

Hoffman Controls

Product Data

706-123VmA and 706-123BVmA Series Electronic Fan Speed Controller



**706-123VmA
Electronic Fan Speed Controller**

Description

The 706-123VmA Series multiple voltage, variable speed electronic controller is designed to provide fixed or proportional speed control of single phase, shaded pole, or permanently split capacitor type motors. The controller will accept any nominal line voltage from 120 to 277 volts. This variable voltage capability allows the controller to be universally applied to all motors that fall within this voltage range.

The controller phase proportions the single phase power to regulate RPM as determined by the input signal.

The input signal to the controller may be 0 – 10V DC or 4 – 20mA as supplied by an external source typical of an analog control output of an EMS system. Motor speed may be constant or automatically variable over a defined span as required. The controller has a minimum and maximum adjustment limit. A “zero adjust” is provided for the start of the controller span. The “cutout” is available for applying or removing power to the motor at a preselected input signal. Radio Frequency Interference (RFI) is suppressed by internal line filtering. Energy Management Systems generating the input signal should be evaluated for compatibility/suitability of system RFI requirements.

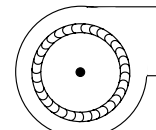
Application

The variable speed controller is applicable for speed adjustment of motor RPM within a limited range of operating temperatures that assure adequate ventilation of the motor for the intended ambient at the reduced RPM speed. Motors should always be evaluated for a particular minimum reduced speed at the highest ambient operating temperature anticipated. The controller is designed for air moving applications (blower propeller types). It may however be applicable for other non air-moving motor driven requirements. Motors should be open, drip proof type.

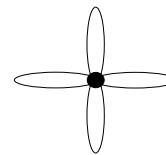
The heat sink is designed to operate in ambients up to 120°F. The heat sink should be mounted on a 4” x 4” electrical box or control cabinet, with the heat sink exposed to the ambient and the component housing exposed on the inside of the electrical box or wiring compartments. The controller should not be mounted in an airtight or unventilated control panel.

The controller should be mounted to electrically conductive materials and should be electrically grounded.

Squirrel Cage



Propeller
(blade type)



Specifications

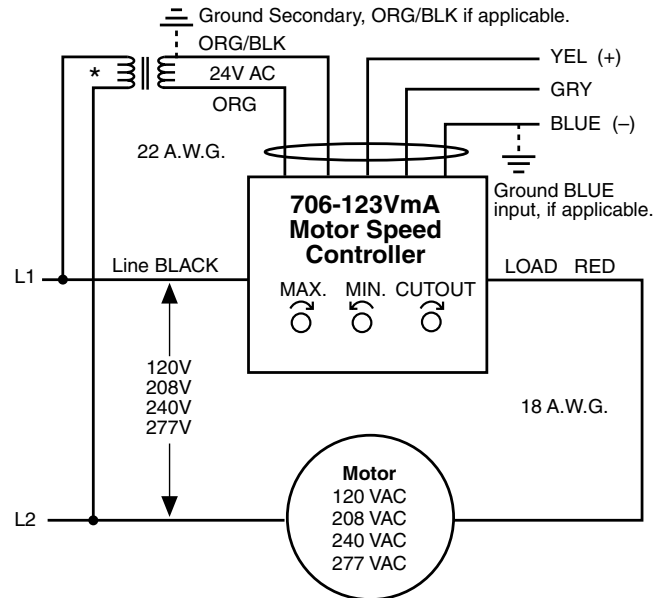
Current, Max	
706-123VmA	5 amps
706-123BVmA	10 amps
Power	2.5 VA
Dimensions	
706-123VmA	4.00” (L) x 4.00” (W) x 1.45” (H)
706-123BVmA	5.75” (L) x 4.20” (W) x 1.55” (H)
Nominal, 24V AC	20 min./30 max.
Line Voltage, Nominal	120 / 208 / 240 / 277V AC

Operating Ambient Temp.	32°F to 120°F
Operating Environment	Moisture Free
Input Signals	
Volts	2 – 10 V DC
Milliamps	4 – 20 mA
Impedance	500 ohms
Adjustable Limits, Volts	
Minimum speed	Stall up to 60% of line
Maximum speed	Stall up to 90% of line
Motor Off (Drop Out)	
V DC Input	0 – 6.5V DC
mA Input	0 – 18 mA
Compliance Voltage	12V DC

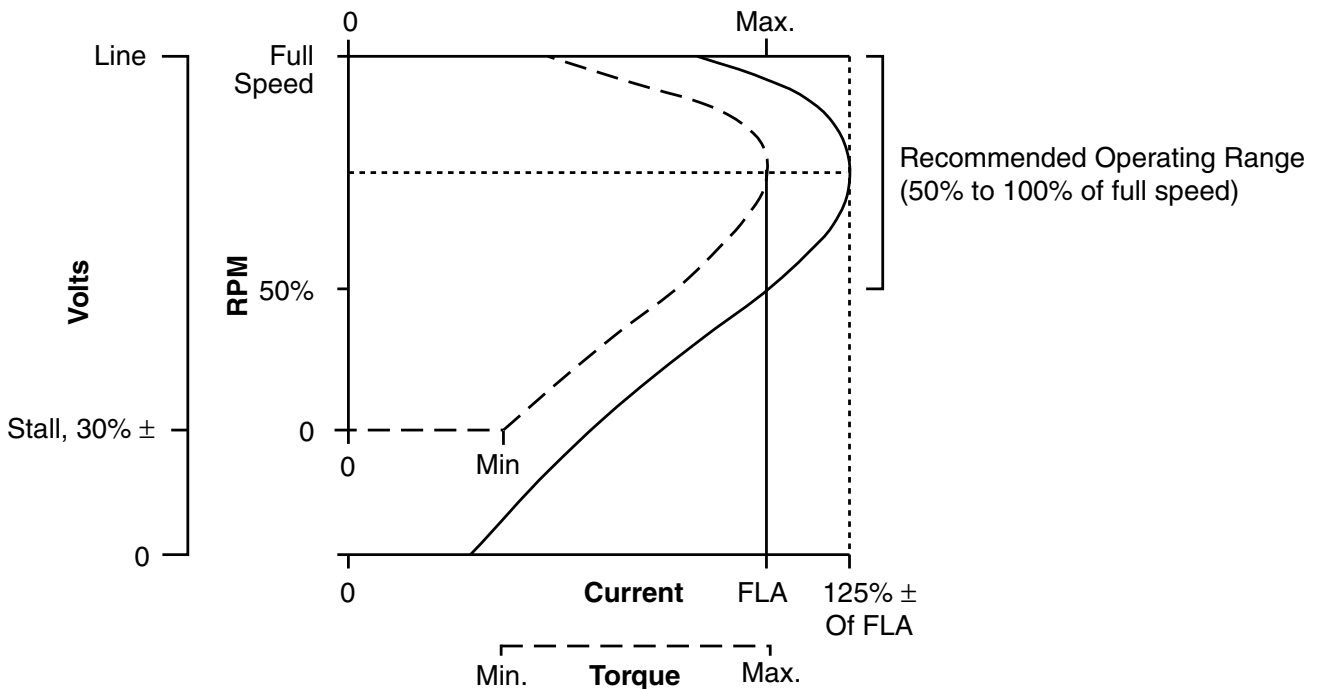
Input Signal Connections			
		(+)	(-)
Volts	2 – 10V DC	YEL	BLU
mA	4 – 20mA	YEL	BLU/GRY (tied together)

Note: ORG/BLK is common internally with BLU (floating ground).

*** Transformer primary must be on same line as motor.**



706-123VmA Typical Wiring Diagram



Typical Motor Volts / RPM vs. Current / Torque

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