ISO/FDIS 4064-3:~~2024(en)~~

ISO/TC 30/SC 7

~~Fifth edition~~

~~Date: 2024-07-13~~

Secretariat: BSI

Date: 2024-xx

Water meters for cold potable water and hot water —

Part 3: Test report format

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

Partie 3: Format du rapport ~~d'essais~~d'essai

FDIS stage

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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 document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at ~~www.iso.org/patents~~.www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see ~~www.iso.org/iso/foreword.html~~www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 30, *Measurement of fluid flow in closed conduits*, Subcommittee SC 7, *Volume methods including water meters* and OIML Technical Subcommittee TC 8/SC 5 *Water meters*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 92, *Test methods and equipment for cold water meters*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition of ISO 4064-3 cancels and replaces the fourth edition (ISO 4064-3:2014), which has been technically revised.

This edition of ISO 4064-3 is identical to the corresponding edition of OIML R 49-3 and OIML R49-4, which will be submitted for approval for final publication by the International Committee of Legal Metrology at its 59th meeting in October 2024. It will be submitted to the International Conference on Legal Metrology in 2025 for formal sanction.

A list of all parts in the ISO 4064 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at ~~www.iso.org/members.html~~www.iso.org/members.html.

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Introduction

Implementation of this test report format is informative with regard to the implementation of ISO 4064-1~~:2024~~:— and ISO 4064-2~~:2024~~:— in national regulations; however, its implementation is required within the framework of the OIML Certificate System for Measuring Instruments [ISO 4064-2~~:2024~~:—, 11.1~~.~~].

~~Clause 4~~Clause 4 shows the required format of a type evaluation report for a complete or combined water meter.

A type evaluation report for a separable calculator (including indicating device) or a measurement transducer (including flow or volume sensor) requires a similar format. However, some modifications to the tables may be required because a large number of variations in the design of these separable units is possible.

Some examples of tables for presenting the test results for separable units are shown in ~~Clause 5~~Clause 5 for initial verifications. These tables can also be adapted for type evaluation reports.

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Water meters for cold potable water and hot water —

Part 3:
Test report format

1 Scope

This document specifies a test report format to be used in conjunction with ISO 4064-1:2024, OIML R 49-1:2024 and ISO 4064-2:2024, OIML R 49-2:2024 for water meters for cold potable water and hot water.

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.

<std>ISO 4064-1:2024, *OIML R 49-1:2024, Water meters for cold potable water and hot water — Part 1: Metrological and technical requirements*</std>

<std>ISO 4064-2:2024, *OIML R 49-2:2024, Water meters for cold potable water and hot water — Part 2: Test methods*</std>

ISO 4064-1:—, *Water meters for cold potable water and hot water — Part 1: Metrological and technical requirements*

ISO 4064-2:—, *Water meters for cold potable water and hot water — Part 2: Test methods*

3 Terms, definitions, symbols, and abbreviated terms

For the purposes of this document, the terms and definitions given in ISO 4064-1, OIML R 49-1 apply.

Some symbols and abbreviated terms used in the tables are as follows.

+	pass
–	fail
n/a	not applicable
EUT	equipment under test
H	horizontal
MAP	maximum admissible pressure
MAT	maximum admissible temperature
MPE	maximum permissible error
V	vertical

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4 Type evaluation report

4.1 General

For each examination and test the checklist shall be completed according to this example:

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+	−	
×		Pass
	×	Fail
n/a	n/a	Not applicable

4.2 Information concerning the type

4.2.1 General

Application number: _____

Applicant: _____

Authorized representative: _____

Address: _____
_____
_____
_____

Testing laboratory: _____

Authorized representative: _____

Address: _____
_____
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_____

4.2.2 Model submitted

New model: _____

Variant of approved model(s):

Approval number: _____

Variation of approved model: _____

See Table 1.

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See Table 1.

Table 1 — Model submitted

Submitted for approval tests	Yes[a]	No[a]	Remarks
Mechanical water meter (complete)			
Mechanical water meter (combined)			
Electronic water meter (complete)			
Electronic water meter (combined)			
Family of water meters			
Separable calculator (including indicating device)			
Separable measurement transducer (including flow or volume sensor)			
Supplementary electronic device(s) for testing (permanently attached to meter)			
Supplementary electronic device(s) for data transmission (permanently attached to meter)			
Supplementary electronic device(s) for testing (temporarily attached to meter)			
Supplementary electronic device(s) for data transmission (temporarily attached to meter)			
Ancillary devices			

[a] Tick as appropriate.

4.2.3 Mechanical water meter (complete or combined)

Manufacturer: _____

Model number: _____

Type details:

Q_1 _____ m³/h

Q_2 _____ m³/h

Q_3 _____ m³/h

Q_4 _____ m³/h

Q_3/Q_1 _____

for combination meters

	Q_{x1}	_____ m³/h
	Q_{x2}	_____ m³/h
	Measuring principle:	_____
	Accuracy class:	_____
	Temperature class:	_____

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	Environmental class:	_____
	Electromagnetic environment:	_____
	Maximum admissible temperature:	_____ °C
	Maximum admissible pressure:	_____ MPa (____ bar)
	Orientation limitation:	_____
	Pressure loss class:	
	Reverse flow: a) ~~a)~~ Meters designed to measure reverse flow b) ~~b)~~ Meters not designed to measure reverse flow c) ~~c)~~ Meters which prevent reverse flow	

EUT testing requirements (ISO 4064-2:~~2024~~ | OIML R 49-2:~~2024,~~ 8.1.8):

Category: _____

Case: _____

Installation details:

Connection type (flange, screw thread, concentric manifold): _____

Minimum straight length of inlet pipe: _____ mm

Minimum straight length of outlet pipe: _____ mm

Flow conditioner (details if required): _____

Mounting: _____

Orientation: _____

Other relevant information: _____

If a family of meters is submitted, the details in this subclause are to be given for each size of water meter.

4.2.4 Electronic water meter (complete or combined)

Manufacturer: _____

Model number: _____

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Type details:

Q_1 _____ m³/h

Q_2 _____ m³/h

Q_3 _____ m³/h

Q_4 _____ m³/h

Q_3/Q_1 _____

Maximum sampling interval in user mode: _____ s

for combination meters

	Q_{x1}	_____ m³/h
	Q_{x2}	_____ m³/h
	Measuring principle:	_____
	Accuracy class:	_____
	Temperature class:	_____
	Environmental class:	_____
	Electromagnetic environment:	_____
	Maximum admissible temperature:	_____ °C
	Maximum admissible pressure:	_____ MPa (____ bar)
	Orientation limitation:	_____
	Pressure loss class:	
	Reverse flow: a) ~~a)~~ Meters designed to measure reverse flow b) ~~b)~~ Meters not designed to measure reverse flow c) ~~c)~~ Meters which prevent reverse flow	
	Software version (if applicable):	

EUT testing requirements (ISO 4064-2:~~2024~~: OIML R 49-2:~~2024,~~ 8.1.8):

Category: _____

Case: _____

Installation details (mechanical):

Connection type (flange, screw thread, concentric manifold): _____

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Minimum straight length of inlet pipe: _____ mm

Minimum straight length of outlet pipe: _____ mm

Flow conditioner (details if required): _____

Mounting: _____

Orientation: _____

Other relevant information: _____

Installation details (electrical):

Wiring instructions: _____

Mounting arrangement: _____

Orientation limitations: _____

Power supply:

Type (battery, mains AC, mains DC): _____

U_{max}: _____ V

U_{min}: _____ V

Frequency: _____ Hz

If a family of meters is submitted, the details in this subclause are to be given for each size of water meter.

4.2.5 Separable calculator (including indicating device)

Manufacturer: _____

Model number: _____

Type details:

Q_1 _____ m³/h

Q_2 _____ m³/h

Q_3 _____ m³/h

Q_4 _____ m³/h

Q_3/Q_1 _____

for combination meters

	Q_{x1}	_____ m³/h
	Q_{x2}	_____ m³/h
	Measuring principle:	_____
	Accuracy class:	_____

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	Temperature class:	_____
	Environmental class:	_____
	Electromagnetic environment:	_____
	Maximum admissible temperature:	_____°C
	Maximum admissible pressure:	_____MPa (____ bar)
	Orientation limitation:	_____
	Pressure loss class:	
	Reverse flow: a) ~~a)~~ Meters designed to measure reverse flow b) ~~b)~~ Meters not designed to measure reverse flow c) ~~c)~~ Meters which prevent reverse flow	
	Software version (if applicable):	

EUT testing requirements (ISO 4064-2:~~2024~~: — OIML R 49-2:~~2024~~: —, 8.1.8):

Category: _____

Case: _____

Maximum relative error specified by the manufacturer:

	Lower flow rate zone, $Q_1 \leq Q < Q_2$:	_____%
	Upper flow rate zone, $Q_2 \leq Q \leq Q_4$:	_____%

Installation details (electrical):

Wiring instructions: _____

Mounting arrangement: _____

Orientation limitations: _____

Power supply:

Type (battery, mains AC, mains DC): _____

U_{max}: _____ V

U_{min}: _____ V

Frequency: _____ Hz

Approval number(s) of compatible measurement transducer(s) (including flow or volume sensor): _____

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4.2.6 Separable measurement transducer (including flow or volume sensor)

Manufacturer: _____

Model number: _____

Type details:

Q_1 _____ m³/h

Q_2 _____ m³/h

Q_3 _____ m³/h

Q_4 _____ m³/h

Q_3/Q_1 _____

for combination meters

	Q_{x1}	_____ m³/h
	Q_{x2}	_____ m³/h
	Measuring principle:	_____
	Accuracy class:	_____
	Temperature class:	_____
	Environmental class:	_____
	Electromagnetic environment:	_____
	Maximum admissible temperature:	_____°C
	Maximum admissible pressure:	_____MPa (____ bar)
	Orientation limitation:	_____

EUT testing requirements (ISO 4064-2:2024: —|OIML R 49-2:2024, —, 8.1.8):

Category: _____

Case: _____

Maximum relative error specified by the manufacturer:

	Lower flow rate zone, $Q_1 \leq Q < Q_2$:	_____%
	Upper flow rate zone, $Q_2 \leq Q \leq Q_4$:	_____%

Installation details (mechanical):

Connection type (flange, screw thread, concentric manifold): _____

Minimum straight length of inlet pipe: _____mm

Minimum straight length of outlet pipe: _____mm

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