



**NSAI**  
Standards

Irish Standard  
I.S. EN 50565-1:2014

# Electric cables - Guide to use for cables with a rated voltage not exceeding 450/750 V (U<sub>0</sub>/U) -- Part 1: General guidance

## I.S. EN 50565-1:2014

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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EUROPEAN STANDARD

**EN 50565-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2014

ICS 29.060.20

Supersedes HD 516 S2:1997 (partially) + A1:2003 (partially) + A2:2008 (partially)

English version

**Electric cables -  
Guide to use for cables with a rated voltage not exceeding 450/750 V  
( $U_0/U$ ) -  
Part 1: General guidance**

Câbles électriques -  
Guide d'emploi des câbles avec une  
tension assignée n'excédant pas 450/750  
V ( $U_0/U$ ) -  
Partie 1: Lignes directrices

Kabel und Leitungen -  
Leitfaden für die Verwendung von Kabeln  
und isolierten Leitungen mit einer  
Nennspannung nicht über 450/750 V  
( $U_0/U$ ) -  
Teil 1: Allgemeiner Leitfaden

This European Standard was approved by CENELEC on 2014-02-17. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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**CENELEC**

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels**

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## Foreword

This document (EN 50565-1:2014) has been prepared by Technical Committee CLC/TC 20, "Electric cables".

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) 2015-02-17
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-02-17

This document together with Part 2 supersedes HD 516 S2:1997.

EN 50565-1:2014 and EN 50565-2:2014 includes the following significant technical changes with respect to HD 516 S2:1997:

Both parts of EN 50565 refer to cable types specified in EN 50525, replacing the reference to the HD 21 and HD 22 cable types. Part 1 provides general recommendations and guidance, Part 2 covers specific guidance for each cable type in EN 50525, like designation, constructional details, recommendations for installation, conditions and limits of operation, temperature limits and recommended use/suitability.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

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.

## **Introduction**

This European Standard provides guidance for equipment manufacturers, installers and end-users on the properties of low voltage electric cables, and the limitations that are deemed to be necessary in order to safeguard life, buildings, and goods. It also gives a reasonable certainty on cable life time expectation relevant to its application, i.e. the duration of acceptable performance considered as reasonable for a cable used in a fixed installation for the distribution of electricity in a building is more than that for flexible cable.

It is not possible to cover all the uses that the installers or users may wish to use for a specific type of cable. The use other than the recommended ones could result in a lowering of safety and/or in a reduction in the expected life of the cable. If a cable is intended to be used outside the recommended uses the cable manufacturer should be consulted for advice.

In specific cases where guidance is not given, it is recommended that specific advice of the cable manufacturer is sought.

In some countries, legislation may limit the use of certain cable types and define additional requirements for cable installation practice.

Additional information on installation practice is given in HD 60364 and HD 384 series of specifications, and national regulations/code practices.

## 1 Scope

This European Standard provides guidance to help installers, cabling designers and end users to understand the characteristics of electric cables, with a rated voltage not exceeding 450/750 V ( $U_0/U$ ) or equivalent d.c. voltages, so that the cable can be selected, installed and operated in a safe way. It is applicable to those cable types that are specified in EN 50525 (all parts).

The guidance given in this European Standard can also be applicable to low-voltage cables of a similar type to those specified in EN 50525 but not specifically mentioned in those standards. In these cases, it is advisable to seek additional advice from the cable manufacturer.

Legal or statutory requirements do take precedence over the guidance given in this document.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50525 (all parts), *Electric cables — Low voltage energy cables of rated voltages up to and including 450/750 V ( $U_0/U$ )*

EN 50565-2, *Electric cables — Guide to use for cables with a rated voltage not exceeding 450/750 V – Part 2: Specific guidance related to EN 50525 cable types*

EN 60079 (all parts), *Electrical apparatus for explosive gas atmospheres (IEC 60079, all parts)*

EN 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1)*

HD 384 (all parts), *Electrical Installations of buildings*

HD 60364 (all parts), *Low voltage electrical Installations (IEC 60364, all parts)*

IEC 60050-461, *International Electrotechnical Vocabulary — Part 461: Electric cables*

IEC 60287 (all parts), *Electric cables — Calculation of the current rating*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-461, HD 60364 and HD 384 standard series and the following apply.

### 3.1

#### **internal wiring**

wiring mechanically protected by being enclosed within a casing of equipment or by other equivalent means

### 3.2

#### **skilled person**

person with technical knowledge or sufficient experience to enable him/her to avoid dangers which electricity may create



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