



**ISO 4064-3**

**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'essai*

**Fifth edition  
2024-12**

This is a preview of ISO 4064-3:2024. [Click here to purchase the full version from the ANSI store.](#)



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms, definitions, symbols, and abbreviated terms</b> .....	<b>1</b>
<b>4 Type evaluation report</b> .....	<b>1</b>
4.1 General.....	1
4.2 Information concerning the type.....	2
4.2.1 General.....	2
4.2.2 Model submitted.....	2
4.2.3 Mechanical water meter (complete or combined).....	3
4.2.4 Electronic water meter (complete or combined).....	4
4.2.5 Separable calculator (including indicating device).....	6
4.2.6 Separable measurement transducer (including flow or volume sensor).....	7
4.2.7 Supplementary electronic device(s) used for testing (permanently attached to meter).....	9
4.2.8 Supplementary electronic device(s) used for data transmission (permanently attached to meter).....	9
4.2.9 Supplementary electronic device(s) used for testing (temporarily attached to meter).....	10
4.2.10 Supplementary electronic device(s) used for data transmission (temporarily attached to meter).....	10
4.2.11 Ancillary devices.....	10
4.2.12 Documents concerning the type.....	11
4.3 General information concerning the test equipment.....	11
4.4 Check list for water meter examinations and performance tests.....	12
4.4.1 Check list for water meter examinations.....	12
4.4.2 Checklist for water meter performance tests.....	16
4.5 Type evaluation tests (for all water meters).....	21
4.5.1 Static pressure test (ISO 4064-2:2024 OIML R 49-2:2024, 7.3).....	21
4.5.2 Determination of changeover flow rates for combination meters (ISO 4064-2:2024 OIML R 49-2:2024, 7.4.3).....	22
4.5.3 Determination of the intrinsic errors (of indication) and the effects of meter orientation (ISO 4064-2:2024 OIML R 49-2:2024, 7.4.4).....	23
4.5.4 Interchange test on all types of cartridge meters and meters with exchangeable metrological modules (ISO 4064-1:2024 OIML R 49-1:2024, 7.2.7, ISO 4064-2:2024 OIML R 49-2:2024, 7.4.4, 7.4.6).....	25
4.5.5 Water temperature test (ISO 4064-2:2024 OIML R 49-2:2024, 7.5) and overload water temperature test (ISO 4064-2:2024 OIML R 49-2:2024, 7.6).....	27
4.5.6 Water pressure test (ISO 4064-2:2024 OIML R 49-2:2024, 7.7).....	28
4.5.7 Reverse flow test (ISO 4064-2:2024 OIML R 49-2:2024, 7.8).....	29
4.5.8 Pressure-loss test (ISO 4064-2:2024 OIML R 49-2:2024, 7.9).....	30
4.5.9 Flow disturbance tests (ISO 4064-2:2024 OIML R 49-2:2024, 7.10, Annex C).....	31
4.5.10 Durability tests (ISO 4064-2:2024 OIML R 49-2:2024, 7.11).....	33
4.5.11 Static magnetic field test (ISO 4064-2:2024 OIML R 49-2:2024, 7.12, 8.16).....	39
4.5.12 Tests on ancillary devices of a water meter (ISO 4064-2:2024 OIML R 49-2:2024, 7.13).....	40
4.6 Type evaluation tests (for electronic water meters and mechanical water meters with electronic components).....	43
4.6.1 Dry heat (non-condensing) (ISO 4064-2:2024 OIML R 49-2:2024, 8.2).....	43
4.6.2 Cold (ISO 4064-2:2024 OIML R 49-2:2024, 8.3).....	44
4.6.3 Damp heat, cyclic (condensing) (ISO 4064-2:2024 OIML R 49-2:2024, 8.4).....	45
4.6.4 Power supply variation (ISO 4064-2:2024 OIML R 49-2:2024, 8.5).....	46
4.6.5 Vibration (random) (ISO 4064-2:2024 OIML R 49-2:2024, 8.6).....	48

This is a preview of ISO 4064-3:2024. [Click here to purchase the full version from the ANSI store.](#)

	2:2024 OIML R 49-2:2024, 8.8).....	50
4.6.8	Bursts on signal lines (ISO 4064-2:2024 OIML R 49-2:2024, 8.9).....	51
4.6.9	Bursts (transients) on AC and DC mains (ISO 4064-2:2024 OIML R 49-2:2024, 8.10).....	52
4.6.10	Electrostatic discharge (ISO 4064-2:2024 OIML R 49-2:2024, 8.11).....	54
4.6.11	Radiated electromagnetic field (ISO 4064-2:2024 OIML R 49-2:2024, 8.12).....	55
4.6.12	Conducted electromagnetic field (ISO 4064-2:2024 OIML R 49-2:2024, 8.13).....	57
4.6.13	Surges on signal, data and control lines (ISO 4064-2:2024 OIML R 49-2:2024, 8.14) (applicable only for environmental class E2).....	58
4.6.14	Surges on AC and DC mains power lines (ISO 4064-2:2024 OIML R 49-2:2024, 8.15) (applicable only for environmental class E2).....	59
4.6.15	Absence of flow test (ISO 4064-2:2024 OIML R 49-2:2024, 8.17).....	63
<b>5</b>	<b>Initial verification report</b> .....	<b>63</b>
5.1	General.....	63
5.2	Information concerning the EUT verified.....	64
5.3	Initial verification test report (ISO 4064-2:2024 OIML R 49-2:2024, Clause 10).....	65
<b>Annex A</b> (normative)	<b>Template of a list of documents concerning the type (ISO 4064-1:2024 OIML R 49-1:2024, 7.2.9)</b> .....	<b>69</b>

This is a preview of ISO 4064-3:2024. [Click here to purchase the full version from the ANSI store.](#)

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](http://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](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

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

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](http://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, *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 59<sup>th</sup> meeting in October 2024. It will be submitted to the International Conference on Legal Metrology in 2024 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](http://www.iso.org/members.html).

This is a preview of ISO 4064-3:2024. [Click here to purchase the full version from the ANSI store.](#)

Implementation of this test report format is informative with regard to the implementation of ISO 4064-1:2024|OIML R 49-1:2024 and ISO 4064-2:2024|OIML R 49-2:2024 in national regulations; however, its implementation is required within the framework of the OIML Certificate System for Measuring Instruments [ISO 4064-2:2024|OIML R 49-2:2024, 11.1].

[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](#) for initial verifications. These tables can also be adapted for type evaluation reports.