PlantCTRL™ Chiller Plant Solution

AUTOMATEDLOGIC
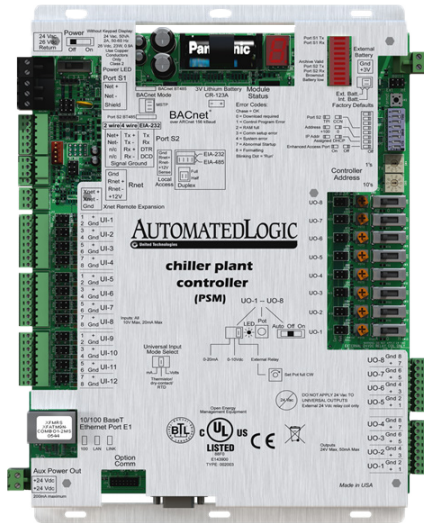United Technologies

Factory-Engineered Plant Control

The Automated Logic® PlantCTRL™ controller is an integral component of the WebCTRL® building automation system.

This factory-engineered, cutting-edge control solution offers algorithms designed to provide control over all aspects of a chiller plant, coordinating the control of chillers, pumps and towers into a finely tuned, cohesive system.

The solution consists of a dedicated controller, I/O expanders, and a library of factory-engineered control programs that are specifically designed to cover the most common chiller plant configurations.

Key Features and Benefits

Features

- Supports library-driven programming using EquipmentBuilder. Quickly choose from a library of factory-engineered and tested control programs that are specifically designed to cover the most common chiller plant configurations, eliminating the need for custom logic

- Supports EIKON® graphical programming tool, an object oriented tool that provides complete flexbility for any custom control sequence that you need

- Supports live, visual displays of control logic, which uses real time operational data and aids in optimizing and troubleshooting system operations

- Embedded trends and alarms provide insight on chiller plant performance and also aid in system troubleshooting and maintenance

- Suports 20 I/O points on the controller, and up to (6) MEX I/O expansion modules in panel configuration or remotely mounted up to 100 ft away for scalable solutions (164 I/O total)

Chiller Plant Dashboards

- Pre-configured screens for both air-cooled and watercooled plants

- Graphical and numeric energy use data

- Default screens for 8 chiller plants; larger plants are easily accommodated

- Metric and imperial units, as well as local currency values are also supported

System Benefits

- Compatible with any manufacturer's air or water cooled chillers

- Supports integration to chiller plant equipment using BACnet and Modbus® protocols

- Responds to the building load, automatically starting, staging and stopping the plant, resetting the chilled water supply temperature, and matching tonnage produced to the tonnage required by the building

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The WebCTRL® building automation system gives you the ability to understand your building operations and analyze the results. The WebCTRL system integrates environmental, energy, security and safety systems into one powerful management tool that allows you to reduce energy consumption, increase occupant comfort, and achieve sustainable building operations. Our web-based platform allows building managers to control and access information about their HVAC, lighting, central plant and critical processes on premises or remotely at any time of day.
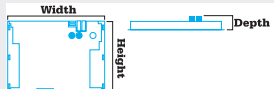
WebCTRL®

We make data **big.**™
Next level building automation engineered to help you make smart decisions.

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Specifications

BACnet Support:	Conforms to the BACnet Advanced Application Controller (B-AAC) Standard Device as defined in BACnet 135-2001 Annex L. Tested to Protocol Revision 9
Communication Ports:	**Ethernet**: (10/100Mbps) for LAN/BACnet IP/Modbus TCP/IP communications **EIA-485**: for ARCNET 156 Kbps or BACnet MS/TP (9600 baud to 76.8 Kbps) **EIA-232/485**: DIP-switch selectable port for Modbus® or LonWorks® communication **Local access**: for system start-up and troubleshooting (115.2 kbps) **Rnet**: for ALC communicating room sensors and ALC touchscreen interface **Xnet:** (500 Kbps) for MEx I/O expansion modules
Universal Inputs:	Twelve configurable universal inputs with 14-bit A/D resolution. Supported input types include: 0-5 Vdc, 0-10 Vdc, 0-20 mA, Thermistor (10 kOhm Type II), 1 kOhm RTD (Platinum, Nickel or Balco), and Dry Contact All inputs support pulse counting up to 40 cycles per second (25 mSec minimum pulse).
Universal Outputs	Eight universal outputs are jumper configurable as 0-10 Vdc, or 0-20 mA with 12-bit D/A or 24 Vdc @ 50 mA relay drive. HOA (hand/off/auto) switches for all outputs, including potentiometer for manual adjustment of analog outputs.
Expansion:	Six MEx I/O expansion modules can be connected - one mounted directly on top of the controller, mounted locally in a stack configuration or remotely mounted up to 100 ft away.
Microprocessor:	Powerful 32-bit Motorola Power PC microprocessor. High-performance 32-bit communication co-processor. I/O expansion CAN co-processor
Memory:	32-bit memory bus structure, 8 Mbyte FLASH memory, 16 Mbyte RAM battery-backed
Battery:	CR123A has life of 10 years with 720 hours of cumulative power outage
Real-time Clock:	Battery-backed real-time clock keeps track of time in event of power failure
Status Indicators:	LED status indicators for EIA-232/485 communication and low battery status. Seven-segment status display for running, error, and power status
Controller Addressing:	Rotary dip switches for intuitive network addressing
Protection:	Built-in surge and transient protection circuitry for power, communications and I/O
Listed by:	UL916 (PAZX), cUL-916 (PAZX7), CE, FCC Part 15 - Subpart B - Class A
Environmental Operating Range:	0ºF to 140ºF (-18ºC to 60ºC); 0 to 90% relative humidity, non-condensing
Power Requirements:	24 Vac ± 10%, 50-60 Hz, 50 VA, or 26 Vdc ± 10%, 23 W NOTE: Power consumption will increase when Equipment Touch or other accessories are attached.
Physical:	Rugged aluminum cover, removable screw terminal blocks.
Weight:	1.7 lb. (0.8 kg)

Dimensions:	Overall	Mounting Holes
	Width: 7-1/2 in. (19 cm) Height: 11-5/16 in. (28.7 cm) Depth: 1-1/4 in. (3.2 cm)	Width: 5 in. (12.7 cm) Height: 10-7/8 in. (27.6 cm)

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