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GUIDE FOR THE APPLICATION OF THE EUROPEAN STANDARD EN 50160

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

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Foreword

This Technical Report has been prepared by BTTF 68-6 and finalized by CENELEC TC 8X/WG1 based on an application guide written by the former UNIPEDE Group of Experts NORMCOMP: “Electricity Product Characteristics and Electromagnetic Compatibility”[1].

The text of the draft was submitted to the formal vote and was approved by CENELEC as CLC/TR 50422 on 2003-11-01.

Contents

1 Background

1.1 General

This guide has been prepared by BTTF 68-6 and finalized by CENELEC TC 8X/WG1 based on an application guide written by the former UNIPEDE Group of Experts NORMCOMP: “Electricity Product Characteristics and Electromagnetic Compatibility”[1].

The aim of this guide is to provide some background information and explanation on the standard EN 50160 “Voltage characteristics of electricity supplied by public distribution systems” [2].

By its very nature, a standard has to be concise and cannot give a comprehensive background of the subject being dealt with. It was accordingly decided to prepare a guide providing additional information and clarification of the standard.

1.2 Background of the definition of supply voltage characteristics

From the very beginning of their association, the Member States of the European Communities decided to create a wide economic area without barriers to internal trade.

For this purpose a number of directives have been issued by the Commission of the European Community (EC), to remove the differences in the legislation of the Member States, which could affect the free exchange of goods and services.

One such directive is the Directive 85/374 on Product Liability [3]. This states in Article 2 that “product” includes electricity for the purpose of the directive. Consequently, it was considered necessary to define the essential characteristics of the electricity supply.

The task of preparing a standard, based on the UNIPEDE document DISNORM 12 [4], was assigned to CENELEC (European Committee for Electrotechnical Standardisation). The request specified the different aspects to be covered, which were exclusively related to the following characteristics of the supply voltage: **frequency, magnitude, waveform** and **symmetry** of the three-phase-voltages.

For this task CENELEC set up a new task force, BTTF 68-6, in which representatives of most of its member countries participated. EN 50160 was prepared by this task force, and was duly ratified by CENELEC.