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STN	**Potenciometre na použitie v elektronických zariadeniach Časť 4: Rámcová špecifikácia Jednootáčkové výkonové potenciometre**	**STN EN IEC 60393-4** 35 8195

Potentiometers for use in electronic equipment - Part 4: Sectional specification: Single-turn rotary power potentiometers

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. 02/24

Obsahuje: EN IEC 60393-4:2023, IEC 60393-4:2023

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60393-4

December 2023

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English Version

Potentiometers for use in electronic equipment - Part 4: Sectional specification: Single-turn rotary power potentiometers (IEC 60393-4:2023)

Potentiomètres utilisés dans les équipements électroniques - Partie 4: Spécification intermédiaire: Potentiomètres rotatifs monotours à forte dissipation (IEC 60393-4:2023)

Potentiometer zur Verwendung in Geräten der Elektronik - Teil 4: Rahmenspezifikation: Hochbelastbare Einfach-Drehpotentiometer (IEC 60393-4:2023)

This European Standard was approved by CENELEC on 2023-11-24. 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.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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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

European foreword

The text of document 40/3074/FDIS, future edition 3 of IEC 60393-4, prepared by IEC/TC 40 "Capacitors and resistors for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60393-4:2023.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2024-08-24
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2026-11-24

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.

A preceding document on the subject covered by this specification has been:

— CECC 41200:1978

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 60393-4:2023 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60068-1:2013 NOTE Approved as EN 60068-1:2014 (not modified)

IEC 80000 (series) NOTE Approved as EN IEC 80000 (series)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60062	2016	Marking codes for resistors and capacitors	EN 60062	2016
+ A1	2019		+ A1	2019
IEC 60063	-	Preferred number series for resistors and capacitors	EN 60063	-
IEC 60068-2-1	-	Environmental testing - Part 2-1: Tests - Test A: Cold	EN 60068-2-1	-
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - Test B: Dry heat	EN 60068-2-2	-
IEC 60393-1	2008	Potentiometers for use in electronic equipment - Part 1: Generic specification	EN 60393-1	2009
IEC 60915	-	Capacitors and resistors for use in electronic equipment - Preferred dimensions of shaft ends, bushes and for the mounting of single-hole, bush-mounted, shaft-operated electronic components	EN 60915	-
IEC 61193-2	2007	Quality assessment systems - Part 2: Selection and use of sampling plans for inspection of electronic components and packages	EN 61193-2	2007
IEC 61439-1	-	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	EN IEC 61439-1	-

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Edition 3.0 2023-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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IEC 60393-4:2023-10(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 60393-4 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment. It is an International Standard.

This third edition cancels and replaces the second edition published in 1992 and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) the document structure has been organized to follow new sectional specification structure decided in TC 40;
b) the information on the assessment level EZ and FZ (zero nonconforming) has been revised.

The text of this International Standard is based on the following documents:

Draft	Report on voting
40/3074/FDIS	40/3085/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 60393 series, published under the general title *Potentiometers for use in electronic equipment*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

POTENTIOMETERS FOR USE IN ELECTRONIC EQUIPMENT –

Part 4: Sectional specification: Single-turn rotary power potentiometers

1 Scope

This part of IEC 60393 is applicable to single-turn rotary power potentiometers wire-wound technology. Enamelled, cemented, moulded, enclosed.

This specification is applicable to rotary potentiometers with nominal dissipation in excess of 10 W, the resistive element of which consists of a wire or a wound tape. All the potentiometers specified by this specification are slider-driven without reduction. Their stroke less than 360° is limited by stops.

This document specifies preferred ratings and characteristics and selects from IEC 60393-1, appropriate quality assessment procedures, tests and measuring methods. It provides general performance requirements for this type of potentiometer.

This document gives the minimum performance requirements and test severities.

Annex A lists the letters and symbols used in the clauses of this document.

2 Normative reference

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.

IEC 60062:2016, *Marking codes for resistors and capacitors*
IEC 60062:2016/AMD1:2019

IEC 60063, *Preferred number series for resistors and capacitors*

IEC 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60393-1:2008, *Potentiometers for use in electronic equipment – Part 1: Generic specification*

IEC 60915, *Capacitors and resistors for use in electronic equipment – Preferred dimensions of shaft ends, bushes and for the mounting of single-hole, bush-mounted, shaft-operated electronic components*

IEC 61439-1, *Low-voltage switchgear and control gear assemblies – General rules*