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European foreword

This document (EN 1434-6:2022) 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of an identical text or by endorsement, at the latest by March 2023, and conflicting national standards shall be withdrawn at the latest by March 2023.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 1434-6:2015+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 1434-6:2015+A1:2019, the following changes have been made:

- the title of this standard has been changed into “Thermal energy meters”;
- Annex ZA has been adjusted to the new Directive 2014/32/EU (MID);
- wording “heat meter” has been partly and where applicable changed into “thermal energy meter” within the whole document;
- new clauses have been inserted: 4.1.4, 4.1.5, 4.4, A.3.4, 3.7.

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,

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

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 the United Kingdom.

QUESTO DOCUMENTO È UNA PREVIEW. RIPRODUZIONE VIETATA

1 Scope

This document specifies commissioning, operational monitoring and maintenance and applies to 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 requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1434-1:2022 and the following apply.

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

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

thermal energy system

heating or cooling installations of the dwelling or premises, including the exchange circuit, the thermal energy meter, the associated fittings and the electrical equipment

Note 1 to entry: The heating or cooling systems typically commences and finishes at the two connections to the heat or cooling mains.

3.2

thermal energy mains

heat or cooling supplier's distribution pipes to which the consumer's installation is connected

3.3

inlet and outlet limbs

pipes connecting the heating or cooling system to the thermal energy mains

3.4

primary circuit

circuit hydraulically connected to the thermal energy mains