

Specifications Sheet – ORP series Single Modular Controllers

Aquarius' single modular ORP controllers use APL technology for tighter control of Redox levels, providing enhanced savings on chemical usage. It is also capable of data logging, have a common no-volt contact alarm and with option of having BCMS connection and remote access with SMS alarm.

These units work well with Aquarius Technologies peristaltic pumps or other brands via supply of power to the designated output which is labelled in the control box. The standard pumps come in 1 or 3 ltr/hr capacity.



ORP101

Models for single modular ORP Controllers				
Detail Specification	ORP100	ORP101	ORP103	ORP100BCD
Dose – ORP	N.A.	1 ltr/hr	3.0 ltr/hr	Select BCD Feeder size from below
Manifold	N.A.	Yes	Yes	Yes
Sensors Fitted	pH/ORP/Ground Ref Probe	Flow/Temperature Probe & pH/ORP/Ground Ref Probe		
Shipping Dim. & Weight	52cm x 62cm x 23cm and cubic weight is 18kgs (ORP100 is 29cm x 26cm x 24cm, 5kgs)			
Communications Port	Interfaced to any RS232 device via the DB9 plug on the circuit board located internally			
Electrical Supply	220 – 250Vac 50 or 60 Hz, 10Amp continuously powered "clean" mains supply – 7Amp output relays			
Alarms - User Defined Alarms - No-volt Contact	All defined set points are able to be associated with alarm outputs as +, -, or +/- ranges. A standard common no-volt alarm is incorporated in all controllers for DDC operation.			
Data Logging	Data logging of analogue readings and the relay ON times is standard – Log can be set from 1 min to 240 min intervals. At 30 min intervals, the log can contain more than 30 days of data, downloaded either locally to a laptop or remotely via a GSM modem.			
Manifold Ratings Press. & Temp. rating Flow rate required Plumbing	Manifolds are designed from uPVC and rated to 700 kPa at 50 °C. A minimum flow rate of 12 ltr/min is required to activate the flow sensor Plumbing inlet & outlets are 20mm BSP fem. Threads or can be fitted with 19mm hosetails			
Pre-Bleed Bleed Lockout	These 2 functions are designed to improve biocide retention in the system, reduce water usage and prevent pumps burnout. Cooling system will automatically bleed down to 87.5% of conductivity set-point prior to start of timed biocide dosing. Prevents any bleed off on commencement of biocide dosing till conductivity level reaches 112.5% of set-point. Biocide is retained in the system for an effective kill period. It will then bleed at reduced rate till end of Bleed Lockout period. Dosing will automatically stop after 6 hrs if set point is not reached.			

Pumps Models	
Peristaltic	Available in 1 & 3 ltr/hr @ 350kPa. These pumps are specially designed to be used with APL control and recommended to be used at 50% duty cycle
Peristaltic - Variable	Available in 1 & 3 ltr/hr @ 350kPa. These pumps are specially designed to be used with APL control and recommended to be used at 50% duty cycle
High Pressure Pumps	Available in 1, 2, 5, 10 & 20 ltr/hr with variable control.

Module Designation	pH - values	ORP - mV	Conductivity – mS/cm	Temperature °C
Operating Range	N/A	0 – 999	N/A	0 – 100
Resolution	N/A	1	N/A	0.1
Accuracy	N/A	+/- 1	N/A	+/- 0.2
Repeatability	N/A	+/- 2	N/A	+/- 0.2
Alarm Range	N/A	+/- 0 – 400	N/A	N/A
Dead Band	N/A	N/A	N/A	N/A
Control Type	N/A	APL	N/A	N/A
Sensor Press. Rating	N/A	700 kPa	N/A	700 kPa
Sensor Temp. Rating	N/A	50 °C	N/A	50 °C

Accessories to Complete and Maintain the System	
BCD Solenoid Kits	Options of 15mm, 20mm or 25mm with non-return valve are offered to suit your BCD size
BCD Feeders	BCD Feeders are available in 13kgs, 33kgs and 100kgs models
Extended Solenoid Cable	240 Vac extension cable of 5m or longer for remote BCD bleed solenoids
Weatherproof Socket	10 Amp weatherproof power sockets with relay activation
Water Meter	An impulse water meter that provides pulses proportional to flow. This is to allow Inhibitor dosage in proportion to system make-up rate
Water Usage Metering (WUM)	By adding a WUM card, water usage readings will be reflected on the controller and can also be data logged. Readings will show month-to-date and year-to-date figures of make-up, bleed and backwash
Tank Alarm	To provide warning when chemical tank is near empty. Alarm can also be sent via SMS when Communications Bundle is installed

Optional Communications Package to Enhance the System	
Communications Bundle	GSM modem with AquaGuard 2 software can be added to enable remote access and downloading of data from the controller. User will also be able to receive controller alarm via SMS
AquaGuard 2	AquaGuard 2 software for local access/downloading of data from controller into computer spreadsheet and graph format
4-20mA Analogue Input	Accepts a 4-20mA signal from a stand-alone meter. Data are displayed on the Aquarius Controller and data logged. Alarm can also be activated via SMS.
BMS Card	A plug-on card that provides 4 analogue signals as 4 - 20 mA + 4 events as contact only signals – means of data transfer to BMS system
Modbus	Modbus 485 card to enhance digital data communications (2 way) between BCMS and controller

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