PRISMA Instruments

COUNTER OF ENERGY ULTRASOUND

RCE Heat Meter

RESIDENTIAL DN15 to DN40

THIS

MID

EN1434

M Bus

Modbus-RTU

EN13757

Thermal & cooling energy

Advanced technology & electronics

Ease of installation & use

Precision, stability & longevity

Communications & tele succession

Design, compact & robust

Vertical or horizontal mounting

Multifunction display / 8 digit LCD display

On long-lasting battery or power supply

Suitable for lower water qualities

DISTRICT DN50 to DN1000

Thermal & cooling energy meter

RCE HeatMeter **Residential DN15~DN40**

CARACTERISTIQUES GENERALES

3.6V High Capacity Lithium Battery - Over 10 Years Life.

Dynamic rangeability (measuring range) 250:1, 100:1 & 50:1.

The installation of meters in DN15-DN40 does not require straight lengths. The flow can be

bi-directional in horizontal or vertical mounting. Furthermore the calculator can be oriented in any direction.

Compatible with MODBUS RTU and EN13757 communication protocols.

Supports Optical, Serial RS485, M-BUS wired and wireless communication interfaces.

Multiple communication modes possible: 2 input pulses 1 output pulse, 4-20mA, GPRS functions...

MID certification and EN-1434 compliance.

An advanced calibration system, according to international standards, ensures the accuracy of the product.

Can be used as a calorie counter, cold counter or as a combined climate counter.

DESCRIPTION

The **RCE HeatMeter** ultrasonic energy meter is equipped with a latest generation ultrasonic flow meter. This ultrasonic energy meter is based on state-of-the-art microprocessor technology, which meets

perfectly to the new standards in terms of energy and environmental savings. She ensures a

exceptional accuracy and reliability. The RCE meter is designed to meet the new requirements for individualized billing of energy consumption. In particular, it makes it possible to measure

specifies the thermal and cooling energy in which water is the heat transfer fluid. It is specifically adapted

to the residential and industrial sectors: HLM, condominium, building, individual house, factories, city, district…

The meter has remote reading functionalities in order to better monitor its energy consumption. It allows communication according to the M-Bus or Modbus RTU standards. It records stores counting data during

24 months. The ultrasonic technology eliminates a significant part of the pressure drops, ensures a very high

measurement range and it is totally insensitive to any particles in suspension in the heat transfer liquid. The advantage of ultrasonic measurement is that no moving parts are in contact with the fluid, which gives the device a long life. Thanks in particular to its very affordable price, you

will certainly save money from the first year of use.

Thermal & cooling energy meter

RCE HeatMeter **Residential DN15~DN40**

PRISMA Instruments

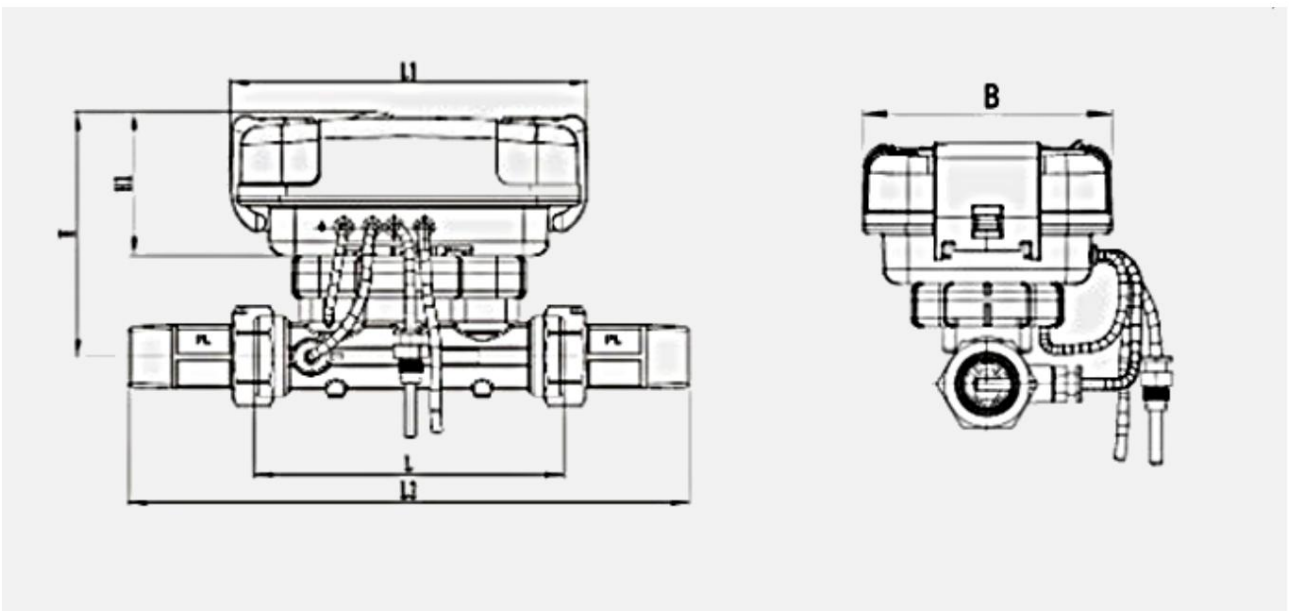
SPECIFICATIONS

The **RCE HeatMeter** ultrasonic energy meters are of a completely new generation.
Their technology is based on the transit time determination method for volume flow measurement,
flow and return temperature measurement, and a digital processor for the calculation and communication parts.

RCE HeatMeter thermal energy meter										
Nominal diameter (mm)		DN15		DN20			DN25		DN32	DN40
Normal flow: qp(m3 /h)		0.6	1.5	0.6	1.5	2.5	3.5	6	6	10
Pressure drop (kPa/qp)		14	18	14	7	17	3.5	6	6	10
Span (Normal Flow: Minimum Flow): qp: q1		100:1 50:1 (optional)			250:1 or 100:1 50:1 (optional)					
Reading max. : m3		999999.99								
Max. temperature reading (kW.h)		99999999								
Scale of Measure	Temperature °C	(4ÿ95)ÿ or (4-130)ÿ optional								
	Temperature difference (K)	(3ÿ60)K (2ÿ110)K can be customized								
	Temperature resolution °C	±0.25°C (customizable)								
	Max working pressure (MPa)	1.6MPa /2.5MPa (customizable)								
Precision		EN1434: 2007 Class 2 and **MID M1, E1**								
Temperature probes		Pt1000, DIN/IEC751B (Pt500, Pt100 optional)								
Protection sign		IP67								
Feed		3.6V lithium battery (AC220v or DC24V optional)								
Battery life		More than 10 years (normal use)								
Environmental Class		Class A (5~55°C) or Class B (-25~55°C) optional								
Mode of communication		M-bus, MODBUS RTU, Photoelectric interface								
Display		8-digit LCD								
		Accumulated Energy: KWh or MJ (Display: 0ÿ9999999.9) Thermal Power: KW								
		Instantaneous flow: m3 /h - Cumulative volume: m3 - Flow water temperature: °C Return temperature: °C - Temperature difference °C Total operating time Date: Y/M/D, Time: h/m/s								
Display resolution		Quantity of Energy: 0.1 kWh or 1 MJ - Cumulative volume: 0.001 m3 Temperature: 0.01 °C - Temperature Difference: 0.01K								
Data storage (EEPROM)		Quantity of energy and Time-stamped Volume Accumulation Maximum Monthly Thermal Power stored each month. 24 month data storage								
Storage temperature		Class A (5ÿ+55)°C								
mounting position		On the water inlet pipe at any angle								

DIMENSIONS

Nominal Diameter (mm)		15	20		25		32	40
Dimensions (mm)	L	110	130	190	160	260	180	200
	L2	200	230	290	260	360	280	300
	L1	150	150	150	150	150	150	150
	H	100	103	103	106	106	109	113
	H1	60	60	60	60	60	60	60
	B	105	105	105	105	105	105	105
Connection (inches)		G3/4B	G1B		G11/4B		G11/2B G2B	
Coupling connection (inches)		R1/2	R3/4		R1		R11/4 R11/2	

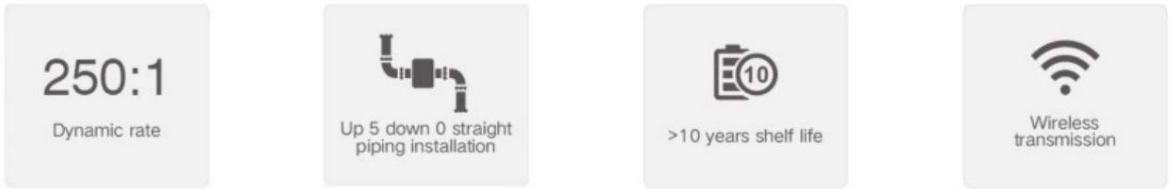


Thermal & cooling energy meter

RCE HeatMeter **District DN50~DN1000**

DN50-DN100

DN125-DN1000



CARACTERISTIQUES GENERALES

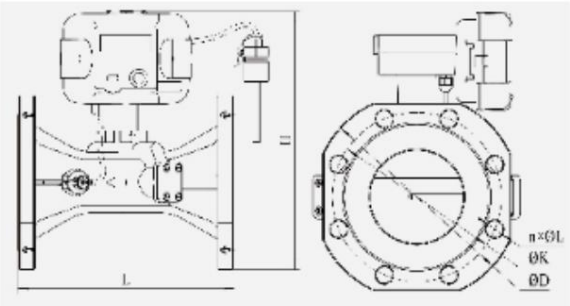
3.6V High Capacity Lithium Battery - Over 10 Years Life
External AC220V or DC24V power supply optional
The calculator can be local or remote (up to 10 m)
Streamlined fluid structure to improve measurement accuracy and stability and reduce the requirement for straight lengths during installation: 5 DN upstream 0 downstream
Mounted on flow or return line, in horizontal or vertical position
compatible with lower water qualities, does not require special maintenance
Compatible with MODBUS RTU and EN13757 communication protocols, Optical communication, RS485 Serial, M-BUS wired and wireless, 4-20 mA optional. Available in remote reading (AMR) facilitates centralized technical management (GTC).
IP68 protection, protected against hot water vapor and condensation.
Advanced calibration device according to international
standards An advanced calibration system, according to international standards, ensures the accuracy of the product.
Can be used as a calorie counter, cold counter or as a combined climate counter.

SPECIFICATIONS

RCE HeatMeter thermal energy meter									
PERFORMANCE	**Settings**								
Nominal Diameter **DN (mm)**	50	65	80	100	125	150	200	250	300
Normal flow: qp (m3 /h)	15	25	40	60	100	150	250	400	600
Max flow. qs(m3 /h)	30	50	80	120	200	300	500	800	1200
Pressure drop (kPa/qp)	4	6	9	11	7	6	4	4	4
Weight (Kg)	8	9	12	15	17	20	30	45	75
Channel	Single or Bi-Channel optional				Single, Double Triple or Quadruple Channel optional				
Reading max. : m3	9999999.9				99999999				
Max. temperature reading (kW.h)	99999999				999999.99				
PERFORMANCE	**Settings**								
Nominal Diameter **DN (mm)**	350	400	450	500	600	700	800	900	1000
Normal flow: qp (m3 /h)	800	1000	1300	1600	2300	3000	4000	5000	6000
Max flow. qs(m3 /h)	1600	2000	2600	3200	4600	6000	8000	10000	12000
Pressure drop (kPa/qp)	2	2	2	2	2	2	2	2	2
Weight (Kg)	100	130	150	190	350	500	600	750	950
Chanel	Single, double triple or quadruple				Single, double triple or quadruple optional				
Reading max. : m3	999999.99								
Max. temperature reading (kW.h)	999999.99								
Fluid Temperature °C	4~95°C or 4~130°C optional								
Temperature difference (K)	(3~60)K or (2~110)K optional								
Min. Temperature error (ÿ)	From 0.25K (customizable)								
Max working pressure. eligible	1.6MPa (2.5MPa optional)								
Precision	Class 2								
Temperature probe type	Pt1000, DIN/IEC751B (Pt500, Pt100 optional)								
Protection class	Calculator	IP67							
	Flow sensor	IP68							
Feed	3.6 lithium battery ~ AC220V or DC24V optional external power supply								
Battery life	ÿ10 years								
Class	Class A (5-55ÿ) or Class B (-25-55ÿ) and Class C optional								
Display resolution	Heat balance: 0.1kW.h or 1MJ Cumulative volume: 0.001 m3 Temperature:0.01°C								
Storage temperature (ÿ)	Class A (5ÿ+55)ÿ								
Temperature probes	Pt1000 (Pt100, Pt500 optional)								
mounting position	Horizontal or vertical								

DIMENSIONS DN50-DN100

Nominal Diameter DN (mm)		50	65	80	100
Dimensions (mm)	L	200/270	200/300	225/300	250/360
	D	165	185	200	220
	H	247	258	279	299
	K	125	145	160	180
	N*ÿL	4*ÿ18	4*ÿ18	8*ÿ18	8*ÿ18



DIMENSIONS DN125 -DN1000

DN 125		**150 200 250 300 350 400 450**				**500**	**600**	**700**	**800**	**900**	**1000**
L	350	350 350	400 450 500 550 600 650				750 875		1000 1230 1300		
D250 _		285 340	405 460 520 580 640 715				840 910		1025 1125 1255		
H 388		418 476	535 589 645 699 756 819				931	1081 1166 1266 1381			
K	210	240 295	355 410 470		525	585	650	770 840	960 1050 1170		
NOT* **ÿL**	8*ÿ18 8*ÿ22		8*ÿ26		8*ÿ30		8*ÿ33 8*ÿ36		8*ÿ39		8*ÿ42