



SLOVENSKI STANDARD
oSIST prEN IEC 60898-3:2023/oprAA:2023
01-september-2023

Električni pribor - Odklopniki za nadtokovno zaščito za gospodinske in podobne inštalacije - 3. del: Odklopniki za enosmerni tok - Dopolnilo AA

Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 3: Circuit-breakers for DC operation

Elektrisches Installationsmaterial - Leitungsschutzschalter für Hausinstallationen und ähnliche Zwecke - Teil 3: Leitungsschutzschalter für Gleichstrom (DC)

Petit appareillage électrique - disjoncteurs pour la protection contre les surintensités pour installations domestiques et analogues - Partie 3: Disjoncteurs pour le fonctionnement en courant continu

Ta slovenski standard je istoveten z: prEN IEC 60898-3:2023/prAA:2023

ICS:

29.120.50	Varovalke in druga nadtokovna zaščita	Fuses and other overcurrent protection devices
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oSIST prEN IEC 60898-3:2023/oprAA:2023

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN IEC 60898-3:2023

prAA

July 2023

ICS 29.120.50

English Version

Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 3: Circuit-breakers for DC operation

To be completed

Elektrisches Installationsmaterial - Leitungsschutzschalter für Hausinstallationen und ähnliche Zwecke - Teil 3: Leitungsschutzschalter für Gleichstrom (DC)

This draft amendment prAA, if approved, will modify the European Standard prEN IEC 60898-3:2023; it is submitted to CENELEC members for enquiry.

Deadline for CENELEC: 2023-10-20.

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

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27 European foreword

28 This document (prEN IEC 60898-3:2023/prAA:2023) has been prepared by CLC/TC 23E "Circuit breakers and
29 similar devices for household and similar applications".

30 This document is currently submitted to the Enquiry.

31 The following dates are proposed:

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withdrawn modified when voting)

32 This document is read in conjunction with prEN IEC 60898-3:2023 and prEN IEC 60898-3:2023/prA1:2023.

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

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

prEN IEC 60898-3:2023/prAA:2023 (E)**38 1 Modifications to Clause 1**

39 *Add at the end of the sentence of the 3rd paragraph:*

40 “and overvoltage category III.”

41 *Add after the 3rd paragraph the following note:*

42 “

43 NOTE 1 Additional requirements are necessary for circuit-breakers used in locations having more severe overvoltage
44 conditions.”

45 *Replace the 5th paragraph with the following:*

46 “Circuit-breakers in compliance with this document are suitable for use in TN and TT system. Under specific
47 conditions, circuit-breakers of this document are also suitable for use in IT systems, provided, that the
48 requirements of HD 60364-4-43:2010 are complied with.”

49 *Add after the 11th paragraph the following new paragraph:*

50 “Supplementary requirements can be necessary for circuit-breakers of the screw-in types.”

51 *Renumber “Note” as “Note 2”*

52 *Add after new Note 2 the following new Note 3:*

53 “

54 NOTE 3 Recommendations for the dimensional coordination between enclosures and circuit breakers for mounting on
55 rails according to EN 60715 or equivalent means are given in the CENELEC report PD CLC/TR 50473.”

56 2 Modification to Clause 2, “Normative References”

57 *Add the following references:*

58 EN 60051-1:2017, *Direct acting indicating analogue electrical measuring instruments and their accessories -*
59 *Part 1: Definitions and general requirements common to all parts*

60 HD 60364-4-43:2010, *Low-voltage electrical installations - Part 4-43: Protection for safety - Protection against*
61 *overcurrent*

62 HD 60364-5-52:2011, *Low-voltage electrical installations - Part 5-52: Selection and erection of electrical*
63 *equipment - Wiring systems*

64 3 Modifications to Clause 3

65 *Add at the end of 3.2 the following two new definitions:*

66 “

67 3.2.16**68 type test**

69 test of one or more devices made to a certain design to show that the design meets certain requirements

70 [SOURCE: IEC 60050-441:1984, 441-53-01, modified]

71 3.2.17**72 routine test**

73 test to which each individual device is subjected during or after manufacture to ascertain whether it complies
74 with certain criteria

75 [SOURCE: IEC 411-53-02, modified]

76 ”

77 *Replace the contents of 3.2.10.2 with the following:*

78 “

79 **3.2.10.2**

80 **reference calibration temperature**

81 calibration temperature on which the time-current characteristics are based”

82 **4 Modifications to Clause 4**

83 *Replace at the end of Note 1 of 4.6.2 “Annex J” with “Annex H”.*

84 *Replace at the end of Note 2 of 4.6.2 “Annex K” with “Annex I”.*

85 *Delete in 4.6.2 the text corresponding to the 4th (and last) dash and delete Note 3.*

86 *Delete Note 2 of 4.7.*

87 **5 Modifications to Clause 5**

88 *Replace the content of 5.2.1.3 with the following:*

89 “The rated impulse withstand voltage (U_{imp}) of a circuit-breaker is the value of voltage, assigned by the
90 manufacturer, to which impulse test voltages and clearances are referred. The rated impulse withstand
91 voltage of a circuit-breaker shall be equal to or higher than the standard value of rated impulse withstand
92 voltage given in 5.3.5.

93 NOTE For dimensioning of clearances, for rated impulse withstand voltages higher than the standard value of rated
94 impulse withstand voltage given in 5.3.6, see the EN 60664 series.”

95 *Replace the 2nd paragraph of 5.2.2 with the following:*

96 “The reference calibration temperature is 30 °C. If a different reference calibration temperature for the
97 circuit-breaker is used, the effect on the overload protection of cables shall be taken into account, since this is
98 also based on an ambient temperature of 30 °C, according to installation rules (see Clause 523 of
99 HD 60364-5-52:2011).”

100 *Delete the note of 5.2.2.*

101 *Add in 5.3.1 after Table 1 the following note:*

102 “

103 NOTE Standard values of DC supply voltages are under consideration.”

104 *Add in 5.3.1 the following new paragraph after Table 1:*

105 “The minimum voltage for which the circuit breaker is designed can be declared by the manufacturer in its
106 documentations.”

107 *Delete the Note in 5.3.3.*

108 **6 Modification in Clause 6**

109 *After the title of Clause 6, add the following new subtitle 6.1:*

110 **“6.1 Standard marking”**

111 *Replace item g) with the following:*

112 “g) rated short-circuit capacity for DC in amperes, within a rectangle, without symbol “A””;

113 *Replace item i) with:*

114 “i) reference calibration temperature, if different from 30 °C”;

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- 115 *Replace the 1st paragraph after item k) with the following:*
- 116 “If, for small devices, the space available does not allow all the above data to be marked, at least the
117 information under e) and f), if required, shall be marked and visible when the circuit-breaker is installed.”
- 118 *Replace the 2nd paragraph after items with:*
- 119 “The information under a), b), c), d), g), h) and k) may be marked on the side or on the back of the device and
120 be visible only before the device is installed.”
- 121 *Delete Note 1 and Note 2.*
- 122 *Delete the 8th paragraph starting with “The manufacturer shall declare in his literature...”.*
- 123 *Replace the 9th paragraph with the following:*
- 124 “The manufacturer shall provide the I²t characteristic (see 3.5.14)”
- 125 *Before the last paragraph, add the new following paragraph:*
- 126 “For rail mounting circuit-breakers, appropriate rail(s) shall be indicated in the manufacturer’s documentation.”
- 127 *Add the following new subclauses 6.2 and 6.3:*
- 128 “
- 129 **6.2 Additional marking**
- 130 Additional marking to other standards (EN or IEC or other) is allowed under the following conditions:
- 131 — the circuit-breaker shall comply with all the requirements of the additional standard;
- 132 — the relevant standard to which the additional marking refers shall be indicated adjacent to this marking
133 and shall be clearly differentiated or separated from the standard marking according to 6.1.
- 134 Compliance is checked by inspection and by carrying out all the test sequences required by the relevant
135 standard. Equivalent or less severe test sequences need not be repeated.
- 136 **6.3 Guidance table for marking**

137

Table Z.1 — Guidance table for marking

Marking and other product information		Markings may be on the MCB itself			Product information in catalogue
Each MCB shall be marked in a durable manner with all or, for small apparatus, part of the following data:		If, for small devices the space available does not allow all the above data to be marked, at least this information shall be marked and visible when the device is installed.	This information may be marked on the side or on the back of the device and be visible only before the device is installed.	Alternatively, the information may be on the inside of any cover which shall be removed in order to connect the supply wires.	Any remaining information not marked shall be given in the manufacturer's catalogues .
a)	manufacturer's name or trademark		X		
b)	type designation, catalogue number or serial number		X		
c)	rated voltage, with the symbol <u> </u>		X		
d)	maximum line-to-line voltage for application in IT systems		X		
e)	rated current without symbol "A" preceded by the symbol of overcurrent instantaneous tripping (B or C), for example B 16	X			
f)	marking of polarity, if required (e.g. +, -, M)	X			
g)	rated short-circuit capacity for DC in a rectangle, in amperes, without symbol "A"		X		
h)	wiring diagram, unless the correct mode of connection is evident		X	X	
i)	reference calibration temperature, if different from 30 °C				X
j)	the degree of protection (only if different from IP20)				X
k)	making and breaking capacity of an individual protected pole of multipole circuit breakers (Icn1), if different from Icn.		X		
	the position of use (symbol according to EN 60051-1:2017), if necessary;		X		
	additional marking of performance to other standards		X		

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138 **7 Modification to Clause 7**139 *Replace the content of Clause 7 with the following:*

140 “

141 **7 Standard conditions for operation in service and for installation**142 **7.1 Standard conditions**143 Circuit breakers complying with this document shall be capable of operating under the standard conditions
144 shown in Table Z.2.145 **Table Z.2 — Standard conditions for operation in service**

Influencing quantity	Standard range of application	Reference value	Test tolerances ^f
Ambient temperature ^{a g}	−5 °C to +40 °C ^b	see 9.2	
Altitude	Not exceeding 2 000 m		
Relative humidity maximum value 40 °C	50 % ^c		
External magnetic field	Not exceeding 5 times the earth's magnetic field in any direction	Earth's magnetic field	^d
Position	As stated by the manufacturer, with a tolerance of 2° in any direction ^e	As stated by the manufacturer	2° in any direction

^a The maximum value of the mean daily temperature is +35 °C.

^b Values outside the range are admissible where more severe climatic conditions prevail, subject to agreement between manufacturer and user.

^c Higher relative humidities are admitted at lower temperature (for example 90 % at 20 °C).

^d When a circuit breaker is installed in proximity of a strong magnetic field, supplementary requirements may be necessary.

^e The device shall be fixed without causing deformation liable to impair its functions.

^f The tolerances given apply unless otherwise specified in the relevant test.

^g Extreme limits of −20 °C and +60 °C are admissible during storage and transportation, and should be taken into account in the design of the device.

146 **7.2 Conditions of installation**

147 Circuit breakers shall be installed in accordance with the manufacturer's instructions.

148 ”

149 **8 Modifications to Clause 8**150 *Delete in 8.1.2 in paragraph 7, the 2nd sentence “without operating handle”.*151 *Delete in 8.1.2 the 4th paragraph from the end of the subclause “Provisionally, in certain countries*
152 *down-closing movement is allowed.”*153 *Replace in 8.1.5.2 the beginning of the subclause above Table 4 with the following:*154 **“8.1.5.2** Circuit breakers shall be provided with terminals which shall allow the connection of copper
155 conductors having nominal cross-sectional areas as shown in Table 4;

156 NOTE 1 Examples of possible designs of screw-type terminals are given in Annex D.

157 Compliance is checked by inspection, by measurement and by fitting, in turn, one conductor of the smallest
158 and one of the largest cross-sectional area as specified.”