Digital Controller for Electromagnetic Vibrator

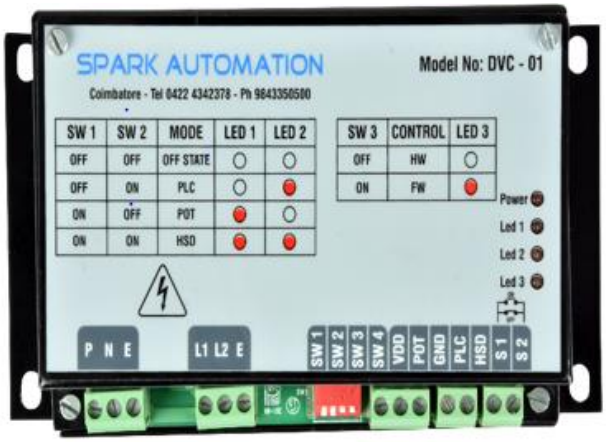
SPARKVIB DVC-01 Single Channel, 230/115Vac, 50/60Hz, 3Amps

The set-point for the feeder throughput are adjusted by using either an external POT or a PLC output (0 - 10V) or with a High Speed Digital Pulse (500Hz to 1KHz).

User can select the Control Input by using on board DIP switch. Necessary LED indications are provided to the user.

An on-board fuse provides short-circuit protection for the internal semiconductors.

The advantage of High Speed Digital Pulse input is that, the feeder can be controlled by using a digital pulse from PLC of 500Hz to 1KHz. Hence a PLC with a DAC output or an external DAC card is not required for this controller.



Operates with Digital Pulse Input.
Analog input not required.

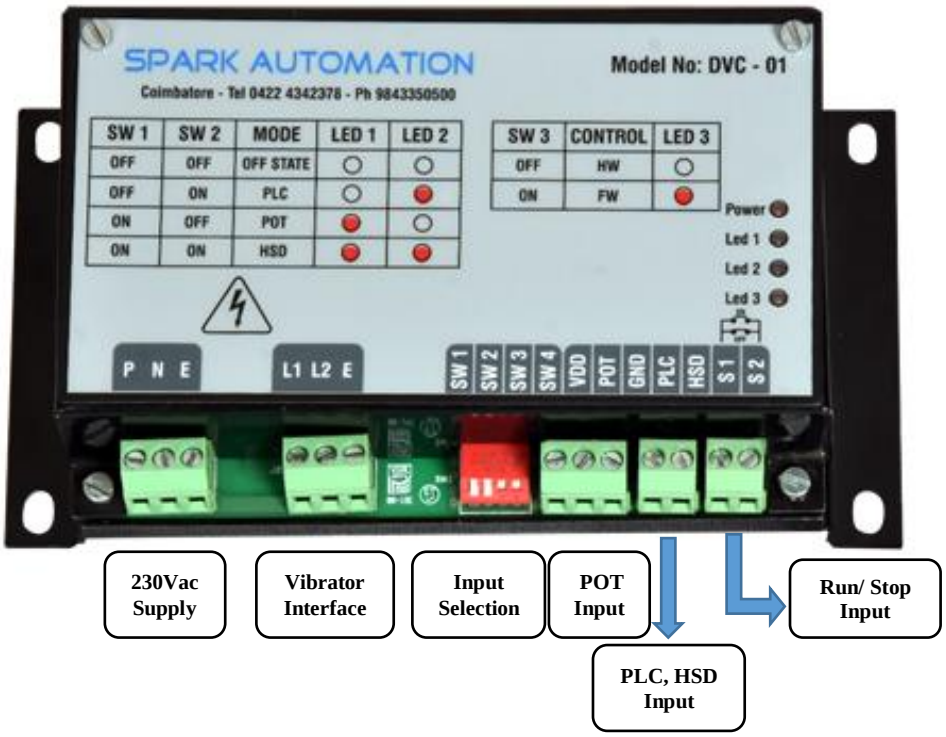
Electrical Characteristics

Supply Voltage	:	230/115 V ± 5%
Frequency	:	50/60Hz
Current	:	3A RMS, 6A Peak
Time of Ramp	:	500msec
Run/Stop control	:	Connect S1 and S2 pins to stop the controller.

Mechanical Characteristics

Operating temperature	:	0...+85 (°C)
Size (l*b*h)	:	162*85*50 mm
Housing	:	Aluminium top cover with Aluminium bottom
Weight	:	325 gms

Connection Details



POT Interfacing:

POT connector has 3 pins for connecting external potentiometer's VDD, Signal and GND. After connecting the POT, vary it from 0 to max, so that output of the controller will also vary proportionately.

PLC Interfacing:

Connect PLC's Analog output or External DAC's output of 0 – 10 VDC between PLC pin and GND pin. No dedicated GND pin is provided for PLC input and hence the GND pin available in POT connector has to be used.

HSD Interfacing:

Connect PLC's Digital output between HSD pin and GND pin. Provide a digital pulse between 500Hz and 1KHz. For 500Hz & less, the controller provides 0V to the Vibrator and for 1KHz & above, the controller provides full voltage to the Vibrator. Between 500Hz and 1KHz, voltage applied to the vibrator will vary proportionately. No dedicated GND pin is provided for HSD input and hence the GND pin available in POT connector has to be used.

Run / Stop Control:

S1 and S2 pins are used for Run / Stop Control. In Run Mode, S1 and S2 pins should be Open, whereas to Stop the controller S1 and S2 pins should be Shorted.

Input Selection Switch:

DVC-01 has three input options – External POT, PLC (0 -10V) or High Speed Digital Pulse (500 Hz - 1 KHz). User choose any one of these input by using Input select switches SW1 and SW2.

LED1 and LED2 indicates the control input chosen by the user.

Below table shows the relationship between Switch Position and Control Input Selection.

SW1	SW2	Selected Input	LED Indication
OFF	OFF	No input selected	Both LED1 and LED2 are in OFF state.
ON	OFF	POT	LED1 is in ON State.
OFF	ON	PLC	LED2 is in ON State.
ON	ON	HSD	Both LED1 and LED2 are in ON state.

Switch Positions should be selected before turning on the Controller.