



SLOVENSKI STANDARD

SIST EN 60051-8:1995

01-avgust-1995

Neposredni kazalni analogni električni merilni instrumenti in njihov pribor – 8. del: Posebne zahteve za pribor (IEC 60051-8:1984)

Direct acting indicating analogue electrical measuring instruments and their accessories -
- Part 8: Special requirements for accessories

Direkt wirkende anzeigende elektrische Meßgeräte und ihr Zubehör - Meßgeräte mit
Skalenanzeige -- Teil 8: Spezielle Anforderungen für Zubehör

Appareils mesureurs électriques indicateurs analogiques à action directe et leurs
accessoires -- Partie 8: Prescriptions particulières pour les accessoires

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ICS:

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
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ENGLISH VERSION

DIRECT ACTING INDICATING ANALOGUE ELECTRICAL MEASURING INSTRUMENTS AND THEIR ACCESSORIES
PART 8: SPECIAL REQUIREMENTS FOR ACCESSORIES
(IEC 51-8 (1984) edition 4)

Appareils mesureurs électriques
indicateurs analogiques
à action directe
et leurs accessoires
Huitième partie: Prescriptions
particulières pour les accessoires
(CEI 51-8 (1984) édition 4)

Direkt wirkende anzeigende
elektrische Meßgeräte
und ihr Zubehör
Meßgeräte mit Skalenanzeige
Teil 8: Spezielle Anforderungen
für Zubehör
(IEC 51-8 (1984) Ausgabe 4)

This European Standard was ratified by CENELEC on 11 September 1989. CENELEC members are bound to comply with the requirements of the CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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CENELEC

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

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC
51-8**

Quatrième édition
Fourth edition
1984

**Appareils mesureurs électriques indicateurs
analogiques à action directe et leurs accessoires**

Huitième partie:

Prescriptions particulières pour les accessoires

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**Direct acting indicating analogue electrical
measuring instruments and their accessories**

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Part 8:

Special requirements for accessories

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIRECT ACTING INDICATING ANALOGUE ELECTRICAL MEASURING
INSTRUMENTS AND THEIR ACCESSORIES****Part 8: Special requirements for accessories**

FOREWORD

- 1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.
- 3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

PREFACE

This standard has been prepared by IEC Technical Committee No. 85: Measuring Equipment for Basic Electrical Quantities (former Sub-Committee 13B: Electrical Measuring Instruments).

This fourth edition replaces the third edition of IEC Publication 51.

This standard constitutes Part 8.

The general layout for the revised Publication 51 is as follows:

- Part 1: Definitions and General Requirements Common to all Parts.
- Part 2: Special Requirements for Ammeters and Voltmeters.
- Part 3: Special Requirements for Wattmeters and Varmeters.
- Part 4: Special Requirements for Frequency Meters.
- Part 5: Special Requirements for Phase Meters, Power Factor Meters and Synchrosopes.
- Part 6: Special Requirements for Ohmmeters (Impedance Meters) and Conductance Meters.
- Part 7: Special Requirements for Multi-function Instruments.
- Part 8: Special Requirements for Accessories.
- Part 9: Recommended Test Methods.

Parts 2 to 9 are not complete in themselves and shall be read in conjunction with Part 1.

All of these parts are arranged in the same format and a standard relationship between subject and clause number is maintained throughout. In addition, tables, figures and appendices add a suffix to the part number in order to differentiate the parts. This re-arrangement will assist the reader of IEC Publication 51 to distinguish information relating to the different types of instruments.

The text of this standard is based upon the following documents:

Six Months' Rule	Report on Voting
13B(CO)91	13B(CO)100

Further information can be found in the Report on Voting indicated in the table above.

DIRECT ACTING INDICATING ANALOGUE ELECTRICAL MEASURING INSTRUMENTS AND THEIR ACCESSORIES

Part 8: Special requirements for accessories

1. Scope

- 1.1 This sub-clause of Part 1 does not apply to accessories.
- 1.2 Part 8 of the standard applies to accessories as defined in Sub-clause 2.1.15 of Part 1.
- 1.3 This sub-clause of Part 1 does not apply to accessories.
- 1.4 to 1.8 See Part 1.

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2. Definitions

See Part 1.

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3. Description, classification and compliance

3.1 Description

Accessories shall be described:

3.1.1 According to their nature as:

- 3.1.1.1 Shunts as defined in Sub-clause 2.1.16 of Part 1.
- 3.1.1.2 Series resistors (impedances) as defined in Sub-clause 2.1.17 of Part 1.
- 3.1.1.3 Special-to-type accessories, for example reactor boxes for frequency meters.

3.1.2 According to their interchangeability as:

- 3.1.2.1 Interchangeable accessories as defined in Sub-clause 2.1.15.1 of Part 1.
- 3.1.2.2 Accessories of limited interchangeability as defined in Sub-clause 2.1.15.2 of Part 1.
- 3.1.2.3 Non-interchangeable accessories as defined in Sub-clause 2.1.15.3 of Part 1.

3.2 Classification

3.2.1 Interchangeable accessories and accessories of limited interchangeability shall be classified in one of the accuracy classes denoted by the following class indices:

0.02, 0.05, 0.1, 0.2, 0.3, 0.5, 1, 2*, 5*, 10*.

Note. — The class indices marked with an asterisk (*) are only for use with high-voltage series resistors and impedances.

3.2.2 A non-interchangeable accessory has no accuracy class of its own: the accuracy class of the associated instrument applies to the combination of the instrument and accessory.

3.3 Compliance with the requirements of this standard

See Part 1.

3.3.1 and 3.3.2 See Part 1.

3.3.3 Interchangeable accessories and accessories of limited interchangeability

3.3.3.1 The error shall not exceed the amount specified by Sub-clause 4.2 at all values of the measured quantity up to and including the rated value.

3.3.3.2 Shunts and series resistors shall be tested using direct current unless a frequency is stated.

3.3.3.3 Interchangeable shunts

When the current taken by the associated measuring instrument is smaller than the rated current multiplied by the class index of the shunt and divided by 300, the current taken by the associated measuring instrument may be neglected.

3.3.4 Accessories of limited interchangeability

3.3.4.1 The accessory is connected to an instrument of the associated type and the errors of the combination are determined.

3.3.4.2 The instrument alone is tested under the same conditions as used in the test of Sub-clause 3.3.4.1 and its errors are determined for the same indicated values that were obtained in that test.

3.3.4.3 The error of the accessory for each pair of indicated values is taken to be the difference obtained by subtracting the error determined in Sub-clause 3.3.4.2 from the error determined in Sub-clause 3.3.4.1, taking account of the signs of the errors (see Part 1, Sub-clause 2.7.1).

3.3.4.4 Instruments intended to be used with accessories of limited interchangeability may necessitate special values of certain circuit elements. Where this is necessary, the relevant information shall be given by the manufacturer and shall be complied with when carrying out the tests.

3.3.4.5 When an instrument cannot be tested without an accessory, the accuracy class applies to the combination only and the class index is marked on the instrument. The errors are determined in accordance with Sub-clause 3.3.4.1.

3.3.5 Non-interchangeable accessories

The accessory is tested in combination with its own instrument. There are no requirements relating to limits of error for either component alone and the class index relates to the combination.