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**(istoveten EN 50143:1997/A1:2003)**

Cables for signs and luminous-discharge-tube installations operating from a no-load rated output voltage exceeding 1 kV but not exceeding 10 kV

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EUROPEAN STANDARD

**EN 50143/A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2003

ICS 29.060.20

English version

**Cables for signs and luminous-discharge-tube installations  
operating from a no-load rated output voltage  
exceeding 1 kV but not exceeding 10 kV**

Câbles pour installations d'enseignes  
et de tubes à décharges lumineuses  
fonctionnant avec une tension à vide  
supérieure à 1 kV mais ne dépassant pas  
10 kV

Leitungen für Leuchtröhrengeräte  
und Leuchtröhren-Anlagen mit einer  
Leerlaufspannung von über 1 kV  
aber nicht über 10 kV

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This amendment A1 modifies the European Standard EN 50143:1997; it was approved by CENELEC on 2003-02-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 Central Secretariat or to any CENELEC member.

This amendment 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, 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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This amendment to the European Standard EN 50143:1997 was prepared by the Technical Committee CENELEC TC 20, Electric cables, and agreed at the Paris meeting (May 2001) to go forward to the Unique Acceptance Procedure.

This amendment has been prepared within the regular maintenance programme.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as A1 to EN 50143:1997 on 2003-02-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2004-02-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2005-02-01

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## 2 Normative references

**Replace** references to HD 405, HD 602 and HD 606 by the following:

EN 50265 (Series)	Common test methods for cables under fire conditions – Test for resistance to vertical flame propagation for a single insulated conductor or cable
EN 50267 (Series)	Common test methods for cables under fire conditions – Tests on gases evolved during combustion of materials from cables
EN 50268 (Series)	Common test methods for cables under fire conditions – Measurement of smoke density of cables burning under defined conditions
EN 50307	Lead and lead alloys – Lead and lead alloy sheaths and sleeves of electric cables

## 4 General requirements for the construction of cables

### 4.5 Non-metallic components of halogen free cables

**Replace** “HD 602” by “EN 50267-2-2”.

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## 5 Cable types

### 5.1 General

**Amend** descriptions of cable types C2, D2 and F to read:

Type C2	-	Silicone rubber insulated cable, unscreened and halogen-free sheathed
Type D2	-	Silicone rubber insulated cable, screened and halogen-free sheathed
Type F	-	PVC insulated cable, PVC sheathed, or PVC insulated cable with flexible protective conductor and PVC sheathed

## 6 Rubber insulated lead sheathed cables (Type A)

### 6.1.1 Conductor

**Delete** the final sentence.

### 6.1.4 Lead sheath

**Replace** paragraph 2 by:

The lead alloy sheath shall be made from lead alloy complying with EN 50307, type PK021S.

### Table 2

Against Ref. No. 1.4 in column 5 **replace** “2.6” by “2.6.2”.

## 7 Silicone rubber insulated cables (Types B, C1, C2, D1 and D2)

### 7.1.4 Sheath

In paragraph 2 **replace** “zero halogen” by “halogen-free”.

### 7.2.2 Smoke emission of cables

**Replace** “HD 606” by “EN 50268-2”.

#### Table 4

Against Ref. No. 1.5 in column 5 **replace** “2.6” by “2.6.1 \*\*”.

**Amend** the tests against Ref. No. 6 to read:

1	2	3	4	5
Ref. No.	Tests	Category of test	Test method described in:	
			HD/EN	Clause
6	<b>Tests under fire conditions</b>			
6.1	Test on single vertical cable	T	50265-1	-
6.2	Test for acidic (corrosive) gases evolved	T	50267-2-2	-
6.3	Smoke emission of cable	T	50268-2	-

**Add** table footnote:

<https://standards.iteh.ai/catalog/standards/sist/0ca871d8-4775-4002-9e6a-75521c291a90/sist-en-50143-1998-a1-2004>

\* For screened cables types D1 and D2 use 2.6.2.

## 8 PVC insulated cables (types E, F and G)

### 8.1 Construction

**Replace** the existing text by the following:

#### 8.1 Construction

##### 8.1.1 Conductor

Number of conductors: 1

The conductors shall comply with the requirements of HD 383, for Class 5 conductors.

The wires shall be of tinned annealed copper.

##### 8.1.2 Insulation

The insulation shall be polyvinyl chloride compound of type TI 1 to Table 1 of HD 21.1 applied around the conductor by extrusion in a single layer.

The thickness of insulation shall comply with the specified value given in Table 6, column 3.

### 8.1.3 Metallic tape screen (Type E only)

The screen shall consist of a folded zinc tape, the thickness of which shall be approximately 0,25 mm. The tape shall fit closely to the insulated core and shall give complete cover. The tape may be corrugated.

### 8.1.4 Drain wire (Types E and F)

For type E cables a 1,5 mm<sup>2</sup> tinned drain wire consisting of parallel or bunched individual strands of about 0,3 mm diameter shall be applied longitudinally, either over or under the screen of folded zinc tape, and in contact with the tape.

Type F may have a drain wire applied under the PVC sheath.

### 8.1.5 Sheath

The sheath shall be polyvinyl chloride compound of type TM 1 to Table 2 of HD 21.1 applied around the core by extrusion in a single layer.

The thickness of sheath shall comply with the specified value given in Table 6.

The sheath shall be capable of being removed without damage to the insulation the drain wire or metal screen.

### 8.1.6 Overall diameter

The mean overall diameter shall be within the limits given in Table 6.

**Table 6**

SIST EN 50143:1998/A1:2004

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Replace the existing table with the following:

1	2	3	4	5	6	7	8	9	10
Cable type	Nominal cross-sectional area of conductor	Thickness of insulation	Screen approximate thickness	Thickness of sheath	Drainwire <sup>a)</sup>		Overall diameter		Insulation resistance at 70°C minimum
					Nominal cross-sectional area	Diameter of individual wires approx	Minimum	Maximum	
E	mm <sup>2</sup> 1,5	mm 2,5	mm 0,25	mm 1,0	mm <sup>2</sup> 1,5	mm 0,3	mm 9,5	mm 11,5	Mohm.km 0,0225
F <sup>a)</sup>	1,5	2,5	-	1,0	1,5	0,3	8,5	10,5	0,0225
G	1,5	2,5	-	-	-	-	6,2	7,5	0,0225

<sup>a)</sup> For cable type F the drain wire is optional.

**Table 7**

Against Ref. No. 1.6 in column 5 **replace** “2.6” by “2.6.1 \*”.

Against Ref. No. 6 in column 4 **replace** “405.1” by “50265-2-1”.

**Add** table footnote:

\* For screened cables type E use 2.6.2.

**Table 10**

Against Ref. No. 1.4 in column 5 **replace** “2.6” by “2.6.1”.

**10 Test methods****10.1 General**

In paragraph 1 **replace** “HD 405, HD 602, HD 606” by “EN 50265, EN 50267, EN 50268”.

**Annex B**

**Delete** the complete annex and **add** “Annex B (Spare)”.

**Annex C**

Against Ref. No. 6.1 column 5, **replace** “602” by “50267-2-2”.

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