

# BAC-7301 and BAC-7301C Advanced Application Controller for Air Handler Units

The BAC-7301 and BAC-7301C are native BACnet, fully programmable, controllers designed for small air handler 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 and 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-1161 and KMD-1181

### 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 100mA 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

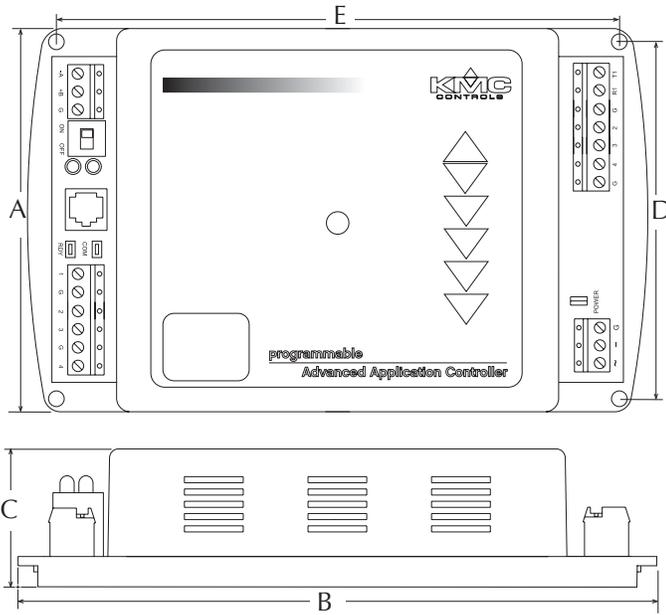
- ◆ 10 Control Basic program areas
- ◆ 40 analog and 40 binary value objects
- ◆ 4 PID loop objects
- ◆ Real time clock with power backup for 72 hours (BAC-7301C only)
- ◆ See PIC statement for supported BACnet objects

### Schedules

- ◆ 8 Schedule objects
- ◆ 3 Calendar objects

## Specifications (continued)

### Dimensions



A	B	C	D	E
3.31 in.	6.79 in.	1.42 in.	4.00 in.	6.00 in.
84 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 RJ-12 connector

## Installation

**Supply voltage** 24 volts AC, -15%, +20% 25 VA

**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

### Environmental limits

**Operating** 32 to 120o F (0 to 49o C)  
**Shipping** -40 to 140o F (-40 to 60o 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

### KMC Controls, Inc.

19476 Industrial Drive  
 New Paris, IN 46553  
 574.831.5250

www.kmcccontrols.com  
 info@kmcccontrols.com

