TECHNICAL REPORT

CLC/TR 50481

RAPPORT TECHNIQUE TECHNISCHER BERICHT

April 2009

ICS 33.100.10; 31.160

Supersedes R210-004:1999

English version

Recommendations on filters for shielded enclosures

This Technical Report was approved by CENELEC on 2009-03-20.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, 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

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

This Technical Report was prepared by the Technical Committee CENELEC TC 210, Electromagnetic compatibility (EMC).

The text of the draft was submitted to vote in accordance with the Internal Regulations, Part 2, Subclause 11.4.3.2 (simple majority) and was approved by CENELEC as CLC/TR 50481 on edes R21. 2009-03-20.

This document supersedes R210-004:1999.

Contents

1	Scop	e	4	
2	Normative references			
3		Definitions		
4	Gene	eneral recommendations on filters4		
5	Inser	Insertion loss		
	5.1	Insertion loss of filters		
6	5.2 Filter	Insertion loss values		
,	6.1	Choice of filter		
	6.2	Power line filters	6	
_	6.3	Signal line filters (including telecom lines)		
7		rical safetyllation of filters		
8 Fig	ures	nation of filters	1	
Fiaı	ıre 1 –	Filter insertion loss value a _e (typical performance for shielded enclosures)	. 5	
_		Filter installations schematic		

1 Scope

This document was prepared to give users general advices on filtering solutions adopted in shielded enclosures. It is mainly a collection of hints derived from practical experience.

This document is coordinated with EN 50147-1 and EN 50417-2.

The document covers the frequency range DC to 40 GHz. The range above 40 GHz and up to 400 GHz is under consideration.

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.

IEC 60050(161), International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility

CISPR 17:1981, Methods of measurement of the suppression characteristics of passive radio ents interference filters and suppression components