OIML Member State SLOVAKIA	**OIML Certificate No.** **R49/2013-A-SK1-26.01**

OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority

Name: **Slovak Legal Metrology (SLM)**
Address: Geologická 9966/1,
821 06 Bratislava-Podunajské Biskupice, Slovakia
Product Certification Body
Hviezdoslavova 31
974 01 Banská Bystrica, Slovakia
Person responsible: Ing. Dušan Šmigura, PhD., Director of PCB

Applicant

Name: **Huizhong Instrumentation Co., Ltd.**
Address: No.126 West Gaoxin Road, High-Tech
Industrial Development Zone
Tangshan 063020, China

Manufacturer

Name: **Huizhong Instrumentation Co., Ltd.**
Address: No.126 West Gaoxin Road, High-Tech
Industrial Development Zone
Tangshan 063020, China

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

Water meter type **SCL-61D**

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

SLOVAK LEGAL METROLOGY SLM

OIML Certificate No.
R49/2013-A-SK1-26.01

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. 2026/ER031/SK1 dated 15th January 2026 that includes 17 pages.

The technical documentation relating to the identified type is contained in documentation file name: „Technical documentation file Huizhong_SCL-61D_00" dated 15th January 2026 that includes 149 pages.

OIML Certificate History

Revision No.	Date	Description of the modification
0	15th January 2026	Certificate first issued
-	-	-

Identification, signature and stamp

The OIML Issuing Authority

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Dušan Šmigura

Date: 15th January 2026

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.

1. Designation

The ultrasonic water meter type **SCL-61D** is designed to measure, memorise and display the volume of water passing through the measurement transducer at metering conditions. The water meter is intended for the measurement of volume of clean water in residential use.

The water meter type SCL-61D is compact ultrasonic water meter with electronic indication device. The measurement is based on ultrasonic bidirectional transit-time principle.
The flow is measured by the difference in time-of-flight of ultrasonic pulses with flow (downstream) and opposite to flow (upstream).

The water meter type SCL-61D can be installed to operate in all positions. The water meter is not designed to measure the reverse flow.

2. Description

Essential parts of the water meter type SCL-61D:

Flow sensor:
- cylindrical stainless steel meter housing with connecting flanges;
- connecting threads can be configured as required;
- eight transducers form four acoustic paths that transmit and receive ultrasonic signals upstream and downstream of the measuring flow channel (pipe section);

Calculator and indication device:
- metal lower shell of the calculator with indication device directly mounted on the flow sensor;
- movement PCBA board used for display communication with LCD display;
- flow measurement PCBA;
- replaceable lithium-ion battery, Umax=3,7 V, lifetime 13 years;
- electronic LCD display with:
  - 9 digits on the upper line and indication range of 99999,9999 m^3, (only 8 digits will be displayed during actual use), the e sub-multiples of a cubic meter are indicated on the display with the frame;
  - 6 digits on the lower line and indication range 999999 (m^3/h);
- magnetic induction button for scrolling of display menu;
- magnet for scrolling of display.

Non-essential parts of the water meter type SCL-61D:
- thermistor;
- photoelectric interface used for infrared communication;
- communication modes RS485, M-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 measurement values are presented by means of the electronic LCD display by magnetic button:

a) the measured volume on the upper line (9999999,9 m^3);
b) the measurement flow rate, on the lower line (m^3/h);

c) other display options:
- cumulative effective operating time (h);
- temperature (°C);
- year/month/day (YY/MM/DD);
- hout/minute/second (HH/MM/SS);
- software version number;
- checksum number;
- display test (an "eights" test);
- display test (a "blanks" test)
- the measured volume on the upper line in test mode (9999,9999 m^3).

2.3 Accountable alarms

The meaning of the main menu fault code screen (in hexadecimal)

Fault code	Meaning
00	No faults
01	Low battery voltage
06	Storage failure
10	Low temperature or malfunction of the temperature sensor
20	High temperature
11	Low battery voltage Low temperature or malfunction of the temperature sensor
21	Low battery voltage High temperature

If a fault condition occurs and the measurement stops, follow the user manual issued by the manufacturer.

2.4 Integrated equipment and functions

- communication modes RS485, M-Bus.

3. Technical and metrological data

Table 1a) Water meters SCL-61D, R250

Characteristics	Unit	SCL-61D					
Nominal diameter DN	mm	50	65	80	100	125	150
Permanent flowrate Q_3	m^3/h	40	63	100	160	250	400
Minimum flowrate Q_1	m^3/h	0,16	0,252	0,4	0,64	1	1,6
Transitional flowrate Q_2	m^3/h	0,256	0,4032	0,64	1,024	1,6	2,56
Overload flowrate Q_4	m^3/h	50	78,75	125	200	312,5	500
Ratio Q_3/Q_1	R	250					
Construction length L	mm	200	200	225	250	250	300

Table 1b) Water meters SCL-61D, R400

Characteristics	Unit	SCL-61D					
Nominal diameter DN	mm	50	65	80	100	125	150
Permanent flowrate Q_3	m^3/h	25	40	63	100	160	250
Minimum flowrate Q_1	m^3/h	0,063	0,1	0,158	0,25	0,4	0,625
Transitional flowrate Q_2	m^3/h	0,1	0,16	0,252	0,4	0,64	1
Overload flowrate Q_4	m^3/h	31,25	50	78,75	125	200	312,5
Ratio Q_3/Q_1	R	400					
Construction length L	mm	200	200	225	250	250	300

Table 1c) Water meters SCL-61D, R400

Characteristics	Unit	SCL-61D					
Nominal diameter DN	mm	50	65	80	100	125	150
Permanent flowrate Q_3	m^3/h	40	63	100	160	250	400
Minimum flowrate Q_1	m^3/h	0,1	0,158	0,25	0,4	0,625	1
Transitional flowrate Q_2	m^3/h	0,16	0,252	0,4	0,64	1	1,6
Overload flowrate Q_4	m^3/h	50	78,75	125	200	312,5	500
Ratio Q_3/Q_1	R	400					
Construction length L	mm	200	200	225	250	250	300

Table 1d) Water meters SCL-61D, R500

Characteristics	Unit	SCL-61D					
Nominal diameter DN	mm	50	65	80	100	125	150
Permanent flowrate Q_3	m^3/h	25	40	63	100	160	250
Minimum flowrate Q_1	m^3/h	0,050	0,080	0,126	0,200	0,320	0,500
Transitional flowrate Q_2	m^3/h	0,080	0,128	0,200	0,320	0,512	0,800
Overload flowrate Q_4	m^3/h	31,25	50	78,75	125	200	312,5
Ratio Q_3/Q_1	R	500					
Construction length L	mm	200	200	225	250	250	300

Table 1e) Water meters SCL-61D, R500

Characteristics	Unit	SCL-61D					
Nominal diameter DN	mm	50	65	80	100	125	150
Permanent flowrate Q_3	m^3/h	40	63	100	160	250	400
Minimum flowrate Q_1	m^3/h	0,08	0,126	0,2	0,32	0,5	0,8
Transitional flowrate Q_2	m^3/h	0,128	0,2	0,32	0,512	0,8	1,28
Overload flowrate Q_4	m^3/h	50	78,75	125	200	312,5	500
Ratio Q_3/Q_1	R	500					
Construction length L	mm	200	200	225	250	250	300

Table 1f) Water meters SCL-61D, R630

Characteristics	Unit	SCL-61D					
Nominal diameter DN	mm	50	65	80	100	125	150
Permanent flowrate Q_3	m^3/h	40	63	100	160	250	400
Minimum flowrate Q_1	m^3/h	0,063	0,100	0,159	0,254	0,397	0,635
Transitional flowrate Q_2	m^3/h	0,102	0,160	0,254	0,407	0,635	1,016
Overload flowrate Q_4	m^3/h	50	78,75	125	200	312,5	500
Ratio Q_3/Q_1	R	630					
Construction length L	mm	200	200	225	250	250	300

Table 1g) Water meters SCL-61D, R800

Characteristics	Unit	SCL-61D					
Nominal diameter DN	mm	50	65	80	100	125	150
Permanent flowrate Q_3	m^3/h	40	63	100	160	250	400
Minimum flowrate Q_1	m^3/h	0,050	0,079	0,125	0,200	0,313	0,500
Transitional flowrate Q_2	m^3/h	0,080	0,126	0,200	0,320	0,500	0,800
Overload flowrate Q_4	m^3/h	50	78,75	125	200	312,5	500
Ratio Q_3/Q_1	R	800					
Construction length L	mm	200	200	225	250	250	300

Table 1h) Other technical parameters of water meters SCL-61D, R250 /R400 / R500 / R630 / R800

Characteristics	Unit	SCL-61D
Nominal diameter DN	mm	50/65/80/100/125/150
Ratio Q_2/Q_1	-	1,6
Connection	mm	flange / thread
Installation orientation	-	all
Water temperature range (temperature class)	°C	0,1 to 50 (T30, T50)
Maximum admissible pressure MAP	bar	10 / 16
Pressure loss class Δp	bar -	0,10 Δp 10
MPE in upper flowrates range $Q_2 \leq Q \leq Q_4$	%	± 2 (at $\Theta \leq 30°C$) ± 3 (at $\Theta > 30°C$)
MPE in lower flowrates range $Q_1 \leq Q < Q_2$	%	± 5
Capacity of calculator – normal mode	m^3	9999999,9

Characteristics	Unit	SCL-61D
Nominal diameter DN	mm	50/65/80/100/125/150
Capacity of calculator – test mode	m^3	9999,9999
Scale interval – normal mode	m^3	0,1
Scale interval – test mode	m^3	0,0001
Accuracy class	-	2
Mechanical class	-	M1
Climatic class	°C	- 25 to + 55
Electromagnetic class	-	E2
Climatic and mechanical environmental conditions (class) according to EN ISO 4064-1/OIML R 49-1	-	O (fixed meters installed outdoors)
Flow profile sensitivity class	-	U0D0
Battery	-	replaceable lithium-ion-battery, Umax=3,7 V, life time 13 years

4. Marking and inscriptions

The following data shall be marked on the water meter:

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

Designation of trademarks on the water meters

The manufacturer uses following trademarks on the water meter:

HUIZHONG

HUI ZHONG

5. Security measures

The water meter types SCL-61D shall be protected against unauthorized manipulation and opening by:

- by two lead seal ensuring the connection of the lower cover (metal lower casing) with the cover of marking plate (transparent casing). (Fig: 4).

6. Figures

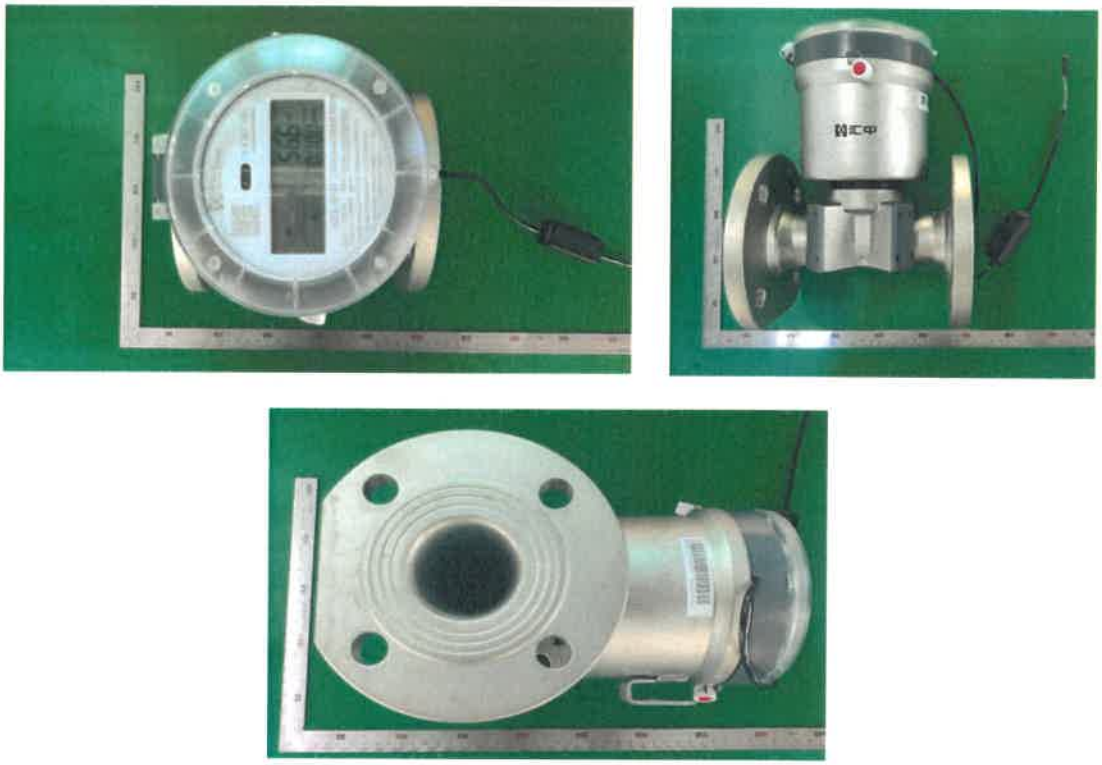
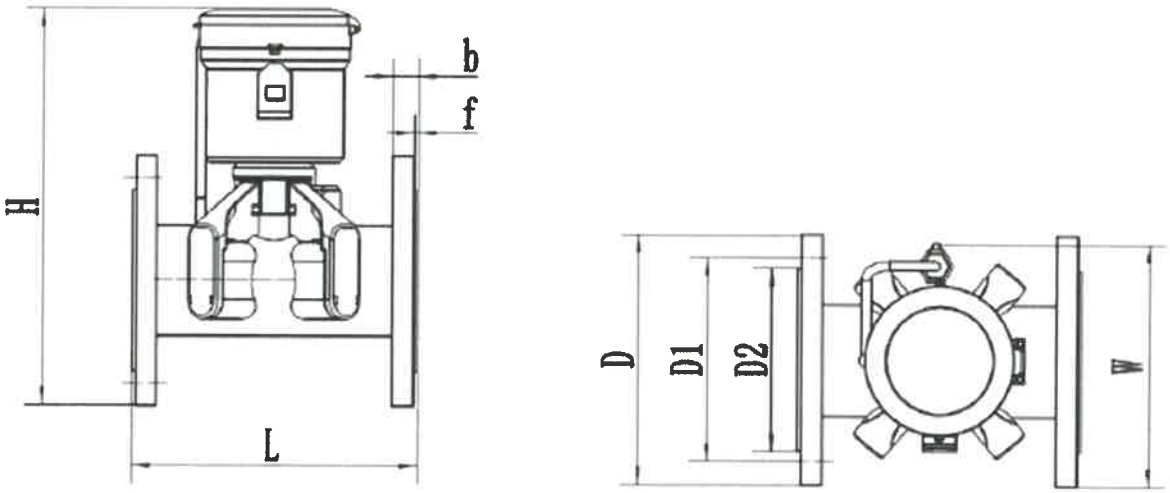


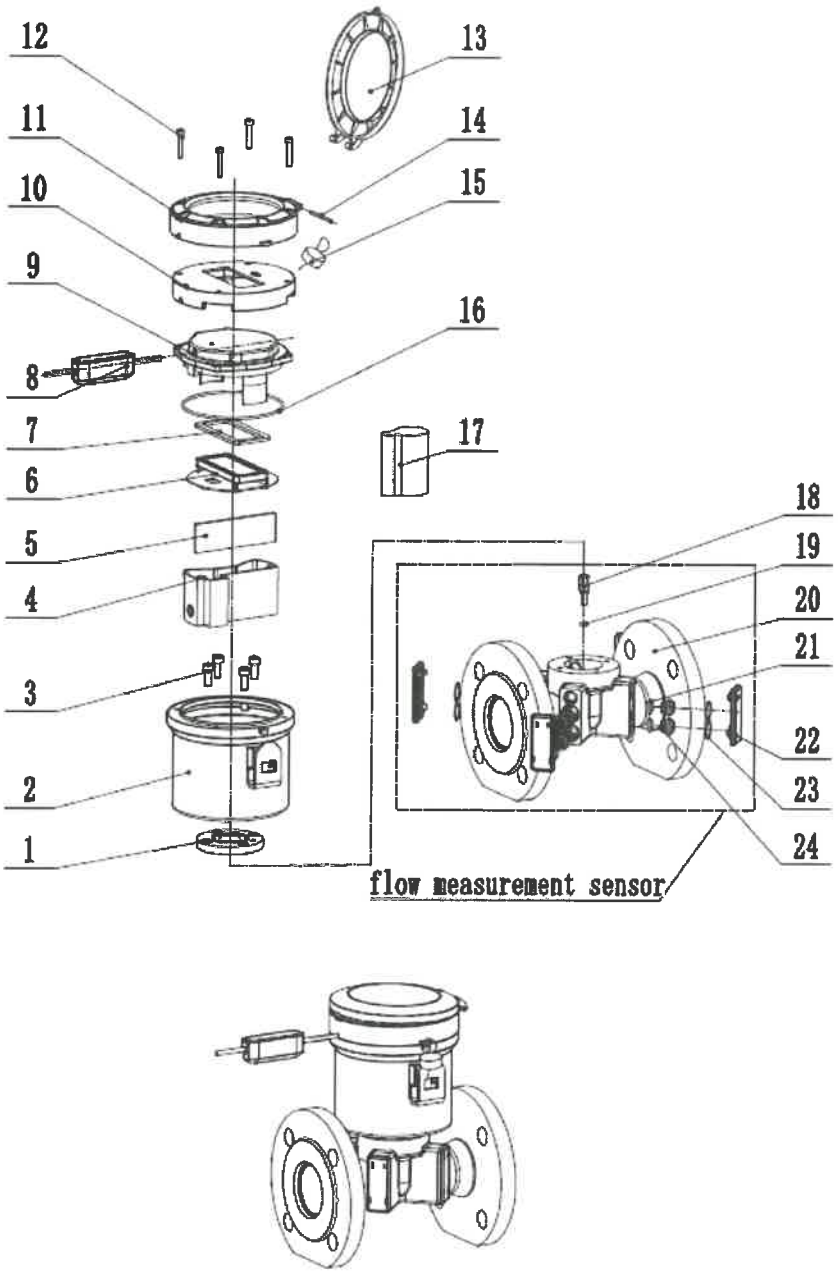
Fig. 1: Illustrative views of the water meters type SCL-61D



Dimensions in mm

Type	DN	L	W	H	D	D1	D2	f	b
SCL-61D	50	200	186	289	according to standard GB/T 9124.1, ASME B16.5, AS4087				
	65	200	196	306					
	80	225	203	323					
	100	250	220	339					
	125	250	250	365					
	150	300	285	394					

Fig. 2: Dimensions of the water meters SCL-61D



Poz.¤	Name·of·ccomponent¤	pc¤
1¤	Multi-channel·heat·gauge·sealing·ring¤	1¤
2¤	Metal·lower·shell·of·the·instrument¤	1¤
3¤	Hexagon·socket·cylindrical·head·screw·M6×20¤	4¤
4¤	Base·meter·junction·box¤	1¤
5¤	Flow·measurement·PCBA¤	1¤
6¤	Movement·PCBA¤	1¤
7¤	Sealing·gasket¤	1¤
8¤	Interface·protection·module¤	1¤
9¤	Transparent·shell¤	1¤
10¤	Circular·upper·shell¤	1¤
11¤	Upper·cover·of·the·round·shell·(gray)¤	1¤
12¤	Hexagon·socket·cylindrical·head·screw·M4×25¤	4¤
13¤	Round·watch·flip·cover¤	4¤
14¤	Toothed·hollow·pin·Φ3×39¤	1¤
15¤	Lead·seal¤	2¤
16¤	0-ring·101×2.5¤	1¤
17¤	Lithium-ion·battery¤	1¤
18¤	Thermistor¤	1¤
19¤	0-ring:·4.3×2.4¤	1¤
20¤	DN50·pipe·section¤	1¤
21¤	0-ring·11×2¤	8¤
22¤	Stuffy·lid¤	4¤
23¤	Single-layer·spiral·retaining·ring·VKM-18·for·holes¤	8¤
24¤	Transducer¤	8¤

Fig. 3: Exploded view of water meter SCL-61D

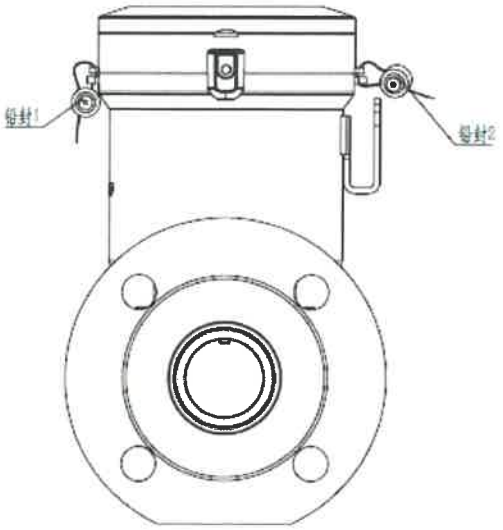
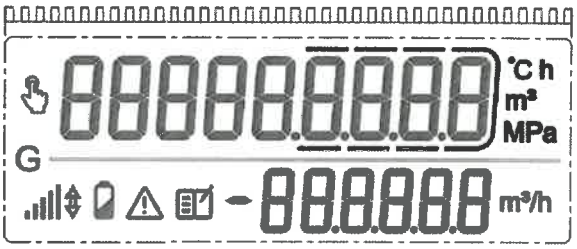
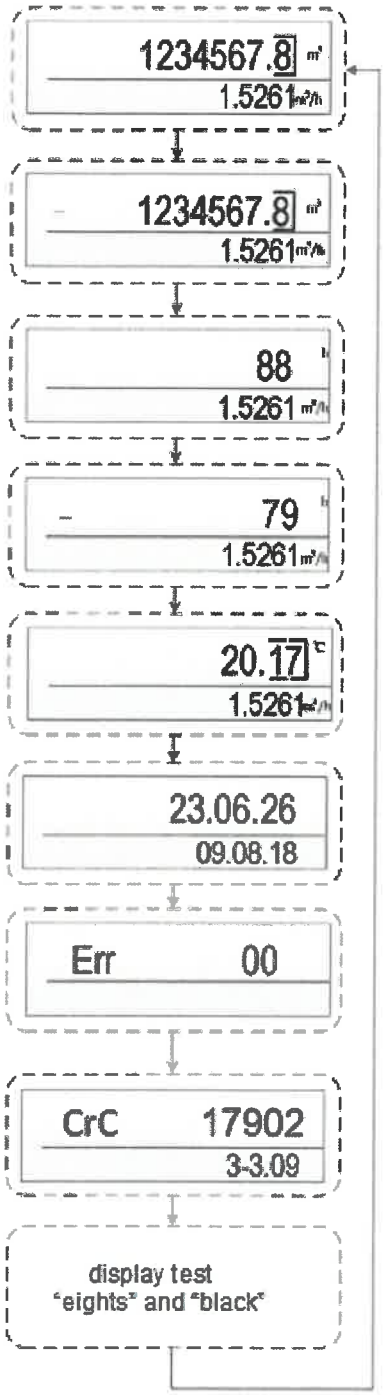


Fig. 4: The sealing of water meter types SCL-61D



Symbol	Meaning	Symbol	Meaning
⚠	Unusual measurement prompt	🔋	The low battery prompt
MPa	The unit of pressure (Only display it if pressure measurement function is available)	m³/h	The unit of flow measurement
°C	The unit of temperature	☝	The operation is valid

Fig. 5: Display and display symbols description SCL-61D



Positive cumulative volume Instantaneous flow
Negative cumulative volume Instantaneous flow
Positive cumulative effective operating time Instantaneous flow
Negative cumulative time effective operating time Instantaneous flow
Temperature Instantaneous flow
Year/Month/Day Hour/Minute/Second
Error code
CRC Checksum Software version
Display tests

Fig. 6: The scrolling sequence of electronic LCD display of water meter types SCL-61D