

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

### APPLICATION

Brunata Zelsius C5 CMF can be used to measure the energy consumption and is available as an energy meter for heating, an energy meter for cooling and a combined energy meter for heating and cooling. With a built-in 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 CMF is one of the market's most leading resource-optimized meters, both in terms of operation, environment and economy.

### PROPERTIES

Reliability and large dynamic range ensure optimal measurement results during the entire operating time. With the non-reactive electronic impeller detection, Brunata Zelsius C5 CMF meets the current metrological requirements for a compact heat meter and due to its concentric measuring capsule it is available for different connection points (A1, IST, M60, TE1) according to DIN EN 14154.

### FUNCTIONS

- Mechanical with coaxial measuring capsule (CMF)
- Low start flow and low pressure loss
- Compact design
- Rotatable calculator
- Fast reaction

### REMOTE READINGS

Brunata Zelsius C5 CMF has a built in radio module that enables the meter to be read remotely, and that can be read via Brunata Net. Brunata Net is a radio network that can be set up in all types of properties. With Brunata Net you can, as the property administrator, gain access to monitor measurement data via Brunatas Online. Brunata Online allows both residents and the administrator to monitor the development of consumption and consumption patterns.



### WHY

- Compact energy meter to measure the energy consumption
- Ensure high measurement stability and a low pressure loss
- Brunata takes care of all the work while you save time
- Mechanical with coaxial measuring capsule
- Get your property ready for the legal requirements and technical standards of the future

### FACTS

- MID-approved
- Sends a telegram every 24 hour (LoRaWAN) or every 3. minute (wM-Bus)
- Available as an energy meter for heating or cooling, or a combined energy meter for heating and cooling
- The energy meter has 11 years of battery lifetime
- The meter meets the Energy Efficiency Directive's (EED) requirement for remote reading



## TECHNICAL DATA FOR CALCULATOR

Temperature range °C	0 ... 105
Temperature difference range K	3 ... 80
Display	8-digit LCD
Ambient temperature during operation °C	5 ... 55
Storage temperature °C	5 ... 55
Minimum temperature difference K	3
Resolution temperature °C	0,01
Flow rate	Standard 30s
Temperatures	Standard 30s
Consumption standard	kWh, option MWh or GJ
Data backup	1 x daily
Standard optical interfaces	ZVEI IrDA
Frequency band	868 MHz
Radiomodule	LoRaWAN wM-Bus
Transmission frequency	Every 24. hour (LoRaWAN) Every 3. minute (wM-Bus)
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 11 years
Protection class	IP 54
Environmental class	A
Ambient conditions / climate influencing	Valid for complete compact meter
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 M	1,5
Installation hot pipe	≤ 2,5 m <sup>3</sup> /h direct
Installation cold pipe	≤ 2,5 m <sup>3</sup> /h direct



## TECHNICAL DATA FOR FLOW SENSOR

Nominal flow $q_p$	m <sup>3</sup> /h	0,6	1,5	2,5
Max. flow $q_s$	m <sup>3</sup> /h	1,2	3	5
Min. flow $q_i$ CMF	l/h	24	30/60	50/100
Starting flow horizontally	l/h	5	5	7
Pressure loss at $q_p$	bar	≤ 0,25		
Temperature range (*)	°C	10 °C ≤ $q$ ≤ 90 °C		
Minimum pressure (to avoid cavitation)	bar	0,3		
Measurement accuracy class		3		
Connecting point*		A1, IST, M60, TE1		
Nominal pressure / peak pressure	PS/PN	16		
Nominal diameter	DN	Depending on the connecting interface		
Installation position		Horizontally or vertically, no upside down installation		
Installation point		LoRaWAN: Programmable for either return- or supply pipe wM-Bus: Ordred for either return- or supply pipe before installation		
Cable length up to calculator	m	1,2		
Installation adapter for temperature sensors		M10 x 1		
Heat carrier (medium)		Water (without additives)		

(\*) optionally

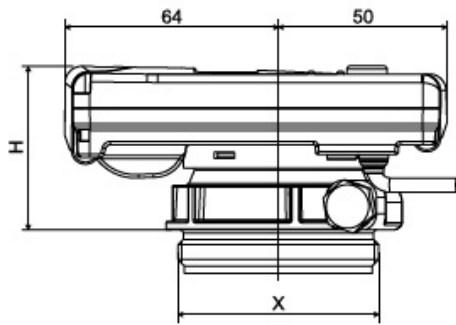
## DIMENSIONS

Height compact version		50 mm
Height combination version	(H1+H2)	65 mm

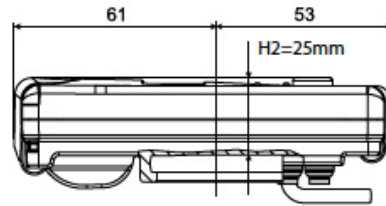
LoRaWAN M-Bus  
**ENERGY METER**  
 BRUNATA ZELSIUS C5 CMF



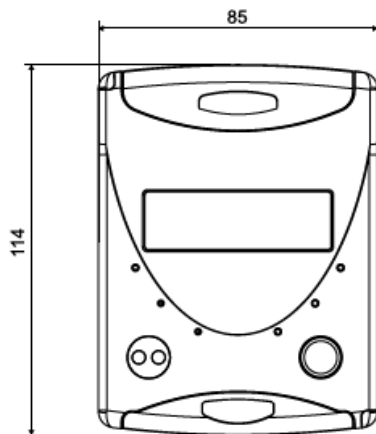
## DIMENSIONS



Compact version



Combi version



Data calculator

## PRESSURE LOSS GRAPH

