# SMART SHOT MONITOR

# INSTALLATION GUIDE FOR IRRIGATION




Version : 0715

**CAUTION**: **Never connect any voltage to the SMART SHOT Sensor Input terminals. The Smart Shot supplies the voltage needed for sensor switching (use dry relay contacts only). Make sure the float or sensor terminals do not have voltage from previously wired configurations.**

**ATTENTION**: **Depending upon the style of system that your are going to control with the Smart Shot Cellular Controller you may need to supply additional parts. Such as relays, step-down transformers, Murphy switches etc.**

## CELLULAR CARRIER

Each Smart Shot's data plans are for 1 year of Wireless Data service that starts on the date of install. The Wireless data plans are renewable for periods of 1 year through Hot Shot Systems Inc.

## BATTERY BACKUP

During a power outage, a rechargeable battery will supply power to the Smart Shot. This will allow the Smart Shot to send alerts when there is a loss of power. The Smart Shot comes with a battery saver feature that will turn off the Smart Shot if the voltage drops from 12vdc to 10vdc. This function will add years of life to the gel cell battery.

**Important... When the battery has discharged, it will take approximately 15 to 20 minutes for the battery to charge enough to operate the Smart Shot in case of another power failure. The battery should be replaced every year for the best reliability during power outages. Call 785-623-1500 for replacement batteries.**

## OPTIONAL SOLAR POWERED SMART SHOT

The Solar Powered Smart Shot comes with a 10watt solar panel along with a larger 12vdc backup battery. Because of shipping the solar battery in not installed in the smart shot enclosure. After the Smart Shot enclosure is mounted the solar battery can be placed in the lower right corner. Connect he red battery wire lead to the positive terminal on the battery and the black battery wire to the negative terminal on the battery. The 10 watt solar panels comes with a pre installed mounting bracket that is designed to position the solar panel at an optimal 45degree angle upwards toward the sun. The solar panel needs to be installed facing south and in a location where it will be exposed to full sun all day.

# SMART SHOT MONITOR ON ENGINE PANEL

**Wire as per the diagram below.**

**Any deviations in wiring may cause damage and void warranty.**

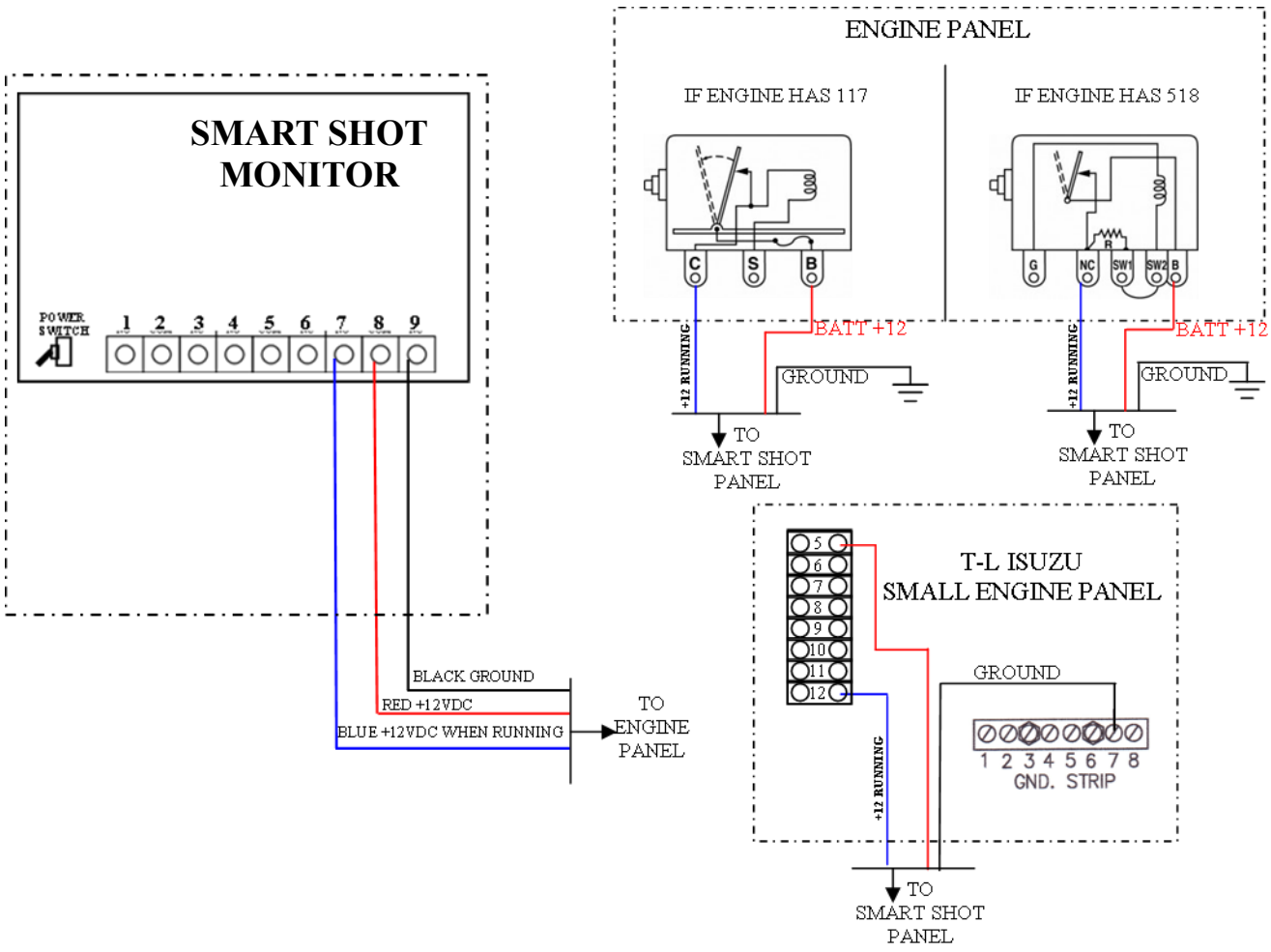
**Operation:**

The Smart Shot is powered by 12vdc coming from the battery or terminals shown below.

- The Blue wire is powered with +12vdc when the pivot starts, which powers the Smart Shot Sensor Input #1.

  Sensor Input #1 of the Smart Shot is now lit and shows on line that the pivot is running.

- If the pivot stops for any reason the Blue wire will loose power, which opens the Sensor Input #1 of the Smart Shot. The Smart Shot will now send out an alert that the pivot has stopped and show online that the pivot is off.



# SMART SHOT MONITOR ON T-L ELECTRIC PANEL

**Wire as per the diagram below.**

**Any deviations in wiring may cause damage and void warranty.**

**Operation:**

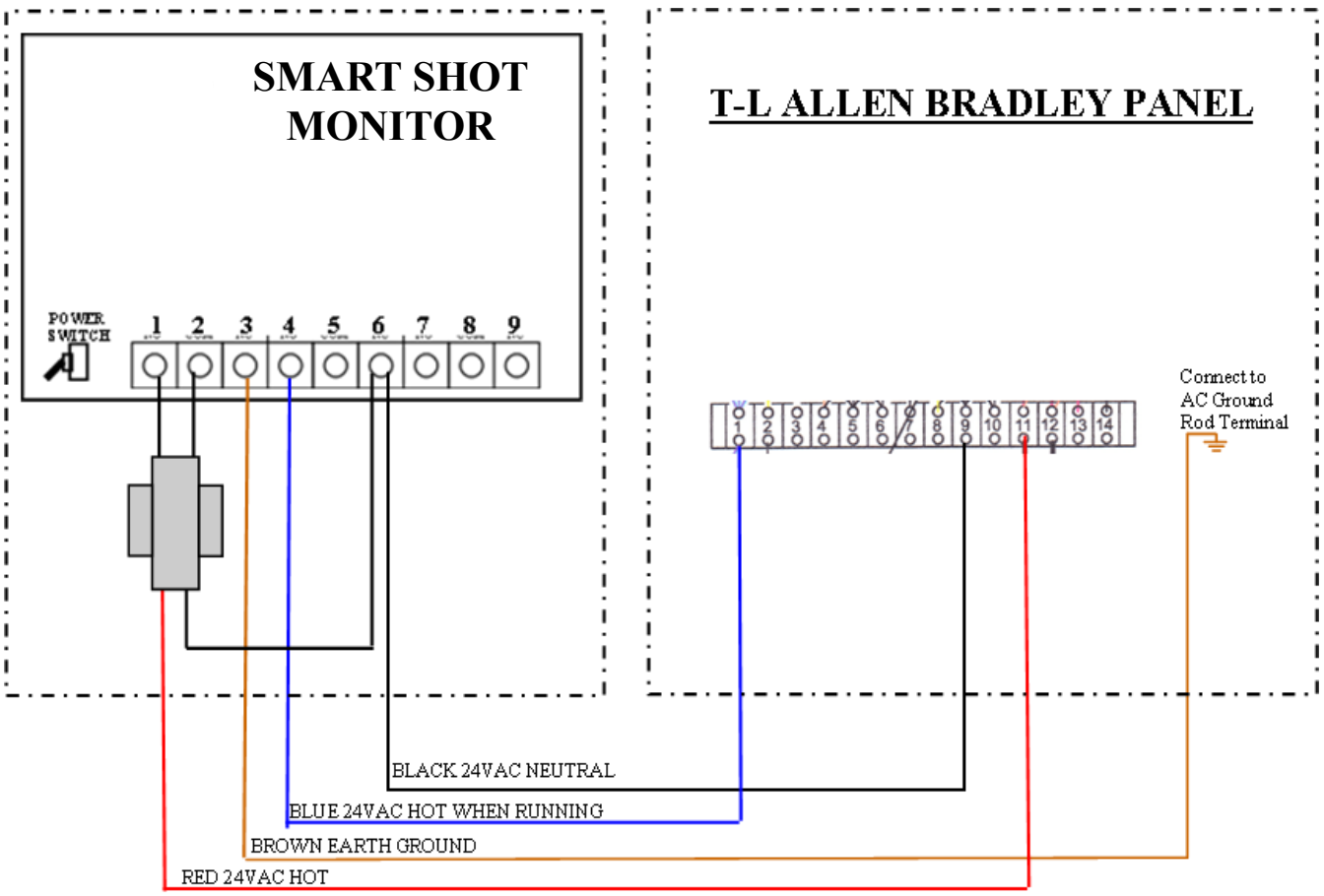
The Smart Shot is powered by 24vac hot when disconnect is on coming from terminals 11 and 9 in the T-L panel.

- T-L AB Panel Well Switch is up and Wet/Dry Switch is up.

- Term #1 of the AB Panel has 24vac hot when the pivot is running, which also controls the Smart Shot Sensor Input #1.
  Sensor Input #1 of the Smart Shot is now lit and shows on line that the pivot is running.

- If equipped the Power Company Auto Restart can start/stop the systems per normal Auto Restart function.

- If the pivot stops for any reason Term #1 of the AB Panel will loose power, which opens the Sensor Input #1 of the Smart Shot. The Smart Shot will now send out an alert that the pivot has stopped and show online that the pivot has stopped.



# SMART SHOT MONITOR ON T-L ELECTRIC 10 TERMINAL PANEL

**Wire as per the diagram below.**

**Any deviations in wiring may cause damage and void warranty.**

**Operation:**

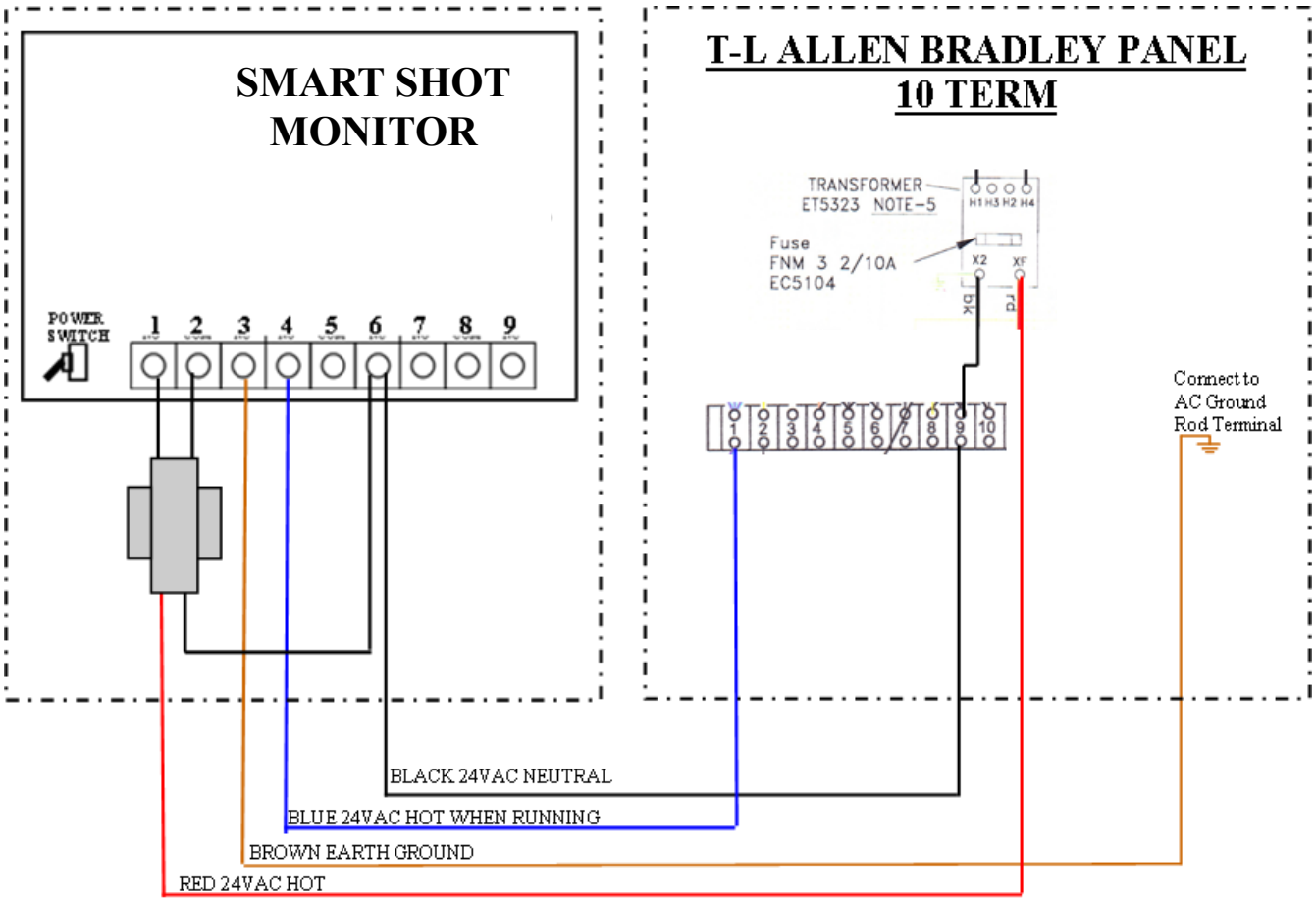
The Smart Shot is powered by 24vac hot when disconnect is on coming from terminal 9 and the X1 terminal on the transformer.

- T-L AB Panel Well Switch is up and Wet/Dry Switch is up.

- Term #1 of the AB Panel has 24vac hot when the pivot is running, which also controls the Smart Shot Sensor Input #1.
  Sensor Input #1 of the Smart Shot is now lit and shows on line that the pivot is running.

- If equipped the Power Company Auto Restart can start/stop the systems per normal Auto Restart function.

- If the pivot stops for any reason Term #1 of the AB Panel will loose power, which opens the Sensor Input #1 of the Smart Shot. The Smart Shot will now send out an alert that the pivot has stopped and show online that the pivot has stopped.



# SMART SHOT MONITOR ON VALLEY ELECTRIC PANEL

**Wire as per the diagram below.**

**Any deviations in wiring may cause damage and void warranty.**

**Operation:**

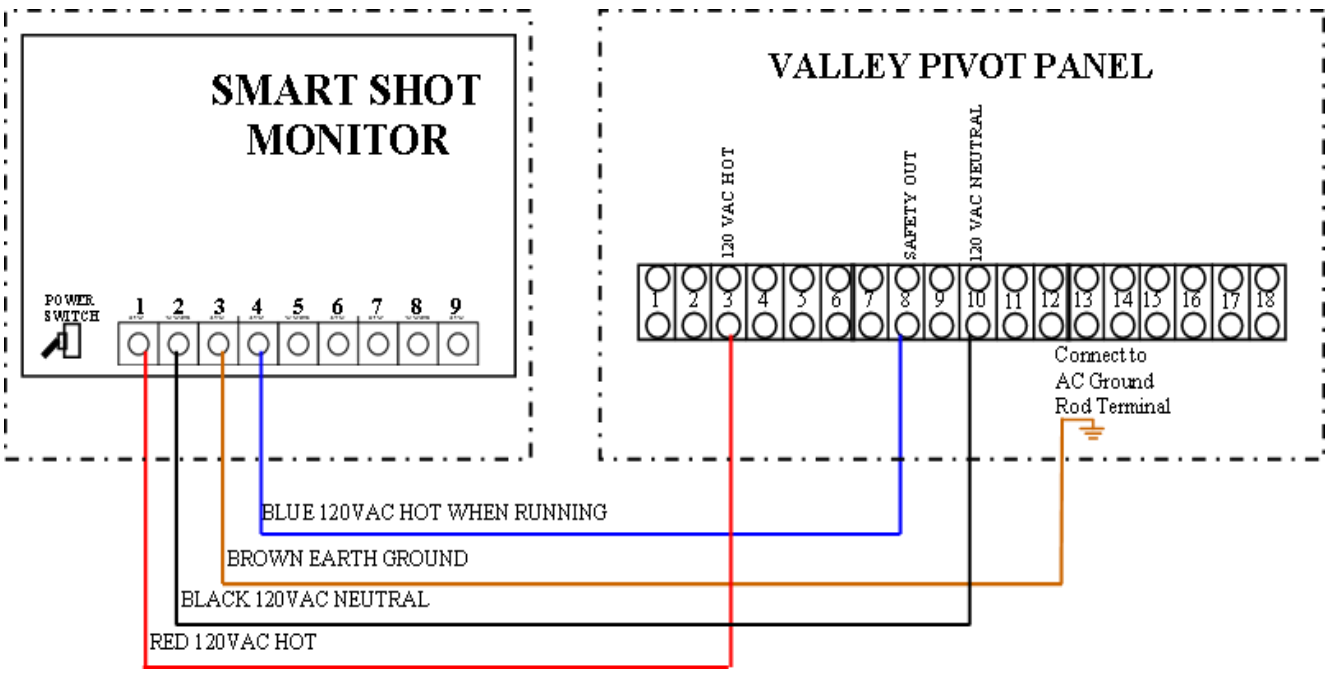
The Smart Shot is powered by 120vac hot when disconnect is on coming from terminals 3 and 10 in the Valley panel.

- Term #8 of the Valley Panel is has 120vac hot when the pivot is running, which also controls the Smart Shot Sensor Input #1

  Sensor Input #1 of the Smart Shot is now lit and shows online that the pivot is running.

- If equipped the Power Company Auto Restart can start/stop the systems per normal Auto Restart function.

- If the pivot stops for any reason Term #8 of the Valley Panel will loose power, which opens the Sensor Input #1 of the Smart Shot. The Smart Shot will now send out an alert that the pivot has stopped and show online that the pivot has stopped.



# SMART SHOT MONITOR ON ZIMMATIC COMPUTER PANEL

**Wire as per the diagram below.**

**Any deviations in wiring may cause damage and void warranty.**

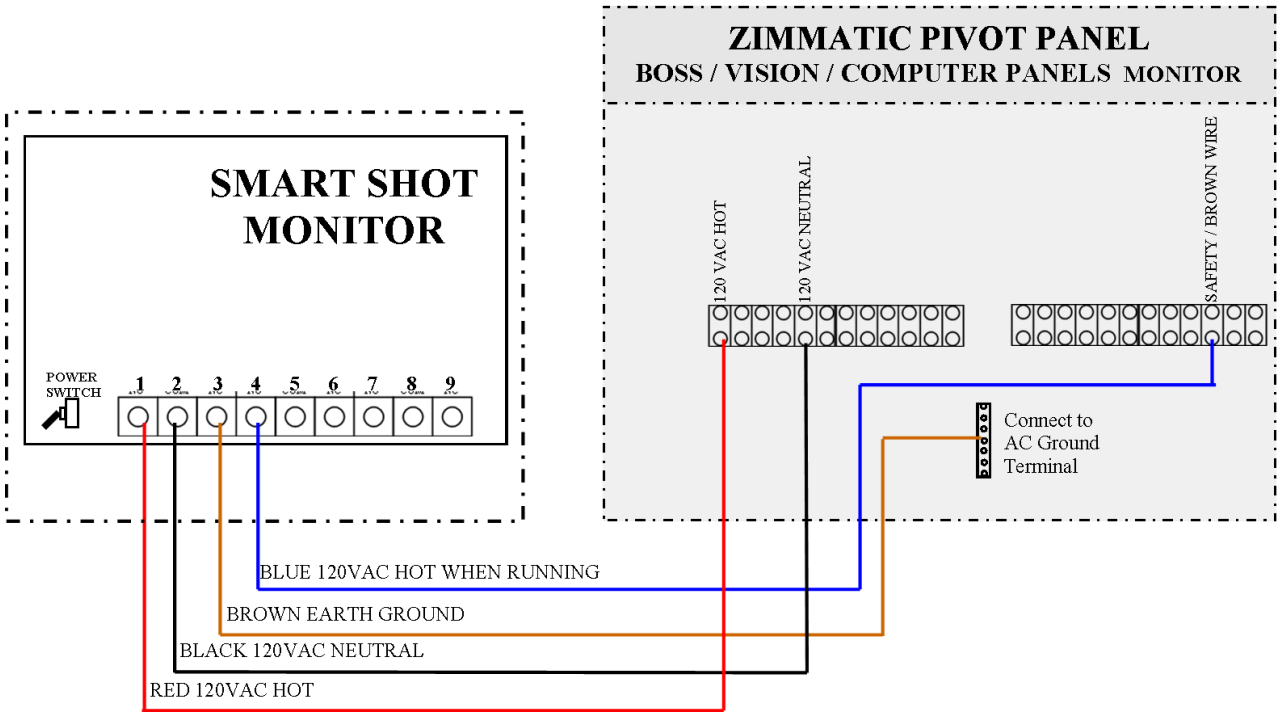
**Operation:**

The Smart Shot is powered by 120vac hot when disconnect is on coming from the terminal strip in the Zimmatic panel.

- The terminal with the Safety Brown Wire in the Panel has 120vac hot when the pivot is running, which also controls the Smart Shot Sensor Input #1.
  Sensor Input #1 of the Smart Shot is now lit and shows online that the pivot is running.

- If equipped the Power Company Auto Restart can start/stop the systems per normal Auto Restart function.

- If the pivot stops for any reason the Safety Brown Wire Terminal will loose power, which opens the Sensor Input #1 of the Smart Shot. The Smart Shot will now send out an alert that the pivot has stopped and show online that the pivot has stopped.



# SMART SHOT MONITOR ON REINKE PANEL

**Wire as per the diagram below.**
**Any deviations in wiring may cause damage and void warranty.**

**NOTE: Due to a neutral safety in Reinke pivots the 120vac supply voltage to the Smart Shot Monitor must be wired as shown below. The 120vac supply voltage polarity needs to be reversed for the Smart Shot to operate properly on a Reinke electric pivot. The Smart Shot is specifically designed to run on reversed polarity when wired to a Reinke panel.**

**Operation:**

The Smart Shot is powered by 120vac when the disconnect is on coming from terminals J13 and J9 in the Reinke panel.

- The Safety Brown Wire on Terminal J7 in the Reinke panel has 120vac neutral when the pivot is running, which controls the Sensor Input #1 (*terminal 4*) in the Smart Shot.
  Sensor Input #1 of the Smart Shot is now lit and shows on line that the pivot is running.

- If equipped the Power Company Auto Restart can start/stop the systems per normal Auto Restart function. When restarted the Smart Shot Monitor will update on line showing that the pivot is running.

- If the pivot stops for any reason the Safety in the Reinke panel will loose neutral, which opens the Sensor Input #1 of the Smart Shot. The Smart Shot Monitor will now send out an alert that the pivot has stopped and show online that the pivot is off.