

DESIGNING YOUR SYSTEM WITH THE PROCONTROL **series2^{plus}** Sanborn, Head & Associates, Inc.

This application note describes the functionality of the ProControl **series2^{plus}** logic controller and remote monitoring system, and the ease with which the ProControl can be incorporated into your project design. Sanborn, Head & Associates, Inc. (SHA) will work with you to integrate the power of this technology into your system.

What Does it Do?

The ProControl **series2^{plus}** is an innovative cost and labor-saving device that performs multiple tasks for your stand-alone operation.

- **Stand-alone Control:** The ProControl is a sophisticated programmable logic controller that can interface with up to 78 electrical devices (float switches, pressure transducers, pH transmitters, flow meters, pumps, blowers, etc.), and execute numerous control functions. Automatic shutdown routines can be programmed to protect your system during alarm conditions. The ProControl is extremely versatile in terms of the control algorithms it can execute.
- **Remote Control and Monitoring:** The ProControl gives you a window into your operation from remote locations, using PROVIEW™, the easy-to-use Windows™-based software supplied with the system. You communicate with the ProControl over a modem link, which allows you to view your system's operating conditions, while also providing the same access to control functions that are available locally at the site (e.g., turning pumps on and off, adjusting alarm setpoints, etc.).
- **Fax and Pager Reporting:** No longer do you have to wonder what's happening at your remote operation. The ProControl can send periodic fax status reports of your project operations on a schedule specified by you, and alert you by fax or pager if an alarm condition warrants attention.
- **Datalogging:** The ProControl can be used as an information manager. It is a powerful datalogger with expanded memory capacity that records operating conditions in its battery-backed memory. You can access your logged data remotely at any time, and download it to your personal computer for further processing. The datalogging capability is a valuable tool for reporting purposes, troubleshooting, and trend graphing.

What You Get

The ProControl **series2^{plus}** is configured in a high-quality extruded aluminum case which houses the ProControl's processor, all input and output circuitry, fax modem, power supply, and relays. The **series2^{plus}** has a keypad and LCD display for accessing control functions. An external transformer supplies power for the ProControl unit, while the ProControl itself provides 24 volts, 15V, and 9V for analog sensors and 5-volt DC power for digital switches or sensors. All electrical connections to the **series2^{plus}** are made using pluggable connectors. The ProControl can be mounted on the wall for retrofit to an existing operation. A control panel for a new system would include the ProControl **series2^{plus}** in a NEMA 4 enclosure along with motor starters for your equipment - additional hardware may not be required. PROVIEW™ operating software, *customized to your operating specifications*, is standard with the ProControl. The ProControl comes ready to connect to sensor and control wires in the field. Once you supply power, it is ready to operate with *no further programming necessary*. You also get an easy to understand User's Manual which runs you through its easy-to-use functions, and which shows you how to connect with your operation from your personal computer.

PROCONTROL series 2^{plus}

What You Don't Get

Every landfill, treatment plant, monitoring station, remediation system, or other stand-alone operation is unique, so there are some things that we cannot include with a standard hardware configuration. The following items are *not* provided with the base ProControl **series2^{plus}** configuration, although we can integrate them for you:

- Sensors, switches, etc. that serve as inputs to the ProControl
- Motor starters, VFD's, and contactors specific to controlled pieces of equipment
- Pumps, blowers, valves, etc.
- Computer for remote access (486 PC or higher with min. 9600-baud modem)

ProControl Implementation

By including the ProControl into your initial system design, you can greatly simplify the process of getting from idea to execution. The ProControl is versatile enough to act as the "brains" for operations as simple as a pump lift station to those as sophisticated as a multi-process treatment plant. The key to this versatility is its *programmable control*, which replaces inflexible hardware-based logic (relays, timers, interlocks) with flexible software control (we program the software for you). You don't need to design a complicated control panel, struggle with ladder-logic diagrams, or get stuck with a control system that won't allow changes in control strategy. Of course, the ProControl can also be easily retrofitted to an existing operation.

Here's how to implement the ProControl **series 2^{plus}** with your project:

1. Review the ProControl **series2^{plus}** specifications and contact us to evaluate which ProControl configuration is best for your operation.
2. Provide us with basic information about your system. We'll need to know what devices (inputs) you want to monitor (e.g., flow meters, conductivity sensors, pressure switches, etc.), what outputs (e.g., pumps, blowers, etc.) you want to control, and what control routines you want to employ. You can describe your control routines in words, flow charts, or with a functional specification. A system schematic always helps. Experienced SHA Applications Engineers are available to help you with your control ideas.
3. SHA will configure and custom-program your **series2^{plus}** unit.
4. After the **series2^{plus}** is shipped to you, mount the ProControl unit or control panel on a wall, supply 110/120-volt power, and hook up your sensor wires and wiring to your controlled equipment.
5. The ProControl is ready to operate.

Additional services SHA can provide include system installation, customized programming of a full graphical user interface, and engineering assistance with sensors and systems integration. Call us. You'll speak with experienced engineers who know your applications. We provide you with a complete, working system, and back it up with applications expertise and dedication to customer satisfaction.



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