

Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol —

Part 3: Power Line Channel Specification

The European Standard EN 14908-3:2006 has the status of a
British Standard

ICS 35.240.99; 97.120

National foreword

This British Standard was published by BSI. It is the UK implementation of EN 14908-3:2006.

The UK participation in its preparation was entrusted to Technical Committee RHE/16, Performance requirements for control systems.

A list of organizations represented on RHE/16 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2006

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ISBN 0 580 49687 2

Amendments issued since publication

Amd. No.	Date	Comments

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 réseau pour le bâtiment - Partie 3:
Spécification des communications pour courants porteurs

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

This European Standard was approved by CEN on 11 September 2006.

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

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



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Foreword

This document (EN 14908-3:2006) 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 May 2007, and conflicting national standards shall be withdrawn at the latest by May 2007.

This European Standard is part of the standard EN 14908 *Open Data Communication in Building Automation, Controls and Building Management — Control Network Protocol* and consists of 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 Guideline

The content of this European Standard covers the data communications used for management, automation/control and field functions. This standard is based on the American standard ANSI-709.2-A-2000 Control Network Powerline Channel Specification but with extensive changes to meet European requirements in respect of the topology and nature of electrical distribution networks, limitations on radio frequency emissions and requirements to use powerline access protocols.

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

Introduction

This European Standard specifies the Control Network Power Line (PL) Channel and serves as a companion document to EN 14908-1. 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 European Standard 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 European Standard 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 European Standard 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 European Standard is used by all involved in design, manufacture, engineering, installation and commissioning activities and has been made in response to the essential requirements of the Constructive Products Directive.

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.

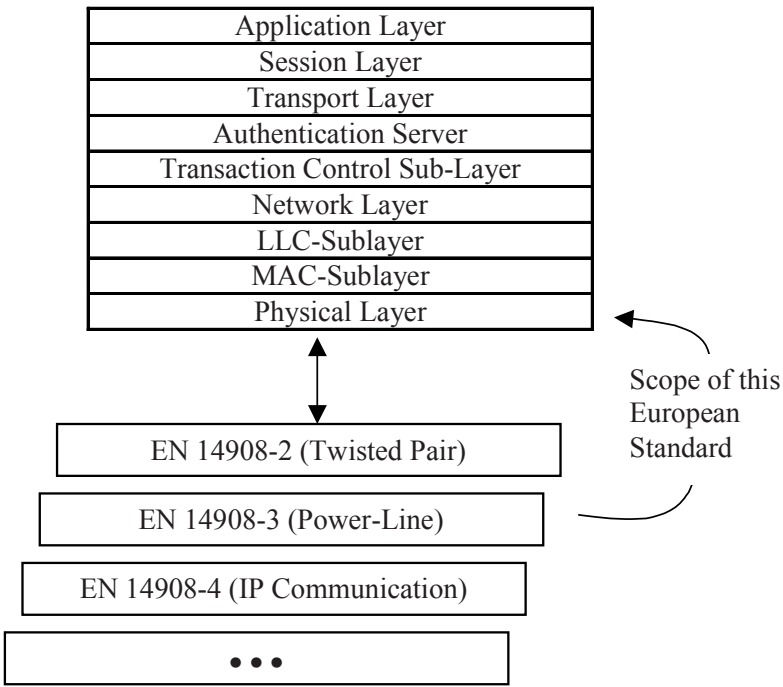


Figure 1 — Relationship of CNP 3 Specification to the CNP 1 Specification Model