Shallow Streamflow Measurement System

TECHNICAL SPECIFICATIONS

Water Velocity Profiling	Profiling range Velocity range Accuracy Resolution Number of cells Cell size Blanking distance Data output rate	0.1m ¹ to 2r ±5m/s ³ ±1% of wat 1mm/s 1-20 stanc 2cm to 10c 3cm 1Hz	0.1m ¹ to 2m standard or 6m ² with upgrade ±5m/s ³ ±1% of water velocity relative to ADCP, ±2mm/s 1mm/s 1-20 standard or 1-30 with upgrade 2cm to 10cm standard or 20cm with upgrade 3cm 1Hz		
Bottom Tracking	Depth range Accuracy Resolution	0.1m-7m ² ±1.0% of bo 1mm/s	0.1m-7m ² ±1.0% of bottom velocity relative to ADCP, ±2mm/s 1mm/s		
Depth Measurement	Range Accuracy Resolution	0.1m-7m ² 1% ⁴ 1mm			
Sensors	Range Accuracy	Temperature (standard) -4° to 45°C ±0.5°C	Tilt (pitch and roll) (optional) ±90° ±0.3°	Compass (heading) (optional) 0-360° ±1°	
Operation Modes	Standard profiling (Broadband) High-precison profiling (included)				
Transducer	Frequency Configuration	2MHz n Janus 4 beams at 20° beam angle			
Software	• StreamPro Software for Pocket PC • WinRiver II (included) for moving-boat measurement • SxS Pro (optional) for stationary measurement (i.e., under-ice); comes with an uncertainty model for in situ quality evaluation and control				
Available Upgrades	 Extended profiling range to 6 meters SxS Pro Software for stationary measurement. Compass and tilt (pitch and roll) sensors GPS High-speed float 				
Communications	Bluetooth wireless Baud rates: 115,200 bps				
Construction	Cast polyurethane with stainless hardware				
Power	Voltage Battery capacity	10.5 –18 V 7.5 hours co continuous	10.5 – 18 VDC (8 AA batteries, alkaline or rechargeable NiMH) 7.5 hours continuous with 8 AA alkaline batteries; 12.75 hours continuous with 8 AA NiMH rechargeable batteries		
Environmental	Operating temperature: Storage temperature:	-5°C to 45° -20°C to 50	-5°C to 45°C -20°C to 50°C		
Physical Properties	Weight in air5.9 kg including electronics, transducer, float, and batteriesDimensionsElectronics housing: 16 x 21 x 11cmTransducer: 3.5cm diam. x 15cm lengthFloat: 42 x 70 x 10cm(line drawings available upon request)				

1 Assume one good cell (minimum cell size) with high precision profiling mode, range measured from the transducer surface.

2 Assume fresh water, actual range depends on temperature and suspended solids concentration.

3 2m/s for standard float; 3.5m/s for optional high-speed float.

4 Assume uniform water temperature and salinity profile



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