

## SOOJUSARVESTID, OSA 2: KONSTRUKTSIOONINÕUDED

Thermal energy meters - Part 2: Constructional requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 1434-2:2015+A1:2018 sisaldab Euroopa standardi EN 1434-2:2015+A1:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 1434-2:2015+A1:2018 consists of the English text of the European standard EN 1434-2:2015+A1:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 21.11.2018.	Date of Availability of the European standard is 21.11.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

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EUROPEAN STANDARD

**EN 1434-2:2015+A1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

## Thermal energy meters - Part 2: Constructional requirements

Compteurs d'énergie thermique - Partie 2 :  
Prescriptions de fabrication

Wärmezähler - Teil 2: Anforderungen an die  
Konstruktion

This European Standard was approved by CEN on 5 September 2015 and includes Amendment 1 approved by CEN on 18 July 2018.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 1434-2:2015+A1:2018) has been prepared by Technical Committee CEN/TC 176 “Thermal energy meters”, the secretariat of which is held by SIS.

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 2019, and conflicting national standards shall be withdrawn at the latest by May 2019.

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 includes Amendment 1, approved by CEN on 2018-07-18.

This document supersedes A1 EN 1434-2:2015 A1.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

EN 1434-2, A1 *Thermal energy meters* A1 consists of the following parts:

- *Part 1: General requirements*
- *Part 2: Constructional requirements*
- *Part 3: Data exchange and interfaces<sup>1)</sup>*
- *Part 4: Pattern approval tests*
- *Part 5: Initial verification tests*
- *Part 6: Installation, commissioning, operational monitoring and maintenance*

In comparison to EN 1434-2:2007, the following changes have been made:

- additional functionalities for smart metering applications are added;
- minimum requirements for test signal output of calculators are added;
- minimum requirements for test data interface of complete A1 thermal energy meters A1 are added;
- new forms of pockets and sensors and parameter setting and adjustment through interface are added.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

<sup>1)</sup> EN 1434-3 is maintained by CEN/TC 294.

## 1 Scope

This European Standard specifies the constructional requirements for  $\boxed{A_1}$  thermal energy meters  $\langle A_1 \rangle$ .  $\boxed{A_1}$  Thermal energy meters  $\langle A_1 \rangle$  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  $\boxed{A_1}$  thermal energy meter  $\langle A_1 \rangle$  indicates the quantity of heat in legal units.

Electrical safety requirements are not covered by this European Standard.

Pressure safety requirements are not covered by this European Standard.

Surface mounted temperature sensors are not covered by this European Standard.

This standard covers meters for closed systems only, where the differential pressure over the thermal load is limited.

## 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 1092-1, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges*

EN 1092-2, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 2: Cast iron flanges*

EN 1092-3, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 3: Copper alloy flanges*

$\boxed{A_1}$  EN 1434-1:2015+A1:2018, *Thermal energy meters — Part 1: General requirements*  $\langle A_1 \rangle$

EN 1434-3, *Heat Meters — Part 3: Data exchange and interfaces*

EN 60751:2008, *Industrial platinum resistance thermometers and platinum temperature sensors (IEC 60751:2008)*

EN 60947-5-6, *Low-voltage switchgear and controlgear — Part 5-6: Control circuit devices and switching elements — DC interface for proximity sensors and switching amplifiers (NAMUR) (IEC 60947-5-6)*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1)*

ISO 4903, *Information technology — Data communication — 15-pole DTE/DCE interface connector and contact number assignments*