
Niskonapetostne stikalne naprave – 5-7. del: Krmilne naprave in stikalni elementi – Zahteve za bližinske naprave z analognim izhodom (IEC 60947-5-7:2003)

Low-voltage switchgear and controlgear - Part 5-7: Control circuit devices and switching elements - Requirements for proximity devices with analogue output (IEC 60947-5-7:2003)

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EUROPEAN STANDARD

EN 60947-5-7

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2003

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Supersedes EN 50319:1999

English version

**Low-voltage switchgear and controlgear
Part 5-7: Control circuit devices and switching elements -
Requirements for proximity devices with analogue output
(IEC 60947-5-7:2003)**

Appareillage à basse tension
Partie 5-7: Appareils et éléments
de commutation pour circuits
de commande -
Prescriptions pour les détecteurs
de proximité à sortie analogique
(CEI 60947-5-7:2003)

Niederspannungsschaltgeräte
Teil 5-7: Steuergeräte und Schaltelemente -
Anforderungen an Näherungssensoren
mit Analogausgang
(IEC 60947-5-7:2003)

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This European Standard was approved by CENELEC on 2003-09-01. 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.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 17B/1277/FDIS, future edition 1 of IEC 60947-5-7, prepared by SC 17B, Low-voltage switchgear and controlgear, of IEC TC 17, Switchgear and controlgear, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60947-5-7 on 2003-09-01.

This standard should be used in conjunction with EN 60947-5-2:1998.

This European Standard supersedes EN 50319:1999.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2004-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2006-09-01

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annex ZA is normative and annex G is informative.

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 60947-5-7:2003 was approved by CENELEC as a European Standard without any modification.

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

IEC 60381-1	NOTE	Harmonized as HD 452.1 S1:1984 (not modified).
IEC 60770-1	NOTE	Harmonized as EN 60770-1:1999 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60947-5-2 (mod)	1997	Low-voltage switchgear and controlgear Part 5-2: Control circuit devices and switching elements - Proximity switches	EN 60947-5-2	1998
A1	1999		A1	1999

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CEI
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60947-5-7

Première édition
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Appareillage à basse tension –

Partie 5-7:

**Appareils et éléments de commutation
pour circuits de commande –**

**Prescriptions pour les détecteurs
de proximité à sortie analogique**
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Part 5-7:

**Control circuit devices and switching elements –
Requirements for proximity devices
with analogue output**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –**Part 5-7: Control circuit devices and switching elements –
Requirements for proximity devices
with analogue output**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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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- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60947-5-7 has been prepared by subcommittee 17B: Low-voltage switchgear and controlgear, of IEC technical committee 17: Switchgear and controlgear.

This standard should be used in conjunction with IEC 60947-5-2.

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

FDIS	Report on voting
17B/1277/FDIS	17B/1287/RVD

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

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

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

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

INTRODUCTION

This part of IEC 60947 modifies the relevant requirements of IEC 60947-5-2, dealing with the requirements for proximity switches with semiconductor switching elements, to make them applicable to proximity devices with analogue output.

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LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 5-7: Control circuit devices and switching elements – Requirements for proximity devices with analogue output

1 General

1.1 Scope and object

This part of IEC 60947 states the requirements for proximity devices with analogue output. They may consist of one or more parts.

The requirements of IEC 60947-5-2 (proximity switches) apply with the additions or modifications as stated in this standard. The clause numbering in this standard follows the clause numbering of IEC 60947-5-2, modified where necessary.

1.2 Normative references

The following referenced documents are indispensable for the application 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 60947-5-2:1997, *Low-voltage switchgear and controlgear – Part 5-2: Control circuit devices and switching elements – Proximity switches* 2003

Amendment 1 (1999)
<https://standards.iteh.ai/catalog/standards/sist/f83b2bde-761c-4dd2-918a-15b783b2c72b/sist-en-60947-5-7-2003>

2 Definitions

2.1 Basic definitions

2.1.2

proximity device with analogue output

device producing an output signal which varies continuously depending on the distance between the sensing face of the proximity device and its target object

2.1.3

lower distance

minimum stated distance above which the output signal varies continuously

2.1.4

upper distance

maximum stated distance below which the output signal varies continuously

2.1.5

distance range

range of distances between and including the lower and upper distances