



CRL-G(Stainless Steel) Ultrasonic Heat Meter

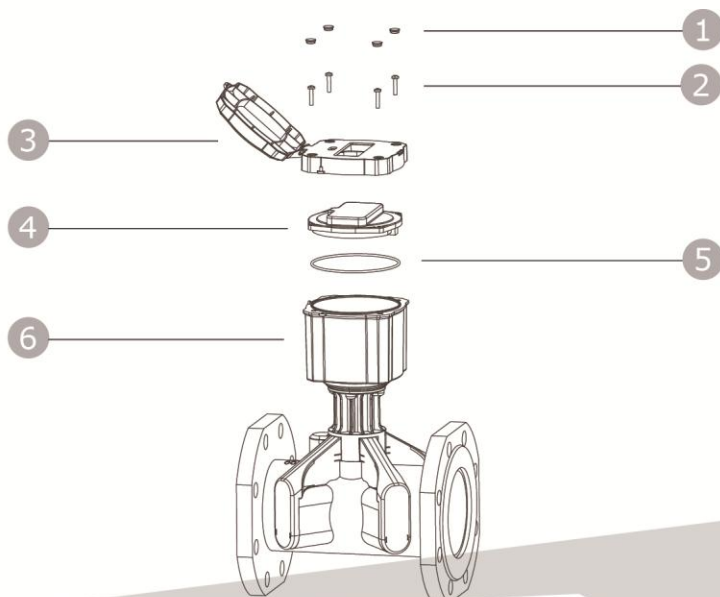
Scope of Application:

Suitable for metering the energy consumption in apartments, high-rise buildings, heat-exchange stations and centralized heating/cooling systems.

Features:

- Online flowrate self-verification function.
- No mechanical moving parts, no wear, long servicing life, no impact by poor water quality.
- The pipe section for meter mounting is straight-through design without flow-restricting element. Highly sensitive to a minimal flowrate.
- Micro power consumption technology, one battery can work continuously over 10 years.
- Integrated mechanical design with protection class of IP68, for effectively eliminating the effect on meter operating produced by vapours and condensate. The meter can keep on working under long-term submersion in water, and is particularly suitable for use under harsh industrial conditions.
- Mounting in any installation position in difficult circumstances.
- Photoelectric interface, RS-485, M-Bus and NB-IoT interface to achieve remote meter reading for easier centralized management.
- The stainless steel pipe can be recycled and reduce the user cost.
- Energy conservation and environmental protection, no casting, no pollution and also material saving.
- Quality seamless stainless steel cable, and precision machining by robot workshop .
- Smart manufacturing to satisfy flexible customization for customer.

No.	Name
1	Sealing
2	Connecting Screw
3	Upper Casing Parts
4	Measuring Mechanism Sets
5	Seal Ring
6	Pipe Section and Transducer Sets





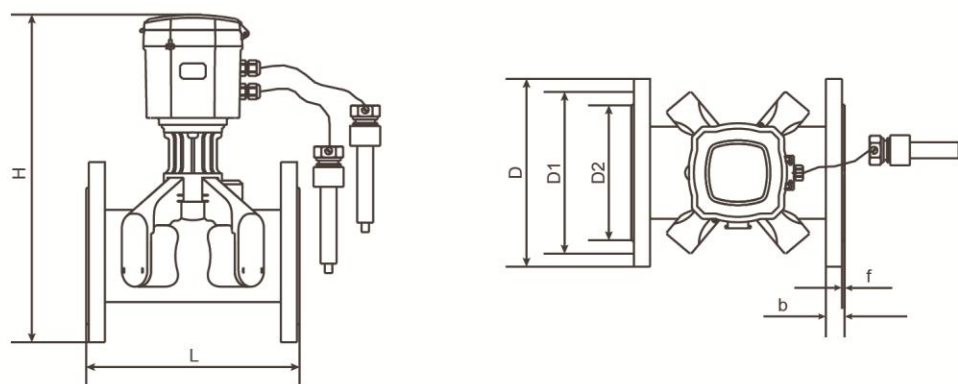
Technical Parameters:

Item		Parameter
Material of Pipe Section		Stainless Steel
Nominal Diameter		DN50~DN400
Measuring Range	Temperature Range(°C)	4~130 (Specify while exceeding the range)
	Temperature Difference(K)	3~70 (Min. value of ex-factory is 0.2K)
	Min. Temperature Pair Error (°C)	±0.1
	Max. Working Pressure(MPa)	1.6/2.5 (Standard is 1.6Mpa, Specify while exceeding the range)
Accuracy		Class 2
Type of Temperature Sensor		Pt1000 , DIN/IEC751B
Protection Class		IP68
Power Supply		Battery DC3.6V (One battery can work continuously over 10 years)
		DC10V~36V (Specify while ordering)
		AC220V±10%,50Hz (Specify while ordering)
Power Consumption(mW)		<0.4
Working Environment		Class B/C/D
Data Communication	Photoelectric Interface	Baudrate: 2400bps, GB/T26831 protocol
	M-Bus/RS-485	Baudrate:2400bps、4800bps、9600bps selectable , default: 2400bps , Transmission distance≤1200m GB/T26831 protocol、CJ-T188 protocol、Huizhong protocol、Modbus RTU protocol selectable default: Huizhong protocol
	Wireless Communication	Narrow Band Internet of Things (NB-IoT)
Values Displayed		LCD, 10-digital+prompting character(Word height:12mm)
		Heat quantity MW·h or GJ, Thermal power kW
		Instantaneous flowrate(m³/h)、Cumulative flowrate(m³)、Supply water temperature(°C)、Return water temperature(°C)、Temperature difference(K)、Accumulated effective running time(h)
		Date : Year/Month/Day、Time : Hour/Minute/Second
Display Resolution		Heat quantity 0.01MW·h or 0.1GJ, Thermal power 0.1kW、 Cumulative flowrate 0.1m³、Temperature 0.01°C、Temperature difference 0.01K
Storage Temperature(°C)		-25~+55
Data Storage(EEPROM)		Heat quantity, cumulative flowrate and corresponding time and the Max. thermal power of the current month can be stored by month. Latest 24 months' data can be stored.
Mounting position of Meter		On supply water pipe (For special requirement, please specify on ordering)

Flowrate and Heat Quantity Parameters

Nominal Diameter (mm)	Dynamic Range	Starting Flowrate	Min.Flowrate (q _{min})	Max.Flowrate (q _{max})	Permanent Flowrate(q _p)	Cumulative Flowrate		Cumulative Heat Quantity	
		m ³ /h				Max.Reading(m ³)	Min.Reading(m ³)	Max.Reading(MW·h)	Min.Reading(MW·h)
50	100	0.014	0.15	30	15	199999999.9	0.1	199999999.99	0.01
65		0.024	0.25	50	25				
80		0.036	0.40	80	40				
100		0.057	0.60	120	60				
125		0.088	1.00	200	100				
150		0.127	1.50	300	150				
200		0.226	2.50	500	250				
250		0.353	4.00	800	400				
300		0.509	6.00	1200	600				
400		0.905	10.00	2000	1000				

Dimension (Plastic Casing) :



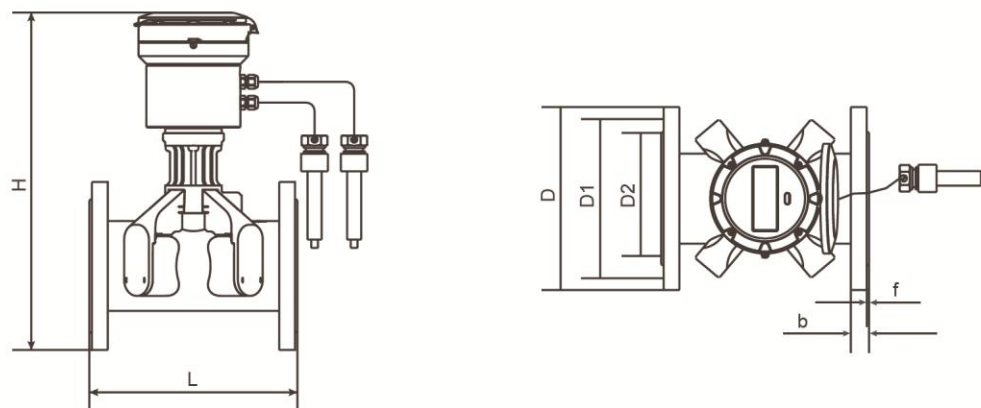
Flange-connected version (1.6MPa):

Nominal Diameter (mm)	D	D1	D2	f	b	nxd	L	H	Pressure Rating	Remarks
50	165	125	99	3	20	4x18	200	330	1.6MPa	d-Diameter of flange connection hole n-Number of flange connection hole D1-Diameter of flange's central connection hole
65	185	145	118		22	4x18	200	348		
80	200	160	132		20	8x18	225	366		
100	220	180	156		22	8x18	250	384		
125	250	210	184		22	8x18	250	413		
150	285	240	211		24	8x23	300	443		
200	340	295	266		24	12x23	350	503		
250	405	355	319		26	12x27	400	641		
300	460	410	370	4	28	12x27	450	695		
350	520	470	438		35	16x26	500	751		
400	580	525	490		38	16x30	600	806		

Flange-connected version (2.5MPa):

Nominal Diameter (mm)	D	D1	D2	f	b	nxd	L	H	Pressure Rating	Remarks
50	165	125	99	3	20	4x18	200	333	2.5MPa	d-Diameter of flange connection hole n-Number of flange connection hole D1-Diameter of flange's central connection hole
65	185	145	118		22	8x18	200	348		
80	200	160	132		24	8x18	225	366		
100	235	190	156		24	8x23	250	388		
125	270	220	184		26	8x27	250	419		
150	300	250	211		28	8x27	300	449		
200	360	310	274		30	12x27	350	510		
250	425	370	330		32	12x30	400	652		
300	485	430	389	4	34	16x30	450	708		
350	555	490	450		42	16x33	500	769		
400	620	550	505		46	16x36	600	826		

Dimension (Metal Casing):



Flange-connected version (1.6MPa):

Nominal Diameter (mm)	D	D1	D2	f	b	nxd	L	H	Pressure Rating	Remarks
50	165	125	99	3	20	4x18	200	372	1.6MPa	d-Diameter of flange connection hole n-Number of flange connection hole D1-Diameter of flange's central connection hole
65	185	145	118		22	4x18	200	387		
80	200	160	132		20	8x18	225	405		
100	220	180	156		22	8x18	250	423		
125	250	210	184		22	8x18	250	452		
150	285	240	211		24	8x23	300	482		
200	340	295	266		24	12x23	350	542		
250	405	355	319		26	12x27	400	669		
300	460	410	370	4	28	12x27	450	723		
400	580	525	490		38	16x30	600	833		

Flange-connected version (2.5MPa):

Nominal Diameter (mm)	D	D1	D2	f	b	nxd	L	H	Pressure Rating	Remarks
50	165	125	99	3	20	4x18	200	372	2.5MPa	d-Diameter of flange connection hole n-Number of flange connection hole D1-Diameter of flange's central connection hole
65	185	145	118		22	8x18	200	387		
80	200	160	132		24	8x18	225	405		
100	235	190	156		24	8x23	250	427		
125	270	220	184		26	8x27	250	458		
150	300	250	211		28	8x27	300	488		
200	360	310	274		30	12x27	350	549		
250	425	370	330		32	12x30	400	679		
300	485	430	389	4	34	16x30	450	735		
400	620	550	505		46	16x36	600	853		



CRL-G(Cast Iron) Ultrasonic Heat Meter

Scope of Application:

Suitable for metering the energy consumption in apartments, high-rise buildings, heat-exchange stations and centralized heating/cooling systems.

Features:

- No mechanical moving parts, no wear, long servicing life, no impact by poor water quality.
- The pipe section for meter mounting is straight-through design without flow-restricting element. Highly sensitive to a minimal flowrate.
- Micro power consumption technology, one battery can work continuously over 10 years.
- Integrated mechanical design with protection class of IP68, for effectively eliminating the effect on meter operating produced by vapours and condensate. The meter can keep on working under long-term submersion in water, and is particularly suitable for use under harsh industrial conditions.
- Mounting in any installation position in difficult circumstances.
- Photoelectronic interface, RS-485, M-Bus interface to achieve remote meter reading for easier centralized management.

Technical Parameters:

Item		Parameter
Material of Pipe Section		Nominal Diameter<DN50 : Copper ; Nominal Diameter≥DN50 : Steel or Cast Iron
Nominal Diameter		DN32~DN300
Measuring Range	Temperature Range(°C)	4~130
	Temperature Difference(K)	3~70 (Min. value of ex-factory is 0.2K)
	Min. Temperature Pair Error (°C)	±0.1
	Max. Working Pressure(MPa)	1.6/2.5
Accuracy		Class 2
Type of Temperature Sensor		Pt1000 , DIN/IEC751B
Protection Class		IP68
Power Supply		Battery DC3.6V (One battery can work continuously over 10 years)
		DC10V~36V (Specify while ordering)
		AC220V±10%,50Hz (Specify while ordering)
Power Consumption(mW)		<0.4
Working Environment		Class B/C/D
Data Communication	Photoelectronic Interface	Baudrate: 2400bps, GB/T26831 protocol
	M-Bus/RS-485	Baudrate:2400bps、4800bps、9600bps selectable , default: 2400bps , Transmission distance≤1200m GB/T26831 protocol、CJ-T188 protocol、Huizhong protocol、Modbus RTU protocol selectable default: Huizhong protocol
Values Displayed		LCD, 8-digital+prompting character
		Nominal Diameter<DN50 : Heat quantity (kW·h or MJ) , thermal power (kW)
		Nominal Diameter≥DN50 : Heat quantity (MW·h or GJ) , thermal power (kW)
		Instantaneous flowrate(m³/h)、Cumulative flowrate(m³)、Supply water temperature(°C)、Return water temperature(°C)、Temperature difference(K)、Accumulated effective running time(h)
		Date : Year/Month/Day、Time : Hour/Minute/Second
		Nominal Diameter<DN50 : Display range of heat quantity : 0~9999999.9kW·h Nominal Diameter≥DN50 : Display range of heat quantity : 0~999999.99MW·h
Display Resolution		Nominal Diameter<DN50 : Heat quantity 0.01kW·h or 0.1MJ、Thermal power 0.1kW、Cumulative flowrate 0.1m³、Temperature 0.01°C、Temperature difference 0.01K Nominal Diameter≥DN50 : Heat quantity 0.01MW·h or 0.1GJ、Thermal power 0.1kW、Cumulative flowrate 0.1m³、Temperature 0.01°C、Temperature difference 0.01K
Storage Temperature(°C)		-25~+55
Data Storage(EEPROM)		Heat quantity, cumulative flowrate and corresponding time and the Max. thermal power of the current month can be stored by month. Latest 24 months' data can be stored.
Mounting position of Meter		On supply water pipe (For special requirement, please specify on ordering)

Flowrate and Heat Quantity Parameters (Single-Channel version):

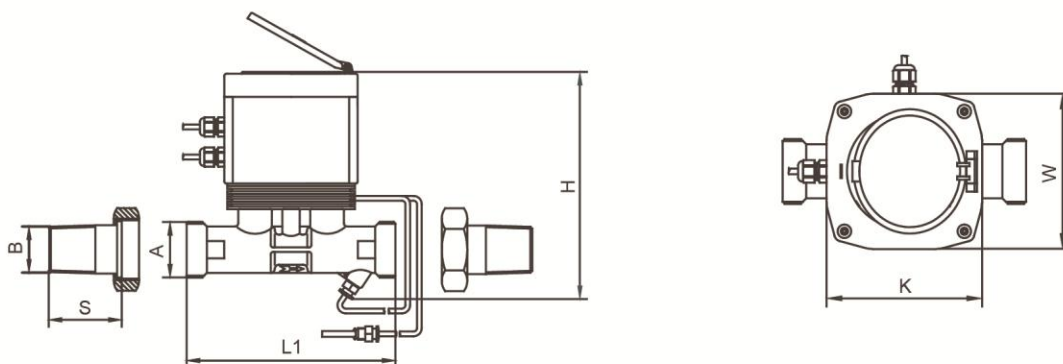
Nominal Diameter (mm)	Dynamic Range	Starting Flowrate	Min.Flowrate (q _{min})	Max.Flowrate (q _{max})	Permanent Flowrate(q _p)	Cumulative Flowrate		Heat Quantity	
		m³/h				Max.Reading(m³)	Min.Reading(m³)	Max.Reading(m³)	Min.Reading(m³)
32	50	0.007	0.12	12	6	99999.999	0.001	9999999.9	0.1
40		0.011	0.20	20	10				

Flowrate and Heat Quantity Parameters (Multi-Channel Version):

Nominal Diameter (mm)	Dynamic Range	Starting Flowrate	Min.Flowrate (q _{min})	Max.Flowrate (q _{max})	Permanent Flowrate(q _p)	Cumulative Flowrate		Heat Quantity	
		m ³ /h				Max.Reading(m ³)	Min.Reading(m ³)	Max.Reading(MW·h)	Min.Reading(MW·h)
50	25	0.035	0.6	50	15	9999999.9	0.1	999999.99	0.01
65		0.060	1.0	80	25				
80		0.090	1.6	100	40				
100	50	0.141	1.2	240	60				
125		0.221	2.0	330	100				
150		0.318	3.0	400	150				
200		0.565	5.0	560	250				
250		0.883	8.0	700	400				
300		1.270	12.0	800	600				

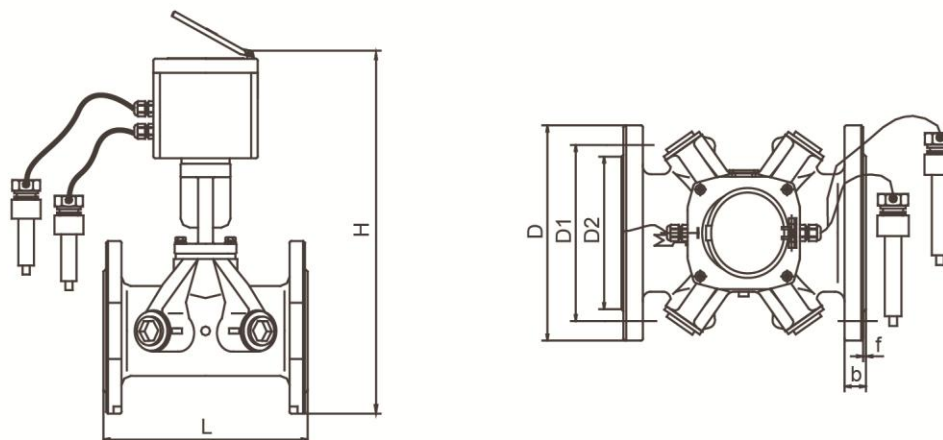
Dimension(mm):

Thread connected version (DN32~DN40):



Nominal Diameter(mm)	32	40
A without Connections	G1½B	G2B
B with Connections	R1½B	R1½B
L1(mm)	180	200
H(mm)	200	215
K(mm)	115	115
W(mm)	115	115
S Connection Length(mm)	60	62

Flange-connected version (DN32~DN300):



Flange-connected version (1.6MPa):

Nominal Diameter (mm)	D	D1	D2	f	b	nxd	L	H	Weight (kg)	Pressure Rating	Remarks
32*	140	100	76	3	18	4x18	180	340	5.5	1.6MPa	d-Diameter of flange connection hole n-Number of flange connection hole D1-Diameter of flange's central connection hole
40*	150	110	84		18	4x18	200	350	6.2		
50	165	125	99	2	20	8x18	200	346	14.5		
65	185	145	118		20	8x18	200	369	15.8		
80	200	160	132	3	20	8x18	225	384	19.5		
100	220	180	156		22	8x18	250	404	23		
125	250	210	184		22	8x18	250	431	27.5		
150	285	240	211		24	8x22	300	462	35		
200	340	295	266		24	12x23	350	512	50		
250	405	355	319		30	12x26	400	597	74		
300	460	410	370	4	32	12x26	450	656	90		

Flange-connected version (2.5MPa):

Nominal Diameter (mm)	D	D1	D2	f	b	nxd	L	H	Weight (kg)	Pressure Rating	Remarks
32*	140	100	76	3	18	4x18	180	340	5.5	2.5MPa	d-Diameter of flange connection hole n-Number of flange connection hole D1-Diameter of flange's central connection hole
40*	150	110	84		18	4x18	200	350	6.2		
50	165	125	99		20	4x19	200	346	14.5		
65	185	145	118		22	8x19	200	369	15.8		
80	200	160	132		24	8x19	225	384	19.5		
100	235	190	156	4	24	8x23	250	404	23		
125	270	220	184		26	8x27	250	431	27.5		
150	300	250	211		28	8x27	300	462	35		
200	360	310	274		30	12x27	350	512	52		
250	425	370	330		32	12x30	400	607	78		
300	485	430	389		34	16x30	450	663	95		