

RGS8000

Controller for Reverse Osmose



■ Description

The unit type RGS8000 is universal applicable for automatic monitoring and control of reverse osmosis plants. There are seven possible stages : "Stand by", "Production", "Rinse after production", "Rinse during production", "Rinse during standby", "Maintenance " and "Regeneration" (wait for regeneration of a softener). This unit can monitor conductivity, temperature and several inputs e.g. level switches, low pressure switch, motor security switch, 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 and Russian

Inputs

- 8x Input for potential free switch
 - 1x Conductivity meter
 - 1x Temperature meter
- Expandable with :
- 3x Conductivity meter + 3x Temperature meter
 - 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⁻¹
- 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)
- Optional circuit boards for:
- 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)
- Webserver
 - visualisation (schematic)
 - configuration
 - download log files on SD Card
- 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)
- ^{*)} 115 VAC input / 24 VAC output
- ^{*)} 230 VAC input / 24 VAC output
- ^{*)} 240 VAC input / 24 VAC output

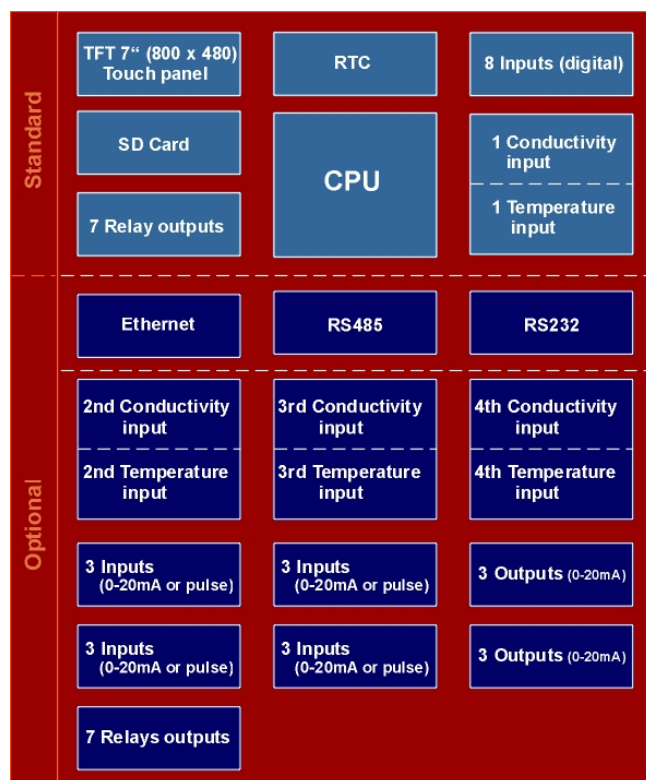
^{*)} Expand options limited.



EQUIPMENT FOR WATER TREATMENT SYSTEMS

RGS8000

■ 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	Stop	Conductivity meter	Recorder
High pressure pump	High level switch	Flow meter	Softstarter set point
Concentrate valve	Low level switch	Pressure meter	
Permeate rinse valve	Exceeded water pressure	Tank level	
Permeate block valve	Low water pressure	pH meter	
Permeate 3 way valve	Concentrate flow switch		
Dosing pump (2)	Motor security switch		
Booster pump	Remote alarm reset		
Alarm (2)	Regeneration input		
Additional program	Pressure for membrane		
	Pressure after membrane		
	Pressure permeate		
	Level switch dosing tank		
	Pump protection switch		
	Valve position switch		
	Paddle wheel input		



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RGS8000

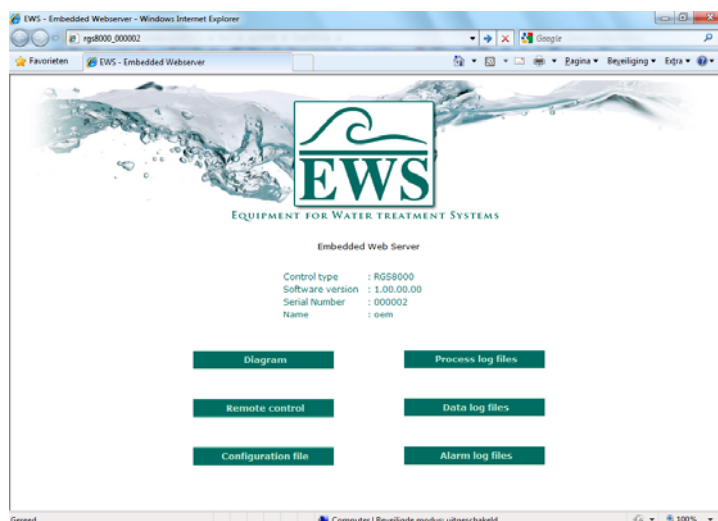
■ Ordering Information

RGS8000

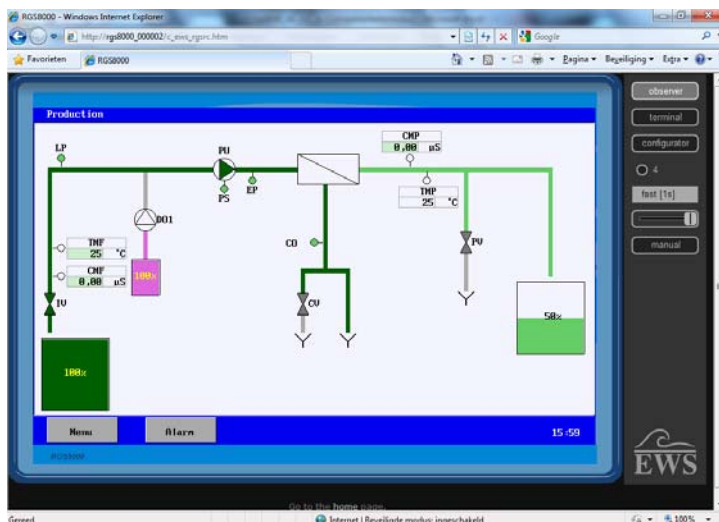
Power supply :	24 VAC / 24 VAC	24 VAC / outputs = external power	
	115 VAC / 115 VAC	115 VAC / outputs = external power	
	230 VAC / 230 VAC	230 VAC / outputs = external power	
	240 VAC / 240 VAC	240 VAC / outputs = external power	
	115 VAC / 24 VAC	230 VAC / 24 VAC	
	240 VAC / 24 VAC		
Communication	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)
Paddle wheel *)	number of additional circuit boards with 3 inputs for paddle wheel		(0 – 4)
Outputs 0-20mA	number of additional circuit boards with 3 outputs 0-20 mA		(0 – 2)

*) Each input for paddle wheel will decrease the number of possible 0-20mA input by one.

■ Web browser screen shots



Main menu

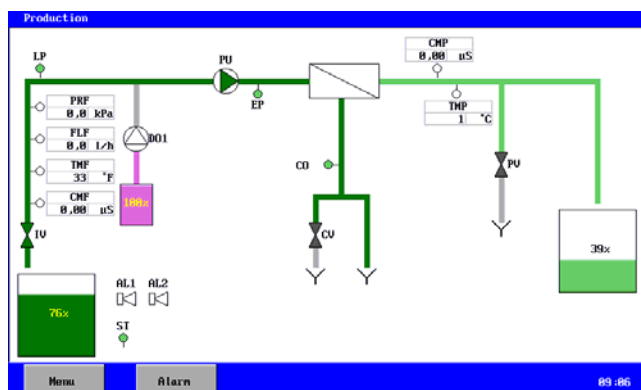
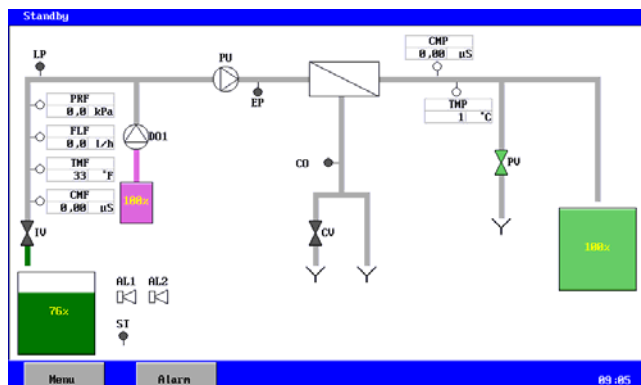




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RGS8000

■ General screen shots



Main menu	Media	Ethernet
Manual control	Ethernet	☒ Auto, IP (DHCP)
Information	SD Card	IP 192 168 1 5
User settings	Email	NH 255 255 255 8
Installation	RS485	GH 192 168 1 254
Clock	Harddisk	Port 00
Language	RS232	
Media		
Service		
Security		
Close	Close	Close

Programming	Components	CM Perm
Components	CM Perm.	Properties
RO Unit	Temp. Perm.	Temperature
	CM Feed	Monitor Min.
	Temp. Feed	Monitor Max.
	CM Relative	
	Dosing Pump 1	
	Perm. rinse	
	Alarm	
	Alarm 2	
Close	Close	Close



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