

Handheld 2-D Electro-Magnetic Current Meter

AEM213-DA



VEL COMP T P



Overview

The AEM213-DA is a direct-reading flow direction and velocity meter equipped with a 2-axis electromagnetic flow velocity sensor and an internal compass. It comes standard with a depth sensor and a water temperature sensor, ensuring accurate flow velocity measurements at the target water depth. This compact and lightweight device is convenient to carry and can be used in various fields such as oceanographic observations, rivers, lakes, and dams.

The display unit, featuring an easy-to-read LCD, also includes a memory function. Observation data can be transferred to a computer after being recorded in the field, allowing for easy execution of various computational processes. The device is powered by C-size alkaline batteries, enabling approximately 10 hours of observation.

Built-in Sensor Specifications

Parameter	Sensor Type	Range	Resolution	Accuracy
Flow Velocity ^{*1}	2-axis Electromagnetic Induction	0 to $\pm 250 \text{ cm s}^{-1}$	0.1 cm s^{-1}	$\pm 1 \text{ cm s}^{-1}$ or $\pm 2\%^{*2}$
Direction	Hall Element	0 to 360°	0.1°	$\pm 2^\circ$
Pressure (Depth)	Semiconductor Pressure	0 to 50 m	0.01 m	Non-linearity $\pm 0.1\%$ FS Repeatability $\pm 0.3\%$ FS
Temperature	Thermistor	-3 to 40°C	0.01°C	$\pm 0.02^\circ\text{C}$ (3 to 31°C)

*1 The flow velocity can be shown in kt (knots). Please specify when ordering.

*2 Flow velocity calibration range is 0 to $\pm 50 \text{ cm s}^{-1}$.

Sensor Specifications

Cable	Kevlar Fiber Reinforced Cable (standard length 50 m)
Dimensions	$\phi 42 \text{ mm} \times 307 \text{ mm}$
Material	Titanium Grade 2
Weight	Approx. 1.0 kg in air (excluding vane) / Approx. 0.65 kg in water (excluding vane)
Pressure Resistance	Equivalent to 200 m depth

Display Unit Specifications

Display Items	Flow Direction, Flow Velocity, Temperature, Depth
Memory	2 MB Flash Memory, approx. 180,000 data points
Power Supply	Four C-size alkaline batteries (approx. 10 hours of continuous use), AC 100 V, DC 12 V
Material	PVC (case)
Waterproof Performance	Equivalent to IPX5
Dimensions	W225 mm \times D100 mm \times H90 mm (excluding protrusions)
Weight	Approx. 1 kg (excluding batteries)

Drawing

