



BSI Standards Publication

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)

Part 11: Smart Metering — Application Specifications —
Simple External Consumer Display

National foreword

This British Standard is the UK implementation of EN 50491-11:2015+A1:2020. It supersedes BS EN 50491-11:2015, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CENELEC text carry the number of the CENELEC amendment. For example, text altered by CENELEC amendment A1 is indicated by $\boxed{A1}$ $\langle A1 \rangle$.

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Contents

Foreword	4
Introduction.....	5
1 Scope	6
2 Normative References	6
3 Terms, definitions and abbreviations	6
3.1 Terms and definitions	6
3.2 Abbreviations	7
4 General reference model	8
5 Requirements for the Data interface	10
5.1 General	10
5.2 Minimization of data transmission	11
5.3 Data consistency	11
5.4 Filtering of message types and data points	11
6 Conformity and Testing	12
7 Metering Functional Blocks of MDC	12
7.1 MDC Heat Meter (M_HEATM)	12
7.1.1 Aims and objectives	12
7.1.2 Functional specification	12
7.1.3 Constraints	12
7.1.4 Data Point Overview	13
7.2 MDC Heat Cost Allocator (M_HCA)	15
7.2.1 Aims and objectives	15
7.2.2 Functional specification	15
7.2.3 Constraints	15
7.2.4 Data Point Overview	16
7.3 MDC Water Meter (M_WATERM)	17
7.3.1 Aims and objectives	17
7.3.2 Functional specification	17
7.3.3 Constraints	17
7.3.4 Data Point Overview	18
7.4 MDC Generic Meter (M_GENERICM)	19
7.4.1 Aims and objectives	19
7.4.2 Functional specification	19
7.4.3 Constraints	20
7.4.4 Data Point Overview	20
7.5 MDC Gas Meter (M_GASM)	21
7.5.1 Aims and objectives	21
7.5.2 Functional specification	21
7.5.3 Constraints	22
7.5.4 Data Point Overview	22
7.6 MDC Electricity Meter (M_ELECM)	23
7.6.1 Aims and objectives	23
7.6.2 Functional specification	23
7.6.3 Constraints	24
7.6.4 Data Point Overview	24
7.7 MDC Breaker (M_BREAKERM)	26
7.7.1 Aims and objectives	26
7.7.2 Functional Specification	26
7.7.3 Constraints	26
7.7.4 Datapoint description	26
7.8 MDC Valve (M_VALVEM)	27
7.8.1 Aims and objectives	27
7.8.2 Functional Specification	27
7.8.3 Constraints	28

7.8.4	Datapoint description.....	28
8	Metering Data model	29
8.1	Introduction.....	29
8.2	Boolean Value.....	29
8.3	1-octet unsigned counter value	30
8.4	Datapoint Types 2-Octet Float Value”	30
8.5	2-octet unsigned counter value	31
8.6	4-Octet Signed unsigned counter Value	31
8.7	4 Octet signed time period	31
8.8	Datapoint Type “MeteringValue”	32
8.8.1	General	32
8.8.2	Coding General.....	32
8.8.3	Coding Vallnffield	33
8.8.4	Coding Status	34
8.8.5	Recommended display format for metering data	34
8.9	DPT Active Energy	35
8.10	DPT for tariff information.....	36
8.11	DPT_Currency.....	36
8.12	DPTs for Price Information	37
8.13	Format of DPT_DateTime	37
8.13.1	Coding	37
8.13.2	Remarks to the coding of DPT_DateTime.....	38
8.14	Datapoint Type DPT_Metering_DeviceType	41
8.15	Datapoint Type Character Set	42
8.16	Datapoint Type DPT_VarString_8859_1	43
8.17	DPT_Gas_Measurement_Condition	43
8.18	Datapoint Type DPT_Meter_BreakerValve_State.....	44
8.19	Datapoint Type DPT_Meter_Mode	44
8.20	Datapoint Type DPT_Power_Threshold_Status	45
8.21	Datapoint Type DPT_Battery_Status	45
	Bibliography.....	46

Foreword

This document (EN 50491-11:2015) has been prepared by CLC/TC 205 "Home and Building Electronic Systems (HBES)".

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EN 50491-11 is part of the EN 50491 series, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)*, which comprises the following parts:

- *Part 1: General;*
- *Part 2: Environmental conditions;*
- *Part 3: Electrical safety requirements;*
- *Part 4-1: General functional safety requirements for products intended to be integrated in Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS);*
- *Part 5-1: EMC requirements, conditions and test setup;*
- *Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light industry environment;*
- *Part 5-3: EMC requirements for HBES/BACS used in industry environment;*
- *Part 6-1: HBES installations — Installation and planning;*
- *Part 6-3: HBES installations — Assessment and definition of levels* [Technical Report CLC/TR 50491-6-3];
- *Part 11: Smart Metering — Application Specification — Simple External Consumer Display* (the present document);
- *Part 12: Smart grid — Application specification — Interface and framework for customer* (currently at Enquiry stage).

Foreword to A1

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Introduction

In March 2009, the European Commission issued a mandate M/441 for the standardization of smart metering functionalities and communication for usage in Europe for electricity, gas, heat and water applications to ensure interoperability of technologies and applications within a harmonized European market.

As a result, a Technical Report, CEN/CLC/ETSI TR 50572, *Functional Reference Architecture for Communications in Smart Metering Systems*, was published in December 2011.

As a consequence of this work and in line with the CEN/CLC/ETSI TR 50572 functional reference architecture, CLC/TC 205, responsible for Home and Building Electronic Systems, was entrusted with the task to formulate standards for the communication from the smart metering system towards the home.

1 Scope

This European Standard specifies a data model to abstract the metering world towards a simple external consumer display. The data model, as described by means of functional blocks contained in this European Standard, lays down the format of metering data accessible by a simple external consumer display. This data interface would be typically part of the meter communication functions and be accessed by a simple external consumer display via the H1 interface of the CEN/CLC/ETSI TR 50572 between the display and the meter communication functions.

The data interface specified in this document may also be accessed by the LNAP or NNAP through the C or M interface, after which the data could be accessed by HBES devices through the H2 and H3 interface.

In other words, in this way the same data model can be used both on the H1 as well as the H2 and H3 interface.

The document specifies neither the communication mechanisms used on the data interface, nor the applied data privacy and security mechanisms nor the ergonomics of the simple external consumer displays, where national regulations may apply.

The document does also not specify the communication protocol used between the meters and the meter communication functions. However, it takes into account the existing European standards like the EN 13757 series (in particular EN 13757-3:2013 and its Annex O) and the EN 62056 series for the definition of the data model.

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 13757 (all parts), *Communication system for meters*

prEN 50491-12, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 12: Smart grid — Application specification — Interface and framework for customer*

CEN/CLC/ETSI TR 50572, *Functional Reference Architecture for Communications in Smart Metering Systems*

EN 62056 (all parts), *Electricity metering data exchange — The DLMS/COSEM suite (IEC 62056, all parts)*

ISO 4217, *Codes for the representation of currencies and funds*

ISO/IEC 8859-1, *Information technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

3.1.1

meter

instrument for measuring, memorizing and displaying data related to the consumption of a commodity