

(PREVIEW)

Indian Standard

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 — PERFORMANCE, TESTING AND RATING — SAFETY
REQUIREMENTS — GUIDE FOR INSTALLATION AND OPERATION

Section 1 : General

1 Scope and object

This part of IEC 931 is applicable to both capacitor units and capacitor banks intended to be used, particularly, for power-factor correction of a.c. power systems having a rated voltage up to and including 1000 V and frequencies 15 Hz to 60 Hz.

This part of IEC 931 also applies to capacitors intended for use in power filter circuits. Additional definitions, requirements, and tests for filter capacitors are given in annex A.

Additional requirements for capacitors protected by internal element fuses, as well as requirements for the same, are given in IEC 931-3.

The following capacitors are excluded from this part of IEC 931:

- Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1000 V (IEC 831).
- Shunt capacitors for a.c. power systems having a rated voltage above 1000 V (IEC 871).
- Capacitors for inductive heat-generating plants operating at frequencies between 40 Hz and 24 000 Hz (IEC 110).
- Series capacitors (IEC 143).
- Capacitors for motor applications and the like (IEC 252).
- Coupling capacitors and capacitor dividers (IEC 358).
- Capacitors to be used in power electronic circuits (IEC 1071).
- Small a.c. capacitors to be used for fluorescent and discharge lamps (IEC 1048 and IEC 1049).
- Capacitors for suppression of radio interference (under consideration).
- Capacitors intended to be used in various types of electrical equipment and thus considered as components.
- Capacitors intended for use with d.c. voltage superimposed on the a.c. voltage.

Accessories such as insulators, switches, instrument transformers, fuses, etc., are to be in accordance with the relevant IEC standards.

IS 13585 (Part 1) : 2012
IEC 60931-1 : 1996

- a) to formulate uniform rules regarding performances, testing and rating;
- b) to formulate specific safety rules;
- c) to provide a guide for installation and operation.

2 Normative references

The following normative documents contains provisions which, through reference in this text, constitute provisions of this part of IEC 931. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 931 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 50(436): 1990, *International Electrotechnical Vocabulary (IEV) – Chapter 436: Power capacitors*

IEC 60-1: 1989, *High voltage test techniques – Part 1: General definitions and test requirements*

IEC 110: 1973, *Recommendation for capacitors for inductive heat generating plants operating at frequencies between 40 and 24 000 Hz*

IEC 143: 1992, *Series capacitors for power systems*

IEC 252: 1993, *A.C. motor capacitors*

IEC 269-1: 1986, *Low-voltage fuses – Part 1: General requirements*

IEC 358: 1990, *Coupling capacitors and capacitor dividers*

IEC 831-1: 1996, *Shunt power capacitors of the self-healing type for a.c. systems having a rated voltage up to and including 1000 V – Part 1: General – Performance, testing and rating – Safety requirements – Guide for installation and operation*

IEC 871-1: 1987, *Shunt capacitors for a.c. power systems having a rated voltage above 1000 V* – Part 1: General – Performance, testing and rating – Safety requirements – Guide for installation and operation*

IEC 931-2: 1995, *Shunt power capacitors of the non-self-healing type for a.c. systems having a rated voltage up to and including 1000 V – Part 2: Ageing test and destruction test*

* According to Amendment No. 1 (1991).