



BRUNATA ZELSIUS C5 IUF



## BRUNATA C5 ZELSIUS C5 IUF IS A COMPACT ENERGY METER WITH MEASUREMENT RATE AND LONG BATTERY LIFETIME

### APPLICATION

Brunata Zelsius C5 IUF is an energy meter that can be used to measure the energy consumption and is available as an energy meter for heating, cooling or a combined energy meter for heating and cooling.

With a built radiomodule, the energy meter is designed for remote reading and can register large amounts of data. This means that the meter can provide an overview of the consumption used. With these elements, Brunata Zelsius C5 IUF is one of the market's most leading resource-optimized meters, both in terms of operation, environment and economy.

### PROPERTIES

The measurement principle is static and based on ultrasonic technology, which provides many benefits: no moving parts (avoids wear and tear of the meter's components), low pressure loss, low start flow, etc. This provides great measurement accuracy and long battery lifetime.

### FUNCTIONS

- Ultrasonic
- Low start flow and low pressure loss
- Compact design
- Rotatable calculator
- Fast reaction

### REMOTE READINGS

Brunata Zelsius C5 IUF's built-in radio module enables the meter to be read remotely via Brunata Net, which is a radio network that can be set up in all types of properties. With Brunata Net you are able to access your meters and monitor measurement data via WebMon, which is part of Brunata's Online Services. WebMon allows both residents and the administrator to monitor the development of consumption and consumption patterns.

### WHY

- Built-in radio module for remote readings
- Ensure high measurement stability and a low pressure loss
- Brunata takes care of all the work while you save time
- Based on ultrasonic technology and no moving parts
- Get your property ready for the legal requirements and technical standards of the future

### FACTS

- MID-approved
- Electronic energy meter that sends a telegram every 24 hour (LoRaWAN) or every 3 minutes (w-MBus)
- Available as an energy meter for heating or cooling, or a combined energy meter for heating and cooling
- The energy meter has 10 years of battery lifetime
- The meter meets the Energy Efficiency Directive's (EED) requirement for remote reading



## TECHNICAL DATA CALCULATOR

Temperature range °C	0 ... 105
Temperature difference range °C	3 ... 80
Display	LCD 8-digit
Ambient temperature during operation °C	5 ... 55
Storage temperature °C	-20 ... 65
Resolution temperature °C	0,01
Flow rate	4 s "fast reaction heat meter" in accordance with DIN EN 1434 - 1:2016-02
Temperature	16 s
Consumption standard	kWh, MWh or GJ
Data backup	1 x daily
Standard optical interfaces	ZVEI, IrDA
Frequency	868 MHz
Radiomodule	LoRaWAN w-MBus (OMS-kompatibel)
Transmission frequency	Every 24. hours (LoRaWAN) Every 3. minute (w-MBus)
Telegram content	Heating energy Cooling energy
Storage of monthly due date values	During the entire operation time
Maximum value storage	Flow rate, thermal output and other parameters
Battery	3.6 V lithium battery
Battery lifetime	Up to 10 years
Protection class	IP 54
Environmental class	A
Climatic highest permissible ambient temperature °C	55
Lowest permissible ambient temperature °C	5
Mechanical class	M1
Electromagnetic class	E1

## TECHNICAL DATA TEMPERATURE SENSORS

Platinum precision resistor	pt 1000
Sensor type	45 x 5,2 mm
Temperature range °C	0 ... 105
Cable length	q <sub>p</sub> 0,6 to 2,5 approx. 1,5 meter q <sub>p</sub> 3,5 to 10 approx. 5 meter
Installation hot pipe	≤ 2,5 m <sup>3</sup> /h direct, ≥ 3,5 m <sup>3</sup> /h pocket
Installation cold pipe	≤ 2,5 m <sup>3</sup> /h direct, ≥ 3,5 m <sup>3</sup> /h pocket

LoRaWAN M-Bus  
ENERGY METER  
BRUNATA ZELSIUS C5 IUF



## TECHNICAL DATA FLOW SENSOR

Nominal flow $q_p$	m <sup>3</sup> /h	0,6	1,5	2,5	3,5	6	10
Maximum flow $q_s$	m <sup>3</sup> /h	1,2	3	5	7	12	20
Minimum flow $q_i$	l/h	6	15	25	35	60	100
		12	30	50	70	120	200
Pressure loss at $q_p$	bar	≤ 0,25					
Temperature range	°C	0 ≤ $\theta_q$ ≤ 105 / 0 ≤ $\theta_q$ ≤ 130					
Minimum pressure (to avoid cavitation) °C	bar	1 bar at $q_p$ and 80 °C medium temperature					
Measurement accuracy class (*)		2 (optional 3)					
Nominal pressure (*)							
Body with thread connection	PS/PN	16/16					
Body with flange	PS/PN	25/25					
Protection class		68					
Installation position		In any position					
Installation point		LoRaWAN: Return- og supply pipe optionally when installed w-MBus: return- og supply pipe					
Cable length up to calculator	m	1,2					
Installation adapter for temperature sensors	2	M10 x 1					
Heat carrier (medium)		Water (without additives)					

(\*) option

## CONNECTION SIZES (\*)

Nominal flow $q_p$ (m <sup>3</sup> /h)	L (mm)	Threaded connection	Flange/DN
0,6	110	G <sup>3</sup> / <sub>4</sub> B	
0,6	130	G1B	
0,6	190	G1B	DN20
1,5	110	G <sup>3</sup> / <sub>4</sub> B	
1,5	130	G1B	
1,5	190	G1B	DN20
2,5	130	G1B	
2,5	190	G1B	DN20
3,5	150	G1 <sup>1</sup> / <sub>4</sub> B	
3,5	260	G1 <sup>1</sup> / <sub>4</sub> B	DN25
6	150	G1 <sup>1</sup> / <sub>4</sub> B	
6	260	G1 <sup>1</sup> / <sub>4</sub> B G1 <sup>1</sup> / <sub>2</sub> B	DN25 DN32
10	200	G2B	
10	300	G2B	DN40

(\*) option

