



OIML Member State
SLOVAKIA

OIML Certificate No.
R49/2013-A-SK1-26.07

OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority

Name: **Slovak Legal Metrology (SLM)**
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Product Certification Body
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Applicant

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Address: Sanchuan Hydraulic Industrial Park, Longgang
Section, Hi-Tech Development Zone, Yingtan,
Jiangxi, 335000, China

Manufacturer

Name: **Sanchuan Wisdom Technology Co., Ltd.**
Address: Sanchuan Hydraulic Industrial Park, Longgang
Section, Hi-Tech Development Zone, Yingtan,
Jiangxi, 335000, China

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

Water meter type **U550 / Q400V**

Designation of the module *(if applicable)*

Ultrasonic water meter with electronic indication device

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



OIML Certificate No. R49/2013-A-SK1-26.07								
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 reports: No. 2026/ER065/SK1 dated 30th July 2026 that includes 17 pages.								
The technical documentation relating to the identified type is contained in documentation file name: „Technical documentation file Sanchuan_U550_Q400V_00“ dated 17th July 2026 that includes 114 pages.								
OIML Certificate History <table><tr><th>Revision No.</th><th>Date</th><th>Description of the modification</th></tr><tr><td>0</td><td>30th July 2026</td><td>Certificate first issued</td></tr></table>			Revision No.	Date	Description of the modification	0	30 th July 2026	Certificate first issued
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Identification, signature and stamp The OIML Issuing Authority  Dušan Šmigura Date: 30th July 2026 								
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1. Designation

The ultrasonic water meter types **U550 / Q400V** (models U550-15K, U550-20K, U550-25K, U550-32K or Q400V) are designed to measure, memorize and display the volume of water passing through the measurement transducers under metering conditions. The water meters are intended for the measurement of the volume of clean water in residential, commercial and light industrial use.

The water meter types U550 / Q400V are compact ultrasonic water meters with an electronic indication device. The measurement is based on the ultrasonic bidirectional transit-time principle. The water meter can be installed in horizontal and vertical positions and is not designed to measure reverse flow.

2. Description

Essential parts of the water meter types U550 / Q400V:

Water meter body:

- the stainless-steel cylindrical body firmly connected together with the plastic housing for the calculator.

Flow sensor:

- two reflection sheets and two ultrasonic transducers at the upstream and downstream of the measurement channel (pipe section) to transmit and receive ultrasonic signals.

Calculator and indication device:

- the plastic housing of the calculator with indication device directly mounted on the flow sensor;
- the PCB board;
- the electronic scrolling LCD display with 9 digits and indication range of 99999,9999 m³;
- the decimal values behind the decimal point are framed around during the displaying of the total consumption (m³);
- one replaceable lithium battery ($U_{\min} = 3,2 \text{ V}$; $U_{\max} = 3,7 \text{ V}$; 15 years battery lifetime) for measuring functions.

Non-essential parts of the water meter types U550 / Q400V:

- filter;
- strainer;
- valve + actuator for valve;
- one replaceable lithium battery for wireless communication functions;
- communication module with optional wireless communication interfaces: LoRaWAN, NB-IoT, GPS, wM-bus.

2.1 Metrological functions

- measuring, memorizing and displaying the volume of water passing through the water meter.

2.2 Operation and presentation of legal data

The legal data available on the electronic indication device (LCD display) in user mode:

- a) the total measured volume of water (0,0001 m³);
- b) flow rate (0,001 m³/h);
- c) checksum;
- d) software version.

The legal data available on the electronic indication device (LCD display) in test mode:

- e) the total measured volume (0,000001 m³);
- f) flow rate (0,001 m³/h);
- g) checksum;
- h) software version.

2.3 Software specification

Software versions	Checksum	Remarks
V1 33460.06	C Fd02Bf8d	-

The software version and checksum can be viewed on LCD display automatic loop.

2.4 Accountable alarms

During the measuring process the calculator and indication device detects automatically if a fault condition occurs and eventually reporting an alarm indication on the display and report to the platform via remote communication. See user manual issued by the manufacturer.

2.5 Integrated equipment and functions

- communication module with optional wireless communication interfaces: LoRaWAN, NB-IoT, GPS, wM-bus;
- valve + actuator for valve.

3. Technical and metrological data

Parameter	Unit	U550-15K / Q400V	U550-20K / Q400V	U550-25K / Q400V	U550-32K / Q400V
Nominal diameter DN	mm	DN15	DN20	DN25	DN32
Permanent flowrate Q ₃	m ³ /h	2,5	4	6,3	10
Minimum flowrate Q ₁	m ³ /h	0,00625 0,00794 0,01 0,0125	0,010 0,0127 0,016 0,02	0,01575 0,02 0,0252 0,0315	0,025 0,03175 0,04 0,05
Transitional flowrate Q ₂	m ³ /h	0,01 0,0127 0,016 0,02	0,016 0,0203 0,0256 0,032	0,0252 0,032 0,04032 0,0504	0,04 0,05079 0,064 0,08
Overload flowrate Q ₄	m ³ /h	3,125	5	7,875	12,5
Ratio Q ₃ /Q ₁	-	400 315 250 200			
Ratio Q ₂ /Q ₁	-	1,6	1,6	1,6	1,6
Connection thread	-	G ¾ B	G1B	G1-1/4B	G1-1/2B
Construction length L	mm	165	190	260	260
Installation orientation	-	H/V			
Water temperature range	°C	0,1 - 50			
Water temperature range class	-	T50, T30			
Maximum admissible pressure (MAP)	bar	16			
Pressure loss	bar	0,63			
Pressure loss class Δp	-	Δp 63			
Ingress Protection (IP) rating	-	IP68			

Parameter	Unit	U550-15K / Q400V	U550-20K / Q400V	U550-25K / Q400V	U550-32K / Q400V
Maximum permissible error in upper flowrates range $Q_2 \leq Q \leq Q_4$	%	± 2 (at $\theta \leq 30^\circ\text{C}$) ± 3 (at $\theta > 30^\circ\text{C}$)			
Maximum permissible error in lower flowrates range $Q_1 \leq Q < Q_2$	%	$\pm 5\%$			
Scale range – normal precision	m^3	0,0001			
Scale range – high precision	m^3	0,000001			
Capacity of calculator – normal mode	m^3	99999,9999			
Capacity of calculator – testing mode	m^3	999,999999			
Accuracy class	-	2			
Mechanical class	-	M1			
Environmental class	-	O			
Electromagnetic class	-	E1			
Climatic class	$^\circ\text{C}$	-25 to +70			
Flow profile sensitivity class	-	U0D0			
Battery	-	One replaceable lithium battery ($U_{\min} = 3,2 \text{ V}$, $U_{\max} = 3,7 \text{ V}$) 15 years battery lifetime			

4. Marking and inscriptions

The following data shall be marked on the water meter:

- name or trademark of the manufacturer;
- type name of the water meter;
- unit of measurement m^3 ;
- year of manufacture, the last two digits of the year of manufacture, or the month and year of manufacture;
- serial number (as near as possible to the indicating device);
- flowrate Q_3 and ratio Q_3/Q_1 indicated as (R) followed by the ratio value;
- the flow direction shall be marked on a water meter's body in form of an arrow;
- maximum admissible pressure (MAP);
- temperature class (T);
- pressure loss class (Δp);
- the latest date by which the battery shall be replaced;
- environmental classification;
- installation sensitivity class;
- electromagnetic environmental class;
- type approval sign according to national regulations.

Designation of trademarks on the water meters

The manufacturer uses following trademarks on the water meter:

 **SANCHUAN**

or

Honeywell

5. Security measures

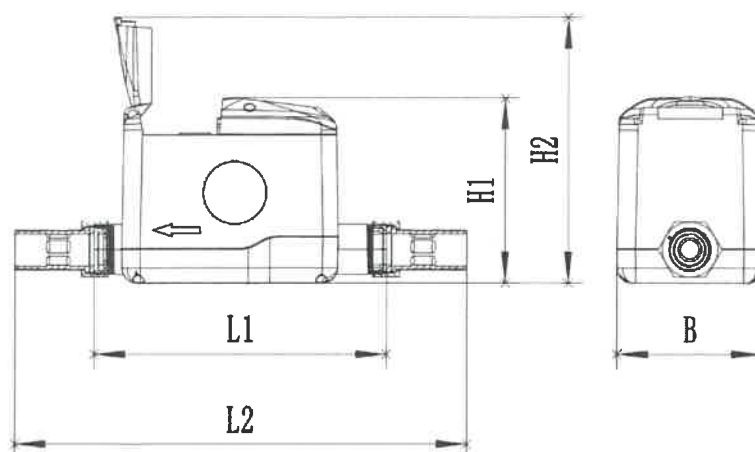
The water meter shall be protected against unauthorised manipulation and opening by two seals securing the connection between upper and lower covers above the water meter (Fig. 3).

6. Figures



Fig 1: Illustrative views of the water meter types U550 / Q400V





Type	DN size	L1 (mm)	L2 (mm)	H1 (mm)	H2 (mm)	B (mm)	Thread (mm)
U550-15K / Q400V	DN15	165	261	123	175	94,5	G ¾
U550-20K / Q400V	DN20	190	296	123	175	94,5	G1
U550-25K / Q400V	DN25	260	382	127	179	94,5	G1 ¼
U550-32K / Q400V	DN32	260	386	136	188	94,5	G1 ½

Fig. 2: Dimensions of the water meters types U550 / Q400V

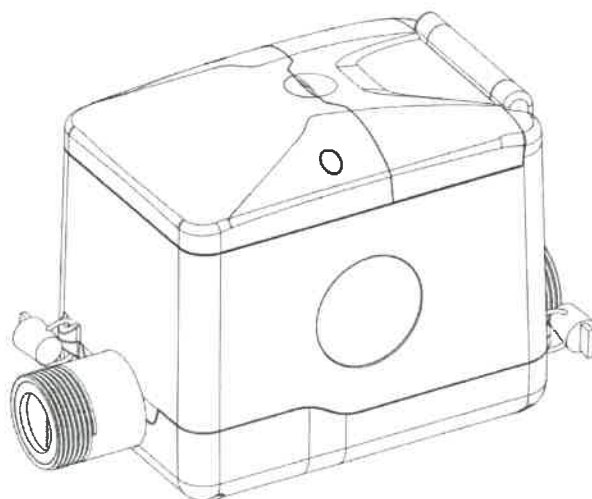
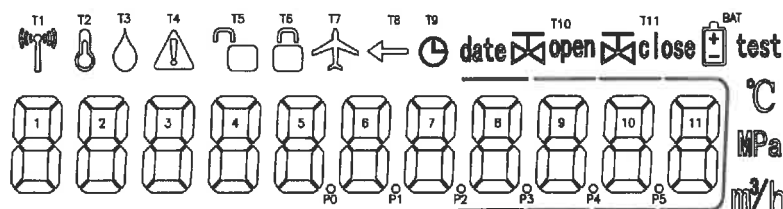


Fig. 3: Sealing of the water meters types U550 / Q400V

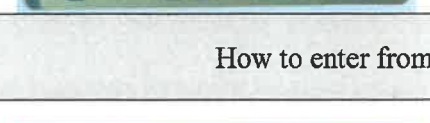




Icon No.	Meaning
T1	Wireless icon. When this icon lights up, it indicates successful wireless communication.
T2	Temperature icon. When this icon lights up, it indicates that the current display content on the LCD screen is temperature.
T3	The water drop icon. When the icon lights up, it indicates that the water flow inside the water meter is flowing and the water meter is measuring.
T4	Alarm icon. If the icon flash, a fault exists.
T5	Unlock icon. When this icon lights up, it indicates that the water meter parameter information can be read through infrared communication.
T6	Lock icon. When this icon lights up, it indicates that the water meter parameter information cannot be read through infrared communication.
T7	Flight mode. When this icon lights up, it indicates that it is currently in-flight mode - the water meter is in sleep and power-saving mode, wireless communication is prohibited, and it can only work normally after being activated by pressing the button.
T8	The reverse flow icon. When this icon lights up, it indicates that the water meter is in a continuous reverse flow state.
T9	Time icon - when this icon lights up, it indicates that the current display content on the LCD screen is time.
date	Date icon - when this icon lights up, it indicates that the current display content on the LCD screen is the date.
T10	Valve open icon - the light indicates that the valve is currently open.
T11	Valve close icon - the light indicates that the valve is currently closed.
BAT	Battery icon - the indicator is on, it indicates that the current metering board is in a low power state.
test	Test icon – when turned on, it indicates the water meter is currently in test mode.
°C	Temperature unit icon. When this icon lights up, it indicates that the current display content on the LCD screen is temperature in degrees Celsius.
MPa	Pressure unit icon. When this icon lights up, it indicates that the current display content on the LCD screen is pressure in mega Pascals.
m³/h	Instantaneous flowrate unit icon. When this icon lights up, it indicates that the current display content on the LCD screen is instantaneous flowrate in cubic meters per hour.

Fig. 4: LCD display icons – description on water meter types U550 / Q400V



Data displayed on LCD in User mode			
No.	Display content	Description	Unit
1		Total consumption of water	m ³
2		Legal software version number	-
3		Checksum	-
4		Quota water volume	m ³
5		Remaining quota water volume	m ³
6		Remaining water volume	m ³
7		Full eights test	-
8		Blank screen test	-
9		Flowrate	m ³ /h
10		Water temperature	°C
11		Date	-
How to enter from User mode to Test mode			
12		Testing mode is activated by long press of the button. The text "test" appears on the LCD display after successful entry to the testing mode.	-

Data displayed on LCD in Test mode			
1		Total consumption of water	m ³
2		Legal software version number	-
3		Checksum	-
4		Quota water volume	m ³
5		Remaining quota water volume	m ³
6		Remaining water volume	m ³
7		Flowrate	m ³ /h
8		Water temperature	°C
9		Date	-

Fig. 5: Data displayed on LCD in user mode and test mode on water meter types U550 / Q400V

