of hole detents

Delete in Figure K.5 "(0,003 in) min.".

"

24 Modifications to Annex L, "Specific requirements for AFDDs with screw-type terminals for external untreated aluminium conductors and with aluminium screw-type terminals for use with copper or with aluminium conductors"

After Annex K, add the following:

"

Annex L
(normative)

Specific requirements for AFDDs with screw-type terminals for external untreated aluminium conductors and with aluminium screw-type terminals for use with copper or with aluminium conductors

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Delete Annex L.

"

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[https://standards.iteh.ai/catalog/standards/sist/7cca059d-bcde-49ab-a095-](https://standards.iteh.ai/catalog/standards/sist/7cca059d-bcde-49ab-a095-47d15f70a1e0/sist-en-62606-2014-oprab-2021)

25 Modification of Annex ZA, "Normative references to international publications with their corresponding European publications"

Replace the Annex ZA with the following:

"