CSA GROUP™

CSA C900.6:21
(EN 1434-6:2015+A1:2019, MOD)
National Standard of Canada

CSA C900.6:21
Thermal energy meters — Part 6: Installation, commissioning, operational monitoring and maintenance
(EN 1434-6:2015+A1:2019, MOD)

Standards Council of Canada
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Cette Norme Nationale du Canada est disponible en versions française et anglaise.

Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users to judge its suitability for their particular purpose.

National Standard of Canada

CSA C900.6:21

Thermal energy meters — Part 6: Installation, commissioning, operational monitoring and maintenance

(EN 1434-6:2015+A1:2019, MOD)

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Reviewed by

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CSA C900.6:21
Thermal energy meters — Part 6: Installation, commissioning, operational monitoring and maintenance
(EN 1434-6:2015+A1:2019, MOD)

CSA Preface

This is the third edition of CSA C900.6, *Thermal energy meters — Part 6: Installation, commissioning, operational monitoring and maintenance*, which is an adoption, with Canadian deviations, of the identically titled CEN (European Committee for Standardization) Standard EN 1434-6 (edition 3:2015 consolidated with Amendment 1:2018). It supersedes the previous edition published in 2013 as CAN/CSA-C900.6 (adopted EN 1434-6:2007), *Heat meters — Part 6: Installation, commissioning, operational monitoring and maintenance*.

For brevity, this Standard will be referred to as "CSA C900.6" throughout.

This Standard is one of a group of Standards on *Thermal energy meters* being adopted by CSA Group, which consists of the following:

a) CSA C900.1 (adopted EN 1434-1) — *Part 1: General requirements*;
b) CSA C900.2 (adopted EN 1434-2) — *Part 2: Constructional requirements*;
c) CSA C900.3 (adopted EN 1434-3) — *Part 3: Data exchange and interfaces*;
d) CSA C900.4 (adopted EN 1434-4) — *Part 4: Pattern approval tests*;
e) CSA C900.5 (adopted EN 1434-5) — *Part 5: Initial verification tests*; and
f) CSA C900.6 (adopted EN 1434-6) — *Part 6: Installation, commissioning, operational monitoring and maintenance*.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was reviewed for Canadian adoption by the CSA Technical Committee on Thermal Energy Meters, under the jurisdiction of the CSA Strategic Steering Committee on Fuels and Appliances, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

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This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line:

a) *Standard designation (number);*
b) *relevant clause, table, and/or figure number;*
c) *wording of the proposed change; and*
d) *rationale for the change.*

Canadian deviations

The following deviations are intended to meet local product requirements and to align with energy efficiency requirements of relevant Canadian regulators.

2 Normative references

[Add the following]

In this Standard, any reference to European Standards shall be replaced by the relevant National Standard of Canada.

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

The following National Standard of Canada, published by CSA Group, is an adoption of a CEN Standard. The requirements of this CSA Group Standard shall take precedence over the European Standard on which it is based. Any reference within CSA C900.6 to the European Standard shall be replaced by a reference to the equivalent Canadian Standard.

CSA Group
CSA C900.1:21
Thermal energy meters — Part 1: General requirements
[Replaces EN 1434-1:2015+A1:2018]

Annex A (informative)
Thermal energy meter installation

A.3 Quality of the heat conveying liquid

A.3.2 Primary water quality

[Add the following paragraph]

When purchasing or specifying thermal energy meters, the owner of the meter should consult with the meter manufacturer to determine any particular water quality requirements to minimize any impact on the meter's accuracy.

A.3.3 Secondary water quality

[Replace the second paragraph with the following]

When purchasing or specifying thermal energy meters, the owner of the meter should consult with the meter manufacturer to determine any particular water quality requirements to minimize any impact on the meter's accuracy.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1434-6:2015+A1

February 2019

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Supersedes EN 1434-6:2015

English Version

Thermal energy meters - Part 6: Installation, commissioning, operational monitoring and maintenance

Compteurs d'énergie thermique - Partie 6 : Installation, mise en service, surveillance et maintenance

Thermische Energiemessgeräte - Teil 6: Einbau, Inbetriebnahme, Überwachung und Wartung

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

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Ref. No. EN 1434-6:2015+A1:2019 E

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European foreword

This document (EN 1434-6:2015+A1:2019) 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 August 2019, and conflicting national standards shall be withdrawn at the latest by August 2019.

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This document includes Amendment 1 approved by CEN on 5 February 2018.

This document supersedes A1 EN 1434-6:2015 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.

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

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 to EN 1434-6:2007, the following changes have been made:

— special cases for combined A1 thermal energy meters A1 are added;

— additional functionalities for smart metering applications are added;

— installation requirements added for A1 thermal energy meters A1 which are located next to cables like data communication cables and mains supply cables;

— installation requirement changed for 4-wire connections;

— cooling meters 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.

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

1 Scope

This European Standard specifies commissioning, operational monitoring and maintenance and applies to [A1] thermal energy meters [A1]. [A1] Thermal energy meters [A1] 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 [A1] thermal energy meter [A1] 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.

[A1] EN 1434-1:2015+A1:2018, *Thermal energy meters — Part 1: General requirements* [A1]

3 Terms and definitions

For the purposes of this document, the terms and definitions given in [A1] EN 1434-1:2015+A1:2018 [A1] and the following apply.

[A1] **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 suppliers 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 [A1]

3.5
secondary circuit
circuit hydraulically separated from the primary circuit