WEIGH-TRONIX

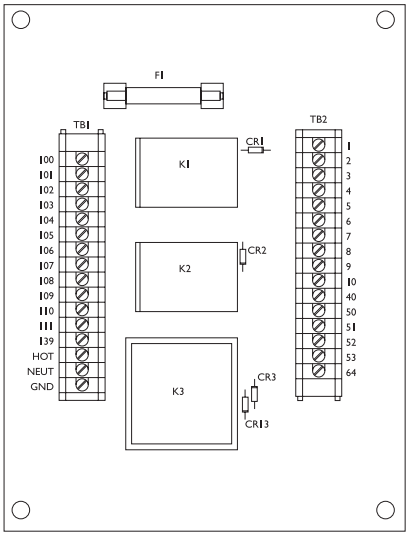
RCU-3 Relay Control Unit
User's Guide

Description

The RCU-3 is a three relay control unit. The three, 24 or 12 volt relays are powered and controlled by cutoff outputs (setpoints) from an indicator.

The relay contacts are non-inductive at 240VAC or 30VDC. You, the operator, enter cutoff values into the indicator through the keypad. The cutoff outputs provide a ground potential energizing the relays. As each succeeding cutoff is reached, the associated relay is de-energized.

The wiring diagrams in this manual show relay K1 being controlled by cutoff 1, K2 by cutoff 2, and K3 by cutoff 3, although any of the cutoff outputs from the indicator could be used.



Component Layout

RCU-3 PC-Board	P/N
12.0 vdc version	26319-0035
24.0 vdc version	26319-0019

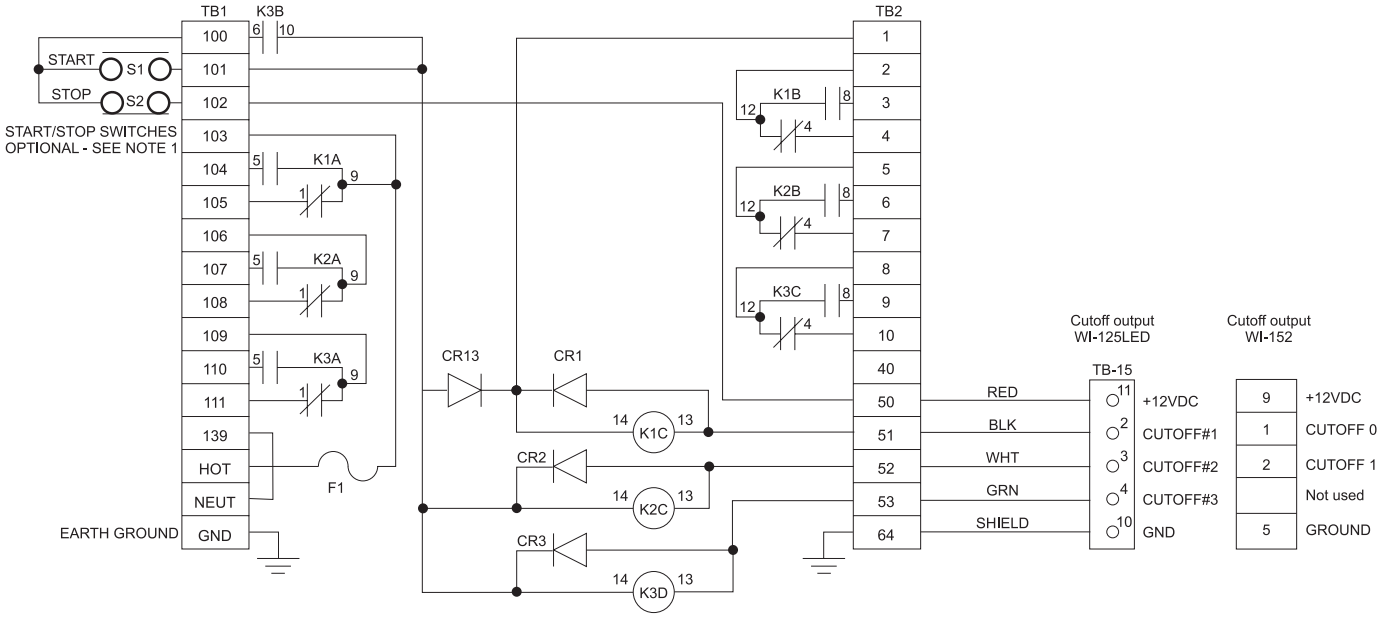
Contact Rating	12 Volt Relay	24 Volt Relay
K1, K2 - 10 amps	PN 23200-0075	PN 23200-0018
K3 - 7.5 amps	PN 23200-0091	PN 23200-0034

Different indicator models can work with either 12-volt or 24-volt relays. This is dependent on the power source used to run the relays. Some indicators can provide power for up to 3 relays from an internal power source built into the indicator power supply section. Weigh-Tronix also offers RCU units with up to 10 relays. These RCU boards have 24.0 vdc power supply as part of the assembly to provide power to the relay coils when the indicator is not capable of providing power.

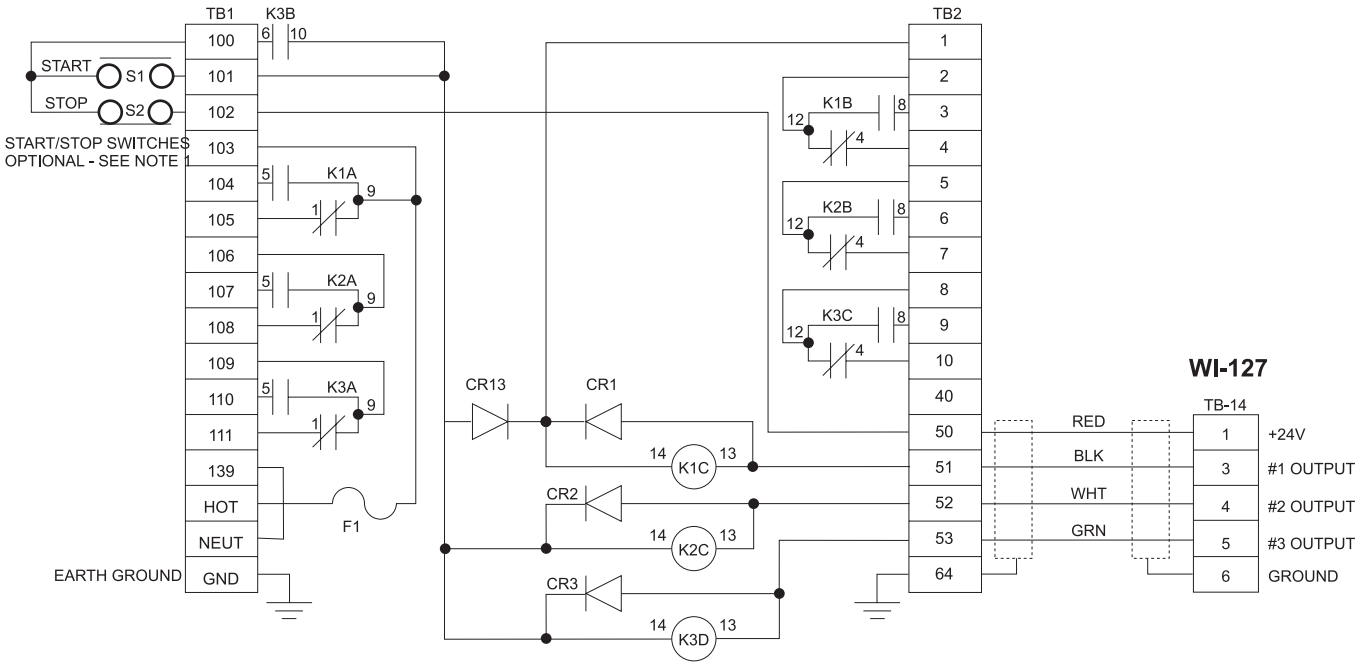
Indicator	*Indicator Power Supply
WI-125 LED	Three-12.0 vdc relays maximum
WI-127	Three-24.0 vdc relays maximum
WI-130	Three-12.0 vdc relays maximum
WPI-135	Three-12.0 vdc relays maximum
WI-152 (12.0 vdc)	Two-12.0 vdc relays maximum
WI-150 w/cutoff fiber link module	Three-24.0 vdc relays maximum
WI-150 w/SC-150	Three-12.0 vdc relays maximum
TT-830/831	None
PC-820/821	None

* The internal power supply's ability to drive multiple relays may be limited by the number of weight sensors and option cards installed. If no internal power source is available or the number of relays you wish to use exceeds the recommended number of relays from the table above, you must provide an external power source to drive the relays.

12 VDC Basic Wiring Diagram For WI-125 LED version and WI-152s



24 VDC Basic Wiring Diagram For WI-127s



Notes: These notes are referenced in the drawings on this and following pages.

1. Terminals 101 and 102 are jumpered except when Start/Stop switches are used.
2. One or two outputs may be used - see Figures E and F of the Option Wiring Diagrams. Start and Stop switches must be used with this option.
3. External power is required to illuminate the lights. Lights will be for 115 VAC unless 230 VAC is specified with order.
4. The ground terminal must be connected to Earth Ground on **ALL** units.

Options

Options available with the RCU-3:

- Start/Stop Switches
- Individual Lights or Batching/Complete Lights
- NEMA 4 Carbon Steel Case or NEMA 4X Stainless Steel Case

Start/Stop Switches

Use start/stop switches when cutoff values are entered in ascending order, or descending order if negative cutoffs are used. If cutoff values are entered, relays are energized when the start switch is depressed. The relays remain energized until the stop switch is depressed or until the cutoff values are reached. As each cutoff is reached, the associated relay de-energizes. Relay K3 acts as a (power on latch) latching relay and should always be the last relay in a sequence. The start switch must be depressed again before the relays will re-energize.

Option Wiring Diagram

Batching and Complete Lights

Units with batching/complete lights are available. These units must have start/stop switches. Only two relay outputs are provided in this option, as shown in the wiring diagrams (Figure A). The batching light illuminates when the start switch is depressed and is extinguished when the stop switch is depressed or when the displayed weight exceeds the quantity entered in cutoff channel 3. The complete light illuminates when the cutoff 3 value is exceeded and remains on until the start switch is again depressed. If a power outage occurs or power is removed, the complete light will turn off and remain off until completion of the next cycle.

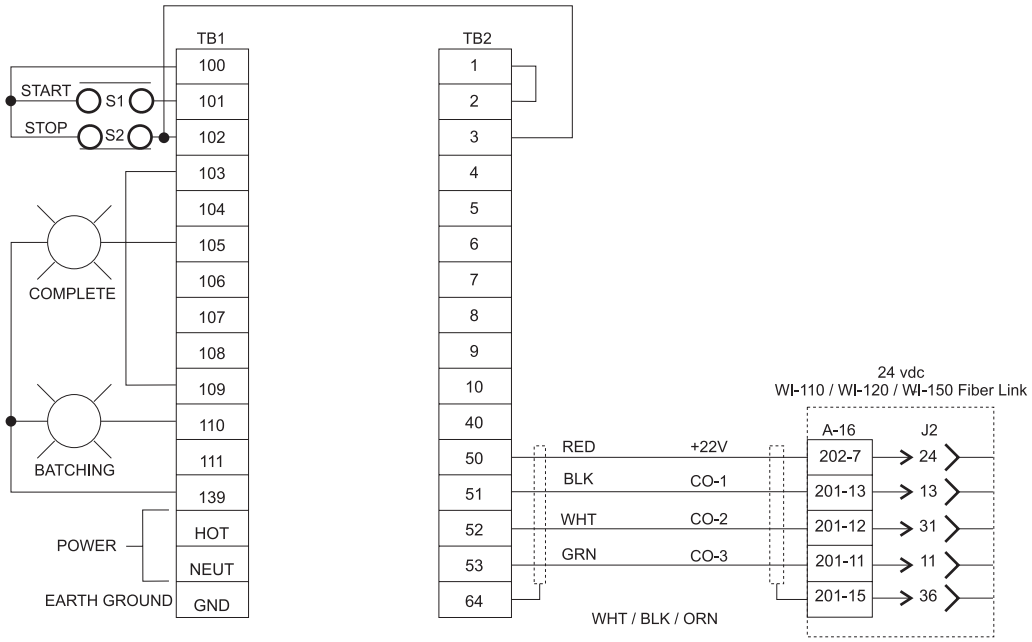


Figure A
Batching and Complete Lights
See Notes 2,3, & 4

Lights

Light operation is sequential when wired as shown in the wiring diagrams (Figures B through D). When three lights are provided, light 1 is illuminated when K1 is energized, light 2 is illuminated while K1 is de-energized and K2 is energized, and light 3 is illuminated while K1 and K2 are de-energized and K3 is energized. Optional lights are labeled with numbers. When ordered with Batching/Complete lights, the lights are labeled “Batching” and “ Complete.”

Figure B
Single Indicating Light
See Notes 1, 3 & 4

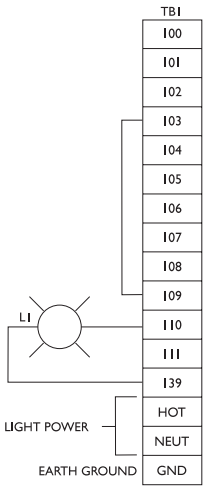


Figure C
Two Indicating Lights
See Notes 1, 3 & 4

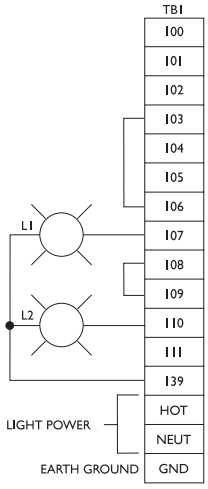


Figure D
Three Indicating Lights
See Notes 1, 3 & 4

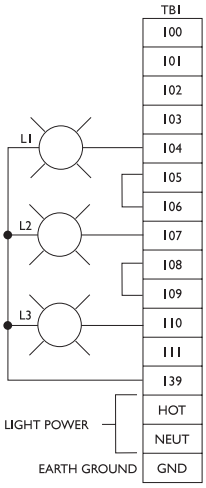
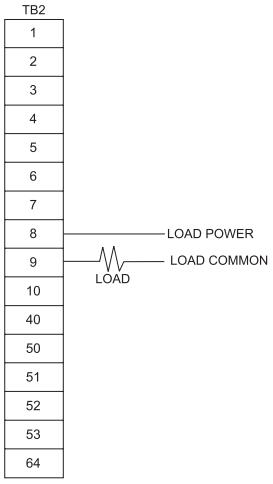
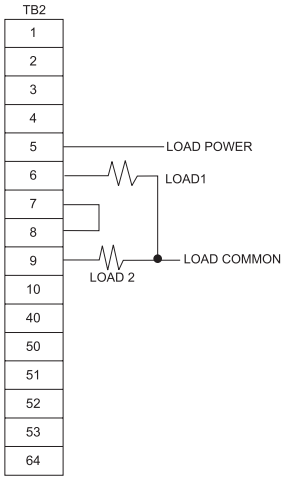


Figure E
1 Output
See Notes 1 & 4



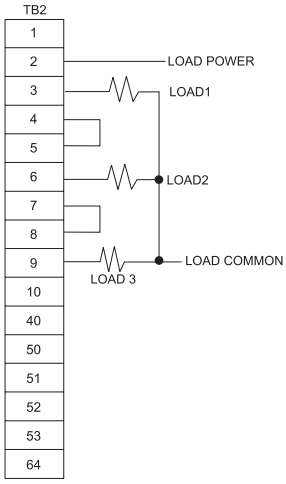
Output is via K3. K3 is controlled by input on terminal 53.

Figure F
2 Sequential Outputs
See Notes 1 & 4



Outputs are via K2 and K3. These are controlled by inputs on terminals 52 and 53 respectively.

Figure G
3 Sequential Outputs
See Notes 1 & 4



Outputs are via K1, K2 and K3. These are controlled by inputs to terminals 51, 52 and 53 respectively.

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