

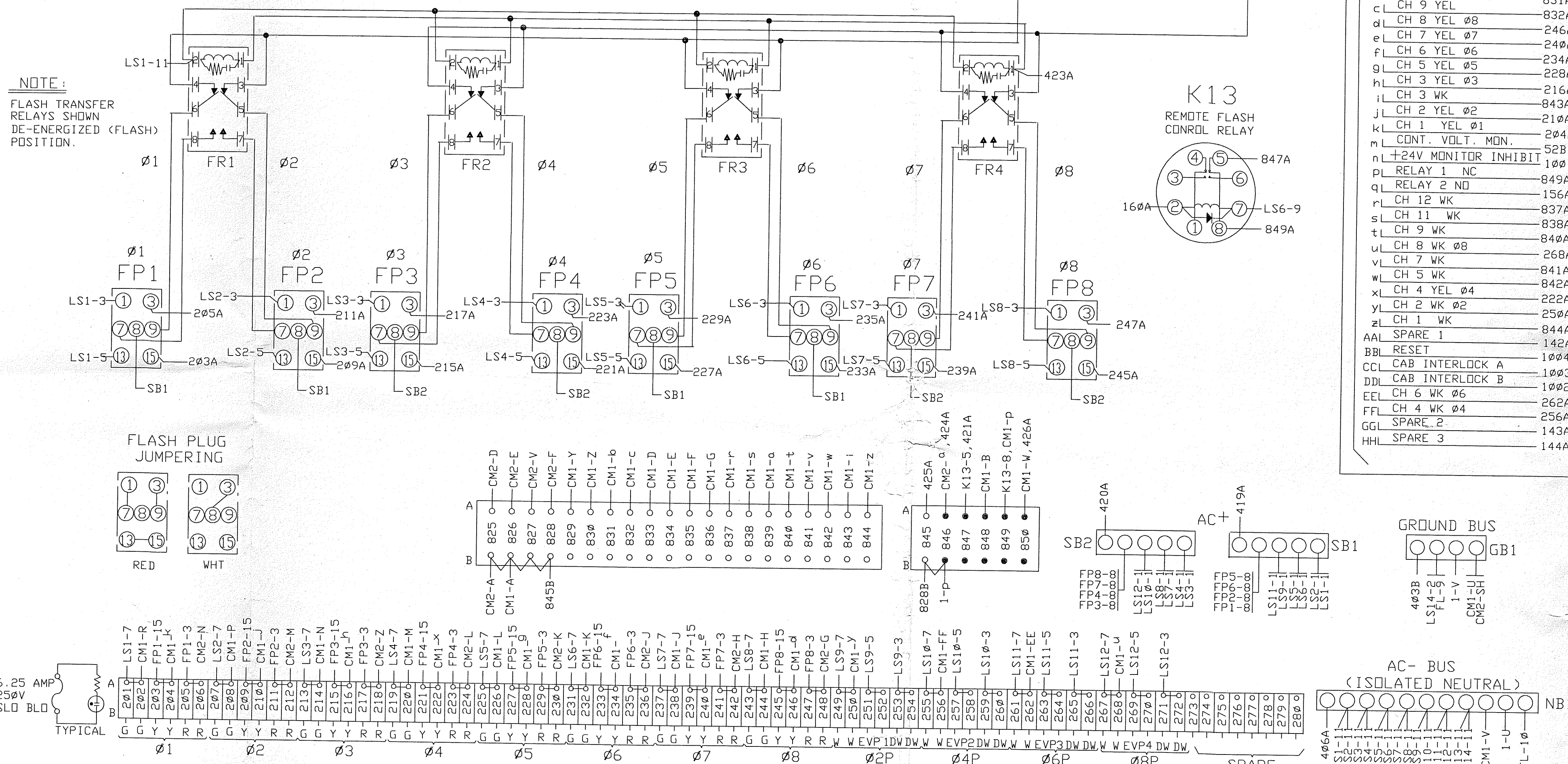
LS	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CONT	1	2	3	4	5	6	7	8	2P	4P	6P	8P		
PLAN	1	2	3	4	5	6	7	8						

IN	GREEN / WALK	10	62A	69A	76A	82A	102A	109A	116A	122A	72A	85A	112A	125A
YELLOW/PED CLR	8	63A	70A	77A	83A	103A	110A	117A	123A	142B	144B	146B	148B	
RED/DON'T WALK	6	64A	71A	78A	84A	104A	111A	118A	124A	73A	86A	113A	126A	

OUT	GREEN / WALK	7	201A	207A	213A	219A	225A	231A	237A	243A	249A	255A	261A	267A
YELLOW	5	FP1-13	FP2-13	FP3-13	FP4-13	FP5-13	FP6-13	FP7-13	FP8-13	251A	257A	263A	269A	
RED/DON'T WALK	3	FP1-1	FP2-1	FP3-1	FP4-1	FP5-1	FP6-1	FP7-1	FP8-1	253A	259A	265A	271A	

POWER	+24 VDC	9	←											
CHASSIS GROUND	2	←												▷GB1
AC NEUTRAL	11	NB1	FR1-2	NB1	NB1	NB1	NB1	NB1	NB1	NB1	NB1	NB1	NB1	NB1
115 VAC	1	SB1	SB1	SB2	SB2	SB1	SB1	SB2	SB2	SB1	SB2	SB1	SB2	SB1

NOTE: FLASH TRANSFER RELAYS SHOWN DE-ENERGIZED (FLASH) POSITION.



TIGHTENING TORQUE SPECIFICATIONS

SCREW SIZE	6-32	8-32	10-32
POUND INCHES	12	16	25.9
BLOCK TYPE	SAK56	RK6-10	SAK35N
POUND INCHES	10.5	16	35
BLOCK TYPE	#B35	#B10	
POUND INCHES	35.5	17.75	

VEHICLE SIGNALS

SIGNAL	←	G	←	R	←	G	←	R
1-1	201	203	205					
1-2	202	204	206					
2-1				207	209	211		
2-2				208	210	212		
2-3				207	209	211		
4-1				219	221	223		
4-2				220	222	224		
4-3				219	221	223		
5-1	225	227	229					
5-2	226	228	230					
6-1				231	233	235		
6-2				232	234	236		
6-3				231	233	235		
8-1				243	245	247		
8-2				244	246	248		
8-3				243	245	247		

VEH DETECTORS

DET	TERMINAL
D1-1	303-304
D1-2	306-307
D2-1	345-346
D2-2	348-349
D4-1	313-314
D4-2	316-317
D4-3	355-356
D4-4	358-359
D5-1	308-309
D5-2	311-312
D6-1	350-351
D6-2	353-354
D8-1	318-319
D8-2	321-322
D8-3	323-324
D8-4	326-327

PED SIGNALS

SIGNAL	TERMINAL
P2-1	249 253
P2-2	250 254
P4-1	255 259
P4-2	256 260
P6-1	261 265
P6-2	262 266
P8-1	267 271
P8-2	268 272

PED PUSHBUTTONS

PPB	TERMINAL
P2-1, 2	301
P4-1, 2	302
P6-1, 2	343
P8-1, 2	344

EVP SENSORS

CONTR. CHAN.	PHASES	POLE #	SIGNAL	DC (+)	GND
1	1-6	1	333	334	337
2	2-5	3	336	334	337
3	4	4	338	339	342
4	8	2	341	339	342

EVP CONFIRMATORY LIGHTS

CONTR. CHAN.	PHASES	POLE #	TERM
1	1-6	1	251
2	2-5	3	257
3	4	4	263
4	8	2	263

NOTES: 1) IF EVP HEADS ARE INSTALLED JUMPER 367B TO 369B AND / DR 335B TO 337B

LOAD SWITCH PANEL ASSEMBLY

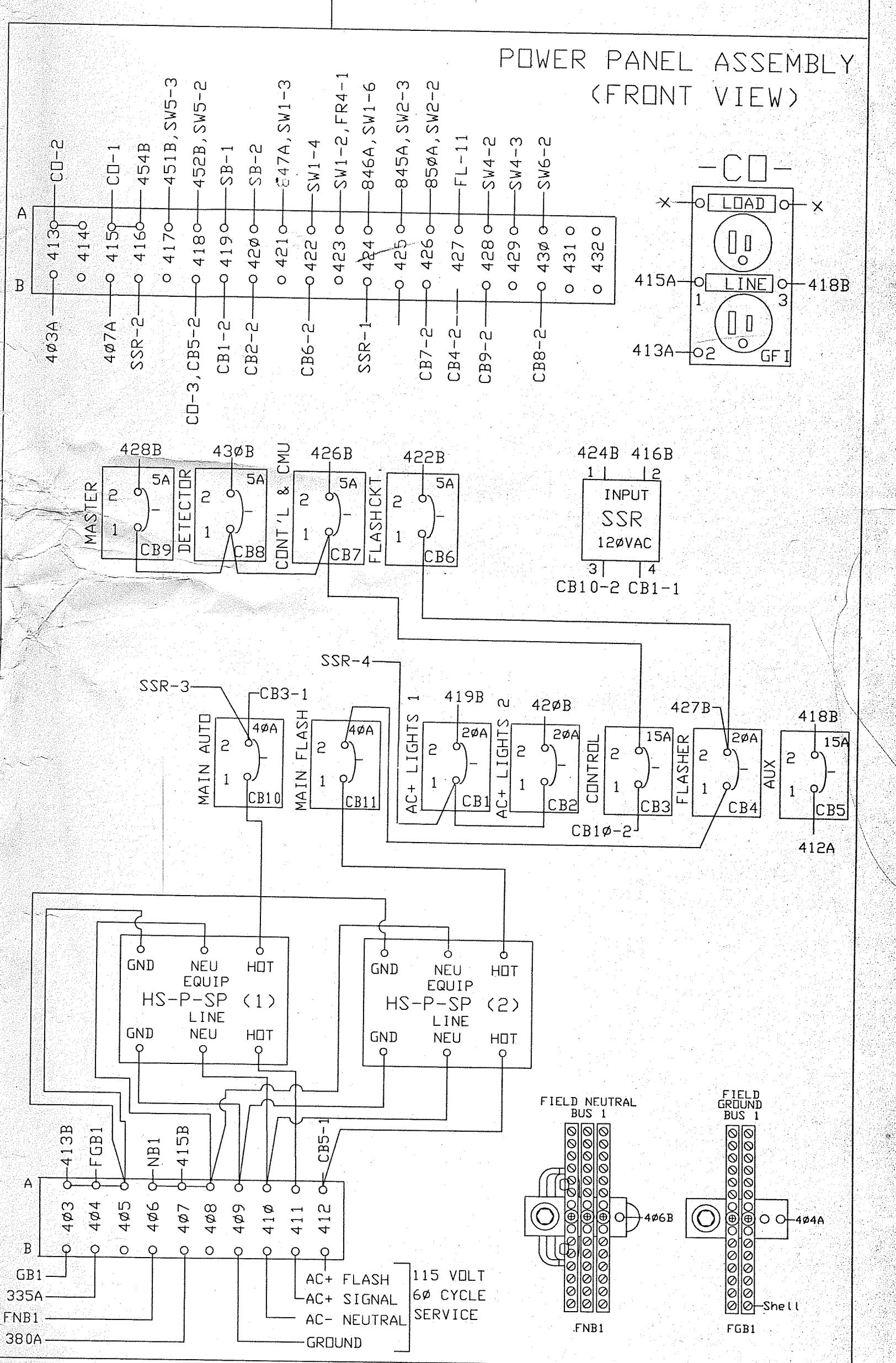
NEMA #2CH CONFLICT MONITOR

CM1	CM2
SHL SHELL GROUND	GB1
AL AC+II	826B
BL RELAY 1 NO	848A
CL RELAY 2 NC	141A
DL CH 12 GRN	833A
EL CH 11 GRN	834A
FL CH 10 GRN	835A
GL CH 9 GRN	836A
HL CH 8 GRN	244A
JL CH 7 GRN	238A
KL CH 6 GRN	232A
LL CH 5 GRN	226A
ML CH 4 GRN	220A
NL CH 3 GRN	214A
PL CH 2 GRN	208A
RL CH 1 GRN	202A
SL +24V MONITOR I	59B
TL LOGIC GROUND	53B
UL CHASSIS GROUND	53B
V AC-(NEUTRAL)	SHELL
W RELAY 1 COMMON (AG)	NB1
X RELAY 2 COMMON (LG)	54B
Y CH 12 YEL	829A
Z CH 11 YEL	830A
a CH 10 YEL	831A
b CH 9 YEL	832A
c CH 8 YEL	246A
d CH 7 YEL	240A
e CH 6 YEL	234A
f CH 5 YEL	228A
g CH 4 YEL	216A
h CH 3 YEL	210A
i CH 2 YEL	204A
j CH 1 YEL	1001B
m CONT. VOLT. MON.	52B
n +24V MONITOR INHIBIT	1001B
p RELAY 1 NC	849A
q RELAY 2 NO	156A
r CH 12 WK	837A
s CH 11 WK	838A
t CH 9 WK	840A
u CH 8 WK	841A
v CH 7 WK	268A
w CH 5 WK	842A
x CH 4 WK	222A
y CH 2 WK	250A
z CH 1 WK	844A
AA SPARE 1	142A
BB RESET	1004B
CC CAB INTERLOCK A	1003B
DD CAB INTERLOCK B	1002B
EE CH 6 WK	262A
FF CH 4 WK	256A
GG SPARE 2	143A
HHL SPARE 3	144A

CONFLICT MONITOR MATRIX PROGRAMMING INSTRUCTIONS

1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
1-3	2-4	3-5	4-6	5-7	6-8	7-9	8-10	9-11	10-12	
1-4	2-5	3-6	4-7	5-8	6-9	7-10	8-11	9-12		
1-5	2-6	3-7	4-8	5-9	6-10	7-11	8-12			
1-6	2-7	3-8	4-9	5-10	6-11	7-12				CH5-0 5
1-7	2-8	3-9	4-10	5-11	6-12					CH6-0 6
1-8	2-9	3-10	4-11	5-12						CH7-0 7
1-9	2-10	3-11	4-12							CH8-0 8
1-10	2-11	3-12								CH9-0 9
1-11	2-12									CH10-0 10
1-12										CH11-0 11
1-12										CH12-0 12

CHANNEL-0 COMBINATIONS NOT PINNED WITH MATRIX JUMPERS CONSTITUTE CONFLICTING MOVEMENTS. TO PROGRAM, CIRCLE PERMISSIVE COMBINATIONS AND INSTALL JUMPERS ON CORRESPONDING PINS ON THE PROGRAM CARD.



08-0-13

02-678-11

REV. STATUS

SHEET	1	2	3
REV	A	A	A

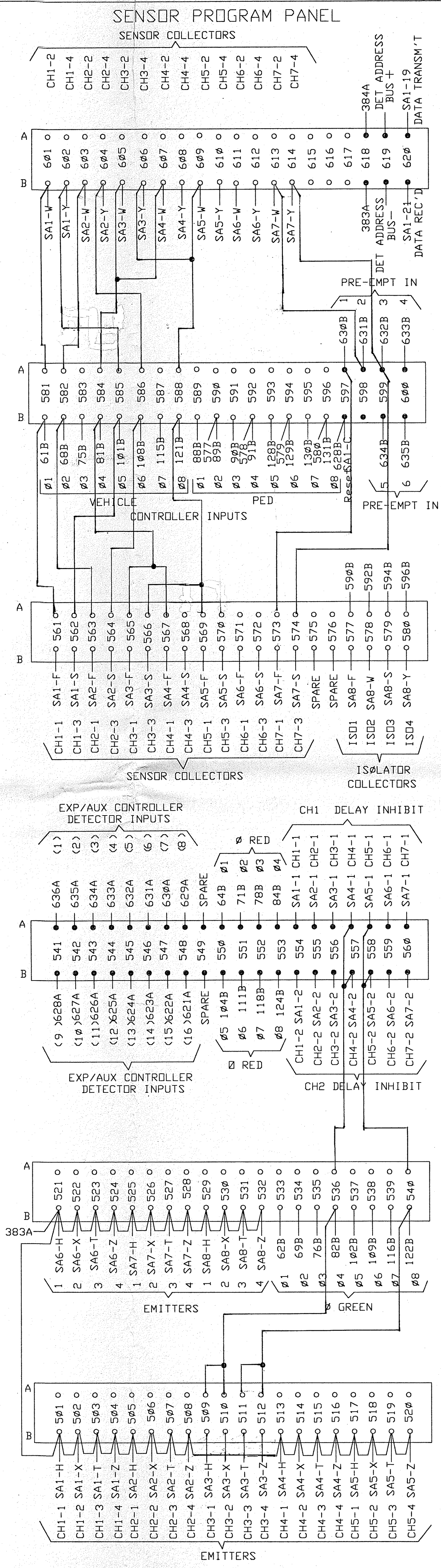
FOR ANOKA

ACT Electronics, Inc.

MNDOT 1998 "R" & "P" CABINET

FILE ACT198AP1

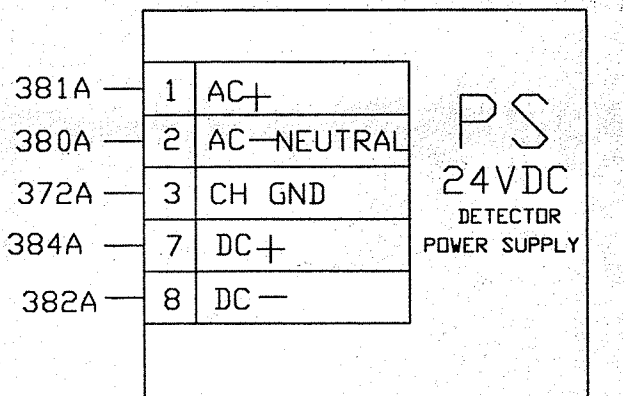
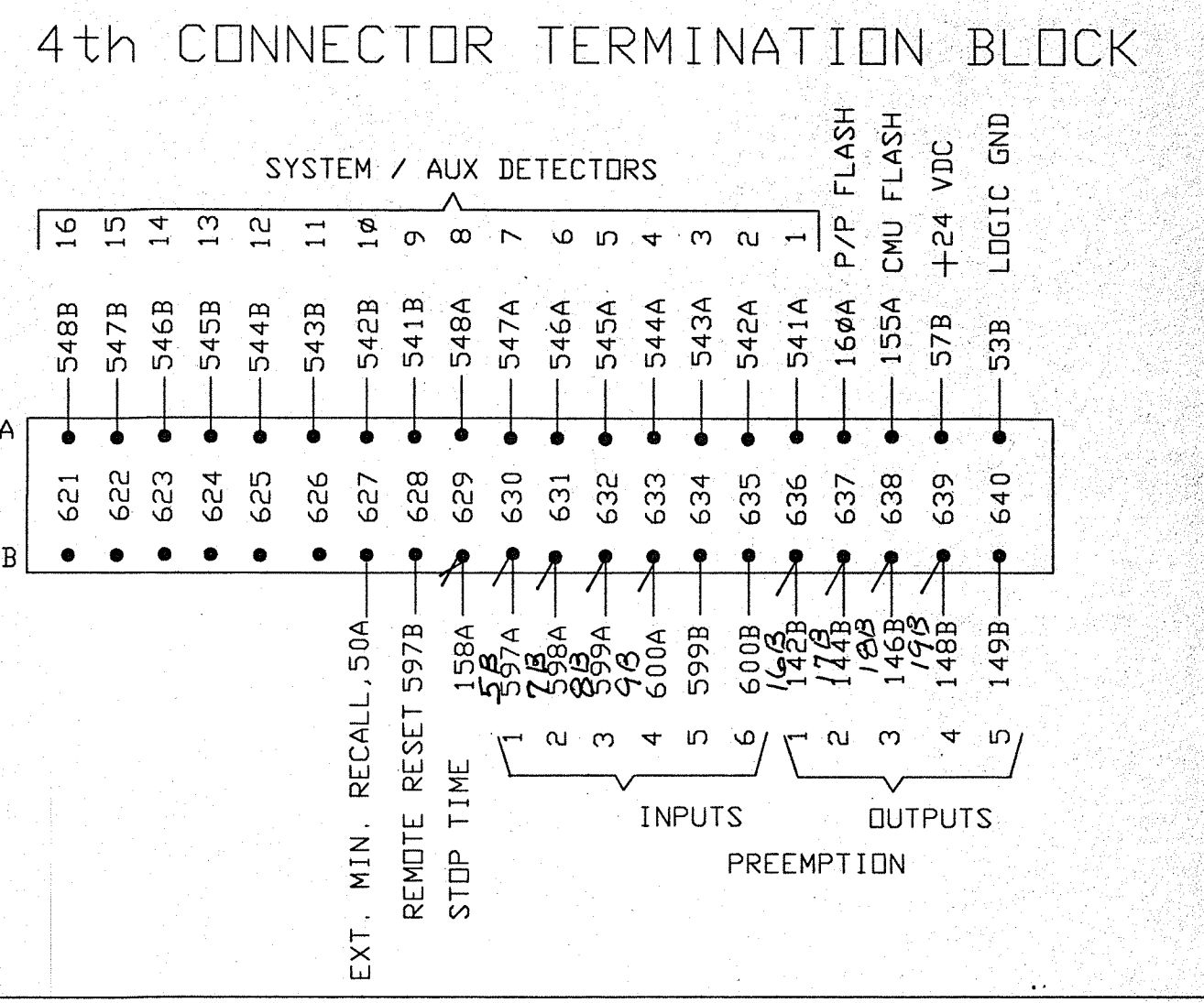
#78/HANSON AT 113TH



SA

DETECTORS AND PPB ISOLATION

WIRE COLOR	SA I/O BLOCK	EDGE CONN.	FUNCTIONS	SA1		SA2		SA3		SA4		SA5		SA6		SA7		SA8		FUNCTIONS	
				PHASE	FUNC	PHASE	FUNC	PHASE	FUNC	PHASE	FUNC	PHASE	FUNC	PHASE	FUNC	PHASE	FUNC	PHASE	FUNC		PHASE
1	BLK/YEL	A	DC GROUND																	1	AC+
2	RED	B	24V DC+																	2	AC-NEUTRAL
3	BLK/BLU	C	REMOTE RESET																	3	CH GND
BRN	D-4	CH 1 LOOP	303A																	4	DC+
WHT/BRN	E-5	CH 1 LOOP	304A																	5	DC-
ORANGE	6	ADDRESS BIT# 0	619B	SA1-15	SA2-10	SA3-15	SA4-15	SA5-10	SA6-15										6	SPARE	
WHT/BLU	5	F	CH 1 OUTPUT (+)	561B	563B	565B	567B	569B	571B	573B	577B								7	SPARE	
BLUE	6	H	CH 1 OUTPUT (-)	501B	505B	509B	513B	517B	521B	525B	529B								8	SPARE	
BLK/RED	7	J-8	CH 2 LOOP	306A	348A	316A	358A	326A	368A	336A	302A								9	SPARE	
BLK/WHT	8	K-9	CH 2 LOOP	307A	349A	317A	359A	327A	369A	337A	303A								10	SPARE	
6	YELLOW	10	ADDRESS BIT# 1	619A	SA1-6	SA3-6	SA4-6	SA4-10	SA5-15	SA7-6									11	SPARE	
12	GREEN	L	CHASSIS GROUND	340A															12	SPARE	
15	WHITE	M	AC-	SA2-M															13	SPARE	
13	BLACK	N	115V AC+	SA2-N															14	SPARE	
ORANGE	9	P-13	LOOP CH 3	308A	350A	318A	360A	328A	370A	338A	343A								15	SPARE	
WHT/OR	10	R-14	LOOP CH 3	309A	351A	319A	361A	329A	371A	339A	379B								16	SPARE	
		15	ADDRESS BIT# 2	SA1-10	SA2-6	SA3-15	SA3-10	SA5-6	SA6-10	SA7-10									17	SPARE	
WHT/GRY	11	S	CH 3 OUTPUT (+)	562B	564B	566B	568B	570B	572B	574B	579B								18	SPARE	
GREY	12	T	CH 3 OUTPUT (-)	503B	507B	511B	515B	519B	523B	527B	531B								19	SPARE	
YELLOW	13	U-17	CH 4 LOOP	311A	353A	321A	363A	331A	373A	341A	344A								20	SPARE	
WHT/YEL	14	V-18	CH 4 LOOP	312A	354A	322A	364A	332A	374A	342A	379A								21	SPARE	
8	GREY	19	DATA TRANSMIT	620A															22	SPARE	
10	VIOLET	21	DATA RECEIVE	620B															23	SPARE	
WHT/VIO	15	W	CH 2 OUTPUT (+)	601B	603B	605B	607B	609B	611B	613B	578B								24	SPARE	
VIOLET	16	X	CH 2 OUTPUT (-)	502B	506B	510B	514B	518B	522B	526B	530B								25	SPARE	
WHT/GRN	17	Y	CH 4 OUTPUT (+)	602B	604B	606B	608B	610B	612B	614B	580B								26	SPARE	
WHT/BLK	18	Z	CH 4 OUTPUT (-)	504B	508B	512B	516B	520B	524B	528B	532B								27	SPARE	
WHT/RED	1	1	CH 1 GREEN	554A	555A	556A	557A	558A	559A	560A									28	SPARE	
RED	2	2	CH 2 GREEN	554B	555B	556B	557B	558B	559B	560B									29	SPARE	



REV. STATUS

SHEET	1	2	3
REV	A	A	A

REV. DATE DATE: 11/24/98 DRAWN: MND

REVISION

TITLE: MNDOT 1998 "R" & "P" CABINET

ACT Electronics, Inc.

SCALE: FILE: ACTSR93 REV A SHEET 3 OF 3