

# RIV-F5 Series Five-beam Acoustic Doppler Current Profiler

The RIV-F5 series is a newly launched five-beam ADCP, technically backed by the Institute of Acoustics of the Chinese Academy of Sciences. The system can provide accurate and reliable data like current velocity, flow, water level, and temperature in real time, effectively used for flood warning systems, water transfer projects, water environment monitoring, smart agriculture, and smart water services. The system is equipped with a five-beam transducer. The additional central sounding

beam strengthens bottom tracking ability for special environments such as waters with high sediment content and gets more accurate and stable data. Based on the superb technology and proven performance of the RIV series, the RIV-F5 is innovated to be the latest generation of five-beam ADCP products. Even in complex environment with high turbidity and large flow velocity, RIV-F5 is ready to get stable data. It is a cost-effective choice with comparable performance.

## Features

- First-class acoustic technology and guaranteed quality of military industry;
- Five-beam transducer with a central sounding beam included, especially used for waters with high sediment content;
- Easy maintenance with robust and reliable internal framework;
- Capability of uploading the measurement results data to the specified Web server;
- More competitive price compared with equivalent ADCPs on the market;
- Perfect service technical supported by experienced technicians engineers, offering whatever you need during the measurement within the shortest time with prompt response.



'Yunying 1' and 'Yunying 2' Unmanned Surface Vehicles provided



## Specifications

Model	F5-300	F5-600	F5-1200
<b>Current profiling</b>			
Frequency	300kHz	600kHz	1200kHz
Profiling range	1~120m	0.4~80m	0.2~35m
Velocity range	±5m/s (default)	±5m/s (default)	±10m/s (default)
Accuracy	±0.5%±5mm/s	±0.25%±2mm/s	±0.3% ± 3mm/s
Resolution	1mm/s	1mm/s	1mm/s
Layer size	1~8m	0.2~4m	0.1~2m
Number of layers	1~260	1~260	1~260
Update rate (typical)	1-2Hz(default), 5Hz (maximum)	1-2Hz(default), 5Hz (maximum)	1-2Hz(default), 5Hz (maximum)
<b>Bottom tracking</b>			
Frequency	300kHz	600kHz	1200kHz
Depth range	2~200m	1~120m	0.7~35m
Accuracy	±0.5%±5mm/s	±0.25%±2mm/s	±0.3% ± 3mm/s
Velocity range	±10 m/s	±10m/s	±10m/s
Update rate (typical)	1-2Hz(default), 5Hz (maximum)	1-2Hz(default), 5Hz (maximum)	1-2Hz(default), 5Hz (maximum)
<b>Central depth</b>			
Frequency	400kHz	400kHz	400kHz
Depth rating	140m	140m	140m
<b>Transducer and hardware</b>			
Type	Piston	Piston	Piston
Mode	Broadband	Broadband	Broadband
Beam angle	20°	20°	20°
Beam width	4°	2°	2°
Configuration	5 beams, JANUS	5 beams, JANUS	5 beams, JANUS
<b>Sensors</b>			
Temperature	Range: -10°C ~ 85°C	Accuracy: ±0.5°C	Resolution: 0.01°C
Motion	Range: ± 50°	Accuracy: ± 0.2°	Resolution: 0.01°
Heading	Range: 0~360°	Accuracy: ±0.5°(calibrated)	Resolution: 0.1°
<b>Power supply and communications</b>			
Power consumption	≤3W		
DC input	10.5VDC~36VDC		
Communications	RS422, RS232 or 10M Ethernet		
Storage	2G		
House material	POM (standard), titanium, aluminum optional (depends on the depth rating required)		
<b>Weight and dimension</b>			
Dimension	236mm (H) × 230mm (Dia)	236mm (H) × 225mm (Dia)	236mm (H) × 202mm (Dia)
Weight	8kg in air (standard)	7.5kg in air, 5kg in water (standard)	7kg in air (standard)
<b>Environment</b>			
Maximum depth	100m/500m/2000m/4000m/6000m		
Operation temperature	-5°C to 45°C, relative humidity ≤93%		
Storage temperature	-25°C to 65°C, relative humidity ≤93%		
<b>Software</b>			
	IOA river current measurement software with acquisition and navigation modules		