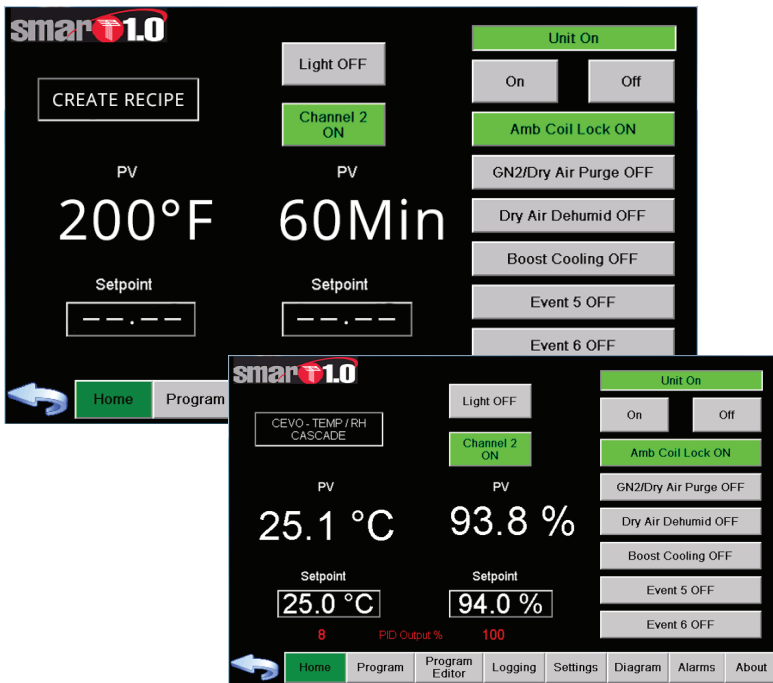# Smart 1.0 Controller

Why the Smart 1.0 Controller?

The Smart 1.0 Controller is a Windows-based Programmable Logic Controller (PLC) that provides the best of both worlds -- the cost effectivenes of a PLC and the flexibility of Windows. It's scalable, extensible, customizable, and affordable and makes upgrading from an F4 controller cost-effective and easy!

Smart 1.0 Windows-based Programmable Logic Controller for use with industrial ovens and environmental test chambers. Scalable, extensible, customizable. Accommodates 100 profiles with 100 steps each. Communicates in real time. Provides remote access via smartphone and tablet using Internet connection and VNC application. Makes upgrading from an F4 controller easy and cost-effective. Smart data logging and trending. Touch screen. Smart-screen navigation, 4-PID loops (2 on C-EVO) with ramp/soak programming for each loop. Two-plus channels (1-2 on C-EVO, depending on the model), two process inputs, six-event (2 on C-EVO) outputs, alarms, and other features. Free software license.

Comprehensive. Scalable. Extensible. Affordable.

The Smart 1.0 Controller is a Windows-based, programmable logic controller (PLC) that provides the best of both worlds – the cost effectiveness of a PLC and the flexibility of Windows. Smart 1.0 is a scalable, extensible, customizable, and affordable controller platform for use in environmental-testing chambers and industrial ovens. It has a real-time function screen and communicates in real time, providing remote access via smartphone, tablet, etc. using an Internet connection and VNC application.

Smart 1.0 offers a WVGA 800 x 480 high-resolution, graphical touch screen; Smart 1.0 graphical user interface; 32-bit RISC 400 MHz central processing unit; and 4GB flash storage, capable of storing up to 100 profiles, with 100 steps each. Test-data retrieval and profile-data transfer/ sharing is accomplished through a local, USB flash drive. Individual PID control loops allow for precise process control, with ramp/soak programming for each loop. Smart 1.0 uses a 100-ohm platinum RTD for temperature measurement and a dry-capacitance-type sensor for humidity measurement.

The controller's Smartwire architecture involves less wiring than other controllers, reducing the opportunity for errors and making troubleshooting and replacement easier. Smart 1.0 has two process inputs and six event outputs (two on the C-EVO) for special applications. Additional features and events can be purchased as options. Ethernet is standard on all models. Serial Modbus RTU (RS232 or RS485) and IEEE 488 also are available.

Benefits
- Provides the cost-effectiveness of a PLC and the flexibility of Windows
- Smart touch-screen navigation
- Smart data logic and trending
- Smart and intuitive alarms
- Smart and easy programming
- Smartwire architecture reduces wiring and errors
- Custom modules can be added easily (current monitor, etc.)
- System can run in single set point mode or programmed mode
- Communicates in real time using free viewers (VNC, etc.)

Features
- 3.5"- 12" WVGA 800 x 480 high-resolution, graphical touch screen
- 32-bit RISC 400 MHz central-processing unit
- 4GB (SD card) flash storage
- 2 channel
- Capable of storing up to 100 separate profiles, with up to 100 steps each
- Test-data retrieval and profile-data transfer
- Alarm, program, and datalog files can easily be transferred to and from the controller via the USB port
- 4 (plus) individual PID control loops allow for precise process control
- Ramp/Soak programming for each loop
- 100-ohm, platinum RTD is used for temperature measurement, and a dry-capacitance-type sensor is used for humidity measurement
- Real-time and historical color graph displays for temperature and humidity as well as set-point values
- Single, set-point control included
- Real-time function screen shows what components are energized for ease of troubleshooting
- 2 process inputs: Ch1 RTD, Ch2 RH (analog)
- 2 – 4-20mA, analog-signal retransmit output to peripheral devices such as optional chart recorders
- Built in TCP/IP networking via Ethernet 10/100 communication is standard
- Serial Modbus RTU (RS232 or RS485) and IEEE GPIB are available as options
- Built-in, peripheral-support expansion using the USB port, providing an effective and flexible interface for use with USB keyboards, mice, and barcode scanners
- Remote access via smartphone, tablet, etc., with Internet connection and VNC application
- Free software user license