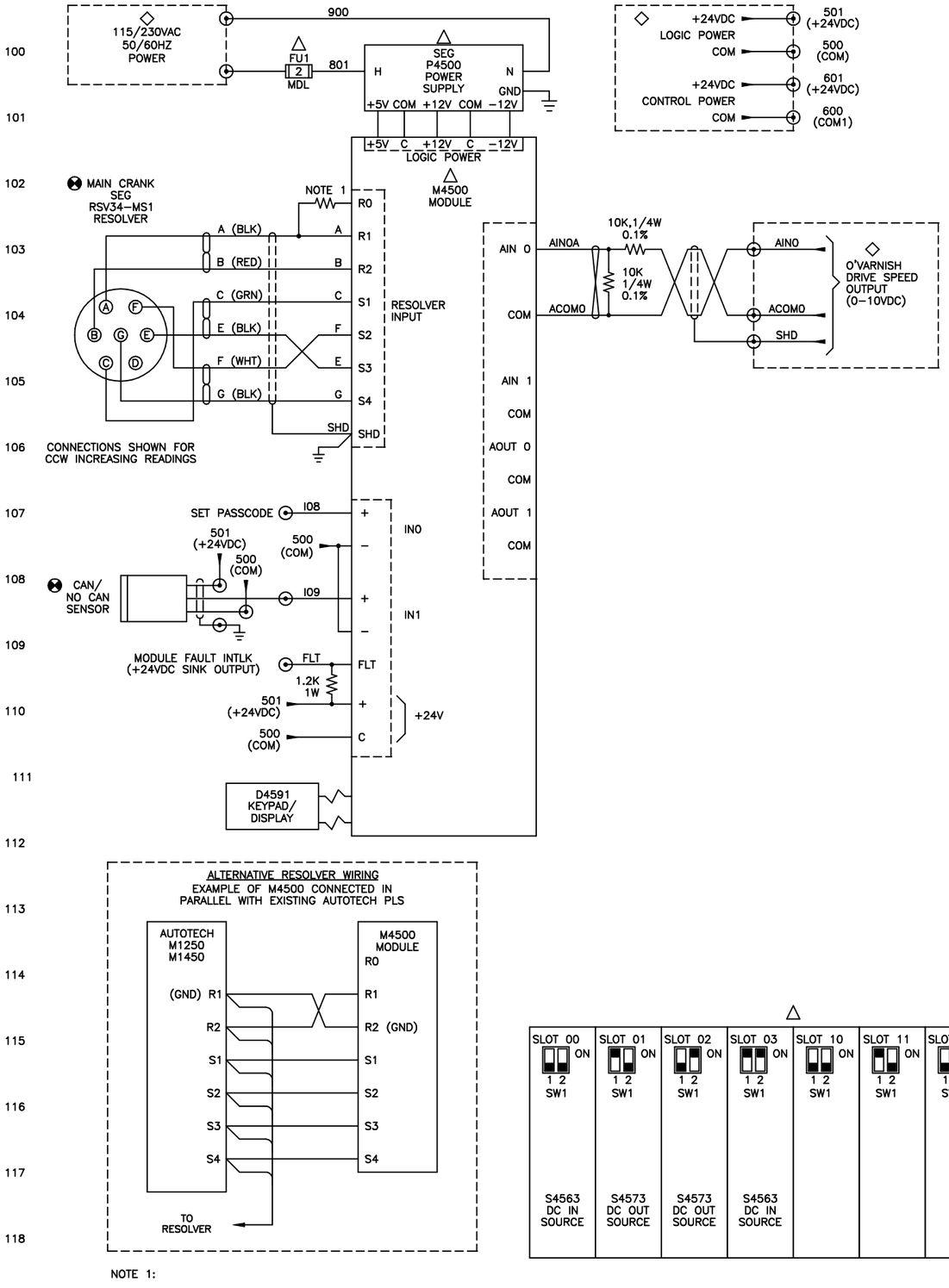


BLOWOFF DATA	BIT 2	BIT 1	BIT 0
NONE	0	0	0
RESTART BLOWOFFS	0	0	1
Q.C. BLOWOFFS	0	1	0
MANUAL BLOWOFFS	0	1	1
BAD CAN BLOWOFFS	1	0	0
GOOD CANS	1	0	1

ALARM DATA	BIT 1	BIT 0
NONE	0	0
TIMING SIGNAL FAIL	0	1
NO CAN TRANSFER	1	0
INFEED TRACK JAM	1	1

SYSTEMS ENGINEERING ASSOCIATES, INC.
ARVADA, COLORADO

SCALE:	APPROVED:	DRAWN BY: KDV
DATE: 3-5-04		REVISED: 6-16-04
HSL−DC5 ELECTRICAL CONTROL SCHEMATIC		WO#
		PT#
SYSTEMS ELECTRONICS GROUP		DRAWING NUMBER 14−4516−10

HOST PLC OUTPUTS (+24VDC SOURCING)

DUCTOR CONTROL AUTO — I30 — 0 (B130.0)
DUCTOR CONTROL MANUAL — I31 — 1 (B130.1)
DUCTORS AUTO ON — I32 — 2 (B130.2)
SPARE — I33 — 3 (B130.3)
SPARE — I34 — 4 (B130.4)
SPARE — I35 — 5 (B130.5)
SPARE — I36 — 6 (B130.6)
SPARE — I37 — 7 (B130.7)

SLOT 03 ON 1 2
S4563 DC IN SOURCE

501 (+24VDC)
500 (COM)

DUCTOR FEEDBACK SENSOR #1 — I38 — 10 (B131.0)
DUCTOR FEEDBACK SENSOR #2 — I39 — 11 (B131.1)
DUCTOR FEEDBACK SENSOR #3 — I40 — 12 (B131.2)
DUCTOR FEEDBACK SENSOR #4 — I41 — 13 (B131.3)
DUCTOR FEEDBACK SENSOR #5 — I42 — 14 (B131.4)
DUCTOR FEEDBACK SENSOR #6 — I43 — 15 (B131.5)
DUCTOR FEEDBACK SENSOR #7 — I44 — 16 (B131.6)
DUCTOR FEEDBACK SENSOR #8 — I45 — 17 (B131.7)

500 (COM) — C

SLOT 02 + ON 1 2
S4573 DC OUT SOURCE

601 (+24VDC)

(B120.0) 0 — FU5 2 ABC — 040B — 040A
(B120.1) 1 — FU6 2 ABC — 041B — 041A
(B120.2) 2 — FU7 2 ABC — 042B — 042A
(B120.3) 3 — FU8 2 ABC — 043B — 043A
(B120.4) 4 — FU9 2 ABC — 044B — 044A
(B120.5) 5 — FU10 2 ABC — 045B — 045A
(B120.6) 6 — 046 SPARE
(B120.7) 7 — 047 SPARE
(B121.0) 10 — FU11 2 ABC — 048
(B121.1) 11 — FU12 2 ABC — 049
(B121.2) 12 — FU13 2 ABC — 050
(B121.3) 13 — FU14 2 ABC — 051
(B121.4) 14 — FU15 2 ABC — 052
(B121.5) 15 — FU16 2 ABC — 053
(B121.6) 16 — FU17 2 ABC — 054
(B121.7) 17 — FU18 2 ABC — 055

C — 600 (COM1)

601 (+24VDC)

"A" TRIP CAM SKIP: PRINT / AUTO / 00X — 040 — Ⓟ SOL — ON
"A" TRIP CAM: LT (A) — 0X0 — 601 (OPTIONAL) — "A" TRIP CAM
041 — Ⓟ SOL — OFF — 00X / X00
"B" TRIP CAM SKIP: PRINT / AUTO / 00X — 042 — Ⓟ SOL — ON
"B" TRIP CAM: LT (A) — 0X0 — 601 (OPTIONAL) — "B" TRIP CAM
043 — Ⓟ SOL — OFF — 00X / X00
"C" TRIP CAM SKIP: PRINT / AUTO / 00X — 044 — Ⓟ SOL — ON
"C" TRIP CAM: LT (A) — 0X0 — 601 (OPTIONAL) — "C" TRIP CAM
045 — Ⓟ SOL — OFF — 00X / X00

048 — Ⓟ SOL — DUCTOR SOLENOID STATION #1
049 — Ⓟ SOL — DUCTOR SOLENOID STATION #2
050 — Ⓟ SOL — DUCTOR SOLENOID STATION #3
051 — Ⓟ SOL — DUCTOR SOLENOID STATION #4
052 — Ⓟ SOL — DUCTOR SOLENOID STATION #5
053 — Ⓟ SOL — DUCTOR SOLENOID STATION #6
054 — Ⓟ SOL — DUCTOR SOLENOID STATION #7
055 — Ⓟ SOL — DUCTOR SOLENOID STATION #8

600 (COM1)

600 (COM1)

SLOT 1–3
SW1 ON SW2 ON
S4516–DF1 COMMUNICATIONS CO–CPU (OPTIONAL)

RS–232: RXD 0 — TXD 1 — SG 2 — 3
RS–422: RXD+ 4 — RXD– 5 — TXD+ 6 — TXD– 7

TX — RX — SG

PLC5 CH0 25–PIN

2	TX
3	RX
7	SG
4	RTS
5	CTS
6	DSR
8	DCD
20	DTR

SLC500 CH0 9–PIN

1	DCD
4	DTR
6	DSR
2	TX
3	RX
5	SG
7	RTS
8	CTS

S3000 NETWORK (IF USED): + 0 — – 1 — + 2 — – 3 — S 4

ALTERNATIVE DUCTOR WIRING

600 (COM1)

SS INK STATION #1 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #1
SS INK STATION #2 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #2
SS INK STATION #3 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #3
SS INK STATION #4 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #4
SS INK STATION #5 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #5
SS INK STATION #6 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #6
SS INK STATION #7 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #7
SS INK STATION #8 OFF / ENABLE — OX — Ⓟ SOL — DUCTOR SOLENOID STATION #8

600 (COM1)

SYSTEMS ENGINEERING ASSOCIATES, INC.
ARVADA, COLORADO

SCALE:	APPROVED:	DRAWN BY: KDV
DATE: 3–5–04		REVISED: 6–16–04
HSL–DC5 ELECTRICAL CONTROL SCHEMATIC		WO#
		PT#
SYSTEMS ELECTRONICS GROUP		DRAWING NUMBER 14–4516–10

ELECTRICAL TIMING PROCEDURE:

1) VERIFY THAT THE DIRECTION OF ROTATION IS CORRECT; IF NOT, REVERSE THE S1 AND S3 LEADS OF THE RESOLVER AT THE M4500 CONNECTOR. ALSO VERIFY THAT FOR ONE MANDREL, THAT THE DEGREES READ-OUT GOES COMPLETELY FROM 0° THRU 359°.

2) POSITION THE SPINDLE WHEEL SUCH THAT AN "A" TRIP CAM FOLLOWER HAS JUST PASSED THE "A" TRIP CAM (SEE FIGS. 1, 2 & 3). THIS IS MACHINE ZERO. SET THE RESOLVER OFFSET USING THE AUTO ZERO FUCTION.

3) SET THE BAD CAN BLOWOFF TIMING AND Q.C. CAN BLOWOFF TIMING SUCH THAT THE SIGNAL STARTS TO TURN ON WHEN THE BLOWOFF PORT IS BETWEEN CANS AS SHOWN IN FIGURE 4.

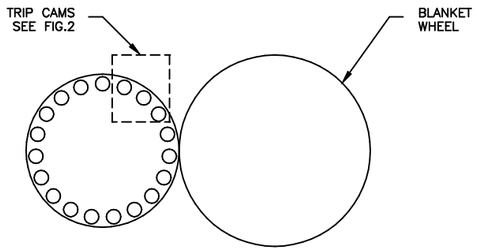


FIGURE 1 – SPINDLE WHEEL & BLANKET WHEEL

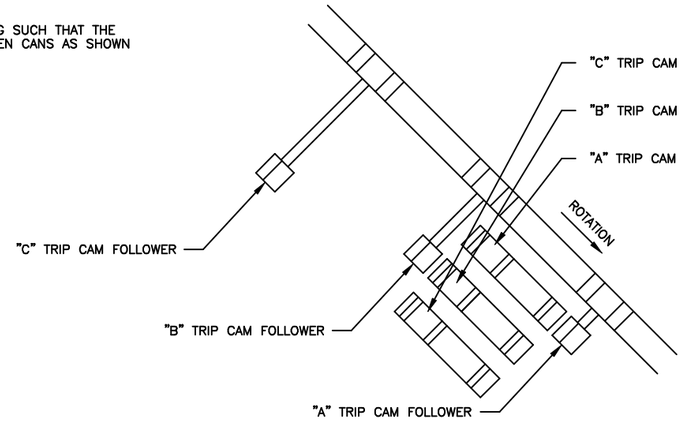
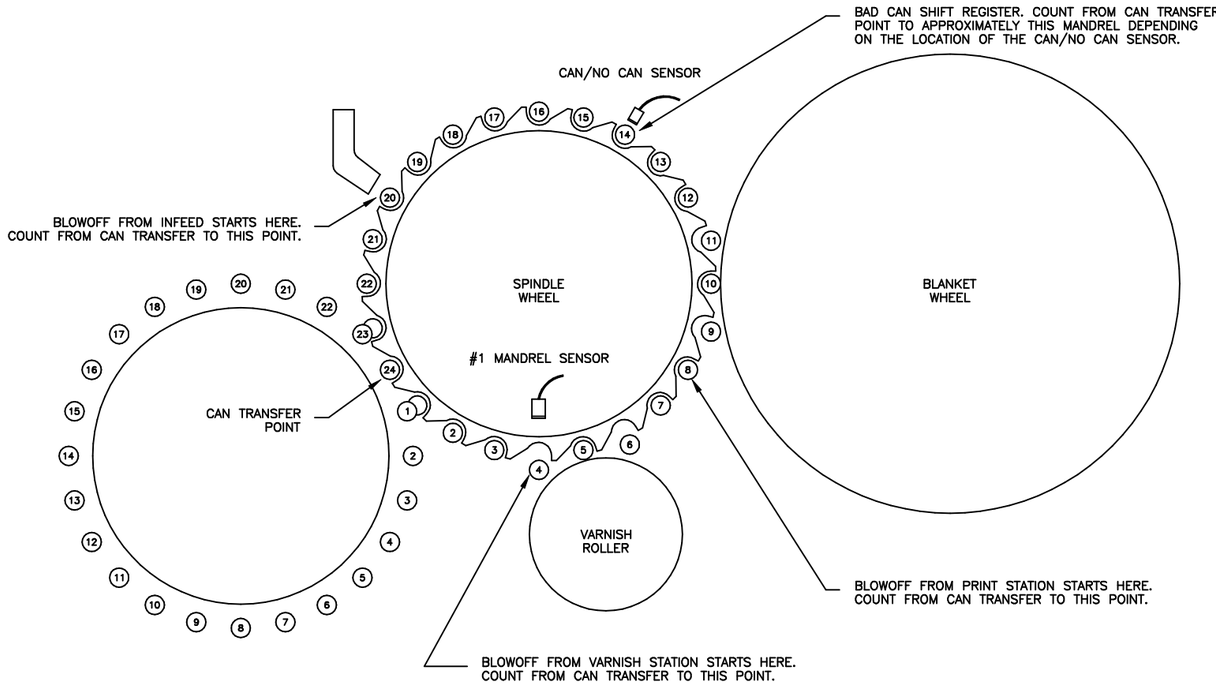


FIGURE 2 – TRIP CAMS / CAM FOLLOWERS (AT ZERO POSITION)



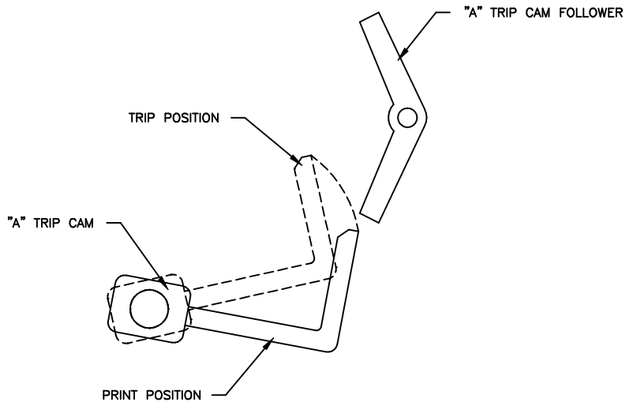


FIGURE 3 – "A" TRIP CAM FOLLOWER HAS JUST PASSED "A" TRIP CAM AT ZERO DEGREE POSITION.

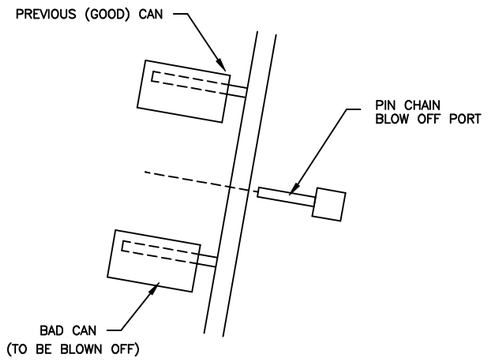
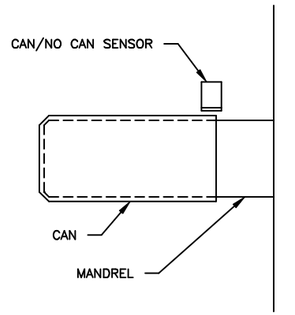


FIGURE 4

LOCATION AT WHICH PIN CHAIN BLOW OFF SHOULD JUST TURN ON



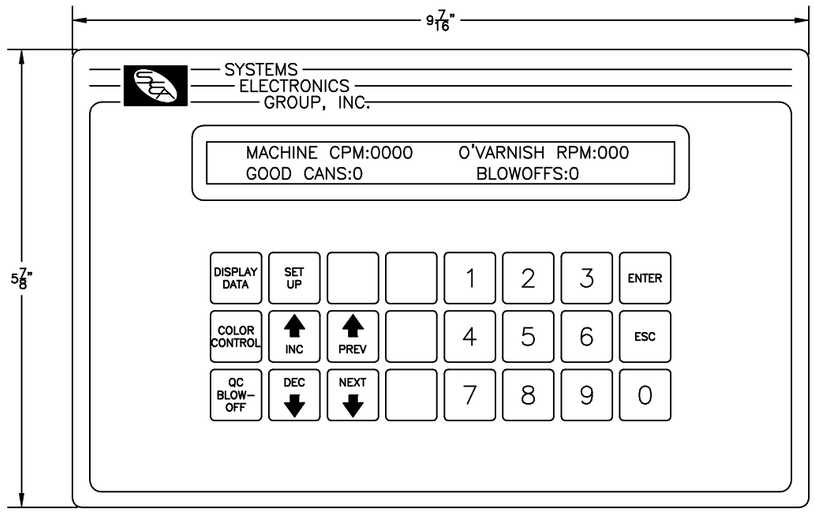
LOCATION OF CAN/NO CAN SENSOR

1. THE NUMBER OF PINS TO THE BAD CAN BLOWOFF PORT IS COUNTED FROM THE TRANSFER POINT OUT ON THE PIN CHAIN TO THE BLOWOFF PORT.

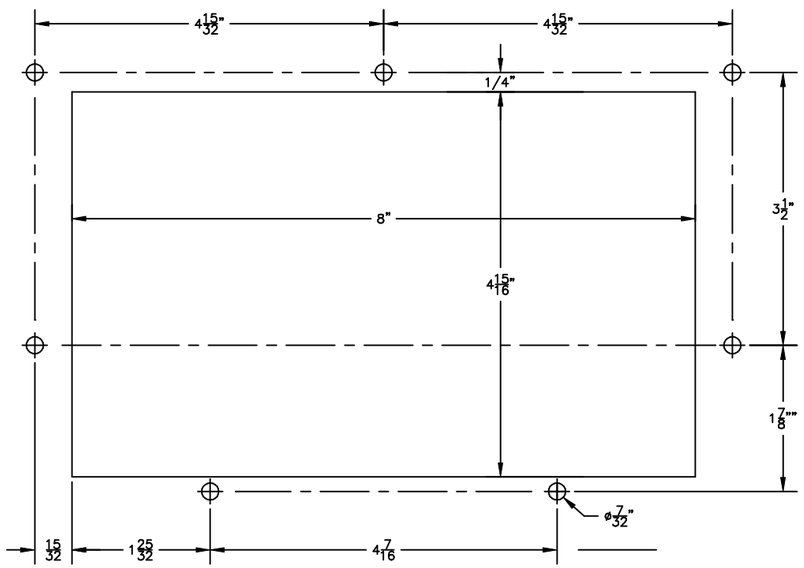
NOTES:

SYSTEMS ENGINEERING ASSOCIATES, INC.
ARVADA, COLORADO

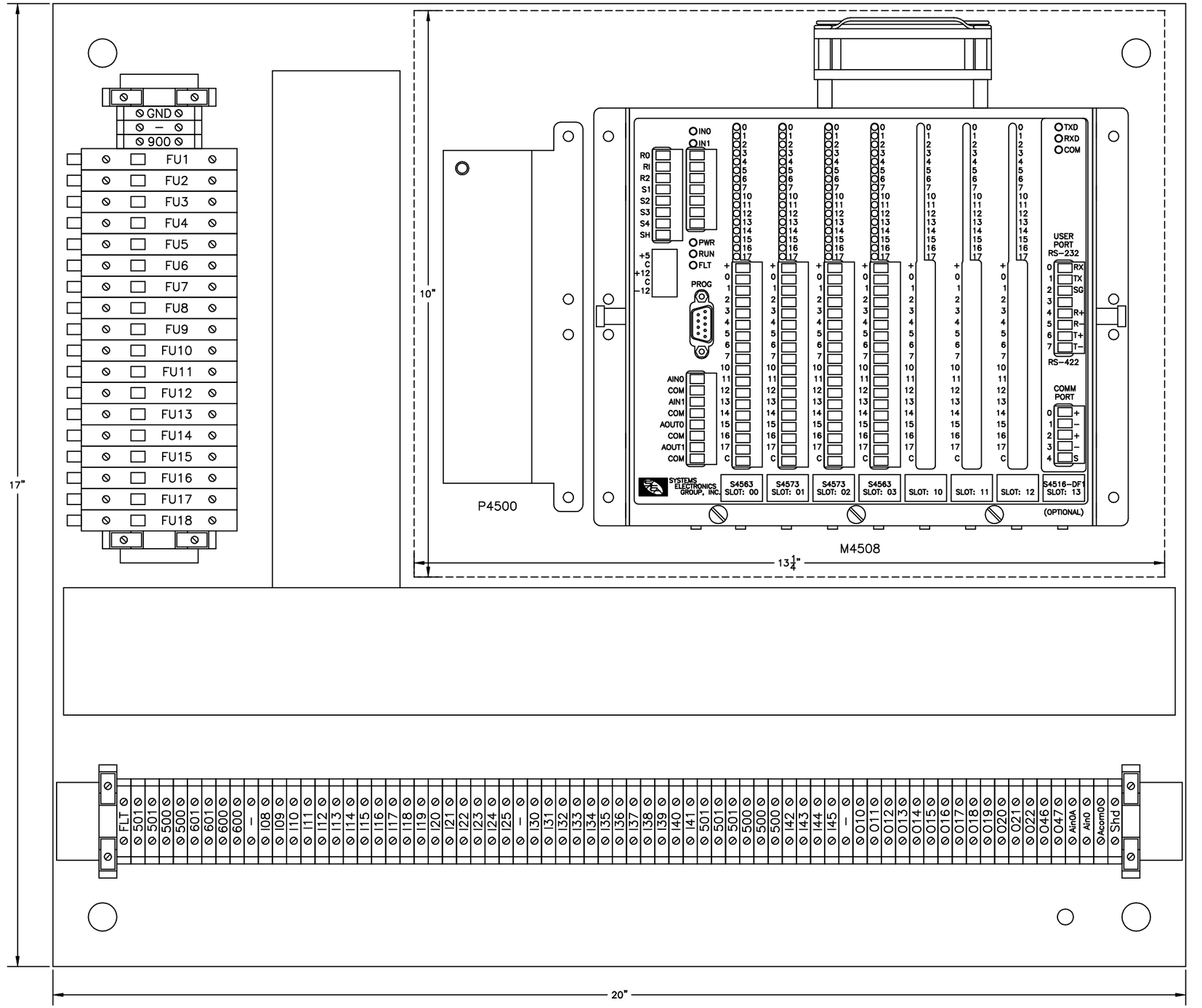
SCALE:	APPROVED:	DRAWN BY: KDV
DATE: 7-16-01		REVISED: 3-9-04
HSL-DC5 TIMING DIAGRAM		WO#
		PT#
SYSTEMS ELECTRONICS GROUP		DRAWING NUMBER 14-4516-14



HSL-DC5 KEYPAD DISPLAY



RECOMMENDED PANEL CUT-OUT



HSL-DC5 PREWIRED BACK PANEL

SHEET 1 OF 1

SYSTEMS ENGINEERING ASSOCIATES, INC.
ARVADA, COLORADO

SCALE: 1/2" = 1"	APPROVED:	DRAWN BY:	KDV
DATE: 3-8-04		REVISED:	8-12-04
HSL-DC5 MECHANICAL LAYOUT		WO#	
		PT#	
SYSTEMS ELECTRONICS GROUP		DRAWING NUMBER	14-4516-15