

AC Powered, Zero D, EFM

Model MUT2300-MC608

The MUT2300 with MC608 is a mains-powered electromagnetic water meter designed for district metering areas (DMA), water abstraction, custody transfer measurement of potable water (OIML R49), irrigation, and other applications. It is a maintenance-free meter that offers a wide measuring range in both compact and remote-mounted configurations. Thanks to its optimized flow profile, the MUT2300 can be installed without straight inlet or outlet runs, even behind pipe bends, valves, or reducers, while ensuring stable measurement at very low flow rates and negligible pressure loss. Optional pressure and temperature sensors and a 12-24 VDC power supply make it ideal for leak detection and pressure management systems. Its robust design allows for buried installation and operation in flooded areas, and on-site verification can be performed without interrupting operation using the Field Vericator tool.



Features & Benefits

- No moving parts
- Neglectable pressure drop
- Long lasting stability and precision
- Zero maintenance
- Extremely sturdy structure
- High chemical resilience
- Wider range of measurement

Typical Applications

- District metering of potable water
- Distribution, municipal water
- Industrial waste water
- Industrial process liquids, muds and concretes
- Leak detection and monitoring
- Fiscal measures, custody transfer
- Irrigation
- Booster pump stations
- Lift stations

High performances to a low cost of ownership:

Capability to read flow velocities of 0.015 m/s (OIML R49 certified)

Multiple outputs:

pulse, analog 4-20mA, Modbus, frequency, Hart protocol and programmable output

U0-D0:

Zero upstream and downstream distances (OIML R49 certified)

No data lost:

Data automatically stored in the internal EEPROM memory. Up to 100.000 lines of active datalogging

Flow - pressure – temperature: all at the same time:

Add on modules of temperature and pressure readying make the MUT2300 with MC608 one of the most complete electromagnetic flowmeter available in the market

Easy management, easy programming:

A software is supplied with the unit to allow users to communicate with the MC608 via ICOM port to any pc, lap top or windows tablet.

Certifications and compliance:

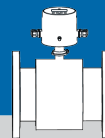
OIML R49 (on request) / EX - IEC IECEx (on request and only separate version) / NSF ANSI61 (On model MUT2200US)

Always verified:

The FIELD VERIFICATOR is available for full on-site verification, without interruption of the process

Empty pipe detection:

Empty pipe electrode supplied as standard ($\geq$ DN65). Empty pipe detection on measuring electrodes standard for all sizes



Converter Specifications

Temperature	Ambient: -20 ... +60 C° (-4 ... +140 F) Media -25 ... 80 C° (-13 ... +176 F) Storage -40 ... +70 C° (-22 ... +158 F)
Flow Units	ml, cl, dl, l, dal, hl, m3, in3, ft3, gal, USgal, bbl, oz + Custom value
Totalizers	5 (2 positive, 2 negative, 1 NET)
Alarms and status	Status icon displayed and alarm logged in the datalogger
Self diagnostic	Alarms available: excitation failure pulse overlapped empty pipe on the 4th electrode measurement error high temperature
External verification	Field vericator available for calibration verification and electronic status
Protection Degree	IP68 1.5 m continuous immersion (EN 60529)
Software for communication and programming	Commissioning (equal settings of meters) - Data print for documentation - Data export (CSV file) - Firmware update - Read instant flowrate - Read and write all non-volatile parameters - Download internal datalogger - View instrument event logger

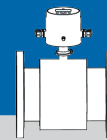
Sensor Specifications

Available size inches/mm	1" - 12" Inch / DN25 - 300 mm
Flanges Connections Available	EN1092-1 PN 10/16, ANSI 150, AS 2129 (table D, E, F), AS 4087, KS10K, Others on request
Pressure	21 bar - 305 psi
Temperature	Operating: -104°F/+176°F (-40°C/+80°C) Storage: -22°F/+158°F (-30...+70°C)
Accuracy	0,2% +/- 2mm/s • 0,2% +/- 0.08inch/s
Linear Material	Hard rubber (Ebonite)
Electrodes Materials	AISI316L (standard), Hastelloy C, Hastelloy B, Titanium, Tantalum, Platinum
Protection Degree	IP68 (EN 60529) permanents submersion at 1,5m (4,92ft)
Pressure Drop Class	DN≤80 ΔP10 (<0.10 bar) • DN≥100 ΔP16 (<0.16 bar) DN≤ 3" ΔP150 (<1.5 psi) • DN≥ 4" ΔP250 (<2.5 psi)
Digital filters	Damping - cutt-off (0,05 m/s • 0,16 ft/s default) - bypass - peak cut
Conformity	EMC: EN 61010 - LVD: EN 61326 ; EN/IEC 60529 IP68

The electromagnetic flowmeter designed for the toughest applications

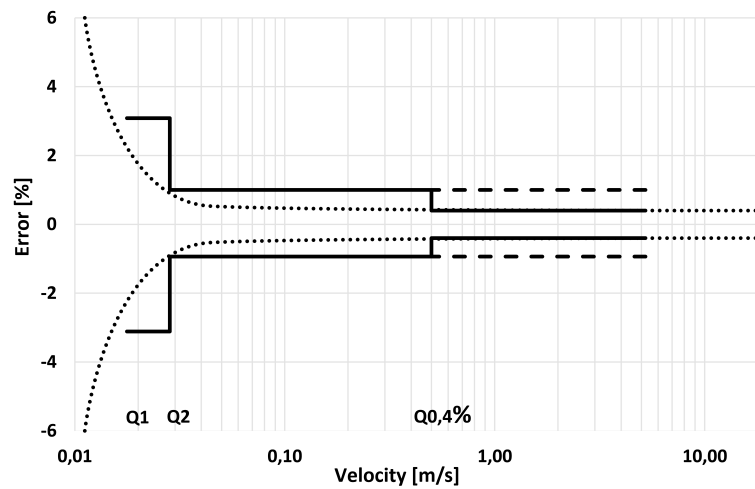


Modbus



Measuring Accuracy

Each flowmeter is standard wet calibrated under reference conditions by direct volume comparison. The performance of the flowmeter is defined and documented in an individual calibration certificate. Accuracy 0.2% +/- 2mm/s (0.2% +/- 1mm/s on request)

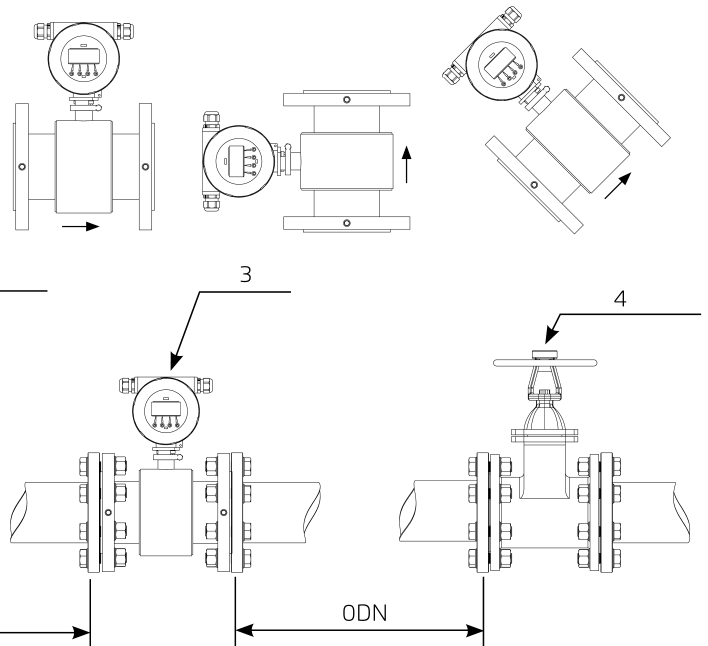


Flow Rate

Size Q @ (m³/h)	DN50 2"	DN65 2½"	DN80 3"	DN100 4"	DN125 5"	DN150 6"	DN200 8"	DN250 10"	DN300 12"
Q1 Minimum Flow	0.12	0.2	0.31	0.5	0.8	1.25	3.15	5	8
Q2 Transitional Flow	0.2	0.32	0.5	0.8	1.28	2	5.04	8	12.5
Q3 Permanent Flow	25	40	63	100	160	250	630	1000	1000
Q4 Maximum Flow (Short Time)	31	50	78	125	200	312	787	1250	1250

Installation Recommendations

- The arrow on water meter body must be in the same direction with the flow.
- Prior to installation, flush the line to remove debris.
- The water meter must be filled with water to operate.



[1] Isolation Valve

[2] Air Valve

[ODN] Unrestricted pipe,
minimum 0XDN

[3] MUT2300

[4] Isolation Valve