



**OIML Member State**  
Czech Republic

**OIML Certificate No.**  
R49/2013-A-CZ1-24.04

**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: Hangzhou Laison Technology Co. Ltd.  
Address: No. 525 Xixi Road, Hangzhou, Zhejiang, 310007, China

**Manufacturer**

Name: Hangzhou Laison Technology Co. Ltd.  
Address: No. 525 Xixi Road, Hangzhou, Zhejiang, 310007, China

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

water meter - ultrasonic  
type LXC, Temperature class: T30, T50; accuracy class 2

**Designation of the module** *(if applicable)*

-

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-V006-22 dated 24 June 2024 that includes 47 pages including annex 1
- Test report No. 6015-PT-P5010-24 that includes 78 pages including annex 1, annex 2
- Test report No. 6011-PT-SW006-24 that includes 5 pages including annex 1

The technical documentation relating to the identified type is contained in documentation file:

0511-UL-V006-22

#### OIML Certificate History

Revision No.	Date	Description of the modification
-	1 July 2024	Issuing certificate

#### The OIML Issuing Authority

RNDr. Pavel Klenovský  
Head of Certification Body

Date: 1 July 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 LXC consist of a brass body with screw threads, a pair of ultrasonic transducers and the electronic indicating device. The electronic indicating device is formed by an LCD display which is equipped with a photosensitive button for rapid test. The display shows the delivered volume for forward flow as a default.

The water meters consist of two-parts plastic cover with protruding brass screw threads. The plastic parts are connected by two screws and prepared for ensuring the integrity of water meter.

The water meters type LXC are powered by a permanent battery with voltage 3.6 V and lifetime 10 years. The water meters shall be installed to H↑ horizontal position with the indicating device at the top, H→ horizontal position with the indicating device at the side and V↑ vertical position with flow from bottom to top and with the indicating device at the side.

### Marking and inscriptions

The water meters types LXC shall be clearly and indelibly marked with the following information:

- Un Water meter type
- Unit of measurement (m<sup>3</sup>)
- Numerical value Q<sub>3</sub> in m<sup>3</sup>/h (Q<sub>3</sub> ×.×) and the ratio Q<sub>3</sub> / Q<sub>1</sub>,
- EU-type examination certificate number
- Manufacturer's name, registered trade name or registered trade mark
- Year of manufacture, two last digits of the year of manufacture, or the month and year of manufacture
- Serial number (as near as possible to the indicating device)
- Direction of flow, by means of an arrow (on display)
- Maximum admissible pressure (MAP ××)
- The temperature class (T××)
- The pressure loss class (Δp ××)
- The installation sensitivity class (Ux Dx)
- Power voltage
- Environmental classification
- Electromagnetic environmental class
- Software version
- Hardware version
- Type approval sign according to national regulations

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. Example is in Figure 2.

### Characteristics

Basic technical data of water meters types LXC:

Manufacturer:	Hangzhou Laison Technology Co. Ltd.		
Model name:	LXC		
Nominal diameter:	15	20	25
Type details:			
Q <sub>1</sub> [m <sup>3</sup> /h]:	flowrates are shown in Table <i>Basic metrological data (flowrates)</i>		
Q <sub>2</sub> [m <sup>3</sup> /h]:			
Q <sub>3</sub> [m <sup>3</sup> /h]:			
Q <sub>4</sub> [m <sup>3</sup> /h]:			
Q <sub>3</sub> /Q <sub>1</sub> :	400		
Q <sub>2</sub> /Q <sub>1</sub> :	1.6		

$Q_4/Q_3$ :	1.25		
Measuring principle:	ultrasonic water meter		
Accuracy class:	2		
Maximum permissible error for the lower flowrate zone (MPE <sub>l</sub> ):	±5 %		
Maximum permissible error for the upper flowrate zone (MPE <sub>u</sub> ):	±2 %		
Temperature class:	T30; T50		
Water pressure class:	MAP16		
Pressure loss class:	Δp63		
Reverse flow:	not designed to measure		
Environmental class:	O		
Electromagnetic environment:	E2 or E1		
Maximum admissible temperature [°C]:	50		
Maximum admissible pressure [MPa]:	1.6		
Orientation limitation:	H↑ horizontal position with the indicating device at the top H→ horizontal position with the indicating device at the side V↑ vertical position with flow from bottom to top and with the indicating device at the side		
Indicating range [m <sup>3</sup> ]:	99 999		
Resolution of the indicating device [m <sup>3</sup> ]:	0.000 001		
Resolution of the device for rapid testing [pulse/dm <sup>3</sup> ]:	-		
EUT testing requirements (OIML R 49-2:2013, 8.1.8):			
Category:	Ultrasonic flow meter		
Case:	B		
Installation details:			
Connection type (screw thread):	G ¾"	G 1"	G 1 ¼"
Minimum straight length of inlet pipe [mm]:	150	200	250
Minimum straight length of outlet pipe [mm]:	75	100	125
Flow profile sensitivity class:	U10 D5		
Flow conditioner (details if required):	No		
Mounting:	-		
Orientation:	H↑ horizontal position with the indicating device at the top H→ horizontal position with the indicating device at the side V↑ vertical position with flow from bottom to top and with the indicating device at the side		
Other relevant information:	-		
Length [mm]:	165	195	160
Reed switch power supply (U <sub>max</sub> / I <sub>max</sub> ):	-		
Reed switch K-factor (impulse / L):	-		
Installation details (electrical):			
Wiring instructions:	-		

Mounting arrangement:	-
Orientation limitations:	-
<b>Power supply:</b>	
Type (battery, mains AC, mains DC):	Battery
$U_{\max}$ (V):	3.6
$U_{\min}$ (V):	3.2
Frequency:	-
<i>Minimum battery life time [years]:</i>	10
<i>Software version (of legally relevant SW):</i>	LS 612842
<i>CRC checksum (of legally relevant SW):</i>	82299 4EE2
<b>Information specified by the manufacturer (information in the table below are not certified)</b>	
-	-

Applicable for water meters equipped with electronic ancillary device. Information specified by the manufacturer.

**Securing components and verification marks**

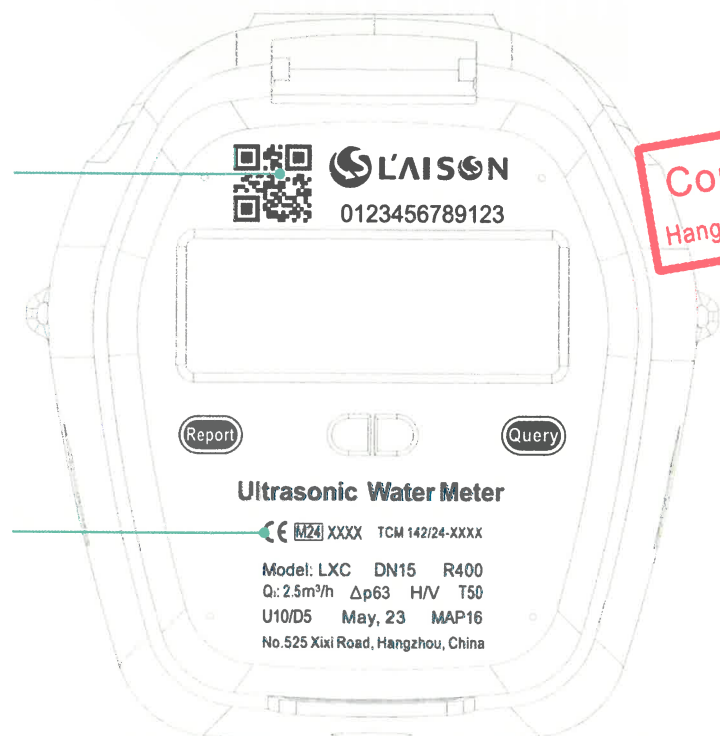
The LXC meters have to be sealed by connecting two plastic rings between the two-parts plastic cover using a wire with a lead seal without damaging the seal or the sealing wire. The location of the seal is described in Figure 1.



Figure 1: The water meter type LXC – view and sealing, example of register:



Figure 2: The water meter type LXC – marking, example of register and display:





Symbol	Meaning
	Strong signal strength, normal communication
	Good signal strength, normal communication
	Poor signal strength, unable to guarantee normal communication
	Data Transfer through LoRaWAN network
	Warning (error) message occur in meter
	Pipe is full of water
	Pipe is empty
	Sufficient battery capacity
	Normal battery capacity
	Low battery capacity alarm
°C	Water temperature
kPa	Water pressure (This feature is not supported )
L	Constant display represents volume unit. Flashing indicates the meter is in verification mode
m <sup>3</sup>	Volume unit
m <sup>3</sup> /h	Flow rate
	Bluetooth (we use it internally as a symbol for Infrared)

	communication ) (This feature is not supported )
	Magnetic interference (This feature is not supported )
	Water leak (This feature is not supported )
	currency symbol (This feature is not supported )
	Valve open (This feature is not supported )
	Valve closed (This feature is not supported )