

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

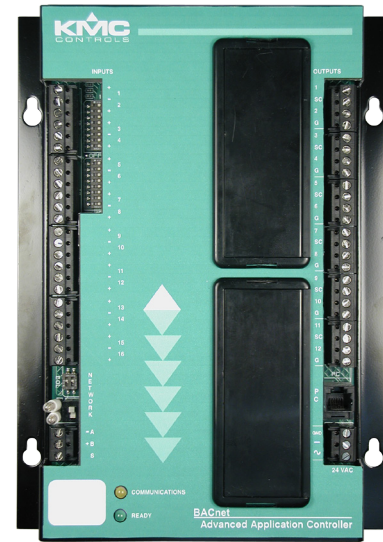
Inputs

- ◆ 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 to 100 mA per output or 450 mA total

Specifications based on firmware 2.0. Specifications and design subject to change without notice.



Still... Made in the U.S.A.

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

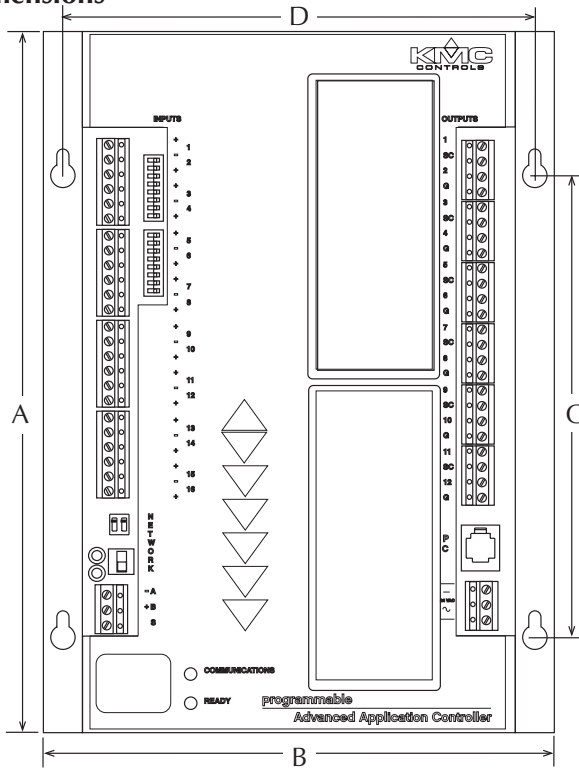
- ◆ Programs and program parameters are stored in nonvolatile memory
- ◆ Automatic restart after power failure

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)

Specifications (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%), 50-60 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)
- ◆ SASO PCP Registration KSA R-103263

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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MS/TP automatic MAC addressing is protected under United States Patent Number 7,987,257.