

Product information Two-Channel Controller

Important values securely under control

As a two-channel controller the chloriDES monitors the current water values during water treatment and controls up to two metering systems connected for treating the water in real-time. In this way it ensures constant water values in the most varied of applications – taking into account the given norms and guidelines – it is universally applicable.

Compact solutions available in several versions

As standard, the chloriDES® is configured to measure and control pH, free chlorine (potentiostatic method), together with temperature measurement and display. Redox measurement and control is available as an extra cost option. The modular design makes the chloriDES® adaptable and highly compatible partner in the field of measuring and control technology.

The large colour display, the representation of all information in clear text and the very clear, multilingual menu navigation makes the chloriDES® very easy for anyone to understand and operate. The integrated online help adds to its user friendliness, both during initial set-up and normal operation.

The access possibilities to the measuring and control values are extensive: All current measurement data and controller values are displayed in the main view. They can also be displayed via the on-screen graph writer for 24h at various zoom levels. The data logger and the logbook feature use the memory card to archive the values. The SD memory card can also be utilised by a PC to display and archive the stored data using free *TopReader* software. The two-channel controller can optionally be equipped with an RS 485 serial interface. This provides the option of transferring the data direct to a computer for displaying it with the visualisation software *TopView*. Communication with a PLC controller via RS RS485/Modbus protocol is installed as the data communication protocol.

The maintenance and upkeep of the measuring unit with the sensors and the regulator is greatly facilitated with the menu-guided calibration with the subsequent validity check. Faulty sensors or errors in the calibration process are automatically recognised and displayed by the chloriDES®.

Functionality

The chloriDES® is equipped with a variety of digital as well as analogue measurement inputs. For transferring the measurement value or as control outputs, analogue outputs 0/4 ... 20 mA are available. Moreover, control outputs can also be configured as potential-free electronic switching outputs; on/off relay outputs, pulse frequency, pulse length, or as three point step output (e.g. for chlorine gas regulators). A 2-way heavy duty relay interface is also provided for the direct connection of 230v motor/solenoid dosing pumps.



The connection of the sensors as well as dosing pumps is achieved in the easiest way via removable terminal blocks. The start up is supported by the pre-selection for controlling the actuators/dosing pumps displayed in plain text, which can be assigned in the most varied of output. Following the configuration the complete wiring diagram is displayed.

Features Summary

- Measuring free chlorine with 3-electrode measuring cell with potentiostatic control
- Measurement of the pH value and temperature
- Redox measurement (extra cost option)
- Display of the effective chlorine according to dissociation curve
- Analogue outputs 0/4 ... 20 mA for measurement or control values, galvanically isolated
- 2 controllers for controlling the parameters for disinfection and the pH value
- 2 x Heavy duty relays for direct connection of dosing pumps
- Selectable pH value compensation of the chlorine value & Temperature compensation of the pH value
- Modbus protocol via RS 485
- Memory card for data logger and logbook
- Very easy to operate with guided start up
- Large display with operator guidance in plain language
- Integrated 24 h screen writer
- Display of the performance of the measuring cells during calibration
- Validity check during calibration
- Individual LED status indicators (green/red) mounted to the flow switch and each measuring cell

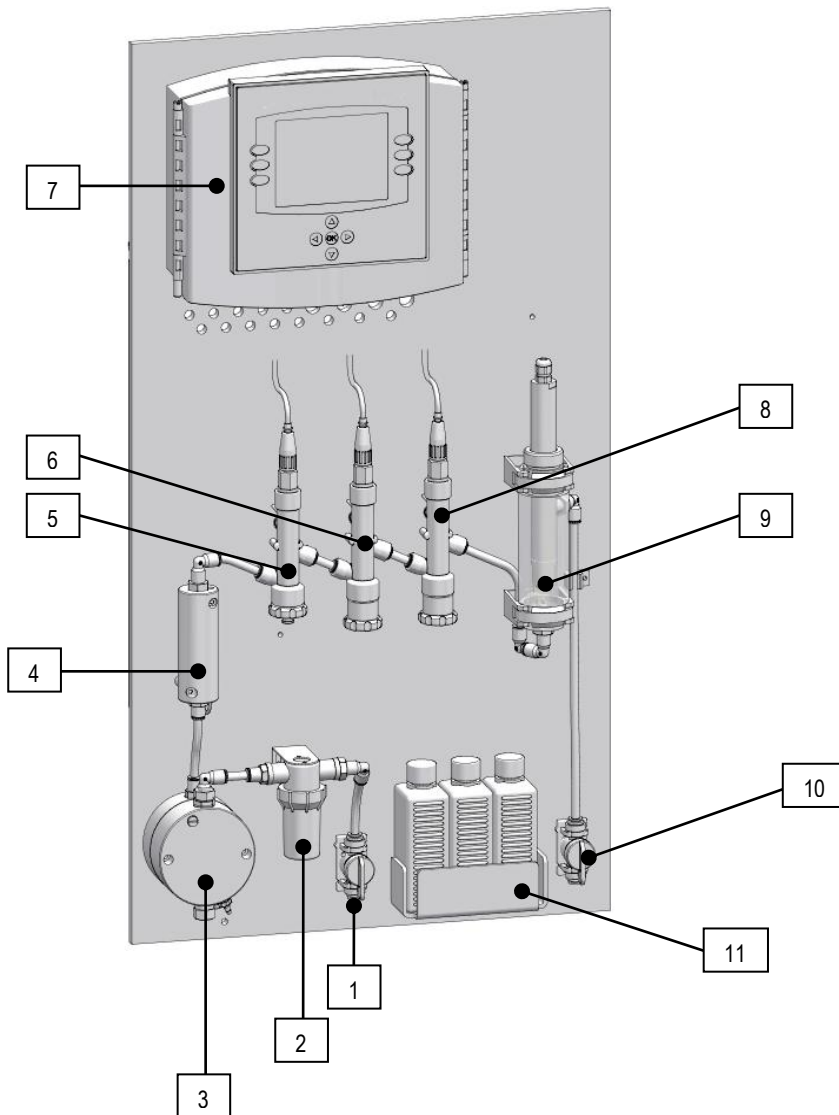
Technical

Features	
Display and controls	Colour display with graphical capabilities, 5.7 inch, 320 x 240 pixels with background lighting 6 sensor keys to navigate the menu 5 sensor keys to control the cursor
Measuring input for free chlorine Measuring cell-options	Amperometric 3-electrode measuring cell with potentiostatic control, measuring range adjustable from 0 ... 2 mg/l, 0 ... 10mg/l
Further measurement inputs	<ul style="list-style-type: none"> pH value, measuring range: pH 0 ... 14 Temperature, measuring range -10 ... +100 °C
Digital inputs	Inputs for: <ul style="list-style-type: none"> Low level alert and main alarm of the chemical tank dosing pump 1 and dosing pump 2 Measuring water deficiency of the regulating function with alarm (external cut off)
Connection of the inputs and outputs	By means of terminal blocks, max. 1 mm ²
Control characteristic for 2 inputs (disinfection and pH value)	P, PI, PD or PID performances Fixed value regulation, standard channel selectable, disturbance variable feed forward (optional), 2-sided
Disturbance variable (optional)	0/4 ... 20 mA programmable, disturbance factor: 0.1 ... 10 times amplification
Controller outputs (each as per the configuration)	3 digital outputs, optocoupler, 48 V DC; 250 mA, pulse frequency 10 ... 350 pulses/min 5 relay outputs programmable as: <ul style="list-style-type: none"> ON/OFF Pulse frequency 10 ... 100 impulses/min. Pulse length 10 ... 120 seconds 3-point step output with feedback position, value of the Potentiometer 1 ... 10 kOhm Analogue outputs 0/4 ... 20 mA, max. load 500 Ohms
Alarm output	Relay output as collective alarm for the measured variables of free chlorine, pH value, Redox potential, temperature as potential free contact Measurement value alarm, min. and max. alarm freely adjustable. Time delay adjustable max. 200 minutes Safety cutout To prevent overdosing (Y-alarm), time delay adjustable: max. 200 minutes
Current outputs for remote transfer of the measured value to the inputs	Current outputs for each measured value 0/4 ... 20 mA possible spreading; max. load 500 Ohms potential free Significant geometric spreading: >50 % with measuring input free chlorine and 0/4 ... 20 >10 % during measurement input of pH value and Redox potential
Interface (optional)	Modbus protocol via RS 485
Relays capacity	Internal: 230 V / 50 Hz, 3 A resistive, 1 A inductive (max). External dosing pump interface relays 8A
Protection class	IP 65 with locked screw connections
Ambient temperature	-5 °C ... +45 °C
Supply voltage	90 to 264 VAC, short circuit and overload-proof
Power consumption	24 VA
Board mounted dimensions	H900 x W490 x D137 mm
Shipping weight	9.0kg (complete board mounted assy)

Scope of delivery

The following components are included in the delivery:

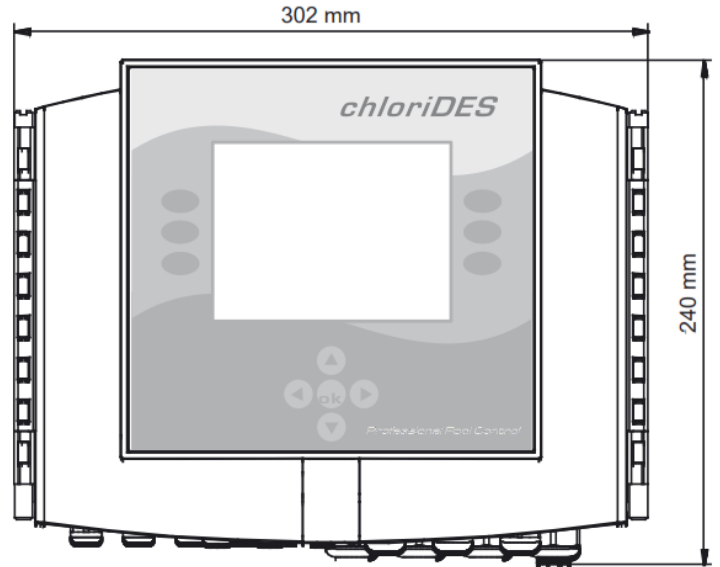
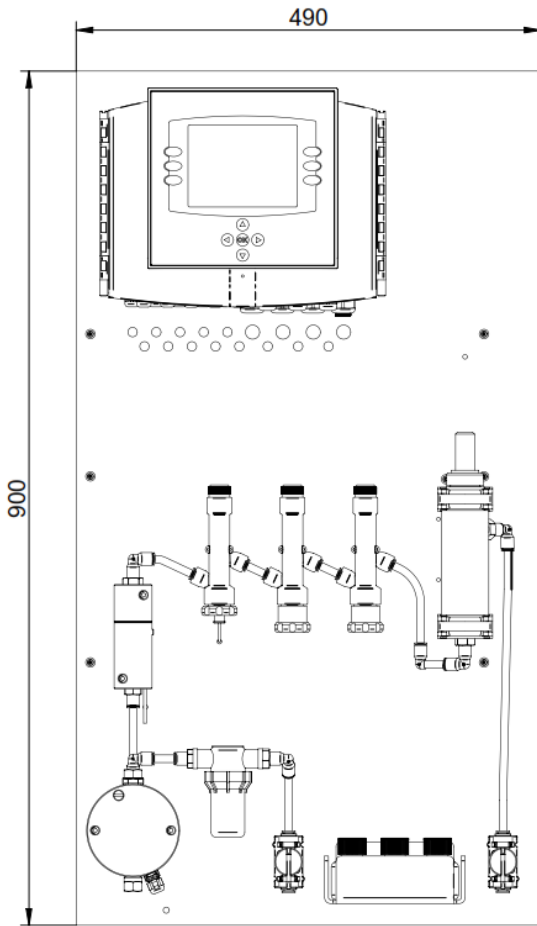
- Base plate with LED status lighting for the flow cells & flow switch
- Wall bracket assy(with opening hinges)
- chloriDES controller
- Sample water filter
- Flow controller with integrated temperature sensor
- Flow switch
- Free chlorine measuring cell (potentiostatic)
- pH value measuring cell
- Buffer solutions, electrode cleaner, storage shelf



Key	Description
1	Sample water inlet valve
2	Sample water strainer, stainless steel.
3	Flow controller
4	Flow switch
5	Chlorine electrode & cell
6	pH electrode
7	chloriDES DE controller
8	Redox electrode (option for other chloriDES variants)
9	Conductivity measuring cell (option for other chloriDES variants)
10	Sample water outlet valve
11	pH buffer solutions & storage shelf



Dimensions



Sales & Service:

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