



EQUIPMENT FOR WATER TREATMENT SYSTEMS

# RGS3000

## Controller for Reverse Osmose



### ■ Description

The unit type RGS3000 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 softner). 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

- Monochrome graphic LCD display 128x64
- Control through four keys
- Five LEDs for process and alarm indication
- Language : English, French, German and Dutch

#### Inputs

- RGS3x00 : 4x Input for potential free switch
- RGS3x01 : 5x Input for potential free switch
- RGS3x12 : 5x Input for potential free switch
- 1x Conductivity meter
- 1x Temperature 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

- 1x Relay output (powered)
- RGS3x00: 2x Relay output (custom configurable between powered and dry contact)
- RGS3x01: 2x Relay output (custom configurable between powered and dry contact)  
2x Relay output (dry contact)

- RGS3x12: 4x Relay output (custom configurable between powered and dry contact)  
2x Relay output (dry contact)

#### Memory

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

#### SD Card

- Software updates
- Programming (Save and Load)
- Data log

#### Communication (available in type RGS3x12)

- RS485 (data log, formats : XML or CSV)
- Webserver
  - visualisation (schematic)
  - configuration
  - download log files on SD Card
- Email messages (alarm)
- Modbus compatible data reading

#### Enclosure

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

#### Power supply

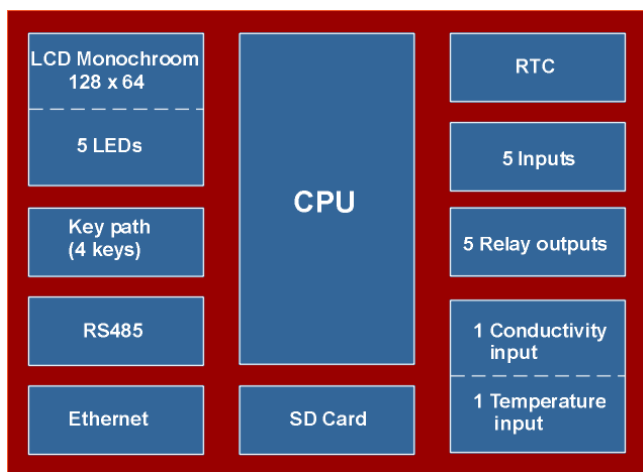
- 24 VAC input / 24 VAC output
- 115 VAC input / 115 VAC output
- 230 VAC input / 230 VAC output
- 115 VAC input / 24 VAC output
- 230 VAC input / 24 VAC output
- 240 VAC input / 24 VAC output



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## ■ Block diagram



RGS3x12

## ■ Function Table

The relay outputs and digital inputs are free programmable for the following functions :

Relay Outputs	Digital Inputs			
Inlet valve	Stop			
High pressure pump	High level switch			
Concentrate valve	Low level switch			
Permeate valve	Exceeded water pressure			
Dosing pump	Low water pressure			
Booster pump	Concentrate flow switch			
Alarm	Motor security switch			
Additional program	Remote alarm reset			
	Regeneration input			
	Pressure for membrane			
	Pressure after membrane			
	Pressure permeate			
	Level switch dosing tank			

## ■ Ordering Information

RGS3x00 : RGS3000 with SD Card functions, 4 digital inputs, 3 relay outputs, 1 conductivity meter and 1 temperature meter.  
 RGS3x01 : RGS3000 with SD Card functions, 5 digital inputs, 5 relay outputs, 1 conductivity meter and 1 temperature meter.  
 RGS3x12 : RGS3000 with SD Card functions, 5 digital inputs, 5 relay outputs, 1 conductivity meter and 1 temperature meter, ethernet (internet / email) and RS485.

x :  
 0 = 24 VAC / 24 VAC  
 1 = 115 VAC / 115 VAC  
 2 = 230 VAC / 230 VAC  
 3 = 115 VAC / 24 VAC  
 4 = 230 VAC / 24 VAC  
 5 = 240 VAC / 24 VAC

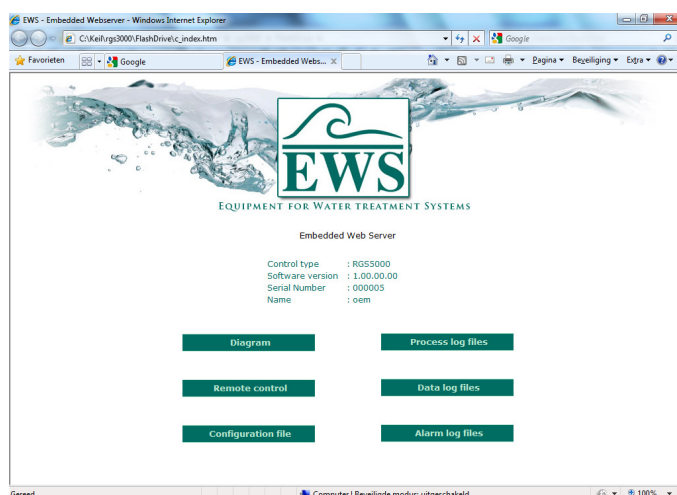
e.g. RGS3212 RGS3000 with 230VAC power supply and 230VAC power output for relay outputs with SD Card functions, 5 digital inputs, 5 relay outputs, 1 conductivity meter and 1 temperature meter, ethernet (internet / email) and RS485.



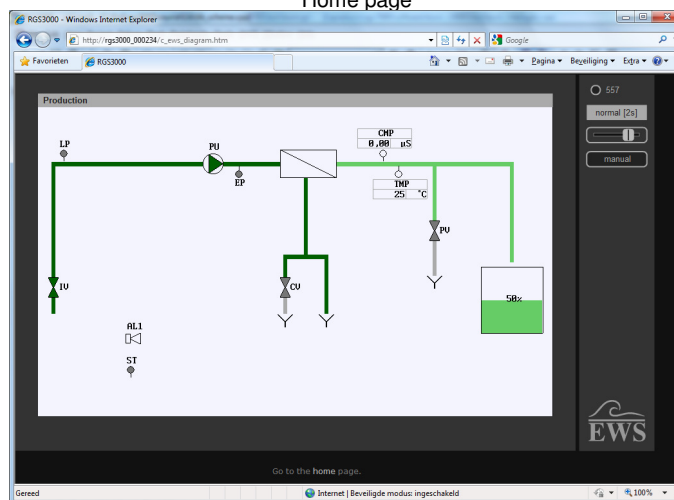
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## ■ Web browser screen shots



Home page



Diagram



Remote Control