

Description and Application

The BAC-5831 is a native BACnet, fully programmable direct digital controller. Use this versatile general purpose controller in stand-alone environments or networked to other BACnet devices. As part of a complete facilities management system, the BAC-5831 controller provides precise monitoring and control of connected points.

- ◆ BACnet MS/TP compliant
- ◆ Automatically assigns the MAC address and the device instance
- ◆ Easy to install, simple to configure, and intuitive to program
- ◆ Controls room temperature, humidity, fans, monitors refrigeration, lighting, and other building automation functions

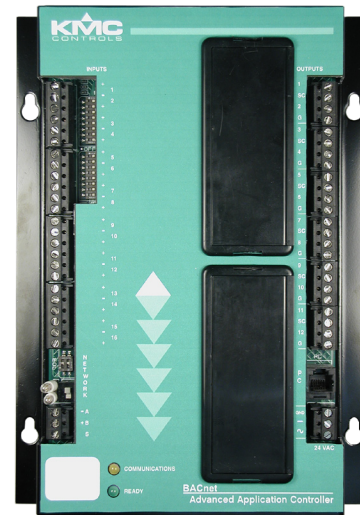
Specifications

Inputs

- ◆ 16 universal inputs, each of which is programmable as an analog, binary, or accumulator object (accumulators limited to three per controller)
- ◆ Standard units of measure
- ◆ Pull-up resistors for switch contacts and other unpowered equipment. Switch selects none or 10K ohms.
- ◆ Removable screw terminal blocks, wire size 14–22 AWG
- ◆ 10-bit analog-to-digital conversion
- ◆ Pulse counting to 16 Hz
- ◆ 0–5 volts DC analog input range
- ◆ Overvoltage input protection
- ◆ Compatible with KMD-1160 and KMD-1180 series NetSensors

Outputs

- ◆ 12 universal outputs, each of which is programmable as an analog or binary object
- ◆ Standard and custom units of measure
- ◆ Slots for HPO-6700 series output override boards
- ◆ Removable screw terminal blocks, wire size 14–22 AWG
- ◆ 0–10 volts DC for analog objects
- ◆ 0 or 12 volts DC for binary objects
- ◆ Short-protected outputs, output current limited



Programmable features

- ◆ 10 Control Basic program areas
- ◆ 40 analog and 40 binary value objects
- ◆ Real time clock with power backup for 72 hours
- ◆ 12 PID loop objects
- ◆ See PIC statement for supported BACnet objects

Schedules

- ◆ 8 Schedule objects
- ◆ 3 Calendar objects

Alarms and events

- ◆ Supports intrinsic reporting
- ◆ 8 Notification class objects

Trends

- ◆ 8 Trend objects

Memory

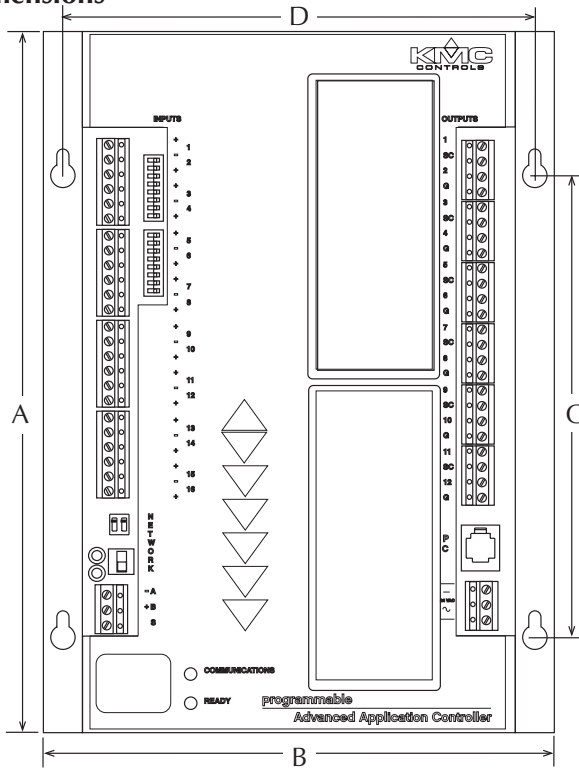
- ◆ Programs and program parameters are stored in nonvolatile memory
- ◆ Automatic restart after power failure

Communications

- ◆ MS/TP at up to 76.8 kilobaud (network connections are supervised in smoke control applications)
- ◆ Automatically assigns MAC addresses and device instance numbers
- ◆ Modular jack for NetSensor connection (5 VDC @ 25 mA typical)

Specification (continued)

Dimensions



A	B	C	D	Height
9.0 in.	6.5 in.	6.0 in.	6.0 in.	0.98 in.
229 mm	165 mm	152 mm	152 mm	25 mm

Installation

Supply voltage

24 volts AC (-15%, +20%), 60 Hz, 36 VA, Class 2 only, non-supervised (all circuits, including supply voltage, are power limited circuits)

Weight 16 ounces (454 g)

Environmental limits

Operating 32 to 120° F (0 to 49° C)
 Shipping -40 to 140° F (-40 to 60° C)
 Humidity 0 to 95% relative humidity (non-condensing)

Case material Black powder-coated steel

Regulatory

- ◆ FCC Class B, Part 15, Subpart B
- ◆ BACnet Testing Laboratory listed
- ◆ CE compliant
- ◆ UL 916 Energy Management Equipment listed
- ◆ UL 864 Smoke Control Equipment listed (UUKL) (for smoke control applications, see Smoke Control Manual For BACnet Systems, P/N 000-035-08)

Installation (continued)

Software compatibility

Requires the current version of BACstage or TotalControl for full configuration and programming features

Accessories

Output override boards (HPO-6700 series)

NOTE: See the HPO-6700 series data sheet, 902-035-10. Only the HPO-6701/6704 boards are approved for smoke control applications.

- 883-319-01 Replacement board guide rack insert
- 902-305-02 Replacement flat cover
- HPO-6802 Output override board raised cover (required when using any of the above boards)

Power transformers

- XEE-6111-40 Transformer, 120-to-24 VAC, 40 VA, single-hub
- XEE-6112-40 Transformer, 120-to-24 VAC, 40 VA, dual-hub
- XEE-6112-100 Transformer, 120-to-24 VAC, 96 VA, dual-hub (required in smoke control applications)

Connectors and fuses

- 902-602-04 Replacement three-pin removable terminal block
- 031-602-02 Replacement four-pin removable terminal block
- 883-602-17 Replacement six-pin removable terminal block
- 902-600-04 Replacement fuse, 1.0 A, fast acting, 5 x 20 mm
- HPO-0054 Replacement fuse bulb
- HPO-0063 Replacement two-pin jumper



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