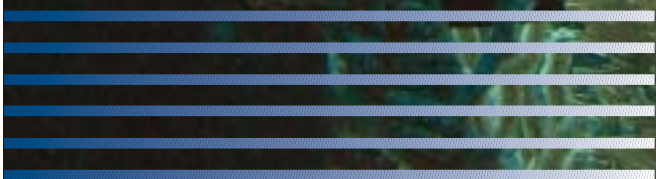


FSI NXIC CTD SERIES

Conductivity, Temperature and Depth Meters



FSI NXIC CTD SERIES

The NXIC CTD Series provides scientific-quality conductivity, temperature and depth measurement capability in an extremely rugged packaging. The CTD Series utilize the patented NXIC conductivity sensor, originally developed by FSI for the US Navy DT-705 Sound Velocity/Salinity sensor. This sensor, required to pass Class A shock tests for Navy applications, provides the basis of an entirely new generation of extremely durable precision measurement instruments.



SPECIFICATION SUMMARY

NXIC CT Bio Direct Read-500M



NXIC CTD Bio Direct Read-500M



NXIC CTD Bio Auto-500M



NXIC CTD Direct Read-500M



Conductivity

Range 0-90 mS/cm
Accuracy 0.005 mS/cm
Resolution 0.0001 mS/cm
Stability 0.0005 mS/cm/month

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Accuracy 0.005 mS/cm
Resolution 0.0001 mS/cm
Stability 0.0005 mS/cm/month

Range 0-90 mS/cm
Accuracy 0.002 mS/cm
Resolution 0.0001 mS/cm
Stability 0.0005 mS/cm/month

Temperature

Range -5° C to 45° C
Accuracy 0.005° C
Resolution 0.001° C
Stability 0.0005° C/month

Range -5° C to 45° C
Accuracy 0.005° C
Resolution 0.001° C
Stability 0.0005° C/month

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Accuracy 0.005° C
Resolution 0.001° C
Stability 0.0005° C/month

Range -5° C to 45° C
Accuracy 0.005° C
Resolution 0.0001° C
Stability 0.0005° C/month

Depth

Range N/A
Accuracy N/A
Resolution N/A
Stability N/A

Range 20, 100, 500 M
Accuracy 0.08% full scale
Resolution 0.001% full scale
Stability 0.004% per month

Range 20, 100, 500 M
Accuracy 0.08% full scale
Resolution 0.001% full scale
Stability 0.004% per month

Range 20, 100, 500 M
Accuracy 0.08% full scale
Resolution 0.001% full scale
Stability 0.004% per month

Power Source

8 to 35 VDC @ 400 mW

8 to 35 VDC @ 400 mW

8 to 35 VDC @ 400 mW

8 to 35 VDC @ 400 mW

Battery Life

N/A

N/A

400 hours continuous

N/A

Memory

Optional 128/256 MB

Optional 128/256 MB

128/256 MB

Optional 128/256 MB

Sample Rate

1-5 Hz

1-8 Hz

1-15 Hz data logging
1-8 Hz direct-read

1-8 Hz

Comms (User selectable)

RS 232, RS 485, CMOS

RS 232, RS 485, CMOS

RS 232, RS 485, CMOS

RS 232, RS 485, CMOS

Housing

Delrin

Delrin

Delrin

Delrin

Depth Rating

500 M

500 M

500 M

500 M

Dimensions

16.38 cm L
8.25 cm Ø
22.30 cm W

18.62 cm L
8.25 cm Ø
22.30 cm W

42.42 cm L
8.25 cm Ø
22.30 cm W

27.05 cm L
8.25 cm Ø

Typical Applications

- Coastal & estuarine salinity studies
- Moored real-time monitoring
- Long-term deployment in high bio-fouling areas
- Diver/infield serviceable

- Coastal & estuarine salinity studies
- Moored real-time monitoring
- Long-term deployment in high bio-fouling areas
- Tide monitoring
- Diver/infield serviceable

- Coastal & estuarine salinity studies
- Battery back-up for real-time systems
- Remote long-term deployments & isolated moorings
- Tide monitoring
- Diver/infield serviceable

- Real-time profiling and sound velocity measurements
- ROV, AUV, trawl nets and towed vehicle applications
- Integration into multi-sensor platforms without proximity effects

- ▶ **Low-power**
- ▶ **No pumps required**
- ▶ **No toxic anti-foulants**
- ▶ **No yearly calibration required**
- ▶ **Field serviceable**



▶ **NXIC CT Sensor interfaced to an FSI 2D ACM in a TRBM deployed in Packery Channel near Corpus Christi Bay, TX.**
 Photo courtesy of the Shoreline Environmental Research Facility of Texas A&M University. www.serf.tamug.edu

◀ **US Navy's NXIC DT-705 passing the Class A shock test.**

NXIC CTD Direct Read-7000M



0-90 mS/cm
 0.002 mS/cm
 0.0001 mS/cm
 0.0005 mS/cm/month

-5° C to 45° C
 0.005° C
 0.0001° C
 0.0005° C/month

3000, 7000 M
 0.08% full scale
 0.001% full scale
 0.004% per month

8 to 35 VDC @ 400 mW

N/A

Optional 128/156 MB

1-8 Hz

RS 232, RS 485, CMOS

Titanium

7000 M

27.05 cm L
 8.25 cm Ø

- Deep ROV, AUV applications
- Deep multi-sensor platforms

NXIC CTD Auto-500M



0-90 mS/cm
 0.002 mS/cm
 0.0001 mS/cm
 0.0005 mS/cm/month

-5° C to 45° C
 0.005° C
 0.0001° C
 0.0005° C/month

20, 100, 500 M
 0.08% full scale
 0.001% full scale
 0.004% per month

8 to 35 VDC @ 400 mW

400 hours continuous

128/256 MB

1-15 Hz data logging
 1-8 Hz direct-read

RS 232, RS 485, CMOS

Delrin

500 M

51.05 cm L
 8.25 cm Ø

- Profiling and towing from small Boats
- ROV, AUV applications
- No surface power or datalogger required

NXIC Auto-7000M



0-90 mS/cm
 0.002 mS/cm
 0.0001 mS/cm
 0.0005 mS/cm/month

-5° C to 45° C
 0.005° C
 0.0001° C
 0.0005° C/month

3000, 7000 M
 0.08% full scale
 0.001% full scale
 0.004% per month

8 to 35 VDC @ 400 mW

400 hours continuous

128/256 MB

1-15 Hz data logging
 1-8 Hz direct-read

RS 232, RS 485, CMOS

Titanium

7000 M

51.05 cm L
 8.25 cm Ø

- Deep long-term moorings
- Deep profiling without data cables
- Water sampler applications

NXIC CTD-ADC with external sensors



0-90 mS/cm
 0.002 mS/cm
 0.0001 mS/cm
 0.0005 mS/cm/month

-5° C to 45° C
 0.005° C
 0.0001° C
 0.0005° C/month

20, 100, 500, 3000, 7000 M
 0.08% full scale
 0.001% full scale
 0.004% per month

8 to 35 VDC @ 400 mW

400 hours continuous

128/256 MB

1-15 Hz data logging
 1-8 Hz direct-read

RS 232, RS 485, CMOS

Delrin/Titanium

500, 7000 M

55.88 cm L
 8.25 cm Ø

- Current available for sensors:
 Internal battery: 500 mA
 External battery: 1000 mA
- Available inputs:
 (2) 0-5V
 (2) 0-5V w/ electronic gain
 (1) RS 232
- Consult factory for available sensors

NXIC ETSG Thermosalinograph



0-90 mS/cm
 0.010 mS/cm
 0.0001 mS/cm
 0.0005 mS/cm/month

-5° C to 45° C
 0.005° C
 0.0001° C
 0.0005° C/month

N/A
 N/A
 N/A
 N/A

8 to 35 VDC @ 400 mW

N/A

Optional 128/256 MB

1-5 Hz

RS 232, RS 485, CMOS

Delrin

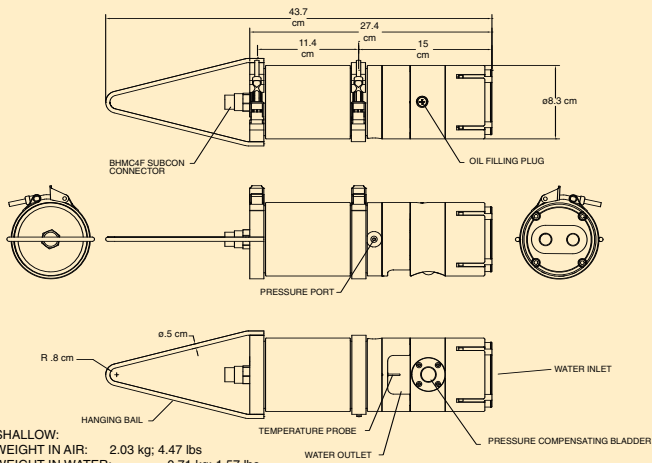
500M

16.38 cm L
 8.25 cm Ø
 23.88 cm W

- Shipboard mounted salinity and sound velocity measuring
- Compact size for small boats or engine rooms
- GPS input
- Extremely durable, waterproof, ideal for exposed mounting on small vessels.
- Also available with external sensor input

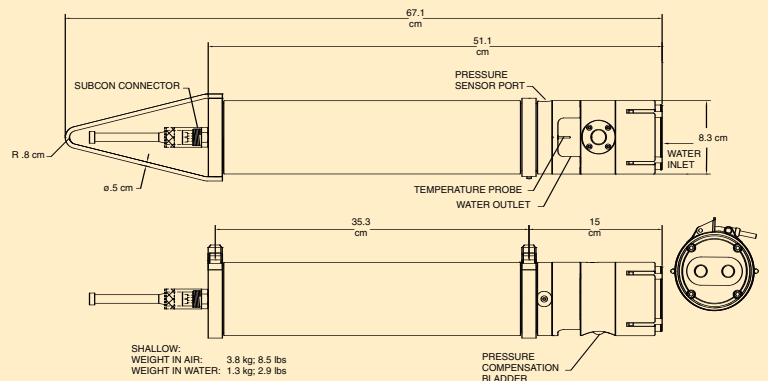


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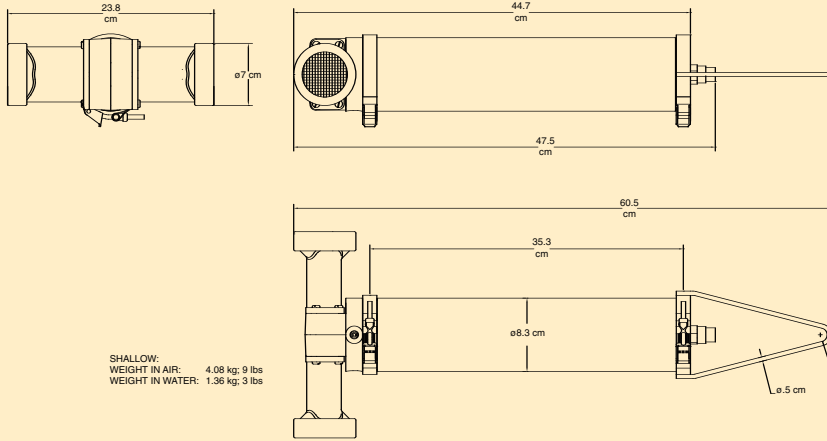
SHALLOW:
 WEIGHT IN AIR: 2.03 kg; 4.47 lbs
 WEIGHT IN WATER: 0.71 kg; 1.57 lbs
 DEEP:
 WEIGHT IN AIR: 3.29 kg; 7.26 lbs
 WEIGHT IN WATER: 2.05 kg; 4.52 lbs

NXIC DIRECT READ



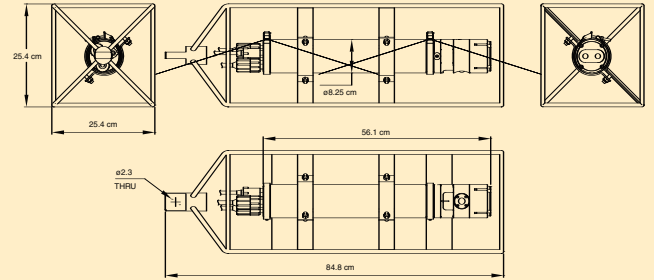
SHALLOW:
 WEIGHT IN AIR: 3.8 kg; 8.5 lbs
 WEIGHT IN WATER: 1.3 kg; 2.9 lbs

NXIC CTD AUTO



SHALLOW:
 WEIGHT IN AIR: 4.08 kg; 9 lbs
 WEIGHT IN WATER: 1.38 kg; 3 lbs

NXIC CTD BIO



NXIC CTD ADC



▶ *NXIC-CT sensor deployed on CEFAS SmartBuoy in UK coastal waters.*
 Photo courtesy of MK Services and CEFAS.

▶ *Bio-fouling copper screens after two-month deployment at Rainbow Garden, Bahamas on NOAA's CREWS station.*



▶ *NXIC-CTD Bio Auto-500M installed on NOAA's CREWS buoy, Lee Stocking Island, Bahamas.*



▶ *NXIC-CTD Bio-Auto-500M installed on NOAA's Coral Reef Early Warning System (CREWS), Lee Stocking Island, Bahamas.*



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