



The **Current Energy Controller** is the heart of a comprehensive automation program. Installing the Current Energy Controller establishes complete control over energy usage in a facility, and also enables monitoring and control over virtually any other equipment and machinery. The Controller is continuously connected via the Internet with the Current Energy Network Operations Center (NOC) for real-time supervision, management, trending and reports. Current Energy Controllers are designed to collect sensor information and to implement flexible automation control algorithms. A Current Energy Controller may be utilized as a single autonomous device, or as a part of a network of controllers.

Current Energy Controller

Complete Control Over Equipment and Energy Consumption

Distributed Control System

A comprehensive automation system is implemented by installing multiple Current Energy Controllers in a facility. The controllers are networked together into a Distributed Control System (DCS). Each controller can operate independently to monitor and control the equipment attached to it. All of the controllers in the network cooperate and share information to optimize the overall performance of the facility. Each controller can auto-recover and perform a self-diagnostic function after loss of power.

Central Monitoring and Administration

All Current Energy Controllers are continuously connected over the Internet to the centralized Current Energy Manager. Users can connect to the Current Energy Manager from any Web access device to monitor, configure or manage their automation systems. Operating data about each facility is uploaded frequently and stored in the server archives. Alarms from Current Energy Controllers are sent to the centralized server, which sends notifications to e-mail, cell phones and pagers. The web-accessed Current Energy Manager application can also be used to view and manage alarms, and to configure and print reports.

Customized Local Control

All Current Energy Controllers are fully programmable. The control strategy for a facility can be built from over 40 pre-defined common algorithms provided by Current Energy, or custom algorithms can be developed and incorporated into the controller. Control algorithms are programmed using a graphical "drag and drop" tool drawing from a large library of basic function blocks.



Common Monitoring & Control Points

- » Energy Usage: Overall Facility & Individual Equipment
- » Heating & Air Conditioning Equipment
- » Outdoor & Indoor Lighting
- » Refrigeration Equipment
- » Cooking & Food Preparation Equipment
- » Ventilation Hoods
- » Drink Dispensers & CO₂ Systems
- » Ice Makers
- » Fuel Tanks & Dispensers
- » Doors & Drive-thru Windows
- » Security Systems

Did You Know?

Current Energy's one-of-a-kind controller sets your products apart from the competition.

Technical Specifications

Power Requirements

Power Requirement: 24 VDC, 100 mV
Voltage Range: 18 - 36 VDC

Physical Design

Mounting: DIN Rail Mounted
Protection: NEMA-1 (IP20)

Digital Inputs

Quantity: 4
Dry Contact Rating: 12 mA, 30 V
Resolution: 12 bits
Response Time: 300 msec (default)
Current Leak: Not more than 0.05 mA
Isolation: Optical

Analog Inputs

Quantity: 8
Resolution: 12 bits
Response Time: 300 msec (default)
Configuration: Jumpers
Available Configurations:

- » RTD: 50 Ohm, 100 Ohm, 1000 Ohm
- » Thermistor: 3 kOhm, 10 kOhm
- » Current: 5 mA, 0 (4) – 20 mA
- » Voltage: 0 – 2400 mV, 0 – 5 V, 0 -10 V
- » Dry Contact Rating: 5 mA, 10 V

Digital Outputs

Quantity: 8
Type: Triacs
Voltage Rating: 24 VAC
Current Rating: 0.015 A to 0.5 A
Maximum Voltage: 48 VAC
Voltage Drop: Not more than 2 VAC

Analog Outputs

Quantity: 2
Resolution: 8 bits
Configuration: Jumpers
Available Configurations:

- » 0 – 10 VDC with load not less than 2 kOhm
- » 0 – 5 mA with load less than 2 kOhm
- » 0 – 20 mA with load less than 500 kOhm

Non-Volatile RAM

Allocated for algorithms – 60 kB
Allocated for data – 30 kB

Communication

Inter-controller communication
RS485 at 57,600 bits per second galvanically Isolated
Local computer interface RS232 at 115,200 bits per second
Optional Ethernet interface module at 10 megabits per second
GPRS/CDMA interface module

Time Clock

Real-Time clock super capacitor supported for at least 300 hours

Certifications

UL 61010C-1 Electrical Process Control Equipment
CE IEC 61010-1
CSA CLASS 2252 85
FCC Part 15 requirements for electromagnetic interference



The Controller is the brain of the system. Each Controller features 22 I/Os and can be used as master or slave in an RS-485 network of up to 32 controllers. The optional WebLinker™ card allows Internet communication via LAN, WAN or RS-232 interface.