

Teledyne RD Instruments

# CITADEL<sup>®</sup> CT-EK

Robust, Reliable, and Rugged CT

Conductivity and Temperature Sensors  
with Digital Output for Integration  
into User Systems

Teledyne RD Instruments CITADEL CT-EK Sensor provides high-accuracy conductivity and temperature measurements in a package that can be readily adapted to various user platforms. The instrument relies on an innovative, inductively coupled conductivity sensor, which provides high-accuracy, stable readings. The sensor is self-flushing, so no pumps are required. A high-grade Platinum Resistance Thermometer (PRT) provides stable temperature readings for calculation of high-accuracy salinity and sound velocity.

Separate models are available with the following options:

- Shallow- (500-meter) or deep-water (7000-meter) construction
- Internal or external temperature sensor (faster response)
- Regular or short stem (shallow versions only)

A large ceramic conductivity cell is also available for improved accuracy and faster response.



## PRODUCT FEATURES

- Self-flushing sensor, with no pump or other moving mechanical parts to fail
- High-stability inductive conductivity sensor can be cleaned without affecting calibration
- High-grade Platinum Resistance Thermometer (PRT) provides high-accuracy temperature
- Low-power operation (<65 mW)
- Fast Power-on to Sample-time provides useful data fast
- Internal references enable continuous self-calibration of electronics
- Digital output includes calculated salinity and sound velocity



# citadel<sup>®</sup> CT-EK

Robust, Reliable, and Rugged CT



## TECHNICAL SPECIFICATIONS

<b>Sensors</b>	<b>Parameter</b>	<b>Small CT Cell Conductivity</b>	<b>Temperature</b>
	Range	0 to 70mS/cm	-2 to 35°C
	Accuracy	±0.02mS/cm	±0.05°C
	Stability	±0.05mS/cm/mo	±0.005°C/mo
<b>Instrument</b>	Power	50 mW @ 6 VDC, voltage range 6-14 VDC; (2) 0-5 VDC control lines; RS-232, RS-485	
	Output Format	Scaled or floating point	
	Baud Rate	300, 1200, 9600, 19200	
	Channels	4, plus user-programmable pressure	
	Dimensions	Sensors—contact factory, PC Card—1.5" x 7" (3.8 x 17.8 cm)	
	Connector	Molex 8 pin housing with lock, #7478	
<b>Ordering</b>	<b>Shallow Long Stem (500dBar)</b>		
	Internal Temperature		CT-EK-0-010003-500-0-I
	External Temperature		CT-EK-0-010003-500-0-E
	<b>Shallow Short Stem (500dBar)</b>		
	Internal Temperature		CT-EK-0-010103-500-0-I
	External Temperature		CT-EK-0-010103-500-0-E
	<b>Shallow Sensor w/Housing (500dBar)</b>		CT-EK-0-020102-500-0-I
	<b>Deep Sensor (7000dBar)</b>		
	External Temperature		CT-EK-0-010104-7000-0-E
<b>Dimensions</b>	Line drawings available upon request		



**TELEDYNE**  
**RD INSTRUMENTS**  
*Everywhere you look™*  
[www.rdinstruments.com](http://www.rdinstruments.com)

### Teledyne RD Instruments

14020 Stowe Drive, Poway, CA 92064 USA  
Tel. +1-858-842-2600 • Fax +1-858-842-2822 • Email: [rdisales@teledyne.com](mailto: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](mailto:rdie@teledyne.com)

Specifications subject to change without notice.  
© 2009 Teledyne RD Instruments, Inc. All rights reserved. MM-1033, Rev.Feb. 2013.