

Hoffman Controls

Installation & Operating Instructions

708-BVmA and 708-CVmA Series Electronic Fan Speed Controllers

Initial Controller Installation

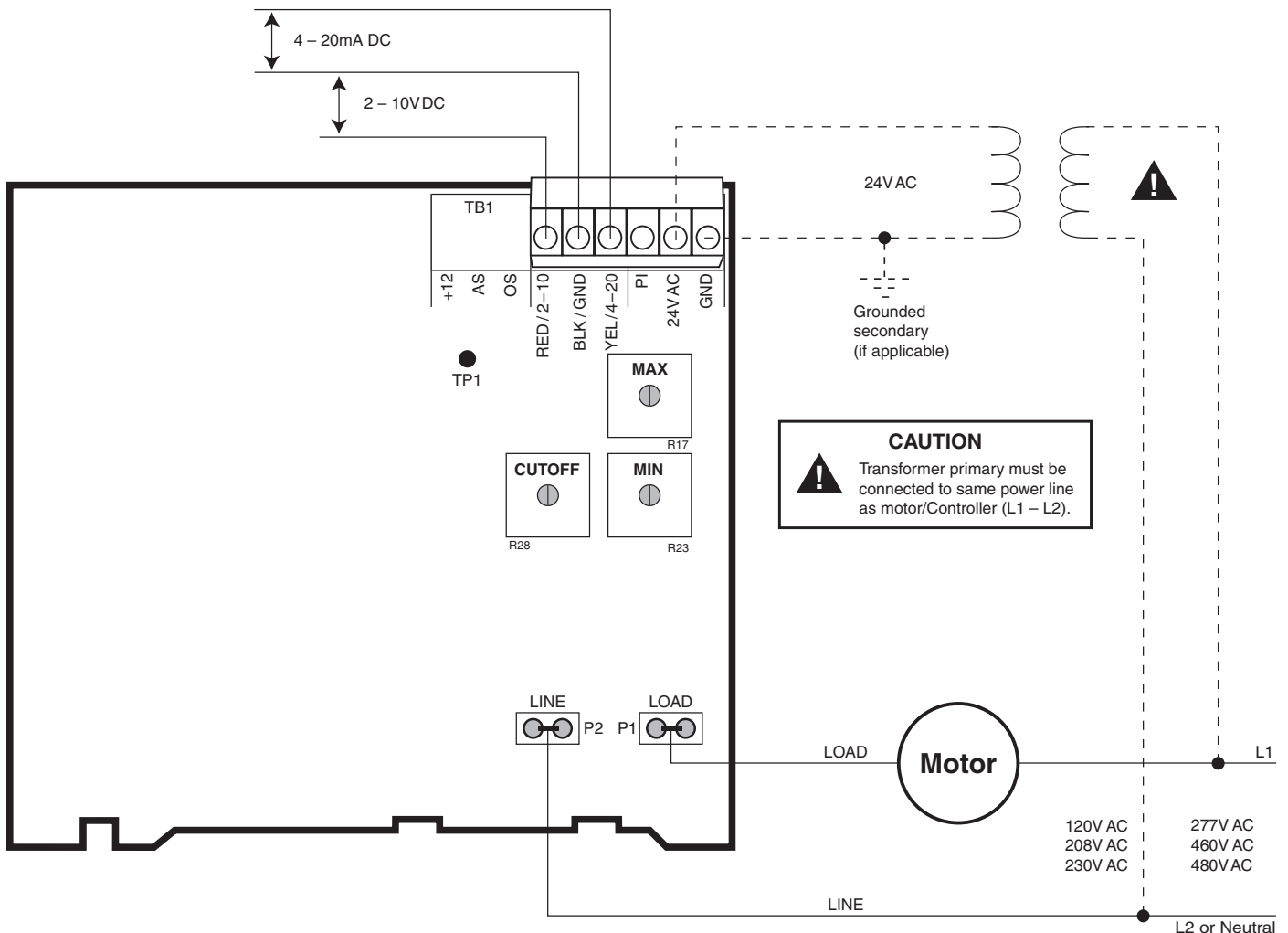
1. Remove the longer 708-BVmA/708-CVmA protective cover (4 screws). Mount Controller to a flat surface using two fasteners (not supplied). Surface or ambient temperature must not exceed 120°F (49°C).
2. De-energize power to Controller and Motor/Load.

Wiring

Attach 24VAC power, signal input & line voltage power wiring using industry approved methods.

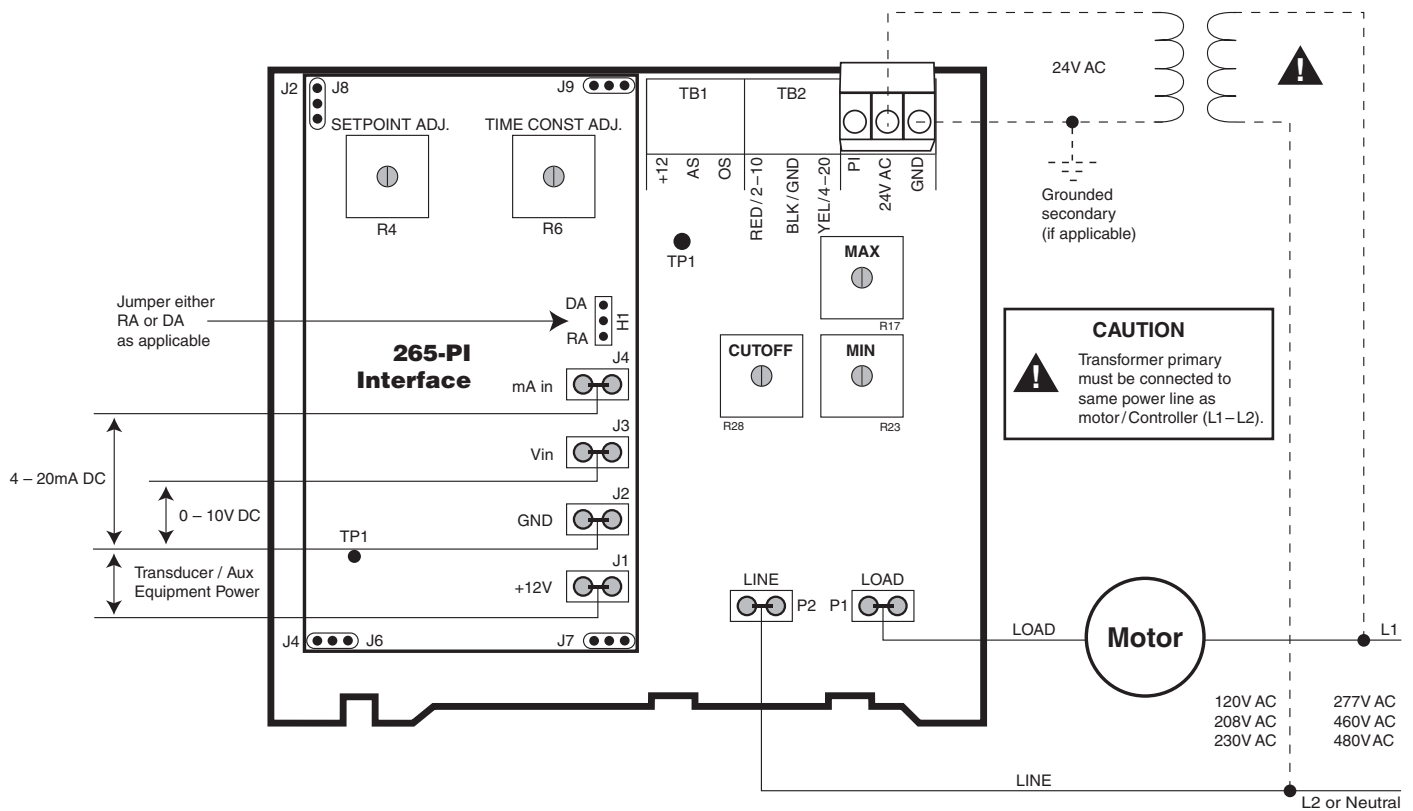
Input Signal(s) Wiring

1. Connect “+24” terminal and “GND” terminal to 24VAC source. The primary of the 24VAC source must be powered from the same lines(s) (phases) as the Motor/Load.
2. **Option 1** – 708-BVmA/708-CVmA using 2 – 10V DC or 4 – 20mA DC. See Figure 1.
 - A. 0.9” W.G. is the maximum allowable static pressure in the duct system of a squirrel cage fan.
 - B. Controller has been designed and tested with a squirrel cage blower motor. Propeller (blade type) fan motors have also been successfully controlled and may be used.

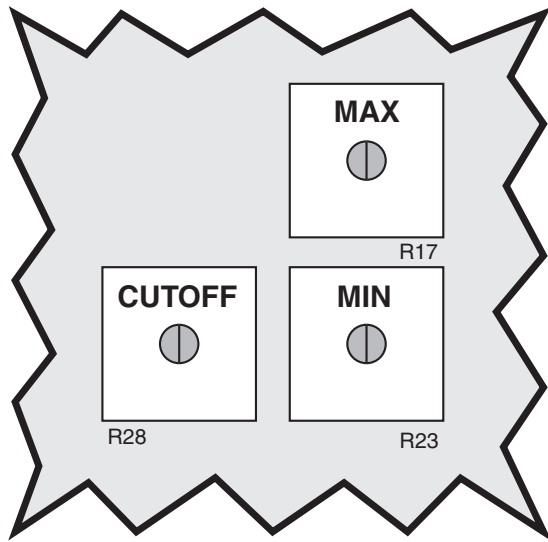


Option 1 – 708-BVmA/708-CVmA Controller
Figure 1

- C. Ensure that the 24VAC transformer primary is connected to the identical power source (L1–Neut) or (L1–L2) as the motor.
 - D. Connect 2–10V DC or 4–20mA DC using “GND” terminal for the negative lead and “2–10” terminal for the + V DC input or “4–20” terminal for the + mA DC input.
3. **Option 2** – 708-BVmA (PI)/708-CVmA (PI) using 2–10V DC or 4–20mA DC, and PI Interface. See Figure 2.
- A. 0.9” W.G. is the maximum allowable static pressure in the duct system of a squirrel cage fan.
 - B. Controller has been designed and tested with a squirrel cage blower motor. Propeller (blade type) fan motors have also been successfully controlled and may be used.
 - C. Ensure that the 24VAC transformer primary is connected to the identical power source (L1–Neut) or (L1–L2) as the motor/Controller.
 - D. The control signal inputs are connected to the 265-PI board when used with the 708-BVmA (PI)/708-CVmA (PI) control. Connect 2–10V DC or 4–20mA DC using GND terminal J2 for the negative lead and V IN terminal J3 for the + V DC input or mA IN terminal J4 for the + mA DC input.
 - E. Reference 265-PI Interface Product Data and Installation & Operating Instructions.
 - F. Ensure proper RA/DA jumper (H1) selection on PI Interface board.



Option 2 – 708-BVmA (PI)/708-CVmA (PI) Controller with a 265-PI Interface
Figure 2



Adjustment Locations
Figure 3

Fan Cut Off Adj. (if used)

If not used, Fan Cut Off Adj. Pot (R28) must be fully CCW.

1. Set input signal to the desired value for Fan Cut Off. It must be set at a value HIGHER than Minimum Fan Speed Adj. value as measured at test point TP1. Fan Cut Off Adj. use negates use of Minimum Speed Adj.
2. Verify Fan Speed Cut Off Pot (R28) is adjusted fully CCW. Motor should be operating.
3. Slowly adjust Fan Speed Cut Off Pot (R28) CW until motor cuts out.

Vary input source over selected Min./Max. and Cut Off values. Monitor fan operation and RPM. Repeat adjustments as necessary for desired operation.

Final Controller Installation

1. De-energize power to Controller and Motor/Load.
2. Fasten protective cover on Controller with four (4) screws provided.
3. Restore power to Controller and Motor/Load. Complete full operational testing as required.

Power Wiring

Motor to LOAD terminal. Line to LINE terminal.



CAUTION

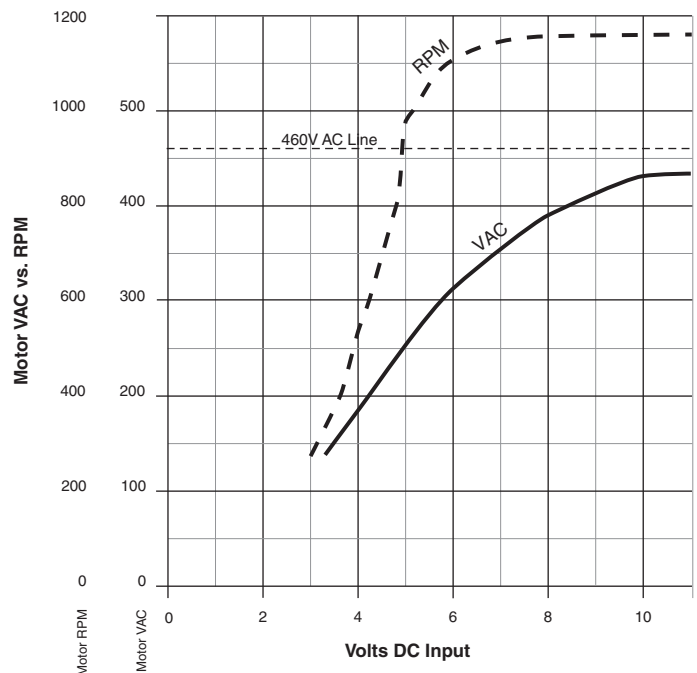
Transformer primary MUST BE on the same lines (phases) as fan motor.

Minimum Fan Speed Adj.

1. Turn Fan Cut-Out Adj. Pot (R28) fully CCW.
2. Turn Maximum Speed Adj. Pot (R17) fully CW.
3. Set the input signal source to the MINIMUM input value required. Do not set value below 2VDC as measured at test point TP1 in reference to "GND" (-) terminal.
4. Connect power to 24VAC transformer. Check test point TP1 voltage level.
5. Adjust Minimum Speed Adj. Pot (R23) to the desired minimum RPM.

Maximum Fan Speed Adj.

1. Set the input signal source to the MAXIMUM input value required.
2. Adjust Maximum Speed Adj. Pot (R17) to desired maximum RPM.



Typical 460VAC Motor Performance
Figure 4

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