FSI PLUS FAMILY

Current, Wave, and Tide Instruments

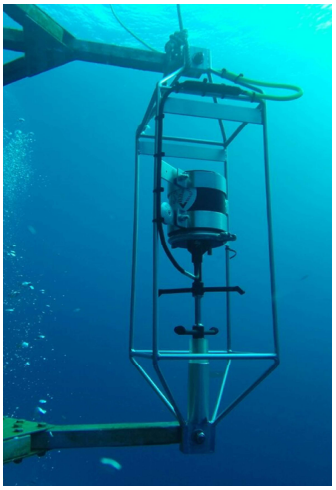
Vector-averaged 3D-Current Speed and Direction, Wave Direction & Height, Tide Measurement

Enhanced Design, Performance, & Specifications

ACM-PLUS
- Single-point Acoustic Current Meter
- 3D-Current speed and direction
- Deep (7,000m) and shallow (300m) models

ACM-WAVE-PLUS
- Wave statistics and direction
- 3D-Current speed and direction
- Tide measurement

WAVE-TIDE-PLUS
- Wave statistics
- Tide measurement



ACM-PLUS-300 (Shallow)

ACM-WAVE-PLUS shown with optional CTD and 5-ton Frame

Members of the ***PLUS*** Family come complete with FSI's Windows-based ***ACMProPLUS*** software for system configuration and data download, as well as our ***ACMPost*** or ***WavePost*** software for graphics display and advanced post-processing.

These devices may also be equipped with an optional integrated CTD module, and can optionally be configured to log up to two analog inputs from external sensors (e.g., DO, OBS, Fluorometer, Transmissometer).

ACM-PLUS-7000 (Deep) Shown with optional CTD and 5-ton Frame

WAVE-TIDE-PLUS

FEATURES
- Compact, lightweight, low-maintenance construction
- 3-Axis ACM with excellent low-velocity resolution
- High-accuracy wave data, precise pressure sensor
- Electronic magneto-resistive compass, 2-axis tilt sensor
- ***Fast Data Sampling***; ***Fast Data Download***
- Long-term data logging to ***8 GigaByte internal memory***
- ***Real-time data*** acquisition via optional cable
- Built-in ***High Accuracy*** real-time clock
- 5-ton working strength mooring frame standard
- Optional pressure sensor in ACM, or conductivity, temperature, pressure sensor (CTD) may be added

SPECIFICATIONS

Available Sensors

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Parameter	Type	Range	Accuracy	Resolution
Pressure (Wave Height)	Silicon Micro-machined	0-50 PSIA (23m max depth)	±0.01% full scale	0.145 x10^{-3}
Velocity	Acoustic	0 to 600 cm/s	2% of Reading or 1 cm/s	0.01 cm/s
Direction	3 Axis Magnetometer	0 to 360°	±2°	0.01°
Tilt	2 Axis Accelerometer	0 to 30°	0.5°	0.01°
Temperature	Semiconductor	-2 to 35°C	0.5°C	0.01°C
ACM – PLUS Pressure (optional)	Strain gauge	0 to 300 dBar 0 to 7000 dBar	±0.1% full scale	0.01% full scale

Optional CTD

	Range	Accuracy	Resolution	Stability
Conductivity (mS/cm)	0 to 70	±0.01	.001	±0.0005 per month
Temperature (Celsius)	-5 to 32° ITS-90	±0.01°	.001°	±0.0005° per month
Pressure (dBar)	0 to 300 dBar	±0.1% full scale	0.01% full scale	±0.01% per month

Common Instrument Specifications (typical)

External Power: 8 to 32 VDC

Current Draw: 15 mA at 1 Hz sample rate; 80 mA at 10 Hz sample rate; 150 uAmp sleep

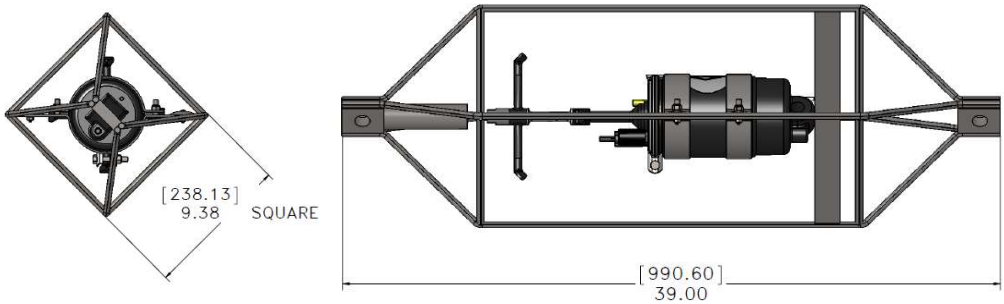
Battery Power: Alkaline 5 D Cell Welded Pack, 10 AHR

Internal Memory: **>8.0GB Standard**

Sample Rate: **10 Hz Maximum for ACM, 5 Hz Maximum for Wave Instruments**
Vector Averaging Period: **User Selectable up to** 59 Min:59 Sec
Real Time Clock: Programmable **High Accuracy** Sampling / Low-power Mode
Sampling Modes: Continuous, Interval, and Delayed Start (continuous or interval)
Clock Stability: +/- 2ppm (0-40 degrees C); +/- 4ppm (-40 degrees C to +85 degrees C)

Optional Input Channels: Two (2) 0-5V DC Input Channels with 12 bit A/D resolution available for external sensor input, such as Transmissometer, DO, OBS (Regulated 12 VDC 1.5W provided to power external sensors)

Mooring Frame: 5 Ton 316 Stainless Steel Mooring Frame (Standard)
5 Ton 316 Stainless Steel with Mooring Line Clamps (Optional)



Outline Dimensions in inches [mm] are shown for the ACM-PLUS-300 with standard 5 ton Mooring Frame; contact FSI for ACM-PLUS-7000 info or further details.

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