

MLCC Ultrasonic Thermal Energy Meter

Innovating Measurement Professional Smart
Meter Manufacturer



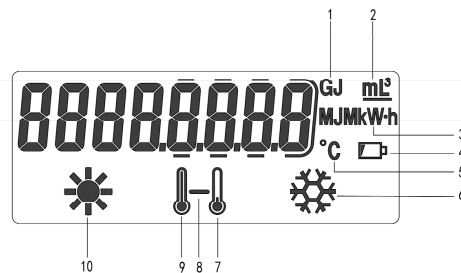
Basic Information

MLCC Ultrasonic Thermal Energy Meter is an intelligent measuring instrument composed of a paired temperature sensor, flow sensor and calculator. The calculator achieves accurate measurement of flow, heat or cooling by processing the temperature difference collected by the sensor and the time difference of sound waves passing through the fluid, and can provide recording and data transmission for various applications of heating or cooling pipelines.

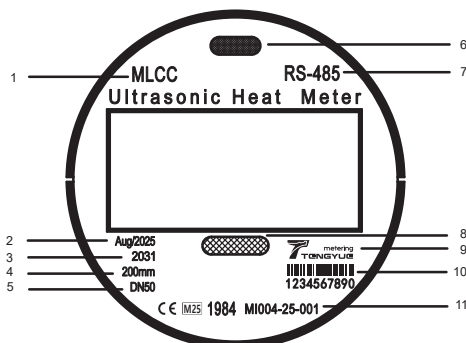
- No moving parts in the measuring mechanism, ensuring no wear and tear
- Supports vertical, horizontal, or inclined installation angles
- High-precision temperature measurement probe, PT1000
- Supports non-full pipe detection
- Low pressure loss
- IP67 protection rating, adaptable to various harsh installation environments
- Supports remote meter data reading: wired reading via RS-485 modbus/M-Bus

LCD Recognition

1	Energy Measurement Unit
2	Fluid Measurement Unit
3	Energy Measurement Unit
4	Low Battery Voltage Indicator
5	Temperature Measurement Unit
6	Cooling Capacity Indicator
7	Outlet Temperature Indicator
8	Temperature Difference Indicator (7&8&9)
9	Inlet Temperature Indicator
10	Heating Capacity Indicator



Nameplate



- 1 Product Model
- 2 Production Date
- 3 Battery Life
- 4 Meter body Length
- 5 Nominal Diameter
- 6 LCD Window
- 7 Communication Method
- 8 Touch Area
- 9 Manufacturer's Logo
- 10 Meter Address
- 11 Certification Mark

► Technical Specifications

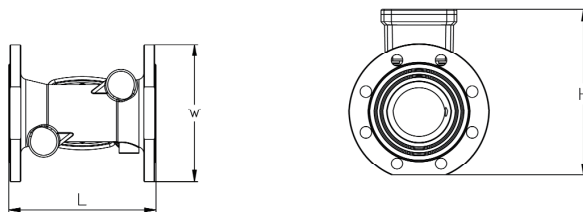
Model	Qs m³/h	Qp m³/h	Qt m³/h	Qi m³/h
MLCC-50	30	15	1.5	0.6
MLCC-65	50	25	2.5	1
MLCC-80	80	40	4	1.6
MLCC-100	120	60	6	2.4
MLCC-125	200	100	10	4
MLCC-150	300	150	15	6
MLCC-200	500	250	25	10
MLCC-250	800	400	40	16
MLCC-300	1200	600	60	24
MLCC-350	1500	750	75	30
MLCC-400	2000	1000	100	40

Description	Value	Unit
Max flow indication	9999999.9	m³
Heat max indication	99999999	kW·h
Accuracy class	Class 2	-
Pressure loss	≤0.025	MPa
Max working pressure	PN16	
Temperature difference range	3~75	K
Temperature range	4~95	°C
Resolution temperature	0.01	°C
Environmental/Machinery category	Class A ; M1	-
Battery life	≥6years(ER18505); ≥10years(ER26500)	-
Installation position	Horizontal or Vertical	-
Temperature sensor	Pt1000	-
Display	LED, 8 digits	-
Interface Protocol	M-Bus/RS485 EN13757/Modbus (188 customizable)	-

► Communication Technical Specifications

Feature	Parameters	
Interface	M-BUS	RS485
Protocol	188/EN13757	Modbus
Baud rate	2400bps/9600bps	9600bps
Communication range	500m	1000m
The maximum number of connectable	500	256
Communication power supply	9-24V	12-24V
Physical layer	Two-wire system	Four-wire system

► Dimensions



Nominal Diameter(mm)	Length L	Height H	Flange Connection		
			Flange Diameter	Bolt Circle Diameter	Bolt Size—M
DN50-2"	200	135	135	125	4—M16
DN65-2.5"	200	150	150	145	4—M16
DN80-3"	225	190	190	160	8—M16
DN100-4"	250	200	200	180	8—M16
DN125-5"	250	245	245	210	8—M16
DN150-6"	300	270	270	240	8—M20
DN200-8"	350	320	320	295	12—M20
DN250-10"	450	405	405	355	12—M24
DN300-12"	500	460	460	410	12—M24
DN350-14"	500	520	520	470	16—M24
DN400-16"	600	580	580	525	16—M27

Legal Notice & Disclaimer

This document is prepared by Lianyungang Tengyue Electronic Technology Co., Ltd. (hereinafter referred to as "TengYue Metering") for the purpose of providing potential customers with technical information regarding our products and solutions. All readers are hereby advised and agree to the following terms:

Dynamic Nature of Technical Specifications

TengYue Metering reserves the right to continuously iterate and optimize product hardware designs, software algorithms, system architectures, and technical parameters. Such modifications may be implemented without prior notice. All technical specifications, performance indicators, and functional descriptions contained herein represent the state of technology at the time of publication and do not constitute a final commitment to delivery. The definitive terms shall be governed exclusively by the formal Technical Agreement and Product Delivery List executed between the parties.

Applicability of Performance Data

All performance data and test results cited in this document are based on values obtained from testing conducted by TengYue Metering under standard laboratory conditions. Actual system performance in a deployed environment may vary due to factors such as the complexity of the on-site environment, network topology, and the degree of integration with third-party systems. TengYue Metering makes no warranties or representations regarding the performance of its products in specific, non-standard environments.

System Compatibility and Integration

The compatibility of TengYue Metering's software systems with third-party platforms or devices is subject to the officially published compatibility certification list. For integration solutions not included on this list, TengYue Metering provides no technical support or guarantees of stability. Customers are responsible for conducting thorough compatibility testing prior to undertaking any system integration.

Intellectual Property Rights

The entire content of this document, including but not limited to technical solutions, architectural diagrams, code snippets, and textual descriptions, is the exclusive intellectual property of TengYue Metering. Any disclosure, reproduction, or use for commercial purposes to any third party is strictly prohibited without the express written authorization of TengYue Metering.

