



NSAI
Standards

Irish Standard
I.S. EN 50180:2010

Bushings above 1 kV up to 52 kV and
from 250 A to 3,15 kA for liquid filled
transformers

I.S. EN 50180:2010

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<p><i>This document replaces:</i> EN 50180:1997</p>	<p><i>This document is based on:</i> EN 50180:2010 EN 50180:1997</p>	<p><i>Published:</i> 24 September, 2010 23 May, 1997</p>
<p>This document was published under the authority of the NSAI and comes into effect on: 30 September, 2010</p>		<p>ICS number: 29.080.20</p>
<p>NSAI 1 Swift Square, Northwood, Santry Dublin 9</p>	<p>T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie</p>	<p>Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie</p>
<p>Údarás um Chaighdeáin Náisiúnta na hÉireann</p>		

English version

**Bushings above 1 kV up to 52 kV and from 250 A to 3,15 kA
for liquid filled transformers**

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

Durchführungen über 1 kV bis 52 kV
und von 250 A bis 3,15 kA
für flüssigkeitsgefüllte Transformatoren

This European Standard was approved by CENELEC on 2010-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard 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 Central Secretariat 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 Central Secretariat 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 36A, Insulated bushings. It was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50180 on 2010-09-01.

This document supersedes EN 50180:1997.

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

The following dates are proposed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2011-09-01
 - latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2013-09-01
-

Contents

Introduction	5
1 Scope.....	5
2 Normative references	5
3 Definitions	5
4 Requirements	6
4.1 Application.....	6
4.2 Standard values of maximum voltage (U_m).....	6
4.3 Standard values of rated current (I_r).....	6
4.4 Compliance	6
4.5 Common dimensions	6
4.6 Detail dimensions and creepage distances of open type bushings	7
4.7 Detail dimensions of plug-in type bushings.....	19
Annex A (normative) Detail drawings of porcelain.....	26
Figures	
Figure 1 - Common dimensions for open and plug-in type bushings.....	7
Figure 2 - 250 A types 12 to 36 kV	8
Figure 3 - 630 A types 12 to 36 kV	10
Figure 4 – 1 250 A types 12 to 36 kV	12
Figure 5 – 2 000 A – 3 150 A types 12 to 36 kV	14
Figure 6 - 250 A – 630 A types 52 kV.....	16
Figure 7 – 1 250 A – 2 000 A – 3 150 A types 52 kV.....	18
Figure 8 - Outside cone plug-in type bushings	20
Figure 9 - Details of outside cone plug-in type bushings.....	22
Figure 10 - Inside cone plug-in type bushings.....	24
Figure 11 - Details of inside cone plug-in type bushings.....	25
Figure A.1 - Insulator (item N° 1), type 1	26
Figure A.3 - Insulator (Item n°1), type 3	26
Figure A.2 - Insulator (Item n°1), type 2	26
Figure A.4 - Insulator (Item n°1), type 4	27
Figure A.5 - Insulator (Item n°1), type 5	27
Figure A.6 - Insulator (Item n°1), type 6	28
Figure A.7 - Insulator (Item n°1), type 7	28
Figure A.8 - Insulator (Item n°1), type 8	29
Figure A.9 - Insulator (Item n°1), type 9	29
Calculated nominal distance AB of represented insulator 760 mm.....	29
Calculated nominal creepage distance AB of represented insulator 1155 mm.....	29
Figure A.10 - Insulator (Item n°1), type 21	30
Figure A.11 - Insulator (Item n°1), type 22	30
Figure A.12 - Insulator (Item n°1), type 23 & 23M.....	31
Figure A.13 - Insulator (Item n°1), type 24 & 24M.....	31
Figure A.14 - Insulator (Item n°1), type 25	32
Figure A.15 - Insulator (Item n°1), type 26	32
Figure A.16 - Insulator (Item n°1), type 27&27M.....	33
Figure A.17 - Insulator (Item n°1), type 28 & 28M.....	33
Figure A.18 - Insulator (Item n°1), type 29	34
Figure A.19 - Insulator (Item n°1), type 30	35
Figure A.20 - Insulator (Item n°1), type 31	35

Figure A.21 - Adjusting ring 37

Tables

Table 1 - Common dimensions for open and plug-in type bushings7

Table 2 - Dimensions, 250 A types 12 to 36 kV9

Table 3 - List of components, 250 A types 12 to 36 kV9

Table 4 - Dimensions, 630 A types 12 to 36 kV 10

Table 5 - List of components - 630 A types 12 to 36 kV..... 11

Table 6 - Dimensions, 1 250 A types 12 to 36 kV 13

Table 7 - List of components, 1 250 A types 12 to 36 kV 13

Table 8 - Dimensions, 2 000 A – 3 150 A types 12 to 36 kV 15

Table 9 - List of components 2 000 A – 3 150 A types 12 to 36 kV 15

Table 10 - Dimensions, 250 A - 630 A types 52 kV..... 17

Table 11 - List of components 250 A - 630 A types 52 kV 17

Table 12 - Dimensions, 1 250 A – 2 000 A – 3 150 A types 52 kV 19

Table 13 - List of components 1 250 A – 2000 A – 3 150 A types 52 kV 19

Table 14 - Interface dimensions 21

Table 15 - Bushing dimensions 23

Table 16 - Interface dimensions 24

Table 17 - Interface dimensions 25

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-