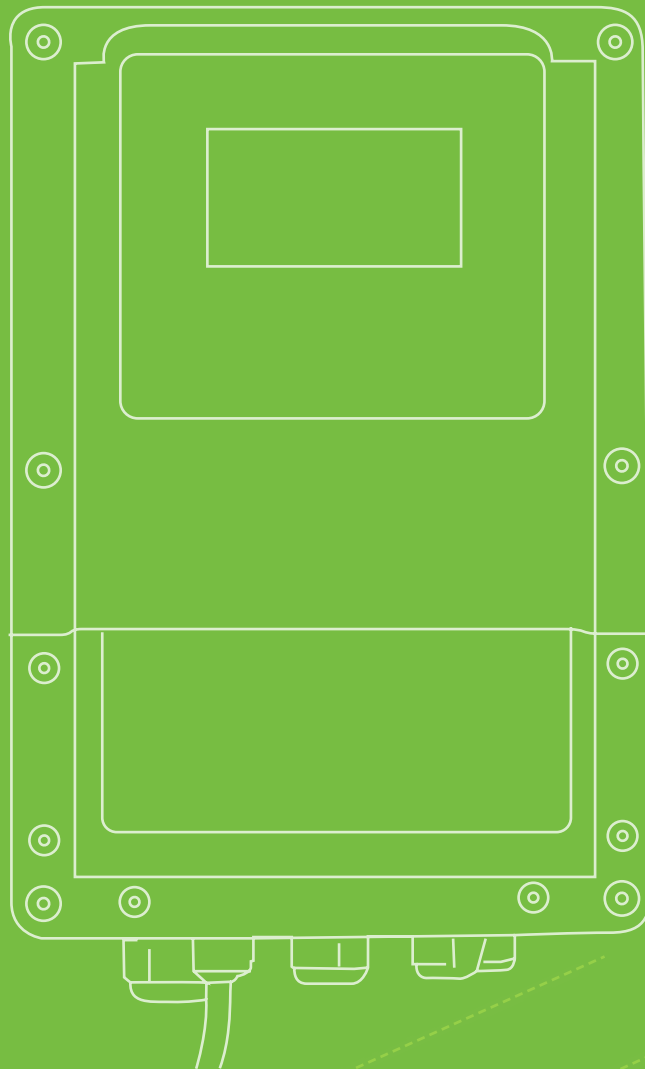




AQUAMONIX
Measure. Monitor. Master.

EMFLUXM500

FLOWMETER TRANSMITTER



IRRIGATION
AUTOMATION



WATER
MEASUREMENT



REMOTE
MONITORING



CLOUD
BASED DATA

EMFLUXM500 Flowmeter Transmitter

The M500 Electromagnetic Flowmeter has been developed to meet the demanding requirements for accurate metering of process and mining fluid supplies but is equally at home in other water supply applications including urban water waste water, irrigation and environmental monitoring.



Applications

- For accurate flow measurement of any conductive fluid.
- Ideally suited to water and waste water treatment plants, mining and general industry.
- Mains Powered or 12-24V DC Power.
- Forward and Reverse flow measurement.

Features

- Use the well established electromagnetic measurement method
- No moving parts or restriction of flow during measurement
- Enhanced diagnostic and alarm functions, completely configurable
- Removable SD card allowing easy upgrade of transmitter and logging
- Large multi-line backlit LCD display
- User configurable logging interval for flow data and diagnostic tables
- Optional 4-20mA output
- User configurable digital frequency and pulse outputs
- Full serial Modbus multidrop support
- 3x expansion slots allowing additional IO
- Serial support for modems, RTUs and PLCs
- Ability to calibrate and operate flow tubes up to 1500mm in diameter
- Capacitance style keypad with no moving parts
- Cable entry via IP68 rated glands
- Multi-level password protection
- Designed for outdoor environments

Technical Data

Display:

128 x 64 pixel monochrome graphic type with LED backlighting. Backlight can be enabled or disabled, includes auto-off mode when enabled and after 30 seconds of keypad inactivity.

Configuration:

Four button capacitive touch with adjacent key suppression, self-calibrating, with wake function and press or hold discrimination. Two-level menu hierarchy: menu and submenu with numerical index to each menu item for ease of cross referencing

Programmable meter codes are configurable. Access remotely via Magmate utility or via the onboard USB port.

Set-up and Operation

The operation and set-up of the system are broken into two main areas:

Operations Menu

- Power up display (self-test status and firmware version indication).
- Display of flow variables and alarms.
- Passcode entry.
- Read only display of settings and diagnostic information.
- Configuration of user settings (configuration menus).

Diagnostics

The M500 incorporates advanced diagnostics which monitor the integrity of the system, including:

- Coil voltage check
- Coil current check
- Electrode check
- Pipe Not Full detection

- Signal voltage check
- A/D Converter operation and self calibration
- Real Time Clock operation
- Battery voltage
- Battery current
- Solar voltage

Data Logging

Records

PC compatible directory structure with individual files for:

- Flow data records (CSV)
- Diagnostic results records (CSV)
- System event records (CSV)
- Alarms records (CSV)
- Configuration data (binary format)

M500

Performance

Flow Velocity Range	0.01-10m/sec
Accuracy	< ±0.5% of indicated flow rate, or ±1mm/sec
Full Scale Flow Rate	Programmable range: 0.01-10m/sec
Low Flow Cutoff	Programmable down to 0.01m/sec
Measurement Type	Flow velocity, flow rate, mass flow
Totaliser Units	Litres, kilolitres, megalitres, gigalitres and others
Flow Time Units	Seconds, hours, days
Flow Simulation Mode	Simulated DC current out, simulated flow rate.
Temperature	-20°C to 55°C

Outputs

Digital Pulse	Yes, 2 standard (up to 4 with optional expansion card) 100mA maximum each
Frequency	Up to 1000Hz
Analogue	Yes (with optional expansion card) Up to 2 outputs, 4 - 20mA, internally or externally powered
Serial RS232	Yes (with optional expansion card)
Serial RS485	Yes (with optional expansion card)
Serial RS422	Yes (with optional expansion card)
Modbus	Yes (with optional expansion card)

Inputs

Type	1 x digital input for controls (with optional expansion card)
Maximum Current	100mA
Power supply	240V AC, 12-24V DC

Data Logging

Parameters Logged	Diagnostic, flow, alarm
Logging Interval	Configurable, 1 to 720 minutes
Comms Connection	Mini USB (standard) RS232, RS485, RS422 (with optional expansion card)
File Format	CSV
Capacity	2 Gigabyte

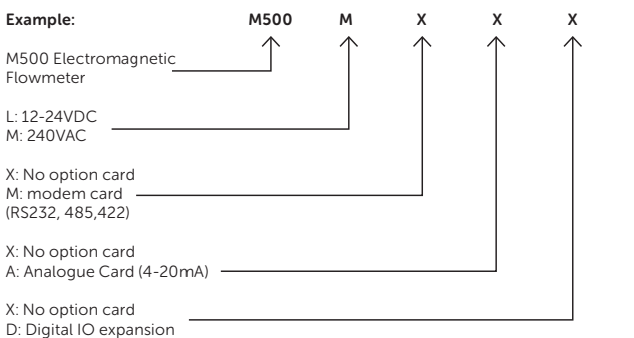
Power Supply

Power Supply	240V AC or 12-24V DC options
Maximum Cable Length	100m

Enclosure Specifications

Construction	Aluminium, polyurethane coated
Rating	IP65
Dimensions	H: 282mm W: 182mm D: 115mm
Weight	3.0 kg
Display	128 x 64 pixel configurable monochrome graphic with LED backlighting
Data Entry	Four button capacitive touch keypad with additional connectivity via USB
Cable Entries	1 x M25 (conduit entry), 1 x M20 (flow detector coil), 3 x M16 (power, flow detector signal)

Typical specifying sequence



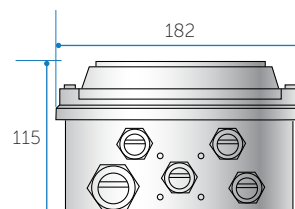
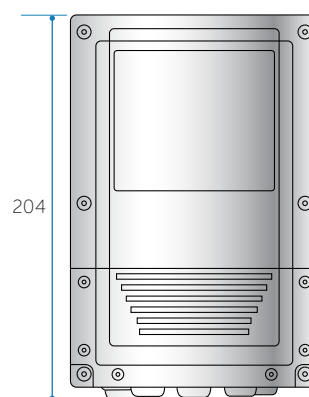
Part number table for M500 flowmeter

M500-MXXX	M500 with 240VAC supply, no option expansion cards.
M500-MXAX	M500 with 240VAC supply, analogue expansion card.
M500-LMXX	M500 with 24VDC supply, modem expansion card.

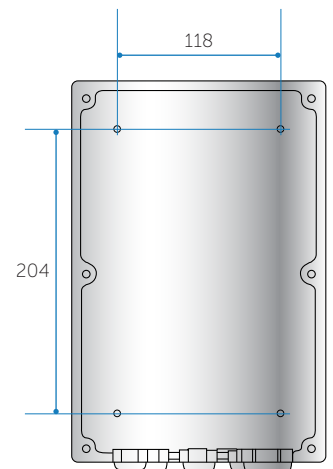
Part numbers for optional expansion cards:

Modem card:	Aquamonix part number G625056-PUR
Analogue card:	Aquamonix part number G625054-PUR
Digital I/O card:	Aquamonix part number G625057-PUR

Dimensions (mm)



M5 Bolt Mounting Hole Positions



About Aquamonix

Aquamonix provides innovative products and services to assist businesses and communities in monitoring critical water resources, managing environmental compliance and mastering remote infrastructure. We are a major supplier of flowmeters, water quality sensors, remote telemetry systems and control solutions for the Australian irrigation market. We are the only Australian manufacturer of full bore flowmeters and have an installed base of more than 40,000 sites and over 40 years of experience in the industry.



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