

# **SLOVENSKI STANDARD**

## **SIST EN 50347:2002**

**01-september-2002**

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### **General purpose three-phase induction motors having standard dimensions and outputs - Frame numbers 56 to 315 and flange numbers 65 to 740**

General purpose three-phase induction motors having standard dimensions and outputs  
- Frame numbers 56 to 315 and flange numbers 65 to 740

Drehstromasynchronmotoren für den Allgemeingebrauch mit standardisierten  
Abmessungen und Leistungen - Baugrößen 56 bis 315 und Flanschgrößen 65 bis 740

Moteurs à induction triphasés à usage général de dimensions et puissances normales -  
Désignation des carcasses entre 56 et 315 et des brides entre 65 et 740

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**Ta slovenski standard je istoveten z: EN 50347:2001**

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#### **ICS:**

29.160.30

Motorji

Motors

**SIST EN 50347:2002**

**en**

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EUROPEAN STANDARD

**EN 50347**

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2001

ICS 29.160.30

Supersedes HD 231 S1:1974

English version

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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.

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# 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**

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## Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 2, Rotating machinery.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50347 on 2001-03-01.

This European Standard supersedes HD 231 S1:1974.

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) | 2002-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn   | (dow) | 2004-03-01 |
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## 1 Scope

This EN 50347 covers general purpose standard dimensioned three-phase induction motors for 50 Hz with rated voltages not exceeding 690 V for industrial purposes having dimensions selected from IEC 60072-1 in the range :

Frame numbers - shaft-heights : 56 mm to 315 mm

Flange numbers - pitch circle diameter of flange : 65 mm to 740 mm

It gives tables of fixing dimensions, shaft extension dimensions and output powers.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 20273, *Fasteners - Clearance holes for bolts and screws*

EN 20286, *ISO system of limits and fits*

IEC 60034-7, *Rotating electrical machines – Part 7: Classification of types of constructions and mounting arrangements and terminal box position (IM Code)* (harmonized as EN 60034-7)

IEC 60072-1, *Dimensions and output series for rotating electrical machines - Part 1: Frame numbers 56 to 400 and flange numbers 55 to 1080*

<https://standards.iteh.ai/catalog/standards/sist/48b802b2-deb4-4148-aac8-b1a13419fe73/sist-en-50347-2002>

## 3 Letter symbols and dimensional sketches

The following symbols identify the dimensional features of a motor. Mandatory dimensions are marked with an asterisk.

### 3.1 Letter-symbols for dimensions

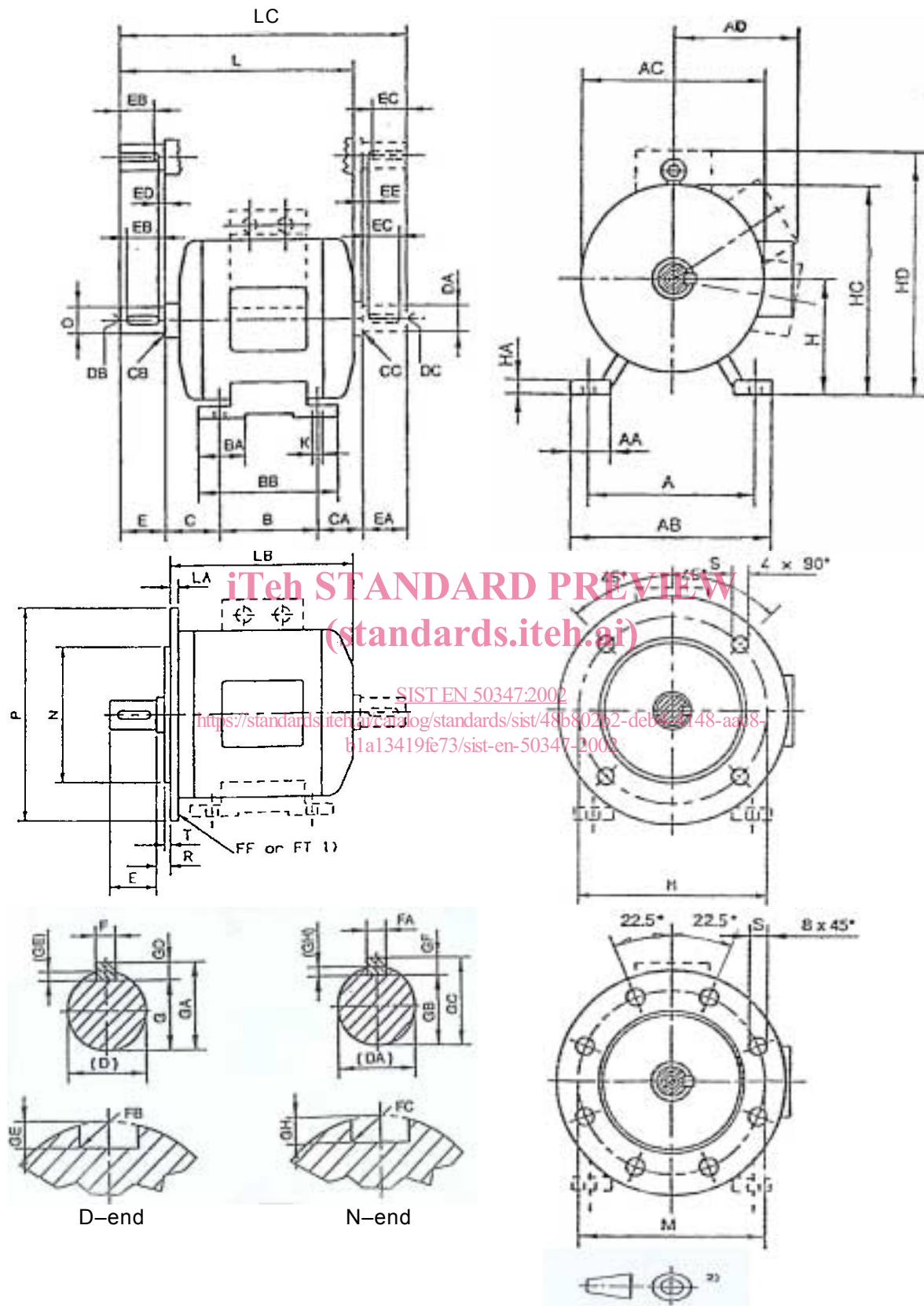
- \*A - distance between centre-lines of fixing holes (end view)
- AA - width of the end of the foot (end view)
- AB - over-all dimension across the feet (end view)
- AC - diameter of the machine
- AD - distance from the centre-line of the machine to extreme outside of the terminal box or other most salient part mounted on the side of the machine
- \*B - distance between the centre-lines of the fixing holes (side view)
- BA - length of the foot (side view)
- BB - over-all dimension across the feet (side view)
- \*C - distance from the shoulder on the shaft at D-end to the centre-line of the mounting holes in the nearest feet
- CA - distance from the shoulder on the shaft at N-end to the centre-line of the mounting holes in the nearest feet
- \*CB - rounding fillet at the shoulder on the shaft at D-end
- CC - rounding fillet at the shoulder on the shaft at N-end

- \*D - diameter of the shaft extension at D-end
- DA - diameter of the shaft extension at N-end
- DB - thread-size in the centre hole at D-end
- DC - thread-size in the centre hole at N-end
- \*E - length of the shaft extension from the shoulder at D-end
- EA - length of the shaft extension from the shoulder at N-end
- \*EB - length of the key at D-end
- EC - length of the key at N-end
- \*ED - distance from the shoulder on the shaft at D-end to the nearest end of the keyway
- EE - distance from the shoulder on the shaft at N-end to the nearest end of the keyway
- \*F - width of the keyway or key of the shaft extension at D-end
- FA - width of the keyway or key of the shaft extension at N-end
- \*FB - rounding fillet in the bottom of the keyway at D-end
- FC - rounding fillet in the bottom of the keyway at N-end
- G - distance from the bottom of the keyway to the opposite surface of the shaft extension at D-end
- \*GA - distance from the top of the key to the opposite surface of the shaft extension at D-end
- GB - distance from the bottom of the keyway to the opposite surface of the shaft extension at N-end
- GC - distance from the top of the key to the opposite surface of the shaft extension at N-end
- \*GD - thickness of the key of the shaft extension at D-end
- \*GE - depth of the keyway at the crown of the shaft extension at D-end
- GF - thickness of the key of the shaft extension at N-end
- GH - depth of the keyway at the crown of the shaft extension at N-end
- \*H - distance from the centre-line of the shaft to the bottom of the feet (basic dimension)
- H' - distance from the centre-line of the shaft to the mounting surface - e.g. the bottom of the feet in the feet-up version
- HA - thickness of the feet
- HC - distance from the top of the horizontal machine to the bottom of the feet
- HD - distance from the top of the lifting eye, the terminal box or other most salient part mounted on the top of the machine to the bottom of the feet
- HE - distance from the mounting surface to the lowest part of the machine in the feet-up version
- \*K - diameter of the holes or width of the slots in the feet of the machine
- L - overall length of the machine with a single shaft extension
- LA - thickness of the flange
- LB - distance from the mounting surface of the flange to the end of the machine
- LC - overall length of the machine when there is a shaft extension at N-end
- \*M - pitch circle diameter of the fixing holes
- \*N - diameter of the spigot
- \*P - outside diameter of the flange, or in the case of a non-circular outline twice the maximum radial dimension
- \*R - distance from the mounting surface of the flange to the shoulder on the shaft
- \*S - diameter of the fixing holes in the mounting flange or nominal diameter of thread
- \*T - depth of the spigot

NOTE 1 The above symbols include all letter symbols listed in IEC 60072-1 supplemented with additional letters necessary for this EN.

NOTE 2 The definition of D-end and N-end of a motor is given in IEC 60034-7.

### 3.2 Dimensional sketches



- 1) FF - access to back  
FT - no access to back
- 2) This ISO symbol indicates the projection method used



## 4 Letters for frame sizes and flange numbers

Letters for frame sizes

S - short length frame size  
M - middle length frame size  
L - long length frame size

Letters for flange numbers

FF - flange with free holes  
FT - flange with tapped holes

## 5 Location of the terminal box

### 5.1 Machines with feet

The terminal box on a motor shall be situated with its centre-line within a sector ranging from the top to 10° below the horizontal centre-line of the motor on the right-hand side, when looking at the D-end of the motor.

It is recommended that unless the terminal box is on the top, motors be so constructed that the terminal box may be located on the left-hand side viewed from the D-end by the manufacturer if requested by the user at the time when the motor is ordered.

NOTE Provision should preferably be made so as to enable the cable entry to the terminal box to be in any one of four directions at right angles.

### 5.2 Machines with flange only

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No recommendation.

[b1a13419fe73/sist-en-50347-2002](https://standards.iteh.ai/catalog/standards/sist/48b802b2-deb4-4148-aac8-b1a13419fe73/sist-en-50347-2002)

## 6 Position of holes in the mounting flange (when machine also has feet)

When a foot-mounted machine is also provided with a flange, the holes in the flange shall be placed in the angular position shown in the sketches of 3.2.