INTELLISPEC™

System Monitor S-IV and SV

Pressco Technology Inc.

74518 Rev. 01

Addendum

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System Monitor

The System Monitor is a standalone device that detects when the vision inspection system is not functioning properly. It monitors the inspection process and looks for conditions where product is flowing through the inspection station but no inspection results are produced. When this condition is detected, an alarm output is produced that can be used to shut down the line. In addition, the system monitor will display an error message that will direct the operator to the source of the problem.

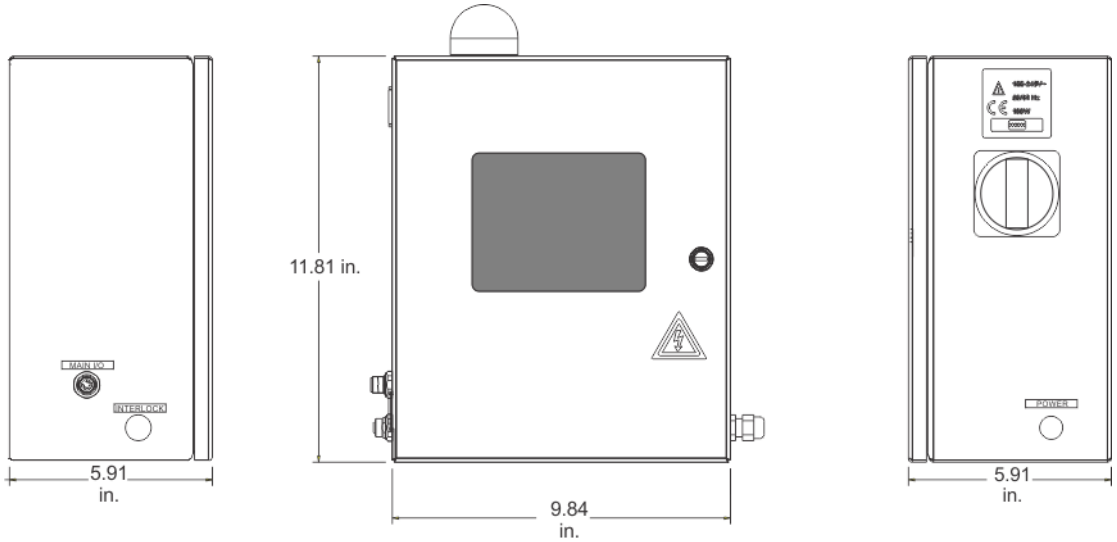
This product works with both Series IV and Series V Intellispec systems. This manual covers both variations.

The following alarms are output by the system monitor:

- System Offline
- Part detect failure
- Encoder failure
- Vision processor failure
- Sensor power failure

The System Monitor consists of a PLC and an HMI display device. Critical system signals such as system state, encoder, part detect, and inspection complete are continuously monitored by the PLC for conditions that indicate an error state.

The System Monitor is shown below.



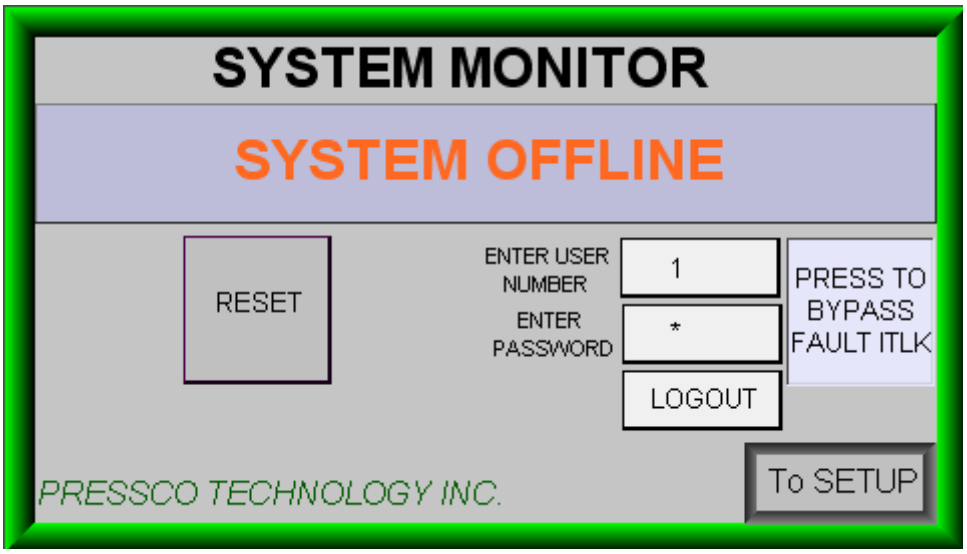
Light Indicator

There is a three color light on the top of the enclosure. The light states are:

- **Red** – Alarm State
- **Yellow** – System Monitor is on bypass
- **Green** – System online and no alarms detected

The same indicators are on the front of the touchscreen.

Main Screen



A message displays at the top of the main screen with one of the following messages:

SYSTEM OFFLINE

Occurs whenever the Intellispec goes offline.

SYSTEM OK

Occurs whenever the system is online and no faults have been detected.

CHECK CONV P/D SENSOR

This alarm refers to a problem with the conveyor part detect (also referred to as independent part detect). This is the additional sensor that was added when the System Monitor was installed. It plugs into the reject confirm input for both Series IV and V systems.

CHECK VISION PROC

The system is online, the encoder is running, both part detects are seeing parts, but no inspection result has been output. For **Series IV**, the output is the Inspection Complete signal. For **Series V**, the output is the Part at Reject signal.

CHECK P/D SENSOR

This alarm refers to a problem with the standard part detect sensor. The system is online, the encoder is running, the conveyor part detect is seeing parts, there is no Inspection Complete or Part at Reject signal, and there are no parts being detected by the P/D sensor.

CHECK ENCODER

The system is online, both part detect sensors are transitioning, but the encoder signal is not being detected.

CHECK ISPEC 24VOLT

This message is displayed whenever the 24 volt supply of the Intellispec is not detected.

CHECK PDX

This message is only possible on **Series IV** systems where PDX is used. If this message is displayed, check the operation of the PDX.

BYPASS MODE

This message is displayed when the system monitor is put in bypass mode. This mode is selectable from the HMI main screen.

Machine Interlock

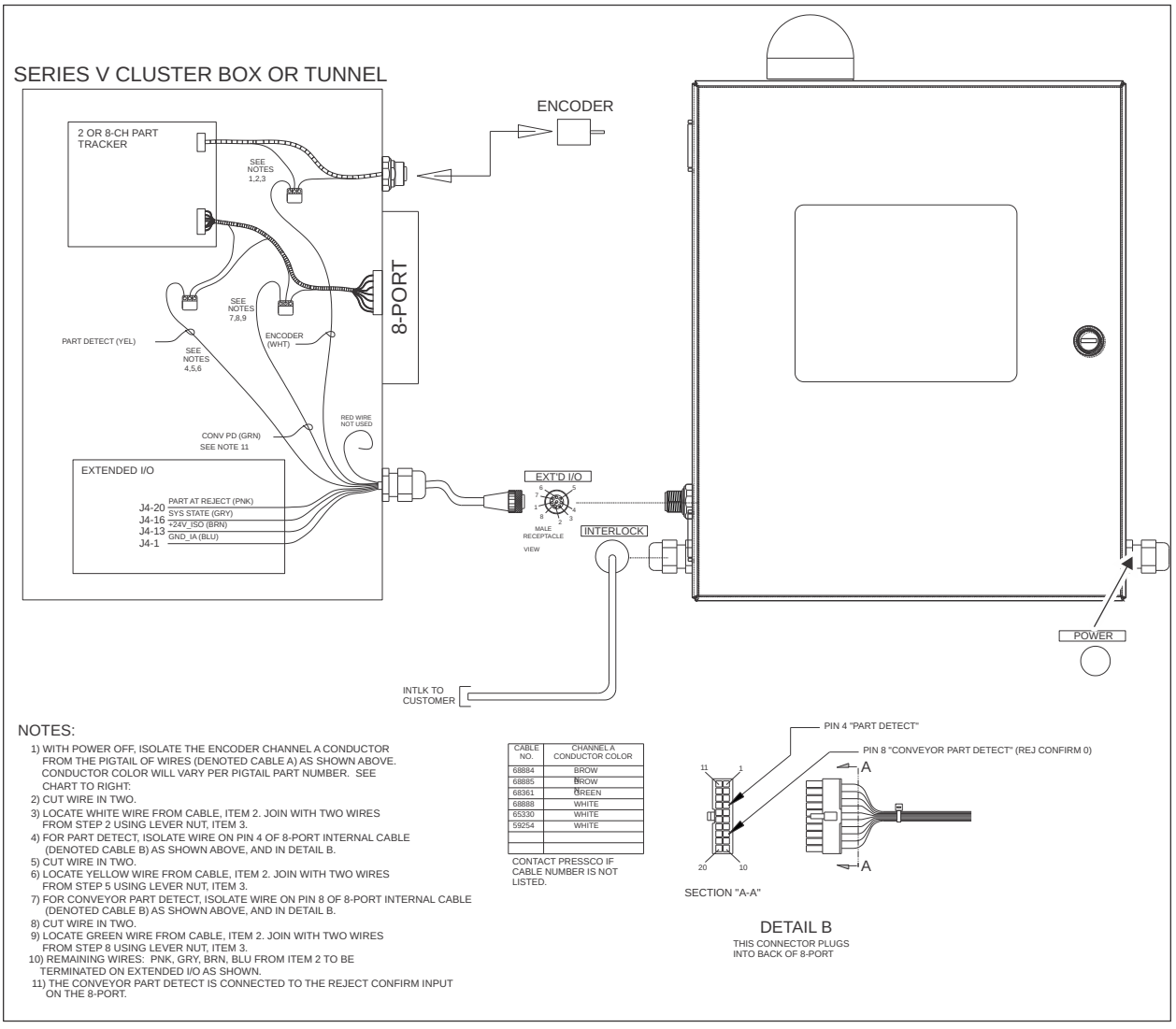
A dry contact relay is provided with a normally open and a normally closed contact. This relay is energized when the system is displaying the System OK message, or when the system monitor has been put in Bypass mode.

Bypass Mode

To bypass the machine interlock, select Bypass mode from the main screen. Enter the HMI password and press the **Bypass** button.

Wiring Diagrams Series V

Interconnect Diagram Series V system monitor



NOTES:

1) WITH POWER OFF, ISOLATE THE ENCODER CHANNEL A CONDUCTOR FROM THE PIGTAIL OF WIRES (DENOTED CABLE A) AS SHOWN ABOVE. CONDUCTOR COLOR WILL VARY PER PIGTAIL PART NUMBER. SEE CHART TO RIGHT:
2) CUT WIRE IN TWO.
3) LOCATE WHITE WIRE FROM CABLE, ITEM 2. JOIN WITH TWO WIRES FROM STEP 2 USING LEVER NUT, ITEM 3.
4) FOR PART DETECT, ISOLATE WIRE ON PIN 4 OF 8-PORT INTERNAL CABLE (DENOTED CABLE B) AS SHOWN ABOVE, AND IN DETAIL B.
5) CUT WIRE IN TWO.
6) LOCATE YELLOW WIRE FROM CABLE, ITEM 2. JOIN WITH TWO WIRES FROM STEP 5 USING LEVER NUT, ITEM 3.
7) FOR CONVEYOR PART DETECT, ISOLATE WIRE ON PIN 8 OF 8-PORT INTERNAL CABLE (DENOTED CABLE B) AS SHOWN ABOVE, AND IN DETAIL B.
8) CUT WIRE IN TWO.
9) LOCATE GREEN WIRE FROM CABLE, ITEM 2. JOIN WITH TWO WIRES FROM STEP 8 USING LEVER NUT, ITEM 3.
10) REMAINING WIRES: PNK, GRY, BRN, BLU FROM ITEM 2 TO BE TERMINATED ON EXTENDED I/O AS SHOWN.
11) THE CONVEYOR PART DETECT IS CONNECTED TO THE REJECT CONFIRM INPUT ON THE 8-PORT.

CABLE NO.	CHANNEL A CONDUCTOR COLOR
68884	BROW
68885	BROW
68361	GREEN
68888	WHITE
65330	WHITE
59254	WHITE

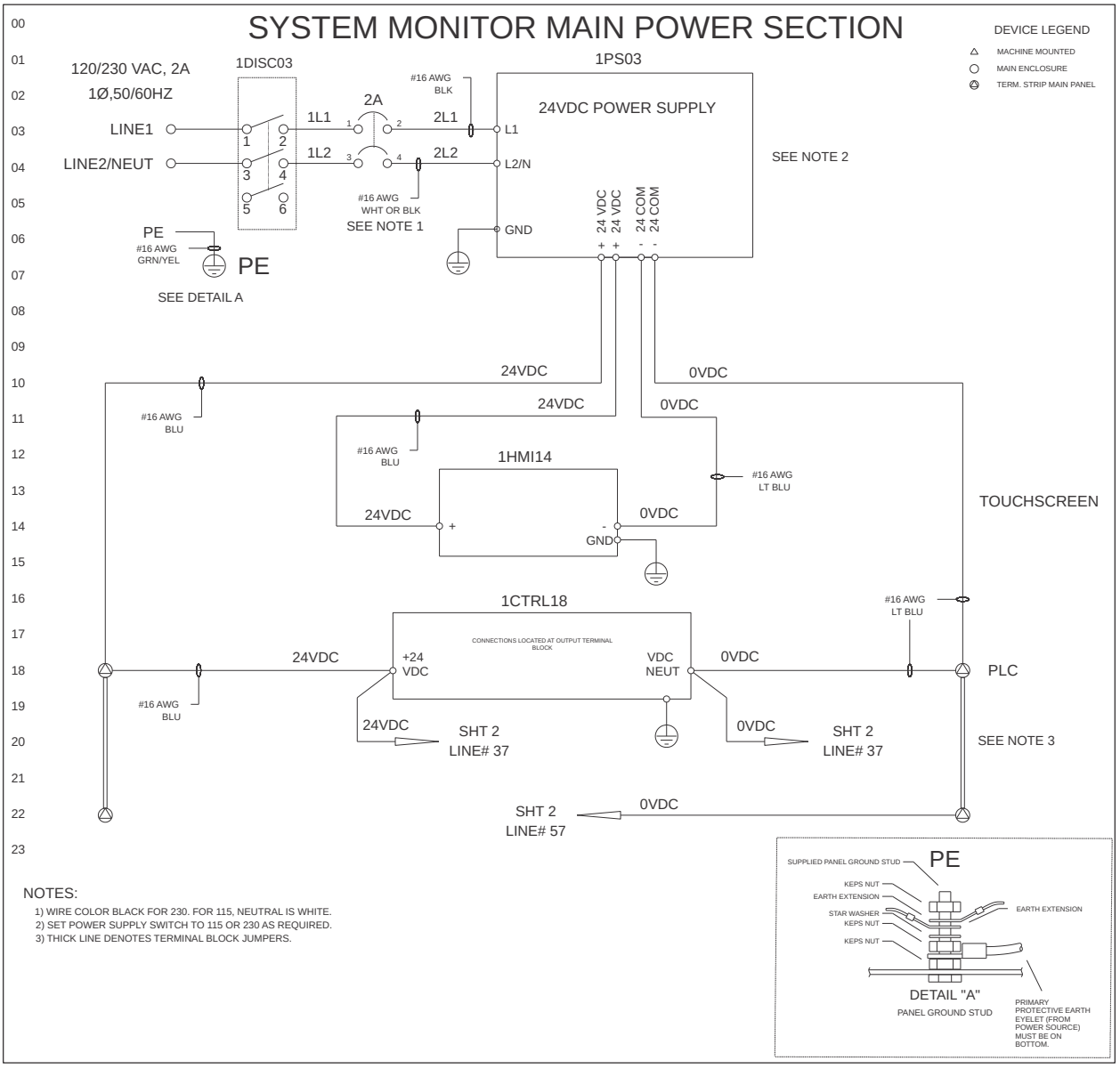
CONTACT PRESSCO IF CABLE NUMBER IS NOT LISTED.

SECTION "A-A"

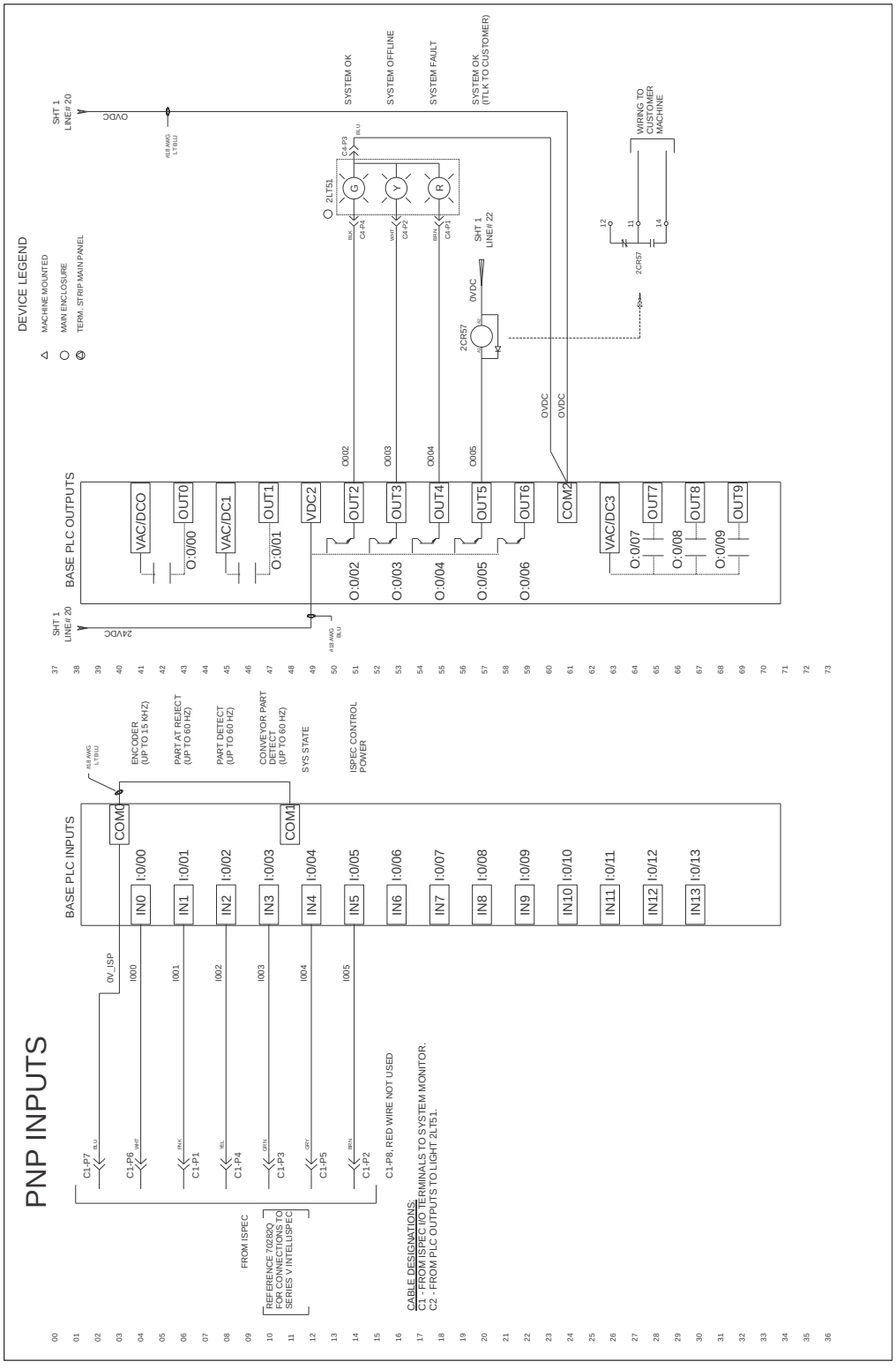
DETAIL B

THIS CONNECTOR PLUGS INTO BACK OF 8-PORT

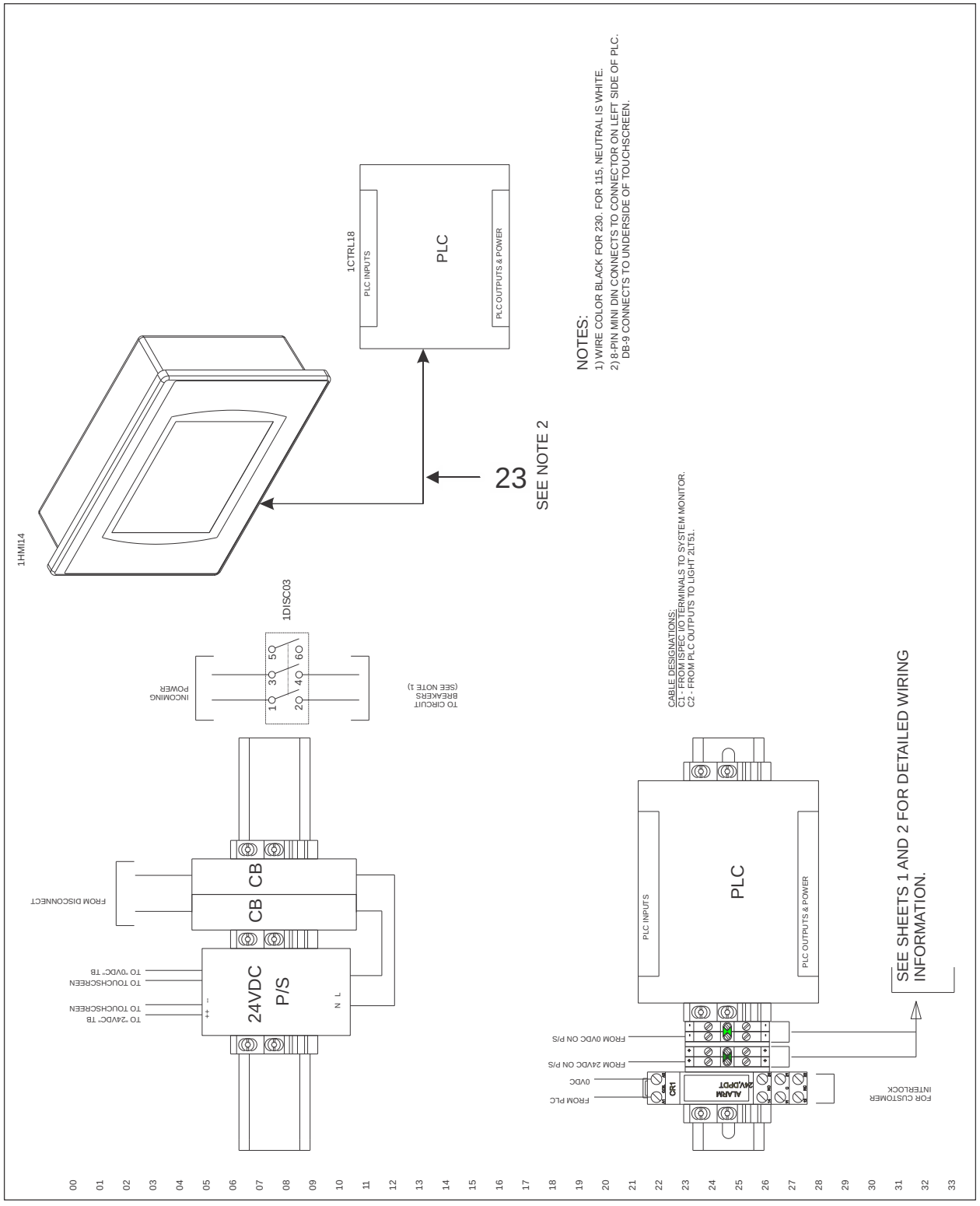
Electrical Diagram Series V System Monitor - sheet 1



Electrical Diagram Series V System Monitor - sheet 2

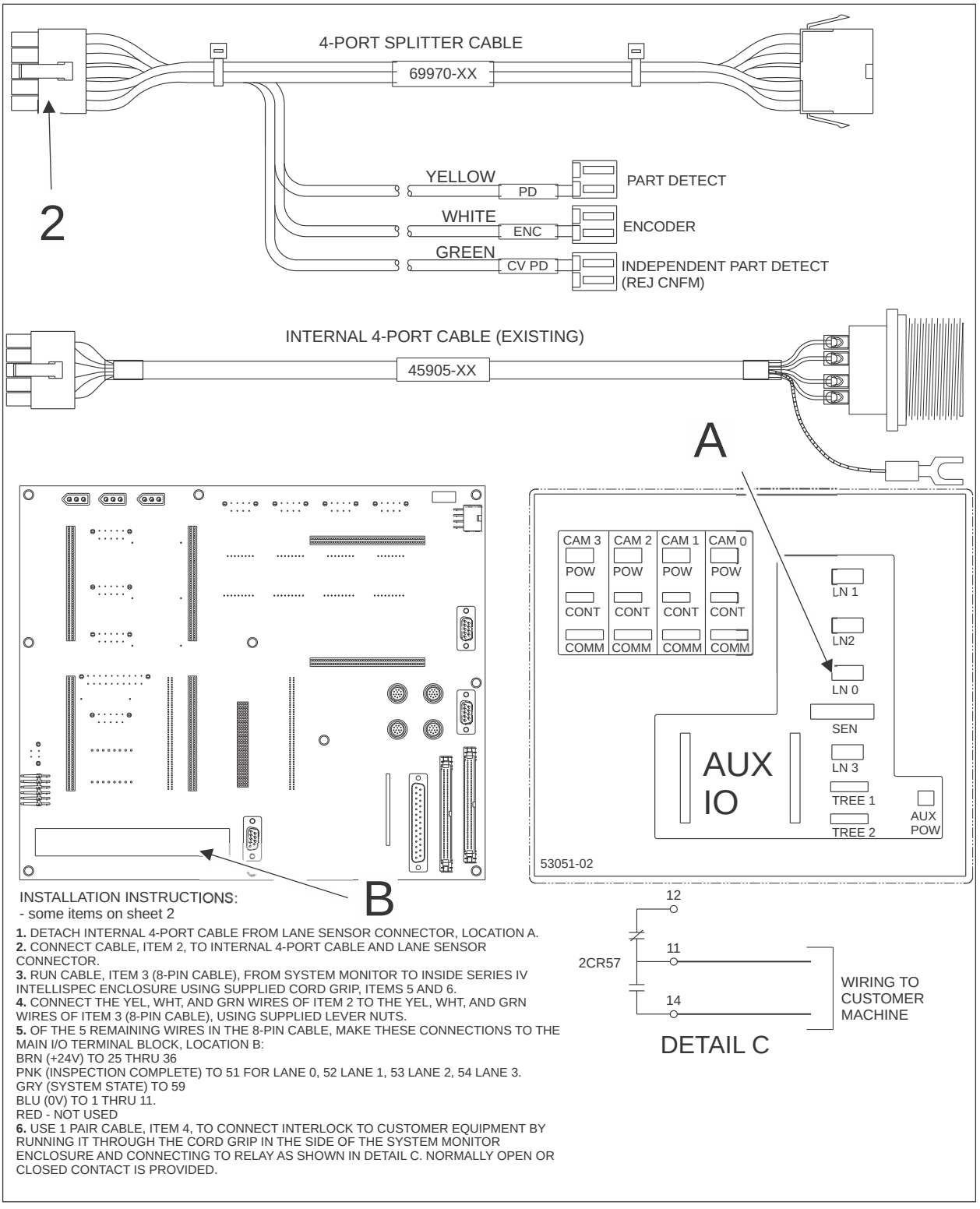


Electrical Diagram Series V System Monitor - sheet 3



Wiring Diagrams Series IV

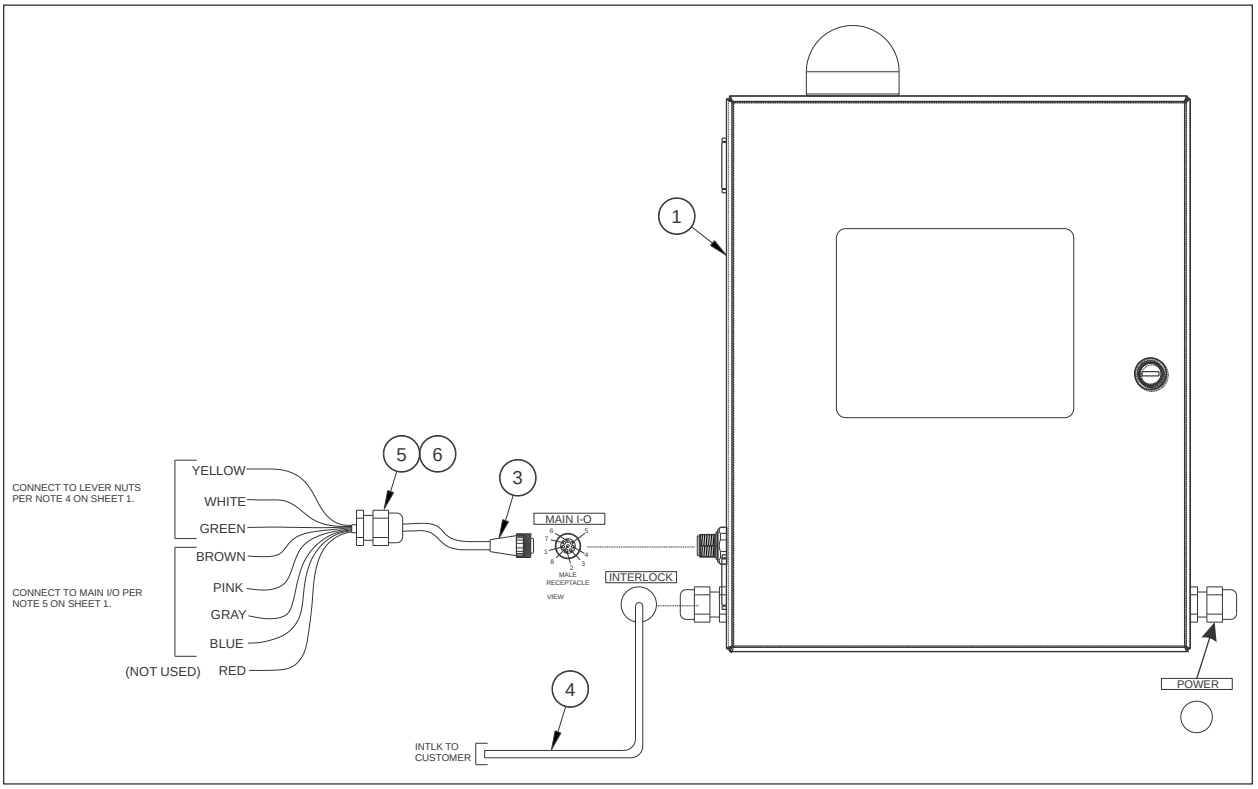
Interconnect Diagram Series IV system monitor - sheet 1



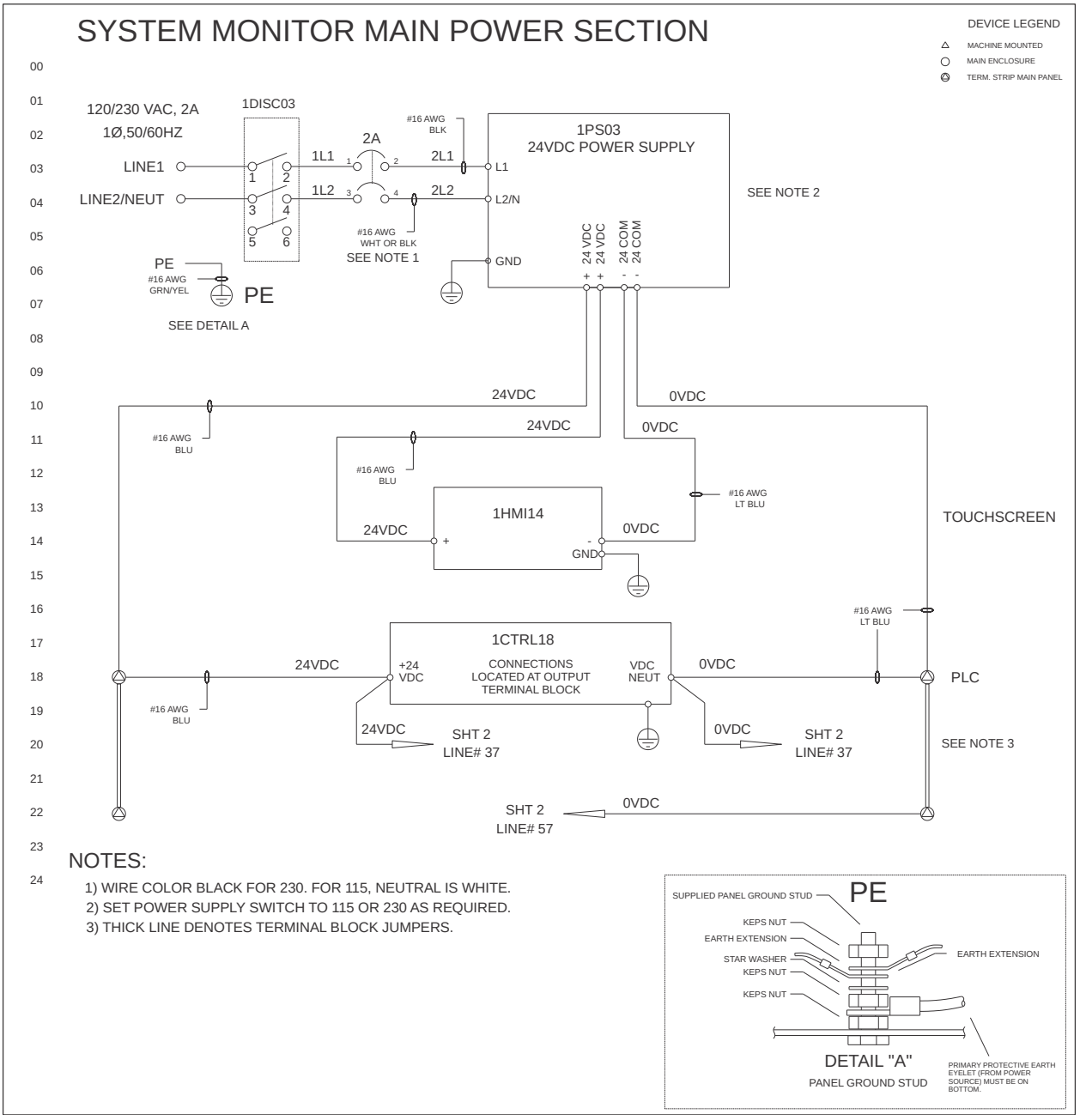
INSTALLATION INSTRUCTIONS:
- some items on sheet 2

1. DETACH INTERNAL 4-PORT CABLE FROM LANE SENSOR CONNECTOR, LOCATION A.
2. CONNECT CABLE, ITEM 2, TO INTERNAL 4-PORT CABLE AND LANE SENSOR CONNECTOR.
3. RUN CABLE, ITEM 3 (8-PIN CABLE), FROM SYSTEM MONITOR TO INSIDE SERIES IV INTELLISPEC ENCLOSURE USING SUPPLIED CORD GRIP, ITEMS 5 AND 6.
4. CONNECT THE YEL, WHT, AND GRN WIRES OF ITEM 2 TO THE YEL, WHT, AND GRN WIRES OF ITEM 3 (8-PIN CABLE), USING SUPPLIED LEVER NUTS.
5. OF THE 5 REMAINING WIRES IN THE 8-PIN CABLE, MAKE THESE CONNECTIONS TO THE MAIN I/O TERMINAL BLOCK, LOCATION B:
BRN (+24V) TO 25 THRU 36
PNK (INSPECTION COMPLETE) TO 51 FOR LANE 0, 52 LANE 1, 53 LANE 2, 54 LANE 3.
GRY (SYSTEM STATE) TO 59
BLU (0V) TO 1 THRU 11.
RED - NOT USED
6. USE 1 PAIR CABLE, ITEM 4, TO CONNECT INTERLOCK TO CUSTOMER EQUIPMENT BY RUNNING IT THROUGH THE CORD GRIP IN THE SIDE OF THE SYSTEM MONITOR ENCLOSURE AND CONNECTING TO RELAY AS SHOWN IN DETAIL C. NORMALLY OPEN OR CLOSED CONTACT IS PROVIDED.

Interconnect Diagram Series IV system monitor - sheet 2



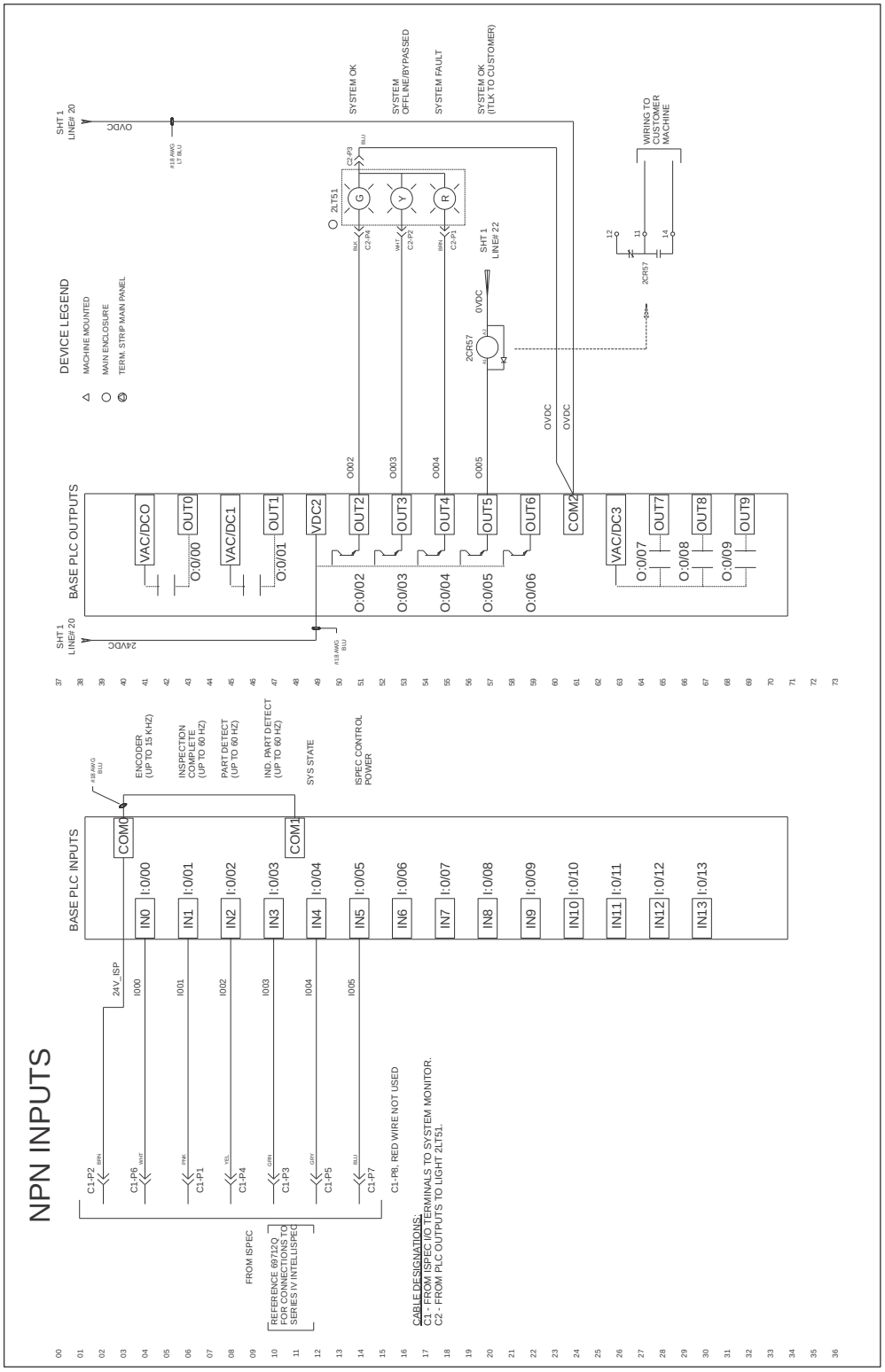
Electrical Diagram Series IV system monitor - sheet 1



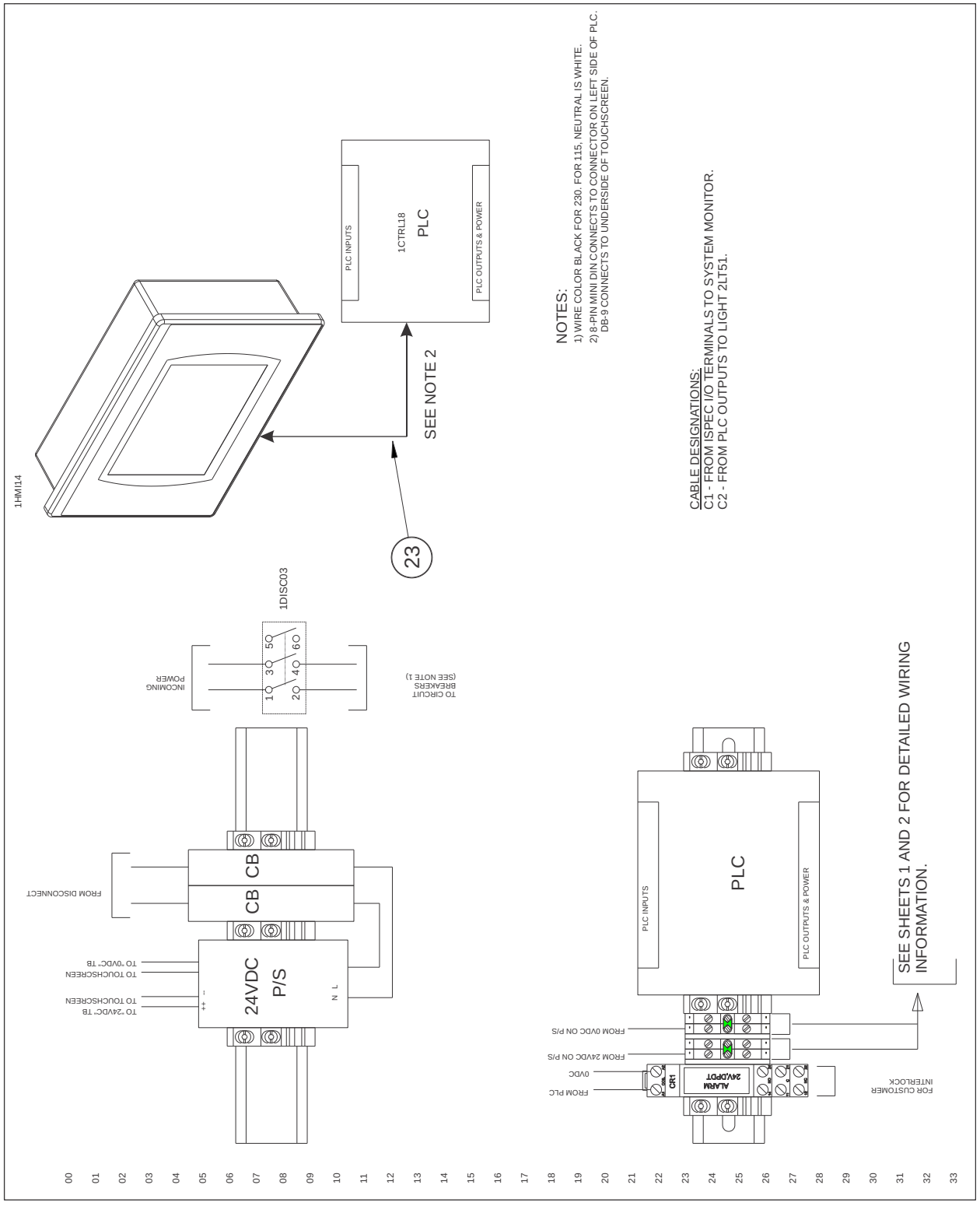
NOTES:

1) WIRE COLOR BLACK FOR 230. FOR 115, NEUTRAL IS WHITE.
2) SET POWER SUPPLY SWITCH TO 115 OR 230 AS REQUIRED.
3) THICK LINE DENOTES TERMINAL BLOCK JUMPERS.

Electrical Diagram Series IV system monitor - sheet 2



Electrical Diagram Series IV system monitor - sheet 3



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