SLOVENSKI STANDARD
SIST EN 50387:2004

01-september-2004

Nadomešča:
SIST HD 607 S1:1997

Zbiralčni skoznjiki za napetosti do 1 kV in od 1,25 kA do 5 kA za transformatorje, polnjene s tekočinami

Busbar bushings up to 1 kV and from 1,25 kA to 5 kA, for liquid filled transformers

Schienendurchführungen bis 1 kV und von 1,25 kA bis 5 kA für flüssigkeitsgefüllte Transformatoren

Traversées passe-barres jusqu'à 1 kV et de 1,25 kA à 5 kA, pour transformateurs à remplissage de liquide

Ta slovenski standard je istoveten z: **EN 50387:2002**

ICS:

29.080.20	Skoznjiki	Bushings
29.180	Transformatorji. Dušilke	Transformers. Reactors

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EUROPEAN STANDARD

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English version

Busbar bushings up to 1 kV and from 1,25 kA to 5 kA, for liquid filled transformers

Traversées passe-barres
jusqu'à 1 kV et de 1,25 kA à 5 kA,
pour transformateurs
à remplissage de liquide

Schienendurchführungen
bis 1 kV und von 1,25 kA bis 5 kA
für flüssigkeitsgefüllte Transformatoren

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CENELEC

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

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Foreword

The text of the Harmonization Document HD 607 S1, prepared by the Technical Committee CENELEC TC 36A, Insulated bushings, was approved by CENELEC on 1995-11-28.

This Harmonization Document was submitted to the formal vote for conversion into a European Standard and was approved by CENELEC as EN 50387 on 2002-10-01.

The following date was fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-10-01

Contents

Page

Introduction

The object of this standard is to specify the cut-out in the cover or tank wall and details of the insulator and its mounting to ensure interchangeability of busbar insulators for rated voltages up to 1 000 V and rated currents from 1 250 A up to 5 000 A for insulating liquid filled transformers.

1 Scope

This standard is applicable to moulded indoor busbar bushings for rated voltages up to 1 000 V, rated currents from 1 250 A up to 5 000 A and frequencies from 15 Hz up to 60 Hz for insulating liquid filled transformers.

NOTE These bushings are suitable for operation at 1,1 kV in compliance with HD 428.1 S1.

2 Definitions

For the purposes of this standard, the following definition applies:

2.1
moulded indoor busbar bushing
a bushing in which the insulation consists of moulded organic material with a single conductor

3 Requirements

3.1 Application

Busbar bushings covered by this standard shall be suitable for operation under the following conditions:

- with both ends fully immersed in an insulating liquid;
- one end fully or partially immersed in an insulating liquid and with the other end in air (indoor environment);
- both ends in air (indoor environment) for special applications.

3.2 Standard value of rated voltage (U_r)

The rated voltage U_r is 1 000 V (phase to phase).

3.3 Standard values of rated current (I_r)

The values of I_r shall be chosen from the standard values as given below, in amperes:

1 250 - 1 600 - 2 000 - 2 500 - 3 150 - 4 000 - 5 000

3.4 Minimum nominal creepage distance

The minimum nominal creepage distance for bushing ends intended for use in air is 55 mm.

3.5 Dielectric characteristics

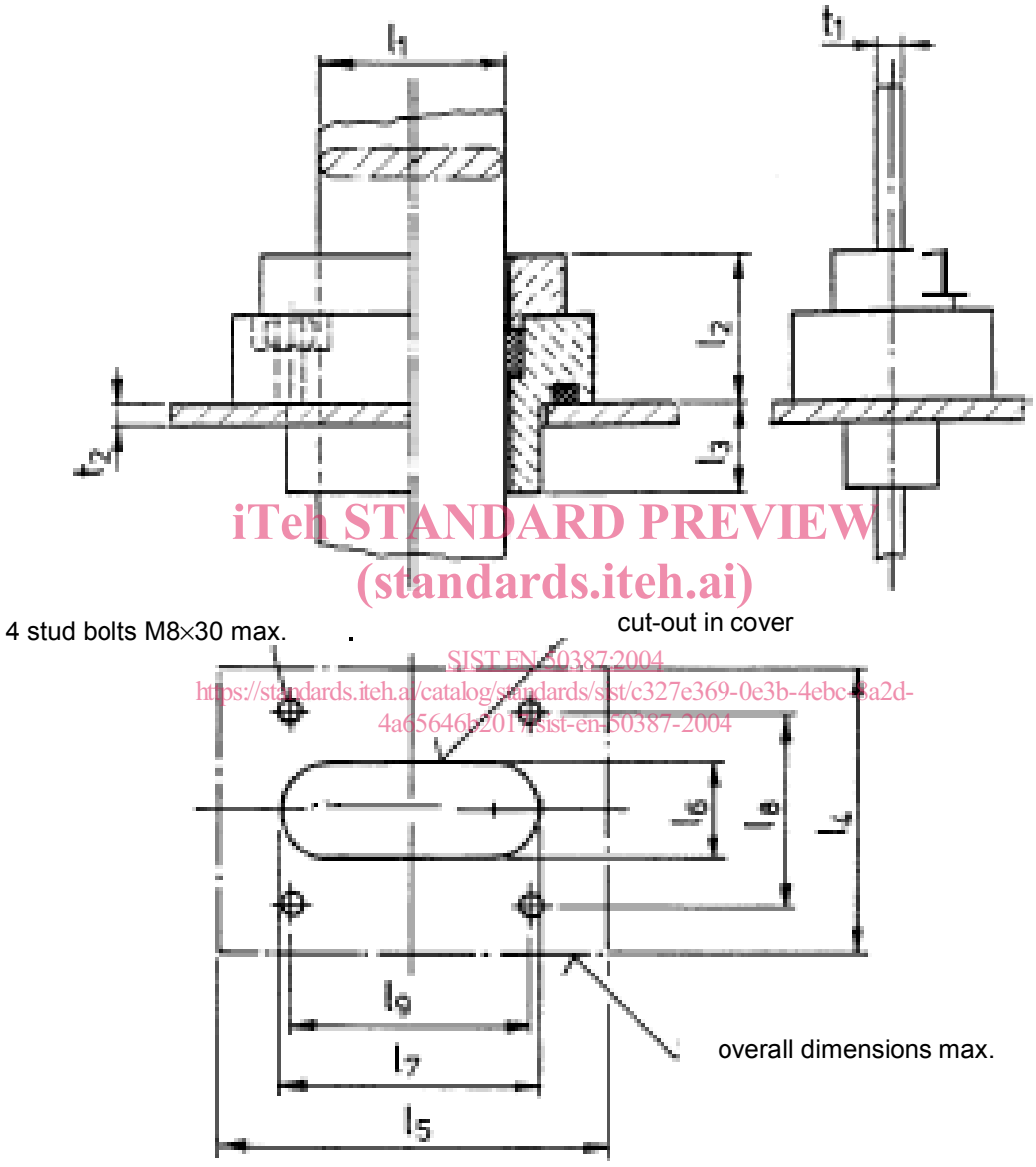
Power-frequency withstand voltage (60 s): dry 10 kV

Lightning impulse withstand voltage (1,2/50 µs): 20 kV

3.6 Dimensions

The dimensions shall be as specified in Figure 1 and Table 1.

The lengths of busbars and terminations are not covered by this standard.



The busbar shall be made of copper unless otherwise agreed between the purchaser and the manufacturer, in which case the value of the rated current I_r shall be amended.

Figure 1 – Moulded indoor busbar bushing

Table 1 – Standard dimensions

I_r	Busbar cross-section		l_2	l_3	t_2	l_4	l_5	l_6	l_7	l_8	l_9
(A)	l_1 (±0,05) (mm)	t_1 (±0,25) (mm)	min. (mm)	min. (mm)	max. (mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1 250	63	12	45	22	8	102	120	38	89	75	80
1 600	63	12	45	22	8	102	120	38	89	75	80
2 000	63	20	45	22	8	102	120	56	89	75	80
2 500	100	12	45	22	10	102	164	38	126	75	80
2 500[a]	63	35	45	22	10	102	120	61	89	75	80
3 150	120	12	45	32	10	145	190	58	158	110	110
4 000	120	20	45	32	10	145	190	58	158	110	110
5 000	120	20	45	32	10	145	190	58	158	110	110

[a] Alternative type.