KMC CONTROLS

BAC-7401/7401C
Advanced Application Controller for Heat Pump Units

Description and application

The BAC-7401 and BAC-7401C are native BACnet, fully programmable, controllers designed for heat pump unit applications. Use these versatile controllers in stand-alone environments or networked to other BACnet devices. As part of a complete facilities management system, the BAC-7401 and BAC-7401C 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 heat pump units

◆ Easy to install, simple to configure, and intuitive to program

◆ Controls compressor, fan, reversing valve and optional auxiliary heating

BACnet
Advanced Application Controller

CE   c UL US LISTED

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

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

Triac Outputs,

◆ 4 Optically isolated triac outputs.

◆ 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-7401 controllers with programming sequences for heat pump units:

◆ Setpoints and changeover based on occupancy

◆ Compressor, reversing valve and fan operation

◆ Auxiliary heat control

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-7401C only)

◆ See PIC statement for supported BACnet objects

Schedules

◆ 8 Schedule objects

◆ 3 Calendar object

Alarms and events

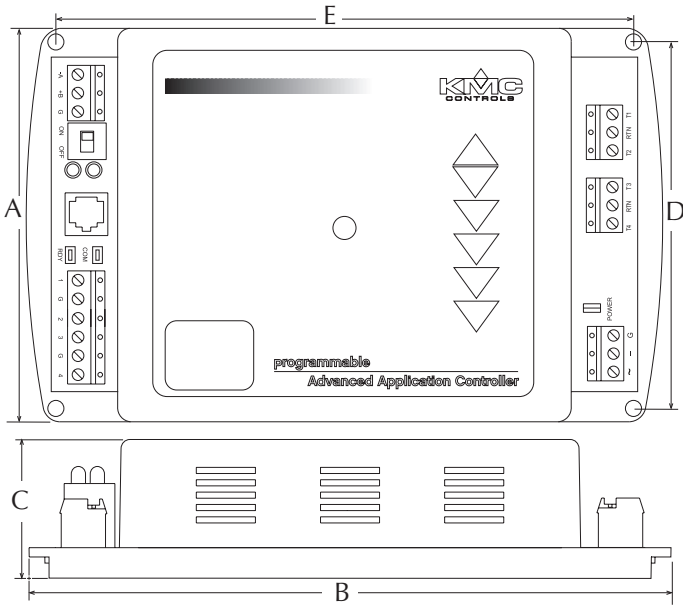◆ Supports intrinsic reporting

◆ 8 Notification class objects

Trends

◆ 8 Trend 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

Memory

◆ Programs and program parameters are stored in nonvolatile memory.

◆ Automatically restarts after a 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%), 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

◆ CE Compliant

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)

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-7401C	BACnet controller with real-time clock
BAC-7401	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.kmccontrols.com
info@kmccontrols.com