

# Build and integrate PID control systems in *minutes*, not hours.

With Red Lion's Modular Controller Series, you can integrate multi-zone PID control into your system in a fraction of the time you'd need with other solutions.

- Accurate, robust PID control outside the PLC.
- Fully integrate PID with your PLC, PC and HMI for better, more user-friendly systems.
- Easy Windows® software enables you to set application parameters quickly.
- Slash assembly time: DIN rail hardware requires no panel cutouts.
- To add loops, just snap more modules in place.

Red Lion's Modular Controller gives you solid PID control and drastically cuts your engineering time—even more for multi-zone PID. Flexible, versatile, and cost effective, the Modular Controller is the only way you'll want to build systems.



## Master Module

- Provides power and high speed communications for up to 16 modules.
- Stores firmware for modules, and updates them automatically, eliminating hardware conflicts.
- Built-in drivers communicate directly to PLC. No comms protocols to write, or store, in PLC memory.
- 10-base-T Ethernet connection for networked systems.

## PID Modules

Each module controls one loop (four modules shown) and accepts thermocouple, RTD, or 0-10V/4-20mA signals. Compact, modular design eliminates bulky fixed backplanes or racks.

- If any module, or the Master fails, the rest of the system keeps working.
- Hot-swappable – the Master knows each module's configuration, so a replaced module assumes proper operation. No reprogramming!

**red lion**  
trust+innovation.

For complete information, visit  
[www.modularcontroller.com](http://www.modularcontroller.com)  
—enter to win an Xbox™!

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IT'S  
NOW  
EASY

## Open Crimson™ software and double-click to create PID modules

Step 1

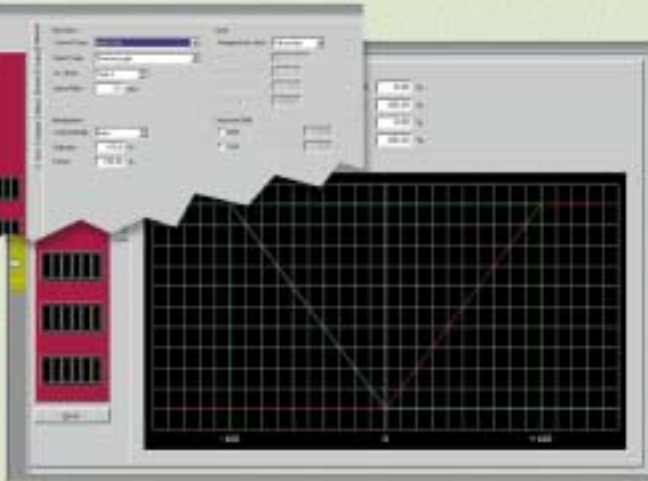


- Create PID modules on-screen and configure them using quick, intuitive Windows® commands.
- No code to write—select all parameters with a few clicks.
- Copy and paste for multiple zones, then modify details as needed.



## Double-click PID modules to edit their configuration

Step 2

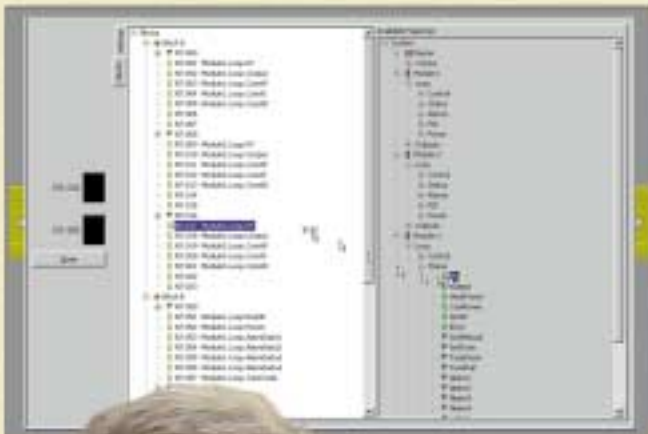


- Point and click to configure PID values, alarm settings, and other parameters.
- Simple graphical interface eliminates typing errors.



## Double-click the ports icon to configure your communications settings

Step 3



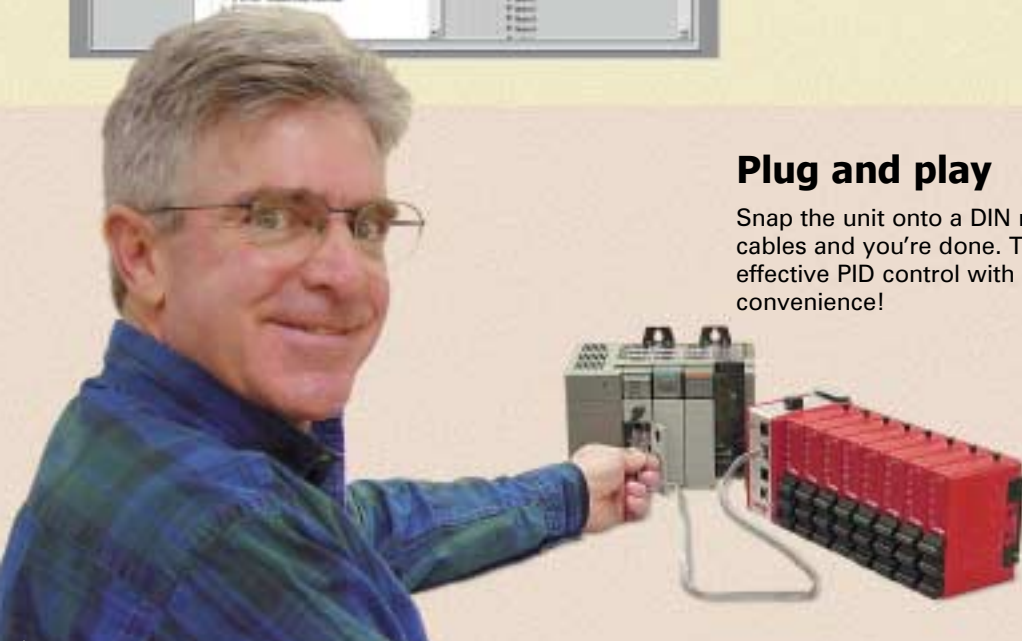
- Pick your PLC from the list.
- Choose the desired PLC registers.
- To map the controller data, simply drag and drop it onto the desired PLC register.



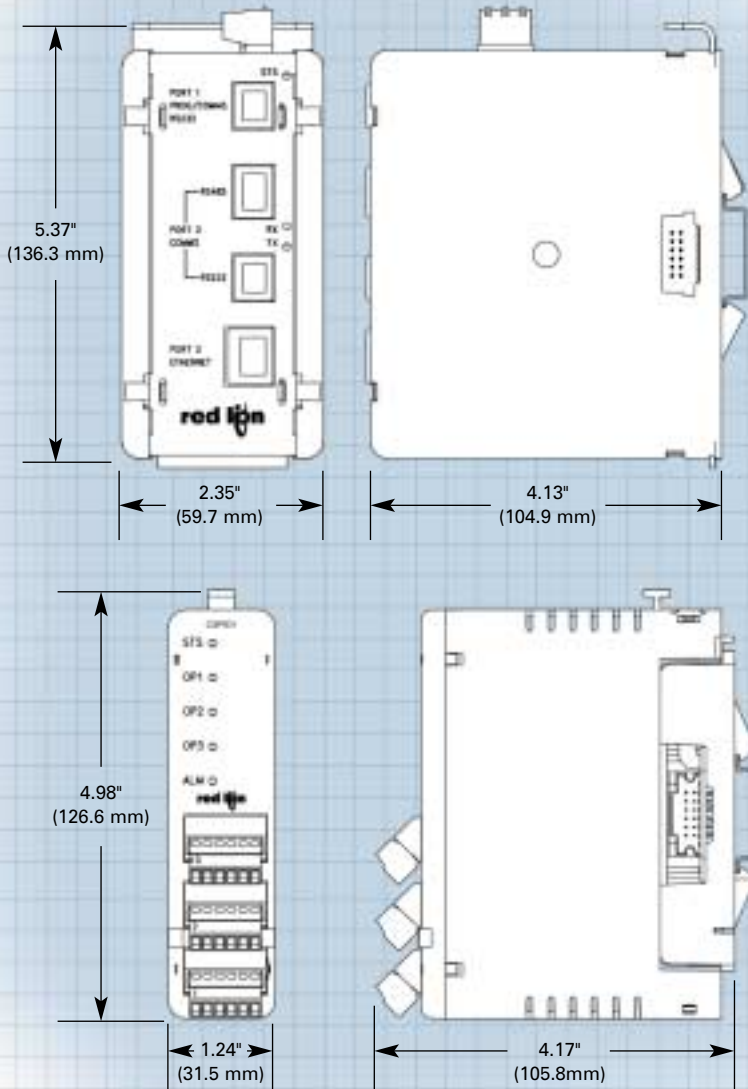
## Plug and play

Step 4

Snap the unit onto a DIN rail, connect the cables and you're done. That's it: effective PID control with unprecedented convenience!



# Modular Controller from Red Lion



## Power:

- Master—24 VDC +/-10%
- Modules—powered via Master
- Hot swap technology allows replacement while powered
- Master auto-configures new modules

## Control Modes:

- On/Off, Smart On/Off
- P, PI, PID
- Time Proportioning or Linear Control
- Heat, Cool, Heat/Cool (Reverse, Direct)

## Inputs:

- Thermocouple, RTD, or 0-10V/4-20mA

## Outputs:

- Three discrete outputs
- Outputs 1 & 2—N.O. relays, 125 VAC @ 3 Amps, or 1 Amp DC NFETs
- Output 3—N.O./N.C. relays, 125 VAC @ 5 Amps

## Optional Analog Output:

- 0-10V/4-20mA for
  - Process Retransmission
  - Setpoint Transmission
  - Output Power
  - Manually Controlled

## Optional Heater Current Monitor:

- 100 mA AC input for current transformers
- Failing heater detection
- Open or shorted control-circuit detection

## Alarms:

- Seven "soft" alarms may be mapped to any output
  - Process alarms (4)
  - Absolute High/Low
  - Deviation High/Low
  - Band Inside/Outside
  - Heater Current Alarm (2)
    - Current Low/High
  - Input Fault (1)



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