IEC 60931-2

Edition 3.0 2025-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Shunt power capacitors of the non-self-healing type for AC systems having a rated voltage up to and including 1 000 V – Part 2: Ageing test and destruction test

Condensateurs shunt de puissance non autorégénérateurs pour réseaux à courant alternatif de tension assignée inférieure ou égale à 1 000 V – Partie 2: Essais de vieillissement et de destruction

ICS 29.120.99, 31.060.70

ISBN 978-2-8327-0495-0

IEC 60931-2:2025-06(en-fr)

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Shunt power capacitors of the non-self-healing type for AC systems having a rated voltage up to and including 1 000 V – Part 2: Ageing test and destruction test

FOREWORD

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IEC 60931-2 has been prepared by technical committee 33: Power capacitors and their applications. It is an International Standard.

This third edition cancels and replaces the second edition published in 1995. This edition constitutes a technical revision.

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

a) Deletion of self-healing test.

This International Standard is to be used in conjunction with IEC 60931-1:2025. The numbering of the clauses and subclauses in this document corresponds to that of IEC 60931-1:2025.

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

Draft	Report on voting
33/709/CDV	33/716/RVC

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 60931 series, published under the general title *Shunt power capacitors of the non-self-healing type for AC systems having a rated voltage up to and including 1 000 V*, 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.

1 Scope

This part of IEC 60931 applies to capacitors according to IEC 60931-1 and gives the requirements for the ageing test and destruction test for these capacitors.

2 Normative references

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 60931-1:2025, *Shunt power capacitors of the non-self-healing type for AC systems having a rated voltage up to and including 1 000 V – Part 1: General*

6 Tests

6.12 Ageing test

6.12.1 Conditioning

6.12.1.1 General

The temperature of the case during the first part (6.12.2 a)) and the third part (6.12.2 c)) of the ageing test shall be the highest mean temperature in 24 h (see IEC 60931-1:2025, Table 1) plus the difference between the measured temperature of the case and the cooling air temperature recorded at the end of the thermal stability test carried out on an identical unit. The second part (6.12.2 b)) of the ageing test should be performed at room temperature.

The two test methods indicated below are intended to ensure that the capacitor case temperature is maintained constant during the test.

The two methods are considered as being equivalent.

The units that are not sealed shall be tested in air, with forced circulation.

6.12.1.2 Testing in air with forced circulation

The capacitor unit is mounted in an enclosure in which heated air is circulated with an air velocity such that temperature variations at any point of the enclosure do not exceed ±2 °C. The sensitive element of the thermostat regulating the temperature in the capacitor enclosure shall be located on the surface of the capacitor container, three-quarters of the way up.

The capacitor shall be placed in a vertical position with the terminals upright.

When many capacitors are tested together, they shall be placed with sufficient clearance between them in order to have sufficient temperature uniformity.

After placing the capacitor in the unheated enclosure, the thermostat shall be set at a temperature equal to that indicated in 6.12.1.1.

Then, without energizing the capacitor, the enclosure shall be brought to thermal stability, which shall be deemed to have been reached when the container temperature of the capacitor has reached the stated temperature with a tolerance of ±2 °C.

The capacitor shall then be energized at the voltage stated in 6.12.2 a).