IEC 60939-2

Edition 2.1 2023-08
CONSOLIDATED VERSION

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Passive filter units for electromagnetic interference suppression – Part 2: Sectional specification – Passive filter units for which safety tests are appropriate – Test methods and general requirements

Filtres passifs d'antiparasitage – Partie 2: Spécification intermédiaire – Filtres passifs pour lesquels des essais de sécurité sont appropriés – Méthodes d'essai et exigences générales

IEC 60939-2:2005-02+AMD1:2023-08 CSV(en-fr)

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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PASSIVE FILTER UNITS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION –

Part 2: Sectional specification – Passive filter units for which safety tests are appropriate – Test methods and general requirements

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This consolidated version of the official IEC Standard and its amendment has been prepared for user convenience.

IEC 60939-2 edition 2.1 contains the second edition (2005-02) [documents 40/1510/FDIS and 40/1537/RVD], its corrigendum (2005-11) and its amendment 1 (2023-08) [documents 40/3059/FDIS and 40/3072/RVD].

In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

International Standard IEC 60939-2 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This second edition constitutes a technical revision.

The major changes that have been made between the first and the second edition are :

– Capacitance and tan δ measurements, d.c. line resistance or voltage drop at rated current, impulse voltage, passive flammability, current overload, solvent resistance of marking, component solvent resistance and active flammability have been added to Clause 4, test and measurement procedures.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 60939 consists of the following parts, under the general title *Passive filter units for electromagnetic interference suppression*

Part 1: Generic specification

Part 2: Sectional specification: Test methods and general requirements

Part 2-1: Blank detail specification – Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (Assessment level D / DZ)

Part 2-2: Blank detail specification – Passive filter units for electromagnetic interference suppression – Filters for which safety tests are required (Safety tests only)

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PASSIVE FILTER UNITS FOR ELECTROMAGNETIC INTERFERENCE SUPPRESSION –

Part 2: Sectional specification – Passive filter units for which safety tests are appropriate – Test methods and general requirements

1 General

1.1 Scope

This Sectional specification applies to passive filter units for electromagnetic interference suppression which fall within the scope of the Generic Specification IEC 60939-1:2010.

The scope of this Sectional specification is restricted to passive filter units for which safety tests are appropriate. This implies that filters specified according to this Sectional specification will either be connected to mains supplies, when compliance with the mandatory tests of Table 3 is necessary, or used in other circuit positions where the equipment specification prescribes that some or all of these safety tests are required.

This Sectional specification applies to passive filter units which will be connected to an a.c. mains or other supply with a nominal voltage not exceeding 1 000 V a.c., with a nominal frequency not exceeding 400 Hz, or 1 000 V d.c.

1.2 Normative references

The following referenced documents are indispensable for the application 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 Components other than inductors and capacitors in the filter unit should fulfil requirements in the relevant IEC Standard.

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60062, *Marking codes for resistors and capacitors*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-17, *Basic environmental testing procedures – Part 2: Tests – Test Q: Sealing*

IEC 60085, *Thermal evaluation and classification of electrical insulation*

IEC 60335-1:2020, ~~*Safety of*~~ *Household and similar electrical appliances – Safety – Part 1: General requirements*

IEC 60384-14:2023, *Fixed capacitors for use in electronic equipment – Part 14: Sectional specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains*

IEC 60664 (all parts), *Insulation coordination for equipment within low-voltage systems*

IEC 60939-1:2010, *Passive filter units for electromagnetic interference suppression – Part 1: Generic specification*