



396-3332Y1

Pivot Stopped and Pivot Kill Relay Installation Instructions

The installation of the relays in this instruction sheet require access inside the irrigation system control panel where voltages up to 480 VAC are present. Only a qualified electrician should install this kit.

Kit Numbers and Kit Descriptions

This instruction sheet includes relay harnesses that perform separate functions. One or both relays may be installed to achieve the desired functionality.

546-04-100100 - Marksman Pivot Stopped Input Relay Kit

546-04-100150 - Marksman Pivot Kill Output Relay Kit

546-04-100200 - Marksman Pivot Kill Output Relay Kit (Retrofit)

Marksman Pivot Stopped Input

The pivot stopped input is used to send the Marksman a stop signal if the irrigation system shuts down. This is an input to the Marksman sent by the irrigation system. Most regulations require functionality of this type so fertilizer or chemical will not be pumped if the irrigation system stops.

The Pivot Stop Input Relay (R1) is basically attached to the same terminals as the existing safety coil. If power is interrupted to the safety coil shutting down the irrigation system, the Marksman will stop application at the same time.

Marksman Pivot Kill Output

The pivot kill output allows Marksman to shut down the irrigation system if Marksman has an error. This might be an empty tank or plugged strainer stopping or slowing product application. This functionality is typically not required by any regulations and is installed if the customer wants to stop irrigation if a fertigation fault occurs.

Loss of Power

If the Marksman loses power the irrigation system will continue to function normally. If there is a failure where Marksman loses power but the irrigation system does not, the Marksman will not shut down the irrigation system. An example of this is a failure of a fuse, transformer or power supply for the Marksman only. The Marksman controller must be powered on to have the ability to shut down the irrigation system.



Physical Relay Mounting

The relay kit includes a short piece of DIN rail to mount the relays on. Disconnect or shut off power to your irrigation control panel. Open the panel and find a location to mount the DIN rail. The relays will both snap onto the DIN rail.

Pivot Stopped Input Relay (R1) Installation

1. The pivot stopped relay is identified as R1 and will have red and white wires attached to it.
2. Locate the existing safety coil and attach the red wire to one coil terminal and attach the white wire to the other terminal of the coil (Shown as connection C and Neutral on the schematic). R1 is a 110 VAC relay, so do not attach to a circuit of higher voltage. The red and white wires are interchangeable in which one is hooked to each side of existing coil.
3. Remove the black/white and black wires from the relay noting where they are attached. Route the wires through a cable gland in the control panel and reattach to the relay.
4. Plug the Pivot Stopped Input into the Marksman electrical harness with the connector with identical label.

Operation & Troubleshooting

- The Marksman pivot stopped relay is a normally closed relay. With the relay closed the Marksman will not run and will show STOP1 on the home screen.
- With power applied to the red and white wires by the irrigation control system, the relay will open which will allow Marksman to run.
- To test the Marksman without the irrigation system running, simply unhook the Pivot Stopped Input connector so the Marksman sees an open circuit.

Pivot Kill Output Relay (R2) Installation

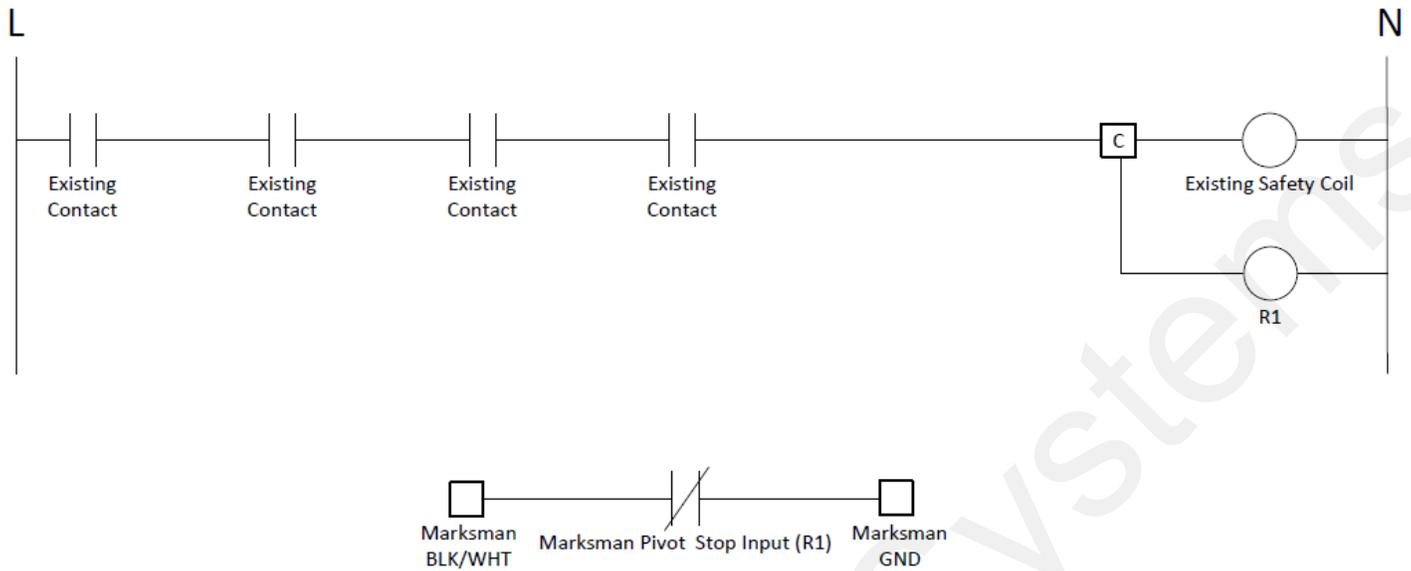
1. The pivot kill relay is identified as R2 and will have orange and black wires attached to it.
2. Locate the existing safety contacts. Connect the orange and black wires into the chain of safety contacts (Connection A and B in schematic).
3. Remove the black and orange/white wires going to the Pivot Kill Output connector from the relay noting where they are attached. Route the wires through a cable gland in the control panel and reattach to the relay.
4. Plug the Pivot Kill Output into the Marksman harness connector with identical label.

Operation & Troubleshooting

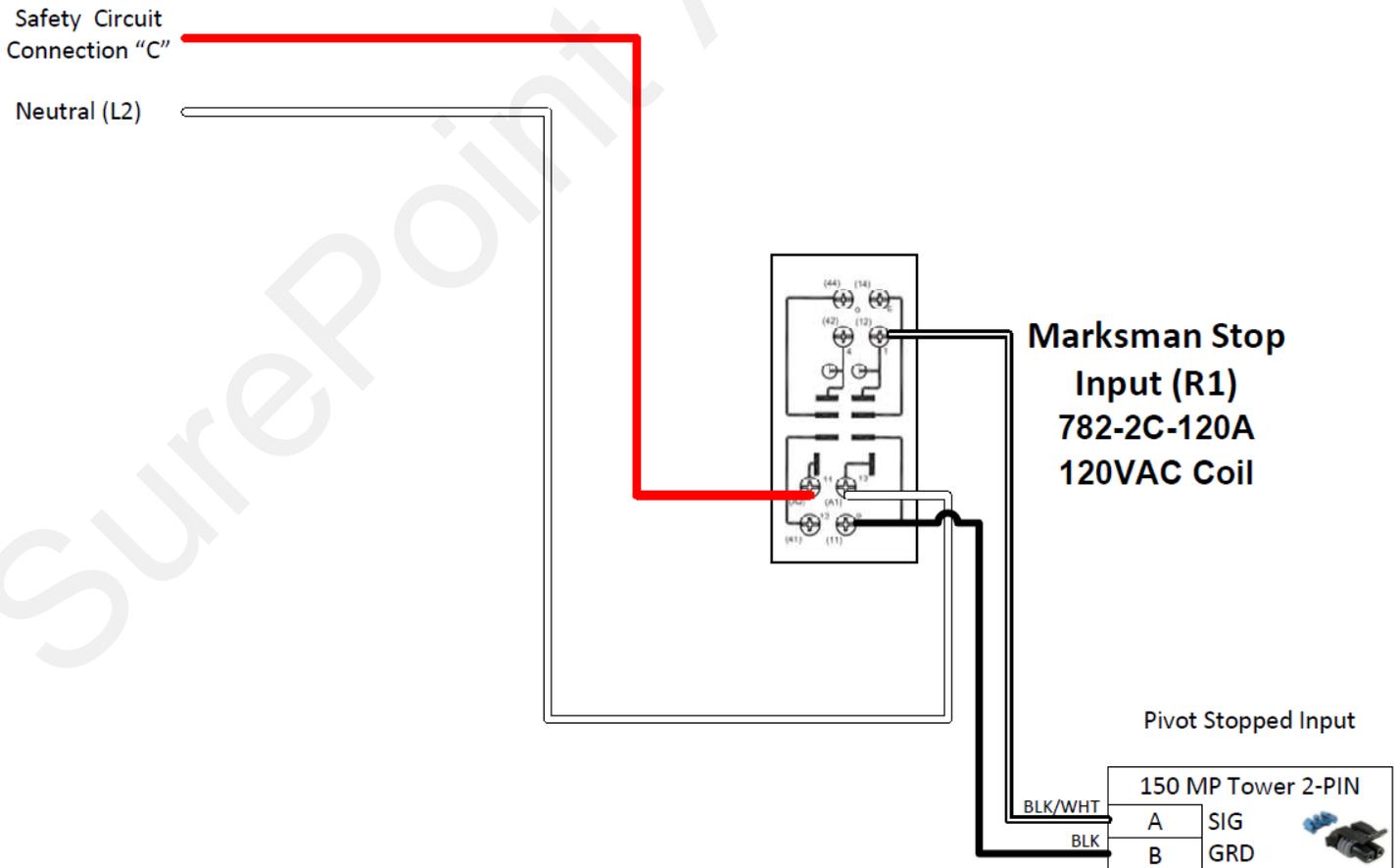
- The pivot kill output is a normally closed relay. The Marksman will send 12 volts to the relay when Marksman has a fault condition. This will open the relay, which will stop the pivot.
- Unplugging the Marksman Pivot Kill Output or turning off the Marksman controller will allow the pivot to run normally.



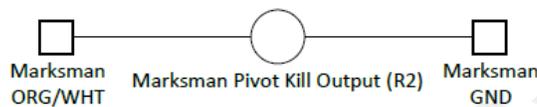
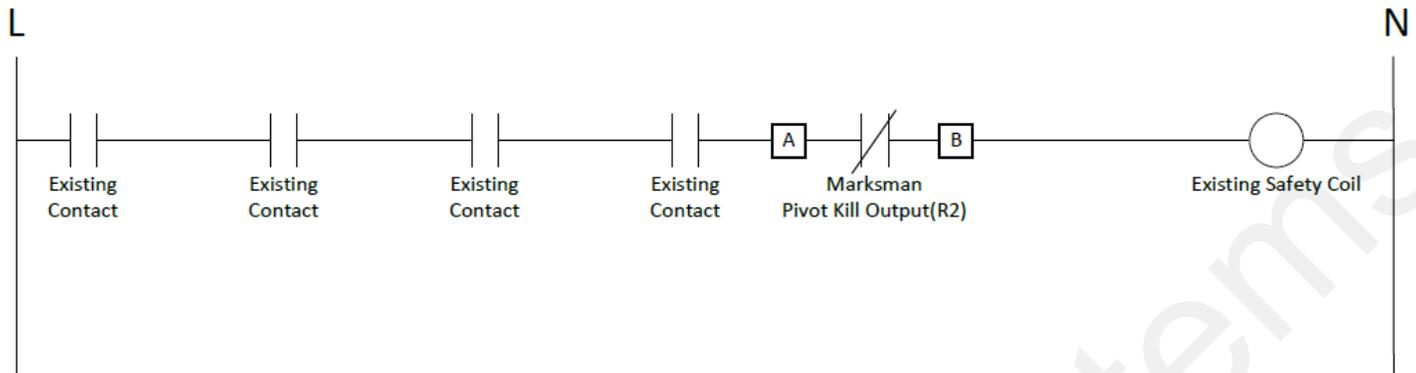
Marksman Pivot Stop Wiring (208-08-3328Y1)



Marksman Pivot Stop Input (R1) coil connection (Connection C) can be placed anywhere where there is 110VAC when the Marksman is permitted to run. This is an example of a circuit.



Marksman Pivot Kill Wiring (208-08-3329Y2)

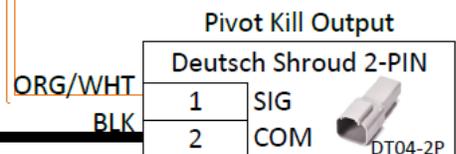
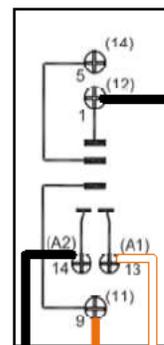


Marksman Pivot Kill Output (R2) contact can be placed anywhere in series with the safety circuit, here it is shown at the end before the safety coil.

Pivot Side of
Relay Circuits
Max Amps: 15

Safety Circuit
Connection "A"
Connection "B"

**Marksman Pivot Kill
Output (R2)
781-1C-12D
12VDC Coil**



If the Pivot Kill Output connector is unplugged from the controller or the controller power is off, the Pivot Kill signal will be in bypass.