ICS 91.140.60 SLOVENSKÁ TECHNICKÁ NORMA November 2017

STN	**Vodomery na meranie studenej pitnej vody a teplej vody Časť 5: Požiadavky na inštaláciu (ISO 4064-5: 2014)**	**STN EN ISO 4064-5 25 7728**

Water meters for cold potable water and hot water - Part 5: Installation requirements (ISO 4064-5:2014)

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. 10/17

Obsahuje: EN ISO 4064-5:2017, ISO 4064-5:2014

Oznámením tejto normy sa ruší
STN EN ISO 4064-5 (25 7728) z decembra 2015

125443

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 4064-5

May 2017

ICS 91.140.60

Supersedes EN ISO 4064-5:2014

English Version

Water meters for cold potable water and hot water - Part 5: Installation requirements (ISO 4064-5:2014)

Compteurs d'eau potable froide et d'eau chaude - Partie 5: Exigences d'installation (ISO 4064-5:2014)

Wasserzähler zum Messen von kaltem Trinkwasser und heißem Wasser - Teil 5: Einbaubedingungen (ISO 4064-5:2014)

This European Standard was approved by CEN on 11 May 2017.

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: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword

The text of ISO 4064-5:2014 has been prepared by Technical Committee ISO/TC 30 “Measurement of fluid flow in closed conduits” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 4064-5:2017 by Technical Committee CEN/TC 92 “Water meters” the secretariat of which is held by SNV.

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 November 2017, and conflicting national standards shall be withdrawn at the latest by November 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 4064-5:2014.

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 Directives.

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

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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.

Endorsement notice

The text of ISO 4064-5:2014 has been approved by CEN as EN ISO 4064-5:2017 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the essential requirements of Directive 2014/32/EU aimed to be covered

This European Standard has been prepared under a Commission's standardization request Mandate to CEN and CENELEC for standardisation in the field of measuring instruments "M/374 EN" to provide one voluntary means of conforming to essential requirements of Directive 2014/32/EC EU of the European Parliament and the Council of 26 February 2014 on measuring instruments (Text with EEA relevance).

Once this standard is cited in the Official Journal of the European Union under that Directive 2014/32/EU, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive 2014/32/EU, and associated EFTA regulations.

Introduction:

The column "Comment" the term "Addressed" indicates the compliance between EN ISO 4064-5:2014 and the relevant requirement in Directive 2014/32/EU. The term "Not (fully) addressed" indicates that compliance may not (fully) be realised, whilst "Addressed" may also be qualified in other ways. In the case the requirement is "Not fully addressed", a short statement may explain what is covered. The indication "Not applicable" means that the requirement in Annex I of Directive 2014/32/EU is not relevant for Water Meters

The original Directive 2004/22/EU had been amended by Directive 137/2009/EC. These have been fully replaced by Directive 2014/32/EU. This latest directive has already been amended by Directive 2015/13/EU.

The numbering in the first column will reflects the structure of the new Directive 2014/32/EU.

For purpose of cross-reference the second column indicates the structure of the original Directive 2004/22/EU.

Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2014/32/EU.

Essential Requirements (ERs) of Directive 32/2014/EU Annex I Essential Requirements **Note: Amended by Directive 2015/13/EU**	**Essential Requirements (ERs) of Directive 22/2004/EC Annex I Essential Requirements** **Note: Amended by Directive 2009/137**	**Clause(s)/subclause(s) of this EN**	**Qualifying remarks/Notes**
I.1.1 and 1.2 Allowable errors, Rated operating conditions	I.1.1 and 1.2 Allowable errors, Rated operating conditions	4.1	Criteria for the selection
I.1.3.1 Climatic environments, temperature limits	I.1.3.1 Climatic environments, temperature limits	4.1	Criteria for the selection
I.1.3.2 Mechanical environments	I.1.3.2 Mechanical environments	4.1	Criteria for the selection
I.1.3.3 Electromagnetic environments	I.1.3.3 Electromagnetic environments	4.1	Criteria for the selection
I.1.3.4 Other influences	I.1.3.4 Other influences	Not addressed in EN ISO 4064-5	See I.1.3.4 in EN ISO 4064-1 and 2
I.1.4.1 Basic rules for testing	I.1.4.1 Basic rules for testing	Not addressed in EN ISO 4064-5	See I.1.4.1 in EN ISO 4064-1 and 2
I.1.4.2 Ambient humidity	I.1.4.2 Ambient humidity	Not addressed in EN ISO 4064-5	See I.1.4.2 in EN ISO 4064-1 and 2
I.2 Reproducibility	I.2 Reproducibility	6.2 7.2 Covered in EN ISO 4064-2, performance tests	Addressed Addressed via acceptance criteria of tests
I.3 Repeatability	I.3 Repeatability	6.2 7.2 Covered in EN ISO 4064-2, performance tests	Addressed Addressed via acceptance criteria of tests
I.4 Discrimination and sensitivity	I.4 Discrimination and sensitivity	6.2 6.5 7 Covered in EN ISO 4064-2, performance tests	Addressed Addressed via acceptance criteria of tests
I.5 Durability	I.5 Durability	Not addressed in EN ISO 4064-5 but covered in EN ISO 4064-2, performance tests	Addressed via acceptance criteria of tests
I.6 Reliability	I.6 Reliability	Not addressed in EN ISO 4064-5 but covered in EN ISO 4064-2, performance tests	Addressed via acceptance criteria of tests

I.7 Suitability	I.7 Suitability	4.1 Covered in EN ISO 4064-2, performance tests EN ISO 4064-1 chapters 4 to 6	Criteria for the selection Addressed via acceptance criteria of tests. Instrument requirements
I.7.1 Fraudulent use	I.7.1 Fraudulent use	8.3.3	Addressed
I.7.2 Suitable for use	I.7.2 Suitable for use	see I.7 (Suitability)	Addressed
I.7.3 Unduly biasing	I.7.3 Unduly biasing	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-2, 7.4.5 b)
I.7.4 Insensitivity to measurand fluctuations	I.7.4 Insensitivity to measurand fluctuations	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-2 performance tests
I.7.5 Robustness and suitability of materials	I.7.5 Robustness and suitability of materials	4.1	Criteria for the selection
I.7.6 Allow for control after placing on the market	I.7.6 Allow for control after placing on the market.	8.3.4.2 8.3.5.2	Addressed
I.8.1 Not to be influenced in any admissible way	I.8.1 Not to be influenced in any admissible way	8.3.3	Addressed
I.8.2 Securing of hardware components	I.8.2 Securing of hardware components	8.3.3	Addressed
I.8.3 Securing and identification of software	I.8.3 Securing and identification of software	8.3.3	Addressed
I.8.4 Measurement data adequately protected against corruption	I.8.4 Measurement data adequately protected against corruption	8.3.3	Addressed
I.8.5 Total quantity supplied not to be reset	I.8.5 Total quantity supplied not to be reset	8.3.3	Addressed
I.9.1 Inscriptions	I.9.1 Inscriptions	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 6.6
I.9.2 Marking of packaging and documents	I.9.2 Marking of packaging and documents	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 6.6
I.9.3 Information on operation	I.9.3 Information on operation	4.2	Addressed
I.9.4 Necessity of instruction manual	I.9.4 Necessity of instruction manual	4.2	Addressed
I.9.5 Scale interval for the measurand	I.9.5 Scale interval for the measurand	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 6.7.3.2.1
I.9.6 Material measure	I.9.6 Unit of measurement	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 6.7.1.2.1
I.9.7 Unit of measurement	I.9.7 Unit of measurement		
I.9.8 Marking properties	I.9.8 Marking properties	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 6.6 and 6.7
I.10.1 Display or hard copy	I.10.1 Display or hard copy	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 3.1.8 d)

I.10.2 Reading properties	I.10.2 Reading properties	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 6.7
I.10.3 Hard-copy or print properties	I.10.3 Hard-copy or print properties	-	Not applicable
I.10.4 Direct sales trading transactions	I.10.4 Direct sales trading transactions	-	Not applicable
I.10.5 Properties of display for remote reading	I.10.5 Properties of display for remote reading	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 6.1.8 and EN ISO 4064-2, 6.4.3
I.11.1 Recording properties of non-utility measuring instrument	I.11.1 Recording properties of non-utility measuring instrument	-	Not applicable
I.11.2 Availability of durable proof of measurement result	I.11.2 Availability of durable proof of measurement result	-	Not applicable
I.12 Conformity evaluation	I.12 Conformity evaluation	Not addressed in EN ISO 4064-5	Addressed in EN ISO 4064-1, 3.6 and 7.3
Specific Requirements of Annex III for WATER METERS (MI-001)	**Specific Requirements of Annex MI-001 for WATER METERS**	**Clause(s)/subclause(s) of this European Standard**	**Qualifying remarks/Notes**
Rated Operating Conditions	Rated Operating Conditions	4.1	Criteria for the selection
MI.1 Values of flow rate range Note: addresses amendment of Directive 2015/13/EU	MI.1 Values of flow rate range Note: addresses amendment of Directive 2015/13/EU	4.1	Criteria for the selection
MI.2 Temperature range of the water	MI.2 Temperature range of the water	4.1	Criteria for the selection
MI.3 Relative pressure of the water	MI.3 Relative pressure of the water	4.1	Criteria for the selection
MI.4 Nominal value of AC voltage supply and limits of DC supply	MI.4 Nominal value of AC voltage supply and limits of DC supply	4.1	Criteria for the selection
MI.5 MPE ± 2 % for water temperature ≤ 30 °C for flow rate between Q2 (included) and Q4	MI.5 MPE ± 2 % for water temperature ≤ 30 °C for flow rate between Q2 (included) and Q4	4.1	Criteria for the selection
MI.5 MPE ±3% for water temperature > 30 °C for flow rate between Q2 (included) and Q4	MI.5 MPE ±3% for water temperature > 30 °C for flow rate between Q2 (included) and Q4	4.1	Criteria for the selection
MI.6 MPE ± 5 % for any water temperature for flow rate between Q1 and Q2 (excluded)	MI.6 MPE ± 5 % for any water temperature for flow rate between Q1 and Q2 (excluded)	4.1	Not addressed
MI.6 Non exploitation of MPE	(see: Directive 137/2009/EC Requirements below)		
MI.7.1.1 Electromagnetic	MI.7.1.1 Electromagnetic	4.1	Criteria for the selection

immunity	immunity		
MI.7.1.2 Condition after electromagnetic disturbance	MI.7.1.2 Condition after electromagnetic disturbance	4.1	Criteria for the selection
MI 7.1.3 Critical change value	MI 7.1.3 Critical change value	4.1	Criteria for the selection
MI 7.2.1 Variation of measurement after durability	MI 7.2.1 Variation of measurement after durability	4.1	Criteria for the selection
MI 7.2.2 Error of indication after durability	MI 7.2.2 Error of indication after durability	4.1	Criteria for the selection
MI.8.1 Meter able to be installed in defined position	MI.8.1 Meter able to be installed in defined position	6.2.6	Addressed
MI.8.2 Meter is not designed to measure reverse flow	MI.8.2 Meter is not designed to measure reverse flow	8.3.2	Addressed
MI.9 Cubic metre	MI.9 Cubic metre	4.1	Criteria for the selection
MI 10 Putting into use	MI 10 Putting into use	6.2.6 and 8.3.2 and I.7	Addressed
	Directive 137/2009/EC Requirements	Clause(s)/subclause(s) of this European Standard	Qualifying remarks/Notes
	MI 001 6a Exploitation of MPE	Not addressed in part 5	Not addressed

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL STANDARD

ISO 4064-5

First edition
2014-06-01

Water meters for cold potable water and hot water —

Part 5: Installation requirements

Compteurs d'eau potable froide et d'eau chaude —

Partie 5: Exigences d'installation

Reference number
ISO 4064-5:2014(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2, www.iso.org/directives.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received, www.iso.org/patents.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

The committee responsible for this document is ISO/TC 30, *Measurement of fluid flow in closed conduits*, Subcommittee SC 7, *Volume methods including water meters*. It supersedes ISO 4064-2:2005, which has been technically revised.

ISO 4064 consists of the following parts, under the general title *Water meters for cold potable water and hot water*:

— *Part 1: Metrological and technical requirements*

— *Part 2: Test methods*

— *Part 3: Test report format*

— *Part 4: Non-metrological requirements not covered in* ISO 4064-1

— *Part 5: Installation requirements*

INTERNATIONAL STANDARD **ISO 4064-5:2014(E)**

Water meters for cold potable water and hot water —

Part 5:
Installation requirements

1 Scope

This part of ISO 4064 applies to water meters used to meter the volume of cold potable water and hot water flowing through a fully charged, closed conduit. These water meters incorporate devices which indicate the integrated volume.

This part of ISO 4064 specifies criteria for the selection of single, combination and concentric water meters, associated fittings, installation, special requirements for meters, and the first operation of new or repaired meters to ensure accurate constant measurement and reliable reading of the meter.

In addition to meters based on mechanical principles, this part of ISO 4064 also applies to water meters based on electrical or electronic principles, and to water meters based on mechanical principles incorporating electronic devices, used to measure the volume of cold potable water and hot water. It also applies to electronic ancillary devices. Ancillary devices are optional. However, national or international regulations may make some ancillary devices mandatory in relation to the utilization of the water meter.

The recommendations of this part of ISO 4064 apply to water meters, irrespective of technology, defined as integrating measuring instruments continuously determining the volume of water flowing through them.

NOTE Any national regulations apply in the country of use.

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.

ISO 4064-1:2014|OIML R 49-1:2013, Water meters for cold potable water and hot water — Part 1: Metrological and technical requirements

ISO 6817, *Measurement of conductive liquid flow in closed conduits — Method using electromagnetic flowmeters*

