

Anemostat® SUBMITTAL

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Model **ABC-7003** DIRECT DIGITAL CONTROLS ADVANCED APPLICATION AIR TERMINAL CONTROLLERS

DIRECT DIGITAL CONTROLS

DESCRIPTION AND APPLICATION

The ABC-7003 are native BACnet, direct digital controllers designed for VAV terminal units. An integrated actuator and the supplied programs make these ideal controllers for temperature setback, overrides, proportional reheat and other HVAC sequences. Install these versatile controllers in stand-alone environments or networked to other BACnet devices. As part of a complete facilities management system, the ABC-7003 controllers provide precise monitoring and control of connected points.

- BACnet MS/TP compliant
- Automatically assigns the MAC address and the device instance
- Standard VAV control sequences are incorporated to provide pressure independent control of a single-duct VAV unit.
- On-board airflow sensor for use with a single or multi-point differential pressure measuring station or pitot tube.
- Use to control heating, cooling, cooling with heat change-over, cooling with time proportional reheat or three-stage, sequential reheat.



SPECIFICATIONS

Inputs

Universal inputs	3
Air flow sensor	1
Key features	Universal inputs programmable as analog, binary or accumulator objects. Standard units of measure. Overvoltage input protection
Pull-up resistors	Switch select none or 10kΩ
Connector	Removable screw terminal block, wire size 14–22 AWG
Conversion	10-bit analog-to-digital conversion
Pulse Counting	Up to 16 Hz
Input range	0–5 volts DC
NetSensor	Compatible with models ABC-1161 and ABC-1181.

Outputs

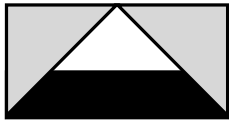
Universal Outputs	1
Key features	Output short protection Universal outputs programmable as analog or binary objects. Standard units of measure
Connector	Removable screw terminal block Wire size 14–22 AWG
Output voltage	0–10 volts DC analog 0–12 volts DC binary
Output current	100 mA per output

Outputs, Relay	1
Key features	Maximum switching 30 volts AC at 2 ampere
Connector	Removable screw terminal block Wire size 14–22 AWG
Outputs, Single-stage triac	1
Key features	Optically isolated triac output. Programmable a binary object.
Connector	Removable screw terminal block Wire size 14-22 AWG
Output range	Maximum switching 30 volts AC at 1 ampere
Communications	
BACnet MS/TP	EIA-485 operating at rates up to 76.8 kilobaud. Automatic baud detection. Automatically assigns MAC addresses and device instance numbers Removable screw terminal block. Wire size 14–22 AWG
NetSensor	Compatible with models ABC-1161 and ABC-1181, Connects through RJ-12 connector.
Programmable features	
Control Basic	10 program areas
PID loop objects	4

All dimensions are in inches.

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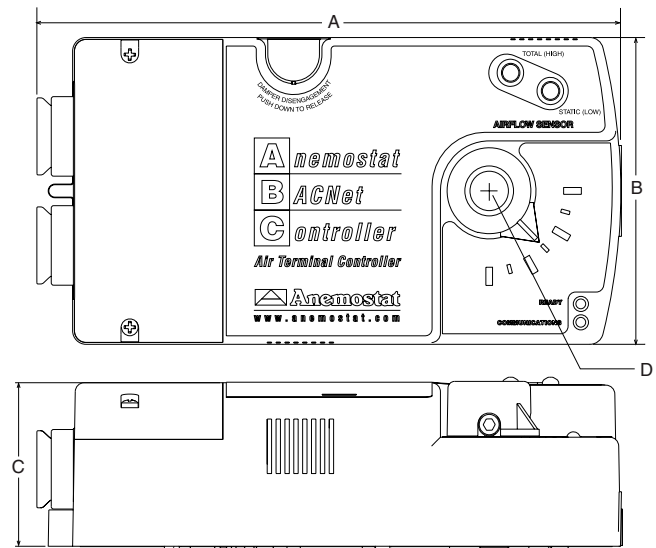
DIRECT DIGITAL CONTROLS

Value objects	40 analog and 40 binary
Supported objects	See PIC statement for supported BACnet objects
Schedules	8 schedule objects 3 calendar object
Trend objects	8 each of which holds 256 samples
Alarms and events	
Intrinsic reporting	Supported for input, output, value, accumulator, trend and loop objects.
Notification class objects	8
Memory	Programs and program parameters are stored in nonvolatile memory. Auto restart on power failure
Applications programs	Anemostat supplies the ABC-7003 with programming sequences for three single-duct VAV applications: <ul style="list-style-type: none"> • Heating-cooling changeover • VAV with time proportional reheat • VAV with three-stage reheat. • Custom sequences per specification
Air sensor features	Platinum-ceramic flow-through
Actuator specifications	
Torque	50 in-lb. (5.7 N•m) minimum 70 in-lb. (7.9 N•m) maximum
Angular rotation	0 to 95° Adjustable end stops at 45/60/90° rotation
Motor timing	18°/minute at 60 Hz 15°/minute at 50 Hz
Shaft size	Fits 0.5 inch (13 mm) round shafts. See Shaft adapters on page 7 for 0.38 inch shafts.
Regulatory	UL 916 Energy Management Equipment FCC Class B, Part 15, Subpart B BACnet Testing Laboratory listed
Installation	
Supply voltage	24 volts AC, -15%, +20% 25 VA Weight 2.4 lb. (1.1 kg)
Case material	Flame retardant green plastic
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)

ACCESSORIES

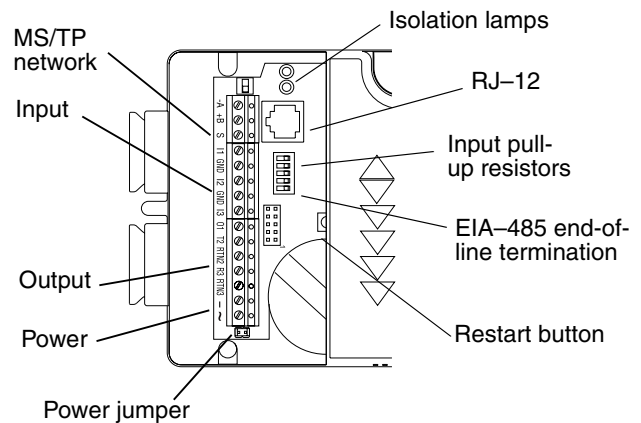
Shaft adapters

HFO-0011 3/8 inch (9.5 mm) shaft adapter



ABC-7003 Dimensions

A	B	C	D
8.23 in.	4.22 in.	2.25 in.	0.51 in.
209 mm	107 mm	57 mm	13 mm



ABC-7003 Connection points inside wiring compartment

All dimensions are in inches.

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