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Elektromagnetisk kompatibilitet (EMC) – Produktfamiljstandard för elektronisk utrustning för eftermontering i fordon

*Electromagnetic compatibility (EMC) –
Product family standard for aftermarket electronic equipment in vehicles*

Som svensk standard gäller europastandarden EN 50498:2010. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50498:2010.

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

**Electromagnetic compatibility (EMC) -
Product family standard for aftermarket electronic equipment in vehicles**

Compatibilité électromagnétique (CEM) -
Norme de famille de produits
pour les équipements électroniques
destinés au marché des pièces
de rechange et accessoires
pour véhicules

Elektromagnetische Verträglichkeit
(EMV) -
Produktfamiliennorm für elektronische
Geräte die nachträglich in Fahrzeuge
eingebaut werden

This European Standard was approved by CENELEC on 2010-07-01. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This European Standard was prepared by Working Group 8 of the Technical Committee CENELEC TC 210, Electromagnetic compatibility (EMC).

It was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50498 on 2010-07-01.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

The following dates are proposed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2011-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2013-07-01

This European Standard has been prepared under Mandate M/359 given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive 2004/108/EC. See Annex ZZ.

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1 Scope and objective

This European Standard specifies limits and methods of measurement for disturbance emissions and immunity characteristics of aftermarket equipment (ESAs) which are referenced by Automotive EMC Directive 2004/104/EC, Annex I, 3.2.9, and which are not related to immunity-related functions of vehicles as defined in Automotive EMC Directive 2004/104/EC, Annex I, 2.1.12.

Any equipment (or part of an ESA) which has a primary function of radio transmission and/or reception according to the ITU Radio Regulations are excluded from the scope of this publication.

This European Standard covers the frequency range 9 kHz to 400 GHz. To date, it specifies limits and methods of measurement for conducted and radiated disturbances from ESAs in the frequency range 30 MHz to 1 GHz and immunity requirements for conducted transients. The assessment of an ESA needs to be performed only in the frequency ranges where limits are defined.

The emission requirements have been selected so as to ensure that disturbances generated by ESAs operating normally do not exceed a level that could prevent the vehicle or apparatus external to the vehicle from operating as intended. Fault conditions are not taken into account. Not all disturbance phenomena have been included for testing purposes in this standard but only those considered as relevant for the equipment covered by this standard.

As ESAs covered by this standard are not related to immunity-related function, only the following electromagnetic disturbance phenomena are evaluated:

- broadband and narrowband radiated electromagnetic disturbances;
- conducted transient disturbances;
- conducted transient immunity.

Accessories that are not connected directly to the vehicle harness, but only via a special interface are normally excluded from vehicular EMC requirements.

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.

ISO 7637-2:2004, *Road vehicles – Electrical disturbances from conduction and coupling – Part 2: Electrical transient conduction along supply lines only*

