

Standards Update

CENELEC

By David Hodges, Chair, SCTE Standards and Technical Committee

The EU commission clarifies new requirements for harmonised standards, and fibre optic systems hits a high with the quantity of new standards.

Another year has passed and our annual meetings of CENELEC TC 209 and IEC TC100/TA05 during November 2022 were again online, not face-to-face. In fact, BSI are encouraging us through EPL/100 only to have one face-to-face meeting per year. While this saves money and possibly the spread of Covid, online meetings lose that personal interaction and are not as constructive.

The year has been full of disappointments from the EU Commission as they have changed the rules on Harmonised standards. It is no longer acceptable for our standards to reference another standard unless that standard is already a Harmonised standard. Harmonised standards are very important to us in that complying to them gives a presumption of conformity to the directive to which they relate. For instance, our standard BS EN 60728-11 defines for our industry, the requirements of the Low Voltage Directive and standard BS EN 50083-2, the EMC directive.

I am working group convenor for WG1, EN 60728-11, despite the standard passing the CDV technical standard stage and any day now the FDIS final comment stage, it is unlikely the Commission will accept it for listing in the UJ.

This will result in the existing issue edition 4 remaining and the new part 5 will go on to become IEC 60728-11 ed 5 only, not harmonised.

I will then need to write the non-harmonised references out of the standard and resubmit the standard to the EU consultants. Reporting on the CENELEC working groups below I list them in working group order.

Acronyms used:

CD	Committee Draft
CDV	Committee Draft for Vote
CC	Compilation of Comments from the Vote
EMC	Electro-Magnetic Compatibility
EN	European Standards
FDIS	Final Draft International Standard
IEC	International Electrotechnical Commission
RED	Radio Equipment Directive
TR	Technical Report
WG	Working Group

WG1 (Safety) IEC 60728-11 ed5

After problems detected by IEC at editorial stage, the standard was returned to me for clarification with respect to the compilation of comments returned from the previous comment stage. After further checking, it was again returned to IEC for completion of the FDIS process.

WG2 (EMC and RED) EN50083-2:2012/PrA2:2019-06

Due to the effects of the Harmonised rule above, work on this standard has stalled. It is hoped that progress will be made later this year.

This has also held up the work on EN50083-8 which will follow the successful revision of part 2.

The work on ETSI EN 303 354, which includes EMC tests, is also held up at the moment.

WG3 (Coaxial equipment) IEC 60728-103 ed1

The work on this Standard continues, based on IEC 60728-3 with digitally modulated signals only.

The DOCSIS work continues, the intention being to adapt IEC 60728-3 to DOCSIS 4.0. The draft document has been prepared and will be submitted through IEC.

IEC TR 60728-103-1 will, when completed, update/replace the current technical report.

Unfortunately, technical report IEC TR 60728-3-2 (Ed. 1, 2016-10): Method of measurement of 5th order non-linearity for active electronic equipment using five carriers did not receive sufficient votes at CVD stage to continue into a standard, much to the disappointment of the Italian authors. This leaves a missing digital measurement for satellite and terrestrial amplifiers.

WG5 (Optical systems and equipment)

It can be seen from the status table below that the ongoing work in fibre optics (coloured yellow) is considerable.

IEC 60728-106 ed1. Optical equipment for systems loaded with digital channels only is at CDV and prEN approved.

IEC 60728-113 ed2. Optical Systems for broadcast signal transmissions loaded with digital channels only is at CDV and prEN approved.

IEC 60728-114: Optical Transmission Systems using RFoG technology is awaiting CDV.

IEC 60728-115 ed1. In-Building Optical Systems for broadcast signal transmissions has been completed and issued.

This working group considered it would soon be viable to broadcast Ultra-Hi-Definition (UHD) TV (including 4K, 8K video) signals over FTTH cable following the success over satellite.

A study of IPTV system for Optical Broadcast Service Part I: IPTV Examples and Applications has now been submitted as a draft Technical Report IEC TR 60728-201 ed1 and IEC TR 60728-201-1 ed1 IP Transmission Systems Technical Report.

WG7 (Systems)

Work on two new standards: - IEC60728-101-1 ed1. RF Cabling for Two-way Home Networks with All-digital Channels Load and IEC 60728-101-2 ed1. Performance Requirements for Signals Delivered at the System Outlet in Operation with All-digital Channels Load.

A meeting of this working group was held to consider the results of the CDV for EN 60728-101 parts 1 and 2 covering performance criteria for CATV, /MATV and SMATV systems including two-way.

WG8 (Satellite Systems and Equipment)

This Working Group has no outstanding items at this time.

In addition to the working groups, CENELEC TC209 and IEC TC100/TA05 have liaison agreements with a number of other groups and organisations and among them are: -

- CLC/TC 46X and CLC/SC 46XA
- CLC/TC210
- CLC/TC 215
- ETSI TC Cable
- ETSI/TC ERM17

Currently, Volker Leisse, Carsten Engelke and Dave Hodges are supporting WG5 of this technical committee.

My thanks go to Thomas Wegmann, secretary of CENELEC TC209, for the table overleaf.

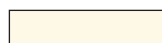
**Present status of International and European Standards and projects of EN 50083 and IEC / EN 60728 series
and other standards and projects under CLC/TC 209 and IEC/TC 100 TA5 responsibility
(Status: 2023-01-04)**

"European Standard EN 50083 series"	International Standard IEC 60728 series (Stability Date)	European Standard EN 60728 series	Title of European Standard "Cable networks for television signals, sound signals and interactive services;"
---	IEC 60728-1:2014 (2020-12)	EN 60728-1:2014	Part 1: System performance of forward paths
---	IEC 60728-1-1:2014 (2020-12)	EN 60728-1-1:2014	Part 1-1: RF cabling for two-way home networks
---	IEC 60728-1-2:2014 (2020-12)	EN 60728-1-2:2014	Part 1-2: Performance requirements for signals delivered at the system outlet in operation
---	IEC 60728-101:2016 (2018-12)	EN 60728-101:2017	Part 101: System performance of forward paths with all-digital channels load
---	IEC 60728-101-1	prEN IEC 60728-101-1	Part 101-2: RF Cabling for two-way home networks with all-digital channels load 100/3803/CDV & prEN approved
	IEC 60728-101-2	prEN IEC 60728-101-2	Part 101-2: Performance requirements for signals delivered at the system outlet in operation with all-digital channels load 100/3804/CDV & prEN approved
	IEC 60728-106	prEN IEC 60728-106	Part 106: Optical equipment for systems loaded with digital channels only 100/3757/CDV & prEN approved
---	IEC 60728-113:2018 (2023-12)	EN 60728-113:2018 prEN IEC 60728-113	Part 113: Optical systems for broadcast signal transmissions loaded with digital channels only 100/3760/CDV & prEN approved
	IEC 60728-114	prEN IEC 60728-114	Part 114: Optical transmission systems using RFOG technology 100/3766/CD, CDV awaited 2023-02
	IEC 60728-115 (2025-12)	EN IEC 60728-115	Part 115: In-Building Optical systems for broadcast signal transmissions
EN 50083-2:2012	IEC 60728-2:2018 (2023-12)	---	Part 2: Electromagnetic compatibility for equipment <i>Note: IEC aligned with EN of 2012</i>
EN 50083- 2:2012/ A1:2015	IEC 60728-2:2018 (2023-12)	---	Part 2: Electromagnetic compatibility for equipment; Amendment A1
CLC/TR 50083-2-1:2014	---	---	Electromagnetic compatibility measurements
CLC/TS 50083-2-3:2018	---		LTE (4G) Interference Mitigation Filters in the 800MHz band
EN 50083-2-4: 2019	---		Interference Mitigation Filters operating in the 700MHz and 800MHz bands for DTT reception
	IEC 60728-3:2017 (2020-20)	EN IEC 60728-3:2018	Part 3: Active wideband equipment for cable networks NOTE: also replaces EN 60728-3-1:2012 and CLC/TC 50083-3-3:2014

"European Standard EN 50083 series"	International Standard IEC 60728 series (Stability Date)	European Standard EN 60728 series	Title of European Standard "Cable networks for television signals, sound signals and interactive services;"
---	IEC/TR 60728-3- 2:2016-10 (2023-12)		Part 3-2 : Method of measurement of 5th order non-linearity for active electronic equipment using five carriers
---	IEC 60728-4:2007 (2023-12)	EN 60728-4:2008	Part 4: Passive wideband equipment for coaxial cable networks
---	IEC 60728-5:2015 (2023-12)	EN 60728-5:2016	Part 5: Headend equipment
---	IEC 60728-6:2011 (2023-12)	EN 60728-6:2011	Part 6: Optical equipment
CLC/ TR 50460:2005 Withdrawn	IEC/TR 60728-6-1: 2006 (2023-12)	---	System guidelines for analogue optical transmission systems
---	IEC 60728-7-1:2003 Stabilised until 2027	EN 60728-7-1:2005	Part 7-1: Hybrid Fibre Coax Outside Plant Status Monitoring - Physical (PHY) Layer Specification
	IEC 60728-7-1:2003/ A1:2015 Stabilised until 2027	EN 60728-7-1:2003/ A1:2015	
---	IEC 60728-7-2:2003 Stabilised until 2026	EN 60728-7-2:2005	Part 7-2: Hybrid Fibre Coax Outside Plant Status Monitoring - Media Access Control (MAC) Layer Specification
---	IEC 60728-7-3:2009 Edition 2 Stabilised until 2026	EN 60728-7-3:2009 Edition 2	Part 7-3: Hybrid Fibre Coax Outside Plant Status Monitoring - Power supply to Transponder Interface Bus (PSTIB) Specification
EN 50083-8:2013	IEC 60728-12:2017 (2020-12)	---	Part 8: Electromagnetic compatibility for networks
EN 50083-8			Maintenance decided
EN 50083-9:2002	IEC 60728-9:2000 (2012-12) IEC 60728-9-am1 (2012-12) Stabilised until 2026	---	Part 9: Interfaces for CATV/SMATV headends and similar professional equipment for DVB/ MPEG-2 transport streams
	IEC 60728-10:2014 (2023-12)	EN 60728-10:2014	Part 10: System performance for return paths
EN 60728- 11:2017/ A11:2018	IEC 60728-11:2016 (2023-12)	EN 60728-11:2017	Part 11: Safety requirements <i>Common Modifications for LVD</i>
	IEC 60728-11 Ed 5	EN 60728-11:2022	Part 11: Safety requirements <i>100/3866/FDIS until 2023-01-27</i>
---	IEC 60728-13:2010 (2020-12)	EN 60728-13:2010	Part 13: Optical systems for broadcast signal transmissions
---	IEC 60728-13-1:2017 (2020-12)	EN 60728-13-1:2017	Part 13-1: Bandwidth expansion for broadcast signal over FTTH system
---	IEC 60728-14:2014 (2019-12)	EN 60728-14:2014	Part 14: Optical transmission systems using RFOG technology

Other standards and projects under the responsibility of CLC/TC209 and/or IEC 100/TA5

	International Standard (Stability date)	European Standard/ Publication	Title of European Standard
---	---	EN 50494:2007	Satellite signal distribution over a single coaxial cable in single dwelling installations
---	---	EN 50585:2014	Transport of satellite delivered signals over IP networks
		EN 50607:2015	Satellite signal distribution over a single coaxial cable - second generation
		CLC/TR 50607-10:2015	Satellite signal distribution over a single coaxial cable - Part 10: Implementation guideline
---	IEC 61114-1:1999 (Stabilised until 2026)	EN 61114-1:1999	Receiving antennas for satellite broadcast transmissions in the 11/12GHz band - Part 1: Electrical measurements
---	IEC 61114-2:1996 (Stabilised until 2026)	EN 61114-2:1996	Methods of measurement on receiving antennas for satellite broadcast transmission in the 11/12GHz band - Part 2: Mechanical and environmental tests on individual and collective receiving antennas



Actual projects (new or revision)



Changes since Rev. 33 of this document, published in September 2021



Actual European version, published



Delayed projects

Contributions and comments on standards

Standards' work is often painstaking and time-consuming, but always worthwhile. It is always better to take part at the formulating stage, rather than discover horrific implications for your business once the standard is published!

The maintenance teams/working groups in IEC and CENELEC are always looking for technical experts; if you really cannot devote time for the actual meetings, then at least consider commenting on the interim drafts that they issue.

For UK-based organisations, the SCTE is happy to circulate drafts of standards issued for comment and voting and to cross-correlate input into BSI.

Dave Hodges has a growing list of engineers who have volunteered to provide comment on draft standards as they go through the creation stage. If you would be willing to provide commitments, please email dave@hodges.co.com



Please email Dave at dave@hodges.co.com if you would like to be included on the draft circulation list.