



SLOVENSKI STANDARD

SIST EN 50216-4:2002

01-oktober-2002

Power transformer and reactor fittings - Part 4: Basic accessories (earthing terminal, drain and filling devices, thermometer pocket, wheel assembly)

Power transformer and reactor fittings -- Part 4: Basic accessories (earthing terminal, drain and filling devices, thermometer pocket, wheel assembly)

Zubehör für Transformatoren und Drosselspulen -- Teil 4: Kleine Zubehörteile (Erdungsanschlussstück, Ablass- und Füllrichtungen, Thermometertasche, Rollen)

Accessoires pour transformateurs de puissance et bobines d'inductance -- Partie 4: Accessoires de base (borne de terre, orifice de remplissage, vanne de vidange, doigt de gant, galets de roulement)

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ICS:

29.180 Transformatorji. Dušilke Transformers. Reactors

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EUROPEAN STANDARD

EN 50216-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2002

ICS 29.180

English version

Power transformer and reactor fittings
**Part 4: Basic accessories (earthing terminal,
drain and filling devices, thermometer pocket,
wheel assembly)**

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de puissance et bobines d'inductance
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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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 14, Power transformers.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50216-4 on 2001-07-01.

The following dates were 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) 2002-08-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-08-01

EN 50216-4 is to be read in conjunction with EN 50216-1.

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1 Scope

EN 50216-4 specifies basic accessories of transformers, such as

- thermometer pockets, to be used for liquid immersed transformers,
- earth terminals; to be used for liquid immersed and dry-type transformers,
- draining plugs, to be used for liquid immersed distribution transformers,
- filling openings, to be used for liquid immersed distribution transformers,
- wheel assembly, choice and distance between centres, to be used for liquid immersed and dry-type distribution transformers.

2 Normative references

Addition to EN 50216-1:

EN 60076	Series	Power transformers (IEC 60076 Series, mod.)
HD 428	Series	Three-phase oil-immersed distribution transformers 50 Hz, from 50 to 2 500 kVA with highest voltage for equipment not exceeding 36 kV
HD 464 S1+ amendments	1988	Dry-type transformers
HD 538	Series	Three-phase dry-type distribution transformers 50 Hz, from 100 to 2 500 kVA, with highest voltage for equipment not exceeding 36 kV

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3 Definitions <https://standards.iteh.ai/catalog/standards/sist/be477588-109e-4972-af3f-ac23529f721a/sist-en-50216-4-2002>

For the purpose of this standard, the following definitions apply:

3.1

thermometer pocket

a device, generally mounted on the transformer or reactor cover, intended to house a thermometer to measure the insulating liquid temperature (marking A)

3.2

earth terminal

a terminal placed on the dry-type transformer/reactor structure or on the transformer/reactor tank/enclosure, for connection to an earthing system (marking B)

3.3

draining plug

a device intended to sample or remove the insulating liquid from a transformer tank (marking C)

3.4

filling openings

a facility for filling a transformer tank with insulating liquid (marking D)

4 Thermometer pockets to be used for liquid immersed transformers

4.1 General

Clause 4 specifies the thermometer pockets for oil immersed transformers in order to ensure the interchangeability of the accessories to this pocket.

The location and the method of fitting on the cover are not specified by this standard.
 The transformer shall be in accordance with the EN 60076 and HD 428 series.
 The opening shall be protected against the ingress of moisture and foreign bodies.
 The pocket has to be filled with oil or other suitable medium to ensure transfer of heat.

4.2 Dimensions of thermometer pockets (dimensions in mm)

The bolt is not specified by this standard.

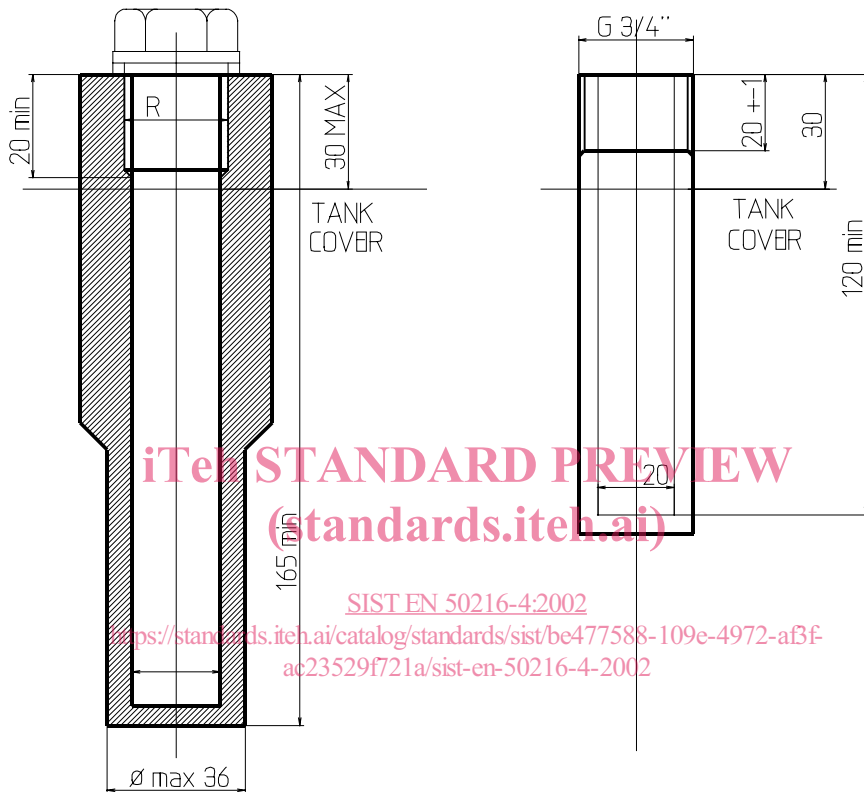


Figure 1 - Type A1 R=1"

Figure 2 - Type A2 R=3/4" G

5 Earth terminals to be used for liquid immersed and dry-type transformers

5.1 General

Clause 5 specifies the shape and dimensions of earth terminals for liquid immersed transformers, complying with the EN 60076 and HD 428 series and dry-type transformers with rated power up to 10 MVA, complying with HD 464 and, as far as applicable, with the HD 538 series.

The terminal shall ensure continuous electrical conductivity and shall be capable of withstanding 20 kA for 1 s.

Two types are available, according to the practice of different countries.

The transformer shall be in accordance with the EN 60076 and HD 428 series.

5.2 Dimensions of different earth terminals

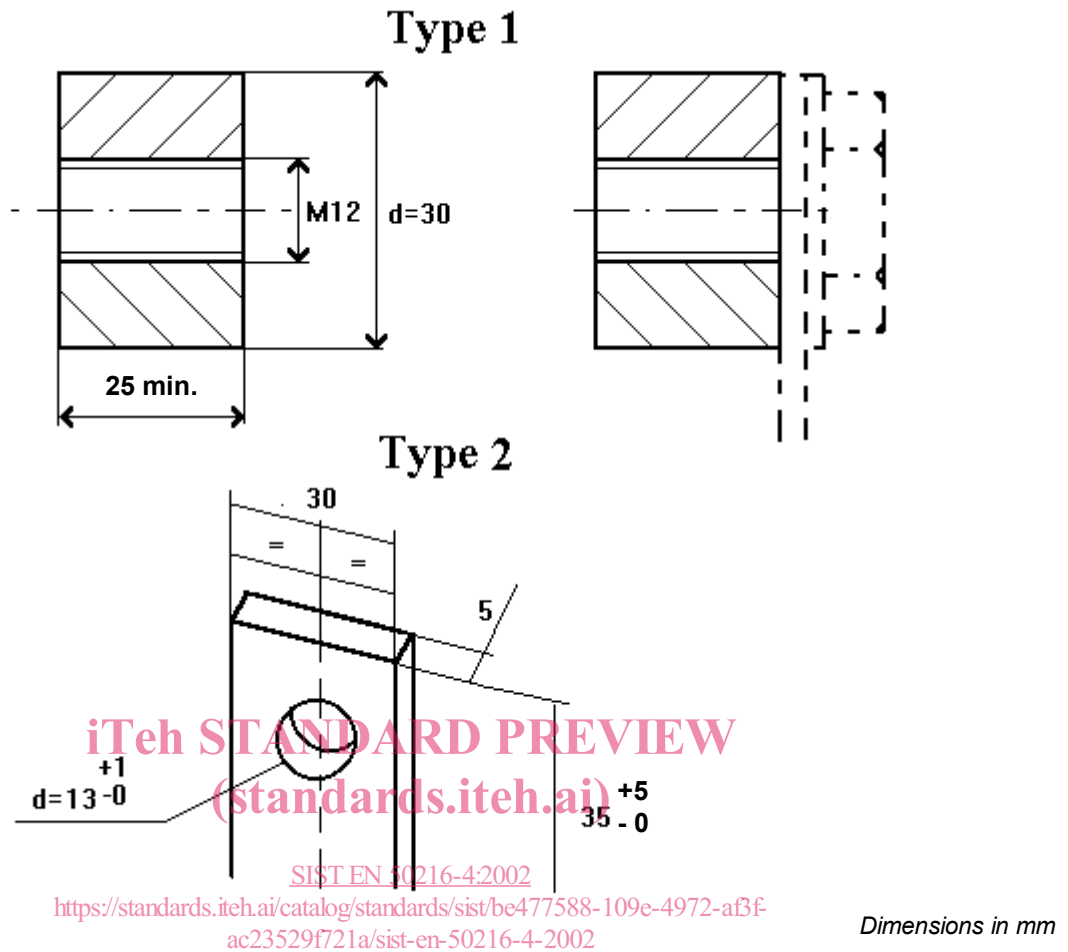


Figure 3 — Earth terminals type B1 (above) and B2 (below)

6.1 General

Clause 6 specifies the dimensions and shape of the draining plug with sampler for liquid immersed transformers with rated power from 50 kVA to 2 500 kVA, complying with the EN 60076 and HD 428 series.

To obtain a sample of liquid, the plug is turned and liquid escapes by the small groove in the boss.

These devices shall be leak-proof for hot oil at 115 °C, at $0,5 \times 10^5$ Pa.

The transformer shall be in accordance with the EN 60076 and HD 428 series.

Two types are available according to the practice of different countries.

6.2 Dimensions of different devices

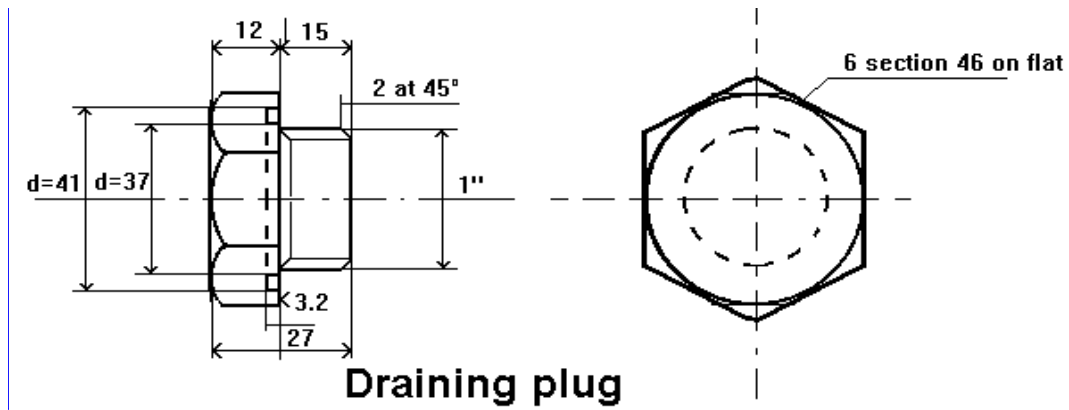


Figure 4 — Draining plug type C1 (bolted type)

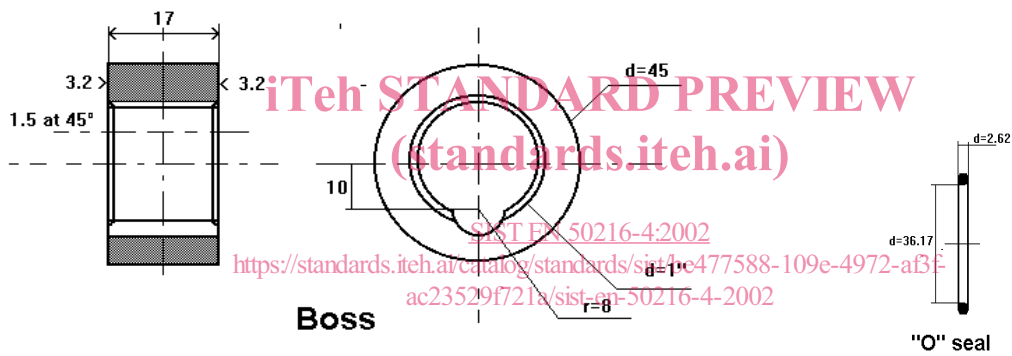


Figure 5 — Detail of Figure 4

Figure 6 — Detail of Figure 4