



SLOVENSKI STANDARD
SIST HD 516 S2:1999/A2:2009
01-marec-2009

Vodilo za uporabo nizkonapetostnih harmoniziranih kablov

Guide to use of low voltage harmonized cables

Leitfaden für die Verwendung harmonisierter Niederspannungsstarkstromleitungen

Guide d'emploi des câbles harmonisés à basse tension

Ta slovenski standard je istoveten z: HD 516 S2:1997/A2:2008

[SIST HD 516 S2:1999/A2:2009](https://standards.iteh.ai/catalog/standards/sist/e4956444-5a1b-46d7-ab8d-9959fec11df1/sist-hd-516-s2-1999-a2-2009)

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ICS:

29.060.20 Kabli Cables

SIST HD 516 S2:1999/A2:2009 **en,fr,de**

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HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 516 S2/A2

October 2008

ICS 29.060.20

English version

Guide to use of low voltage harmonized cables

Guide d'emploi des câbles
harmonisés à basse tension

Leitfaden für die Verwendung
harmonisierter
Niederspannungsstarkstromleitungen

This amendment A2 modifies the Harmonization Document HD 516 S2:1997; it was approved by CENELEC on 2008-09-01. CENELEC members are bound to comply with the GEN/GENELEC Internal Regulations which stipulate the conditions for implementation of this amendment at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German).

<https://standards.iteh.ai/catalog/standards/sist/e4956444-5a1b-46d7-ab8d->

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: rue de Stassart 35, B - 1050 Brussels

Foreword

This amendment to Harmonization Document HD 516 S2:1997 was prepared by the Technical Committee CENELEC TC 20, Electric cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A2 to HD 516 S2:1997 on 2008-09-01.

The following dates were fixed:

- latest date by which the existence of the amendment has to be announced at national level (doa) 2009-03-01
- latest date by which the amendment has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 2009-09-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2010-09-01

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Table 1A – Intended Usage of Single Core PVC Cables for Fixed Wiring*Add the following new columns for HD 21.15:*

Standard	HD 21.15			HD 21.15		
Clause number	4/5			6/7		
Code designation	H07Z1			H05Z1		
Conductor type	U	R	K	U	R	K
1. <u>METHOD OF INSTALLATION</u> (5)						
1.1 In conduit (6)	+	+	+	-	-	-
1.2 In cable trunking (6)	+	+	+	+(1)	+(1)	+(1)
1.3 In cable ducting (6)	+	+	+	-	-	-
1.4 In cable wiring of electric appliances and equipment	+(3)	+(3)	+(3)	+(3)	+(3)	+(3)
Notes:	(1) Signalling and control circuits only. (2) For installation at low temperatures. (3) For use in normal temperature zones. (4) For use in higher temperature zones. (5) The presence of water in contact with the cable is not acceptable. (6) The maximum conductor temperature at which the particular cable should operate will depend upon the limiting temperature of the other cables and accessories with which it is in contact. '+' = Acceptable application. '-' = Not suitable.					

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Supplement to Table 1A – Specific Guidance for Use of Single Core PVC Cables for Fixed Wiring

Add the following entries for Part 15:

1	2	3
Part No.	Recommended use	Comments
PART 15 <u>Single core non-sheathed halogen free cables for fixed wiring of rated voltage 450/750 V</u> Clause 4 H07Z1-U and H07Z1-R Clause 5 H07Z1-K	Installation in surface mounted or embedded conduits, or similar closed systems, particularly for situations in which low emission of smoke and corrosive gases are required in the case of burning. Type 2 cables are for use where special fire performance is necessary, or where local conditions or regulations require increased levels of public safety (for example in hospitals, cinemas or schools). They are especially suitable for use where cables are installed in bunches.	Suitable for fixed protected installation in, or on, lighting and control gear for voltages up to 1 000 V a.c. or, up to 750 V d.c. to earth.
PART 15 <u>Single core non-sheathed halogen free cables for fixed wiring of rated voltage 300/500 V</u> Clause 6 H05Z1-U and H05Z1-R Clause 7 H05Z1-K	Fixed protected installation inside appliances and in, or on, lighting fittings, particularly for situations in which low emission of smoke and corrosive gases are required in the case of burning.	Suitable for installation in surface mounted or embedded conduits, only for signalling or control circuits.
	The maximum permitted conductor temperature for cables to Part 15 in normal use is 70 °C. These cables are not intended to provide circuit integrity in case of fire.	The defined tests for smoke and halogen free gases relates only to the cables, and not to cable and conduit together.

Table 2A – Intended Usage of PVC Flexible Cables or Cords*Add the following new columns for HD 21.14:*

Standard	HD 21.14		HD 21.14	
Clause numbers	3		4	
Designation	H03Z1Z1		H05Z1Z1	
Cross section shape	Circ.	Flat	Circ.	Flat
Conductor type	F	F	F	F
1. <u>DUTY</u> (1)				
1.1 Extra light	+	+	+	+
1.2 Light	+	+	+	+
1.3 Ordinary	-	-	+	+
1.4 Heavy	-	-	-	-
2. <u>PRESENCE OF WATER</u>				
2.1 Condition AD1 (2)	+	+	+	+
2.2 Condition AD2 (2)	-	-	+	+
2.3 Condition AD6 (2)	-	-	-	-
3. <u>CORROSIVE OR POLLUTING SUBSTANCES</u>				
3.1 Condition AF3 (2)	-	-	+	+
4. <u>IMPACT</u>				
4.1 Condition AG2 (2)	-	-	-	-
5. <u>VIBRATIONS</u>				
5.1 Condition AH3 (2)	-	-	-	-
6. <u>FLORA</u>				
6.1 Condition AK2 (2)	-	-	-	-
7. <u>FAUNA</u>				
7.1 Condition AL2 (2)	-	-	-	-
8. <u>OUTDOOR USE</u> (3)				
8.1 Temporary (5)	-	-	+	+
8.2 Permanent (5)	-	-	-	-
9. <u>FREQUENT FLEXING</u>	+	+	+	+
10. <u>FREQUENT TORSION</u>	+	+	+	-
Notes:	(1) See Annex B for definitions.			
	(2) See Annex C for definitions.			
	(3) Only for the relevant duty classification given in line 1 "Duty".			
	(4) See Annex A for definitions.			
	(5) "+" Acceptable application.			
	"-" Not suitable.			

Supplement to Table 2A – Specific Guidance for Use of PVC Flexible Cables or Cords

Add the following entries for Part 14:

1 Part No.	2 Recommended use	3 Comments
PART 14 <u>Clause 3</u> H03Z1Z1-F or H03Z1Z1H2-F Halogen-free thermoplastic insulated and sheathed flexible cords of rated voltage 300/300 V	<p>Where cords having a low level of emission of smoke and corrosive gases are required in the case of fire or of burning.</p> <p>In domestic premises, kitchens, offices; for light duties, for light portable appliances (e.g. radio sets, table and standard lamps, office machines).</p> <p>For “H03Z1Z1-F and H03Z1Z1H2-F” with cross-section 0,75 mm², the same “Recommended use” and “Comments” as for “H05Z1Z1-F and H05Z1Z1H2-F” below are applicable.</p> <p>Where extra flexibility is required and provided there is no particular danger of mechanical damage, these light cords may be used.</p> <p>If cords are subject to frequent flexing and/or torsion, circular cords are recommended instead of flat ones.</p>	<p>Maximum cord operating temperature is: 60 °C.</p> <p><u>Unsuitable</u> for cooking and space heating appliances.</p> <p><u>Unsuitable</u> for use in elevated temperature zones in luminaires.</p> <p><u>Unsuitable</u> for outdoor use, in industrial (*) or agricultural buildings or for non domestic portable tools.</p> <p>Not recommended for the cabling of fixed installations.</p>
PART 14 <u>Clause 4</u> H05Z1Z1-F or H05Z1Z1H2-F Halogen-free thermoplastic insulated and sheathed flexible cords of rated voltage 300/500 V	<p>Where cords having a low level of emission of smoke and corrosive gases are required in the case of fire or of burning.</p> <p>In domestic premises, kitchens, offices; for household appliances, including in damp premises; for medium duties (e.g. washing machines spin dryers and refrigerators).</p>	<p>Maximum cord operating temperature is: 60 °C.</p> <p>May be used for cooking and heating appliances, providing that there is no risk of contact with hot parts and is not subject to radiation.</p> <p><u>Unsuitable</u> for use in elevated temperature zones in luminaires.</p> <p><u>Unsuitable</u> for permanent outdoor use, in industrial (*) or agricultural buildings or for non domestic portable tools.</p> <p>Not recommended for the cabling of fixed installations.</p>

Table 3A – Limiting Conditions for PVC Cables for Fixed Installation and Internal Wiring

Add new entries for HD 21.15 as follows:

1 Cable type	2 Type Designation	3 Standard		5 Rated voltage V	6 Number of cores	7 Nominal cross section area range mm ²	8 Temperature °C			11 Transportation installation and handling	12 Storage ambient
		HD/part	Clause				Conductor operating		At cable surface		
6. Halogen-free non sheathed for general purposes	H07Z1-U	21.15	4	450/750	1	1,5-10	max.	max.	max.	min.	max. (2)
	H07Z1-R	21.15	4	450/750	1	1,5-630	+70	+160	+70	+5	+40
	H07Z1-K	21.15	5	450/750	1	1,5-240	+70	+160 (3)	+70	+5	+40
7. Halogen-free non sheathed for internal wiring	H05Z1-U	21.15	6	300/500	1	0,5-1	max.	max.	max.	min.	max. (2)
	H05Z1-R	21.15	6	300/500	1	0,5-1	+70	+160	+70	+5	+40
	H05Z1-K	21.15	7	300/500	1	0,5-1	+70	+160	+70	+5	+40
Notes:											
(1) Maximum allowable time 5 s.											
(2) In direct sunlight the surface temperature of the cable may exceed the value given but subject to a maximum of 60 °C.											
(3) For conductor sizes above 300 mm ² this temperature is reduced to 140 °C.											