

# SVS, Inc.

## Remote Power Sensor

**Important:** For lifts with the power sensor accessory installed, Keep the wall plate controller key switch in the Service position when plugging the wall plate controller cable into the lifts gray control box. This will prevent the power sensor from immediately activating the motor and defaulting to the Up position. The lift shipping blocks will prevent the upper limit microswitches shutting off the motor. The power sensor will operate in both the Auto and Off key switch positions.

## Circuit Description

The power sensor circuit is designed to monitor the current that is supplied to the projector, and lower the lift to the Show position when the projector is turned on. The power sensor will trigger a relay on the motor control board when the current exceeds a preset level. The power sensor has a variable resistor on the wall plate controller to adjust the current trigger level. The power sensor is factory adjusted to lower the lift when the current exceeds .9 amps (100 watts). This setting will work for most projectors, but can be adjusted for your projector if necessary.

## Set Up

The proper field adjustment should be done with the wall plate controller key switch in the Auto position, the projector plugged into the power outlet on the lifts gray control box, the lift plugged into wall power, and no video signal present.

## Adjustment

The current should be approximately 150 to 800 watts. Turn the variable resistor located on the wall plate controller clockwise until the lift lowers to the Show position. This sets the trigger level at the exact current that the projector is using. Turn the variable resistor clockwise approximately three more turns to set the threshold below the normal projector current. The variable resistor has thirty turns end-stop to end-stop for accurate adjustment. If you have a high impedance digital voltmeter, you can monitor the approximate 1.1 VDC that is required to turn on the transistor and trigger the lift to lower when the projector is turned on. Connect one voltmeter lead to the Violet wire and the other voltmeter lead to the Black wire of the variable resistor.

Note: If the three turns are not adjusted away from the threshold level, the relay will not latch and the lift will not go up or down until the relay sees an increase in the pull up voltage.

If screen control is used, see the schematic and wall plate controller pin out description.

## **SVS Projector Lifts Solid State Motor Control Wall Plate Controller Pin Out Description**

- Pin 1** Is the 24 VAC common from the 24 VAC transformer.
- Pin 2** Is the Up command when the 24 VAC from Pin 1 is connected. Current is approximately 10 ma.
- Pin 3** Is the Down command to the Show Position Microswitch, when the 24 VAC from pin 1 is connected. Current is approximately 10 ma.
- Pin 4** Is the Down command to the Service position, when the 24 VAC from Pin 1 is connected. Current is approximately 10 ma.
- Pin 5** If the Power Sensor is used, the 24 VAC from Pin 1 is routed to Pin 5 by the Key Switch Auto position and is connected to the power sensor by Pin 5.
- Pin 6**
- 1) If the Power Sensor accessory is used, this is the return from the variable resistor. Voltage will be approximately 1.1 VDC when the projector is turned on (measured between Pin 6 and Pin 7).
  - 2) If a second Show Position accessory is used, this is the Down command for second Show Position when 24 VAC from Pin 1 is connected. Current is approximately 10 ma.
  - 3) If the 12 Volt Trigger accessory is used, this is the input Down command. Current is approximately 10 ma.
- Pin 7** Is the common of the 24 VAC transformer and is used for supplying a return ground back to the transformer. This common is floating above the chassis ground and has no continuity to electrical ground.
- Pin 8** Is connected to the optoisolator of the 110 VAC that is applied to the motor brake. This is used to power the LED on the wall plate controller and is isolated from the 110 VAC by the optoisolator.
- The common of the LED is connected to Pin 7. This can confirm that power is being applied and removed to the motor brake from the motor control board at the proper time. The LED will light when the motor runs. Voltage with LED as load is approximately 1.8 VDC and approximately 15 ma current.
- Pin 9** Is used only when the Power Sensor with Screen Control accessory is installed. This is the common contact of the Power Sensor relay. 24 VAC at 2 Amps Maximum. *Installer runs wire to screen relay.*
- Pin 10** If the Power Sensor accessory is used, this is the sensitivity voltage to the variable resistor on the wall plate controller (.2 TO 8 VDC).
- Pin 11** Is used only with the Power Sensor with Screen Control accessory and is the *normally closed* contact (Up). *Installer runs wire to screen relay.*
- Pin 12** Is used only with the Power Sensor with Screen Control and is the *normally open* contact (down). *Installer runs wire to screen relay.*