

STN	Dráhové aplikácie. Signalizačné relé na jednosmerný prúd.	STN EN 50578 34 2690
------------	--	--

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. 01/14

Obsahuje: EN 50578:2013

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50578

June 2013

ICS 93.100

English version

**Railways applications -
Direct current signalling relays**

Applications ferroviaires -
Relais de signalisation à courant continu

Bahnanwendungen -
Gleichstrom-Signalrelais

This European Standard was approved by CENELEC on 2013-05-20. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Contents

Foreword	3
Introduction.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions.....	5
4 Classification.....	7
5 Essential requirements of the relays and their construction	8
5.1 Generic requirements for signalling relays	8
5.1.1 Forcibly guided (mechanically linked) contacts.....	8
5.1.2 Forcibly guided (mechanically linked) operation	8
5.2 Specific requirements	8
5.2.1 Relays of type N.....	8
5.2.2 Relays of type C.....	8
5.3 Mechanical construction of the signalling relays.....	9
5.3.1 Connecting devices.....	9
5.3.2 Materials	9
5.4 Environmental conditions.....	9
5.4.1 General	9
5.4.2 Vibrations and shocks.....	9
5.5 Magnetic system	9
5.5.1 General	9
5.5.2 Requirements for new relays	9
5.5.3 Functioning during service	10
5.6 Design of insulation	10
5.6.1 General	10
5.6.2 Overvoltage.....	10
5.6.3 Test voltage	11
5.6.4 Case of a supply circuit not connected to earth.....	11
5.6.5 Pollution	11
5.7 Contacts.....	11
5.7.1 Spacing	11
5.7.2 Break contact.....	11
5.7.3 Contact heating.....	11
5.7.4 Service life	11
5.7.5 Minimum distance apart of the relay contact elements.....	12
5.7.6 Contact force	12
5.7.7 Self-cleaning	12
5.7.8 Bounce.....	12
Bibliography.....	13

Foreword

This document (EN 50578:2013) has been prepared by SC 9XA, "Communication, signalling and processing systems", of Technical Committee CENELEC TC 9X, "Electrical and electronic applications for railways".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-05-20
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-05-20

This document is a transposition of the UIC leaflet 736, *Signalling relays*.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Introduction

This European Standard gives a set of generic and specific requirements for direct current signalling relays.

This European Standard introduces a set of recommendations and requirements for signalling relay characteristics, construction, magnetic system, contacts and insulation. Requirements are coordinated with present international standards on all-or-nothing relays.

1 Scope

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

This European Standard is applicable to monostable relays. However it can also be used as a guide for other relays such as with bistable relays.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50124-1, *Railway applications — Insulation coordination — Part 1: Basic requirements — Clearances and creepage distances for all electrical and electronic equipment*

EN 50125-3:2003, *Railway applications — Environmental conditions for equipment — Part 3: Equipment for signalling and telecommunications*

EN 60664-1, *Insulation coordination for equipment within low-voltage systems — Part 1: Principles, requirements and tests (IEC 60664-1)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN