

VF420 SIGNAL FOLLOWING POWER CONTROL APPLICATION NOTE

DESCRIPTION

The VF420 provides manual or auto (process following) control of vibratory feeders. In the auto mode, vibration (feed rate) is proportional to the analog signal input from programmable controllers, weighing scales, tachometers, temperature controls, etc. Voltage or current input is user selectable and does not have to be isolated from the AC line or ground. The VF420 can also supply power to electric heaters, lamps, and some motor types.

Controls are factory adjusted for best overall performance. Minor adjustments may be required for specific applications. Adjustments and installation should be made by qualified personnel with power off.

MANUAL OPERATION

Output voltage is set by main potentiometer. Jumper M to C on TB1. If output range requires adjustment, use min/max pots to raise or lower output voltage. Adjust min pot with main control at 0% on dial. Adjust max pot with main control at 100%.

AUTO OPERATION(Signal Following)

Output voltage follows analog input signal. Jumper A to C on TB1. Move J6 jumper to either current, I or voltage, V position.

In CURRENT position apply 4-20mA to +SIG- input (40 mA max).

In VOLTAGE position apply 4-10VDC (20VDC max).

Do not apply voltage signal when J6 jumper is in the current position or damage will result.

The A/cal pot can be used to adjust output voltage level vs signal input. Min/Max pots are not used in the auto (signal following) mode.

SOFT START

Soft start provides a fixed 2-3 second ramp for output voltage to reach it's maximum value. This feature works in manual, auto, and power ON/OFF operation.

AC/DC CONVERSION (Jumper J2)

Select 60PPS (half wave DC output) or 120PPS(AC output) to load.

Changing this jumper position may require re-adjustment of MIN/MAX pots in manual mode or A/cal pot in the auto mode.

NOTE:

Load must be connected to output terminals to get correct output voltage readings.

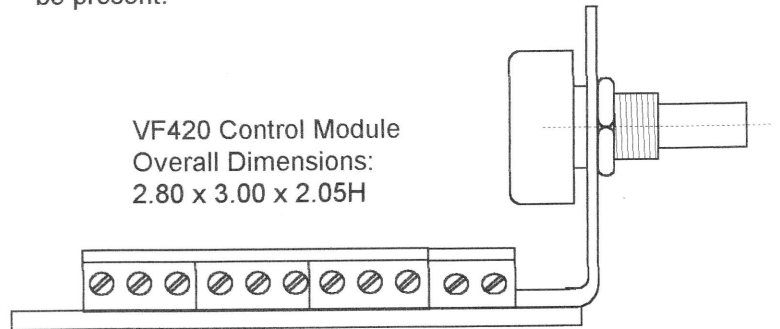
Remote ON/OFF control

A set of remote relay or switch contacts can be connected across TB10 & TB11 for ON/OFF control in manual or auto operation.

Contacts closed= control ON

To use this option jumper J4 must be removed.

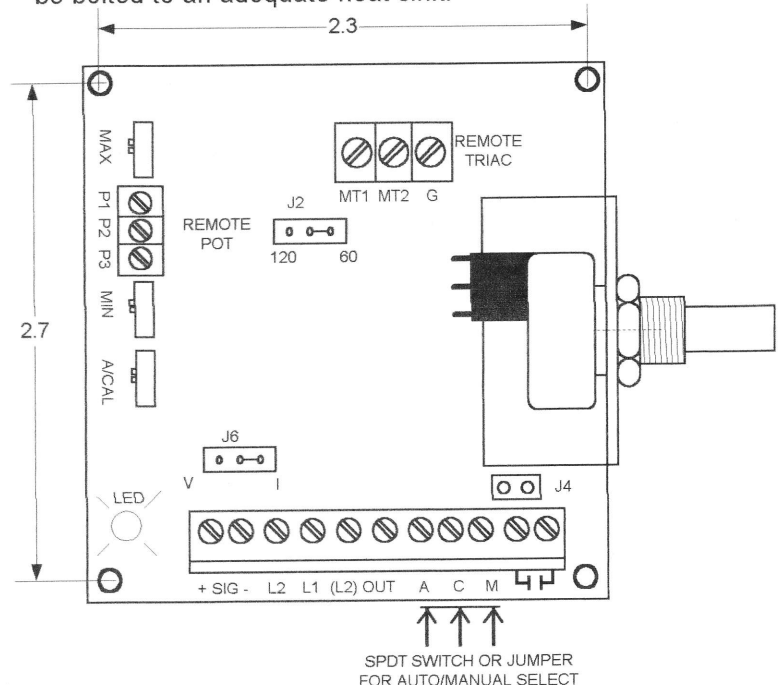
Contacts switch low current <50mA but line voltages may be present.



Mounting options

3" PVC snaptrack insulated standoffs or panel mount (.375" drill) with knob & dial plate.

Maximum power capacity requires mounting bracket to be bolted to an adequate heat sink.



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