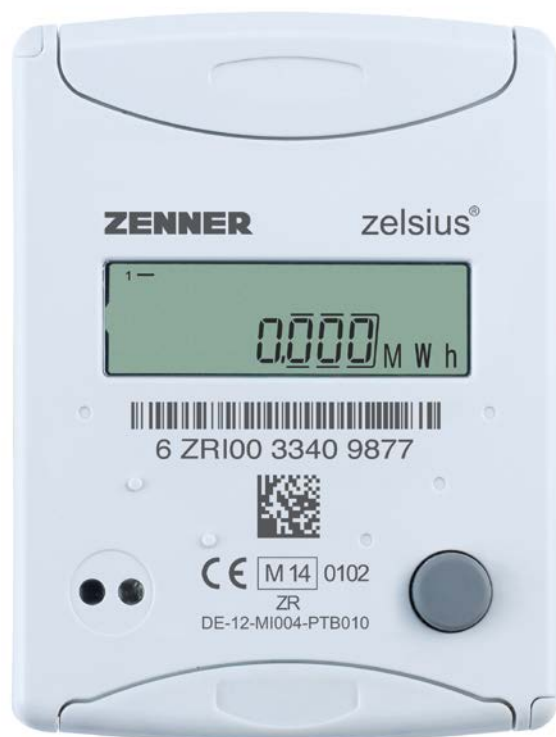


Hello, I am the new Zelsius C5 heat meter

The new generation of ultrasonic heat and cooling meters
for precise energy consumption measurement.



zelsius® C5 Ultrasonic Energy Meter



About

The ZENNER C5 Ultrasonic Energy Meter offers a robust and future-proofed solution for energy consumption measurement in both heating and cooling applications.


The MID Approved Class 2 standard, compact design, reliability at low flow rates and range of data collection outputs, including MBus, Wireless MBus and Pulse makes the ZENNER C5 Ultrasonic Energy Meter the ideal solution for all energy consumption measurement applications.

Whatever your application, the ZENNER C5 Ultrasonic Energy Meter is the solution for you.

An Overview of Features and Benefits

- Available as heat, cooling or combined heat and cooling
- Compact and low design height
- MBus output as standard
- Powered by MBus
- Optional wireless MBus
- 3 pulse inputs or outputs
- Optional temperature measurement cycle of 4 seconds
- Any installation position
- Stores monthly readings during whole running time
- 6 or 11 Year Battery, becomes backup battery when powered by MBus
- Precise, long term stable and wear free
- Range of available nominal flow rates
- Tamper evident features
- MID Class 2, suitable for domestic and commercial billing
- Battery can be retrofitted on-site

For further technical advice
please contact us on:

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Applications

District and Communal Heating Applications

On any heat or cooling network, whether communal or district, the ZENNER C5 Ultrasonic Energy Meter offers the most reliable and future-proofed solution available.

The compact and smart design ensures the ease of installation in any position. The removable calculator and mounting bracket make the display easy to locate and viewable for consumers, alongside tamper-evident features to both deter and detect fraud.

All ZENNER C5 Ultrasonic Energy meters offer an MBus 'open-protocol' data collection output as standard, with the meter powered by MBus and not reliant on any battery. Additional meters, such as water or electricity meters, can be connected to one of the three available pulse inputs to provide a cost effective solution to capture all metering data through one data collection method.

The reliable and robust MBus data transfer method complies with the Open Metering System (OMS) standard, ensures that data is not locked to any supplier or manufacturer.

Alongside this a wireless MBus version is available making the ZENNER C5 Ultrasonic Energy Meter suitable for both new-builds as well as retrofits.

Hydraulic Interface Units (HIU) or Consumer Interface Units (CIU)

The popularity of HIU's is increasing in the UK and the ZENNER C5 Ultrasonic Energy meter is the ideal metering solution for any HIU, offering proven and reliable ultrasonic measurement technology that is wear free and tolerant of debris and stable over long term measurement.

The compact design and removable calculator alongside the range of available nominal flow rates offers a solution for all HIU's. The one-button menu control makes commissioning of HIU's simple and efficient.

The inclusion of an MBus 'open-protocol' data collection output as standard, as well as powering the meter by MBus and offering three pulse inputs or outputs ensures suitability for every application.

Alongside this the optional 4-second temperature measurement cycle, available at no additional cost, ensures the capture of all energy consumption and is ideal for instantaneous hot water HIU's. This is because many energy meters do not update their temperature cycle for 15 or 30 seconds, often missing the consumption of hot water, when a tap might only be turned on for a short period of time.

Stand Alone Installations


On any stand-alone installation the ease of installation and operation are key. The ZENNER C5 Ultrasonic Energy Meter offers proven and reliable ultrasonic measurement technology that is wear free and tolerant of debris, stable over long term measurement, reliable for very low volume flow rates and can be installed in any installation position.

Alongside this the large LCD display with all functions available at the touch of a button means that long term operation could not be easier.

The full range of installation accessories are available including, couplings, ball valves and pockets as required.



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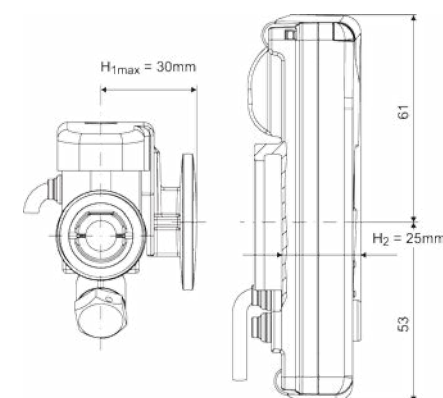
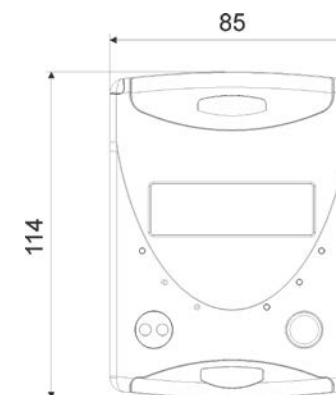
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Technical data calculator		
Temperature Range	°C	0...105/0...150*
Temperature difference range	K	3...80/3...130*
Display		LCD 8-digit + additional characters
Ambient temperature during operation	°C	5...55
Storage temperature	°C	-20...+65
Resolution temperature	°C	0.01
Measurement frequency		Adjustable ex works, beginning with 2s, standard 30s
Unit to read the heat consumption		Standard MWh, opt. kWh, GJ
Data storage		1 x daily
Due date values		Storage of all monthly values during the entire operation time
Maximum value storage		Extensive storage of flow rate, performance and other parameters
Interface	Standard	Optical interface (ZVEI, IrDA)
	Optional	M-Bus, wM-BUS, RS485, radio
Supply		3.6V lithium battery (different capacities)
Battery lifetime	Years	>6, opt >11 (changeable during operation time)
Protection class		IP54
Environmental class acc. To EN 1434		A
Ambient conditions/climatic influencing (valid for complete compact meter)	- climatic	Highest permissible ambient temperature 55°C
		Lowest permissible ambient temperature 5°C
		Humidity class IP54
	- Mechanical class	M1
- electro-magnetic class	E1	

*optional



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Technical data flow sensors

Nominal flow, q _p	m ³ /h	0.6	1.5	2.5
Maximum flow q _s	m ³ /h	1.2	3	5
Minimum flow q _i	l/h	6 / 12 / 24	15 / 30 / 60	25 / 50 / 100
Pressure loss at q _p	bar	<=0.25 bar		
Medium temperature range*	°C	0°C <=θ _q <=90°C / 0°C <=θ _q <=130°C		
Minimum pressure (to avoid cavitation)	bar	1 bar at q _p and 80°C medium temperature range		
Measurement accuracy class*		2		
Nominal pressure / peak pressure	PS / PN	Body with threaded connection	16/16	
	PS/PN	Body with flange	16/16 / 25/25	
IP-Protection class		68		
Installation position		Any		
Installation		Return flow, opt. forward flow		
Cable length up to calculator	m ³ /h	1.2		
Installation place temperature sensors		M10 x 1		
Heat carrier		Water		
Nominal diameter	DN	15	15	20
Connecting sizes*	Nominal flow q _p [m ³ /h]	L [mm]	Threaded connection	Flange / ND
		0.6	110	G3/4B
	0.6	130	G1B	--
	0.6	190	G1B	20
	1.5	110	G3/4B	--
	1.5	130	G1B	--
	1.5	190	G1B	20
	2.5	130	G1B	--
	2.5	190	G1B	20

*optional

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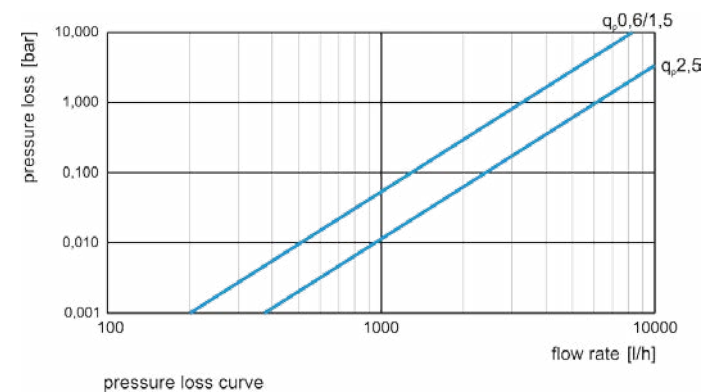


Technical data temperature sensors

Platinum precision resistor		Pt 1000
Sensor diameter/type	mm	45 x 5.0 / 45 x 5.2 / DS 27.5 other sizes on demand
Temperature range	°C	0 ... 105 / 0 ... 150*
Cable length	m	1.5 (opt. 5)
Installation	VL	By direct immersion or by immersion sleeves (in case of existing measuring points)
	RL	By direct immersion or by immersion sleeves (in case of existing measuring points); integrated in flow sensor, optionally external

Dimensioning limits may apply for non-symmetrical temperature sensors installation.

*optional




pressure loss curve

Notes

Three columns of horizontal dotted lines for taking notes.

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