

# ECM-DX

PRICE DELUXE ECM SPEED CONTROLLER



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## Price Deluxe ECM Speed Controller

### Typical System Configuration

The Price ECM speed controller is designed to interface with a high-efficiency Electronically Commutated Motor. This low voltage speed controller offers either full manual push-button control, automatic control (modulation signal from a terminal unit controller) or Building Automation System (BAS) control of the Electronically Commutated Motor. Switching between the modes is easy: just apply the BAS signal and the controller will automatically switch over from manual (dial) mode to BAS mode.

### FEATURES

- + Low supply voltage (24VAC)
- + Dual outputs to control up to two Electronically Commutated Motors (both motors will receive the same signal)
- + BAS 2 to 10 VDC input for variable speed remote control
- + Red four-digit display communicates:
  - Speed: 0-100%
  - Motor RPM: for one of two motor inputs
  - BAS Input Voltage Display: incoming BAS voltage signal



The Price Deluxe ECM Speed Controller (front-facing and back-facing views)

### Product Highlights

#### BAS Interface & Modes

The BAS interface accepts an industry standard 2-10 VDC signal from a controller or computer to vary the speed of the Electronically Commutated Motor, allowing remote control/shutdown of the ECM motor based on air requirements and/or occupancy modes.

Do not switch 120/208/240/277VAC power to turn Electronically Commutated Motor on and off. Instead, adjust the 24VAC signal or BAS signal to turn the motor on and off. The motor has large capacitors that charge quickly on mains power up. Switching on several motors frequently could reduce building power quality and is not recommended.

Turning off 24 VAC power to the ECM speed controller will turn off the motor.

- 0 - 1 VDC Local Control Mode using push buttons: Local setpoint can be adjusted from 0 - 100 (%).
- 1 - 2 VDC Motor OFF: Recommend sending a 1.5 VDC signal to command motor off.
- 2 - 9 VDC Modulating Control: 2 - 9 VDC modulates motor from 0 - 100%.
- 9 - 10 VDC Maximum Speed: Motor is running at maximum speed (100%).

#### LED Digital Display

The LED Digital Display communicates the current mode of the ECM speed controller, allowing for more precise field adjustment and troubleshooting.

By pressing both the UP and DOWN push buttons at the same time, the user can cycle between the following:

- L.SET: Local Setpoint - Manual Speed Adjust Mode (use UP/DOWN to adjust). Range: 0-100%.
- rPn: RPM - Shows current RPM mode of ECM Motor 1. Range: 0-1500 RPM.
- bAS.r: BAS Remote - BAS Mode - voltage signal (maximum display reading is 9.99 VDC). Range: 0-9.99 VDC.
- bAS.S: BAS Setpoint - Current BAS setpoint. Range: 0-100%.

#### Specifications

Subject to change without notice

<b>Power</b>	24 VAC ±10% at 50/60Hz (2VA)
<b>Operating Conditions</b>	32°F to 122°F (0°C to 50°C) 0%-95% R.H. Non-Condensing
<b>Storage Conditions</b>	-22°F to 122°F (-30°C to 50°C) 0%-95% R.H. Non-Condensing
<b>Processor</b>	8-Bit Standard Flash Microcontroller
<b>Inputs</b>	1 Analog (BAS) and 3 Digital (push buttons and RPM)
<b>Outputs</b>	2 Digital (GO Signal to ECM, Vspd PWM Signal at 80.0 Hz), Display and Aux Analog
<b>Connections</b>	¼ in. (6.35 mm) Spade Terminals – recommend 18-22 AWG Copper Wire
<b>Dimensions</b>	2.8 in. x 3.8 in. (71 mm x 96 mm) – includes mounting plate
<b>Shipping Weight</b>	0.22 lbs (100 g)

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