CT2X Submersible Smart Sensor

CONDUCTIVITY/TEMPERATURE WITH DEPTH/LEVEL OPTION

AquiStar™
Data Collection Systems

APPLICATIONS

- Wetland surveys
- Saltwater intrusion monitoring
- Agricultural runoff studies
- Discharge monitoring

Measure and record conductivity, temperature, depth/level, salinity, all with one low power, easy-to-use smart sensor

Features

- Measures and records conductivity, temperature, and time with depth/level option
- Low power — *field replaceable AA batteries*
- Modbus® RTU (RS485) and SDI-12 interface — *great flexibility*
- 10 – 100,000 microSiemens/cm — *200,000 or 300.000 optional*
- Also measures salinity and TDS
- Linear and nLFn temperature compensation
- Small diameter — *0.75" (1.9 cm)*
- 349,000 records in non-volatile memory — *no data loss in the event of a power failure*
- Wireless connectivity — *radios and/or cellular*
- Barometric compensation utility for use with absolute sensors
- Free, easy-to-use software

EASY-TO-USE SOFTWARE

- Easy, in-field calibration
- Flexible logging sequences
- Real-time viewing
- Easy export to spreadsheets and databases
- Firmware upgradable in the field

INW™

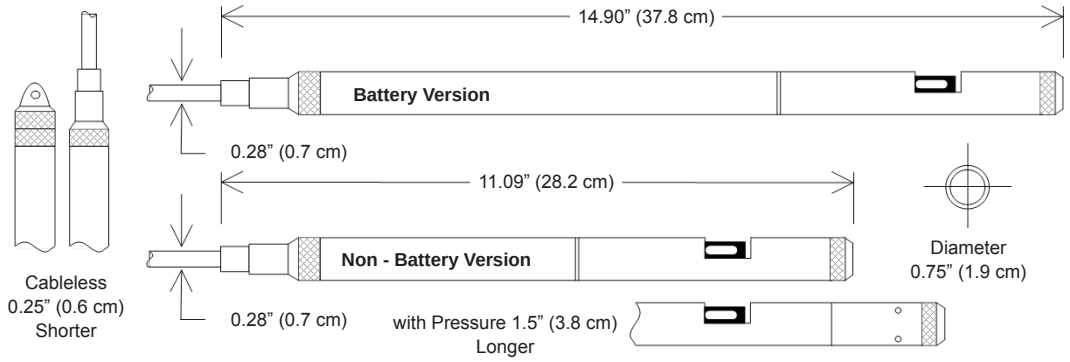
True data, measure by measure

ISO 9001:2008 CERTIFIED

1-800-PRO-WELL
WWW.INWUSA.COM
CE

CT2X Submersible Smart Sensor Conductivity/Temperature with Depth/Level Option

AquiStar™ Data Collection Systems



[1] *Storage without batteries*

[2] *Lithium available upon request*

[3] *Requires freeze protection kit if using pressure option in water below freezing*

[4] *Burst reduced at PSI≥300*

[5] *Higher pressure ratings available upon request*

[6] *Accuracy reduced at levels <10 µS/cm*

[7] *May vary due to environmental factors*

[8] *±0.25% accuracy FSO (max) at this range*

[9] *Depth range for absolute sensors has 14.7 PSI subtracted to give actual depth allowed.*

GENERAL

	w/pressure	w/o pressure
Length w/batteries	16.40" (41.6 cm)	12.59" (32.0 cm)
Length w/o batteries	14.90" (37.8 cm)	11.09" (28.2 cm)
	Cableless 0.25" (0.6 cm) shorter	
Diameter	0.75" (1.9 cm)	
Weight	1.0lb. (0.5 kg)	
Body Material	Acetal & 316 stainless *or* titanium	
Wire Seal Materials	Fluoropolymer and PTFE	
Submersible Cable	Polyurethane, polyethylene, *or* FEP	
Cable Weight	4lbs./100 ft (1.8 kg/30 m)	
Protection Rating	IP68, NEMA 6P	
Desiccant	1-3mm indicating silica gel *(high or standard capacity)*	
Terminating Connector	Available	
Communication	RS485 Modbus® RTU	
	SDI-12 (ver.1.3)	
Recommended Operating Temp. Range[3]	-5° C to 40° C	
Storage Temp. Range[1]	-40° C to 80° C	

LOGGING

Memory	4MB - 349,000 records
Log Types	Variable, user-defined, logarithmic, profiled
Programmable Baud Rate	9600, 19200, 38400
Logging Rate	4x/sec maximum
Software	Complimentary Aqua4Plus or Aqua4Push
Networking	32 available addresses per junction w/ batching capabilities (up to 255)
File Formats	.xls / .csv / .a4d

POWER

Internal Battery	2x1.5V AA Alkaline[2]
Auxiliary Power	12VDC - Nominal
	6-15VDC - Range
Exp. Alkaline Battery Life	12 months at 15m polling interval[7]

TEMPERATURE

Element Type	30K ohm thermistor
Element Material	Epoxy bead/external housing
Accuracy	± 0.25°C
Resolution	0.1° C
Range	-5° C to 40° C
Units	Celsius, Fahrenheit, Kelvin

DEPTH/LEVEL

Transducer Type	Silicon strain gauge
Transducer Material	316 stainless steel or titanium
Units	PSI, FtH_2O, inH_2O, cmH_2O, mmH_2O, mH_2O,inHg, cmHg, mmHg, Bars, mBars, kPa
Static Accuracy	± 0.05% FSO (typical) ± 0.1% FSO (maximum) *(B.F.S.L. 20°C)*
Resolution	0.0034% FS (typical)
Maximum Operating	1.1 x FS
Burst Pressure[4]	3.0 x FS
Compensated Range	0°C to 40°C

PRESSURE RANGES[5]

Gauge

PSI	1[8], 5, 15, 30, 50, 100, 300
FtH_2O	2.3[8],12, 35, 69, 115, 231, 692
mH_2O	0.7[8],3.5,10.5,21,35,70,210

Absolute[9]

PSI	30, 50, 100, 300
FtH_2O	35, 81, 196, 658
mH_2O	10, 24, 59, 200

CONDUCTIVITY

Probe Material	Epoxy/Graphite
Electrode	4-pole
Static Accuracy	± 0.5% of measured value
Resolution	32 bit
Ranges	
Conductivity[6]	0-100,000 *or* 0-200,000 *or* 0-300,000 µS/cm
TDS	4.9-49,000 *or* 4.9-98,000 *or* 4.9-147,000 mg/L
Salinity	2-42 PSU
Units	µS/cm, mS/cm, mg/L, PSU
Resolution	0.1 µS/cm / 0.001 mS/cm / 0.1 mg/L (TDS) / 0.001 PSU
Warm-Up Time	200 msec
Thermal Compensation	None, linear, or nLFn

SALES & SERVICE

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