Teledyne RD Instruments

citadel® CTD-NH

Robust, Reliable, and Rugged CTD

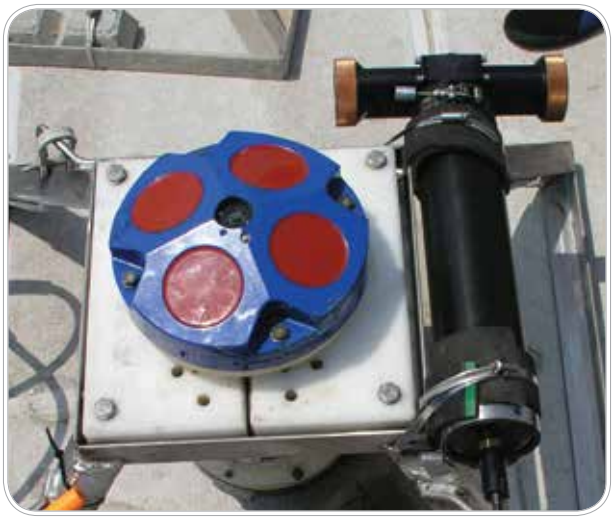
Bio-Fouling Resistant, Conductivity, Temperature, and Depth with External Input, Direct Digital Output, and Datalogging Capability

The CITADEL CTD-NH provides scientific-quality conductivity, temperature, and depth measurement capability in an extremely rugged package. This new CTD utilizes the patented Non-eXternal Inductive Cell (NXIC) conductivity sensor, and represents a new generation of extremely durable precision measurement instruments.

The Citadel CTD-NH is a fast sampling, fully integrated instrument platform with optional battery power, datalogging, and external analog sensor input. Its unique design resists bio-fouling and allows for easy in-field cleaning.

The Citadel CTD-NH's NXIC internal conductivity cells do not suffer from proximity effects as do typical external inductive cells, and allow the unit to be mounted in virtually any orientation, close to other equipment. The unit draws very low power and can run for 400 hours continuous on its 3V battery pack.

The instrument can be field cleaned without affecting factory calibration. There are no pumps or fragile electrodes, which ensures reliability in demanding marine environments.



PRODUCT FEATURES

- High accuracy
  - ±0.0009 S/M conductivity
  - ±0.005°C temperature
  - 0.05% full scale pressure
- Salinity calculation using PSS-78
- Sound velocity calculation using UNESCO 44
- Non-external inductive conductivity sensor with no electrodes to foul
- Bio-fouling resistant design, including field-replaceable protective copper screens
- No pump required
- Rugged thermistor
- Silicon pressure sensor
- Built-in real-time clock
- Direct digital output via RS-232, RS-485
- Windows® software for system configuration, data acquisition, real-time

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TECHNICAL SPECIFICATIONS

Sensors	**Parameter**	**Conductivity**	**Temperature**	**Pressure**
	Operational Range	0-70mS/cm[1]	-5 to 35°C	Customer specified
	Accuracy	±0.003mS/cm[2,3]	±0.005°C	±0.05% Full Scale (FS)
	Stability	±0.001mS/cm/month[2,4]	±0.0005°C/month	±0.004% FS/month
	Thermal Sensitivity	±0.003mS/cm/°C[5]	n/a	n/a
	Resolution	0.0001mS/cm	0.0001°C	0.001% FS/month
Power	8 to 35VDC @ 40mA			
Depth Rating	500m Delrin housing standard			
Warm-Up	3.0 seconds after power up			
Sample Rate	User Programmable from 1 to 15Hz			
Data Output Rate	Up to 8Hz over serial			
Real-Time Clock	Programmable Alarm/Sleep Functions ±20ppm/year, ±5ppm/year optional			
Internal Memory	256MB standard			
Serial Communications	RS-232 or RS-485			
Format	ASCII Protocol			
Battery Options	Welded Alkaline			
Dimensions	Line drawings available upon request			

1 Full operational range is 0 to 90mS/cm
2 Specified at 22°C and 35PSU
3 Defines as root sum of the squares (RSS) of endpoint non-linearity, repeatability error, and calibration uncertainty.
4 Measured over a typical one-year period.
5 Relative to 22°C.

TELEDYNE
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Everywhereyoulook™
www.rdinstruments.com

Specifications subject to change without notice.

Teledyne RD Instruments
14020 Stowe Drive, Poway, CA 92064 USA
Tel. +1-858-842-2600 • Fax +1-858-842-2822 • Email: rdisales@teledyne.com
Les Nertieres 5 Avenue Hector Pintus 06610 La Gaude France
Tel. +33-49-211-0930 • Fax +33-49-211-0931 • Email: rdie@teledyne.com