

VMP 500

Coastal & Upper Ocean Vertical Microstructure Profiler



DESCRIPTION

The **VMP-500** is a vertical microstructure turbulence profiler for the measurement of dissipation-scale turbulence in oceans and lakes up to 2000 m depth. It is equipped with state-of-art microstructure velocity probes (shear probes), high-resolution temperature sensors (thermistors) and micro-conductivity sensors. Integrated fast-response dissolved oxygen, compound fluorescence/turbidity and high-accuracy SBE3/4 CTD sensors are available as options.



CONFIGURATION

- Standard sensors**
- 2x Shear Probe,
 - 1x Micro-temperature (FP07),
 - 1x Pressure,
 - 1x Tilt Sensor
- Optional sensors**
- SBE 3F Temperature & 4C Conductivity,
 - Compound Fluorometer-Turbidity Sensor,
 - RINKO Optical Dissolved Oxygen,
 - Micro-Conductivity,
 - Additional Micro-temperature (FP07)

GENERAL SPECIFICATIONS

- Model Designations**
- VMP-500-IR (Internal Data Recording)
 - VMP-500-IR (Real-time Data Transmission)
- Depth range** 0 - 1,000 m (2,000 m optional)
- Weight (in air)** 19.5 kg other weights available
26.7 kg with SBE3/4 sensors
- Length overall** 1.65 m
- Sampling rate** 512 Hz / 64 Hz fast channel / slow channels (up to 2048 Hz available)
- Data acquisition** Internal recording
(Real-time transmission, optional)

SENSOR SPECIFICATIONS

Sensors	Range	Accuracy	Resolution	Bandwidth*
Velocity shear probe	0 – 10 s ⁻¹	5%	10 ⁻³ s ⁻¹	0.1 - 100 Hz
Micro temperature (FP07)	-5 – 35 °C	0.005 °C	10 ⁻⁵ °C	0 - 25 Hz
Pressure	50 / 100 dbar	0.1 % FS	5 × 10 ⁻⁴ bar	0 - 5 Hz
Vibration sensor	±1g	2%	3 × 10 ⁻⁵ g	0.1 - 100 Hz
Micro-conductivity (SBE7)	0 - 70 mS/cm	0.005 mS/cm	0.001 mS/cm	0 - 100 Hz
CT sensor	Conductivity	0 - 70 mS/cm	0.001 mS/cm	0 - 16 Hz
	Temperature	-3 - 35 °C	0.001 °C	
FT sensor	Fluorescence	0 - 500 ppb	0.01 ppb	0 - 100 Hz
	Turbidity	0 - 1000 FTU	0.03 FTU	
RINKO-FT Dissolved Oxygen	0 - 425 µmol L ⁻¹ †	±2% of measured value or ± µmol L ⁻¹	0.01 µmol L ⁻¹	0 - 100 Hz

All specifications subject to change without notice.

* other bandwidths available upon request
† Calculated from air saturation at 25 °C and 34 PSU

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