

# INTERNATIONAL STANDARD

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**Railway applications – Direct current signalling monostable relays –  
Part 2: Spring type relays**





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**Railway applications – Direct current signalling monostable relays –  
Part 2: Spring type relays**

INTERNATIONAL  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**RAILWAY APPLICATIONS – DIRECT CURRENT  
SIGNALLING MONOSTABLE RELAYS –**
**Part 2: Spring type relays****FOREWORD**

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International Standard IEC 62912-2 has been prepared by IEC technical committee 9: Electrical equipment and systems for railways.

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

FDIS	Report on voting
9/2513/FDIS	9/2532/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.

The existing IEC 62912 will be renumbered as IEC 62912-1 on the occasion of its next revision.

A list of all parts in the IEC 62912 series, published under the general title *Railway applications – Direct current signalling monostable relays*, 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

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- withdrawn,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

A bilingual version of this publication may be issued at a later date.

## INTRODUCTION

This document gives a set of generic and specific requirements for non-proved direct current signalling relays of the spring type.

This document introduces a set of recommendations and requirements for signalling relay characteristics, construction, magnetic system, contacts and insulation. Requirements are coordinated with current International Standards on all-or-nothing relays.

This document is in addition to IEC 62912:2015. IEC 62912-2 describes the non-proved spring type relay.

All signalling relays are expected to fulfil the requirements of IEC 62425:2007 and their characteristics are given by IEC 62425:2007, Annex C.7.22 which lists two types of physical properties to provide return forces for stability. Of these properties IEC 62912-2 considers only relays with a spring return force alone.

Meeting all the requirements in IEC 62912-2 is sufficient to ensure that further compliance to IEC 62425:2007 need not be evaluated.

IEC 62912-2 has been developed as a standard independent from IEC 62912:2015. It uses the same structure as IEC 62912:2015. IEC 62912-2 does not refer to the IEC 61810 series because the relays defined in it are exclusively used in the signalling system, unlike the electromagnetic type elementary relays defined by IEC 61810.

# RAILWAY APPLICATIONS – DIRECT CURRENT SIGNALLING MONOSTABLE RELAYS –

## Part 2: Spring type relays

### 1 Scope

This document gives requirements for direct current relays intended for safety-related applications in railway signalling installations.

This document is applicable to non-proved signalling monostable relays of the spring type, whose return force is generated by elasticity of spring.

The return force can be provided either from a separate spring and/or from the contact springs themselves.

NOTE “Non-proved” means the feature of relays fulfilling all the safety conditions without the aid of other relays or without control of operations in the circuit.

### 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 62425:2007, *Railway applications – Communication, signalling and processing systems – Safety related electronic systems for signalling*

IEC 62497-1, *Railway applications – Insulation coordination – Part 1: Basic requirements – Clearances and creepage distances for all electrical and electronic equipment*

IEC 62498-3:2010, *Railway applications – Environmental conditions for equipment – Part 3: Equipment for signalling and telecommunications*

IEC 62912:2015, *Railways applications – Direct current signalling monostable relays of type N and type C*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1

##### **all-or-nothing relay**

electrical relay, which is intended to be energised by a quantity, the value of which is either within its operative range or effectively zero

Note 1 to entry: “All-or-nothing relays” include both “elementary relays” and “time relays”.

[SOURCE: IEC 60050-444:2002, 444-01-02]