Critical Environments Controller AC7100

Airflow & Temperature Controller

Laboratories, Life Sciences, Healthcare

- Used with AccuValve Airflow Control Valves
- Room Airflow Tracking Control
- Room Temperature Control
- Room Humidity Control
- Native BACnet® MS/TP or I/P
- Field Firmware Upgrade
- Graphical User Interface Setup

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The Accutrol AC7100 is a versatile, high-speed controller, for airflow and temperature control of laboratories, life science, healthcare and other critical environments. The AC7100 can be used to directly control the AccuValve® AVT or to provide setpoints for the AccuValve AVC.

The AC7100 offers BACnet® IP, BACnet Ethernet, BACnet MS/TP, Modbus Serial (RS485) and Modbus TCP/IP protocols plus a built-in Web server for easy configuration.

Features & Benefits

Graphical User Interface Setup

Intuitive graphical user interface enables programming parameters for control of different spaces.

High-Speed Data Rates

Multiple serial communication (RS485) speed selection from 9.6kbps to 115.2kbps. Supports Ethernet 10Base-T/100Base-T interface, half or full duplex.

Dual Processor

The on-board dual processor provides nearly twice the speed of communication and power compared to others.

Network Security

All configuration changes are protected via password, either through standard network protocol access (Modbus) or web.

Multiple Input/Output Type

The controller has:

- Universal Inputs (available as voltage, current, resistance and temperature sensor)
- Digital Inputs
- Digital Outputs
- Analog Outputs

The chart on page 3 lists specific I/O quantities.

High Accuracy Analog Channels

High speed 14-bit A/D converter with programmable gain amplifier yields a high resolution and accurate reading and 12- bit D/A provides accurate analog output.

Field Firmware Upgrade/Configuration

The controller firmware can be upgraded either through RS485 or Ethernet connection. Network communication and operation parameters can be changed via RS485/Ethernet with the built-in boot-loader and terminal program.

Stand-Alone or Peer-to-Peer

The controller is stand-alone or peer-to-peer capable over Ethernet.

Specifications

MECHANICAL

Dimensions	7.4" (187mm) L x 4.3" (110mm) W x 1.9" (47mm) H
Weight	14 oz. (400 grams)

ELECTRICAL

Power Supply	24VAC, 6VA max., or 20~34VDC
Consumption	12VA
Current Rating	500mA max. @ 24VDC
Operating Temperature	32° to 150° F (0° to 65° C)
Storage Temperature	-4° to 150° F (-20° to 65° C)
Operating Humidity	10% to 95% non-condensing

INPUT/OUTPUT

Universal Input	8 Channels, 14-bit A/D
Voltage	0-10V (±0.005V), 0-5V (±0.003V)
Current	0-20mA (±0.01mA)
Resistance	0-30K (±10 ohm), 0-10K (±5 ohm), 0-1.5K (±1 ohm)
Thermistor Sensor	10K, 10K Shunt, 1K Platinum: All (±0.01°C)
Digital Input	8 Channels
Type	Voltage Free
Limit	+5V at 500 ohm Resistance maximum
Digital Output	8 Channels
Relay Contacts	SPST NO, 48VA at 24 VAC, Pilot Duty
Analog Output	4 Channels (12 bits resolution)
Current	0-20mA, 0-10V

Communication

PHYSICAL INTERFACE 1

EIA-485 (BUS A, B) Two-wire, Half Duplex

PORT 1

Baud Rate	
Speed	9.6K, 19.2K, 38.4K
Data Bit	8 bits
Parity	None, even, odd

PORT 2

Protocol	BACnet® MS/TP, Modbus serial

PHYSICAL INTERFACE 2

Ethernet	10/100 Base T
Ethernet Support	IP, TCP, UDP, ICMP, IGMP, FTP, HTTP
Application Support	Modbus, TCP, BACnet IP, BACnet Ethernet, Sedona

Your representative is: