



McLane Moored Profiler

Application:

The McLane Moored Profiler (MMP) is an autonomous time-series instrument that profiles the water column by traveling along a fixed wire carrying an array of sensors. Depending on the sensors that are selected, *in situ* measurements can include conductivity, temperature, depth, chlorophyll-a and dissolved oxygen data. An optional underwater inductive modem provides real-time communication between the MMP and a surface buoy or seabed node. Profiling depth, time intervals and pressure stops are user-defined, and profiling patterns can span specific seasons or timeframes.

Features:

- 240Ah or 360Ah lithium battery pack.
- Time-series vertical profiles at known locations.
- Continuous data collection while profiling.
- Near real-time data telemetry with non-volatile flashcard data storage backup.
- Well-suited for deep-ocean profiling with 6,000m depth-rating.
- Titanium controller housing, motor housing and drive wheel provide added durability.
- Highly visible removable polyethylene skin covers the frame.
- Energy-efficient drive motor and bearings resist fouling on the mooring cable.
- For more information about this profiler, see the Moored Profiler pages at mclanelabs.com.

Body design provides easy access to sensors, electronics and the battery. Two models are available: the standard and extended version. The extended MMP provides 50% more battery capacity and is 12.7cm longer than the standard MMP.

Sample schedule options:

Data collection is controlled by user-defined profiles and scheduled sampling. A Deployment Planner option also provides a PC-based application for creating reusable deployment schedules and patterns.

Deployment:

Drive motor provides smooth, steady ascent/descent at 25cm/sec. Depending on installed sensors and profile settings, 240Ah or 360Ah battery options make multi-year deployments possible.

Supported sensors:

CTD sensor is required. All currently integrated sensors* are listed below.

Seabird 52MP CTD	Seabird Inductive Modem
Teledyne RDI Micro CTD	Biospherical PAR
Fal Scientific Current Meter	Wetlabs Optical Sensors
Nortek Aquadopp II	Seapoint Fluorometer
Seabird 43F Dissolved Oxygen	Seapoint Turbidity
Satlantic SUNA	Aanderaa Optode
OceanServer Motion Pack	ProOceanus Mini-Pro CO ₂ or CH ₄

*Other sensors can be integrated depending on sensor size and battery drain.



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McLane Moored Profiler Specifications

DIMENSIONS:

Length: 131 cm (51 in)
Width: 33 cm (13 in) (max diameter)
Height: 51 cm (20 in)

WEIGHT (APPROX):

In air (with sensors): 71 kg (155 lbs)
In water: neutrally buoyant

CONTROLLER:

Power supply: 8.5 -12.5 VDC
Power consumption: 250 mA* (profiling)
**nominal estimate (power depends on installed sensors)*
300 µA (sleep)

OPERATIONS:

Maximum depth: 6000 m
Battery endurance: 240Ah or 360Ah lithium battery pack
Minimum temperature: -35°C
Profiling speed: 25cm/sec
Data storage: Compact flash backup data storage

MATERIALS:

Guide wheels: Ertalyte
Drive wheel: Urethane-coated titanium
Pressure housing: Titanium
Flotation spheres: Borosilicate glass
Connectors: Glass reinforced epoxy
Hardware: Nylon, 316 stainless steel

