BS EN 50083-8:2013

BSI Standards Publication

Cable networks for television signals, sound signals and interactive services -

Part 8: Electromagnetic compatibility for networks

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National foreword

This British Standard is the UK implementation of EN 50083-8:2013. It supersedes BS EN 50083-8:2002+A11:2008 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/100/4, Cable distribution equipment and systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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English version

Cable networks for television signals, sound signals and interactive services - Part 8: Electromagnetic compatibility for networks

Réseaux de distribution par câbles pour signaux de télévision, signaux de radiodiffusion sonore et services interactifs - Partie 8: Compatibilité électromagnétique des réseaux

Kabelnetze für Fernsehsignale, Tonsignale und interaktive Dienste - Teil 8: Elektromagnetische Verträglichkeit von Kabelnetzen

CENELEC

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

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Foreword

This document (EN 50083-8:2013) has been prepared by CLC/TC 209 "Cable networks for television signals, sound signals and interactive services".

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)	2014-11-08
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2016-11-08

This document supersedes EN 50083-8:2002 + A11:2008.

EN 50083-8:2013 includes the following significant technical changes with respect to EN 50083-8:2002 and EN 50083-8/A11:2008.

— EN 50083-8 with its methods of measurement and EMC performance requirements is explicitly dedicated to “under operating conditions (in situ)” to ensure the ongoing EMC integrity of cable networks.

— The harmonized standard EN 50529-2 is dedicated for the provision of presumption of conformance to the EMC Directive.

— The first intermediate frequency range (1st IF range) for satellite signal transmission was extended to cover now frequencies from 950 MHz up to 3 500 MHz.

— The method of measurement and the requirements for in-band immunity were extended taking into account the new EMC environment due to the allocation of broadband wireless services in the frequency band 790 MHz to 862 MHz. As a consequence, the limits of in-band immunity were specified for analogue and additionally for digital signals in this frequency range.

— The substitution method of measurement (power method) was deleted.

— EMC measurements below 30 MHz were deleted

— New Annex D “Measurement in other distances than the standard distance of 3 m”

— New Annex E “GPS based leakage detection system for cable networks”

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.

1 Scope

1.1 General

Standards of the EN 50083 and EN 60728 series deal with cable networks including equipment and associated methods of measurement for headend reception, processing and distribution of television and sound signals and for processing, interfacing and transmitting all kinds of data signals for interactive services using all applicable transmission media. These signals are typically transmitted in networks by frequency-multiplexing techniques.

This includes for instance

— regional and local broadband cable networks,

— extended satellite and terrestrial television distribution systems,

— individual satellite and terrestrial television receiving systems,

and all kinds of equipment, systems and installations used in such cable networks, distribution and receiving systems.

The extent of this standardization work is from the antennas and/or special signal source inputs to the headend or other interface points to the network up to the terminal input of the customer premises equipment.

The standardization work will consider coexistence with users of the RF spectrum in wired and wireless transmission systems.

The standardization of any user terminals (i.e. tuners, receivers, decoders, multimedia terminals etc.) as well as of any coaxial, balanced and optical cables and accessories thereof is excluded.

1.2 Specific scope of EN 50083-8

This European Standard applies to the radiation characteristics and immunity to electromagnetic disturbance of cable networks for television signals, sound signals and interactive services and covers the frequency range 0,15 MHz to 3,5 GHz. It should be noted that measurements below 30 MHz are not generally considered useful in the context of cable networks and are difficult to perform in practice.

Application of the harmonized standard EN 50529-2 provides presumption of conformance to the EMC Directive. Therefore, to fulfil the requirements of EN 50529-2, it is necessary to use cable network equipment that satisfies the requirements of EN 50083-2 regarding limits of radiation and of immunity to external fields.

This European Standard specifies methods of measurement and EMC performance requirements under operating conditions (in situ) to ensure the ongoing EMC integrity of cable networks.

Cable networks beyond the system outlets (e.g. the receiver lead, in simplest terms) which begin at the system outlet and end at the input to the subscriber's terminal equipment are not covered by the standard EN 50083-8. Requirements for the electromagnetic compatibility of receiver leads are laid down in EN 60966-2-4, EN 60966-2-5 and EN 60966-2-6.

Cable networks and a wide range of radio services have to coexist. These include for example the emergency services, safety of life, broadcasting, aeronautical, radio navigation services and also land mobile, amateur and cellular radio services. Frequency ranges of typical safety of life services are listed in Annex B. Additional protection for certain services may be required by national regulations.