AQUARIUS TECHNOLOGIES PTY LTD
WATER QUALITY CONTROL
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Quality Endorsed Company ISO 9001 Lic 5403

Potable Water controllers - User Manual

Appendix 1. Functionalities of PF100 and PF200 controllers

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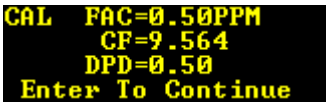
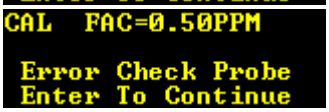
1. Start-up procedure:

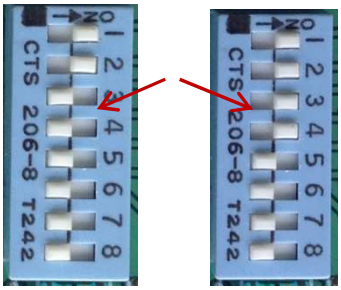
- Ensure all pumps and probes are connected/plugged in correctly. Sockets are labelled for your convenience.
- If a relay is used, make sure relay is plugged in
- Switch the controller on by plugging into a power point. Turn the inlet and outlet valves on to allow flow through the manifold.

1.a. Adjusting the correction factor for your water

In order to adjust the CF (Correction Factor) for your water, it is important to firstly calibrate the FAC probe. (Please see point 2 below for FAC calibration procedure). The CF should be between 0.5 – 1.5 when Calibrating the FAC probe. IF not, follow the instructions below for adjustment. It is advisable to start with a free chlorine level of around 0.5 ppm to ensure a smooth transition.







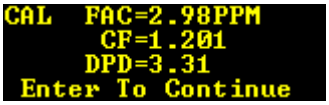
If CF is out of the accepted range, the system may or may not be able to calibrate. For efficient operation it is important to adjust the CF to between 0.5-1.5

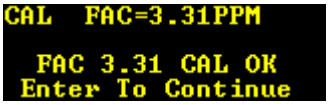
In order to adjust the system:

- Open the door of the controller panel.
- Locate the dip switches on FAC board.
- Turn the switches ON, from left to right until CF is in range between 0.5 – 1.5

2. FAC Calibration

It is important to keep the FAC probe calibrated. A DPD1 test can be used to calibrate the FAC probe.





Press 

and then  until **facCtrl ?**

Input the DPD1 result and press 

No Calibration is required if controller FAC measurement is within 20% of your DPD1 test results.

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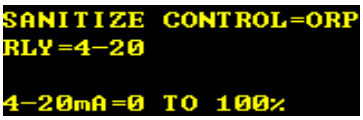
3. Set Sanitize

When on SANITIZE page press SET to change settings



Use ENTER followed by or to change the Control Method (CTR) and Relay. The available options are:

CTR:

FAC: to control disinfection via direct measure of chlorine

ORP: to control disinfection via ORP measurement

Relay:

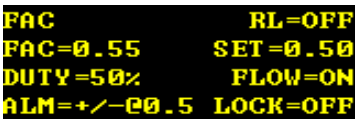
CELL: for salt chlorinators

HYPO: for dosing sodium hypochlorite

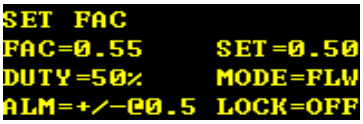
4-20mA (option): to control Salt Chlorinators /chlorine dosing via 4-20mA outputs

Set 0-100% or 100-0% according to your equipment.

4. Set FAC / ORP



When on FAC/ORP page press SET to change settings



Use ENTER followed by or o change set point, Duty, Mode, Alarm criteria and Lock out time.

Note:

Either FAC or ORP can be set

When FAC is set as sanitize control, ORP will be read only

When ORP is set as sanitize control, FAC will be read only

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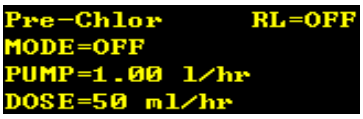
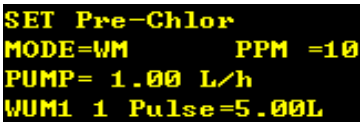
5. Set Pre-Chlorination

This function is used when it is desirable to pre-chlorinate the water before water tank by either continual chlorine dosing or adding a water meter on the inlet line.



When on Pre-Chlor page press SET to change settings



Use ENTER followed by ▲ or ▼ to Mode from OFF to "CONT" for continuous dosing or "WM" for dosing proportional to Water Meter measurements.

For CONT mode:

Input the Hypo pump size

Input the required dosing rate

For WM mode:

Input the Hypo pump size

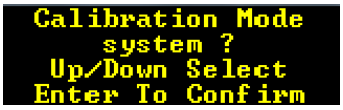
Enable WUM1 (a water meter must be already installed)

Define the Water Meter for controller (1 Pulse = ? L)

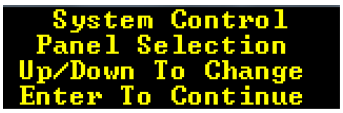
Set the required ppm of chemical. In order to get o.5ppm chlorine from a 10% chlorine solution, set ppm to 5.

6. Switch from Logo Page to Data Page

Press CAL and then ▲ until **System ?**



Press ENTER and then ▲ until **Panel Selection**



Press ENTER

Press ▲ or ▼ to Select

Press ENTER to Confirm and ENTER to exit

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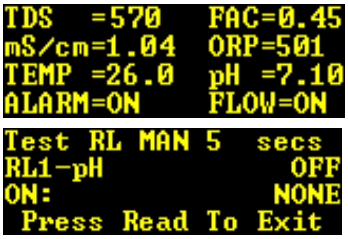
7. Timer for Outputs

7a. Check Output Relays for 5 sec



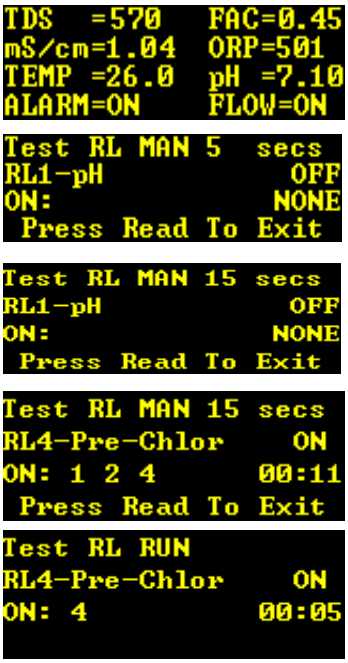
When on Logo/Data Page press READ and hold for 5 sec

Press ENTER and then ▲ to Change from MAN to RUN

Each Output will RUN automatically for 5 seconds

Press READ to Exit and ▲ to main menu

7b. Run Multiple Outputs by Timer



When on Logo/Data Page press READ and hold for 5 sec

Press ENTER twice and then ▲ or ▼ to set the time

Press ENTER then ▲ or ▼ to select time unit “mins/secs”

Press ENTER then ▲ or ▼ to select Output

Press ENTER then ▲ or ▼ to turn it On/Off

Repeat the above two steps to select more outputs

System automatically **Exits** to normal operations 10 minutes after the timer finishes. Press READ if you want to **Exit** earlier.

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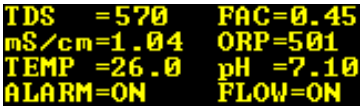
8. Set Points Sneak Peek



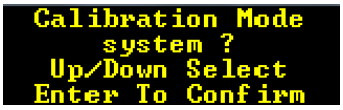
When on **Data Page** press SET and hold it down

Set points are displayed as long as SET button is down

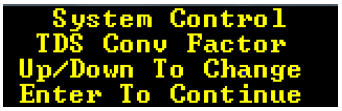
Release SET and Press ▲ to return to **Data Page**

9. Set Conductivity/ TDS Conversion Factor

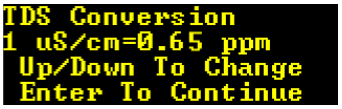
Press CAL and then ▲ until **System ?**



Press ENTER then ▲ until **TDS Conv Factor**



Press ENTER

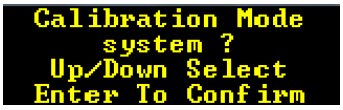


Press ▲ or ▼ to change and ENTER to Save

10. Clear Data Log

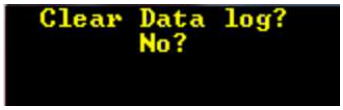
The following procedure is used to clear data log:

Press CAL and then ▲ until **System ?**



Press ENTER and then ▲ until **Clear Datalog**

Press ENTER



Press ▲ or ▼ to change

Press ENTER to Continue

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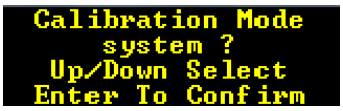
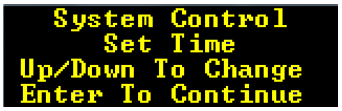
11. Set time

Procedure to set time when there is no modem installed on the controller:

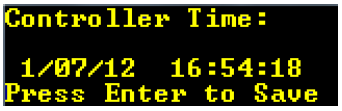
Press CAL and then ▲ until **System ?**



Press ENTER and then ▲ until **Set Time**



Press ENTER



Press ▲ or ▼ to change and ENTER to Save

Press READ to exit without saving!

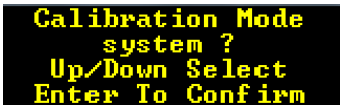
NOTE! When a modem is installed the following message appears informing that time zone should be set from AquaReporter website:

Use AquaReporter website to set time zone

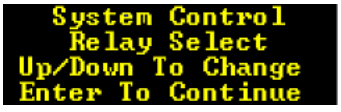
12. Activate Common Alarm Port

The Common Alarm port of "WEB READY" controllers is programmed to restart modems when they stop communicating with Aquarius Clouds Server.
As long as there is no modem installed, this port can be activated to send alarms to an external alarm system (e.g., BMS, Siren, flashing light). The relevant steps are described here:

Press CAL and then ▲ until **System ?**

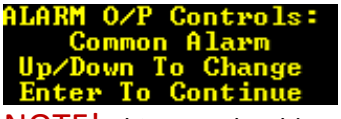


Press ENTER and then ▲ until **Relay Select**



Press ENTER

Press ▲ or ▼ to change to **Common Alarm**



Press ENTER to Continue

NOTE! This port should not be connected to an external alarm system when a modem is connected.

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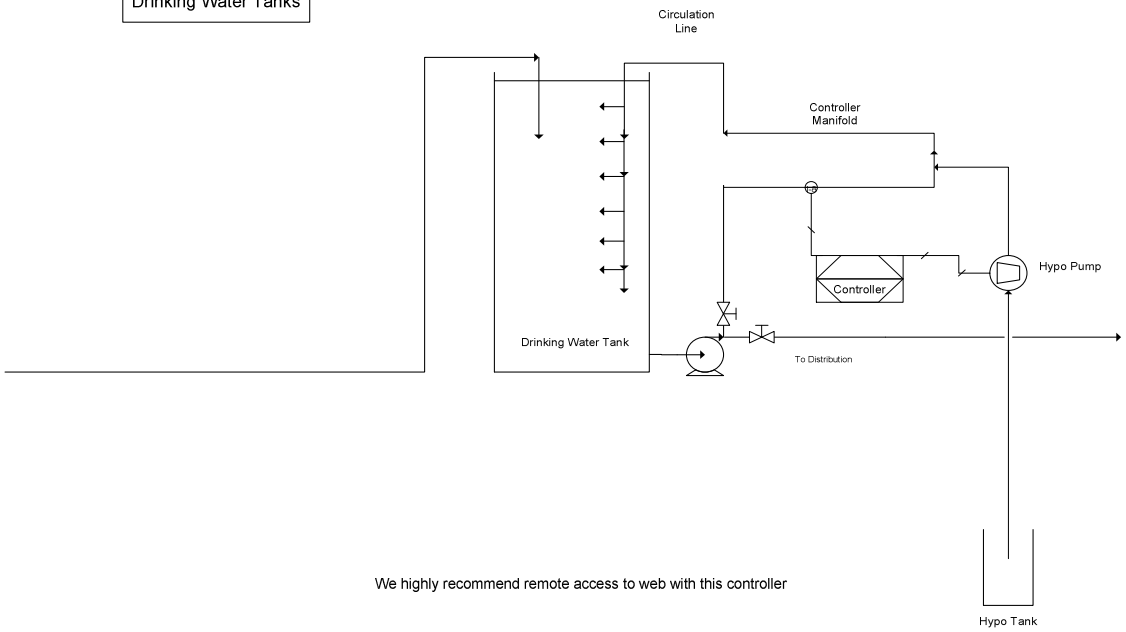
12. Schematic of Recommended Pluming Diagrams

Chlorination of Small Drinking Water Tanks



Chlorination of Large Drinking Water Tanks