

**OIML Member State**

Czech Republic

OIML Certificate No.

R49/2013-A-CZ1-2021.01

Revision 1

OIML CERTIFICATE ISSUED UNDER SCHEME A**OIML Issuing Authority**

Name: Czech Metrology Institute

Address: Okružní 31, 638 00 Brno, Czech Republic

Person responsible: Jan Kalandra

Applicant

Name: Wenling Younio Water Meter Co., Ltd.

Address: No. 1039 Jiulong Av. Chengxi, Wenling, Zhejiang, 317500 Zhejiang, China

Manufacturer

Name: Wenling Younio Water Meter Co., Ltd.

Address: No. 1039 Jiulong Av. Chengxi, Wenling, Zhejiang, 317500 Zhejiang, China

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

water meter - multi jet, dry dial

LXSG-xxE5/RLN1; LXSG-xxE5/S/RLN1; LXSG-xxE5/RLN2; LXSG-xxE5/S/RLN2

Designation of the module *(if applicable)*

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This OIML 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):

OIML R 49

Edition (year): 2013

For accuracy class (if applicable): 2



This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

- No. 0511-ER-0001-21 dated 15 April 2021 that includes 52 pages including annex 1
 - o Test report No. 6015-PT-P5001-21 that includes 53 pages including annex 1
- No. 0511-ER-V003-24 dated 24 January 2024 that includes 61 pages including annex 1
 - o Test report No. 6015-PT-P5002-24 that includes 23 pages including annex 1

The technical documentation relating to the identified type is contained in documentation file:
0511-UL-V003-24

OIML Certificate History

Revision No.	Date	Description of the modification
Addition 0	19.4.2021	Issuing certificate
Addition 1	26 February 2024	Adding dimension DN25 of the type LXSG-25E5/RLN1

The OIML Issuing Authority

RNDr. Pavel Klenovský
Director General

Date: 26 February 2024



Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is 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.

Measuring system description

The water meters type types LXSG-xxE5/RLN1; LXSG-xxE5/S/RLN1; LXSG-xxE5/RLN2; LXSG-xxE5/S/RLN2 are multi jet rotary vane wheel water meters with dry mechanical indicating device types RLN1 and RLN2. The water meters contain following types ('xx' means nominal diameter):

- LXSG-xxE5/RLN1: brass body and the indicating device type RLN1;
- LXSG-xxE5/S/RLN1: plastic body and the indicating device type RLN1;
- LXSG-xxE5/RLN2: brass body and the indicating device type RLN2;
- LXSG-xxE5/S/RLN2: plastic body and the indicating device type RLN2.

The water meters types LXSG-xxE5/RLN1; LXSG-xxE5/S/RLN1; LXSG-xxE5/RLN2; LXSG-xxE5/S/RLN2 consist of a brass (types LXSG-xxE5/RLN1 and LXSG-xxE5/RLN2) or plastic (types LXSG-xxE5/S/RLN1 and LXSG-xxE5/S/RLN2) body with connecting screw threads, an inlet strainer and adjusting screw, a plastic gasket, a wet measuring unit with a plastic distributor with tangential holes and a shaft, a rotary vane wheel and cover plate, a magnetic coupling (wet and dry side), a rubber O-ring and a plastic gasket, a brass (or plastic) ring closing the wet part, two pieces magnetic shields, a mechanical indicating device with pointers and numbered drums, a plastic cover with a plastic lid. The mechanical indicating devices types RLN1 and RLN2 are formed by numbered rollers with seven drums (5 black and 2 red drums) and two pointers. The adjustment is realized by adjusting screw. The access to the adjusting screw is protected by sealed screw.

The water meters types LXSG-xxE5/RLN1; LXSG-xxE5/S/RLN1; LXSG-xxE5/RLN2; LXSG-xxE5/S/RLN2 shall be installed to operate in horizontal position only with the indicating device positioned at the top.

Marking and inscriptions

The water meters types LXSG-xxE5/RLN1; LXSG-xxE5/S/RLN1; LXSG-xxE5/RLN2; LXSG-xxE5/S/RLN2 shall be clearly and indelibly marked with the following information:

- Unit of measurement (m^3)
- Numerical value Q_3 in m^3/h ($Q_3 \times \times$) and the ratio Q_3 / Q
- OIML certificate of conformity number
- Name of trademark of the manufacturer
- Year of manufacture, two last digits of the year of manufacture, or the month and year of manufacture and serial number (as near as possible to the indicating device)
- Direction of flow, by means of an arrow (shown on both sides of the body or on one side only provided the direction of flow arrow is easily visible under all circumstances)
- Maximum admissible pressure ($\text{MAP} \times \times$)
- Letter H↑ (horizontal position with the indicating device at the top)
- The temperature class ($T \times \times$)
- The pressure loss class ($\Delta p \times \times$)
- The installation sensitivity class ($U_x D_x$)

These markings shall comply with the requirements of OIML R 49 and shall be visible without dismantling the water meter after the instrument has been placed on the market or put into use.



Characteristics

Basic technical data of water meters types LXSG-xxE5/RLN1; LXSG-xxE5/S/RLN1; LXSG-xxE5/RLN2; LXSG-xxE5/S/RLN2:

Manufacturer:	Wenling Younio Water Meter Co., Ltd.		
Model number:	LXSG-15E5/RLN1 LXSG-15E5/S/RLN1	LXSG-20E5/RLN1 LXSG-20E5/S/RLN1	LXSG-25E5/RLN1 LXSG-25E5/S/RLN1
Nominal diameter:	15	20	25
Type details:			
Q_1 [m³/h]:	flowrates are shown in Table <i>Basic metrological data (flowrates)</i>		
Q_2 [m³/h]:			
Q_3 [m³/h]:			
Q_4 [m³/h]:			
Q_3/Q_1 :	125; 100; 80; 63; 50; 40		
Q_2/Q_1 :	1.6		
Q_4/Q_3 :	1.25		
Measuring principle:	multijet, dry dial		
Accuracy class:	2		
Maximum permissible error for the lower flowrate zone (MPE_l):	±5 %		
Maximum permissible error for the upper flowrate zone (MPE_u):	±2 % for water having a temperature ≤ 30 °C ±3 % for water having a temperature > 30 °C		
Temperature class:	T30 or T50 for R ≤ 100 T30 for R ≤ 125		
Water pressure class:	MAP10 or MAP16		
Pressure loss class:	ΔP 63		
Environmental class:	-		
Electromagnetic environment:	-		
Maximum admissible temperature [°C]:	50		
Maximum admissible pressure [MPa]:	1.6		
Orientation limitation:	horizontal with the indicating device at the top		
Indicating range [m³]:	99 999		
Resolution of the indicating device [m³]:	0.00005 or 0.00002		
Resolution of the device for rapid testing [dm³]:	66,6666		
EUT testing requirements (OIML R 49-2:2013, 8.1.8):			
Category:	Positive displacement meters and turbine meters		
Case:	A		
Installation details:			
Connection type (screw thread):	G ¾ B	G 1 B	G 1 1/4 B
The installation sensitivity class:	U0 D0		
Minimum straight length of inlet pipe [mm]:	0		



Minimum straight length of outlet pipe [mm]:	0		
Flow conditioner (details if required):	No		
Mounting:	in-line		
Orientation:	H↑ (horizontal with the indicating device at the top)		
Other relevant information:	-		
Length [mm]:	165 or 190	190	260

Manufacturer:	Wenling Younio Water Meter Co., Ltd.	
Model number:	LXSG-15E5/RLN2 LXSG-15E5/S/RLN2	LXSG-20E5/RLN2 LXSG-20E5/S/RLN2
Nominal diameter:	15	20
Type details:		
Q_1 [m³/h]:	flowrates are shown in Table <i>Basic metrological data (flowrates)</i>	
Q_2 [m³/h]:		
Q_3 [m³/h]:		
Q_4 [m³/h]:		
Q_3/Q_1 :	100; 80; 63; 50; 40	
Q_2/Q_1 :	1.6	
Q_4/Q_3 :	1.25	
Measuring principle:	multijet, dry dial	
Accuracy class:	2	
Maximum permissible error for the lower flowrate zone (MPE_l):	±5 %	
Maximum permissible error for the upper flowrate zone (MPE_u):	±2 % for water having a temperature ≤ 30 °C ±3 % for water having a temperature > 30 °C	
Temperature class:	T30 or T50	
Water pressure class:	MAP10 or MAP16	
Pressure loss class:	ΔP 63	
Environmental class:	-	
Electromagnetic environment:	-	
Maximum admissible temperature [°C]:	50	
Maximum admissible pressure [MPa]:	1.6	
Orientation limitation:	horizontal with the indicating device at the top	
Indicating range [m³]:	99 999	
Resolution of the indicating device [m³]:	0.00005 or 0.00002	
Resolution of the device for rapid testing [m³]:	-	
EUT testing requirements (OIML R 49-2:2013, 8.1.8):		
Category:	Positive displacement meters and turbine meters	
Case:	A	
Installation details:		



Connection type (screw thread):	G ¾ B	G 1 B
The installation sensitivity class:	U0 D0	
Minimum straight length of inlet pipe [mm]:	0	
Minimum straight length of outlet pipe [mm]:	0	
Flow conditioner (details if required):	No	
Mounting:	in-line	
Orientation:	H↑ (horizontal with the indicating device at the top)	
Other relevant information:	-	
Length [mm]:	165 or 190	190

Basic metrological data (flowrates)

Manufacturer:	Wenling Younio Water Meter Co., Ltd.									
Model number:	LXSG-15E5/RLN1; LXSG-15E5/S/RLN1; LXSG-15E5/RLN2; LXSG-15E5/S/RLN2									
Nominal diameter:	15									
Q ₁ [m³/h]:	0.063	0.050	0.040	0.031	0.025	0,020	-	-	-	-
Q ₂ [m³/h]:	0.100	0.080	0.063	0.050	0.040	0,032	-	-	-	-
Q ₃ [m³/h]:	2.5	2.5	2.5	2.5	2.5	2.5	-	-	-	-
Q ₄ [m³/h]:	3.13	3.13	3.13	3.13	3.13	3.13	-	-	-	-
Q ₃ /Q ₁ :	40	50	63	80	100	125	-	-	-	-

Manufacturer:	Wenling Younio Water Meter Co., Ltd.									
Model number:	LXSG-20E5/RLN1; LXSG-20E5/S/RLN1; LXSG-20E5/RLN2; LXSG-20E5/S/RLN2									
Nominal diameter:	20									
Q ₁ [m³/h]:	0.100	0.080	0.063	0.050	0.040	0,032	-	-	-	-
Q ₂ [m³/h]:	0.160	0.128	0.102	0.080	0.064	0,051	-	-	-	-
Q ₃ [m³/h]:	4.0	4.0	4.0	4.0	4.0	4.0	-	-	-	-
Q ₄ [m³/h]:	5.0	5.0	5.0	5.0	5.0	5.0	-	-	-	-
Q ₃ /Q ₁ :	40	50	63	80	100	125	-	-	-	-

Manufacturer:	Wenling Younio Water Meter Co., Ltd.									
Model number:	LXSG-25E5/RLN1 LXSG-25E5/S/RLN1									
Nominal diameter:	25									
Q ₁ [m³/h]:	0.1575	0.126	0.1	0.07875	0.063	0.0504	-	-	-	-
Q ₂ [m³/h]:	0.252	0.2016	0.16	0.126	0.1008	0.08064	-	-	-	-
Q ₃ [m³/h]:	6.3	6.3	6.3	6.3	6.3	6.3	-	-	-	-
Q ₄ [m³/h]:	7.875	7.875	7.875	7.875	7.875	7.875	-	-	-	-
Q ₃ /Q ₁ :	40	50	63	80	100	125	-	-	-	-

Securing components and verification marks

The types LXSG-xxE5/RLN1; LXSG-xxE5/S/RLN1; LXSG-xxE5/RLN2; LXSG-xxE5/S/RLN2 meters have to be sealed by connecting the plastic cover to the adjusting screw using a wire with a lead (plastic) seal such that the cover and the adjusting screw cannot be turned without damaging the seal or the sealing wire.

