

JYMC Variable Speed DC Motor Controls

JYMC Variable Speed DC Motor Controls are designed for shunt wound and PM motors. They are extensive to be used on a wide range of motor horsepower such as Packaging Machine , Machine tools, Conveyors, Pumps, Feeders and so on. They have the following characteristics:

1.High reliability and low cost:

- 1) MOV transient protection, which is used to protect the power bridge. Integrated circuitry is used to provide a non-complicated design with superior load and line voltage regulation.
- 2) Electronic current limiting the(CL) protects the motor and control against overloads by limiting the maximum level of output current.
- 3) Acceleration start (adjustable from 0.5 to 4 seconds) provides a smooth start each time the AC power is applied.
- 4) The controls can also be operated in voltage following mode by supplying an isolated analog signal (0-7 VDC) to the input terminals P₂(+) and F-.
- 5) Additional versatility is achieved by enlarging heat sink area to enlarge the horsepower rating of each model.
- 6) The inhibit circuit(terminals I1 and I2) is provided to electronically reduce the armature output voltage to zero.

2.standard features:

- 1) Changing the Horsepower Resister allows controls to be used on a wide range of motor horsepower.
- 2) MOV Transient Protection
- 3) Trimpots: MIN , MAX ,ACCEL, IR, CL
- 4) Voltage following
- 5) Inhibit

3.SPECIFICATIONS

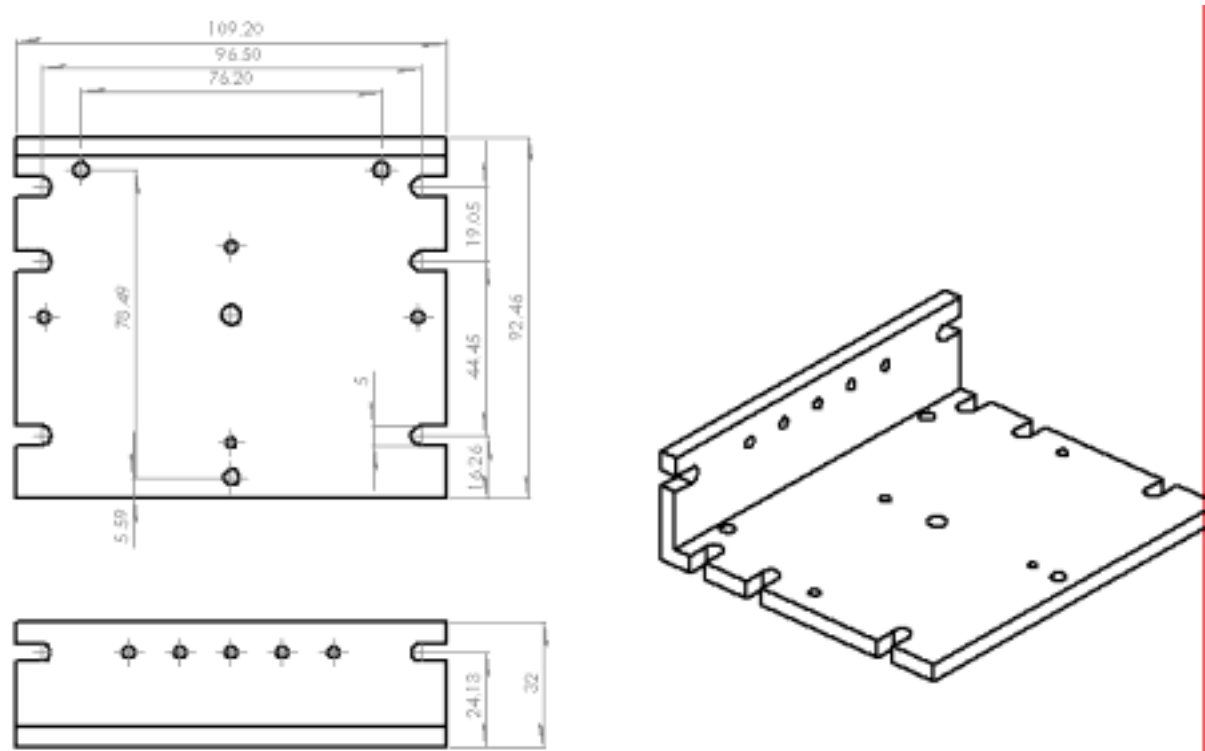
- 1) Speed range(Ratio).....50:1
- 2) Load regulation (0—full load, 50:1 speed range)
(% Base speed).....1
- 3)Line voltage Regulation
(at Full Load, +/-15% Line variation)(% speed).....0.5
- 4) Control Linearity (%Speed vs.Dial Rotation).....2
- 5) CL/Torque Range(%Full Load).....0-200
ACCEL Time Range(Secs).....0.5-4
- 6) MIN Speed Trimpot Range(%Full Speed).....0-30
- 7) MAX Speed Trimpot Range (%Full Speed).....50-120
- 8)Maximum Allowable Ambient Temperature
(at Full Rating)(° C/ ° F).....45/113

4.ELECTRICAL RATINGS

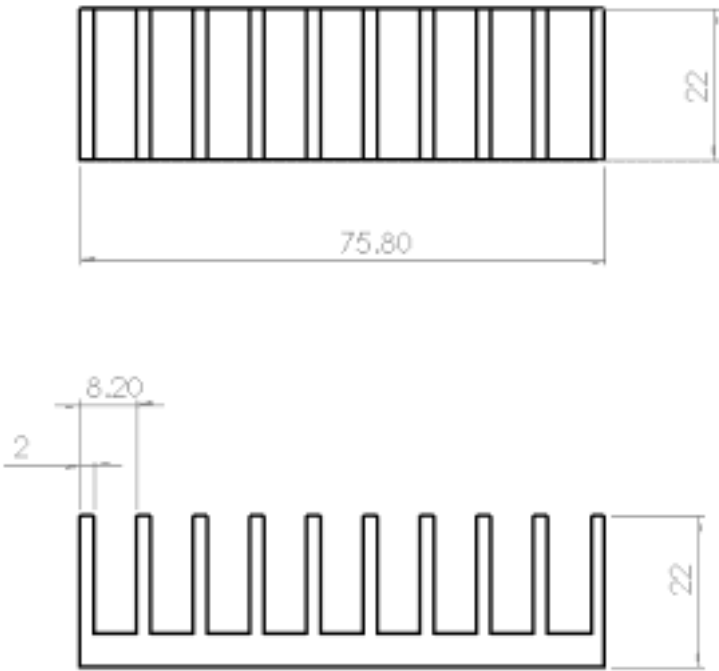
Model Number	AC Line Voltage (VAC)+15% 50/60HZ	Motor Voltage (VDC)	Rating Without Enlarging Heat Sink area			Rating With doubled Heat Sink area			Fiel Voltage (Shunt Wound Motors Only (VDC)
			Max AC LoadCurrent	Max DC LoadCurrent	Maxumum Horsepower	Max AC Load Current	Max DC Load Current	Maximum Horsepower	
JYMC-220A-I JYMC-220A-II JYMC-220B	115	0-90	9.0	6.0	0.37	18	12	0.75	50,100
JYMC-220C JYMC-220D	230	0-180			0.75			1.5	100,200

5.MACHANICAL SPECIFICATIONS (mm)

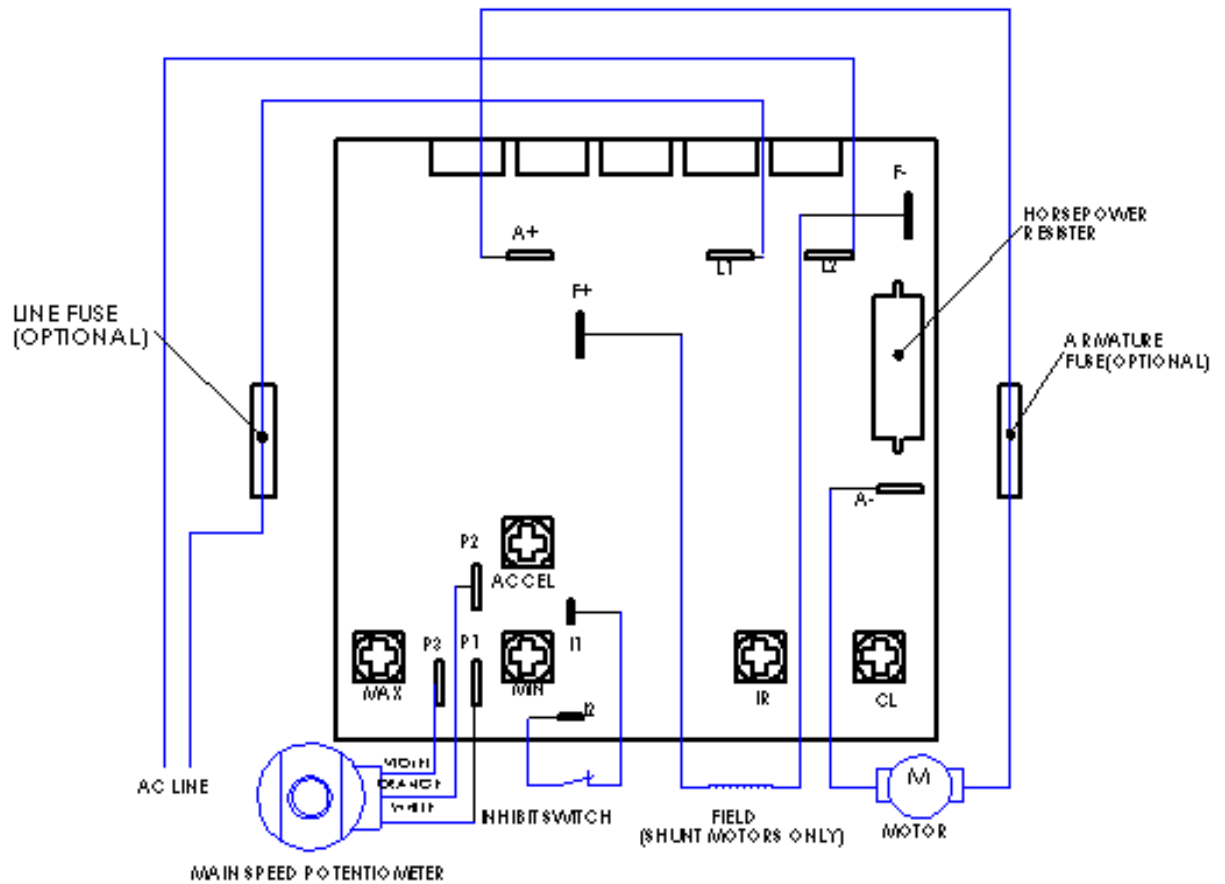
1) HEAT SINK OF JYMC-220-I



2) HEAT SINK OF JYMC-220-II



6.CONNECTION DIAGRAM



7.HORSEPOWER RESISTER &FUSE SELECTION CHART

MOTER HORSEPOWER RANGE (NOTE:1)		HORSEPOWER RESISTER	RECOMMENDED FUSE SIZE	
ARMATURE VOLTAGE	ARMATURE VOLTAGE		(AMPS)	
90—130VDC	180VDC	VALUE	LINE	ARMATURE
1/100-1/50	1/50-1/25	1	12	1/3
1/50-1/30	1/25-1/15	0.5	12	1/2
1/30-1/20	1/15-1/10	0.35	12	3/4
1/20-1/12	1/10-1/6	0.25	12	1.25
1/12-1/8	1/6-1/4	0.18	12	2
1/8-1/5	1/4-1/3	0.1	12	2.5
1/4	1/2	0.05	12	4
1/3	3/4	0.035	12	5
1/2	1	0.025	12	8
3/4 (NOTE 2)	1.5 (NOTE 2)	0.015	15	12
1 (NOTE 2)	2 (NOTE 2)	0.01	25	15

NOTE:1.For overlapping motor horsepower range use lower value Horsepower resister

2. Use with doubled area of HEAT Sink –see Electrical Ratings