SVENSK STANDARD SS-EN 60947-5-5

Fastställd	Utgåva	Sida	Ansvarig kommitté
1998-03-27	1	1 (1+17)	SEK TK 17B

Kopplingsapparater för högst 1000 V – Del 5-5: Manöverkretsapparater och kopplingselement – Elektriska nödstoppsanordningar med mekanisk låsning

Low-voltage switchgear and controlgear –
Part 5-5: Control circuit devices and switching elements –
Electrical emergency stop device with mechanical latching function

Som svensk standard gäller europastandarden EN 60947-5-5:1997. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60947-5-5:1997.

Nationellt förord

Europastandarden EN 60947-5-5:1997[*)]

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60947-5-5, First edition, 1997 - Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 60947-1, utgåva 2, 1998 och SS-EN 60947-5-1, utgåva 1, 1998.

[*)] EN 60947-5-5:1997 ikraftsattes 1998-03-27 som SS-EN 60947-5-5 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

ICS 29.130.20

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. *Telefax*: 08 - 444 14 30
E-post: sek@elstandard.se. *Internet*: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60947-5-5

December 1997

ICS 29.120.60

Descriptors: Control circuit device, emergency stop device, latching function

English version

Low-voltage switchgear and controlgear
Part 5-5: Control circuit devices and switching elements
Electrical emergency stop device with mechanical latching function
(IEC 60947-5-5:1997)

Appareillage à basse tension
Partie 5-5: Appareils et éléments de commutation pour circuits de commande - Appareil d'arrêt d'urgence électrique à accrochage mécanique
(CEI 60947-5-5:1997)

Niederspannungsschaltgeräte
Teil 5-5: Steuergeräte und Schaltelemente
Elektrisches NOT-AUS-Gerät mit mechanischer Verrastfunktion
(IEC 60947-5-5:1997)

This European Standard was approved by CENELEC on 1997-10-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

Ref. No. EN 60947-5-5:1997 E

Foreword

The text of document 17B/837/FDIS, future edition 1 of IEC 60947-5-5, 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 60947-5-5 on 1997-10-01.

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) 1998-08-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-08-01

This standard is to be used in conjunction with EN 60947-1:1997 and EN 60947-5-1:1997.

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 A is informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60947-5-5:1997 was approved by CENELEC as a European Standard without any modification.

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.

Publication	Year	Title	EN/HD	Year
IEC 60050(441)	1984	International Electrotechnical Vocabulary (IEV) Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60068-2-1	1990	Environmental testing Part 2: Tests - Tests A: Cold	EN 60068-2-1	1993
IEC 60068-2-2	1974	Part 2: Tests - Test B: Dry heat	EN 60068-2-2[1)]	1993
IEC 60068-2-6	1995	Part 2: Tests - Test Fc: Vibration (sinusoidal)	EN 60068-2-6[2)]	1995
IEC 60068-2-11	1981	Part 2: Tests - Test Ka: Salt mist	HD 323.2.11 S1	1988
IEC 60068-2-27	1987	Part 2: Tests - Test Ea and guidance: Shock	EN 60068-2-27	1993
IEC 60068-2-30	1980	Part 2: Tests - Test Db and guidance: Damp heat, cyclic (12 + 12 hour cycle)	HD 323.2.30 S3[3)]	1988
IEC 60073	1996	Basic and safety principles for man-machine interface, marking and identification Coding principles for indication devices and actuators	EN 60073	1996
IEC 60204-1 (mod)	1992	Safety of machinery - Electrical equipment of machines Part 1: General requirements	EN 60204-1[4)]	1992

1) EN 60068-2-2 includes supplement A:1976 to IEC 60068-2-2.

2) EN 60068-2-6 includes the corrigendum March 1995 to IEC 60068-2-6.

3) HD 323.2.30 S3 includes A1:1985 to IEC 60068-2-30.

4) EN 60204-1 is superseded by EN 60204-1:1997, which is based on IEC 60204-1:1997.

Publication	Year	Title	EN/HD	Year
IEC 60721-3-3	1994	Classification of environmental conditions Part 3: Classification of groups of environmental parameters and their severities Section 3: Stationary use at weather protected locations	EN 60721-3-3	1995
IEC 60947-1 (mod)	1996	Low-voltage switchgear and controlgear Part 1: General rules	EN 60947-1	1997
IEC 60947-5-1	1997	Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	EN 60947-5-1 + A11	1997 1997
IEC 61310-1	1995	Safety of machinery - Indication, marking and actuation Part 1: Requirements for visual, auditory and tactile signals	EN 61310-1	1995
ISO 3864	1984	Safety colours and safety signs	-	-
ISO 13850	1996	Safety of machinery - Emergency stop Principles for design	-	-

CONTENTS

INTRODUCTION

The present IEC 60947-5-5 deals specifically with electrical emergency stop devices with mechanical latching function and gives additional electrical and mechanical requirements to those given in the following International Standards:

– ISO 13850 giving requirements for the emergency stop function of a machine, whatever be the energy used;

– IEC 60204-1 giving additional requirements for an emergency stop function realized by the electrical equipment of a machine;

– IEC 60947-5-1 specifying electrical characteristics of electromechanical control circuit devices.

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR – Part 5-5: Control circuit devices and switching elements – Electrical emergency stop device with mechanical latching function

1 Scope

This section of IEC 60947-5 provides detailed specifications relating to the electrical and mechanical construction of emergency stop devices with mechanical latching function and to their testing.

This standard is applicable to electrical control circuit devices and switching elements which are used to provide an emergency stop signal. Such devices may be either provided with their own enclosure, or installed according to the manufacturer's instructions.

This standard does not apply to:

– emergency stop devices for non-electrical control circuit, for example hydraulic, pneumatic;

– emergency stop devices without mechanical latching function.

An emergency stop device may also be used to provide an emergency switching off function (see annex A).

2 Normative references

The following normative documents contain provisions, which through reference in this text, constitute provisions of this section of IEC 60947-5. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this section of IEC 60947-5 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60050(441):1984, *International Electrotechnical Vocabulary (IEV) – Chapter 441: Switchgear, controlgear, fuses*

IEC 60068-2-1:1990, *Environmental testing – Part 2: Tests – Test A: Cold*

IEC 60068-2-2:1974, *Environmental testing – Part 2: Tests – Test B: Dry heat*

IEC 60068-2-6:1995, *Environmental testing – Part 2: Tests – Test Fc: Vibration (sinusoidal)*

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

IEC 60068-2-27:1987, *Environmental testing – Part 2: Tests – Test Ea and guidance: Shock*

IEC 60068-2-30:1980, *Environmental testing – Part 2: Tests – Test Db and guidance: Damp heat, cyclic (12+12-hour cycle)*

IEC 60073:1996, *Basic and safety principles for man-machine interface, marking and identification – Coding principles for indicating devices and actuators*

IEC 60204-1:1992, *Electrical equipment of industrial machines – Part 1: General requirements*

IEC 60721-3-3:1994, *Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 3: Stationary use at weather protected location*

IEC 60947-1:1996*, Low-voltage switchgear and controlgear – Part 1: General rules*

IEC 60947-5-1:1997, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices*

IEC 61310-1:1995, *Safety of machinery – Indication, marking and actuation – Part 1: Requirements for visual, auditory and tactile signals*

ISO 3864:1984, *Safety colours and safety signs*

ISO 13850:1996, *Safety of machinery – Emergency stop – Principles for design*