

INTELLISPEC™ Series V and DECOSPECTOR 360™

System Monitor Addendum

Pressco Technology Inc.

74518 Rev. 04



Original Instructions

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Chapter 1

System Monitor

The System Monitor is an optional hardware kit that works with the **Intellispec Series V** inspection system. Three kits are available, depending on your system configuration:

- Eight channel cluster box with eight channel part tracker - **Cluster Box 8 Channel - Interconnect Diagrams** (on page 9)
- CP4422EV inspection module with eight channel part tracker - **CP4422EV - Interconnect Diagrams** (on page 13)
- Integrated tunnel with two channel part tracker - **Integrated Tunnel - Interconnect Diagrams** (on page 17)

A System Monitor kit is also available for the **DECOSPECTOR 360™** system - **Decospector 360™ - Interconnect Diagrams** (on page 21)

Description

The System Monitor PCB monitors Intellispec system signals and sets fault outputs if any of the monitored signals fail. The fault outputs will also be set if the part tracker loses communication with the host or if the system is taken offline.

Six fault conditions are currently assigned. All of the fault outputs will be off when the system is online and all monitored signals are functioning properly. **Fault Indicator/ Reset Pushbutton** (on page 6)

A System OK output is on when the system is offline or when it is online and all signals are functioning properly. The System OK signal will turn off when there is a fault. The fault outputs are latched on until the reset button is pressed. **Outputs** (on page 6)

Operating Modes

NORMAL - All system monitoring functions are enabled.

BYPASS - All system monitoring functions are disabled and the System OK output will always be on.

The operating mode is set by the switch setting on System Monitor PCB. Set it once, then leave it. **Switch Settings** (on page 7)

User I/O TB2

See the drawing for your configuration:

User I/O - Cluster Box 8 Channel (on page 11)

User I/O - CP4422EV (on page 15)

User I/O - Integrated Tunnel (on page 19)

User I/O - Deco (on page 23)

Power

+V – 24VDC.

-V – 24VDC Common.

INPUT - 24VDC, 8mA.

OUTPUTS – 24VDC, 25mA max.

The user must provide a 24VDC power supply for the inputs and outputs at TB2.

Outputs

SYSOK_OUT – System OK - System is offline or it is online and all monitored signals are functioning properly.

FAULT_B0 – Fault indicator bit 0 (LSB).

FAULT_B1 – Fault indicator bit 1.

FAULT_B2 – Fault indicator bit 2.

FAULT_B3 – Fault indicator bit 3 (MSB).

Input

RESET_IN – Clears fault indicator bits.

Fault Indicator/ Reset Pushbutton

GREEN – System OK - System is online and all monitored signals are functioning properly.

RED – A fault condition has occurred.

RESET – Press button to clear fault.

System Monitor Light Flash Codes

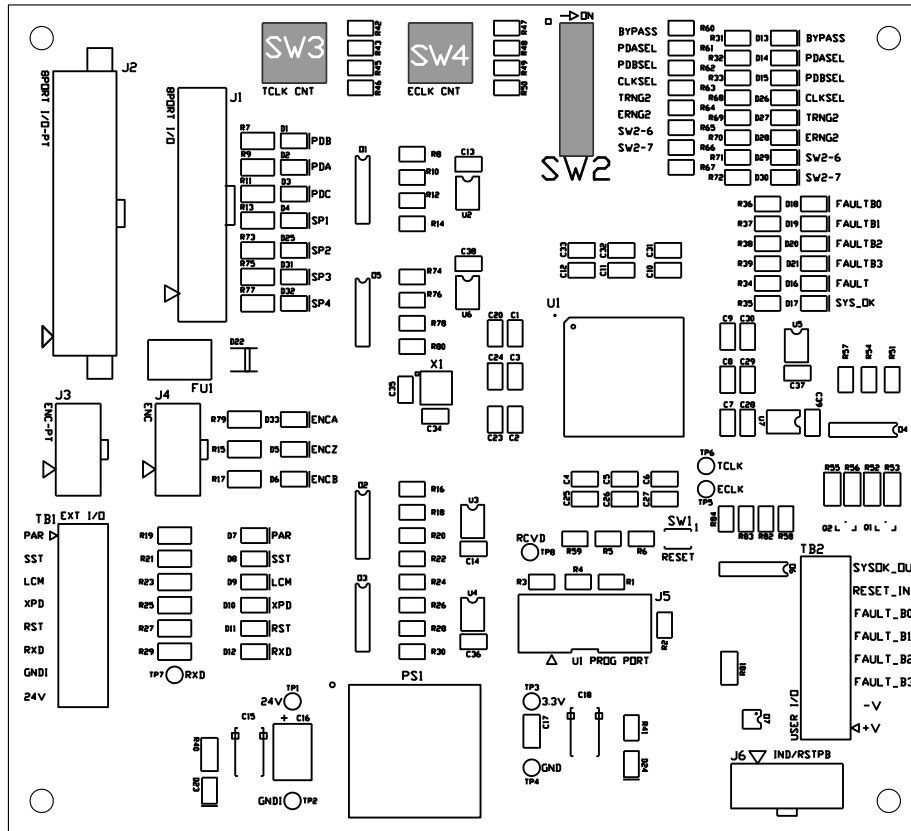
Green Solid	System OK
Green Flashing	In Bypass Mode
Red (1 flash)	Vision Processor fault
Red (2 flash)	Encoder failure
Red (3 flash)	Intellispec part detect failure
Red (4 flash)	Conveyor part detect failure
Red (5 flash)	Lost host communications
Red (6 flash)	System offline

When a fault is detected, the lamp will flash (example, three flashes), then remain off (for length of three flashes), then flash again (three flashes). It continues this cycle until you reset the system monitor.

Electrical Specifications

POWER - 24VDC, 1A max.

Switch Settings



NOTES:

- 1) SET SW2 TO ALL OFF.
- 2) SET SW3 TO 2.
- 3) SET SW4 TO 0.

SW2	Label	OFF	ON
1	BYPASS	Normal Mode – Signal monitoring enabled	Bypass Mode – Signal monitoring disabled
2	PDASEL	Intellispec part detect from sensor	Intellispec part detect from Extended I/O
3	PDBSEL	Conveyor part detect from Reject Confirm 0	Conveyor part detect from other sensor
4	CLKSEL	Signal timeouts based on time	Signal timeouts based on encoder counts
5	TRNG2	Extended time range disabled	Extended time range enabled
6	ERNG2	Extended encoder count range disabled	Extended encoder count range enabled
7*	SW2-6	System State Alarm disabled	System State Alarm enabled
8*	SW2-7	Part Detect Checks enabled	Part Detect checks disabled

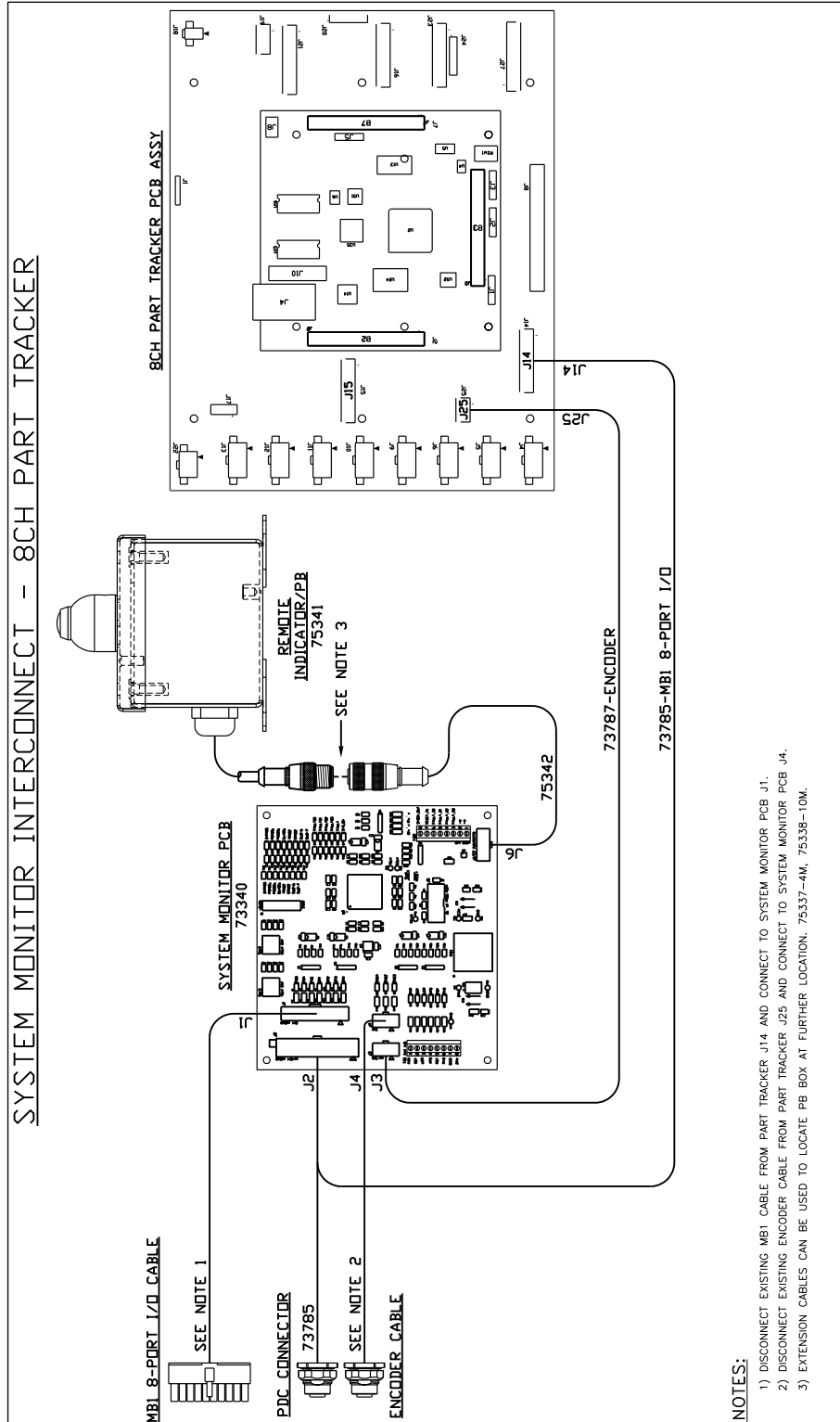
*SW2-7 and SW2-8 are only used in System Monitor Firmware Version V2.0 (Pressco P/N 76159)

Table 2: SW3 – Timeout in seconds			Table 3: SW4 - Timeout in encoder ticks		
SW3	TRNG2 - OFF	TRNG2 - ON	SW4	ERNG2 - OFF	ERNG2 - ON
0	0.512	16.384	0	4096	69632
1	1.024	32.768	1	8192	73728
2	1.536	49.152	2	12288	77824
3	2.048	65.536	3	16384	81920
4	2.560	81.920	4	20480	86016
5	3.072	98.304	5	24576	90112
6	3.584	114.688	6	28672	94208
7	4.096	131.072	7	32768	98304
8	4.608	147.456	8	36864	102400
9	5.120	163.840	9	40960	106496
A	5.632	180.224	A	45056	110592
B	6.144	196.608	B	49152	114688
C	6.656	212.992	C	53248	118784
D	7.168	229.376	D	57344	122880
E	7.680	245.760	E	61440	126976
F	8.192	262.144	F	65536	131072

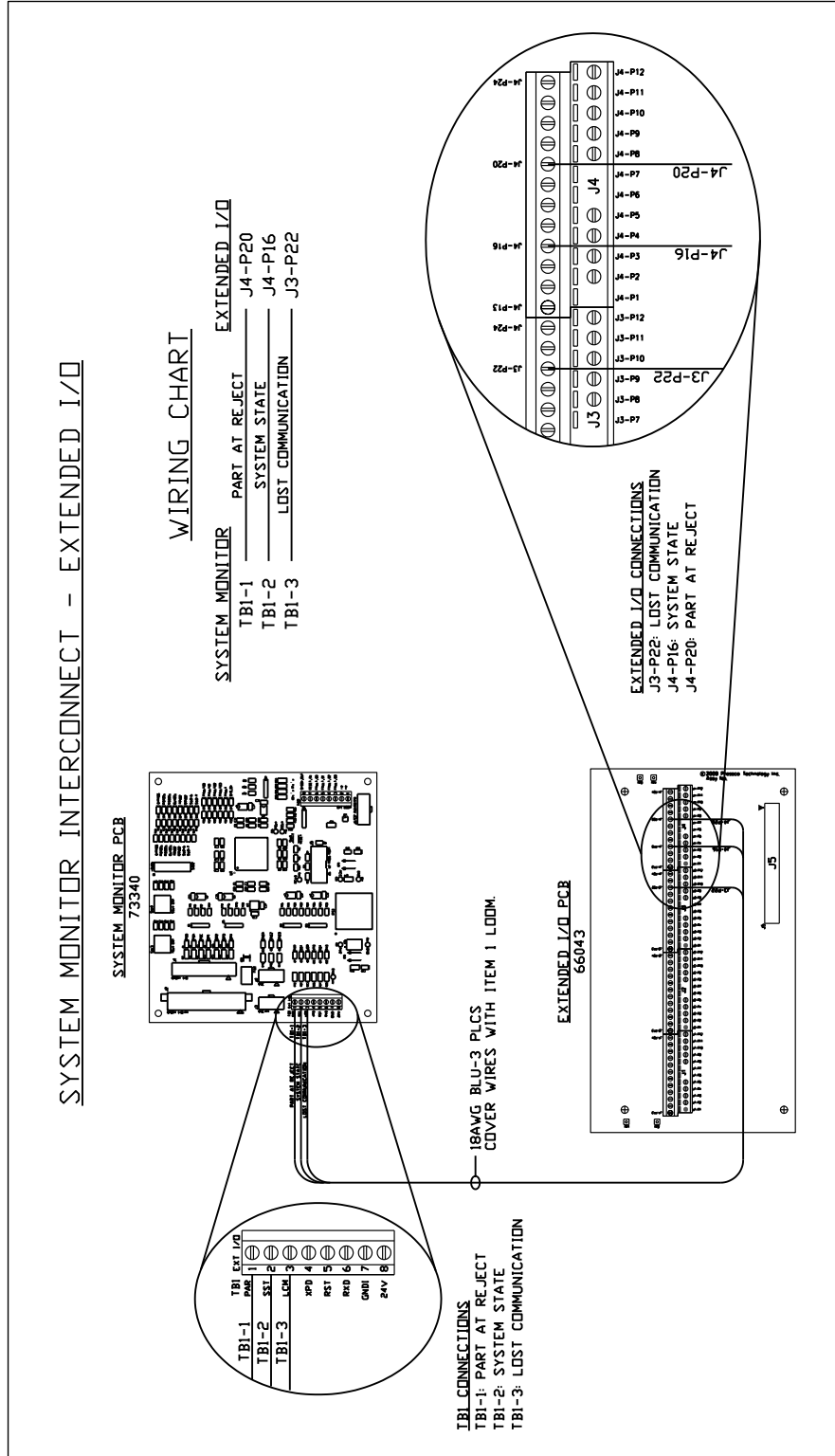
Chapter 2

Cluster Box 8 Channel - Interconnect Diagrams

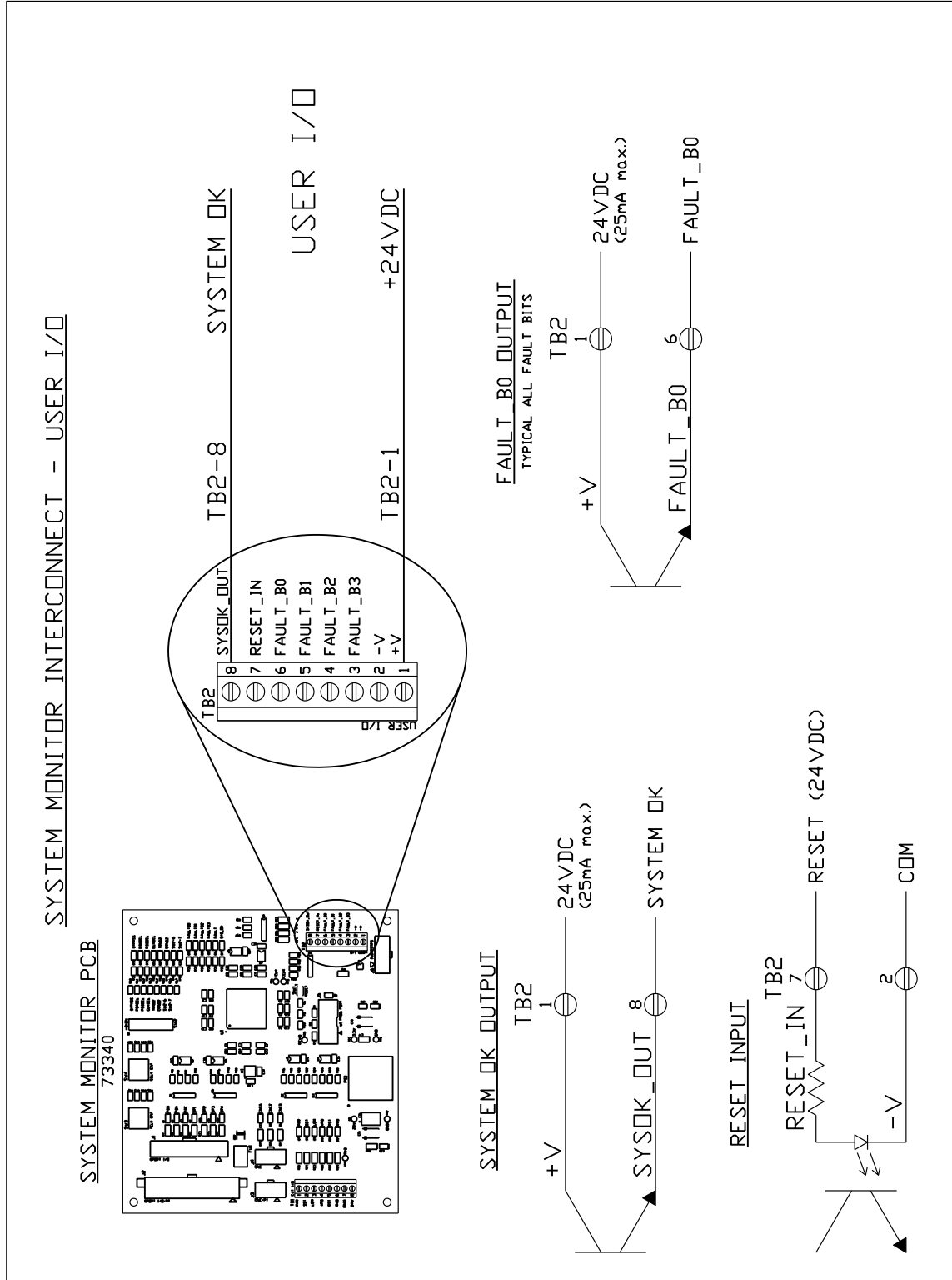
8 Channel Part Tracker - Cluster Box 8 Channel



Extended I/O - Cluster Box 8 Channel



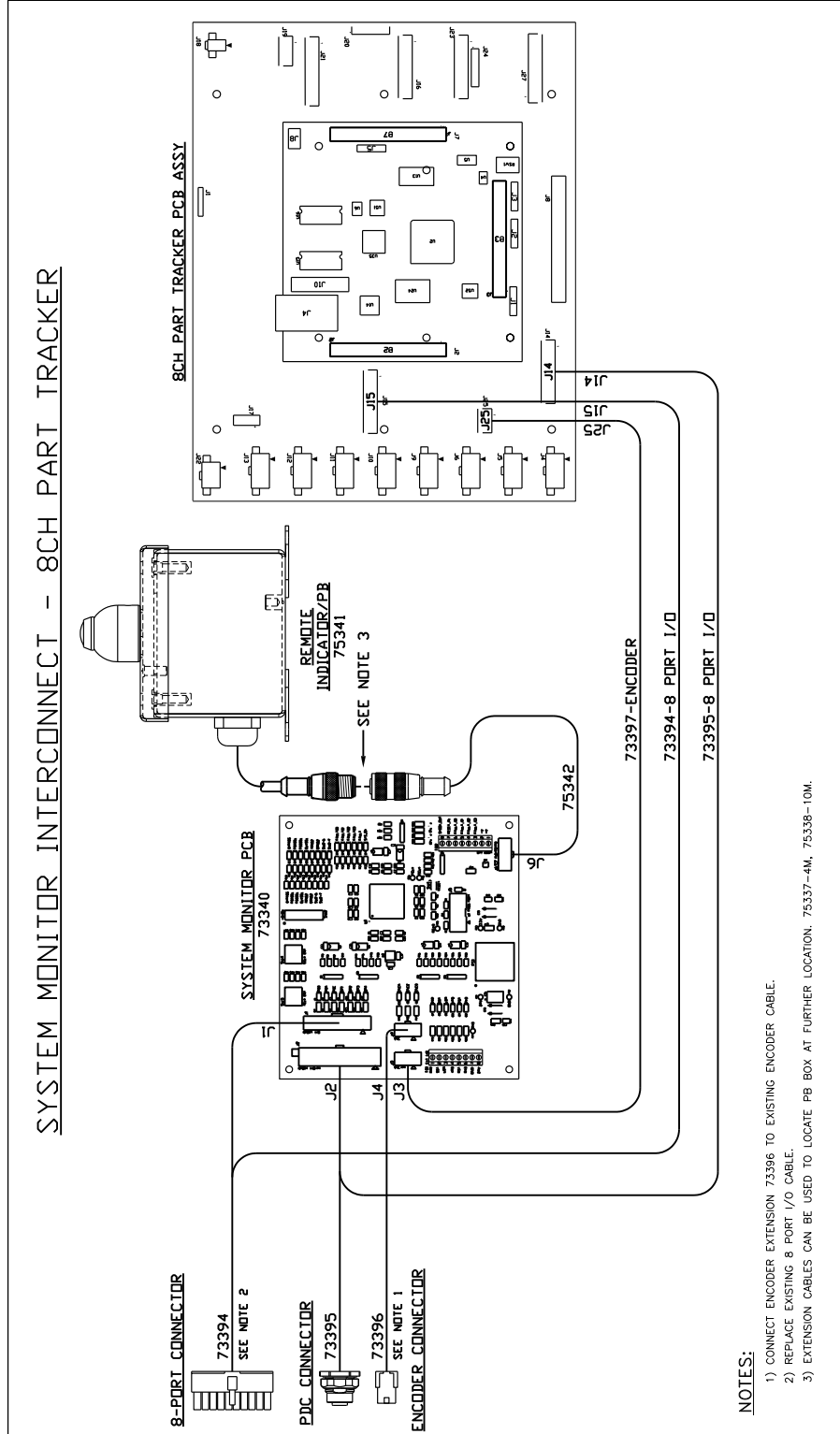
User I/O - Cluster Box 8 Channel



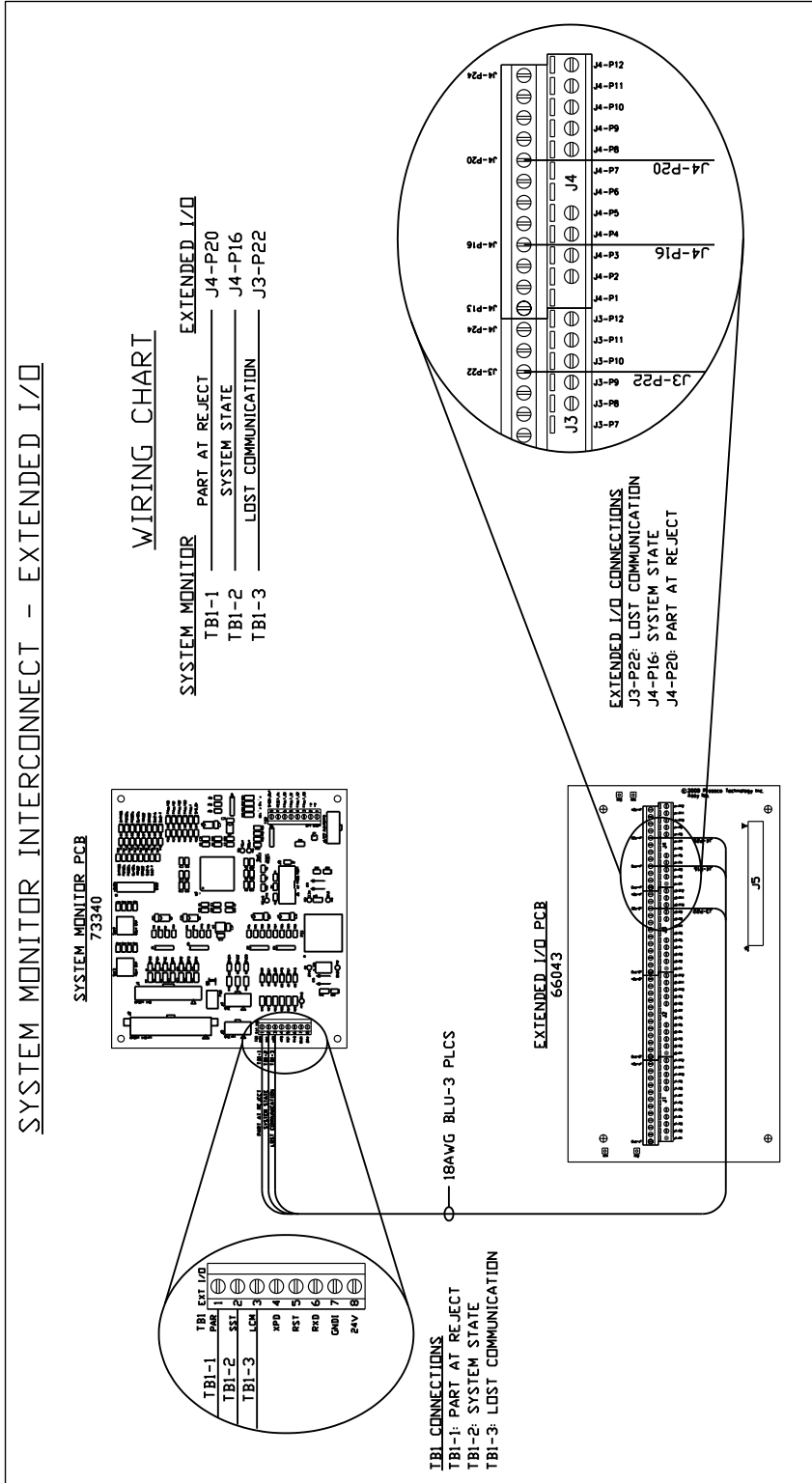
Chapter 3

CP4422EV - Interconnect Diagrams

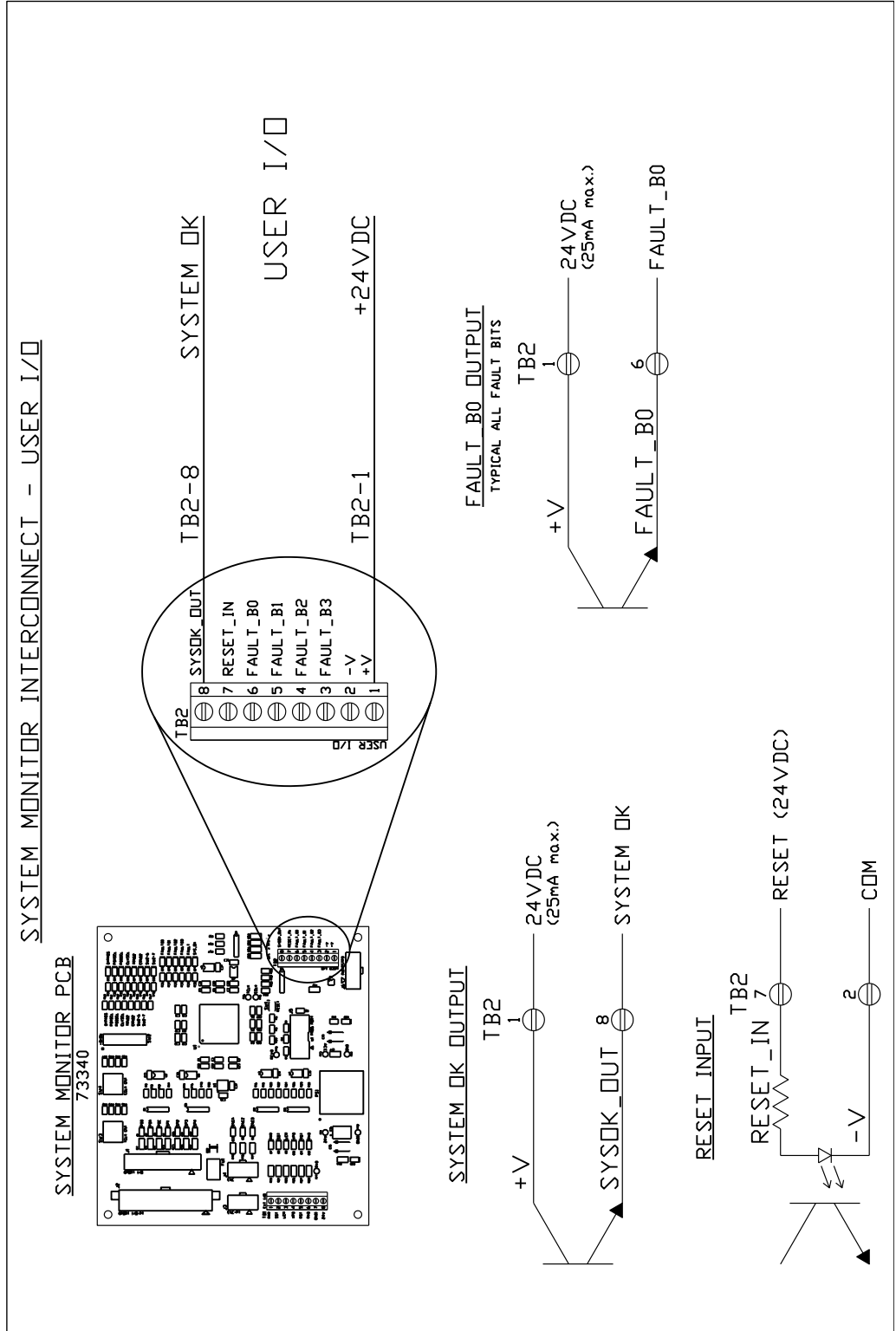
8 Channel Part Tracker - CP4422EV



Extended I/O - CP4422EV



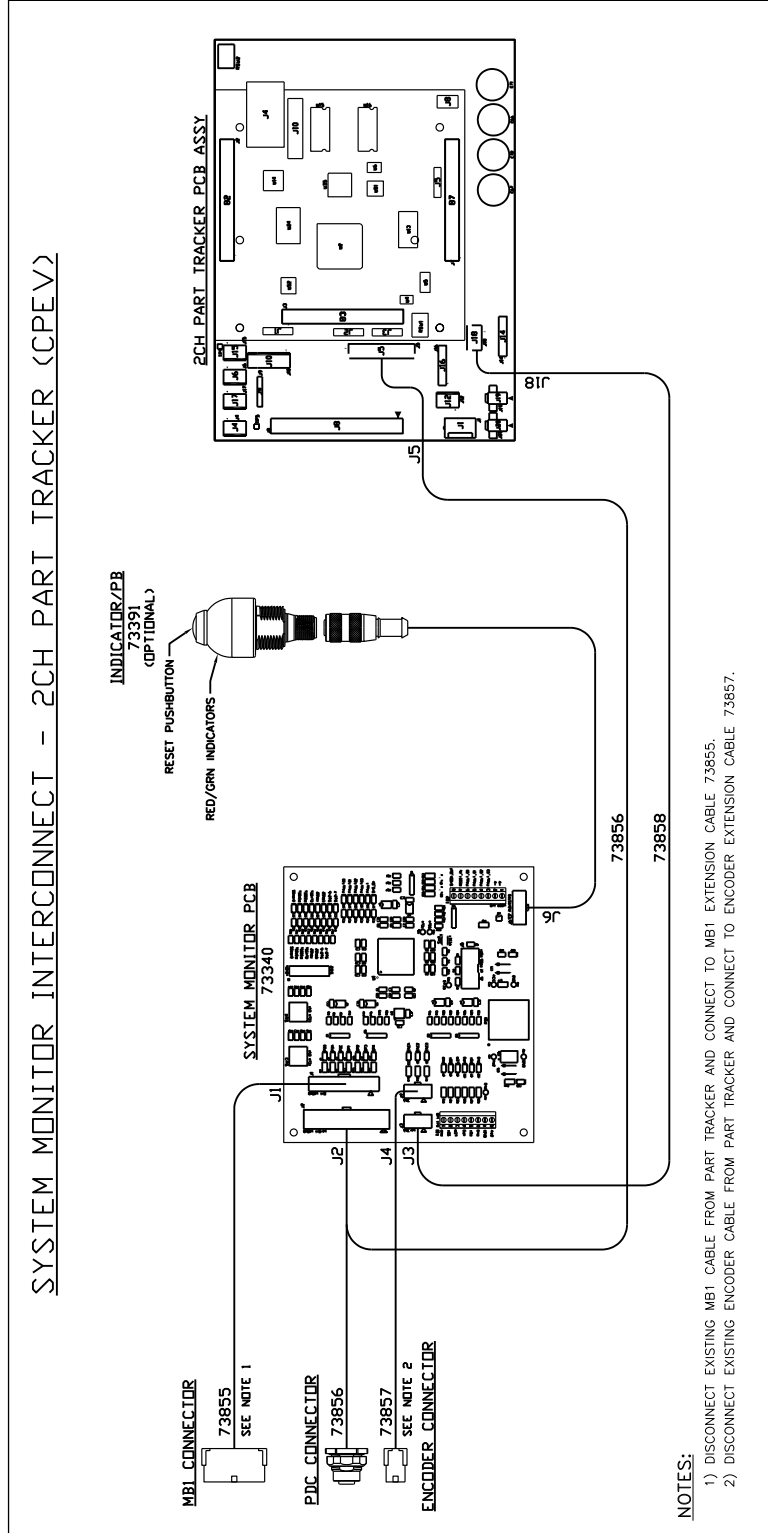
User I/O - CP4422EV



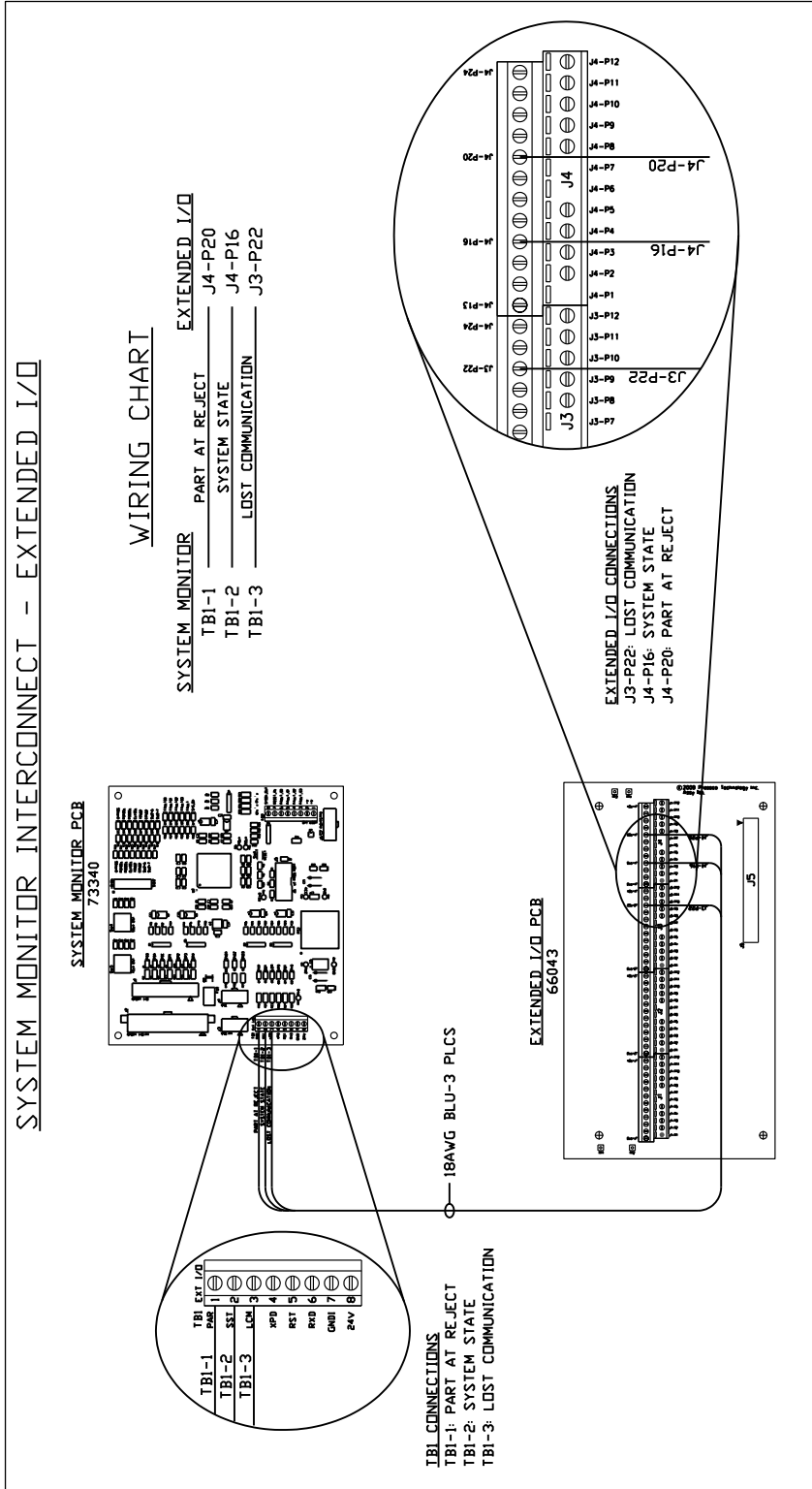
Chapter 4

Integrated Tunnel - Interconnect Diagrams

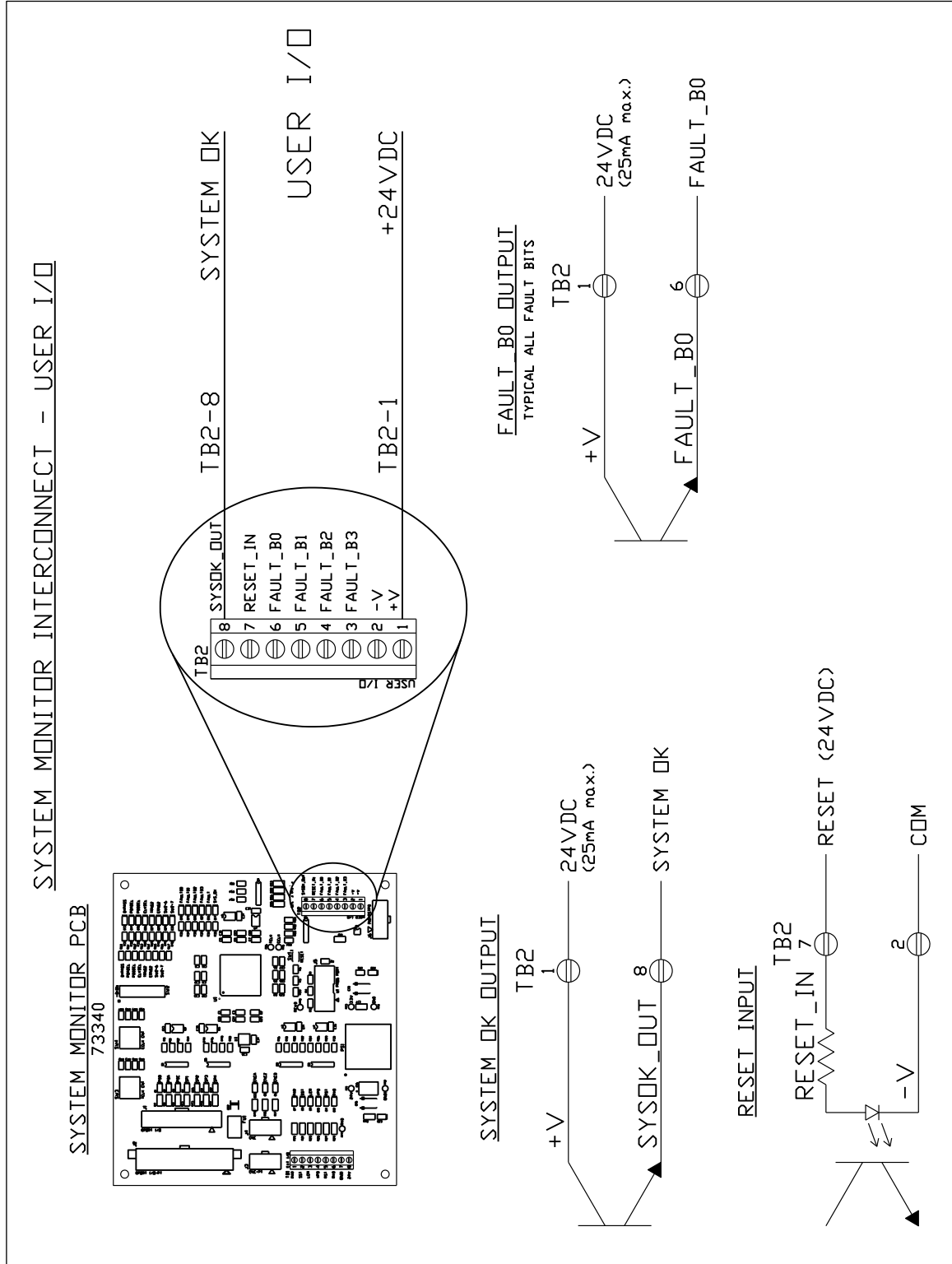
2 Channel Part Tracker - Integrated Tunnel



Extended I/O - Integrated Tunnel



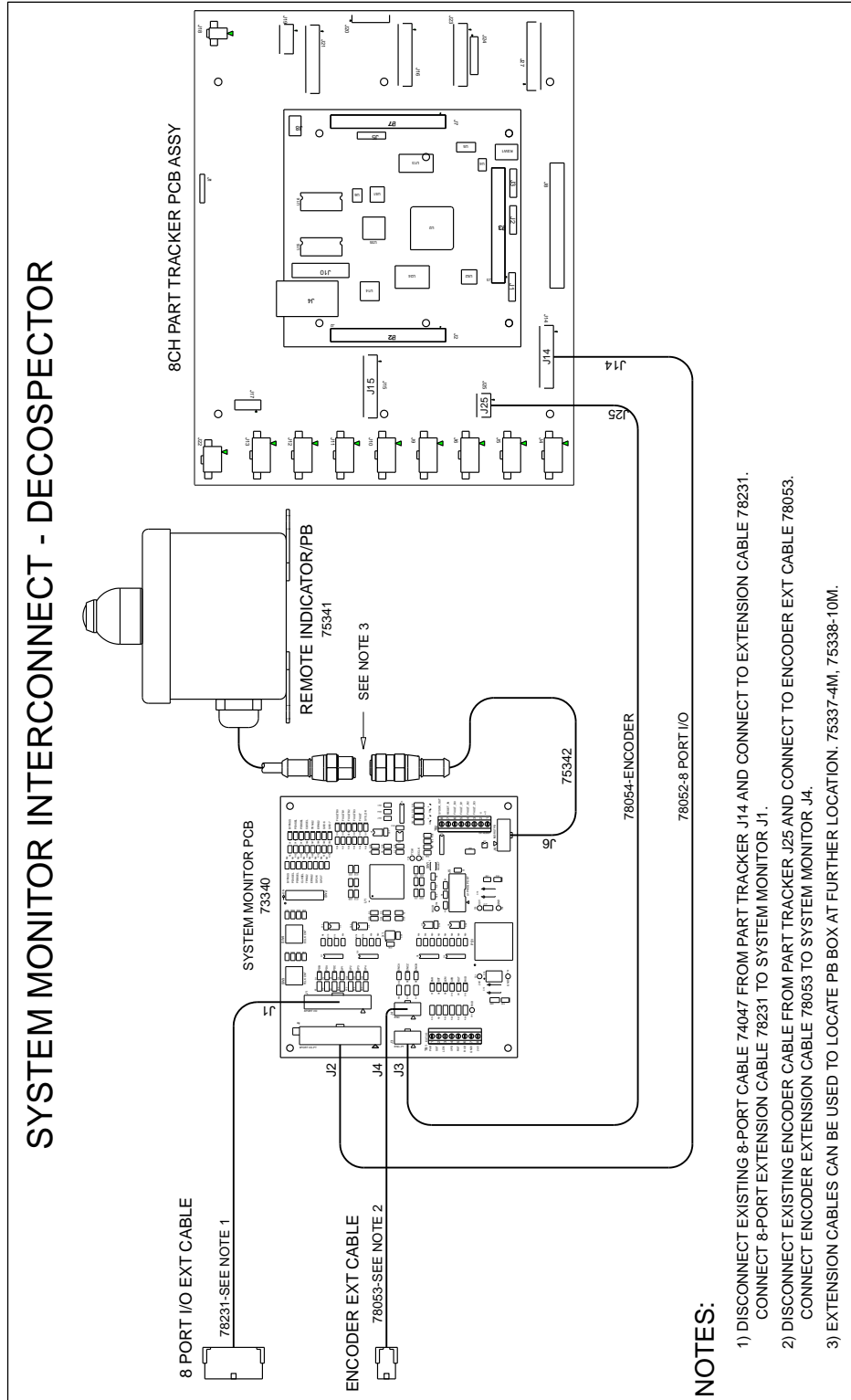
User I/O - Integrated Tunnel



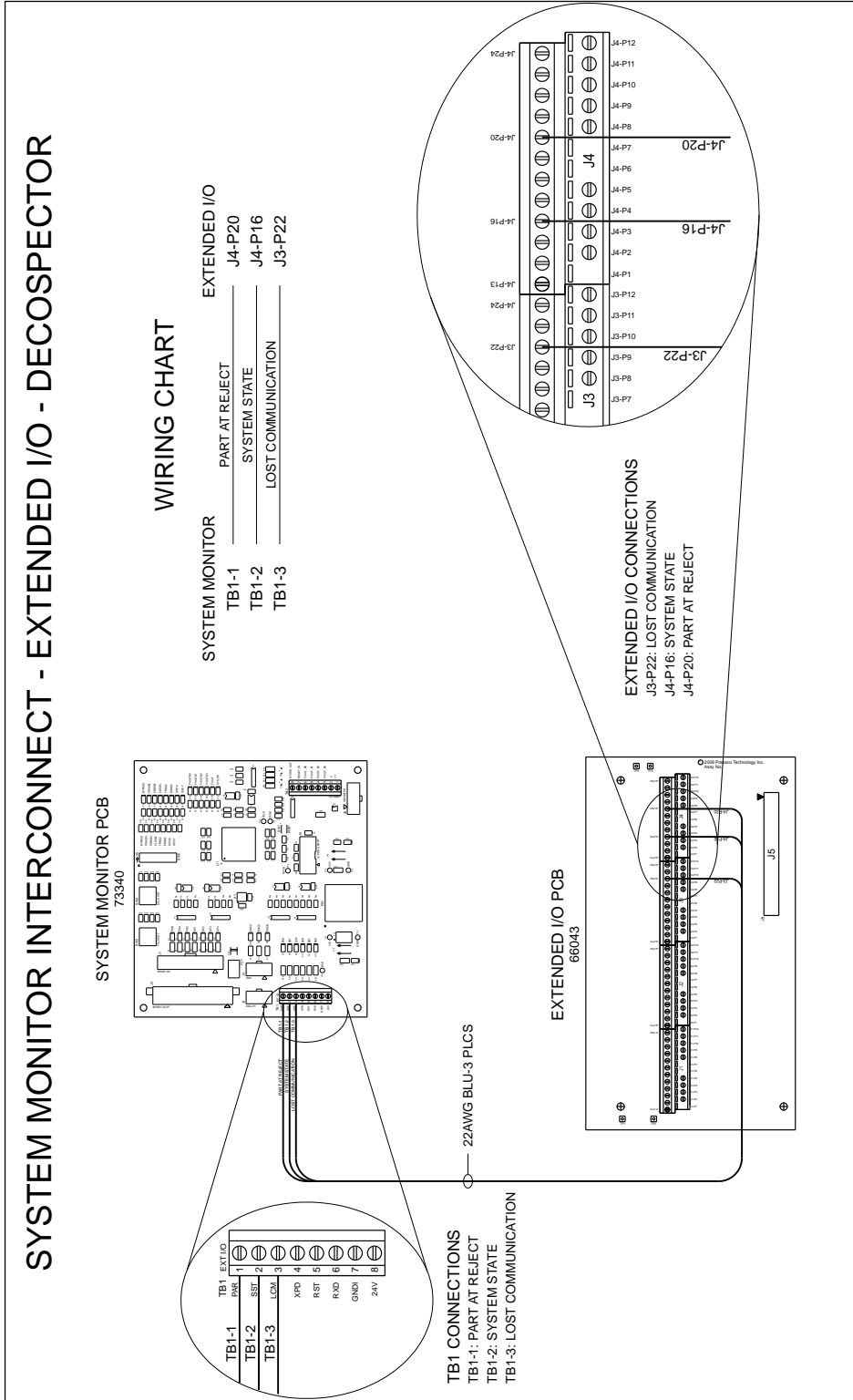
Chapter 5

Decospector 360™ - Interconnect Diagrams

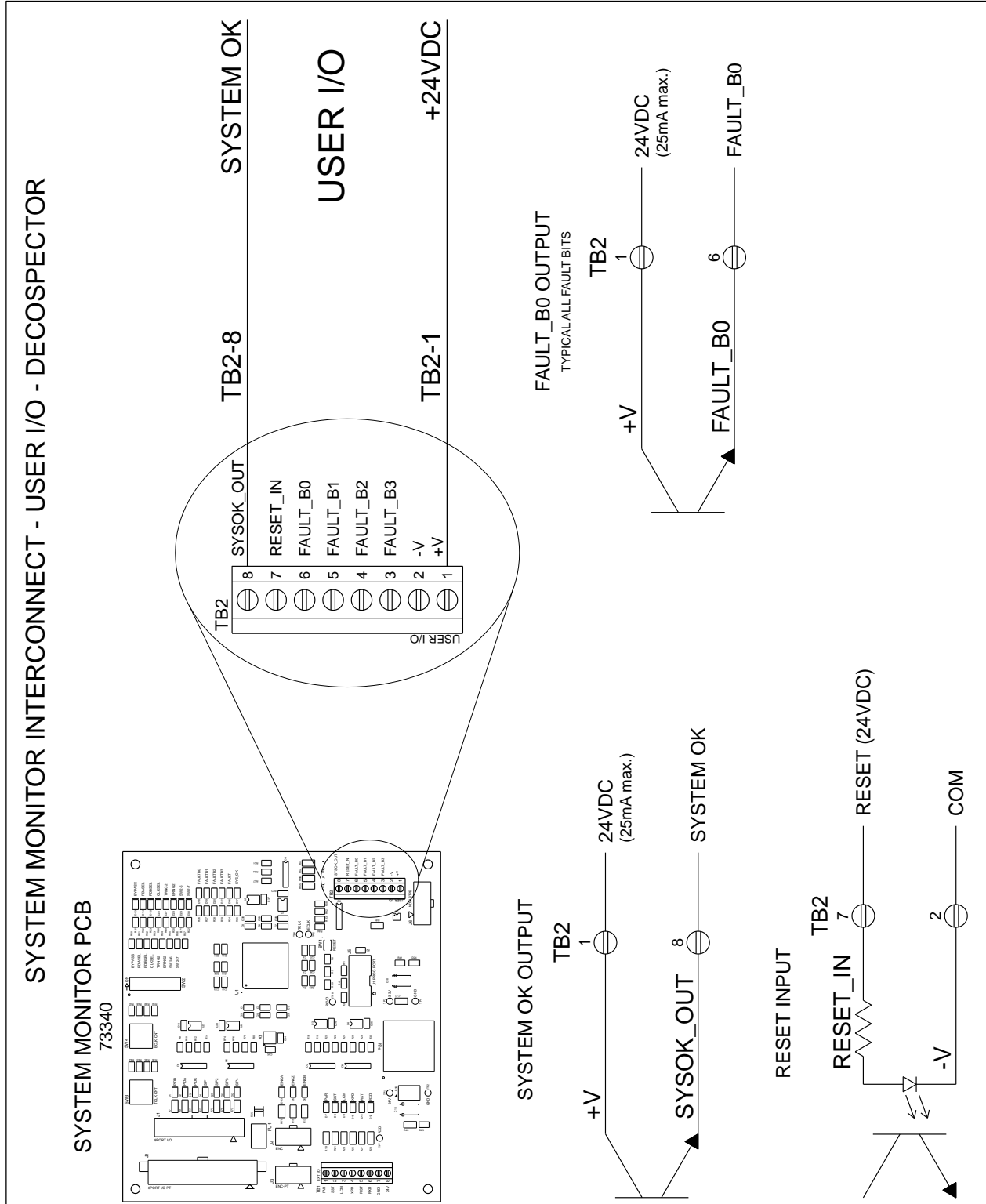
8 Channel Part Tracker System Monitor Interconnect - Deco



Extended I/O - Deco



User I/O - Deco



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