METRION
ULTRA



ULTRASONIC BTU / COOLING ENERGY METER · DN15–DN200+

Designed to International Standards. Engineered for Middle East Performance.

Logic Utilities District Cooling Services LLC · Dubai, UAE · www.logicutilities.com



Comfort you don’t have to think about.

Behind every cooled home, office and retail space is a billing relationship that has to be accurate, transparent and fair. METRION ULTRA is the ultrasonic BTU meter Logic Utilities specifies to make that possible — measuring thermal energy precisely, so residents and building owners across the UAE are billed for exactly what they use.

METRION ULTRA

Ultrasonic BTU / Cooling Energy Meter

The METRION ULTRA is a compact, high-accuracy ultrasonic BTU and cooling energy meter supplied by Logic Utilities for district cooling, chilled water plant rooms, and sub-metering applications across the UAE. The meter integrates a precision ultrasonic flow transducer with a matched PT1000 temperature sensor pair to calculate thermal energy in accordance with EN 1434. With no moving parts, negligible pressure loss, and a replaceable internal lithium battery, it is designed for long-term unattended operation in occupied buildings.



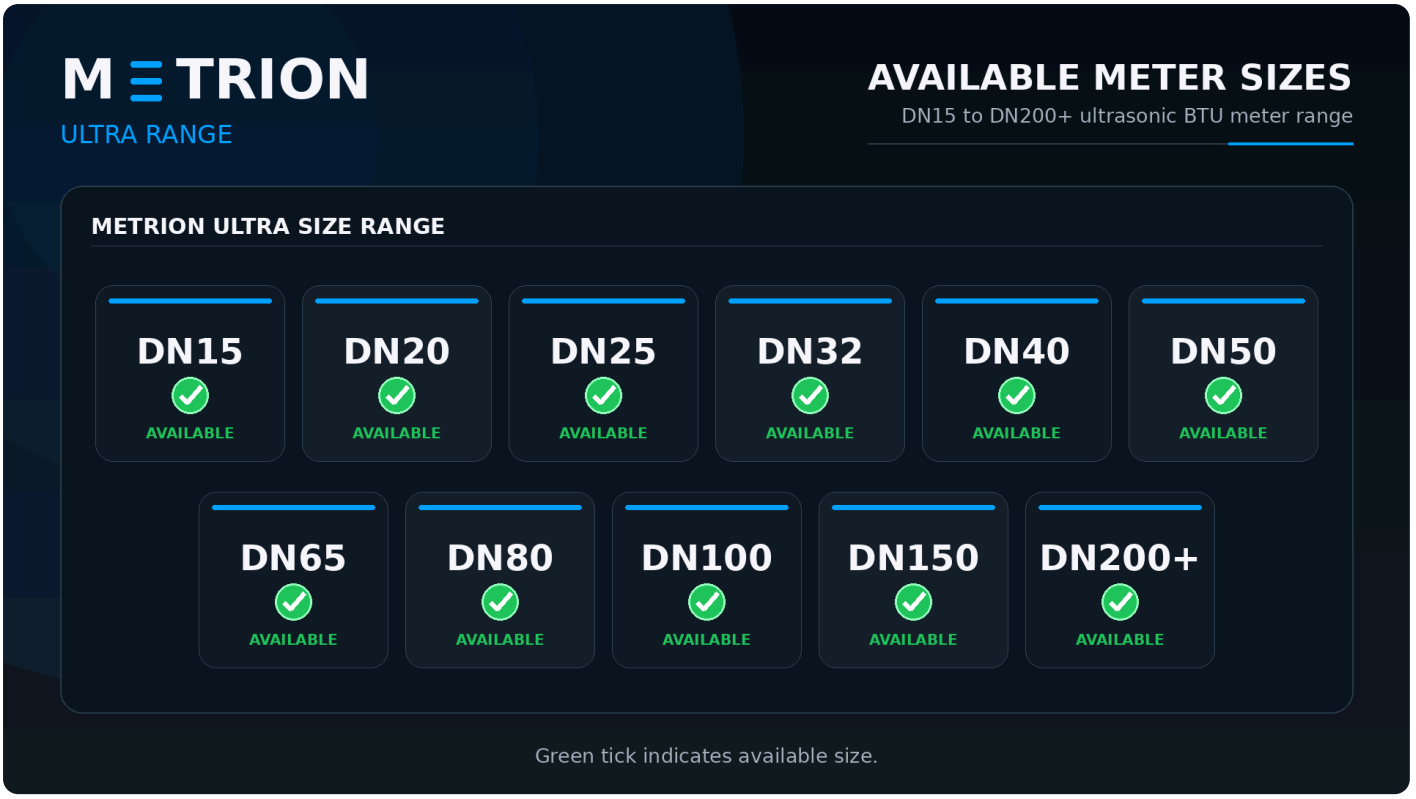
- ✓ Ultrasonic — no moving parts
- ✓ Class 2 accuracy (EN 1434)
- ✓ Battery life ≥ 10 years (replaceable)
- ✓ Return-pipe default (chilled water)
- ✓ M-Bus (wired) communication
- ✓ IP67 protection · 36-month data logging

TECHNICAL SPECIFICATIONS

Meter Type	Ultrasonic, single-path
Measurement	Cooling energy (kWh) / Heat energy (kWh) / Combined
Accuracy Class	Class 2 per EN 1434
Temperature Range	4 °C – 95 °C (fluid temperature)
Temperature Difference	2 K – 90 K
Max. Working Pressure	1.6 MPa (PN16)
Flow Measuring Range	1 : 100 (Qmin : Qmax)
Pressure Loss	≤ 0.025 MPa at Qp
Temperature Sensors	PT1000, 2-wire, M10×1 brass adapter — supplied as a matched pair · Cable length 1.5 m (standard)
Power Supply	Internal lithium battery (replaceable unit)
Battery Life	≥ 10 years (replaceable battery unit)
Data Logging	36 months continuous (heat/cool energy + flow volume)
Display	8-digit LCD — energy, flow, temperatures, temp. difference, date/time
Protection Class	IP67
Environmental Class	Class B
Default Installation	Return pipe (chilled water default) · Supply pipe available on request
Installation Position	Horizontal (preferred) or vertical
Ambient Temperature	5 °C – 55 °C

Specifications correspond to the DN15–DN40 threaded range. DN50–DN200+ cast-iron flanged variants are covered on the following size range page.

AVAILABLE METER SIZES — DN15 TO DN200+



Meter Sizes — Threaded (Brass Body), DN15–DN40

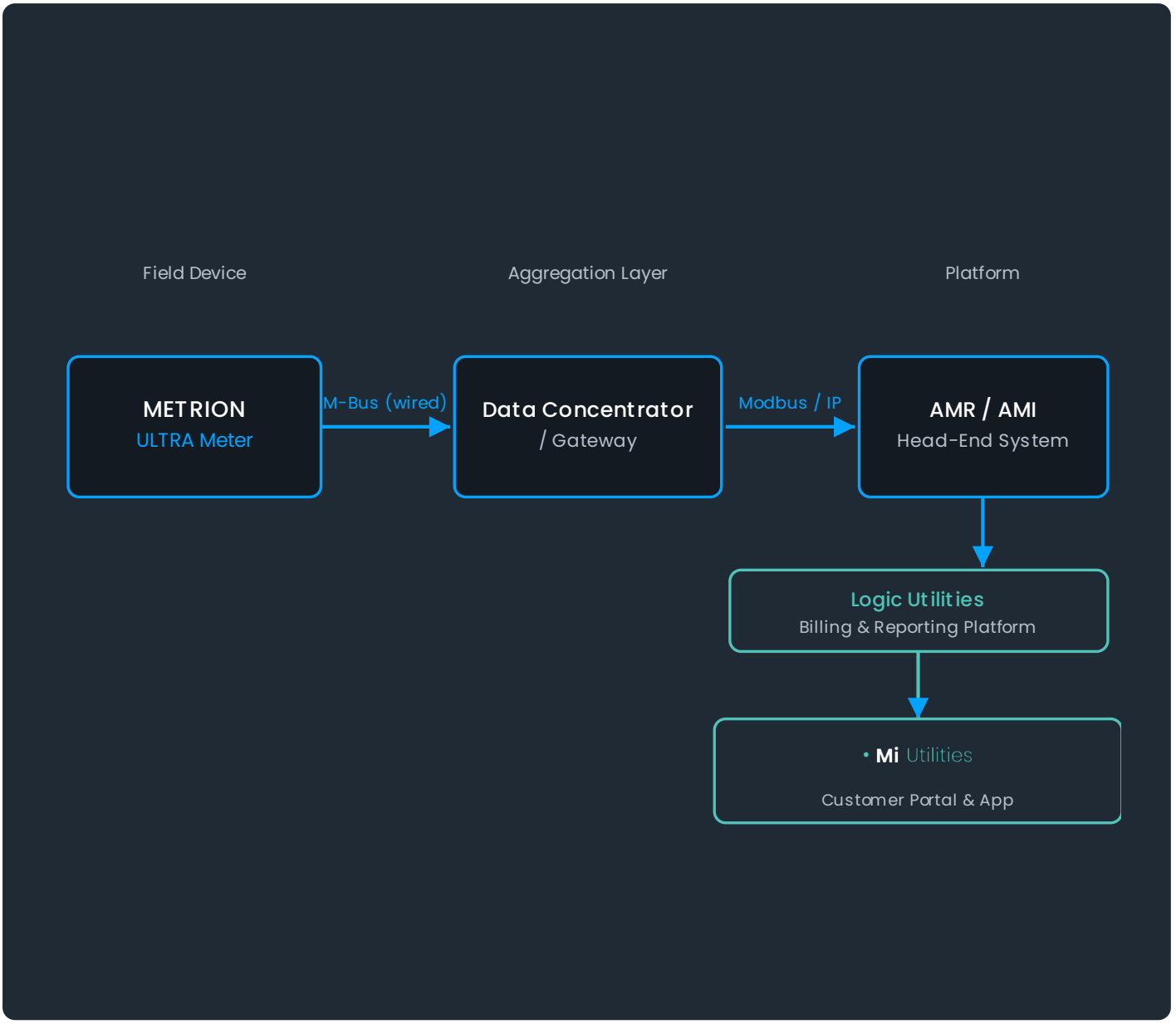
Nominal Diameter	Connection (BSP)	Qmin (m³/h)	Qp (m³/h)	Qmax (m³/h)	Face-to-Face (mm)
DN15	G ¾″	0.015	1.5	3.0	110
DN20	G 1″	0.025	2.5	5.0	130
DN25	G 1¼″	0.035	3.5	7.0	160
DN32	G 1½″	0.12	6.0	12.0	180
DN40	G 2″	0.2	10.0	20.0	200

DN50–DN200+ available in cast-iron body with flanged connections. Specifications on request.

COMMUNICATION & CONNECTIVITY

Interface	Detail
M-Bus (wired)	EN 13757 · 24–45 V · primary/secondary addressing
Protocol	EN 1434

DATA FLOW — METER TO CUSTOMER



Default and standard communication interface: M-Bus (wired), EN 13757. Meter data flows through to Mi Utilities, the Logic Utilities customer-facing portal and app, for resident and building-owner visibility. Reading frequency limits apply per the installation guide.



Built for Real Installation Conditions

METRION ULTRA is engineered for plant rooms, ceiling voids and riser cupboards — not laboratory conditions. IP67 protection, a replaceable battery unit and flexible horizontal or vertical mounting keep commissioning straightforward for field teams.

INSTALLATION NOTES

Installation side	Default factory configuration is return-pipe (chilled water). Supply-pipe configuration must be specified at order.
Flow direction	Ensure medium flow direction matches the arrow on the meter body.
Straight pipe runs	Minimum 5× DN upstream and 3× DN downstream of the meter.
Orientation	Horizontal installation preferred. Vertical installation permitted when the meter is positioned at the bottom of the pipe loop to maintain back-pressure.
Temperature sensors	Do not cut or extend sensor cables. Fit BLUE-label sensor to supply pipe, RED-label sensor to return pipe.
Isolation valves & strainer	Install isolation valves and a Y-strainer upstream of the meter.
Sealing	Use PTFE tape for threaded connections. Do not use hemp/linen thread.
Meter housing	Install in a dry, accessible location. A lockable meter box is recommended.
Battery replacement	Must be carried out by qualified personnel only.

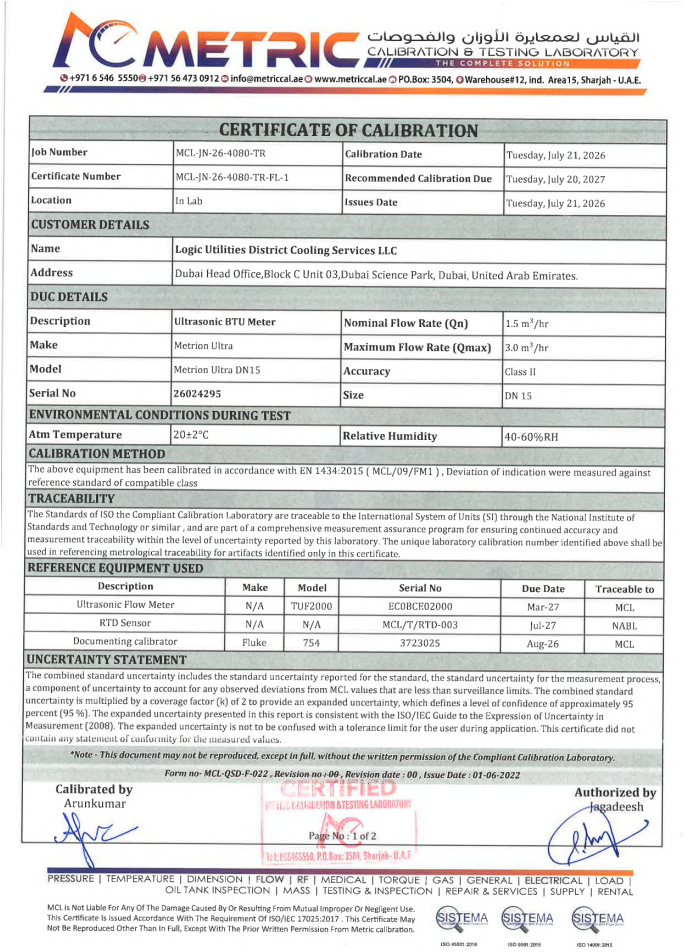
ENGINEERING STANDARDS & COMPLIANCE

Standard / Approval	Scope	Status
EN 1434	Heat meters — Parts 1–6	Engineered to standard ✓
IP67	Ingress protection (IEC 60529)	Confirmed ✓
EN 60751 Class B	Temperature sensor accuracy	Confirmed ✓
Local Testing & Calibration	Metric Calibration & Testing Laboratory, UAE — EN 1434:2015 method	Certified July 2026 ✓
CE Marking	Conformité Européenne	Confirmed ✓
ECAS (MOIAT)	UAE Cabinet Decision 140 of 2023 type approval	In Progress

UAE Calibration Certificate

Independently tested by Metric Calibration & Testing Laboratory (Sharjah, UAE) in accordance with EN 1434:2015. Flow measurement error confirmed within 0.496% across the tested range, with temperature measurement verified from 4–95 °C.

Certificate No. MCL-JN-26-4080-TR-FL-1 · Issued 21 July 2026 · Recommended recalibration due 20 July 2027.



METRIC القياس لمعايرة الأوزان والفحوصات
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THE COMPLETE SOLUTION
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CERTIFICATE OF CALIBRATION

Job Number	MCL-JN-26-4080-TR	Calibration Date	Tuesday, July 21, 2026
Certificate Number	MCL-JN-26-4080-TR-FL-1	Recommended Calibration Due	Tuesday, July 20, 2027
Location	In Lab	Issues Date	Tuesday, July 21, 2026
CUSTOMER DETAILS			
Name	Logic Utilities District Cooling Services LLC		
Address	Dubai Head Office,Block C Unit 03,Dubai Science Park, Dubai, United Arab Emirates.		
DUC DETAILS			
Description	Ultrasonic BTU Meter	Nominal Flow Rate (Qn)	1.5 m^3/hr
Make	Metrion Ultra	Maximum Flow Rate (Qmax)	3.0 m^3/hr
Model	Metrion Ultra DN15	Accuracy	Class II
Serial No	26024295	Size	DN 15
ENVIRONMENTAL CONDITIONS DURING TEST			
Atm Temperature	20±2°C	Relative Humidity	40-60%RH

CALIBRATION METHOD
The above equipment has been calibrated in accordance with EN 1434:2015 (MCL/09/FM1) , Deviation of indication were measured against reference standard of compatible class

TRACEABILITY
The Standards of ISO the Compliant Calibration Laboratory are traceable to the International System of Units (SI) through the National Institute of Standards and Technology or similar , and are part of a comprehensive measurement assurance program for ensuring continued accuracy and measurement traceability within the level of uncertainty reported by this laboratory. The unique laboratory calibration number identified above shall be used in referencing metrological traceability for artifacts identified only in this certificate.

REFERENCE EQUIPMENT USED

Description	Make	Model	Serial No	Due Date	Traceable to
Ultrasonic Flow Meter	N/A	TUF2000	EC0BCE02000	Mar-27	MCL
RTD Sensor	N/A	N/A	MCL/T/RTD-003	Jul-27	NABL
Documenting calibrator	Fluke	754	3723025	Aug-26	MCL

UNCERTAINTY STATEMENT
The combined standard uncertainty includes the standard uncertainty reported for the standard, the standard uncertainty for the measurement process, a component of uncertainty to account for any observed deviations from MCL values that are less than surveillance limits. The combined standard uncertainty is multiplied by a coverage factor (k) of 2 to provide an expanded uncertainty, which defines a level of confidence of approximately 95 percent (95 %). The expanded uncertainty presented in this report is consistent with the ISO/IEC Guide to the Expression of Uncertainty in Measurement (2008). The expanded uncertainty is not to be confused with a tolerance limit for the user during application. This certificate did not contain any statement of conformity for the measured values.

**Note - This document may not be reproduced, except in full, without the written permission of the Compliant Calibration Laboratory.*

Form no- MCL-QSD-F-022 , Revision no - 00 , Revision date : 00 , Issue Date : 01-06-2022

Calibrated by Arunkumar
CERTIFIED METRIC CALIBRATION & TESTING LABORATORY
Authorized by Jagadeesh
Page No : 1 of 2
Tel: 065465550, P.O.Box: 3504, Sharjah - U.A.E

PRESSURE | TEMPERATURE | DIMENSION | FLOW | RF | MEDICAL | TORQUE | GAS | GENERAL | ELECTRICAL | LOAD | OIL TANK INSPECTION | MASS | TESTING & INSPECTION | REPAIR & SERVICES | SUPPLY | RENTAL

MCL Is Not Liable For Any Of The Damage Caused By Or Resulting From Mutual Improper Or Negligent Use. This Certificate Is Issued Accordance With The Requirement Of ISO/IEC 17025:2017 . This Certificate May Not Be Reproduced Other Than In Full, Except With The Prior Written Permission From Metric calibration.

SISTEMA ISO 45001:2018 SISTEMA ISO 9001:2015 SISTEMA ISO 14001:2015

ORDERING INFORMATION

Model Code	METRION-ULTRA-[DN]-[COMM]
Example	METRION-ULTRA-DN25-MBUS = DN25, M-Bus communication
Body Material	DN15–DN40: Brass (threaded) · DN50–DN200+: Cast iron (flanged, on request)
Default Configuration	Return-pipe installation, cooling mode, M-Bus (wired)
Supply-Pipe Installation	Available on request — state at time of order
Communication Options	M-Bus (wired) — EN 13757
Cable Lengths	Calculator-to-flow-part cable: 1.5 m standard · Temperature sensor cables: 1.5 m standard

MODEL REFERENCE EXAMPLES

Model Code	DN Size	Communication
METRION-ULTRA-DN15-MBUS	DN15	M-Bus (wired)
METRION-ULTRA-DN20-MBUS	DN20	M-Bus (wired)
METRION-ULTRA-DN25-MBUS	DN25	M-Bus (wired)
METRION-ULTRA-DN32-MBUS	DN32	M-Bus (wired)
METRION-ULTRA-DN40-MBUS	DN40	M-Bus (wired)



Logic Utilities District Cooling Services LLC · Utility Management Solutions · Dubai, UAE · E: sales@logicutilities.com · W: www.logicutilities.com · Document Ref: DS-MU-001 · Rev C · July 2026

WHY METRION

Built for the Region It Serves

District cooling is the dominant cooling model across the UAE's major residential and commercial developments, and accurate sub-metering is central to fair billing at scale. METRION ULTRA is specified, stocked and supported locally by Logic Utilities — an RSB Dubai and DoE Abu Dhabi licensed utility metering and billing operator already managing tens of thousands of meters across major master developments in the UAE.



- ✓ Locally stocked in the UAE
- ✓ Supported by an RSB / DoE licensed operator
- ✓ Engineered for chilled-water district cooling
- ✓ Backed by UAE-issued calibration certification

STOCK, SCALE & DELIVERY

Ready for Deployment at Scale

METRION ULTRA is held in UAE warehouse stock across the standard DN15–DN40 range, supporting rapid turnaround for new developments, retrofit programmes and reconnection campaigns without factory lead-time delays.



Size	Stock Status	Typical Dispatch
DN15 – DN40 (brass, threaded)	In stock, UAE warehouse	1–3 working days
DN50 – DN200+ (cast iron, flanged)	Available to order	Confirmed on order per project schedule

- ✓ Consistent quality, assured supply
- ✓ UAE-based inventory across DN15–DN40
- ✓ DN50–DN200+ available to order
- ✓ Direct dispatch to site or plant room

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