

**OIML Member State**  
The Netherlands

Number R49/2013-A-NL1-22.02 revision 1  
Project number 3660690  
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Issuing authority  
Person responsible: NMi Certin B.V.  
M.Ph.D. Schmidt

Applicant and  
Manufacturer Viewshine Metering Ltd.  
Building 6, Moganshan Road  
1418-41 Hangzhou  
P.R. China

Identification of the  
certified type An ultrasonic **water meter**  
Type: U-WR Series

Characteristics See page 2 and further

This OIML Certificate is issued under scheme A.

This Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML Type Evaluation Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

**R 49-1 (2013)** "Water meters intended for the metering of cold potable water and hot water"

Accuracy class 2

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation identified above. This Certificate does not bestow any form of legal international approval.

This certificate and supporting reports comply with the requirements of OIML-CS-PD-07 clause 6.2.

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Type Evaluation Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority **NMi Certin B.V., OIML Issuing Authority NL1**  
18 August 2023

#### Certification Board

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The conformity was established by the results of tests and examinations provided in the associated report(s):

- No. NMI-1900855-01 dated 11 August 2017 that includes 35 pages;
- No. 170301928 / DN 15 / Q3 2,5 dated 11 August 2017 that includes 55 pages;
- No. NMI-2678029-01 dated 8 March 2022 that includes 36 pages.

### Characteristics of the measuring instrument

In Table 1 the general characteristics of the measuring instrument are presented.  
Table 2 gives an overview of the general characteristics of the family of instruments.  
The construction of the measuring instrument is recorded in the Documentation folder no. T11059-3.

**Table 1 General characteristics**

Measuring principle	Ultrasonic flow metering
Accuracy class	2
Environmental class	M1 / O (installed outdoors)
Electromagnetic environment	E1
Temperature range ambient	-25 °C / +55 °C
Water temperature class	T50 (+0,1 °C / +50 °C)
Maximum admissible pressure (MAP)	1,6 MPa (16 bar)
Orientation	All positions (Horizontal, vertical or diagonal)
Flow profile sensitivity class	U0S and D0 (flow straightener + 0 x DN upstream and 0 x DN downstream)
Reverse flow	The sensor is not intended to measure reverse flow
Pressure loss class	$\Delta p$ 63 (0,63 bar)
Power supply	Non-replaceable battery (3,0 – 3,7 V)
Software identification	Version: V2.2 Checksum: 37244 Displayed on water meter as 22 37244

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**Table 2 General characteristics of the family of instruments**

Meter size	Ø in- and outlet [mm]	Flow rates [m <sup>3</sup> /h]				Ratio Q3/Q1
		Minimum Q1	Transitional Q2	Permanent Q3	Overload Q4	
DN15	19	0,00625	0,01	2,5	3,125	400
DN20	24	0,01	0,016	4	5	400

Please note that the flow rates Q1, Q2, Q3 and Q4 can be freely chosen as long as:

- Values Q3 and ratio Q3/Q1 are selected from paragraph 4.1 of OIML R49-1: 2013(E);
- Values mentioned for Q1 and Q2 are minimum values and the ratio Q2/Q1 = 1,6;
- Values mentioned for Q3 and Q4 are maximum values and the ratio Q4/Q3 = 1,25;
- The ratio Q3/Q1 is at least 40.

**Table 3 General characteristics of the indicating device**

Meter size	Indicating range (minimum value) [m <sup>3</sup> ]	Verification scale interval (minimum resolution) [m <sup>3</sup> ]
DN15; DN20	99999,999	0,000001

**Certificate history:**

This revision replaces the previous version.

Revision	Date	Description of the modification
Initial	8 March 2022	-
1	18 August 2023	Addition of a new PCB