

BAC-7301 and BAC-7301C **Advanced Application Controllers** for Air Handling Units

Description

The BAC-7301 and BAC-7301C are native BACnet, fully programmable, controllers designed for small air handling units. Use these versatile controllers in stand-alone environments or networked to other BACnet devices. As part of a complete facilities management system, the

BAC-7301/7301C controllers provide precise monitoring and control of connected points.

- BACnet MS/TP compliant
- Automatically assigns the MAC address and the device instance
- Supplied with programming sequences for small air handler unit
- 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

- 4 universal inputs each of which is programmable as an analog, binary or accumulator object; accumulators limited to three in one controller
- Standard units of measure
- Pull-up resistors for switch contacts and other unpowered equipment; switch selects none or 10K ohms.
- Removable screw terminal block, 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-1160/1180 series NetSensors

Outputs, Universal

- 3 universal outputs each of which is programmable as an analog or digital object
- Standard and custom units of measure
- 0–10 volts DC for analog objects
- 0–12 volts DC for binary objects
- Output current limited to 100 mA per output (outputs are short protected)











Outputs, Triac

- 1 Optically isolated triac output
- Maximum switching 30 volts AC at 1 ampere
- Removable screw terminal block, wire size 14-22 AWG

Supplied application programs

KMC Controls supplies the BAC-7301 controllers with programming sequences for small air handler units:

- Air handler operation based on occupancy, night setback, proportional hot and chilled water valve control
- Economizer operation
- Freeze protection

Programmable features

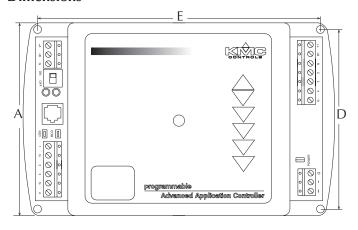
- 10 Control Basic program areas
- 40 analog and 40 binary value objects
- ◆ 4 PID loop objects
- Real time clock with power backup for 72 hours (BAC-7301C only)
- ◆ See PIC statement for supported BACnet objects

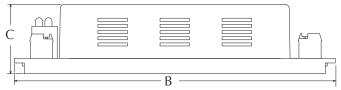
Schedules

- 8 Schedule objects
- 3 Calendar objects

Specifications (continued)

Dimensions





Α	В	C	D	E
4.36 in.	6.79 in.	1.42 in.	4.00 in.	6.00 in.
111 mm	172 mm	36 mm	102 mm	152 mm

Alarms and events

- Supports intrinsic reporting
- ♦ 8 Notification class objects

Trends

♦ 8 Trend objects

Memory

- Programs and program parameters are stored in nonvolatile memory.
- ◆ Automatically restarts after power failure

Communications

- MS/TP operating up to 76.8 kilobaud with automatic baud detection.
- Automatically assigns MAC addresses and device instance numbers
- NetSensor compatible through modular jack



Installation

Supply voltage 24 volts AC (–15%, +20%),

50-60 Hz, 8 VA minimum, 15 VA maximum load, Class 2 only, non-supervised (all circuits, including supply voltage, are power limited

circuits)v

Weight 3.5 ounces (99 grams)

Case material Green and black flame

retardant plastic

Regulatory

- ◆ UL 916 Energy Management Equipment
- ◆ FCC Class B, Part 15, Subpart B
- ◆ BACnet Testing Laboratory listed
- ◆ CE compliant
- ◆ SASO PCP Registration KSA R-103263

Environmental limits

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

(non-condensing)

Software compatibility

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

Accessories

Power transformer

XEE-6111-40 Single-hub 120 volt transformer XEE-6112-40 Dual-hub 120 volt transformer

Models

BAC-7301C BACnet controller with real-time

clock

BAC-7301 BACnet controller without real-time

clock

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

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