RESIDUAL CHLORINE ANALYZER
CRA3500

STANDARD FEATURES

- Continuously measures free chlorine, total chlorine, and/or chlorine dioxide
- Membrane-covered polarographic sensor
- Automatic temperature compensation
- Includes clear constant-head flowcell
- Multiple analog and digital outputs
- Modbus communication (RS485 & TCP/IP)
- Datalogging (75 days at 15 min. intervals)
- Graphical trend of last 60 logged values

OPTIONAL FEATURES

- Capability to add on second residual chlorine sensor
- Automatic calibration (free & total chlorine sensor)
- Carbon dioxide or acid buffer unit
- SMS text alarms
- Low flow detector
- PID control capability
- Remote access via internet

BENEFITS

- No reagents or moving parts
- Easy set up and maintenance
- Intuitive menu and programming functions
- Reduced pH dependency
- Low purchase and ownership cost

APPLICATIONS

Water Treatment

- Online disinfection monitoring
- Disinfection dosage control

Swimming Pools

Paper Machine System Microbial Control

Legionella Control

Food Washing

DESCRIPTION

The CRA3500 Residual Chlorine Analyzer measures free chlorine, total chlorine, and chlorine dioxide using a membraned polarographic probe. Chemtrac's probe design incorporates a long-lasting acidic fill solution which significantly reduces pH dependency. Because the CRA3500 has no moving parts and doesn't require buffers or the addition of reagents, cost of ownership is low and maintenance is simple. The CRA3500 is available with up to two chlorine sensor inputs, reducing the cost per point.

Residual Chlorine

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GENERAL SPECIFICATIONS

Analyzer

Power:	110-240 VAC, 24 VDC (optional)
Display:	LCD Backlit 128x64 graphical
Outputs:	Two 4-20 mA outputs Four configurable alarm relays, 250 VAC, 6A PID control (optional)
Inputs:	Up to two sensors Low flow alarm Low buffer alarm
Comms:	RS485 (Modbus) TCP/IP (Modbus) USB
Datalogging:	User selectable intervals, records greater than 75 days at 15 min. intervals
System Eventlogging:	500 events

Autocalibrator (optional)

Power:	110-240 VAC, 24 VDC (optional)
Outputs:	Low flow alarm Low CO_2 alarm (if fitted)

GSM/GPRS Modem (optional)

Power:	110-240 VAC, 24 VDC (optional)
SIM Card:	User supply
Region:	Quad band

Chlorine Sensor Probe (Free or Total)

Type:	Membrane-covered amperometric polarographic three-electrode system
Measured:	Free residual chlorine or total residual chlorine
Optional Probe Ranges:	0-2, 0-5, or 0-10 mg/L (ppm)
Resolution:	.001 or 0.01 mg/L (ppm), dependent on probe range
Reproducibility:	±5%
Stability:	-2% per month (without calibration)
Working Electrode:	Gold cathode
Counter Electrode:	Stainless steel anode
Reference Electrode:	Silver/silver halide
Membrane Material:	Micro-porous hydrophillic membrane
Flow Rate:	15 to 60 L/hr.
Temperature Range:	> 0 up to 40° C
Temperature Compensation:	Automatically by integrated thermistor (ATC)
pH Range:	pH 4 up to pH 9.5
Permissible Over-Pressure:	7.25 psi (0.5 bar)
First Polarization Time:	120 min.
Re-Polarization Time:	30 min.
Zero-Point Adjustment:	Not necessary
Calibration:	Manual using DPD or automatic (optional)
Housing Material:	PVC, silicone, polycarbonate, stainless steel
Dimensions:	Diameter approx. 0.98 in., length 6.89 in.
Replacement Intervals	
Membrane:	Annually
Electrolyte:	Quarterly
Interferences:	Surfactants and high levels of other oxidants such as ozone and chlorine dioxide

Chlorine Dioxide Sensor Probe

Type:	Membrane-covered amperometric polarographic two-electrode system
Measured:	Chlorine dioxide
Optional Probe Ranges:	0-0.5, 0-2, 0-5, 0-10, or 0-20 mg/L (ppm)
Resolution:	0.001 or 0.01 mg/L (ppm), dependant upon probe range
Reproducibility:	±2%
Stability:	-1%
Working Electrode:	Gold cathode
Counter Electrode:	Anode: combined reference and counter electrode of silver/silver halogenide
Membrane Material:	Hydrophobic membrane
Flow Rate:	15 to 60 L/hr
Temperature Range:	> 0 up to 50° C
Temperature Compensation:	Automatically by integrated thermistor (ATC)
pH Range:	pH 2 up to pH 11
Permissible Over-Pressure:	14.5 psi (1 bar)
First Polarization Time:	60 min.
Re-Polarization Time:	30 min.
Zero-Point Adjustment:	Not necessary
Calibration:	Manual using analytic determination
Housing Material:	PVC, silicone, polycarbonate, stainless steel
Dimensions:	Diameter approx. 0.98 in., length 6.89 in.
Replacement Intervals	
Membrane:	Annually
Electrolyte:	Bi-annually

CO_2 pH Suppressant Unit (if required)

CO_2 Usage:	Variable, zero waste

Acid Buffer Unit (if required)

Power:	110-240 VAC, 24 VDC (optional)
Dosing Pump:	Peristaltic

Free Chlorine Response to pH (Unbuffered)