

The Evinox ultrasonic heat meter range has been designed for use in both heating and cooling metering applications. The meters employ the latest technology to guarantee high quality and outstanding long-term measurement stability. The sensor body is constructed from brass and has no moving parts, making it virtually maintenance-free.

The meters feature high quality paired PT1000 temperature probes to ensure performance according to the EN 1434 standard, and can operate with water temperatures up to a max of 130°C and nominal pressure of 16 bar.

Available in two Protocols:-

- **MBus** - Power supplied via network
- **RS485 ModBus** - Separate 5 Volt power supply required



Technical Specification

- EN 1434 Compliant - Class 2 accuracy
- $q_1 = 0.3 \text{ m}^3/\text{h}$, $q_p = 15 \text{ m}^3/\text{h}$ $q_s = 30 \text{ m}^3/\text{h}$ (RC50) (Refer to the technical table below for full details of the range)
- $q_1 = 2 \text{ m}^3/\text{h}$, $q_p = 100 \text{ m}^3/\text{h}$ $q_s = 200 \text{ m}^3/\text{h}$ (RC125) (Refer to the technical table below for full details of the range)
- Heating / Cooling Medium: Water
- Min water temp: 4°C
- Max water temp: 130°C
- Temperature probes: PT1000 Platinum Resistance
- Reaction time of the probe sensors: 3 sec
- Max. temperature deviation of the probe pair: <0.1 °C
- Display: LCD (9 digits + decimal point)
- Communication interface: Option of RS485 with ModBus or M-BUS protocol
- Unit of heat displayed: kWh
- Battery: 3.6 V lithium battery cell
- Battery Life: 10+ years
- External 5V d.c. auto switching (RS485 ModBus)
- Ambient temperature: +5 / +55 °C
- Storage temperature: -30 / +60 °C
- PN/PS: 1.6 MPa (16 bar)
- Pressure loss at nominal flow rate: RC50 – RC100: <18kPa / RC125 – RC600: <15kPa
- Protection class: IP68
- Temperature sensor cable length: 1.5 m (one sensor fitted on flow rate transducer)
- Flow and return temperature sensor cables up to 10m are available on request
- Suitable for vertical or horizontal installation, supply pipe

Technical Details RC 50 - 100 IP65

	RC50	RC65	RC80	RC100
DN (mm)	50	65	80	100
q_s (m ³ /h) Max.	30	50	80	120
q_p (m ³ /h) Nominal	15	25	40	60
q_1 (m ³ /h) Min.	0.3	0.5	0.8	1.2

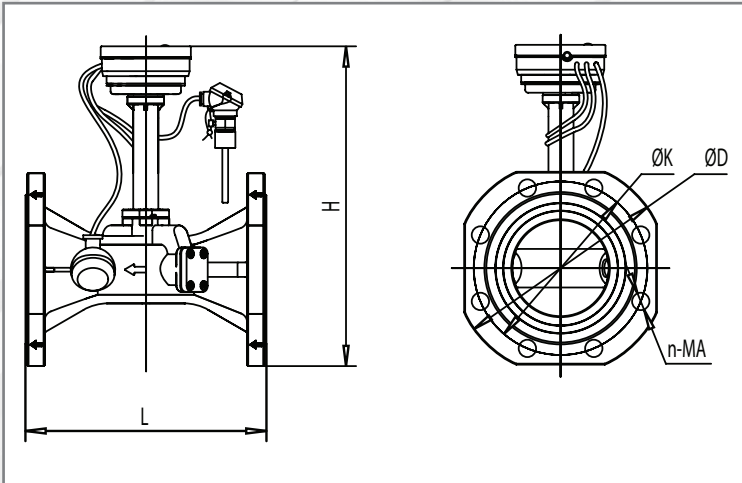
Technical Details RC 125 - 600 - IP68

	RC125	RC150	RC200	RC250	RC300	RC350	RC400	RC450	RC500	RC600
DN (mm)	125	150	200	250	300	350	400	450	500	600
q_s (m ³ /h) Max.	200	300	500	800	1200	1600	2000	2600	3200	4600
q_p (m ³ /h) Nominal	100	150	250	400	600	800	1000	1300	1600	2300
q_1 (m ³ /h) Min.	2	3	5	8	12	16	20	26	32	46

Heat Meters

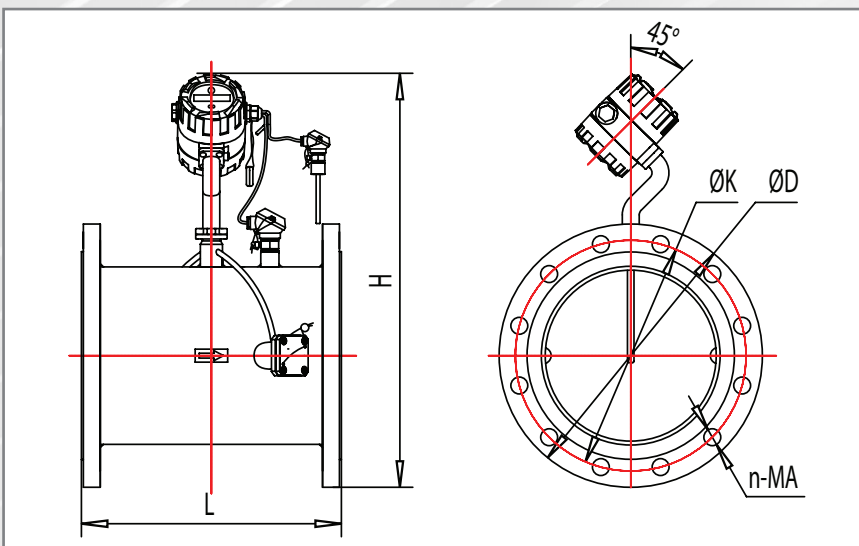
Commercial Range RC50 - 600

Dimensions RC50 - RC100



Dimensions	RC50	RC65	RC80	RC100
L (mm)	200	200	225	250
D (mm)	165	185	200	220
H (mm)	215	225	310	330
K (mm)	125	145	160	180
Connection Sizes	4-M16	4-M16	8-M16	8-M16
Weights	RC50	RC65	RC80	RC100
Weight (kg)	8	9	12	15

Dimensions RC125 - RC600



Dimensions	RC125	RC150	RC200	RC250	RC300	RC350	RC400	RC450	RC500	RC600
L (mm)	350	350	350	400	450	500	550	600	650	650
D (mm)	250	285	340	405	460	520	580	640	715	840
H (mm)	500	530	580	650	700	755	810	870	930	1070
K (mm)	210	240	295	355	410	470	525	585	650	770
Connection Sizes	8-M16	8-M20	12-M20	12-M24	12-M24	16-M24	16-M27	20-M27	20-M30	20-M33
Weights	RC125	RC150	RC200	RC250	RC300	RC350	RC400	RC450	RC500	RC600
Weight (kg)	17	20	30	45	75	100	130	150	190	350

Heat Meters

Commercial Range RC50 - 600

Network Communication Protocols

Evinox heat meters are available for use with the following communication protocols:-

- **RS485 ModBus**
- **MBus**

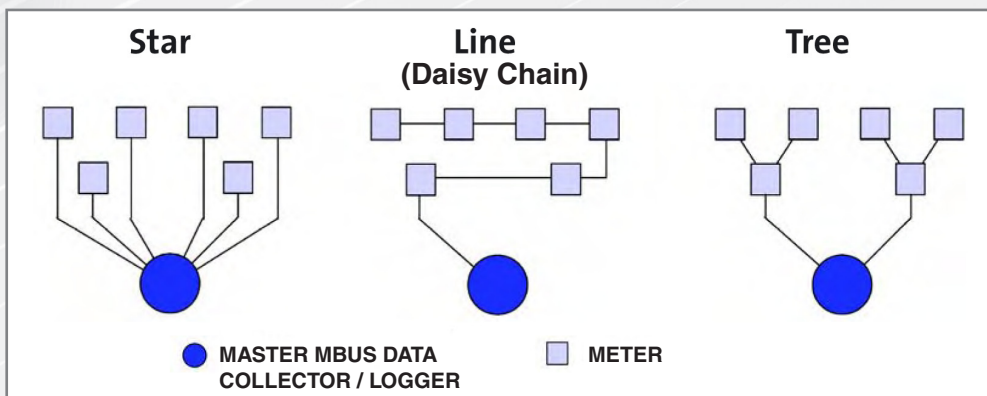
The RS485 ModBus model requires a 5 Volt separate power supply.

The MBus model obtains its power supply via the network.

The meters can be supplied as standard with our ModuSat HIU range or sold separately.

MBus System Architecture

When used for standalone metering applications using MBus protocol the meters can be connected either in a daisy chain, star or tree system architecture.



Star: All meters are wired directly to the central point. In the case of an error, the measuring instrument can be switched on or off to localize the defect.

Line (Daisy Chain): The meters are wired sequentially. While this is cost effective, start up operation and troubleshooting can be costly under certain circumstances. Due to the high voltage drop, this structure is not recommended.

Tree: This is a combination of star and line structures. The individual branches are created as lines so that a defect will merely affect the corresponding branch. Repeaters (signal amplifiers) can be utilised in the branches and provide additional safety and isolation of the individual sections.

Heat Meters

Commercial Range RC50 - 600

RS485 ModBus (Mixed Use) HIU's with Commercial Metering

