SLOVENSKI STANDARD
SIST EN 50180-3:2016

01-januar-2016

Nadomešča:
SIST EN 50180:2010

Skoznjiki za napetosti nad 1 kV do 52 kV in tokove od 250 A do 3,15 kA za transformatorje, polnjene s tekočinami - 3. del: Zahteve za pritrditev skoznjikov

Bushings above 1 kV up to 52 kV and from 250 A to 3,15 kA for liquid filled transformers - Part 3: Requirements for bushing fixations

Durchführungen über 1 kV bis 52 kV und von 250 A bis 3,15 kA für flüssigkeitsgefüllte Transformatoren - Teil 3: Anforderungen an Einzelteile der Befestigung

Traversées de tensions supérieures à 1 kV jusqu'à 52 kV et de 250 A à 3,15 kA pour transformateurs immergés dans un liquide - Partie 3: Exigences relatives aux fixations de traversée

Ta slovenski standard je istoveten z: **EN 50180-3:2015**

ICS:

29.080.20	Skoznjiki	Bushings
29.180	Transformatorji. Dušilke	Transformers. Reactors

SIST EN 50180-3:2016 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50180-3

October 2015

ICS 29.080.20

English Version

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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 European Standard 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.

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CENELEC

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. EN 50180-3:2015 E

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European foreword

This document (EN 50180-3:2015) has been prepared by CLC/TC 36A "Insulated Bushings".

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)	2016-08-10
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2018-08-10

This document supplements EN 50180-1:2015 by design details for fastenings and their components with dimensions for bushings, which are of importance for utilities concerning compatibility.

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.

EN 50180 "*Bushings above 1 kV up to 52 kV and from 250 A to 3,15 kA for liquid filled transformers*" consists of the following parts:

– *Part 1: General requirements for bushings*;

– *Part 2: Requirement for bushing components*;

– *Part 3: Requirements for bushing fixations*.

1 Scope

This European Standard should be considered in factual context with EN 50180-1 only. Constructional details for fastenings and their details are supplementing EN 50180-1. This information is of importance for utilities concerning compatibility.

For a better understanding of additional information some dimension from EN 50180-1 are repeated in this European Standard.

This European Standard was extended for fastenings of bushings for a highest voltage of 52 kV.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50180-1:2015, *Bushings above 1 kV up to 52 kV and from 250 A to 3,15 kA for liquid filled transformers — Part 1: General requirements for bushings*

EN 22768-1, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1)*

EN 22768-2, *General tolerances – Part 2: Geometrical tolerances for features without individual tolerance indications (ISO 2768-2)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 50180-1:2015 apply.

4 Dimensions and designations

Permissible deviations for tolerances without specified limits: EN 22768 (series).

4.1 Fixations for bushings

The fixation of the bushing is made with a flange ring and a defined number of clamping paws as illustrated in Figure 1.

Example: designation A

Dimension in mm

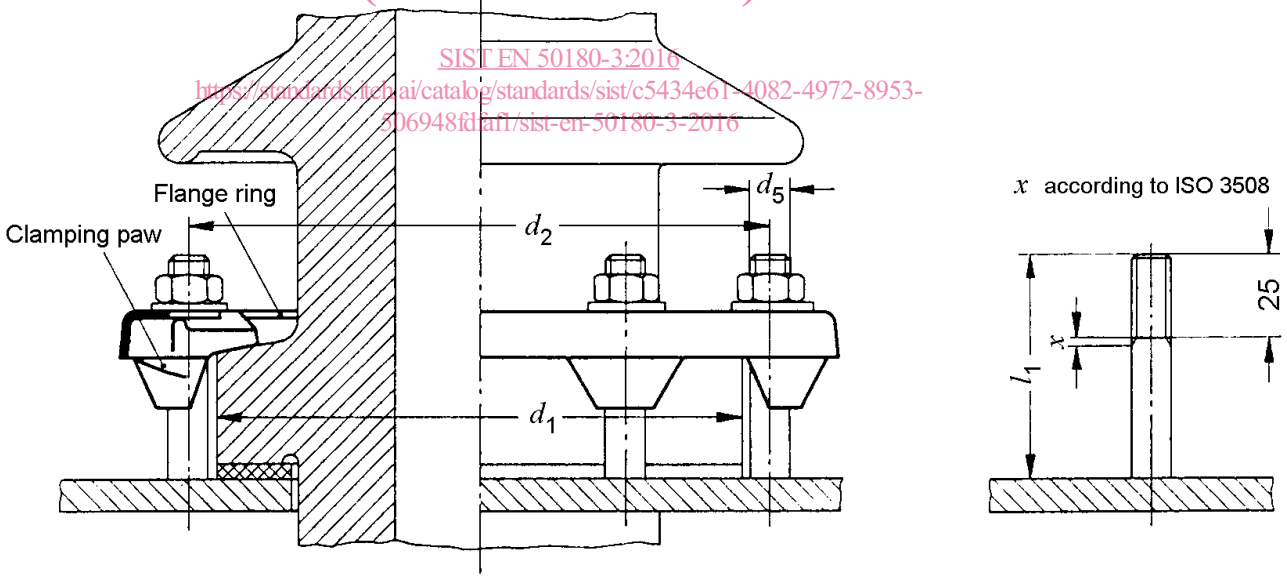

Figure 1 – Fixation with flange ring and clamping paws

Table 1 – Dimensions for fixation components, 12 kV to 52 kV

d_1	d_2	d_5	l_1	Flange ring	Clamping paw		Bushing
					Type	Number	
111_{-7}^{0}	123_{-1}^{+1}	M10	55	A	E	4	250 A
128_{-8}^{0}	140_{-1}^{+1}	M10	55	B	E	6	630 A
165_{-10}^{0}	180_{-2}^{+2}	M12	65	C	F	6	1 250 A
	185_{-2}^{+2}						
185_{-11}^{0} [a] 183_{-7}^{0} [b]	200_{-2}^{+2}	M12	65	D	F	6	2 000 A and 3 150 A
	205_{-2}^{+2}						

[a] Tolerances for porcelains of bushings U_m 12 kV to 36 kV.

[b] Tolerances for porcelains of bushings U_m 52 kV.

Remark: Diameter d_2 may deviate from EN 50180-1:2015 (Figures 4 and 5) for bushings 1 250 A to 3 150 A and U_m 12 kV to 36 kV and for bushings U_m 52 kV. To enable interchangeability the required diameter has to be agreed between purchaser and manufacturer.

4.2 Details for fixations

Designation: **Flange ring A**

Dimension in mm

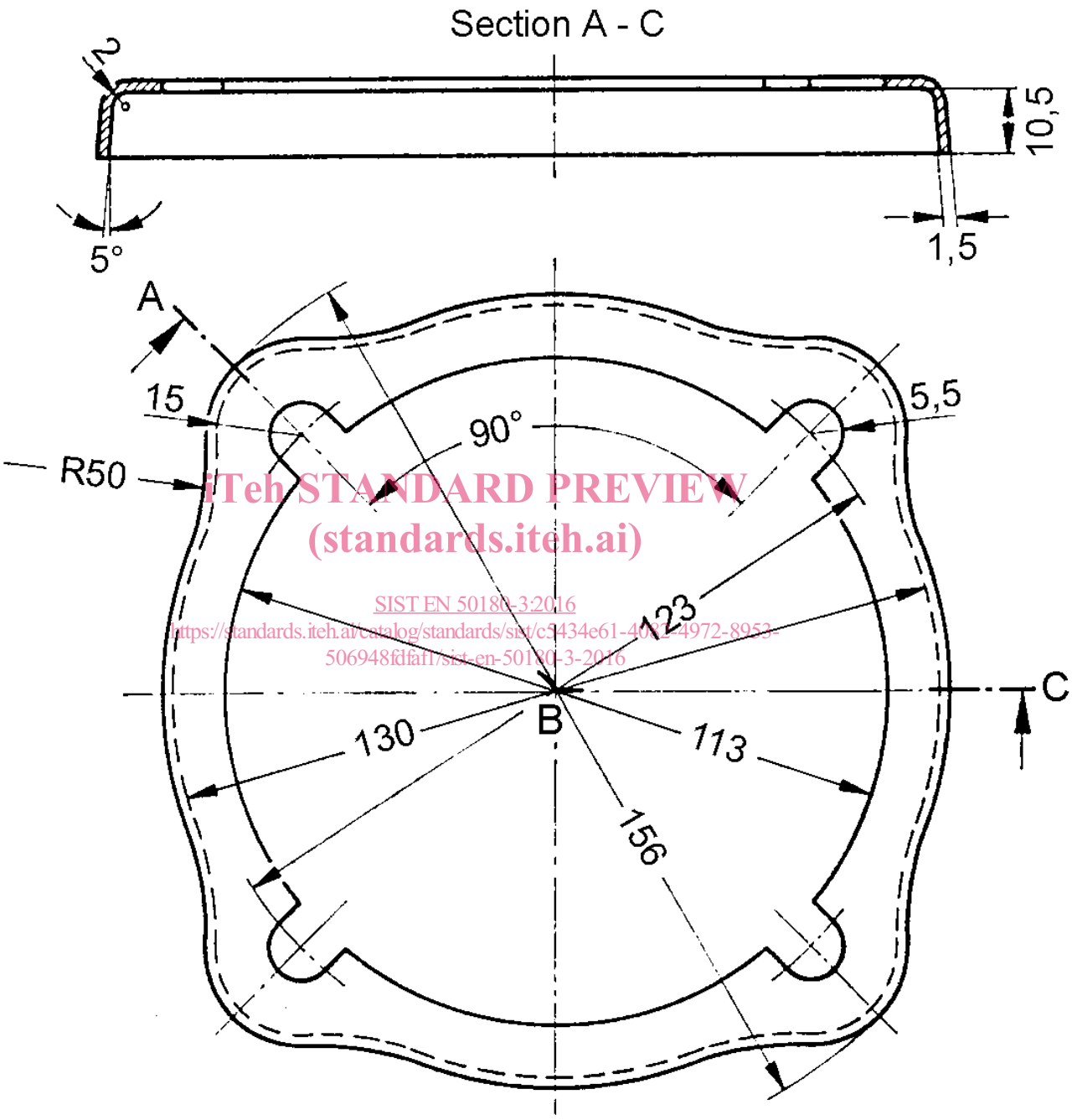

Figure 2 – Flange ring A for bushing 250 A