

# CRIUS 3500 and 3500+ Chlorine Residual Analyser

## KEY BENEFITS

- **No reagents or moving parts**
- **Optional automatic calibration**
- **Low purchase cost**
- **Low cost of ownership**
- **Reduced pH dependency**
- **SMS text alarms**
- **Up to 4 sensors**
- **No maintenance for up to 12 months**
- **PID control built in**

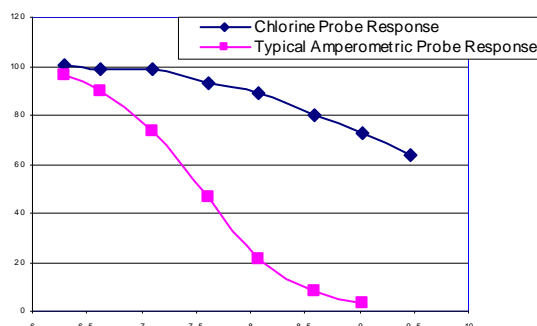


## PRINCIPLE OF OPERATION

The membraned polarographic chlorine probe, is enhanced with a third, reference electrode which eliminates zero drift. Its unique design means that pH correction is not usually required at all, completely eliminating reagents. Where it is required there are options for using carbon dioxide or a more traditional acid buffer. Total Residual Chlorine, and Chlorine Dioxide measurement probe options are also available.

In addition to the state of the art sensors the CRIUS 3500 offers a vast array of communication protocols including Modbus, TCP/IP, USB, RS485, TTL, Relays and 4-20mA outputs. Despite all of the additional functionality that this unit has to offer, the purchase costs are less than or comparable to, its competitors. Added to the cost savings of a truly automatic (no operator present), calibration system, some will achieve a replacement payback of only a few months. Also available are Dual and Triple Validation options, pH correction and a PID control function.

Typical Probe Response to pH (Unbuffered)



## AUTOMATIC CALIBRATION

The CRIUS 3500 Residual Chlorine Analyser is the first of its kind in the world to offer automatic calibration as an option. Cleverly engineered and using state of the art electronics the CRIUS is able to save customers considerable sums of money by autocalibrating at user defined time intervals.

## Water Treatment

- **Remote sites**
- **Automatic Calibration**
- **Chlorine dosing control**
- **Secondary Chlorination**
- **PID control**

Anywhere you have a requirement to measure the residual chlorine is a suitable application for the CRIUS 3500 with or without auto calibration. The CRIUS 3500 is particularly suited to working in remote sites where reliability and ease of use are paramount.

## Multiple Probes

- **Reduced cost per point**
- **Free and Total on the same instrument**
- **Add pH and/or ORP (see CRIUS pHHybrid)**

The CRIUS 3500 comes equipped to take up to two probes as standard while the CRIUS 3500+ takes up to four probes thereby greatly reducing the cost per point. Probes can be mixed so you can select, for example, a single analyser with both free and total chlorine.

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## SPECIFICATIONS

### CHLORINE SENSOR PROBE

Type:	Membrane covered amperometric polarographic three-electrode system
Measurand:	Free Residual Chlorine or Total Residual Chlorine (ClO <sub>2</sub> optional)
Range:	0-1, 0-2, 0-5, 0-10mg/l (ppm)
Resolution:	0.01mg/l (ppm)
Reproducibility:	±5 %
Stability:	-2 % per month (without calibration)
Working electrode:	Cathode made of gold
Counter electrode:	Anode made of stainless steel
Reference electrode:	Silver/silver halide
Membrane material:	Micro-porous hydrophilic membrane
Flow rate:	Approximately 0.5l/min (Min 0.2l/min)
Temperature range:	>0 up to 40 °C
Temperature compensation:	Automatically by an integrated thermistor
pH-range:	pH 4 up to pH 9,5
Permissible overpressure:	0.5 bar
First-polarisation time:	120 min
Re-polarisation time:	30 min
Zero-point adjustment:	Not necessary
Calibration:	Manual using DPD or Automatic
Material of construction:	PVC, silicone, polycarbonate stainless, Perspex
Dimensions:	Diameter approx. 25mm, length 175mm
Maintenance intervals:	
Membrane:	Yearly
Electrolyte:	Quarterly
Calibration reagent:	Six monthly
Interferences:	High levels of other oxidants such as Ozone and Chlorine Dioxide



### ANALYSER

Power:	100-240VAC (12/24 VDC optional)
Display:	LCD Backlit 128x64 graphical
Outputs:	4 configurable alarms (relays). 2 x 4-20mA outputs
Inputs:	1 x low flow alarm 1 x low buffer alarm
Comms:	RS485 TCP/IP (Webserver)
Datalogging:	One year at 15 min intervals (equiv.)
Eventlogging:	500 events

### AUTOCALIBRATOR

Power:	100/240VAC (12/24 VDC optional)
Outputs:	Low flow alarm Low CO <sub>2</sub> alarm (if fitted)

### GSM/GPRS MODEM

Power:	100-240VAC (12/24 VDC optional)
Sim card:	User supply

### ACCESSORIES

#### CO<sub>2</sub> pH SUPPRESSANT UNIT

(If Required)	
CO <sub>2</sub> Usage:	Variable, zero waste

#### ACID BUFFER UNIT

(If Required)	
Power:	110/240VAC
Dosing Pump:	Peristaltic

#### POLARIZOR

Power	100-240 VAC + 12V + Internal rechargeable batteries
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