



Specifications

| Model | Line Voltage (VAC) | Armature Voltage Range (VDC) | Continuous Armature Current (Amps) | Motor Horsepower Range |
|--------------|--------------------|------------------------------|------------------------------------|------------------------|
| SPM100-3-PT3 | 115 | 0 - 90 | 3.0 | 1/8 - 1/4 |

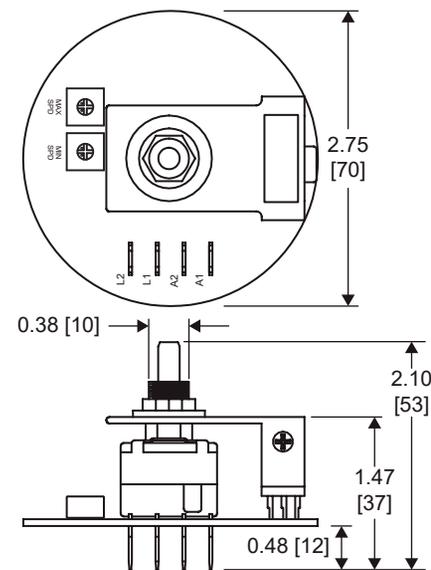
| | |
|--------------------------------------|------------------------|
| AC Line Source | 115 VAC, 50/60 Hz, 1Ø |
| Acceleration Time Range | 0.25 seconds |
| Deceleration Time Range | 0.25 seconds |
| Form Factor | 1.37 at base speed |
| Load Regulation | 3% of base speed |
| Speed Range | 20:1 |
| Maximum Vibration 0 - 50 Hz (>50 Hz) | 0.5G (0.1G) |
| Surrounding Air Temperature Range | 50 - 131°F / 10 - 55°C |
| Weight | 0.16 lbs / 72.6 g |

Safety Warnings

READ ALL SAFETY WARNINGS BEFORE INSTALLING THIS EQUIPMENT

- **DO NOT INSTALL, REMOVE, OR REWIRE THIS EQUIPMENT WITH POWER APPLIED.** Have a qualified electrical technician install, adjust and service this equipment. Follow the National Electrical Code and all other applicable electrical and safety codes, including the provisions of the Occupational Safety and Health Act (OSHA), when installing equipment.
- **Circuit potentials are at 115 VAC above earth ground.** Avoid direct contact with the printed circuit board or with circuit elements to prevent the risk of serious injury or fatality. Use approved personal protection equipment and insulated tools if working with power applied. Use a non-metallic screwdriver for adjusting the calibration trim pots.
- Reduce the chance of an electrical fire, shock, or explosion by using proper grounding techniques, over-current protection, thermal protection and enclosure. Follow sound maintenance procedures.
- **Removing AC line power is the only acceptable method for emergency stopping.** Do not use braking, decelerating, or coasting to a stop for emergency stopping. They may not stop a drive that is malfunctioning.
- Line starting and stopping (applying and removing AC line voltage) is recommended for infrequent starting and stopping of a drive only. Braking, decelerating to minimum speed, or coasting to a stop is recommended for frequent starts and stops. Frequent starting and stopping can produce high torque. This may cause damage to motors.
- **Do not disconnect any of the motor leads from the drive** unless power is removed or the drive is disabled. Opening any one lead while the drive is running may destroy the drive.
- This product does not have internal solid state motor overload protection. It does not contain speed-sensitive overload protection, thermal memory retention, or provisions to receive and act upon signals from remote devices for over temperature protection. If motor protection is needed in the end-use product, it needs to be provided by additional equipment in accordance with NEC standards.

Dimensions



ALL DIMENSIONS IN INCHES [MILLIMETERS]

Installation

Mounting

- Components are sensitive to electrostatic discharge. Avoid direct contact with the circuit board. Hold the drive by the potentiometer only.
- Protect from dirt, moisture, and accidental contact.
- Provide sufficient room for access to the spade terminals and calibration trim pots.
- Mount away from heat sources. Operate within the surrounding air temperature range.
- Prevent loose connections by avoiding excessive vibration.
- Mount in either a horizontal or vertical plane.

Wiring: Use 14 - 16 AWG wire for AC line (L1, L2) and motor (A1, A2) wiring.

Shielding Guidelines: As a general rule, it is recommended to shield all conductors.

Fusing: Use fast acting fuses rated for 125 VAC or higher and 150% of the maximum armature current. Fuse the HOT leg of the AC line.

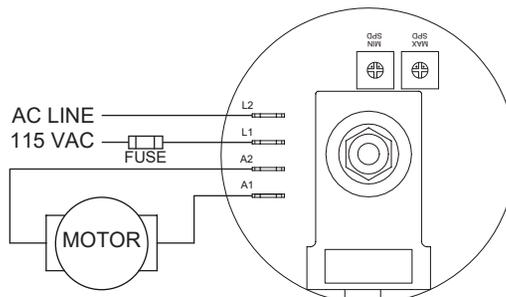
Connections

Input Power

Connect the AC line power leads to terminals L1 and L2.

Motor

Connect the DC armature leads to terminals A1 and A2. If the motor does not spin in the desired direction, power down the drive and reverse these connections.



Startup

- Verify that no foreign conductive material is present on the printed circuit board.

1. Turn the speed adjust potentiometer full counterclockwise (CCW).
2. Apply AC line voltage. Turn the speed adjust potentiometer clockwise until it clicks. Now the unit is powered.
3. Slowly advance the speed adjust potentiometer clockwise (CW). The motor slowly accelerates as the potentiometer is turned CW. Continue until the desired speed is reached.
4. Remove AC line voltage from the drive to coast the motor to a stop.

Calibration

Minimum Speed (MIN SPD): The MIN SPD setting determines the minimum motor speed when the speed adjust potentiometer is set for minimum speed. It is factory set for zero speed. To calibrate the MIN SPD:

1. Set the MIN SPD trim pot full CCW.
2. Set the speed adjust potentiometer for minimum speed.
3. Adjust MIN SPD until the desired minimum speed is reached or is just at the threshold of rotation.

Maximum Speed (MAX SPD): The MAX SPD setting determines the maximum motor speed. To calibrate the MAX SPD:

1. Set the MAX SPD trim pot full CCW.
2. Set the speed adjust potentiometer for maximum speed.
3. Adjust MAX SPD until the desired maximum speed is reached.

Check the MIN SPD and MAX SPD adjustments after recalibrating to verify that the motor runs at the desired minimum and maximum speed.