MAURITIAN STANDARD

MS 190-3:2015

(OIML R **35-3,** Edition 2011)

First edition
2015-04-04

Material measures of length for general use.

Part 3: Test report format

ICS 17.040.30

Mauritius Standards Bureau
Moka

Gr

National foreword

This Mauritian Standard is identical with the International Organization of **L**egal Metrology Recommendations, OIML R **35-3,** Edition 2011 (E) - *Material measures of length for general use. Part 3: Test report format.* It was adopted by the Mauritius Standards Bureau on the recommendation of the **Metrology Standards Committee** through its Subcommittee on Dimensional Measurement Equipment and approval of the Standards Council on March 2015. It was notified in the Government Gazette on **04 April 2015.***

For the purposes of this standard the following change should be made:

- wherever the word '*Recommendation*' appears, referring to this standard, it should be read as '*Mauritian Standard'*.

* General Notice No. 622 of 2015

Mauritius Standards Bureau
Villa Road
Moka
Mauritius

Telephone *+ (230) 433 3648*
Fax *+ (230) 433 5051/ 433 5150*
E-mail *msb@intnet.mu*

Contents

Foreword ... 4

Explanatory notes to the Test Report Format ... 5

I Type evaluation report ... 6

1 Information concerning the type ... 6
1.1 General ... 6
1.2 Model submitted ... 6
1.3 Material measures of length (complete) ... 7
1.4 Separate blade ... 8
1.5 Separate case ... 9
1.6 Separate sinker ... 9
1.7 Supplementary readout/display ... 10
1.8 Supplementary electronic sensing device ... 11
1.9 Identification ... 12

2 Documents concerning the type ... 12

3 General information concerning the test equipment ... 12

4 General information concerning simulators ... 12

5 Checklist for measures of length examinations and performance tests ... 13
5.1 Checklist for external examinations ... 13
5.2 Checklist for accuracy tests ... 28
5.3 Checklist for influence factor and disturbance tests for electronic devices ... 29

6 Type evaluation tests (for all measures of length) ... 31
6.1 Datasheet for blade accuracy calculations ... 31
6.2 Scale accuracy and large scale linearity ... 32
6.3 Scale interval accuracy ... 33
6.4 Scale interval linearity ... 33
6.5 Accuracy of other metrological components ... 34
6.6 Indicating devices ... 35

7 Tests for influence factors and disturbances ... 37
7.1 Static temperatures (specified high) ... 37
7.2 Static temperatures (specified low) ... 38
7.3 Damp heat, cyclic (condensing) ... 39
7.4 Mechanical shock ... 40
7.5 Radio-frequency immunity ... 41
7.6 Electrostatic discharge ... 43
7.7 Voltage of battery power source ... 44

II Initial verification report ... 45

1 Information concerning the EUT verified ... 45
2 Initial Verification Test Report ... 46
2.1 Example 1: Approved measure (no ancillary electronic devices) ... 46
2.2 Example 2: Approved measure(with ancillary electronic devices) ... 48

Annex A (Mandatory) – List of documents received from the manufacturer concerning the type ... 50

Annex B (Mandatory) – List of test equipment used in examinations and tests ... 51

Annex C (Mandatory, when applicable) – List of simulators used in examinations and tests ... 52

Foreword

The International Organization of Legal Metrology (OIML) is a worldwide, intergovernmental organization whose primary aim is to harmonize the regulations and metrological controls applied by the national metrological services, or related organizations, of its Member States. The main categories of OIML publications are:

- **International Recommendations (OIML R),** which are model regulations that establish the metrological characteristics required of certain measuring instruments and which specify methods and equipment for checking their conformity. OIML Member States shall implement these Recommendations to the greatest possible extent;
- **International Documents (OIML D),** which are informative in nature and which are intended to harmonize and improve work in the field of legal metrology;
- **International Guides (OIML G),** which are also informative in nature and which are intended to give guidelines for the application of certain requirements to legal metrology; and
- **International Basic Publications (OIML B),** which define the operating rules of the various OIML structures and systems.

OIML Draft Recommendations, Documents and Guides are developed by Project Groups linked to Technical Committees or Subcommittees which comprise representatives from OIML Member States. Certain international and regional institutions also participate on a consultation basis. Cooperative agreements have been established between the OIML and certain institutions, such as ISO and the IEC, with the objective of avoiding contradictory requirements. Consequently, manufacturers and users of measuring instruments, test laboratories, etc. may simultaneously apply OIML publications and those of other institutions.

International Recommendations, Documents, Guides and Basic Publications are published in English (E) and translated into French (F) and are subject to periodic revision.

Additionally, the OIML publishes or participates in the publication of **Vocabularies (OIML V)** and periodically commissions legal metrology experts to write **Expert Reports (OIML E)**. Expert Reports are intended to provide information and advice, and are written solely from the viewpoint of their author, without the involvement of a Technical Committee or Subcommittee, nor that of the CIML. Thus, they do not necessarily represent the views of the OIML.

This publication - reference OIML R 35-3, edition 2011 (E) - was developed by the OIML Technical Subcommittee TC 7 *Measuring instruments for length and associated quantities*. It was approved for final publication by the International Committee of Legal Metrology in 2011.

OIML Publications may be downloaded from the OIML web site in the form of PDF files. Additional information on OIML Publications may be obtained from the Organization's headquarters:

Bureau International de Métrologie Légale
11, rue Turgot - 75009 Paris - France
Telephone: 33 (0)1 48 78 12 82
Fax: 33 (0)1 42 82 17 27
E-mail: biml@oiml.org
Internet: www.oiml.org

Material measures of length for general use
Part 3: Test Report Format

Explanatory notes to the Test Report Format

Implementation of this Test Report Format is informative with regard to the implementation of R 35-1 and R 35-2 in national regulations; however, **its implementation is mandatory within the framework of the OIML Basic Certificate System for OIML Type Evaluation of Measuring Instruments** [R 35-2, 9].

Section I shows the required format of a type evaluation report for a measure of length.

A type evaluation report for a dimensioned case or electronic sensing device 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 measures and ancillary devices are shown in Section II for initial verification reports. These tables may also be adapted for type evaluation reports.

Meaning of symbols:

/ ..... Indication
EUT ..... Equipment Under Test
mpe ..... Maximum permissible error

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

For each test, the “SUMMARY OF TYPE EVALUATION” and the “CHECKLIST” shall be completed according to this example:

	P	F
when the instrument has passed the test:	X	
when the instrument has failed the test:		X
when the test is not applicable:	/	/

P = Passed
F = Failed

The white spaces in boxes in the headings of the report should always be filled according to the following example:

	At start	At end	
Temp.:	20.5	21.1	°C
Rel. h.:			%
Date:	2012-04-20	2012-04-21	yyyy-mm-dd
Time:	16:00:05	16:30:25	hh:mm:ss

where:

Temp. = temperature
Rel.h. = relative humidity

"Date" in the test reports refers to the date on which the test was performed.