

Teledyne RD Instruments

# CITADEL<sup>®</sup> CT-EK Analog

Robust, Reliable, and Rugged CT

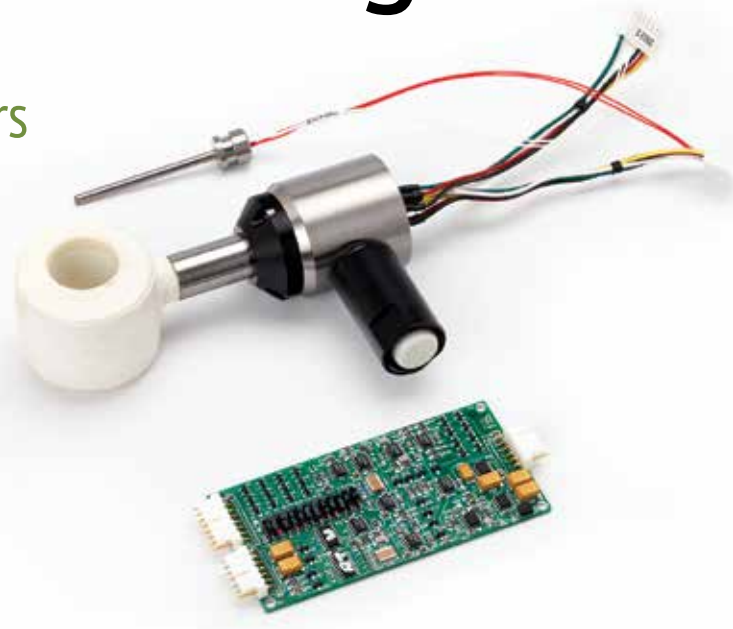
Conductivity and Temperature Sensors  
with Analog Output for Integration  
into User Systems

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 Thermistor 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 thermistor 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



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## TECHNICAL SPECIFICATIONS

Robust, Reliable, and Rugged CT

Sensors	Parameter	Large CT Cell Conductivity	Small CT Cell Conductivity	Temperature
	Range	0 to 70mS/cm	0 to 70mS/cm	-2 to 35°C
	Accuracy	±0.01mS/cm <sup>1,2</sup>	±0.02mS/cm <sup>1,2</sup>	±0.05°C
	Stability	±0.02mS/cm/month <sup>1,3</sup>	±0.02mS/cm/month <sup>1,3</sup>	±0.005°C/month
Instrument	Power	50 mW @ 6 VDC, voltage range 6-14 VDC; (2) 0-5 VDC control lines		
	Connector	Molex 8 pin housing with lock, #7478		
Ordering	<b>Shallow Long Stem (500dBar) No Housing</b>			
	Internal Temperature			CT-EK-0-020105-500-0-I
	External Temperature			CT-EK-0-020105-500-0-E
	<b>Shallow Short Stem (500dBar) No Housing</b>			
	Internal Temperature			CT-EK-0-020106-500-0-I
	External Temperature			CT-EK-0-020106-500-0-E
	<b>Shallow Sensor (500dBar) With Housing</b>			
				CT-EK-0-020110-500-0-I
	<b>Deep Sensor (7000dBar) No Housing</b>			
	External Temperature			CT-EK-0-020104-7000-0-E
Dimensions	Line drawings available upon request			

1 Specified at 22°C and 35PSU

2 Defines as root sum of the squares (RSS) of endpoint non-linearity, repeatability error, and calibration uncertainty.

3 Measured over a typical one-year period.