SVENSK STANDARD SS-EN 61850-3

Fastställd	Utgåva	Sida	Ansvarig kommitté
2003-09-22	1	1 (1+18)	SEK TK 57

System och nät för kommunikation i stationer och ställverk – Del 3: Allmänna fordringar

Communication networks and systems in substations – Part 3: General requirements

Som svensk standard gäller europastandarden EN 61850-3:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61850-3:2002.

Nationellt förord

Europastandarden EN 61850-3:2002*)

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61850-3, First edition, 2002 - Communication networks and systems in substations - Part 3: General requirements**

utarbetad inom International Electrotechnical Commission, IEC.

*) EN 61850-3:2002 ikraftsattes 2003-09-22 som SS-EN 61850-3 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

ICS 33.200

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 **EN 61850-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM March 2002

ICS 33.200

English version

Communication networks and systems in substations
Part 3: General requirements
(IEC 61850-3:2002)

Réseaux et systèmes de communication dans les postes
Partie 3: Prescriptions générales
(CEI 61850-3:2002)

Kommunikationsnetze und –systeme in Stationen
Teil 3: Allgemeine Anforderungen
(IEC 61850-3:2002)

This European Standard was approved by CENELEC on 2002-03-01. 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, Malta, 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 61850-3:2002 E

SEK Svensk Elstandard

Foreword

The text of document 57/557/FDIS, future edition 1 of IEC 61850-3, prepared by IEC TC 57, Power system control and associated communications, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61850-3 on 2002-03-01.

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)	2002-12-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2005-03-01

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

_____

Endorsement notice

The text of the International Standard IEC 61850-3:2002 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 60654-4	1987	Operating conditions for industrial-process measurement and control equipment Part 4: Corrosive and erosive influences	EN 60654-4	1997
IEC 60694	1996	Common specifications for high-voltage switchgear and controlgear standards	EN 60694 + corr. May	1996 1999
IEC 60870-2-1	1995	Telecontrol equipment and systems Part 2: Operating conditions - Section 1: Power supply and electromagnetic compatibility	EN 60870-2-1	1996
IEC 60870-2-2	1996	Part 2: Operating conditions - Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences)	EN 60870-2-2	1996
IEC 60870-4	1990	Part 4: Performance requirements	HD 546.4 S1	1992
IEC 61000-4-3 (mod)	1995	Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	1996
IEC 61000-4-4	1995	Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	1995
IEC 61000-4-5	1995	Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	1995
IEC 61000-4-6	1996	Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	1996
IEC 61000-4-8	1993	Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	1993

Publication	Year	Title	EN/HD	Year
IEC 61000-4-10	1993	Part 4-10: Testing and measurement techniques - Damped oscillatory magnetic field immunity test	EN 61000-4-10	1993
IEC 61000-4-12	1995	Part 4-12: Testing and measurement techniques - Oscillatory waves immunity test	EN 61000-4-12	1995
IEC 61000-4-16	1998	Part 4-16: Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz	EN 61000-4-16	1998
IEC TS 61000-6-5	2001	Part 6-5: Generic standards - Immunity for power station and substation environments	-	-
CISPR 22 (mod)	1997	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55022 + corr. July	1998 2001
IEEE C37.90.2	1995	Withstand capability of relay systems to radiated electromagnetic interference from transceivers	-	-

CONTENTS

COMMUNICATION NETWORKS AND SYSTEMS IN SUBSTATIONS –

Part 3: General requirements

1 Scope and object

This part of IEC 61850 applies to substation automation systems (SAS). It defines the communication between intelligent electronic devices (IEDs) in the substation and the related system requirements.

The specifications of this part pertain to the general requirements of the communication network, with emphasis on the quality requirements. It also deals with guidelines for environmental conditions and auxiliary services, with recommendations on the relevance of specific requirements from other standards and specifications.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61850. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61850 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60654-4:1987, *Operating conditions for industrial-process measurement and control equipment – Part 4: Corrosive and erosive influences*

IEC 60694:1996, *Common specifications for high-voltage switchgear and controlgear standards*

IEC 60870-2-1:1995, *Telecontrol equipment and systems – Part 2: Operating conditions – Section 1: Power supply and electromagnetic compatibility*

IEC 60870-2-2:1996, *Telecontrol equipment and systems – Part 2: Operating conditions – Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences)*

IEC 60870-4:1990, *Telecontrol equipment and systems – Part 4: Performance requirements*

IEC 61000-4-3:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 3: Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 4: Electrical fast transient/burst immunity test.* Basic EMC Publication

IEC 61000-4-5:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 5: Surge immunity test*

IEC 61000-4-6:1996, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 6: Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-8:1993, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 8: Power frequency magnetic field immunity test*

IEC 61000-4-10:1993, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 10: Damped oscillatory magnetic field immunity test*

IEC 61000-4-12:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 12: Oscillatory waves immunity test*

IEC 61000-4-16:1998, *Electromagnetic compatibility (EMC) – Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz*

IEC TS 61000-6-5:2001, *Electromagnetic compatibility (EMC) – Part 6-5: Generic standards – Immunity for power station and substation environments*

CISPR 22:1997, *IEEE Standard for Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement*

IEEE C37.90.2:1995, *Withstand capability of relay systems to radiated electromagnetic interference from transceivers*