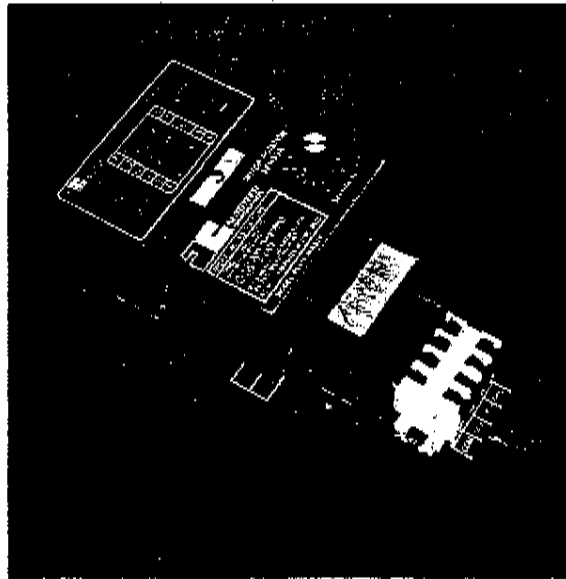


The PS119 Anti-Plugging Zero Speed Switch



- Fast and simple installation
- Lower installation costs
- Solid-state construction
- One device for different size motors
- Greater reliability
- Extended operating life
- No maintenance
- Greater system protection

A Unique Concept in Zero Speed Detection

The PS119 Anti-plugging Zero Speed Switch is designed to replace motor mounted mechanical speed controls. Typical applications are on stamping presses and in reversing controls for AC motors. The switches' reliability has been proven through extensive use by major automotive manufacturers. The PS119 works on the principle of back EMF generated by a coasting motor, explained in theory of operation.

Autotech Corporation
343 St. Paul Boulevard
Carol Stream, IL 60188
312. 668 3900
TWX 910-252-2131

Reduced Costs

With the PS119 Zero Speed Switch, installation is simple and economical as there are no gears or sensors to be mounted to the motor shaft. The device installs quickly in the control panel with no changes in control wiring. All operating checks are made in the control panel and there is no need to check zero speed at the motor.

Versatility

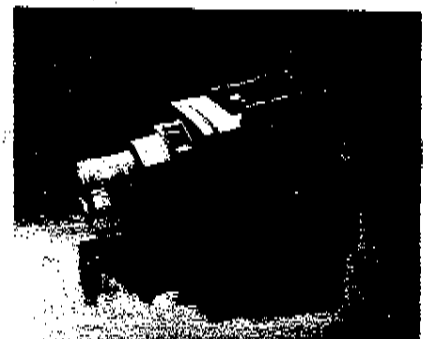
The PS119 can work on any size motor, from fractional horsepower to hundreds of horsepower. Also the motor can be either single phase or three phases, 115 VAC or 230 VAC or 480 VAC.

Theory of Operation

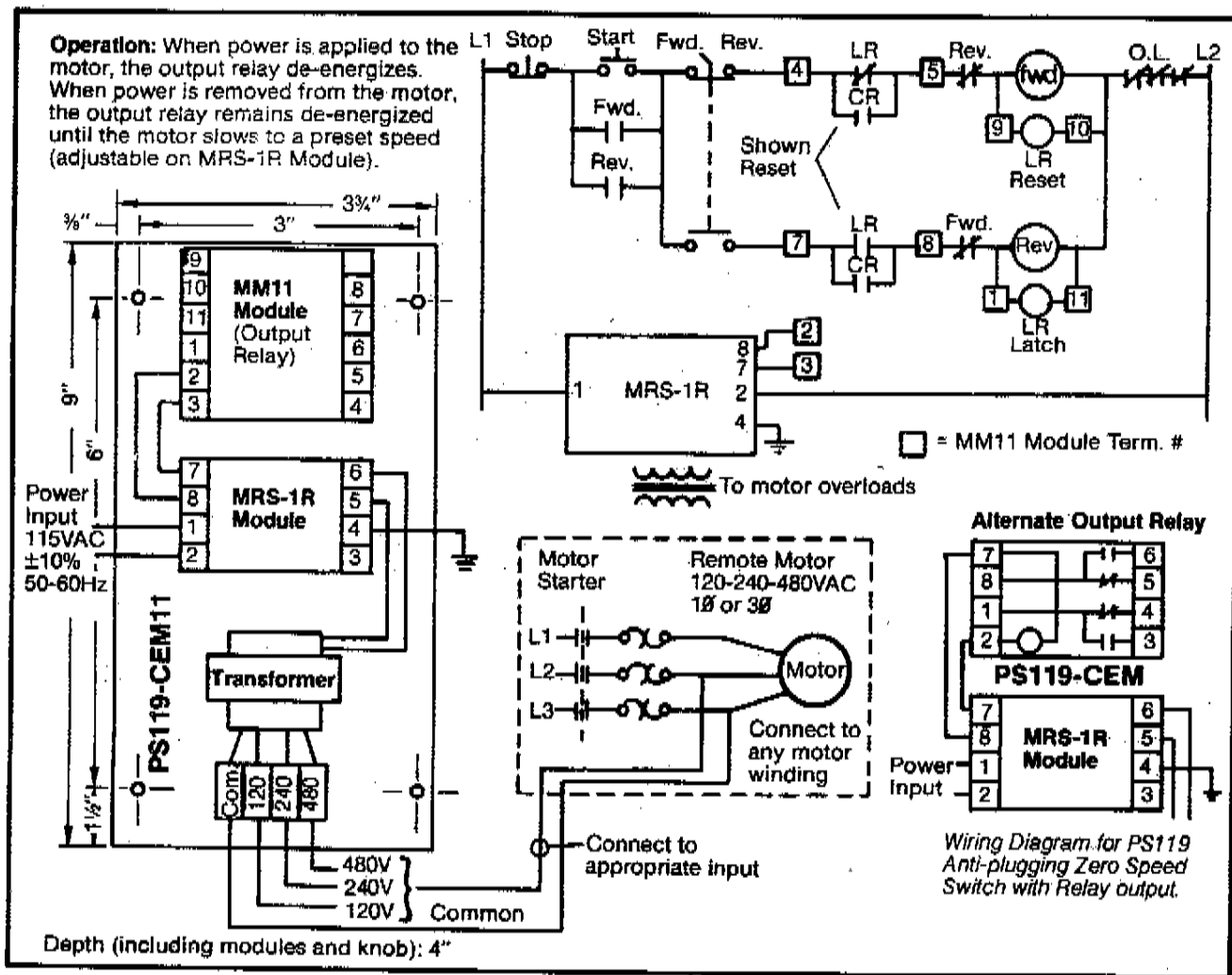
The PS119 Anti-plugging Zero Speed Switch requires 115 VAC, 50-60 Hz as power source and works off the back EMF or generated voltage of coasting motor as sensing input. As soon as the motor comes to a complete stop, the Zero Speed Switch senses the absence of back EMF and allows the motor to be started in either reverse or forward direction. Whenever the motor is rotating (regardless of applied power or momentum) the output of the MRS-1R module is de-energized. When the motor ceases turning, the output turns on. The speed at which the output will turn on can be adjusted by a knob on this module.

The MM11 memory module, when wired as shown in the diagram, allows you to restart instantly in the same direction of rotation if the motor is coasting, but prevents a restart in the opposite direction. E.g., if the motor is running in the forward direction, both LR and CR contacts (between terminals 7 & 8 of MM11) are open; therefore the motor cannot be put in Reverse.

When the stop button is pushed the motor will start coasting. The CR contact will remain open until the motor has stopped. Again the motor cannot be reversed until the CR contacts are closed. However, the motor can be restarted in the forward direction before it has come to a stop since power can flow thru LR normally closed contacts between 4 and 5 of MM11. Only when the motor has stopped turning and the CR contacts close can power flow thru 7 and 8 of MM11 to activate the Reserve contactor.



Motion Light



Typical wiring diagram of Autotech's PS119 Anti-plugging Zero Speed Switch which includes the memory module.

Specifications

- Input Power:** 105 to 135 VAC, 50-60 Hz, 10w exclusive of load
- Output Contacts:** 10 Amp resistive at 115 VAC
- Sensing Input:** 120, 240 or 480 VAC, single or three-phase motor
- Operating Temperature:** -10° F to 135° F

How to Order

1. **PS119-MRS1R Motor Rotation Sensor Module**
2. Select the output:
 - a. **PS119-RLY Relay**, 10 Amp 2 form C output contact for straight zero speed application
 - b. **PS119-MM11 Memory Module** for ability to start in the same direction before coming to a stop
3. Select the base chassis:
 - a. **PS119-CEM** for use with PS119-RLY Relay
 - b. **PS119-CEM11** for use with PS119-MM11 Memory Module
4. **PS119-LITE Optional Fly-Wheel Motion Light** that indicates to the machine operator when true zero speed is obtained.