

# Sentinel V

Self-Contained 20m, 50m, 100m Profiling ADCP



## TECHNICAL SPECIFICATIONS

Depth Cell Size <sup>1</sup>	V20 (1000kHz)		V50 (500kHz)		V100 (300kHz)	
	Range (m) <sup>2,3</sup> Wide/Narrow	Std Dev (cm/s) <sup>3,4</sup> Wide/Narrow	Range (m) <sup>2,3</sup> Wide/Narrow	Std Dev (cm/s) <sup>3,4</sup> Wide/Narrow	Range (m) <sup>2,3</sup> Wide/Narrow	Std Dev (cm/s) <sup>3,4</sup> Wide/Narrow
0.3m	19.3/24.0	6.6/12.5				
0.5m	20.6/25.3	4.3/8.0	45.0/58.6	11.5/21.8		
1.0m	22.4/27.3	2.1/4.0	51.5/65.6	4.3/8.0	96.3/122.6	6.5/12.3
2.0m	24.8/29.8	1.0/1.9	57.0/71.6	2.1/4.0	105.3/132.4	3.3/6.2
4.0m			64.2/79.3	1.0/1.9	116.5/144.3	1.6/3.1
6.0m					121.7/151.5	1.1/2.0
<b>Communications and Recording</b>	Wireless Internal memory		802.11b/g/n One 16GB Micro SD Card included			
<b>Profile Parameters</b>	Velocity accuracy		V20/V50: 0.3% of the water velocity relative to the ADCP ±0.3cm/s V100: 0.5% of the water velocity relative to the ADCP ±0.5cm/s			
	Velocity resolution		0.1cm/s			
	Velocity range		±5m/s (default); ±20m/s (maximum)			
	Ping rate		Up to 4Hz			
<b>Echo Intensity Profile</b>	Vertical resolution		Depth cell size			
	Dynamic range		80dB			
	Precision		±1.5dB			
<b>Transducer and Hardware</b>	Beam angle		25°			
	Configuration		4-beam, convex; 5th beam vertical			
	Depth rating		200m			
	Materials		Transducer, housing, and end cap: plastic Connector: metal shell			
<b>Standard Sensors</b>	Temperature (mounted on transducer)		Range -5° to 45°C, precision ±0.4°C, resolution 0.1°			
	Compass (magneto-inductive sensor)		Accuracy 2° RMS, resolution 0.1°, max. dip angle 85°			
	Tilt (MEMS accelerometers)		Pitch range ±90°, roll range ±180°, accuracy 2° RMS, precision 0.05° RMS, resolution 0.1°			
	Pressure sensor (mounted on transducer)		Range 300m, accuracy 0.1%FS			
<b>Power</b>	External DC input		12–20VDC			
	Internal battery voltage		18VDC new			
	Battery capacity; over-the-counter @0°C		100 watt hours (typical)			
	Battery pack @5°C		510 watt hours			
<b>Software</b>	Teledyne RDI's new software included		ReadyV—Pre-deployment (resident in ADCP) ReadyV Lite—Pre-deployment (mobile app) Velocity—Post-processing (data handling, display, and export)			
<b>Environmental</b>	Standard depth rating		200m			
	Operating temperature		-5° to 45°C			
	Storage temperature (without batteries)		-30° to 60°C			
	Weight in air		7.5kg – 16.0kg			
	Weight in water		1.6kg – 6.0kg			
<b>Available Options</b>	External battery case • AC/DC power converter • 5th beam (at time of order only) • Waves processing • Straight or right-angle metal shell connector					
<b>Dimensions</b>	Special configuration drawing available upon request					

1. User's choice of depth cell not limited to the typical values specified.  
 2. Ranges specified are typical at temperature of 5°C and salinity of 35psu; longer ranges are possible.  
 3. User selects the bandwidth mode; wide = 25% or narrow = 6%.  
 4. Standard deviations (Std Dev) are typical values for single ping data.