

© Copyright SEK. Reproduction in any form without permission is prohibited.

Kraft-, styr-, tele- och datakablar – Brandegenskaper – Kablar för allmän användning i byggnadsverk där krav på egenskaper vid brand föreligger

Power, control and communication cables –

Cables for general applications in construction works subject to reaction to fire requirements

Som svensk standard gäller europastandarden EN 50575:2014. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50575:2014.

ICS 13.220.50; 29.060.20

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
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 mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar 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

English Version

Power, control and communication cables - Cables for general applications in construction works subject to reaction to fire requirements

Câbles d'énergie, de commande et de communication - Câbles pour applications générales dans les ouvrages de construction soumis aux exigences de réaction au feu

Starkstromkabel und -leitungen, Steuer- und Kommunikationskabel - Kabel und Leitungen für allgemeine Anwendungen in Bauwerken in Bezug auf die Anforderungen an das Brandverhalten

This European Standard was approved by CENELEC on 2014-08-11. 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.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	5
4 Product characteristics	5
4.1 Reaction to fire	5
4.2 Release of dangerous substances	5
5 Test methods for reaction to fire classes	6
6 Assessment and verification of constancy of performance - AVCP	6
6.1 General	6
6.2 Type testing	6
6.3 Factory production control (FPC)	7
7 Marking, labelling and packaging	12
7.1 Marking	12
7.2 Form of marked elements	13
7.3 Legibility of marking	13
Annex ZZ (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Regulation	14
ZZ.1 Scope and relevant characteristics	14
ZZ.2 Procedures for AVCP of power, control and communication cables	14
ZZ.2.1 Systems of AVCP	14
ZZ.2.2 Declaration of performance (DoP)	16
ZZ.3 CE marking and labelling	19
Bibliography	23
 Figure ZZ.1 – Example of CE marking information on the product label for products subject to AVCP system 1+	 20
Figure ZZ.2 – Example of CE marking information on the product label for products subject to AVCP system 3	21
Figure ZZ.3 – Example of CE marking information on the product label for products subject to AVCP system 4	22
 Table 1 – Test methods for reaction to fire classes	 6
Table ZZ.1 — Relevant clauses for power, control and communication cables to be used for the supply of electricity and communications	14
Table ZZ.2—Systems of AVCP	15
Table ZZ.3.1 — Assignment of AVCP tasks for the power, control and communication cables under system 1+	15
Table ZZ.3.2 — Assignment of AVCP tasks for the power, control and communication cables under system 3	16
Table ZZ.3.3 — Assignment of AVCP tasks for the power, control and communication cables under system 4	16

Foreword

This document (EN 50575:2014) has been jointly prepared by CLC/TC 20 "Electric cables", CLC/TC 46X "Communication cables" and its sub-committees and CLC/TC 86A "Optical fibres and optical fibre cables".

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) 2015-08-11
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-08-11

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.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Performance characteristics other than those covered by the standard may be subject to the provisions of other relevant directives and Regulations, for example the Low Voltage directive (2006/95/EC).

1 Scope

This European Standard specifies reaction to fire performance requirements, test and assessment methods for electric cables used for the supply of electricity and for control and communication purposes, which are intended for use in construction works and subject to performance requirements on reaction to fire.

The cables covered by this standard are intended to be used for the supply of electricity and communications in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Cables intended to be used for the supply of electricity, communication, and fire detection and alarm in buildings and other civil engineering works where it is essential to assure the continuity of power and/or signal supply of safety installations such as alarm, way guidance and fire fighting installations are not covered by this standard.

NOTE This European Standard does not replace the electrical, mechanical and environmental requirements that are essential to demonstrate compliance with other applicable cable standards/specifications.

This European Standard covers:

- power cables – insulated conductors and cables for use in, e.g. the supply of electricity;
- control and communication cables – wires, symmetric cables, and coaxial cables with metallic conductors for use in, e.g. telecommunication, data transmission, radio frequency, video communication and signalling and control equipment;
- optical fibre cables – for use in, e.g. telecommunication, data transmission, radio frequency, video communication and signalling and control equipment.

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 13501-6, *Fire classification of construction products and building elements — Part 6: Classification using data from reaction to fire tests on electric cables*

EN 50399, *Common test methods for cables under fire conditions — Heat release and smoke production measurement on cables during flame spread test — Test apparatus, procedures, results*

EN 60332-1-2, *Tests on electric and optical fibre cables under fire conditions — Part 1-2: Test for vertical flame propagation for a single insulated wire or cable — Procedure for 1 kW pre-mixed flame (IEC 60332-1-2)*

EN 60754-2, *Test on gases evolved during combustion of materials from cables — Part 2: Determination of acidity (by pH measurement) and conductivity (IEC 60754-2)*

EN 61034-2, *Measurement of smoke density of cables burning under defined conditions — Part 2: Test procedure and requirements (IEC 61034-2)*

EN ISO 1716, *Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value) (ISO 1716)*