

Teledyne RD Instruments

Ocean Observer III 38 kHz (00III38DR)

Long-Range Direct-Reading
(Real-Time) ADCP (3rd Generation)

Measuring >1000 m
from the Surface!



Since 1997 Teledyne RD Instruments (TRDI) has been providing ADCPs that have proven in the field they can profile beyond 1000 m from research vessels traveling at speeds >15 knots and from offshore oil and gas platforms during exploration work.

That same technology has now allowed us to create the **Ocean Observer III 38 kHz ADCP**. We have combined our field-proven 38 kHz phased array ADCP transducer with our field-proven electronics into a single package that is capable of profiling >1000 m.

This design makes it ideal to be mounted from an oil platform, over the side of a vessel, and in surface buoys.



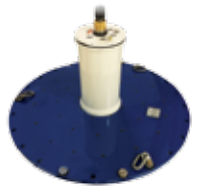
PRODUCT FEATURES

- **Field-Proven Hardware Functionality:**
Phased-array transducer technology >18 years
Electronics/firmware >5 years
- **Field-Proven Profiling Range:** 1000 m profiling range on more than 100 installations worldwide for >18 years
- **Compact Size:** Patented phased-array transducer with integrated electronics in a single package
- **Dual Profiling Modes:** Independent or interlaced long-range and high-resolution modes to optimize for deployment requirements
- **Integrated Sensors:** Heading, pitch, roll, temperature, pressure, and HEM sensors
- **Fit for use:** Collect real-time 1000 m profiles from just about any surface platform or mooring



Ocean Observer III 38 kHz

Long-Range, Real-Time ADCP



TECHNICAL SPECIFICATIONS

Water Profiling	Long Range Mode	38 kHz	
	Vertical resolution cell size ¹	Max Range ²	Precision ³
	16	>1000 m	30 cm/s
	24	>1000 m	20 cm/s
	High Precision Mode	38 kHz	
	Vertical resolution cell size ¹	Max Range ²	Precision ³
	16	>900 m	15 cm/s
	24	>950 m	10 cm/s
Profile Parameters	Velocity accuracy (typical)	±1.0% ± 0.5 cm/s	
	Velocity range	±9 m/s	
	Number of depth cells	1–128	
	Maximum ping rate	0.4 Hz	
Echo Intensity Profile	Vertical resolution	Depth cell size, user configurable	
	Dynamic range	80 dB	
	Precision	±1.5 dB	
Transducer and Hardware	Beam angle	30°	
	Configuration	4-beam, phased array	
	Communications	RS-232 or RS-422 at 1200-115,200 baud Hex-ASCII or binary	
System Power	AC input	90–250 VAC, 47–63 Hz	
	DC Power	36-48 VDC, 300 W	
Software	Use TRDI's Windows™-based software for best results: VMDAS — Vessel-Mount Data Acquisition System; WinADCP —Data Display and Export		
Environmental	Operating temperature	-5° to 45°C	
	Storage temperature	-30° to 60°C	
	Standard depth rating	100 m	
Standard Sensors	Temperature (mounted on transducer)	Range -5° to 45°C, Precision ±0.1°C, Resolution 0.03°	
	Tilt ⁴	Accuracy 0.2° RMS	
	Compass (AHRS)	Heading Accuracy 1° RMS	
	Pressure Sensor	Range 20 bar, Accuracy 0.1% FS	
System Components	Fully integrated 38 kHz Phased Array Transducer and system electronics, external AC/DC Power Supply with RS232 serial port, 100 m cable for power and communications, data acquisition software package		
Options	Velocity for advanced post processing; 1000 m depth rating; BT with 1700 m range		
Dimensions	38 kHz phased-array transducer aluminum housing diameter 915 mm, aluminum housing diameter 180 mm, transducer plus housing length 430 mm (<i>line drawings available upon request</i>)		

1. User's choice of depth cell size is not limited to the typical values specified.
2. Ranges are typical and vary with situation.
3. Single ping standard deviation.
4. Heading in degrees as well as magnetometer output.

Specifications subject to change without notice.
© 2016 Teledyne RD Instruments, a business unit of Teledyne Instruments, Inc.
All rights reserved. MM-1042.