SVENSK STANDARD SS-EN 50065-2-2

Fastställd	Utgåva	Sida	Ingår i
2003-04-24	1	1 (1+16)	SEK Område 205A

Svenska Elektriska Kommissionen, SEK

Signalöverföring i lågspänningsinstallationer i frekvensområdet 3 kHz till 148,5 kHz – Del 2-2: Immunitetsfordringar på utrustning och system som utnyttjar frekvensområdet 95 kHz till 148,4 kHz, avsedda för användning i industrimiljö

Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz – Part 2-2: Immunity requirements for mains communications equipment and systems operating in the range of frequencies 95 kHz to 148,5 kHz and intended for use in industrial environments

Som svensk standard gäller europastandarden EN 50065-2-2:2003. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50065-2-2:2003.

ICS 33.040.30

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK, som också kan lämna upplysningar om **sakinnehållet** i standarden.
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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

Svenska Elektriska Kommissionen, SEK, 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.

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EUROPEAN STANDARD **EN 50065-2-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM January 2003

ICS 33.040.30

English version

Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz Part 2-2: Immunity requirements for mains communications equipment and systems operating in the range of frequencies 95 kHz to 148,5 kHz and intended for use in industrial environments

Transmission de signaux sur les réseaux électriques basse tension dans la bande de fréquences de 3 kHz à 148,5 kHz Partie 2-1: Exigences d'immunité pour les appareils et les systèmes de communication sur le réseau électrique dans la bande de fréquences de 95 kHz à 148,5 kHz et destinés à être utilisés dans un environnement industriel

Signalübertragung auf elektrischen Niederspannungsnetzen im Frequenzbereich 3 kHz bis 148,5 kHz Teil 2-2: Störfestigkeitsanforderungen an Netz-Datenübertragungsgeräte und -systeme die im Frequenzbereich 95 kHz bis 148,5 kHz betrieben werden und für den Gebrauch im Industriebereich bestimmt sind

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 50065-2-2:2003 E

Foreword

This European Standard was prepared by SC 205A, Mains communicating systems, of Technical Committee CENELEC TC 205, Home and Building Electronic Systems (HBES).

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50065-2-2 on 2001-12-04.

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) 2003-08-01

- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-08-01

This part of this standard defines limits and test methods for the immunity of mains communication equipment and systems (MCES) operating in the range of frequencies from 95 kHz to 148,5 kHz and intended for use in industrial environments. Immunity requirements for similar equipment intended for operation in residential, commercial and light industrial environments are given in Part 2-1 of this standard. Immunity requirements and tests applicable to Electricity Suppliers' equipment and systems operating in the band 3 kHz to 95 kHz are given in Part 2-3 of this standard.

These tests and limits represent essential electromagnetic compatibility and immunity requirements for the environment according to the scope. They may accordingly be applied to MCES according to the Scope of Part 2-3 if lower immunity requirements are sufficient for the considered MCES. Not all known disturbances have been included for testing purposes which have been limited to those disturbances known to be critical for the operation of such equipment including specific MCES disturbances such as conducted narrow band.

The immunity requirements have been selected to ensure an adequate level of immunity for MCES in industrial environments. The levels do not however cover extreme cases which may occur in any location but with an extremely low probability of occurrence.

NOTE This standard closely follows EN 50082-2, the generic immunity standard for the industrial environment, from which much of the material is taken. However the nature of MCES is such that the performance criteria given in clause 5 of this standard differ from those given in EN 50082-2, particularly regarding the recovery of equipment following a disturbance. For clarity and completeness all the affected sections of EN 50082-2 are therefore repeated in this part.

Annexes designated "normative" are part of the body of the standard.
In this standard, annex A is normative.

Contents

1 Scope

This standard applies to electrical equipment using signals in the frequency range 95 kHz to 148,5 kHz to transmit or receive information on low voltage electrical systems, in industrial environments. In the case of equipment which includes functions other than the transmission or reception of information on low voltage electrical supplies, this standard applies only to that part of the equipment intended for such transmission or reception of information. Other parts of the equipment shall comply with the immunity standard or standards relevant to the functions of those other parts. In the event of tests being specified in those other standards of a different severity and where the construction of the equipment is such that the functions cannot be tested separately, the higher severity shall apply to all affected functions.

The object of this standard is to limit mutual influence between mains communication equipment and systems (MCES) operating in different frequency bands as defined in EN 50065-1 and to contribute to ensuring electromagnetic compatibility in general. It specifies essential immunity requirements and test methods, including those tests which are to be performed during type-testing of MCES on low-voltage installations, for electromagnetic interference in general and more specific interference coming from other MCES. It therefore defines the immunity test requirements for apparatus in relation to continuous and transient disturbances, both conducted and radiated, and electrostatic discharges. Test requirements are specified for each port considered.

This standard gives limits which are applicable to products operating in industrial environments. The levels do not however cover extreme cases which may occur in any location but with a low probability of occurrence. In special cases situations will arise where the level of disturbances may exceed the levels specified in this standard e.g. where a hand-held transmitter is used in proximity to an apparatus. In these instances special mitigation measures may have to be employed.

It does not specify immunity between mains communication systems operating in the same band (as defined in EN 50065-1) or immunity to signals originating from power line carrier systems operating on high or medium voltage networks.

Safety considerations are not included in this standard.

2 Normative references

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).

EN 50065-1		Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz – Part 1: General requirements, frequency bands and electromagnetic disturbances
EN 50082-2		Electromagnetic compatibility – Generic immunity standard – Part 2: Industrial environment
EN 55022	1998	Information technology equipment – Radio disturbance characteristics - Limits and methods of measurement (CISPR 22:1997, mod)