

BAC-7301/7301C

Advanced Application Controller 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

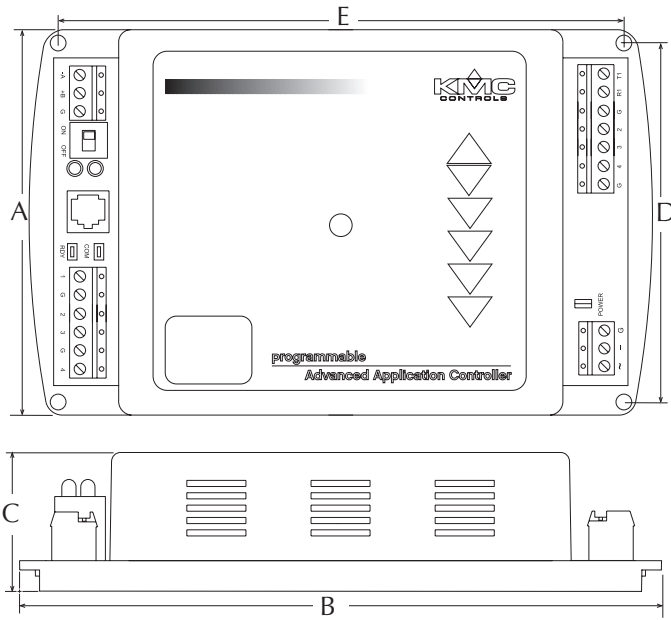
- ◆ 10 Control Basic program areas
- ◆ 40 analog and 40 binary value objects
- ◆ 4 PID loop objects
- ◆ Real time clock with power backup for 72 hours (BAC-7301C only)
- ◆ See PIC statement for supported BACnet objects

Schedules

- ◆ 8 Schedule objects
- ◆ 3 Calendar objects

Specifications (continued)

Dimensions



A	B	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, 25 VA, Class 2 only,
non-supervised (all circuits,
including supply voltage, are
power limited circuits)

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.



KMC Controls, Inc.
19476 Industrial Drive
New Paris, IN 46553
574.831.5250
www.kmcccontrols.com
info@kmcccontrols.com