

STN	Merače tepelnej energie Časť 5: Skúšky pri prvotnom overení	STN EN 1434-5 25 8512
------------	--	---

Thermal energy meters - Part 5: Initial verification tests

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/22

Obsahuje: EN 1434-5:2022

Oznámením tejto normy sa ruší
STN EN 1434-5+A1 (25 8512) z augusta 2019

135824

EUROPEAN STANDARD

EN 1434-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2022

ICS 17.200.20

Supersedes EN 1434-5:2015+A1:2019

English Version

Thermal energy meters - Part 5: Initial verification tests

Compteurs d'énergie thermique - Partie 5 : Essais de
vérification primitive

Thermische Energiemessgeräte - Teil 5: Tests für
Konformitätsuntersuchungen und Eichungen

This European Standard was approved by CEN on 17 July 2022.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye 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

EN 1434-5:2022 (E)

Contents	Page
European foreword	3
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 General.....	5
5 Uncertainty of test equipment	6
6 Tests to be carried out	6
6.1 General.....	6
6.2 Flow sensors	7
6.3 Temperature sensor pair	7
6.3.1 Error in temperature difference	7
6.3.2 Insulation resistance	8
6.3.3 Single temperature sensor for smart metering applications	8
6.4 Calculator.....	8
6.5 Calculator and temperature sensor pair	9
6.5.1 Heating and cooling applications.....	9
6.5.2 Calculator with single temperature sensor for smart metering applications	9
6.6 Combined thermal energy meter	9
6.7 Complete meter	9
6.8 Meters for heat-conveying liquids other than water	10
6.8.1 Flow sensor	10
6.8.2 Temperature sensor pair	10
6.8.3 Calculator.....	10
7 Documentation to be supplied	11
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2014/32/EU aimed to be covered.....	12
Bibliography	13

European foreword

This document (EN 1434-5:2022) 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 March 2023, and conflicting national standards shall be withdrawn at the latest by March 2023.

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 1434-5:2015+A1:2019.

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

- *Part 1: General requirements;*
- *Part 2: Constructional requirements;*
- *Part 3: Data exchange and interfaces¹;*
- *Part 4: Pattern approval tests;*
- *Part 5: Initial verification tests;*
- *Part 6: Installation, commissioning, operational monitoring and maintenance.*

In comparison with EN 1434-5:2015+A1:2019, the following changes have been made:

- the third calibration temperature θ_3 for extrapolation error of sensor pairs has been changed in Table 1;
- new subclause 6.8 has been added.

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

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

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.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of

¹ EN 1434-3 is maintained by CEN/TC 294.

EN 1434-5:2022 (E)

North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

1 Scope

This document specifies initial verification tests for thermal energy meters. 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 thermal energy meter indicates the quantity of thermal energy in legal units.

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

This document is not applicable to:

- electrical safety requirements;
- pressure safety requirements; and
- surface mounted temperature sensors.

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 1434-1:2022, *Thermal energy meters — Part 1: General*

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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN