



MANUAL – INSTALLATION + SERVICE

# Deluxe ECM Speed Controller

ECMDX Series

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# DELUXE ECM SPEED CONTROLLER

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# DELUXE ECM SPEED CONTROLLER

## PRODUCT OVERVIEW

### General

The Price Deluxe ECM speed controller works with a high efficiency ECM motor. This low voltage (24VAC) speed control allows full manual (push button adjust) or BAS (2-10VDC signal) control of the ECM motor.

#### Features:

- Dual outputs for controlling 2 ECM motors
- Red four-digit digital display for reading out:
  - a) Speed 0 -100%
  - b) Motor RPM
  - c) BAS input voltage
- Building Automation System input (2-10VDC) for remote control



### LED Digital Display

The Digital Display shows the user several modes of operation. This allows for easier and more precise field adjustment and troubleshooting. To change modes press both **up** and **down** buttons at the same time.

**NOTE:** Local setpoints are stored to EEPROM and will remain set after power failures.

**WARNING:** Do not switch 120/208/240/277 VAC power to turn ECM motor on and off. Instead control the 24VAC signal or BAS signal to turn the ECM motor on and off. The ECM motor has large capacitors that charge quickly on mains power up. Switching on several motors frequently could reduce building power quality.

### Specifications

Display	Mode	Range
L.SET	Local Setpoint - Manual Speed Adjust Mode (use UP/DOWN to adjust)	0-100%
rPn	RPM - Shows current RPM mode of ECM motor 1. If E001 is displayed – no RPM pulses are being read. Check 6 position cable. If E002 is displayed – RPM reading is over 3000 RPM. Check primary air.	0-2500 RPM
bAS.r	BAS remote - BAS Mode – Voltage Signal (Max display reading is 9.99 VDC)	0-9.99 VDC
bAS.S	BAS Setpoint - Current BAS setpoint	0-100%

Power:	24 VAC +/-10% @ 50/60Hz (2VA)
Operating Conditions:	0°C to 50°C (32°F to 122°F) 0% – 95% R.H. non-condensing
Storage Conditions:	-30°C to 50°C (-22°F to 122°F) 0% – 95% R.H. non-condensing
Processor:	8-bit enhanced flash microcontroller
Inputs:	1 Analog (BAS) and 3 digital inputs (push buttons and RPM)
Outputs:	2 Digital (GO signal to ECM and Vspd PWM signal @ 80.0 Hz), Display, and aux analog output
Connections:	¼" Spade Terminals – Recommend 16 - 22AWG copper wire
Dimensions:	2.8" by 3.8" [71mm by 96mm] (includes mounting plate)
Shipping Weight:	0.220 lbs, 100 grams

# DELUXE ECM SPEED CONTROLLER

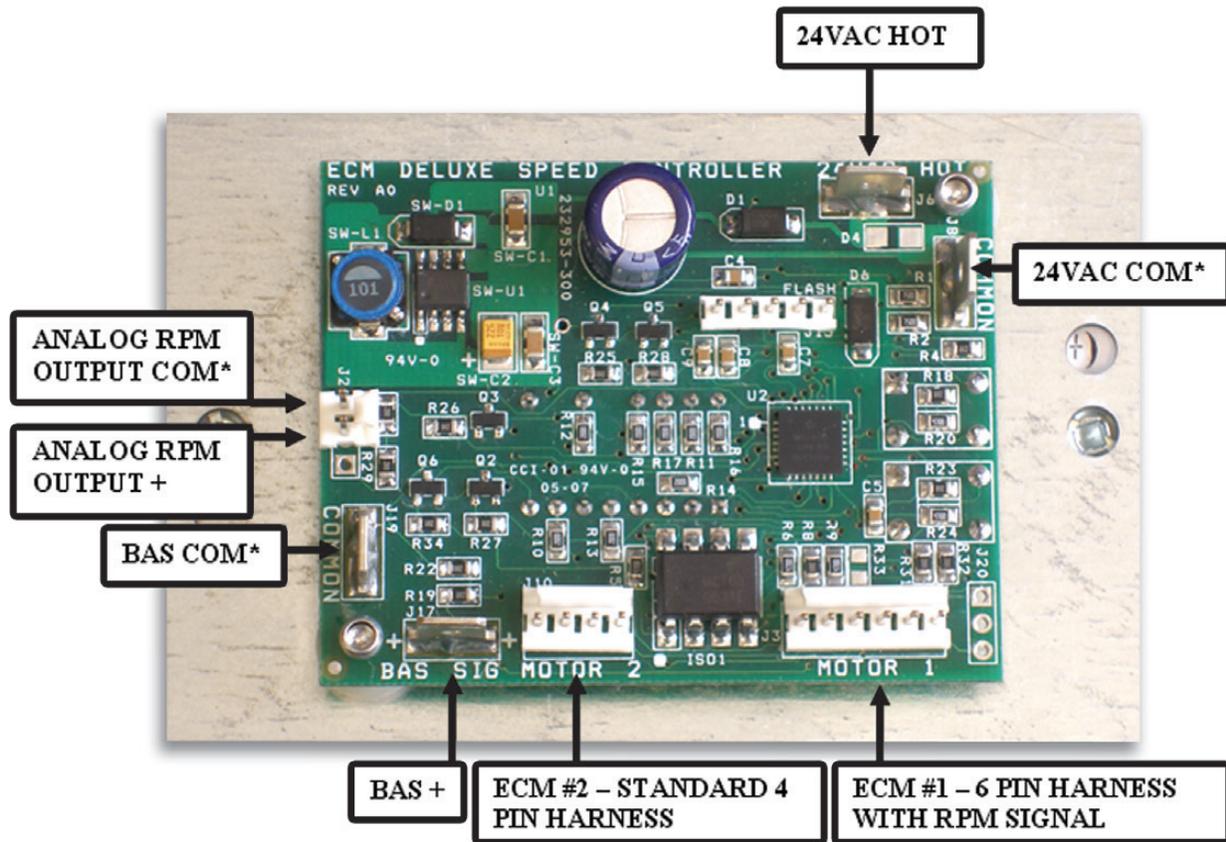
## PRODUCT OVERVIEW

### Low Voltage Wiring

The Price Deluxe ECM speed controller works with a high efficiency ECM motor. This low voltage (24VAC) speed control allows full manual (push button adjust) or BAS (2-10VDC signal) control of the ECM motor.

**NOTE:** 24VAC COM, BAS COM, ANALOG OUTPUT COM are all connected together. Please observe 24VAC polarity

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### BAS Input Signal

The BAS input signal overrides the local setpoint using a remote 0 – 10VDC signal. If the BAS signal drops below 1VDC local control (via the push buttons) is restored.

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







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