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S.R. CLC/TS 50568-4:2015

Electricity metering data exchange - Part 4: Lower layer PLC profile using SMITP B-PSK modulation

S.R. CLC/TS 50568-4:2015

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Electricity metering data exchange - Part 4: Lower layer PLC profile using SMITP B-PSK modulation

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Foreword

This document (CLC/TS 50568-4:2015) has been prepared by CLC/TC 13, "Electrical energy measurement and control".

The following date is fixed:

- latest date by which the existence of (doa) 2015-07-24
this document has to be announced
at national level

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

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

The European Committee for Electrotechnical Standardization (CENELEC) draws attention to the fact that it is claimed that compliance with this International Standard may involve the use of a maintenance service concerning the stack of protocols on which the present Technical Specification CLC/TS 50568 is based.

The CENELEC takes no position concerning the evidence, validity and scope of this maintenance service.

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Introduction

This Technical Specification is based on the results of the European OPEN Meter project, Topic Energy 2008.7.1.1, Project no.: 226369, www.openmeter.com.

According to the structure of the CLC/TS 50568 documentation, this document is positioned as highlighted in the following figure:

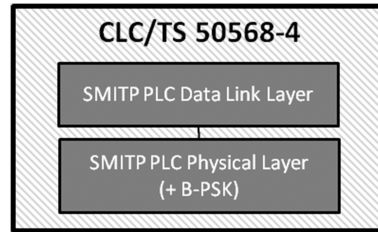


Figure 1 – Document structure of CLC/TS 50568-4

1 Scope

This Technical Specification specifies the characteristics of the profile related to Physical and Data Link Layers for communications on LV distribution network between a Concentrator (master node) and one or more slave nodes.

The following prescriptions are applied to groups of devices that communicate using low voltage network. Each section of the network is composed by one Concentrator (acting as the master of the section), and one or more primary nodes (A-Nodes). Every A-Node can optionally be associated to one secondary node (B-Node).

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

3 Terms, definitions, acronyms and notations

3.1 Terms and definitions

For the purpose of this document, the following terms and definitions apply:

3.1.1

concentrator section

identification code of the network managed by the concentrator

3.1.2

node subsection

identification code of the sub network within the network identified by concentrator section

3.1.3

node progressive

unique node ID within the node sub section

3.1.4

upper layers

every communication stack layer except PHY, MAC and LLC

3.2 Acronyms

For the purpose of this document, the following acronyms apply:

ACA:	Absolute Communication Address
B-PSK:	Binary Phase Shift Keying
CRC:	Cyclic Redundancy Check
D-L:	Data-Link
ECC:	Encryption Coding Control
ECTL:	Extended Control
HDLC:	High-level data link control procedures
LLC:	Logical Link Control
LSb:	Least Significant bit
LSB:	Least Significant Byte
LSDU:	LLC Service Data Unit
LV:	Low Voltage

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