

# CONTROLLERS

[www.waterengrs.com](http://www.waterengrs.com)



Chemical Injection skids



Water Quality Monitoring Systems cum dosing (WQMSD)



Mobile Disinfection/Dosing systems

**Complete Water Solutions  
Single Trusted Source**



Containerised Water Treatment systems

## TOUCH controller series

**MEASURING PARAMETER:** Free (residual), Total chlorine; pH, RX (ORP); Dissolved Oxygen; Hydrogen Peroxide; Conductivity ( $\mu\text{S}$ ); Chlorine Dioxide; Peracetic acid, Cooling towers controller, BMS controllers.

### COMMON FEATURES

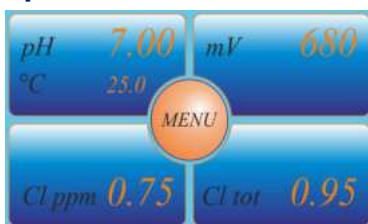
- Touch screen controllers with graphic display
- Simultaneous measurements, temperature, alarm and flow status
- Graphic icons for Errors, Alarms, output and Input status
- Scrolling parameter selection by touch screen
- Expandable relay outputs to control other remote equipments
- Relays outputs activations by timer control or measurements settings
- Configurable mA outputs according requirements
- mA outputs galvanically isolated
- Universal power supply 90÷240 Vac (upon request 12÷24 Vdc)
- Real time clock configurable as Timer to drive controller functions
- Time out of dosing pump over dosage via timer or pulses control
- Level control for external chemical tanks (according to parameters)
- Proximity switch functions
- Hysteresis and Max/min Alarm adjustments, Alarm overdosage
- Manual and Automatic temperature, programmable settings
- Programmable Menu Basic / Expert
- Standard Ethernet connection, Modbus protocol
- Data recording and Internal memory
- USB port direct download on Pen drive
- IP65 ABS UL94 HB enclosure, hinged lid
- Touch 1 model enclosure V0 self extinguishing (available for other models)
- Available upon request IP56 ABS enclosure
- Other features available upon request, after submitting technical data

### OPTIONS UPON REQUEST

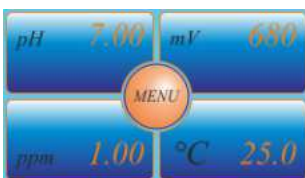
Wi-Fi connection  
RS485 Adaptor via external Pen drive  
GSM/ GPS external module



### TOUCH 4 – 7” 5 parameters



### TOUCH 3 – 4,3” 3 parameters



### TOUCH 2 – 4,3” 2 parameters



### TOUCH 1 – 4,3” 1 parameter



### AVAILABLE MODELS

#### TOUCH 4 – 7” display touch screen controller

- ✓ 4 measuring parameters + temperature, all with simultaneous visualization
- ✓ 11 relay (*expandable 16*): 5 set-points On-Off + 6 Aux/Alarm configurable outputs
- ✓ 5 Proportional (PVM) time / pause output to drive On-Off equipment
- ✓ 4 of 4÷20mA (*expandable to 6*) programmable outputs
- ✓ 2 TTL outputs for dosing pumps related to set-points of two measurements
- ✓ 3 Level control inputs for external chemical tanks
- ✓ **Available with 4”1/3 touch screen display**

#### TOUCH 3 – 4,3” display touch screen controller

- ✓ 3 measuring parameters + temperature, all with simultaneous visualization
- ✓ 11 relay (*expandable 16*): 4 set-points On-Off + 7 Aux/Alarm configurable outputs
- ✓ 4 Proportional (PVM) time / pause output to drive On-Off equipment
- ✓ 4 of 4÷20mA (*expandable to 6*) programmable outputs
- ✓ 2 TTL outputs for dosing pumps related to set-points of two measurements
- ✓ 2 Level control inputs for external chemical tanks

#### TOUCH 2 – 4,3” display touch screen controller

- ✓ 2 measuring parameters + temperature, all with simultaneous visualization
- ✓ 6 relay (*expandable to 16*): 3 set-points ON-OFF (2pH)+1 Alarm+2 Aux outputs
- ✓ 3 Set-points ON-OFF with 2 voltage free outputs
- ✓ 3 Proportional (PVM) time / pause output to drive On-Off units
- ✓ 4 of 4÷20mA programmable outputs + 2 TTL outputs for each each setpoint
- ✓ 2 Level control inputs

#### TOUCH 1 – 4,3” display touch screen controller

- ✓ 1 measuring parameter + temperature, all with simultaneous visualization
- ✓ 3 relay (*expandable 8*): 2 set-points ON-OFF + 1 Aux/Alarm configurable outs
- ✓ 1 Proportional (PVM) time / pause output to drive On-Off equipment
- ✓ 2 of 4÷20mA programmable outputs
- ✓ 1 TTL outputs for dosing pumps related to set-points of two measurements
- ✓ 1 Level control inputs for external chemical tanks

# CONTROLLERS AND MEASUREMENTS



**CTRL enclosure IP65** ABS, 231w x125h x90, V0 (fireproof)  
easy access via hinged front panel with safe lock



**CTRL/B enclosure IP56** ABS, 204w x149h x85-UL94 HB  
easy access via front panel locked with captive screws



**CTRL/R enclosure**, PPO plastic self-extinguish,  
DIN 43700 type 96x96 for rack mounting



**CTRL/din enclosure**, PC/ABS plastic self-extinguish,  
DIN rail 43880 (EN 60715)

**MEASURING PARAMETER:** *Free (residual), Total chlorine; pH, RX (ORP); Dissolved Oxygen; Hydrogen Peroxide; Conductivity (µS); Chlorine Dioxide; Peracetic acid, Cooling towers controller,*

## COMMON FEATURES

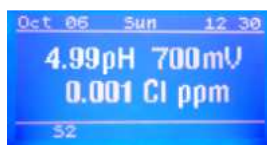
- Large display 128x64 with graphic display
- Simultaneous measurements, temperature, alarm, flow status
- Graphic icons for Errors, Alarms, output and Input status
- Configurable mA outputs according requirements
- Universal power supply 90÷240 Vac (upon request 12÷24 Vdc)
- mA outputs, adjustable settings and galvanically isolated
- Level control for chemical tanks (according to parameters)
- Proximity switch functions and Digital inputs
- Hysteresis and Max/min Alarm adjustments

- Real time clock configurable as Timer to drive controller
- Alarm overdosage via time or max pulses
- Automatic / Manual temperature settings
- Programmable Menu Basic / Expert

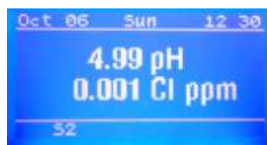
## OPTIONS UPON REQUEST

- Ethernet connection, Modbus protocol
- USB port direct download on Pen drive
- RS485 Adapter via external Pen drive
- GSM / GPS external module
- (options not available with DIN housings)

## AVAILABLE MODELS



**CTRL3 plus** 3 measuring parameters + temperature, simultaneous visualization  
 ✓ 8 relays (expandable to 12): 4 set-points ON-OFF + 4 Aux/Alarm configurable outs  
 ✓ 2 Proportional (PWM) time / pause output to drive On-Off units  
 ✓ 4 of 4÷20mA programmable outputs to drive dosing equipment or data logger  
 ✓ 2 Level control inputs+Real time Clock/Timer to program CTRL or aux outputs



**CTRL2/6 plus** 2 measuring parameters + temperature, simultaneous visualization  
 ✓ 6 relays: 3 set-points ON-OFF + 3 Aux/Alarm configurable outs  
 ✓ 2 Proportional (PWM) time / pause output to drive On-Off units  
 ✓ 4 of 4÷20mA programmable outputs to drive dosing equipment or data logger  
 ✓ 2 Level control inputs+Real time Clock/Timer to program CTRL or aux outputs



**CTRL2 plus** 2 measuring parameters + temperature, simultaneous visualization  
 ✓ 4 relays: 3 set-points ON-OFF + 1 Aux/Alarm configurable outs  
 ✓ 2 Proportional (PWM) time / pause output to drive On-Off units  
 ✓ 2 of 4÷20mA programmable outputs to drive dosing equipment or data logger  
 ✓ 2 Level control inputs



**CTRL plus** 1 measuring parameter + temperature, simultaneous visualization  
 ✓ 3 relays: 2 set-points ON-OFF + 1 Aux/Alarm configurable outs  
 ✓ 1 Proportional (PWM) time / pause output to drive On-Off units  
 ✓ 2 of 4÷20mA programmable outputs to drive dosing equipment or data logger  
 ✓ 1 Level control input+Real time Clock/Timer to program CTRL or aux outputs



**CTRL** 1 measuring parameter + temperature, simultaneous visualization  
 ✓ 2 relays: 2 set-points ON-OFF  
 ✓ 1 Proportional (PWM) time / pause output to drive On-Off units  
 ✓ 1 of 4÷20mA programmable outputs to drive dosing equipment or data logger  
 ✓ 1 Level control input

**NOTE:** for all the TOUCH and CTRL series, all the PH controllers include also the selection of RX (ORP) unit.  
In case the double or triple controller features both parameters.

# ELECTRODES AND SENSORS

## AMPEROMETRIC MEMBRANE SENSORS CLS



- CLS** series offers a large selection of “potentiostatic ion-selective chlorine sensors” membrane principle, for measuring: Free Chlorine Inorganic and Organic, compatible with Isocyanuric Acid, sensors suitable with presence of Surfactants/Flocculants, for potable and salt water, Salt water, Ozone, Hydrogen Peroxide, Peracetic Acid.
- Suitable for a wide choice of measuring ranges and applications.
  - Fast and easy calibration procedure: only one point to calibrated
  - Temperature compensation is integrated within each probe
  - No environmental disturbances thanks to sensors low impedance
  - Long lifetime and very little required maintenance

## AMPEROMETRIC CHLORINE CELL CLC



**CLC** are “open” system amperometric cells able to measure inorganic free chlorine with the possibility to control the actual incoming water flow hosting a proximity switch for output signal (switch upon request). Keeping a good maintenance and a steady flow, will obtain great results with competitive prices.

- Self-cleaning cell with glass balls
  - Range 0÷10 ppm. Electrode Platinum/Copper
  - Max pressure 5 bar - Max temperature 5÷60°C
- CLC 3** chlorine cell+2 electrode+temperature sensor holder, flow sensor proximity switch, incoming flow adjustment  
**CLC 2** chlorine cell+2 electrode+temperature sensor holder  
**CLC 4** chlorine cell+Proximity switch temperature sensor holder

## COMBINED PH AND RX ELECTRODES



- Electrodes with cables from 1 to 15 m length
- Electrodes without cables DIN Connection PG13,5 threading
- Epoxy body
- Glass body
- Max pressure from 1 bar to 16 bar
- Max temperature from 60°C to 130°C

## TURBIDITY SENSOR



- Turbidity sensor **CELL TURB**
- Measuring range: 0÷40,0 or 0÷20,0 NTU (to specify at the order)
- Functioning mode: optical transmission by 90° Light photodiode
- Liquid Ends: PVC body – PP fittings

## DISSOLVED OXYGEN SENSOR



- Dissolved Oxygen sensor with NTC temperature sensor
- Range 0÷20,0mg/L,1ppb to saturation or 0.01%÷200% of oxygen

## CONDUCTIVITY PROBES



- Ranges 0÷200 µS; 0÷2000 µS; 0÷20.000 µS; 0÷200.000 mS
- With cables 4m up to 30 m length with amplified probes
- AISI 316 or Graphite electrodes
- Probes amplified via internal NTC and thermo-compensated
- Body PVC or PTFE

## TEMPERATURE PROBES



- Ranges up to 100°C
- With cables from 1 to 15 m length
- Body AISI, PVC, PTFE
- PT100 probes in GLASS, AISI, PVC

## SENSORS ACCESSORIES



- FWT has developed a new modular in-line probe cell:
  - great versatility in choosing one or more modules according to requirements allowing money saving;
  - a base module for detecting flow and temperature and flow adjustment thus allowing the ideal flow required;
  - every sensor has its own module for: pH/RX electrodes, Oxygen PT100 temperature sensors, high linearity conductivity probes;
  - Membrane system Ion selective sensors have their own module clearly for their peculiarity;
  - clean and visible operations;
  - outlet fitting to take sample and/or emptying the cell module;
  - easy to use, install and maintain;
  - separate modules can be replaced without affecting operations

- Probe holder for a variety of electrodes, sensors and functions
- Submersible probeholder, PVC body, length 50 cm, 1 m, 1,5 m
- In-line electrode holder, PVC or AISI316, connection 1/2"



- Proximity switch to detect in-coming flow
- Impedance adapter for remote installations
- Buffer solutions

## DOSING PUMPS ACCESSORIES

- Electric Mixers
- Manual Mixers



- Suction lances



- Pulse emitter water meter (threaded) from 1/2" to 2"
- Pulse emitter water meter (flanged) from 2" to 8"



- Complete hydraulic kits for monitor panel assembly



- Dosing tanks
- Bunds and fittings



- Safety valves
- Back pressure / Relief valves
- Anti-syphon valves



- Pulsation dampers

