

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Reed switches –
Part 1-1: Generic specification – Blank detail specification**

**Contacts à lames souples –
Partie 1-1: Spécification générique – Spécification particulière-cadre**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

REED SWITCHES –

Part 1-1: Generic specification – Blank detail specification

FOREWORD

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International Standard IEC 62246-1-1 has been prepared by IEC technical committee 94: All-or-nothing electrical relays.

This second edition cancels and replaces the first edition published in 2013. This edition constitutes a technical revision.

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

- a) update of the scope, references and terms and definitions;
- b) inclusion of guidelines for the preparation of blank detail and detail specifications;
- c) update of characteristics values including functional ratings for safety;
- d) update of the quality conformance inspection procedures;
- e) update of typical applications.

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

FDIS	Report on voting
94/426/FDIS	94/427/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

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

This document is to be used in conjunction with IEC 62246-1:2015.

A list of all parts in the IEC 62246 series, published under the general title *Reed switches*, 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

Reed switches which are in mass production and which are widely used, in practice could be classified by the following characteristics:

a) Size:

- Normal or standard reed switches with a tube more than 50 mm in length and more than 5 mm in diameter;
- Sub-miniature reed switches with a tube more than 20 mm and up to 50 mm in length and up to 5 mm in diameter;
- Miniature reed switches with a tube more than 10 mm and up to 20 mm in length and more than 2 mm and up to 5 mm in diameter;
- Micro-miniature reed switches with a tube up to 10 mm in length and up to 2 mm in diameter.

b) Type of switching of electric circuit:

- Closing or normally open – A type or NO;
- Opening or normally closed – B type or NC;
- Changeover – C type or CO.

c) Withstand voltage level:

- Low-voltage (up to 1 000 V);
- High-voltage (more than 1 000 V).

d) Switches power:

- Low-power (up to 60 W or 60 VA);
- Power (100 W to 1 000 W or 100 VA to 1 000 VA);
- High-power (more than 1 000 W or 1 000 VA).

e) Types of electric contacts:

- The tube is filled with dry air, gas mixture, vacuumized, or high pressurized.

Based on the general provisions of IEC 62246-1:2015, this document selects and specifies blank detail and detail specifications including safety contact ratings and test procedures for reed switches where enhanced requirements for the verification of quality assessment specification apply.

This document describes sampling and test schedules for qualification approval procedures, quality conformance inspection, formation of inspection lots and intervals between tests.

NOTE All type of reed switches exclude mercury reed switches.

REED SWITCHES –

Part 1-1: Generic specification – Blank detail specification

1 Scope

This part of IEC 62246 which is a blank detail specification defines requirements and tests for reed switches for use in general and industrial applications.

This document is intended to be used in conjunction with IEC 62246-1:2015 and specific products standards applying as switching elements.

This document selects from IEC 62246-1:2015 and from other sources the appropriate test procedures to be used in detail specifications derived from this specification.

Reed switch types are specified depending on characteristic values including functional ratings for safety and tests.

NOTE Mercury wetted reed switches are not covered by this document due to their possible environmental impact.

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 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-11:1981, *Basic environmental testing procedures – Part 2-11: Tests – Test Ka: Salt mist*

IEC 60068-2-14:2009, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-17:1994, *Environmental testing – Part 2-17: Tests – Test Q: Sealing*

IEC 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60068-2-21:2006, *Environmental testing – Part 2-21: Tests – Test U: Robustness of terminations and integral mounting devices*

IEC 60068-2-78:2012, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*

IEC 60127-2:2014, *Miniature fuses – Part 2: Cartridge fuse-links*

IEC 61373:2010, *Railway applications – Rolling stock equipment – Shock and vibration tests*

IEC 61810-2:2017, *Electromechanical elementary relays – Part 2: Reliability*