

<b>STN</b>	<b>Zásuvné priechodky na 72,5 kV s prúdom 630 A a 1 250 A pre elektrické zariadenia</b>	<b>STN EN 50673</b>  34 8154
------------	---	--

Plug-in type bushings for 72,5 kV with 630 A and 1 250 A for electrical equipment

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/19

Obsahuje: EN 50673:2019

**129678**

EUROPEAN STANDARD

**EN 50673**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2019

ICS 29.080.20

English Version

## Plug-in type bushings for 72,5 kV with 630 A and 1 250 A for electrical equipment

Traversées de type embrochable, 72,5 kV, pour transformateurs à diélectrique liquide et autres équipements

Einsteck-Durchführungen für 72,5 kV mit 630 A und 1 250 A für elektrische Betriebsmittel

This European Standard was approved by CENELEC on 2018-12-27. 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 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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**

<b>Contents</b>	<b>Page</b>
European foreword .....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	5
4 Rated values .....	6
4.1 Standard values of maximum voltage ( $U_m$ ) .....	6
4.2 Standard values of rated current ( $I_r$ ) .....	6
5 Requirements .....	6
5.1 Compliance .....	6
5.2 Mechanical forces .....	6
5.3 High voltage shielding electrode .....	6
5.4 Ground shielding electrode .....	7
5.5 Transformer drying process .....	7
6 Tests .....	7
6.1 General .....	7
6.2 Interchangeability of plug-in type bushings and separable connectors .....	7
7 Dimensions and Applications .....	8
7.1 Current- carrying connection interfaces .....	8
7.2 Plug-in type bushing mounting distance .....	8
7.3 Detail dimensions of plug-in type bushings .....	8
7.3.1 General .....	8
7.3.2 Outside cone plug-in type bushings .....	8
7.3.3 Inside cone plug-in type bushings .....	10
8 Requirements for plug-in type bushing fixations to apparatus .....	11
8.1 General .....	11
8.2 Outside cone plug-in type bushings .....	11
8.3 Inside cone plug-in type bushings .....	13
Bibliography .....	14

## European foreword

This document (EN 50673:2019) 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) 2019-12-27
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2021-12-27

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.

## Introduction

The object of this document is to specify dimensions, properties, requirements and tests to ensure interchangeability between plug-in type bushings and separable connectors, installed high voltage power cables with extruded insulation and connected to electrical equipment, like liquid filled transformers and gas insulated switchgear and controlgear. The application of such plug-in type bushings is limited to  $U_m = 72,5$  kV and rated currents of 630 A and 1 250 A.

## 1 Scope

This document is applicable to plug-in type bushings, according to EN 60137, 72,5 kV, rated currents from 630 A up to 1 250 A and frequencies from 15 Hz up to 60 Hz for single or three-phase arrangements in electrical equipment like liquid filled transformers or gas insulated switchgear and controlgear. It complements and amends, if necessary, the relevant EN standards.

The application of such plug-in type bushings is derived from EN 50180 and EN 50181 but applied for higher voltages with described deviations to EN 50299-2 and EN 62271-209.

This standard does not cover the connection assembly as described in EN 50299-2 and EN 62271-209.

EN 60137 and HD 632 series outline the qualification, type test, routine and sample test of plug-in type bushings according to this standard.

This document establishes essential dimensions and testing procedures, to ensure adequate mounting and interchangeability of mating plug-in separable connectors of equivalent ratings.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 60076 series, *Power transformers (IEC 60076 series)*

EN 60137, *Insulated bushings for alternating voltages above 1 000 V (IEC 60137)*

EN 62271 series, *High-voltage switchgear and controlgear (IEC 62271 series)*

EN 62271-209, *High-voltage switchgear and controlgear - Part 209: Cable connections for gas-insulated metal-enclosed switchgear for rated voltages above 52 kV - Fluid-filled and extruded insulation cables - Fluid-filled and dry-type cable-terminations (IEC 62271-209)*

HD 632 series, *Power cables with extruded insulation and their accessories for rated voltages above 36 kV ( $U_m = 42$  kV) up to 150 kV ( $U_m = 170$  kV)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**