ALS-SPARC-2
Wireless Monitoring and Control

The ALS-SPARC2 controller wirelessly monitors and controls your remote ponds. The SPARC is powerful enough to take care of the core issues of your pond or PBR, but simple, small, and low cost enough to be deployed at scale. The SPARC has 4 sensor ports for up to 8 sensed parameters, and two relay output ports to actuate your key devices such as CO2 valve. An expansion port allows adding 8 relay outputs using the ALS-RAC8-SE relay box. The SPARC communicates over autonomous wireless waves to the central ALS-ACH HubBox computer, but will continue to monitor and control your culture even if disconnected from the Hub. Use one SPARC per pond for small ponds, or for large ponds use several SPARCs at different locations.

Specifications

- Number of input ports: 4 dual input ports monitor 1 to 8 sensed parameters.
- Number of output ports: 2 relay outputs to control AC or DC devices.
- Output expansion port: Up to 8 more controlled devices using ALS-RAC8-SE or ALS-DAC2-SE.
- Supported sensors: pH, temperature, algae density, dissolved O2 (optical available), conductivity, light, water level/depth, nitrate, and others.
- Power supply: Requires 8-28 Volt supply. Cable with screw terminal block included.
- Ingress rating: Water proof with IP65/NEMA4 or better components.
- Software: Connects wirelessly to AlgaeConnect ™ software running on ALS-ACH HubBox computer. Graphing, monitoring, data logging, control settings, calibration, Smart and manual control modes. Controls updated 2x/second, numerical displays 1x/second, database and graphs 1x/minute.
- Wireless Range: USA: 1.6 miles (2.5 km) Line of Sight 900 Mhz. Europe/Asia: 4,000 feet (1200 m) Line of sight ISM 2.4 Ghz.
- Communications: Use ALS-WHUB1 to communicate to ALS-ACH.
- Firmware: Upgradeable via USB.

Features

- Autonomous wireless monitoring and control for large scale pond or PBR installations.
- Continuous visual update in real time (1x/sec) of sensor and control data through the HubBox (with access via tablet/phone).
- Up to 8 sensed parameters.
- Control essential devices such as CO2 valves with algae specific algorithms like pulsed CO2 cycle dosing. 280 VAC or 60 VDC.
- Use one SPARC for smaller ponds or several for larger ponds.
- 4 control modes in the software: Manual, Scheduled, Smart Feedback (including programmable scripts), and Remote Computer.
- Data logging (1x/min or more) when connected to HubBox. Output to Excel readable files.
- Water resistant and heat tolerant box for outdoor use.
- Galvanic isolation on inputs prevents cross talk and reduces interference.
- Expansion port allows control of up to 8 relays or 4 analog (0-10 volt) or PWM outputs.

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