ICS 35.240.99, 91.140.01, 97.120

SLOVENSKÁ TECHNICKÁ NORMA

Október 2014

STN	**Otvorená dátová komunikácia v komplexných automatických riadiacich systémoch prevádzky a manažmentu budov. Komunikačný protokol pre sieťovo prepojené riadiace systémy (CNP). Časť 3: Komunikáca prostredníctvom vedenia nízkonapäťového elektrického napájania.**	**STN EN 14908-3** 74 7306

Open Data Communication in Building Automation, Controls and Building Management - Control Network Protocol - Part 3: Power Line Channel Specification

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/14

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ICS 35.240.99; 97.120; 91.140.01

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English Version

Open Data Communication in Building Automation, Controls and Building Management - Control Network Protocol - Part 3: Power Line Channel Specification

Réseau ouvert de communication de données pour l'automatisation, la régulation et la gestion technique du bâtiment - Protocole de contrôle du réseau - Partie 3 : Spécifications des communications par courants porteurs

Offene Datenkommunikation für die Gebäudeautomation und Gebäudemanagement - Gebäude-Netzwerk-Protokoll - Teil 3: Kommunikation über die Stromversorgungsleitungen

This European Standard was approved by CEN on 12 April 2013.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 14908-3:2014) has been prepared by Technical Committee CEN/TC 247 “Building Automation, Controls and Building Management”, the secretariat of which is held by SNV.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2014 and conflicting national standards shall be withdrawn at the latest by October 2014.

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

This document supersedes EN 14908-3:2006.

This European Standard is part of a series of standards for open data transmission in building automation, control and in building management systems. The content of this European Standard covers the data communications used for management, automation/control and field functions.

EN 14908-3 is part of a series of European Standards under the general title *Control Network Protocol (CNP)*, which comprises the following parts:

Part 1: *Protocol stack;*

Part 2: *Twisted pair communication;*

Part 3: *Power line channel specification;*

Part 4: *IP-Communication;*

Part 5: *Implementation;*

Part 6: *Application elements.*

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This part of EN 14908 specifies the Control Network Power Line (PL) Channel and serves as a companion document to EN 14908-1:2014. Its purpose is to present the information necessary for the development of a PL physical network and nodes to communicate and share information over that network. This is one of a series of documents covering the various media that comprise the CNP standard.

This part of EN 14908 covers the complete physical layer (OSI layer 1) including the interface to the Medium Access Control (MAC) Sub-Layer and the interface to the medium. It includes parameters specific to the PL channel type, even though the parameters may be controlled at an OSI layer other than layer 1. This part of EN 14908 also provides a set of guideline physical and electrical specifications for the power line environment as an aid in developing products for that environment.

This part of EN 14908 has been prepared to provide mechanisms through which various vendors of building automation, control and of building management systems may exchange information in a standardised way. It defines communication capabilities.

This part of EN 14908 is used by all involved in design, manufacture, engineering, installation and commissioning activities.

The CNP specification model is based on the OSI 7-layer model Reference Model. There are also important extensions to the OSI Reference Model. Figure 1 shows the scope of this specification in reference to the entire CNP model. In this European Standard, only the parts of the model relevant to power line communication are specified. Anything outside this boundary is covered in other parts of the standard. Similar specifications exist for other CNP media.

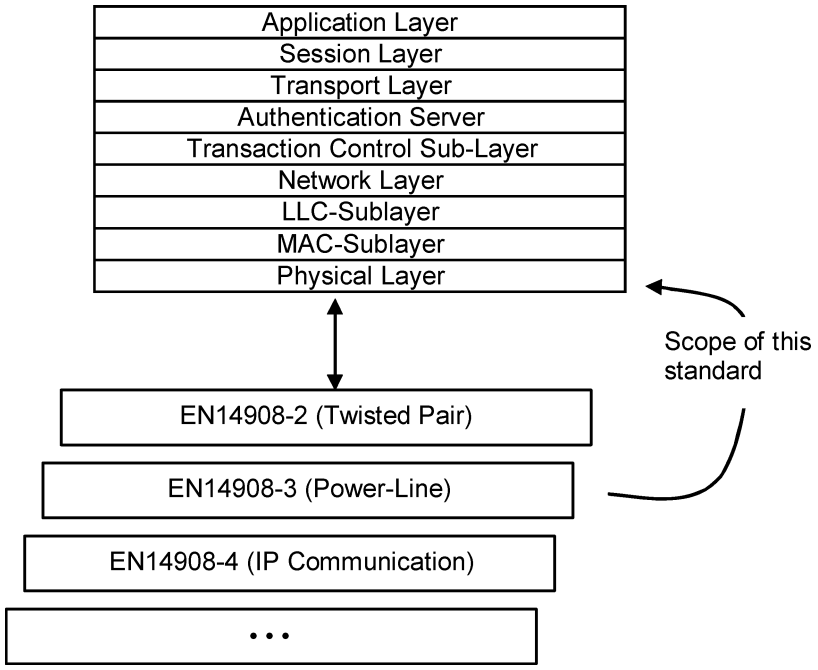

Figure 1 — Relationship of CNP 3 specification to the CNP 1 specification

1 Scope

This European Standard specifies all the information necessary to facilitate the exchange of data and control information over the power line medium for networked control systems in commercial Building Automation, Controls and Building Management.

This European Standard establishes a minimal set of rules for compliance. It does not rule out extended services to be provided, given that the rules are adhered to within the system. It is the intention of the standard to permit extended services (defined by users) to coexist.

Certain aspects of this standard are defined in other documents. These documents are referenced where relevant. In the case where a referenced standard conflicts with this European Standard, this part of EN 14908 will prevail.

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 14908-1:2014, *Open Data Communication in Building Automation, Controls and Building Management – Control Network Protocol — Part 1: Protocol Stack*

EN 50065-1, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz — Part 1: General requirements, frequency bands and electromagnetic disturbances*

EN 50065-2-1, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz —Part 2-1: Immunity requirements for mains communications equipment and systems operating in the range of frequencies 95 kHz to 148,5 kHz and intended for use in residential, commercial and light industrial environments*

EN 50065-2-2, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz — Part 2-2: Immunity requirements for mains communications equipment and systems operating in the range of frequencies 95 kHz to 148,5 kHz and intended for use in industrial environments*