

# TECHNICAL DATA SHEET – ULTIMA SP22 & SE22 SWIMMING POOL CONTROLLERS



Aquarius ULTIMA SP22/SE22 provides ultimate ease and control at your fingertips.

## Features:

- 7" colour touch screen with cutting-edge display, elegant styling
- User-friendly navigation
- Dual parameter dosing control : FAC, ORP & pH
- Remote monitoring and control: modem, WiFi, Ethernet
- Optional ORP Safety backup for FAC

ULTIMA SP22/SE22 is ideal for all commercial pool and spa applications. Using automated ORP or FAC and dual pH control pumps, our advanced SP22

and SE22 series will streamline the automation of your pool and spa, helping to keep your water clean, healthy and properly disinfected at all times.



## Features

<b>7-day timers</b>	Outputs may be activated via 7-day timers set on selected days of the week, 4-week cycle.
<b>Accessory Timers</b>	4 x accessory timers link to each 7-day timer using "Before", "With" and "After" function.
<b>Fuzzy Control</b>	Configurable dynamic control for outputs controlling to a process value (sensor) set point. Adjusts control rate as process value approaches setpoint. Minimise overshoot & hysteresis.
<b>LSI</b>	Approximates system water Langelier Saturation Index based on input average calcium hardness.
<b>Alarms: User-Defined</b>	All controller probes and inputs have alarm mode capability. Alarm is triggered when value deviates outside range. Active alarm will be displayed on screen and via common-alarm relay.
<b>Alarms: Common</b>	1 x no-volt common alarm relay incorporated in all controllers for DDC operation. Common alarm to output 14 is standard for all SP22/SE22 models.
<b>Alarms: No-Flow</b>	No-Flow alarm function standard for all SP22/SE22 models.
<b>Data Logging</b>	Controller memory can log >6 months of data, exportable to USB memory device as CSV files or viewed on AquaReporter as graphs. Calibration data stored for troubleshooting.
<b>Settings</b>	Settings can be downloaded to USB, cloned to other SP22/SE22 controllers or stored on a PC.
<b>Password</b>	Three levels of access available using one password: Unlocked, Read Only, & Locked.

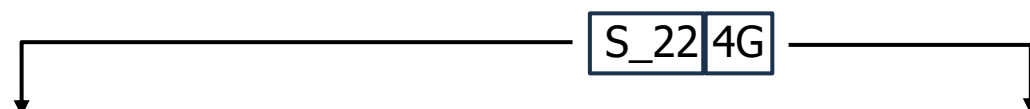
Input Sensor Modules	pH	ORP mV	Conductivity µS/cm	Temperature °C	FAC chlorine PPM
<b>Operating Range</b>	4 – 10	0 – 999	0 – 99,999	0 – 100	0 – 200*
<b>Resolution</b>	0.01	1	1	0.1	0.1
<b>Alarm Range (plus/minus)</b>	0.3 – 3	25 – 400	200 – 1,000	0.5 – 40	0.5 – 2
<b>Dead Band</b>	N/A	N/A	1.5% of set point	N/A	N/A
<b>Control Type</b>	APL	APL	On/Off	N/A	APL
<b>Control Modes</b>	Disabled, Flow-Dependent or Continuous				
<b>Sensor Press. Rating kPa</b>	280	280	280	280	280
<b>Sensor Temp. Rating °C</b>	45	45	60	60	45, 50 & 70

\*different ranges available

## Specifications

<b>Electrical Supply</b>	Dual input 240VAC power supply. Requires 230VAC +10%/-6% 10A continuous clean supply.
<b>Touchscreen Display</b>	Resistive 7" touchscreen + heavy duty Autotext XE screen protector resists UV & chemicals.
<b>Programmable Outputs</b>	14 programmable outputs, configurable via input value, timer, accessory, or manual control. 50V/240V outputs available to suit variety of applications.
<b>Input Sensor Modules</b>	Conductivity/TDS, pH/pHb, ORP/ORPB, Temperature and FAC/FACB (Free Available Chlorine). FAC option requires additional accessories.
<b>Additional Generic Inputs</b>	6 x 4-20mA/0-5V additional signal inputs from external sensors and devices. Configure to desired parameters, outputs and alarms, display on screen, trend & log data.
<b>Communications Port</b>	2 x USB ports for use with WiFi or Ethernet, or for importing/exporting settings/data. Modem connection port for 4G internet connectivity.

## Ordering Guide



### SP22

ULTIMA PRO SP22 controller for pools & spas. Each unit also includes:

- Flow/Conductivity/Temperature probe PR\_FCT
- pH/ORP/Ground Reference Probe PH\_PHRG
- PVC manifold w/fittings for FAC flowcell c/w inline hair/lint strainer, fitted on PVC backboard
- 6 x 4-20mA generic inputs for external devices
- Power points for 4 x 240V outputs
- Free Chlorine (FAC) function (probe assembly supplied separately)

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No Internet Connection

### SE22

Ultima PRO pools and Spas using salt chlorinators. Each unit also includes:

- Flow/Conductivity/Temperature probe PR\_FCT
- pH/ORP/Ground Reference Probe PH\_PHRG
- PVC manifold w/fittings for FAC flowcell c/w inline hair/lint strainer, fitted on PVC backboard
- 6 x 4-20mA generic inputs for external devices
- Power points for 4 x 240V outputs
- 15A inbuilt relay to run salt chlorinators
- Free Chlorine (FAC) function (probe assembly supplied separately)

**4G**

Supplied with 4G modem for internet connection.  
\$300 annual internet subscription

**Standard Shipping Dim. & Weight** - **54cm x 36cm x 21cm, 15kgs**

## Optional Communications Packages

<b>Communications Bundle</b>	4G modem, WiFi and Ethernet to enable remote access to the controller to see live data, change settings, receive alarms via SMS or e-mail, see and download trend charts.
<b>AquaReporter</b>	AquaReporter website is designed for remote access to the controllers. Settings and Data can be viewed/changed as if you were at the controller.
<b>Modbus</b>	ULTIMA SP22/SE22 can be fitted with a Modbus PCB board to enable Modbus to BCMS/DDC.
<b>4-20mA Analogue</b>	ULTIMA SP22/SE22 can be fitted with BMS PCB board to enable 8 x 4-20mA data to BCMS/DDC

## Optional Accessories

<b>Dosing Pumps</b>	Peristaltic: Available in 1 & 3 L/hr @ 300kPa. Designed for use with APL control. High Pressure Pulse/Diaphragm: 2, 5, 10 & 20 L/hr with variable control.
<b>Solenoid Valves</b>	Options of 15mm, 20mm, 25mm, 40mm & 50mm available.
<b>BCD Solenoid Kits</b>	15mm, 20mm or 25mm to suit BCD size, c/w non-return valve.
<b>BCD Feeders</b>	4kg, 12kg, 25kg or 100kg available.
<b>Ext. Solenoid Cable</b>	2.5m, 240VAC extension cable for remote bleed solenoids.
<b>Impulse Water Meter</b>	Provides pulses proportional to flow. Enables dosage proportional to a flow rate.
<b>Tank Level Switch</b>	Provides alarm when chemical tank is near empty. 500mm & 1000mm available.
<b>External Sensors</b>	External sensors outputting 4-20mA or 0-5V can be accepted. Options include: Free Available Chlorine/ Total Chlorine membrane sensors, etc.