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STN	**Elektromechanické elementárne relé Časť 4: Jazýčkové relé Všeobecné a bezpečnostné požiadavky**	**STN EN IEC 61810-4** 33 4850

Electromechanical elementary relays - Part 4: General and safety requirements for reed relays

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. 03/21

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61810-4

December 2020

ICS 29.120.70

English Version

Electromechanical elementary relays - Part 4: General and safety requirements for reed relays (IEC 61810-4:2020)

Relais électromécaniques élémentaires - Partie 4: Exigences générales et de sécurité relatives aux relais à lames souples (IEC 61810-4:2020)

Elektromechanische Elementarrelais - Teil 4: Reedrelais - Allgemeine und Sicherheitsanforderungen (IEC 61810-4:2020)

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European foreword

The text of document 94/482/FDIS, future edition 1 of IEC 61810-4, prepared by IEC/TC 94 "All-or-nothing electrical relays" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61810-4:2020.

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) 2021-09-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-12-09

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

IEC 60068 (series)	NOTE	Harmonized as EN 60068 (series)
IEC 60068-2-6	NOTE	Harmonized as EN 60068-2-6
IEC 60068-2-27	NOTE	Harmonized as EN 60068-2-27
IEC 60529:1989	NOTE	Harmonized as EN 60529:1991 (not modified)
IEC 60529:1989/A1:1999	NOTE	Harmonized as EN 60529:1991/A1:2000 (not modified)
IEC 60529:1989/A2:2013	NOTE	Harmonized as EN 60529:1991/A2:2013 (not modified)
IEC 60721-3-3:2019	NOTE	Harmonized as EN IEC 60721-3-3:2019 (not modified)
IEC 60870-2-2:1996	NOTE	Harmonized as EN 60870-2-2:1996 (not modified)
IEC 60947-1:2020	NOTE	Harmonized as EN IEC 60947-1:—[1] (not modified)
IEC 61643-21:2000	NOTE	Harmonized as EN 61643-21:2001 (not modified)
IEC 61643-21:2000/A1:2008	NOTE	Harmonized as EN 61643-21:2001/A1:2009
IEC 61643-21:2000/A2:2012	NOTE	Harmonized as EN 61643-21:2001/A2:2013 (not modified)
IEC 61810 (series)	NOTE	Harmonized as EN 61810 (series)
ISO 4589-2:2017	NOTE	Harmonized as EN ISO 4589-2:2017 (not modified)
ISO 5659-2:2017	NOTE	Harmonized as EN ISO 5659-2:2017 (not modified)

[1] To be published. Stage at the time of publication: FprEN IEC 60947-1:2020.

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.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60068-2-17	1994	Basic environmental testing procedures - Part 2-17: Tests - Test Q: Sealing	EN 60068-2-17	1994
IEC 60077-1	2017	Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules	EN 60077-1	2017
IEC 60077-2	2017	Railway applications - Electric equipment for rolling stock - Part 2: Electrotechnical components - General rules	EN 60077-2	2017
IEC 60571	2012	Railway applications - Electronic equipment used on rolling stock	-	-
IEC 61373	2010	Railway applications - Rolling stock equipment - Shock and vibration tests	EN 61373	2010
IEC 61810-1	2015	Electromechanical elementary relays - Part 1: General and safety requirements	EN 61810-1	2015
+ A1	2019		+ A1	2020
IEC 61810-2	2017	Electromechanical elementary relays - Part 2: Reliability	EN 61810-2	2017
IEC 61810-2-1	2017	Electromechanical elementary relays - Part 2-1: Reliability - Procedure for the verification of B_{10} values	EN 61810-2-1	2017
IEC 61810-7	2006	Electromechanical elementary relays - Part 7: Test and measurement procedures	EN 61810-7	2006
IEC 61810-10	2019	Electromechanical elementary relays - Part 10: Additional functional aspects and safety requirements for high-capacity relays	EN IEC 61810-10	2019

EN IEC 61810-4:2020 (E)

Publication	Year	Title	EN/HD	Year
IEC 62246-1	2015	Reed switches - Part 1: Generic specification	EN 62246-1	2015
IEC 62246-1-1	2018	Reed switches - Part 1-1: Generic specification - Blank detail specification	EN IEC 62246-1-1	2018
IEC 62497-1	2010	Railway applications - Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment	-	-
+A1	2013		-	-
IEC 62498-1	2010	Railway applications - Environmental conditions for equipment - Part 1: Equipment on board rolling stock	-	-

IEC 61810-4

Edition 1.0 2020-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electromechanical elementary relays – Part 4: General and safety requirements for reed relays

Relais électromécaniques élémentaires – Partie 4: Exigences générales et de sécurité relatives aux relais à lames souples

IEC 61810-4:2020-11(en-fr)

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IEC 61810-4

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INTERNATIONAL STANDARD

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Electromechanical elementary relays – Part 4: General and safety requirements for reed relays

Relais électromécaniques élémentaires – Partie 4: Exigences générales et de sécurité relatives aux relais à lames souples

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTROMECHANICAL ELEMENTARY RELAYS –

Part 4: General and safety requirements for reed relays

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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International Standard IEC 61810-4 has been prepared by IEC technical committee 94: All-or-nothing electrical relays.

The text of this document is based on the following documents:

FDIS	Report on voting
94/482/FDIS	94/484/RVD

Full information on the voting for the approval of this document 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.

A list of all parts of IEC 61810 series, published under the general title *Electromechanical elementary relays*, can be found on the IEC website.

This document is to be read in conjunction with IEC 61810-1.

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

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

INTRODUCTION

Reed relays have been used in wide fields such as household and similar appliances, security control systems for appliances, measuring instruments, medical equipment, semiconductor and chip test equipment, information and communication equipment, power distribution facilities and transit vehicles, etc.

IEC 61810-4 provides technical deviations/additions to IEC 61810-1 in order to specify general and safety requirements for reed relays, as a result of component safety standards for relevant systems.

The reed switches are used as the switching contacts of the reed relays, all the requirements for reed contacts (reed switches) within the reed relay are read in conjunction with IEC 62246 (all parts).

ELECTROMECHANICAL ELEMENTARY RELAYS –

Part 4: General and safety requirements for reed relays

1 Scope

This part of IEC 61810 applies to electromechanical elementary relays with reed switches (reed contacts) incorporated into general control circuits. It defines the basic functional and safety requirements in all areas of electrical engineering or electronics in accordance with the parts of IEC 61810 series and IEC 62246 series.

This document defines technical deviations/additions to IEC 61810-1. It specifies type tests, routine tests, special tests and environmental tests to confirm the service conditions for applications.

NOTE The terms reed switch(es) and reed contact(s) are both in use for the description of the contact set in reed relays.

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 60068-2-17:1994, *Basic environmental testing procedures – Part 2-17: Tests – Test Q: Sealing*

IEC 60077-1:2017, *Railway applications – Electric equipment for rolling stock – Part 1: General service conditions and general rules*

IEC 60077-2:2017, *Railway applications – Electric equipment for rolling stock – Part 2: Electrotechnical components – General rules*

IEC 60571:2012, *Railway applications – Electric equipment used on rolling stock*

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

IEC 61810-1:2015, *Electromechanical elementary relays – Part 1: General and safety requirements*
IEC 61810-1:2015/AMD1:2019

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

IEC 61810-2-1:2017, *Electromechanical elementary relays – Part 2-1: Reliability – Procedure for the verification of B_{10} values*

IEC 61810-7:2006, *Electromechanical elementary relays – Part 7: Test and measurement procedures*

IEC 61810-10:2019, *Electromechanical elementary relays – Part 10: Additional functional aspects and safety requirements for high-capacity relays*

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