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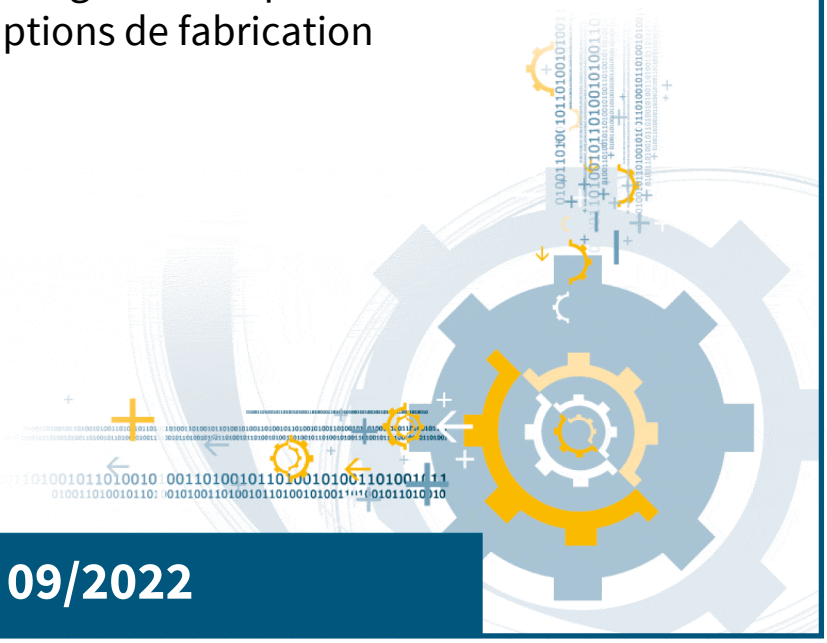
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Thermal energy meters - Part 2: Constructional requirements

Thermische Energiemessgeräte - Teil 2: Anforderungen an die Konstruktion

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



09/2022

National Foreword

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EUROPEAN STANDARD
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English Version

Thermal energy meters - Part 2: Constructional requirements

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

Thermische Energiemessgeräte - Teil 2: Anforderungen an die Konstruktion

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

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European foreword

This document (EN 1434-2:2022) 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of an identical text or by endorsement, at the latest by March 2023, and conflicting national standards shall be withdrawn at the latest by March 2023.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 1434-2:2015+A1:2018.

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

— *Part 1: General requirements*;

— *Part 2: Constructional requirements*;

— *Part 3: Data exchange and interfaces*[1];

— *Part 4: Pattern approval tests*;

— *Part 5: Initial verification tests*;

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

In comparison with EN 1434-2:2015+A1:2018, the following changes have been made:

— Figure A.10 “Threaded pipe fitting G1/2B, G3/4B, G1B, G1 1/4B and G1 1/2B sizes” has been updated;

— in 4.2.2 “Materials of temperature probe sheath and pocket” another suitable material 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.

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1 Scope

This document is applicable to the constructional requirements 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 1092-1:2018, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges*

EN 1092-2:1997, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 2: Cast iron flanges*

EN 1092-3:2003, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 3: Copper alloy flanges*

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

EN 1434-3:2015, *Heat meters — Part 3: Data exchange and interfaces*

EN 1434-4:2022, *Thermal energy meters — Part 4: Pattern approval tests*

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

EN 60947-5-6:2000, *Low-voltage switchgear and controlgear — Part 5-6: Control circuit devices and switching elements — DC interface for proximity sensors and switching amplifiers (NAMUR) (IEC 60947-5-6:1999)*

EN ISO 228-1:2003, *Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

ISO 4903:1989, *Information technology — Data communication — 15-pole DTE/DCE interface connector and contact number assignments*

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