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Wiring Diagrams for STOP – Manual Control Pivot

<u>Hydr Pumping Unit</u>	<u>Field Commander Location</u>	
Electric	At Allen Bradley Panel	9
Electric	2 Towers from Pivot Point	10
Engine	At Engine	11
Engine	2 Towers from Pivot Point	12

Note: FC = Field Commander



What's in the AgSense Shipping Box?

AgSense Field Commander FC2 TL-24 Units (with Stop):

- Qty 1 - Field Commander FC2 TL-24
- Qty 1 - Mounting Hardware Sack (Beam Clamps, wire nuts, etc.)
- Qty 1 - MD90835 T-L 24V Installation Kit for AgSense
- Qty 1 - CD91158 AgSense Installation FC2 TL-24 with Stop for TL Pivots

MD90835 T-L 24V Installation Kit for AgSense - Bill of Materials Listing. Use parts as required.

<u>Part No.</u>	<u>Description</u>	<u>Req'd.</u>
EA53469	3AMP DIODE ASSEMBLY	2
	(use diodes with ET Manifold Boards that do not have a power block.)	
EH52124	AUTO STYLE 24VDC RELAY	1
EH52350	WIRE NUT - ORANGE	3
EH53065	TERM QC FEM .250" 16-14	4
FC4893	HOSE CLAMP #104	2

AgSense Field Commander Specifications

Power Requirements for these units:

DC Powered Unit 7-40V DC:

At 12v DC: 1.0A MAX
0.1A - 0.5A during normal operation

120vAC Powered Unit:

At 120v AC: 0.25A MAX
0.05A - 0.15A during normal operation

The above numbers are the current required for our unit to operate. Below is the current the relays in our box can control: On both AC and DC units, each relay can handle a peak max of 10A, 5A constant (at a max voltage of 120vAC, or 30vDC).

Contact Information

AgSense Phone Number: 605-352-8350.

T-L Irrigation Phone: 800-330-4264.



Overview – Point and Precision Point Control Pivots.

The wiring diagrams in the following section are for:

- T-L Pivots with Point or Precision Point Control.
- Using AgSense FC2 TL-24 with Stop version of the Field Commander.

Point Control Panel

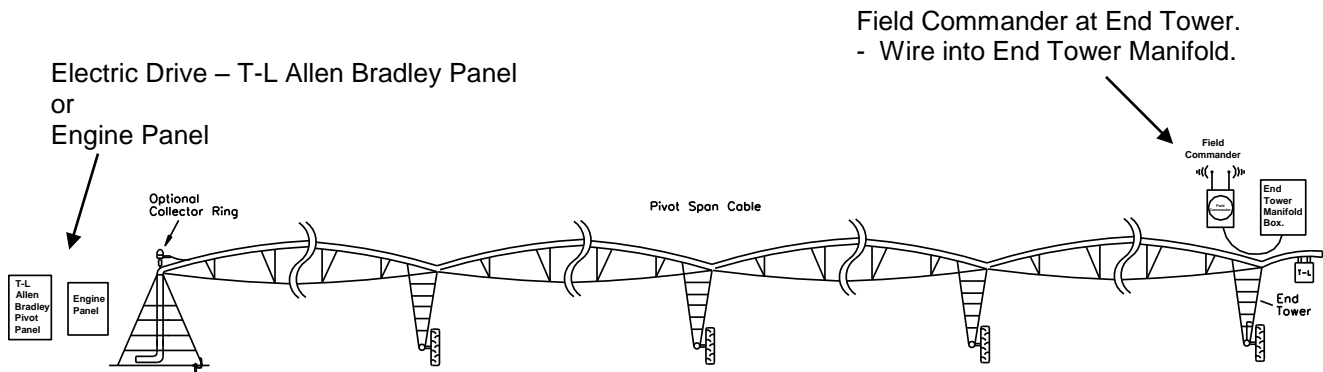


Precision Point Control



Field Commander Location at End Tower

Electric Drive or Engine Drive Hydraulic Pump at Pivot Point or Remote





Installation at End Tower – Point or Precision Point Control

The AgSense unit is installed at the end tower, with mounting in one of two ways.

1. Mounted to the spreader rail on truss rod overhangs with the beam clamps supplied by AgSense as shown in the picture below.



2. Mounted on the span pipe with the hose clamps supplied in the installation kit as shown in the pictures below.

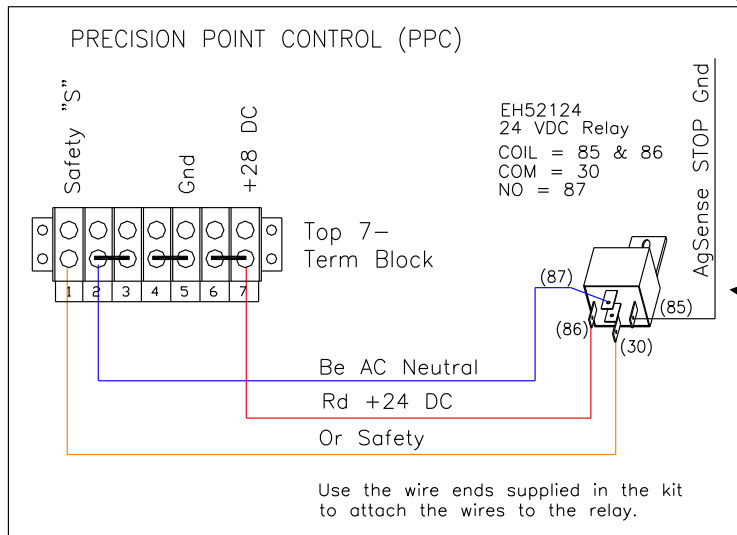
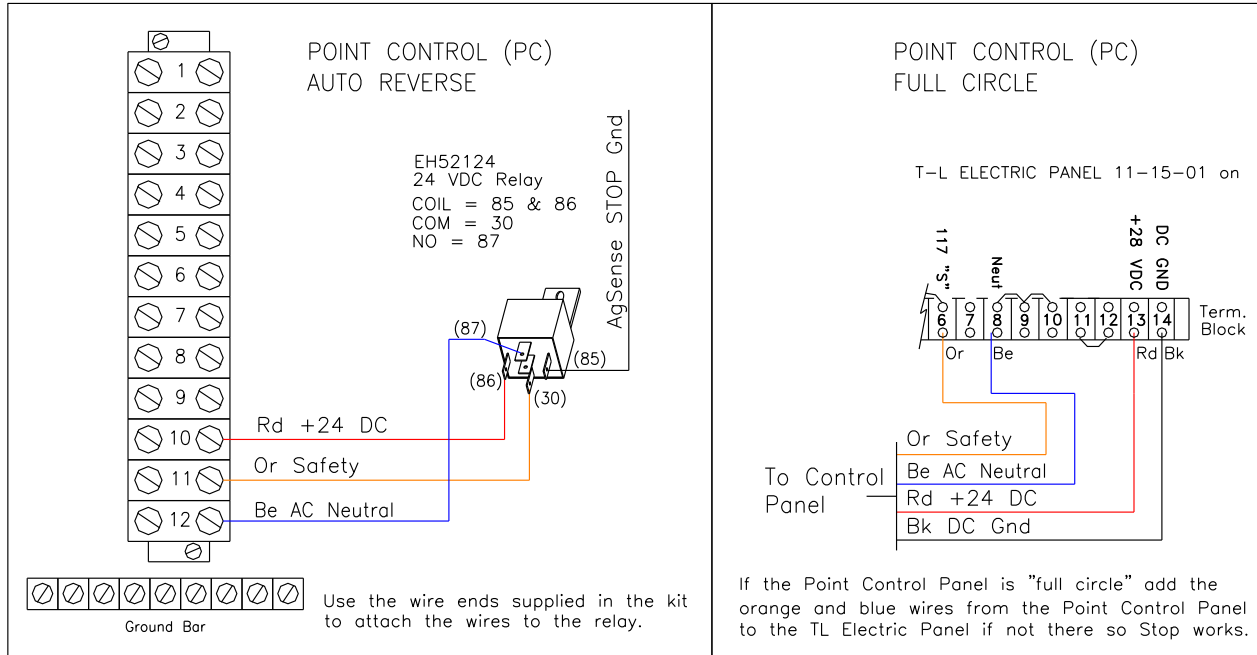




Wiring Diagrams for STOP - Point Control or Precision Point Control Pivot.

Wiring of Stop Relay – Electric Drive

Install the 24 VDC relay from the installation kit into your Point or Precision Point Control panel in a suitable location and wire as shown below.

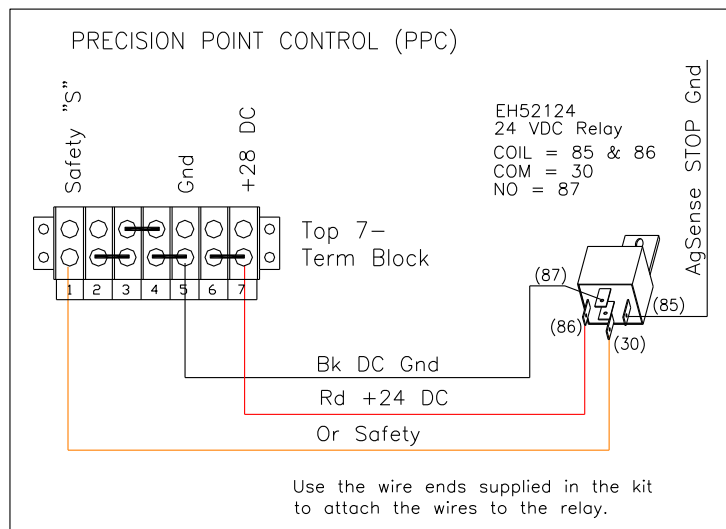
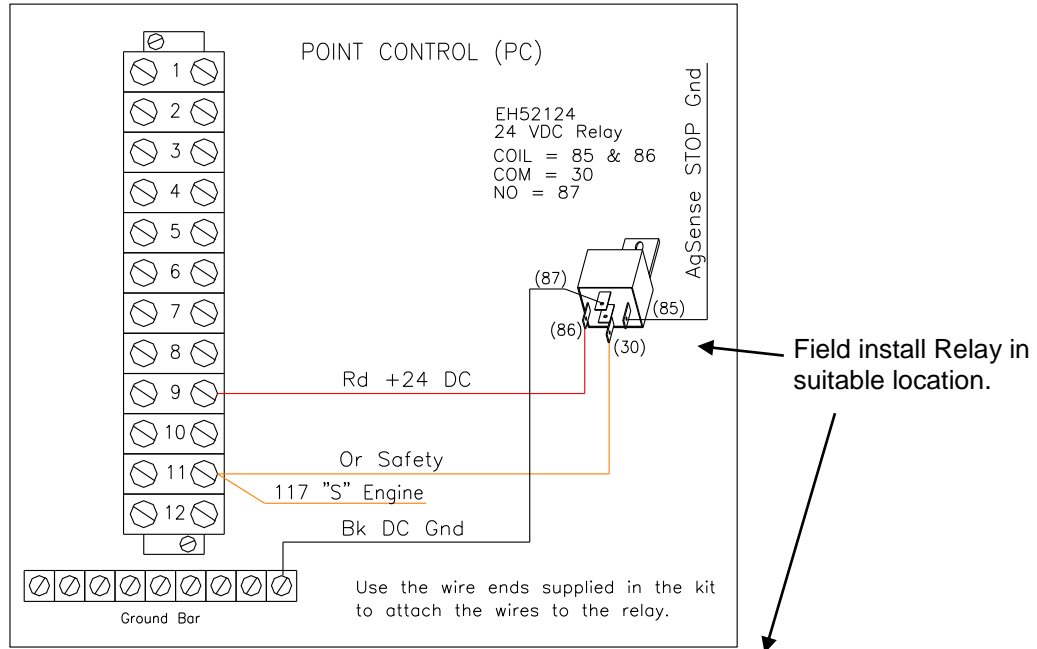


Field install Relay in suitable location.



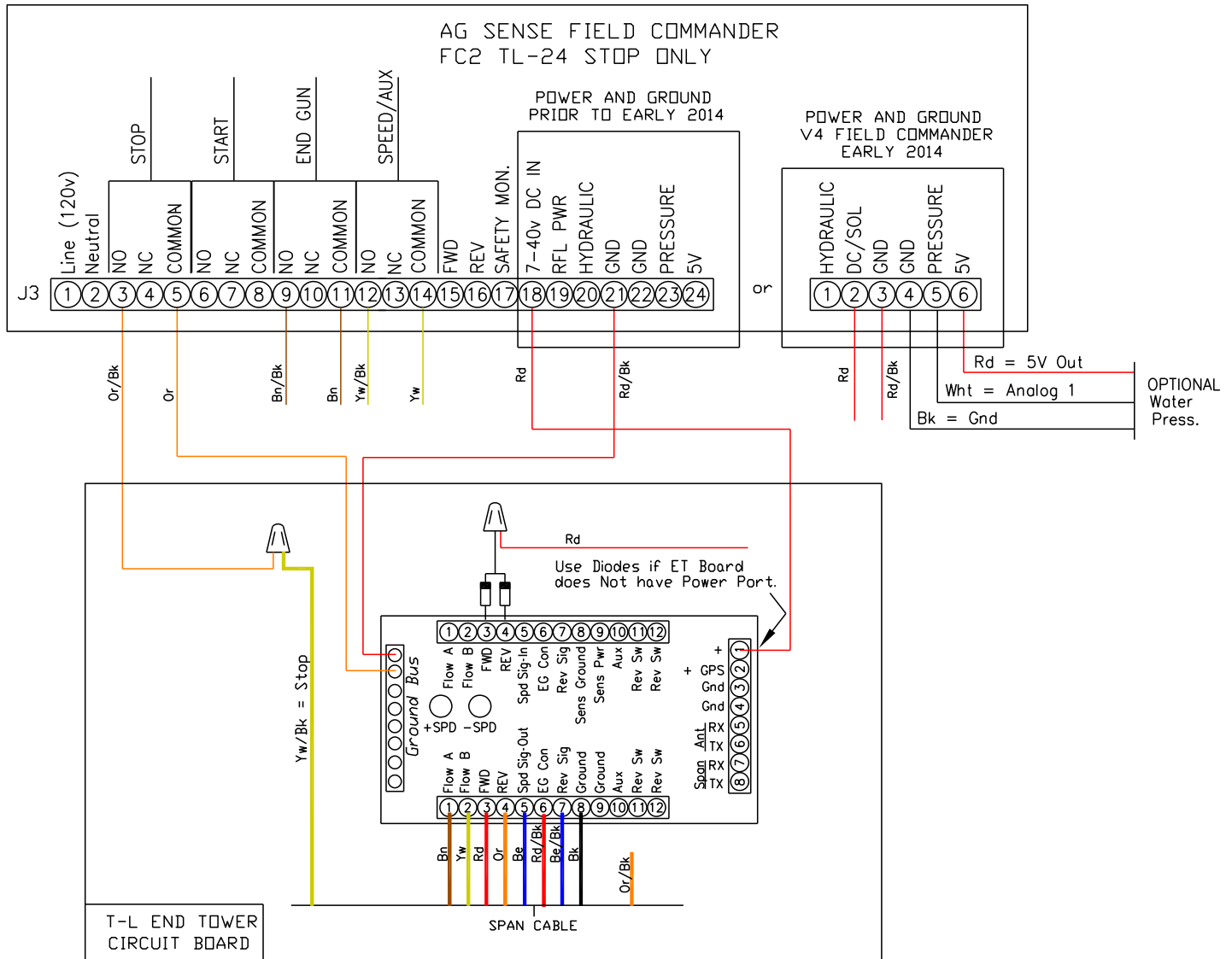
Wiring of Stop Relay – Engine Drive

Install the 24 VDC relay from the installation kit into your Point or Precision Point Control panel and wire as shown below. .





Wiring of Field Commander at End Tower Manifold for Point or Precision Point Control



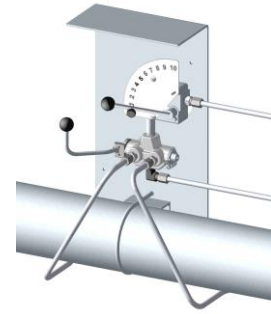
Operation

Red to AgSense = +24 VDC when Pivot running, 0 VDC when stopped
 Stop Command from Website: Closes Stop Relay for 10 seconds, closes Relay at pivot point and stops pivot.



Overview - Manual End Tower Control Pivots.

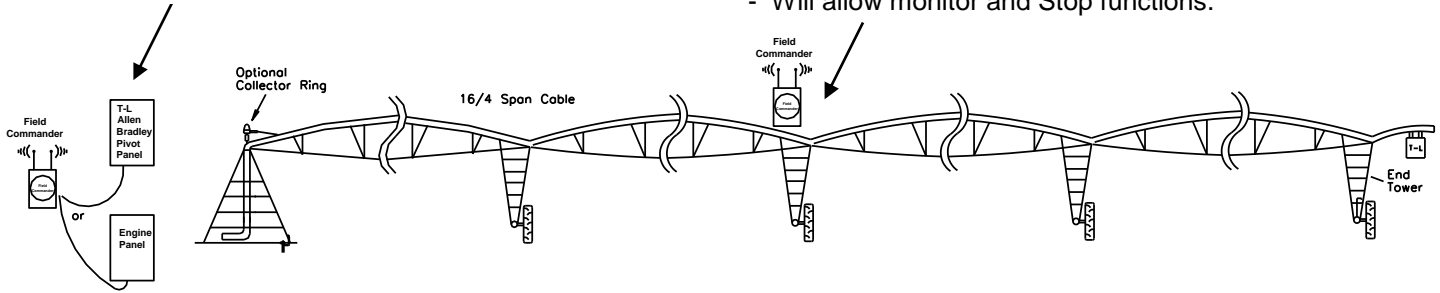
The following wiring diagrams are for T-L Pivots with Manual Control that are using the FC2 TL-24 with Stop powered version of the Field Commander and not the Solar version.



Field Commander Location at Panel or 2 Towers from Pivot Point

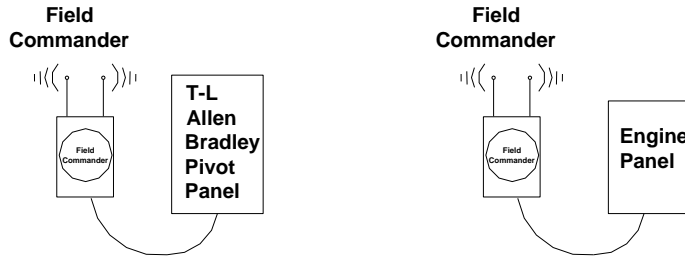
- Mount at T-L Allen Bradley Panel (Electric) or Engine Panel
- Will not show correct Angle location of Pivot on Wagnet website.
 - Will allow monitor and Stop functions.

- Mount 2 Towers Out:
- Requires 16/4 Span Cable
 - Optional Collector Ring at Pivot Point
 - Will show Angle location of Pivot on Wagnet Website.
 - Will allow monitor and Stop functions.



Field Commander Location at Panel

Field Install and wire into Panel (either Allen Bradley Electric or Engine Panel) per diagrams following.



Field Commander Installation 2 Towers from Pivot Point



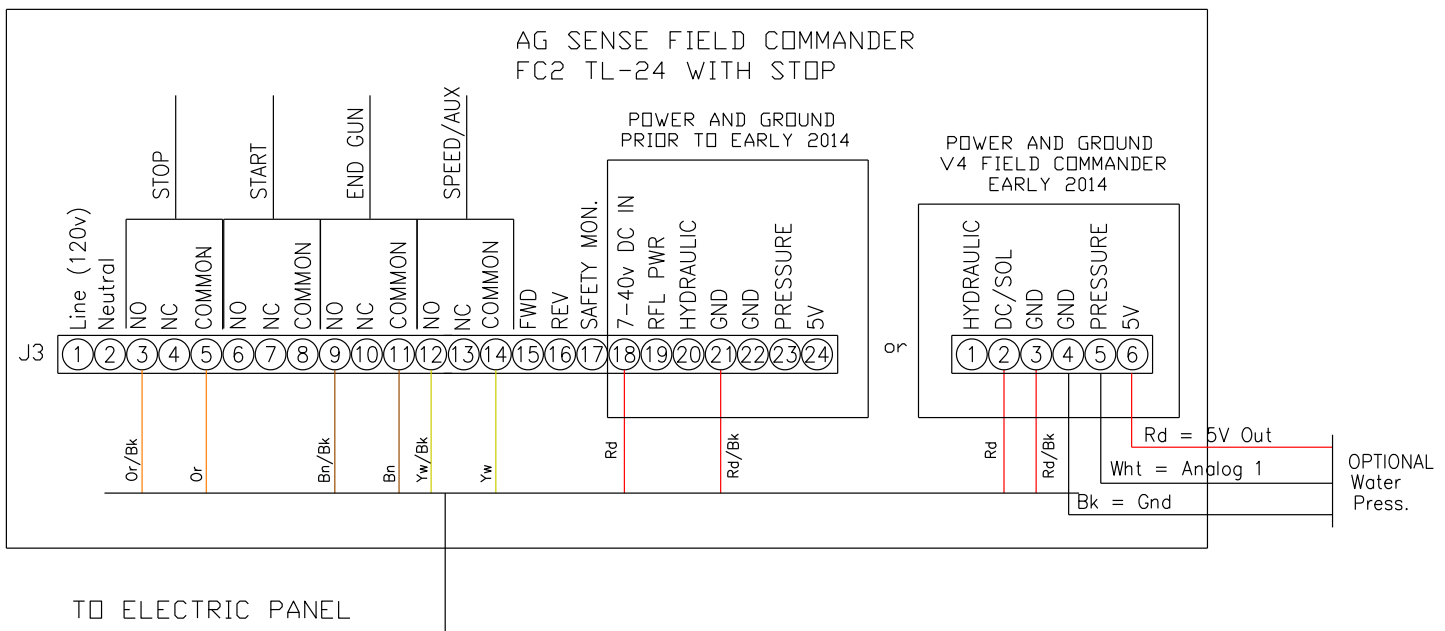
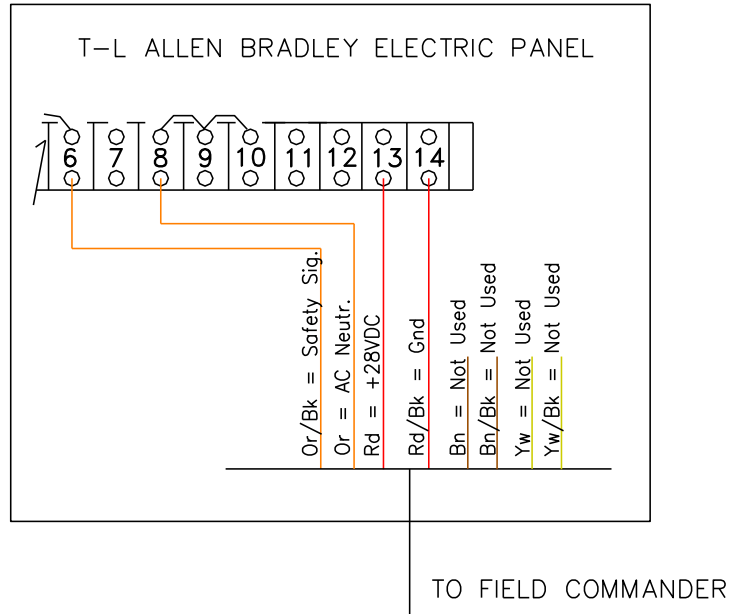


Wiring Diagrams for STOP - Manual Control Pivot.

Electric Hydr Pumping Unit, FC at Allen Bradley Panel

Note: Route Cable connected to AgSense Field Commander into Allen Bradley Panel.

OPERATION:
 Red = +28V when Pivot running.
 = 0V when stopped.
 Stop Command = Closes Stop Relay for 10 seconds.
 = Jumpers 8 to 6,
 to pop out 117.

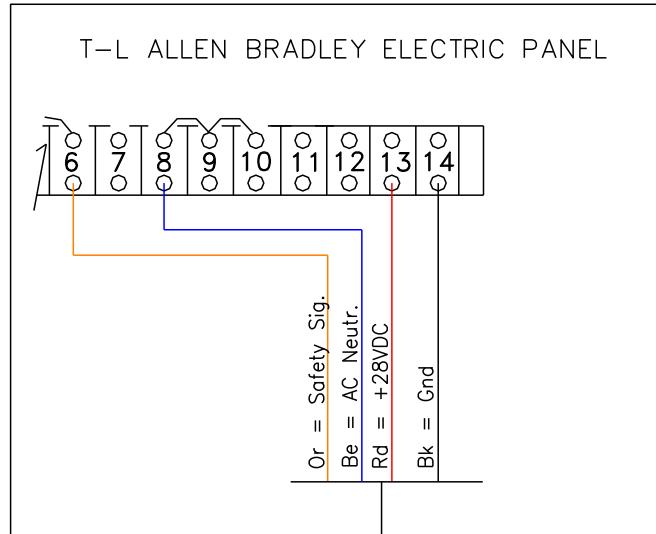




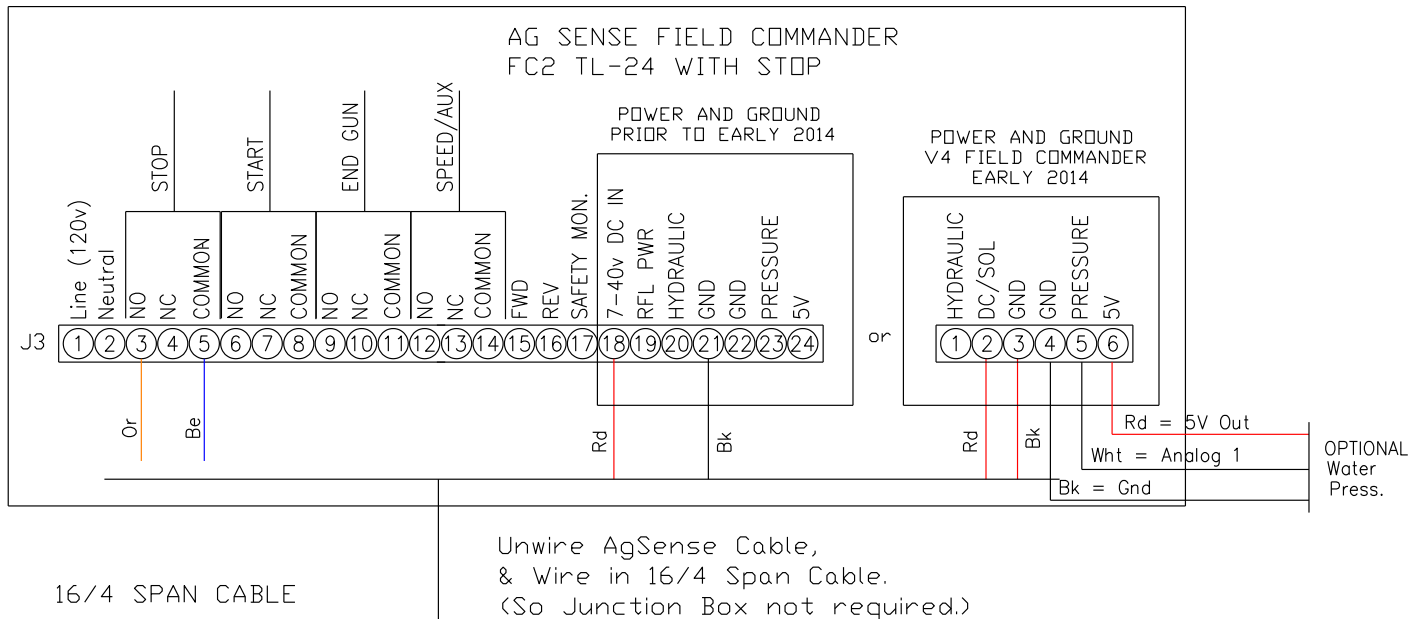
Wiring Diagram for Stop, Electric Hydr Pumping Unit, FC at 2 Towers from Pivot Point

- Notes: 1. Replace Cable connected to AgSense Field Commander with 16/4 Cable.
 2. Collector Ring not shown, wire through Collector Ring if necessary.
 3. Interface Relay not required if only 2 Towers out, low amp draw to cause stop safety.

OPERATION:
 Red = +28V when Pivot running.
 = 0V when stopped.
 Stop Command = Closes Stop Relay for 10 seconds.
 = Jumpers 8 to 6,
 to pop out 117.



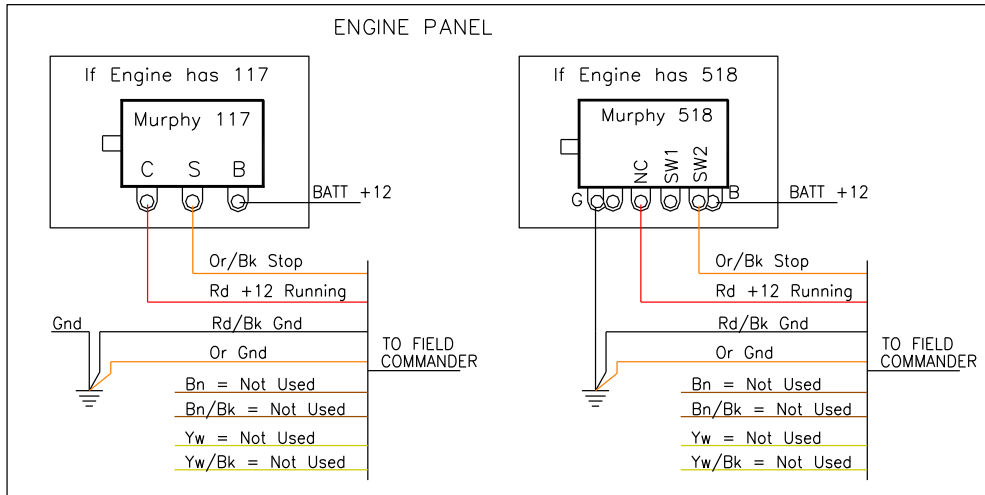
16/4 SPAN CABLE



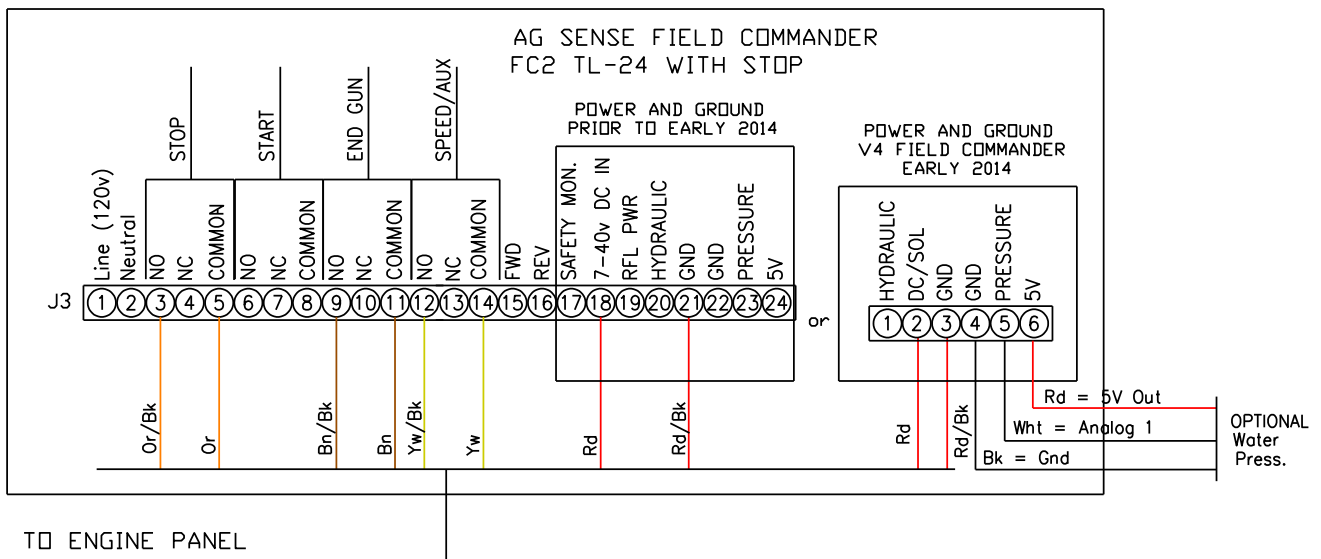
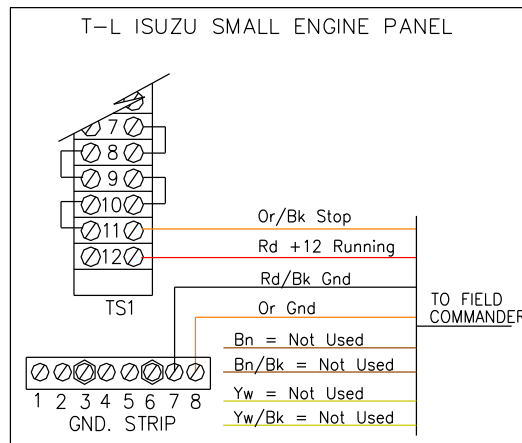


Wiring Diagram for Stop, Engine Hydr Pumping Unit, FC at Engine

Note: Route Cable connected to AgSense Field Commander into Engine Panel.



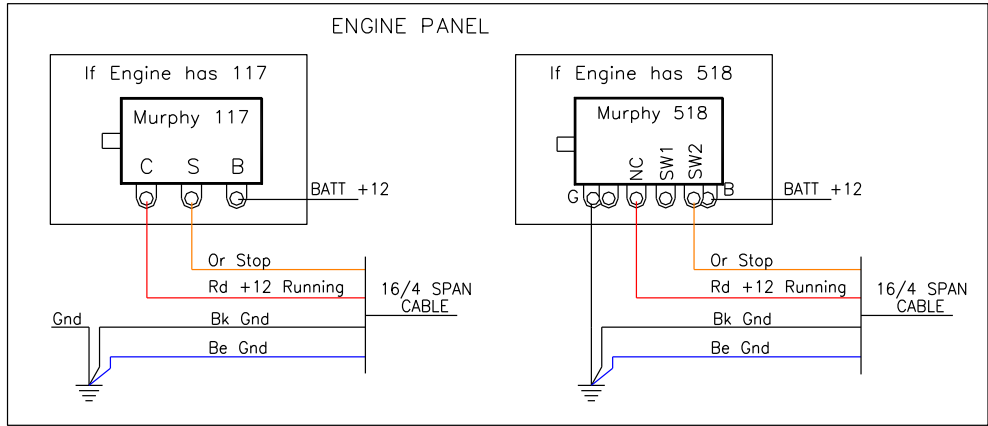
OPERATION:
 Red = +12V when Pivot running.
 = 0V when stopped.
 Stop Command = Closes Stop Relay for 10 seconds.
 = Grounds the "S", shutting off the engine.



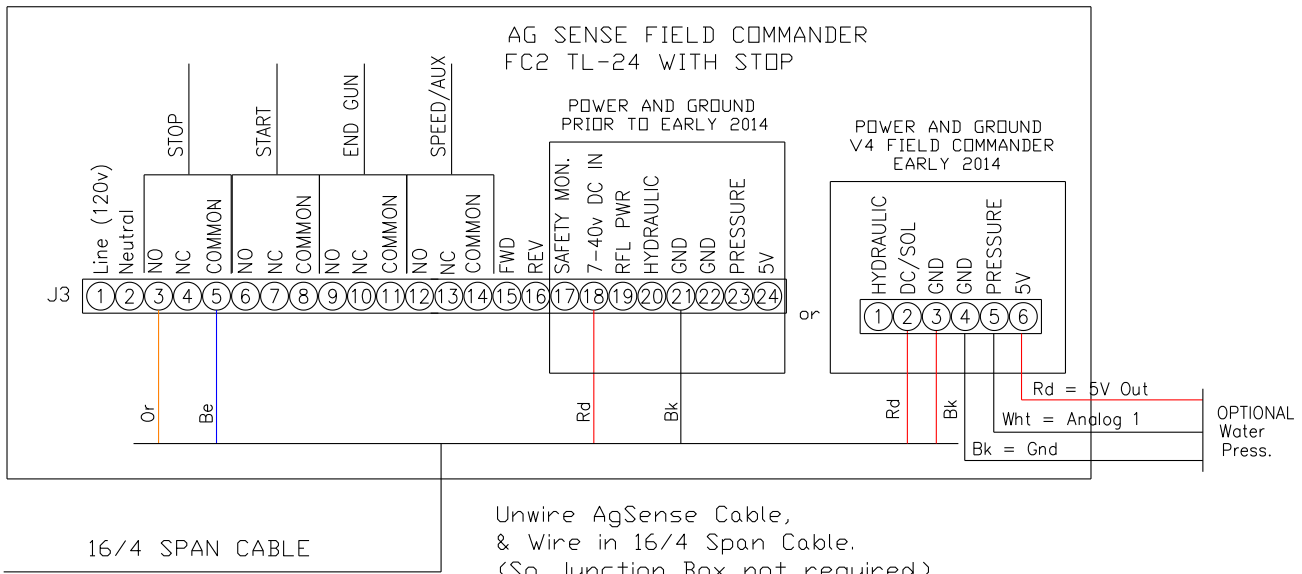
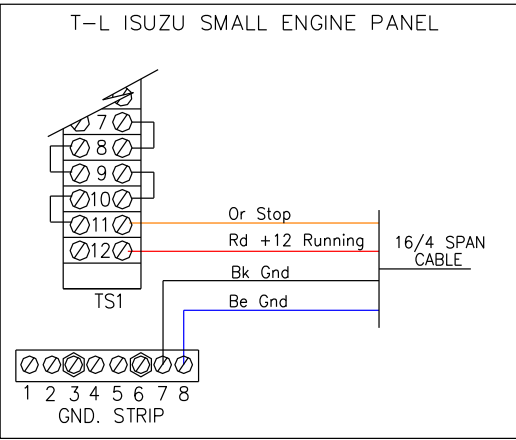


Wiring Diagram for Stop, Engine Hydr Pumping Unit, FC at 2 Towers from Pivot Point

- Notes: 1. Replace Cable connected to AgSense Field Commander with 16/4 Cable.
 2. Collector Ring not shown, wire through Collector Ring if necessary.
 3. Interface Relay not required if only 2 Towers out, low amp draw to cause stop safety.



OPERATION:
 Red = +12V when Pivot running.
 = 0V when stopped.
 Stop Command = Closes Stop Relay for 10 seconds.
 = Grounds the "S", shutting off the engine.





T-L Irrigation Company

CD91158 AgSense Field Commander FC2 TL-24 with Stop for TL Pivots
