HUI ZHONG

SCL-61H-100

Residential Ultrasonic Water Meter

Scope of Application

Designed for residential area with household metering and billing system, reached the demand of precise measurement and settlement on End-User for water utilities.

- Low starting flowrate
- IP68
- No abrasion
- Anti-interference
- Low pressure loss
- Micro-power consumption
- Water temperature alarm
- Reverse flow measurable

Features

- Large dynamic range to 1000:1.
- Integrated mechanical design with protection class of IP68, able to work in long-term water immersion.
- Ultrasonic measuring technology with no mechanical moving parts and pressure loss, improves device serving time.
- Micro-power consumption technology,battery-powered with lifetime over 13 years.
- Low starting flowrate(as low as 0.0015m^3/h)
- Multiple transmission methods, photoelectric interface, NB-IoT, RS-485, M-Bus, RF, LoRaWAN and Wireless M-Bus, which achieves lower consumption, stronger inter-linkage, wider coverage and more realible usage.
- Utilize data analysis platform built with self-developed system comprehensively integrated with smart platform, seamless connected, apply Big Data and Cloud computing technology to further discover water supply information and resources.

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Technical Parameters:

Item	Parameter	
Accuracy	Class 2	
Nominal Diameter	DN15~DN20	DN25~DN50
Dynamic Range	R250, R315, R400	R250, R315, R400, R500, R630, R800, R1000
Maximum Working Pressure	1.6MPa	
Working Environment	-25℃～+55℃, ≤100%RH (If exceed this range, please specify when ordering)	
Water Temperature Class	T30, T50, T70	
Class of Upstream Flow Field Sensitivity	U0	
Class of Downstream Flow Field Sensitivity	D0	
Category of Climate & Mechenical Environment Conditions	Class O	
Class of Electromagnetic Compatibility	E2	
Operation	Photosensitive key	
Display Indication	LCD, 10-digital+prompting character	
Values Displayed	Accumulated flow rate（m^3）, Instantaneous flow rate（m^3/h）, Water temperature（℃）, Accumulated effective running time（h）, Date（YY/MM/DD）, Time（hh/mm/ss）, Software version / Meter ID, Screen test	
Display Resolution	DN15~DN25: cumulative flowrate 0.00001m^3, instantaneous flowrate 0.00001m^3/h, DN32~DN50: cumulative flowrate 0.0001m^3, instantaneous flowrate 0.0001m^3/h, Water temperature 0.01℃	
Display Range	DN15~DN25 Cumulative flowrate: 0m^3～19999.99999m^3 DN32~DN50 Cumulative flowrate: 0m^3～199999.9999m^3	
Data Communication	Photoelectric Interface	Baud rate: 2400bps, even parity, Protocol: EN13757
	RS-485/M-Bus	Baud rate: 2400bps, 4800bps, 9600bps, default: 2400bps, transmission distance≤1200m; Support CJ/T 188 protocol, Modbus-RTU protocol, EN13757 protocol, default: EN13757 protocol
	RF	470MHz/868MHz
	NB-IoT	Data report period once per day (If the range is exceeded, please specify on ordering)
	LoRaWAN	EU868 /AU915/US915/AS923
	W-MBus	868MHz/433MHz
Power Supply	Battery powered DC3.6V (battery can continuously work for over 13 years)	
Protection Class	IP68	
Storage Temperature	-25℃～+70℃	
Installation Position	Water supply pipe	
Reverse flow	Measurable reverse flow	

Flow Parameters (R250)

Nominal Diameter (mm)	DN15	DN20	DN25	DN32	DN40	DN50
Min. Flowrate Q_1	0.010	0.016	0.025	0.040	0.064	0.100
Transitional Flowrate Q_2	0.016	0.025	0.040	0.064	0.100	0.16
Permanent Flowrate Q_3	2.5	4.0	6.3	10.0	16.0	25
Overload Flowrate Q_4	3.125	5.0	7.875	12.5	20.0	31.25
Q_3/Q_1	250	250	250	250	250	250
Pressure Loss	Δp40	Δp40	Δp40	Δp40	Δp40	Δp40

Flow Parameters (R315)

Nominal Diameter (mm)	DN15	DN20	DN25	DN32	DN40	DN50
Min. Flowrate Q_1	0.0079	0.0127	0.0200	0.0317	0.0508	0.0794
Transitional Flowrate Q_2	0.0127	0.0203	0.0320	0.0508	0.0813	0.1270
Permanent Flowrate Q_3	2.5	4	6.3	10	16	25
Overload Flowrate Q_4	3.125	5	7.875	12.5	20	31.25
Q_3/Q_1	315	315	315	315	315	315
Pressure Loss	Δp40	Δp40	Δp40	Δp40	Δp40	Δp40

Flow Parameters (R400)

Nominal Diameter (mm)	DN15	DN20	DN25	DN32	DN40	DN50
Min. Flowrate Q_1	0.006	0.010	0.016	0.025	0.040	0.0625
Transitional Flowrate Q_2	0.010	0.016	0.025	0.040	0.064	0.100
Permanent Flowrate Q_3	2.5	4	6.3	10	16	25
Overload Flowrate Q_4	3.125	5	7.875	12.5	20	31.25
Q_3/Q_1	400	400	400	400	400	400
Pressure Loss	Δp40	Δp40	Δp40	Δp40	Δp40	Δp40

Flow Parameters (R500)

Nominal Diameter (mm)	DN25	DN32	DN40	DN50
Min. Flowrate Q_1	0.013	0.020	0.032	0.050
Transitional Flowrate Q_2	0.020	0.032	0.051	0.080
Permanent Flowrate Q_3	6.3	10	16	25
Overload Flowrate Q_4	7.875	12.5	20	31.25
Q_3/Q_1	500	500	500	500
Pressure Loss	Δp40	Δp40	Δp40	Δp40

Flow Parameters (R630)

Nominal Diameter (mm)	DN25	DN32	DN40	DN50
Min. Flowrate Q_1	0.010	0.016	0.025	0.040
Transitional Flowrate Q_2	0.016	0.025	0.041	0.063
Permanent Flowrate Q_3	6.3	10	16	25
Overload Flowrate Q_4	7.875	12.5	20	31.25
Q_3/Q_1	630	630	630	630
Pressure Loss	Δp40	Δp40	Δp40	Δp40

Flow Parameters (R800)

Nominal Diameter (mm)	DN25	DN32	DN40	DN50
Min. Flowrate Q_1	0.008	0.013	0.020	0.031
Transitional Flowrate Q_2	0.013	0.020	0.032	0.050
Permanent Flowrate Q_3	6.3	10	16	25
Overload Flowrate Q_4	7.875	12.5	20	31.25
Q_3/Q_1	800	800	800	800
Pressure Loss	Δp40	Δp40	Δp40	Δp40

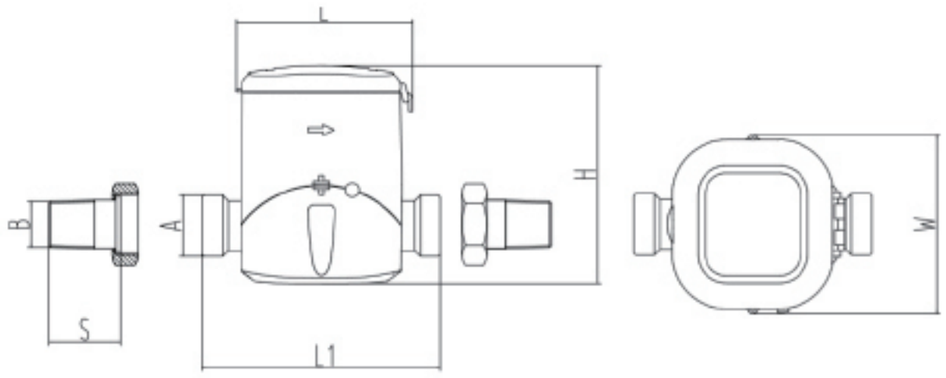
Flow Parameters (R1000)

Nominal Diameter (mm)	DN25	DN32	DN40	DN50
Min. Flowrate Q_1	0.006	0.010	0.016	0.025
Transitional Flowrate Q_2	0.010	0.016	0.026	0.040
Permanent Flowrate Q_3	6.3	10	16	25
Overload Flowrate Q_4	7.875	12.5	20	31.25
Q_3/Q_1	1000	1000	1000	1000
Pressure Loss	Δp40	Δp40	Δp40	Δp40

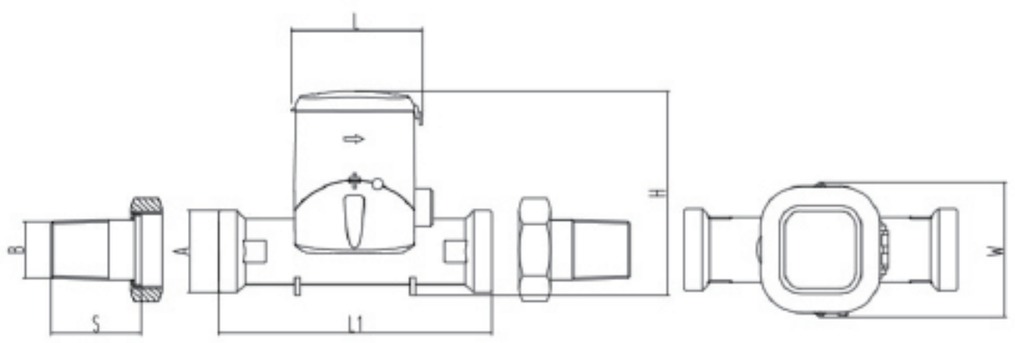
Flow Parameters - with Pressure Sensor

Nominal Diameter (mm)	DN15	DN20	DN15	DN20	DN15	DN20
Min. Flowrate Q_1	0.0100	0.0160	0.0079	0.0127	0.0063	0.0100
Transitional Flowrate Q_2	0.0160	0.0256	0.0127	0.0203	0.0100	0.0160
Permanent Flowrate Q_3	2.5	4.0	2.5	4.0	2.5	4.0
Overload Flowrate Q_4	3.125	5	3.125	5	3.125	5
Q_3/Q_1	250	250	315	315	400	400
Pressure Loss	Δp40	Δp40	Δp40	Δp40	Δp40	Δp40

Dimension

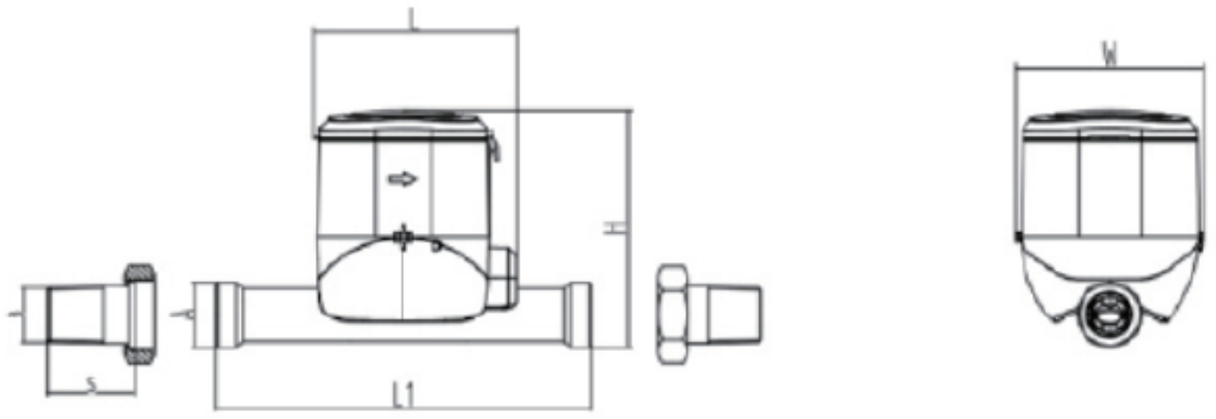


DN15-DN25



DN32-DN50

Nominal Diameter (mm)	DN15	DN20	DN25	DN32	DN40	DN50
A without Connections	G3/4B	G1B	G1 1/4B	G1 1/2B	G2B	G2 1/2B
B with Connections	R1/2	R3/4	R1	R1 1/4	R1 1/2	R2B
L (mm)	97					
L1 (mm)	110/165 (common type and meterwith pressure sensor)	154 (meter with pressure sensor)/190/195	160	180	200/245	294/300
H (mm)	119			145	153	160
W (mm)	98					
S Connection Length (mm)	45	51	59	74	78	86



DN15-DN40 （Alternative Appearance）

Nominal Diameter (mm)	DN15	DN20	DN25	DN32	DN40
A without Connections	G 3/4B	G 1B	G1 1/4B	G1 2/4B	G2B
B with Connections	R 1/2B	R 3/4	R1	R1 1/4	R1 1/2
L (mm)	105				
L1 (mm)	165	190/195	160/225	180	200/245
H (mm)	121	125	128	151	158
W (mm)	98				
S Connection Length (mm)	45	51	59	74	78