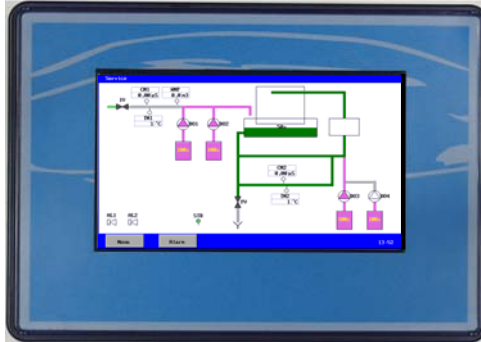




EQUIPMENT FOR WATER TREATMENT SYSTEMS

# CTS8000

## Controller for Cooling Tower



### ■ Description

The unit type CTS8000 is universal applicable for automatic monitoring and control of cooling tower plants. There are five possible stages : "Stand by", "Service", "Flushing", "Biociddosing" and "Maintenance".

This unit can monitor conductivity, temperature and several inputs e.g. water meters, level switches, alarm reset flush blocking, flush start etc.. Adaptable to user specific requirements by built-in programmable options. The programmed configuration will be stored into non volatile memory and therefore not be affected by power loss.

### ■ Features

#### User Interface

- Colour 7X TFT display (800x480)
- Control through touch panel
- Language : English, French, German, Dutch

#### Inputs

- 8x Input for potential free switch
- CTS : 1x Conductivity meter (cap, passive) + 1x Temperature meter
- CTI : 1x Conductivity meter (ind., 0-10V)

#### Expandable with :

- CTS : 3x Conductivity meter (cap, passive) + 3x Temperature meter
- CTI : 1x Conductivity meter (ind., 0-10V)
- Max. 12x input 0 (4) -20mA : Flow, pressure, conductivity, pH and tank level or pulse inputs : paddle wheel flow meter

#### Conductivity meter

- Automatic range switching
- Cell constants from 0,01 - 10,00 cm<sup>-1</sup>
- Range from 0,5 - 100.000 µS/cm depending on used cell
- Manual or automatic temperature compensation
- Capacitive cell

#### Temperature meter

- Range from 0 - 94°C (Δ 32 - 201 °F)
- PT1000

#### Outputs

- 4x Relay output (powered)
- 3x Relay output (dry contact)

#### Outputs (optional)

- 7x Additional relay outputs (4x powered / 3x dry contact)
- 6x output 0 (4) -20mA (recorder, soft starter set point)

#### Memory

- Last twenty alarm messages will be stored.
- Real time clock with "lifetime" battery
- Programming will be stored and not be affected by power loss.

#### SD Card

- Software updates
- Programming (Save and Load)
- Data log, Process log and Alarm log

#### Communication (optional)

- RS485 (data log formats : CSV)
- RS232 (data log formats : CSV)
- Webservice
- Email messages (alarm)

#### Enclosure

- Suitable for wall mounting, panel mounting and plate mounting
- IP65

#### Power supply

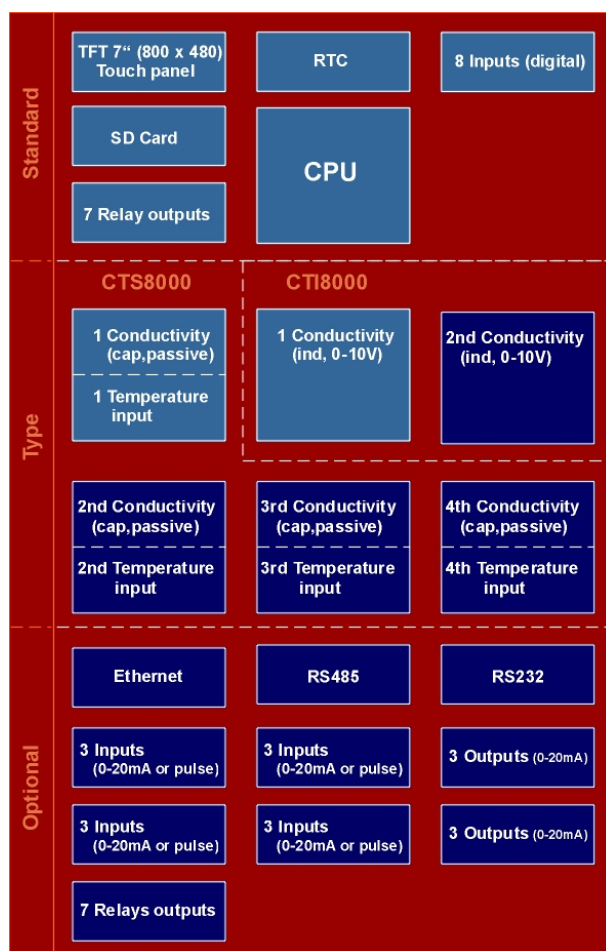
- 24 VAC input / (output = input or extern)
- 115 VAC input / (output = input or extern)
- 230 VAC input / (output = input or extern)
- <sup>1)</sup> 115 VAC input / 24 VAC output
- <sup>2)</sup> 230 VAC input / 24 VAC output
- <sup>3)</sup> 240 VAC input / 24 VAC output



EQUIPMENT FOR WATER TREATMENT SYSTEMS

# CTS8000

## ■ Block diagram



## ■ Function Table

The relay outputs, digital inputs and inputs 0-20mA are free programmable for the following functions :

Relay Outputs	Digital Inputs	Inputs 0-20 mA	Outputs 0-20mA
Inlet valve	Water meter in	Conductivity meter	Recorder
Flush valve	Water meter flush	Temperature meter	Softstarter set point
Biocid dosing	Stand by	Flow meter	
Proportional dosing	High level switch	Pressure meter	
Circulation pump	Low level switch	Tank level	
Alarm	Remote alarm reset	pH	
Additional program	Level switch dosing tank	ORP	
Service	Pump protection switch		
Stand by	Valve position switch		
Flow pulse	Flush start		
	Flush block		



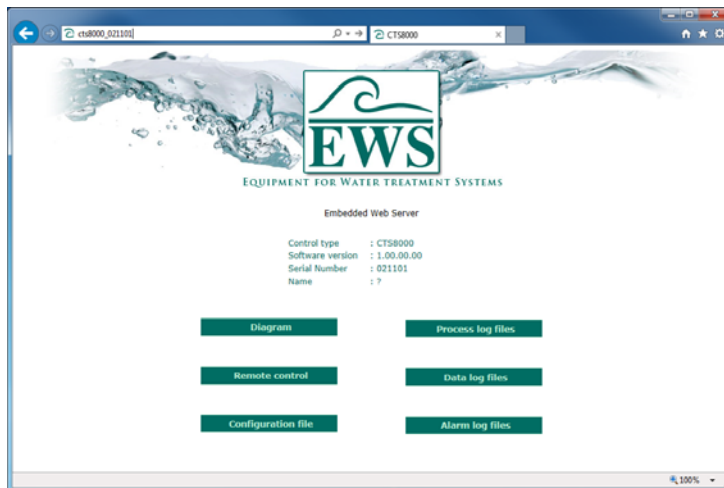
EQUIPMENT FOR WATER TREATMENT SYSTEMS

# CTS8000

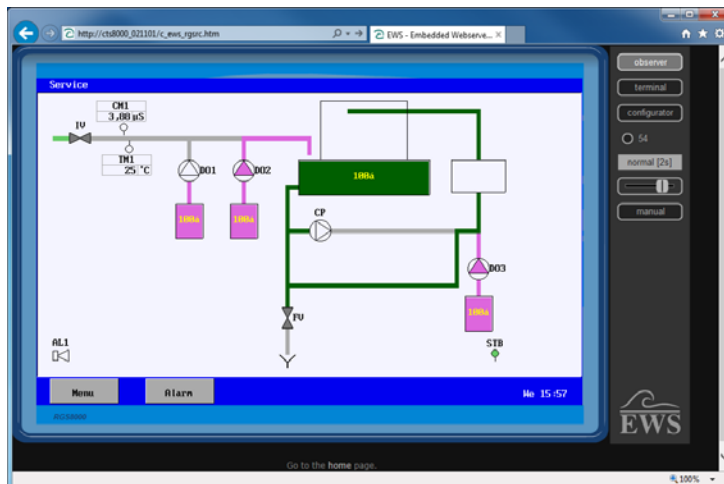
## ■ Ordering Information

CTS8000			
CCS8000	With capacitive conductivity measurement (passive)		
CIS8000	With inductive conductivity measurement (0-10V)		
Power supply :	115 VAC / 24 VAC 230 VAC / 24 VAC 240 VAC / 24 VAC 24 – 240 VAC / output = input 24 – 240 VAC / output = external power		
Communication	without RS232, RS485 and ethernet with RS232, RS485 and ethernet		
Relay outputs	number of circuit boards with 7 relay outputs (4x powered, 3x dry)		( 1 – 2 )
Conductivity	number of conductivity meters and temperature meters		( 1 – 4 )
Inputs 0-20mA	number of additional circuit boards with 3 inputs 0-20 mA		( 0 – 4 )
Outputs 0-20mA	number of additional circuit boards with 3 outputs 0-20 mA		( 0 – 2 )

## ■ Web browser screen shots



Main menu



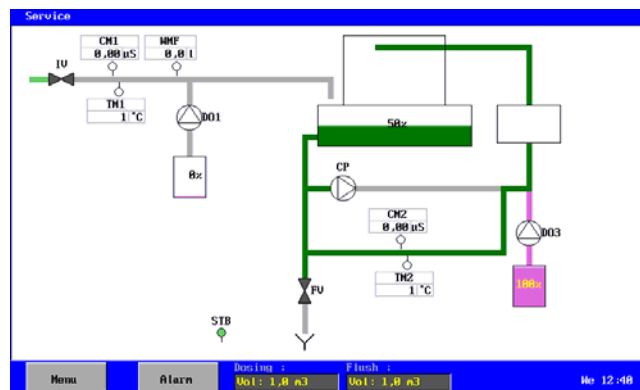
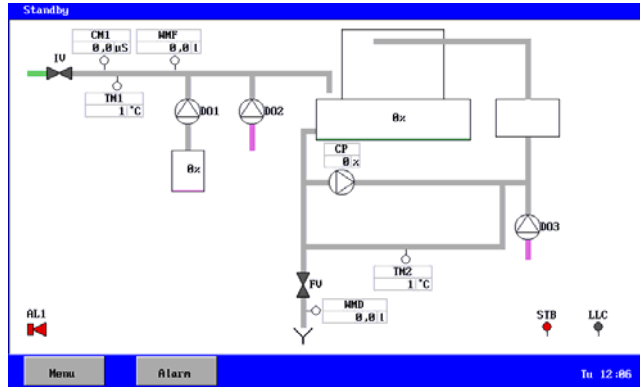
Remote control



EQUIPMENT FOR WATER TREATMENT SYSTEMS

# CTS8000

## ■ General screen shots



Main menu	Media	Ethernet
Manual control	Ethernet	<input checked="" type="checkbox"/> Auton. IP (DHCP)
Information	SD Card	IP: 192 168 1 5
User settings	Email	NM: 255 255 255 0
Installation	RS485	GM: 192 168 1 254
Clock	Harddisk	Port: 00
Language	RS232	
Media		
Service		
Security		
Close	Close	Close

Programming	Components	Conductivity 1
Components	Conductivity 1	Property
Cooling towers	Temperature 1	Unit: $\mu\text{S/cm}$
	Temperature 2	Factor: 0.75
	Dosing Pump 1	Monitor Min.
	Dosing Pump 2	Monitor Max.
	Dosing Pump 3	Correction: 1.0
	Alarm	
	Coolwater tank	
	Dosing tank 1	
Close	Close	Close