BSI Standards Publication

Thermal energy meters

Part 3: Data exchange and interfaces

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National foreword

This British Standard is the UK implementation of EN 1434-3:2025. It supersedes BS EN 1434-3:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PEL/894, Remote Meter Reading.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Published by BSI Standards Limited 2025

ISBN 978 0 539 25212 5

ICS 17.200.10

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2025.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD **EN 1434-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2025

ICS 17.200.10 Supersedes EN 1434-3:2015

English Version

Thermal energy meters - Part 3: Data exchange and interfaces

Compteurs d'énergie thermique - Partie 3: Échange de données et interfaces

Thermische Energiezähler - Teil 3: Datenaustausch und Schnittstellen

This European Standard was approved by CEN on 4 November 2024.

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Ref. No. EN 1434-3:2025 E

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European foreword

This document (EN 1434-3:2025) has been prepared by Technical Committee CEN/TC 294 "Communication systems for meters", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

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

This document supersedes EN 1434-3:2015.

EN 1434-3:2025 includes the following significant technical changes with respect to EN 1434-3:2015:

a) change from heat to thermal energy meters in accordance with the EN 1434 series;

b) deletion of former Annex B, *Additional information for thermal energy meters*;

c) protocol modes according to EN 62056-21 for the optical interface of thermal energy meters are no longer supported;

d) deletion of (sub)Clauses 5.1.2, 5.4, and C.3 (regarding EN 62056-21 protocol) as well as in subclause 6.1;

e) Clause 4.5 Physical layer current loop interface was deleted and Table 1 updated;

f) Clause 4.6 Physical layer local bus was deleted in accordance with the withdrawal of EN 13757-6;

g) Clause 5.4 Link layer current-loop interface was deleted;

h) former Annex E, *Protection techniques for M-Bus meters against surge/lightning*, was moved to EN 13757-2.

EN 1434 consists of the following parts, under the general title "Thermal energy meters":

— Part 1: General requirements;

— Part 2: Constructional requirements;

— Part 3: Data exchange and interfaces *(this document);*

— Part 4: Pattern approval tests;

— Part 5: Initial verification tests;

— Part 6: Installation, commissioning, operational monitoring and maintenance.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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1 Scope

This document specifies the general requirements of data exchange and interfaces for thermal energy meters.

This document is applicable to unidirectionally and bidirectionally transmitting thermal energy meters.

This document applies also to networks with up to 250 meters, for which a master unit with AC mains supply is necessary to control the M-Bus. In these cases, the document is only applicable in conjunction with EN 13757-2 (physical and link layer) and EN 13757-3 (application layer).

For wireless thermal energy meter communications, this document is only applicable in conjunction with EN 13757-4, which describes several alternatives of walk/drive-by readout via a mobile station or by using stationary receivers or a network.

NOTE Thermal energy meters are instruments intended for measuring the energy which in a heat-exchange circuit is absorbed (cooling) or given up (heating) by a liquid called the heat-conveying liquid. The meter indicates thermal energy in legal units.

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 13757-3:2025, *Communication systems for meters and remote reading of meters — Part 3: Dedicated application layer*

EN 13757-4, *Communication systems for meters — Part 4: Wireless M-Bus communication*

EN 13757-7:2025, *Communication systems for meters — Part 7: Transport and security services*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.2 Abbreviated terms

For the purposes of this document, the following abbreviated terms apply.

DIF Data information field (see EN 13757-3)

VIF Value information field (see EN 13757-3)