ICS 35.100.10, 35.100.20, 97.120

SLOVENSKÁ TECHNICKÁ NORMA

August 2020

STN	**Elektronické systémy pre byty a budovy (HBES) Časť 5-2: Prenosové médium a vrstvy závislé na prenosovom médiu Sieť založená na HBES, triede 1 Krútená dvojlinka**	**STN EN 50090-5-2** 36 8051

Home and Building Electronic Systems (HBES) Part 5-2: Media and media dependent layers - Network based on HBES Class 1, Twisted Pair

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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Supersedes EN 50090-5-2:2004 and all of its amendments and corrigenda (if any)

English Version

Home and Building Electronic Systems (HBES) Part 5-2: Media and media dependent layers - Network based on HBES Class 1, Twisted Pair

Systèmes électroniques pour les foyers domestiques et les bâtiments (HBES) - Partie 5-2: Medias et couches dépendantes des medias - Réseau basé sur HBES Classe 1, Paire Torsadée

Elektrische Systemtechnik für Heim und Gebäude (ESHG) - Teil 5-2: Medien und medienabhängige Schichten - Netzwerk basierend auf ESHG Klasse 1, Twisted Pair

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Contents

European foreword

This document (EN 50090-5-2:2020*)* has been prepared by CLC/TC 205, “Home and Building Electronic Systems (HBES)”[1]

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)	2020-10-10
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2023-04-10

This document will supersede EN 50090-5-2:2004 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

EN 50090-5-2 is part of the EN 50090 series of European Standards, which will comprise the following parts:

— Part 1: Standardization structure;

— Part 3: Aspects of application;

— Part 4: Media independent layers;

— Part 5: Media and media dependent layers;

— Part 6: Interfaces;

— Part 7: System management;

NOTE Part 2 has been withdrawn.

[1] This document was prepared with the help of CENELEC co-operation partner KNX Association, De Kleetlaan 5, B-1831 Diegem.

Introduction

According to OSI, Physical Layers consist of the medium, the cable, the connectors, the transmission technology etc. which refers to their hardware requirements. In this document however, the status of the Physical Layer as a “communication medium” is emphasized.

1 Scope

This document defines the mandatory and optional requirements for the medium specific physical and data link layer for HBES Class 1 Twisted Pair TP1.

Data link layer interface and general definitions, which are media independent, are given in EN 50090-4-2.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 50090-1, *Home and Building Electronic Systems (HBES) — Part 1: Standardization structure*

EN 50090-2-2, *Home and Building Electronic Systems (HBES) — Part 2-2: System overview — General technical requirements*

EN 50090-3-2, *Home and Building Electronic Systems (HBES) — Part 3-2: Aspects of application — User process for HBES Class 1*

EN 50090-4-2, *Home and Building Electronic Systems (HBES) — Part 4-2: Media independent layers — Transport layer, network layer and general parts of data link layer for HBES Class 1*

EN 50290 (series), *Communication cables*

EN 61000-4-5, *Electromagnetic compatibility (EMC) — Part 4-5: Testing and measurement techniques — Surge immunity test (IEC 61000-4-5)*

EN 61000-6-1, *Electromagnetic compatibility (EMC) — Part 6-1: Generic standards — Immunity for residential, commercial and light-industrial environments (IEC 61000-6-1)*

EN 61000-6-2, *Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity for industrial environments (IEC 61000-6-2)*

HD 21.2 S2, *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V — Part 2: Test methods (IEC 60227-2)*

HD 22.2 S2, *Rubber insulated cables of rated voltages up to and including 450/750 V — Part 2: Test methods (IEC 60245-2)*

IEC 60189-2, *Low-frequency cables and wires with PVC insulation and PVC sheath — Part 2: Cables in pairs, triples, quads and quintuples for inside installations*

IEC 60332-1, *Tests on electric cables under fire conditions — Part 1: Test on a single vertical insulated wire or cable*

IEC 60754-2, *Test on gases evolved during combustion of materials from cables — Part 2: Determination of acidity (by pH measurement) and conductivity*