# MAIN PANEL: 171-1081-504

## ASC3-2100 CONTROLLER WITH:

- ■ CONFIGURATION: 3601
- ■ SOFTWARE: 2.44.30
- ■ ETHERNET MODULE

- □ OVERLAPS
  - □ IN EEPROM
  - □ KEYBOARD ENTERED

  A =
  B =
  C =
  D =
- □ ANALOG TELEMETRY MOD.: 100-1005-501
- ■ INTERNAL RS-232 TELEMETRY
- □ TEST INPUT A =
- □ TEST INPUT B =

## LEGEND

| | |
|---|---|
| BIU | BUS INTERFACE UNIT |
| BU() | C/C, BIU () |
| CB() | CIRCUIT BREAKER () |
| C/C | CONNECTING CABLE |
| CCA | CONTROLLER CABLE "A" |
| CDP | C/C, DR POWER |
| CMA | MMU/CMU CABLE "A" |
| CMB | MMU/CMU CABLE "B" |
| CPO | C/C PRE-EMPT OUTPUTS |
| CPP | C/C PRE-EMPT POWER |
| DR | DETECTOR RACK |
| DS() | DOOR SWITCH () |
| FL() | FLASHER () |
| FR() | FLASH XFER. RELAY |
| LS() | LOAD SWITCH |
| MC | MERCURY CONTACTOR |
| MP | MAIN PANEL |
| PAP | POWER-AUX PANEL |
| PSP | CAB. PWR. SUPPLY |
| SA | SURGE ARRESTOR |
| TB-() | TERM. BLOCK () |

## FLASHER

| PIN | FUNCTION |
|---|---|
| 7 | CIRCUIT #1 |
| 8 | CIRCUIT #2 |
| 9 | CHASSIS GND |
| 10 | AC COMMON |
| 11 | 115 VAC |
| 12 | |

## LOAD SWITCH

| PIN | FUNCTION |
|---|---|
| 1 | 115 VAC |
| 2 | CHASSIS GND |
| 3 | RED/DW OUTPUT |
| 4 | |
| 5 | YEL OUTPUT |
| 6 | RED/DW INPUT |
| 7 | GRN/W OUTPUT |
| 8 | YEL INPUT |
| 9 | +24 VDC |
| 10 | GRN/W INPUT |
| 11 | AC COMMON |
| 12 | |

① 2.2K 10W

3 USE ONLY COPPER CONDUCTORS FOR FIELD AND SERVICE CONNECTIONS.

2 CONNECT A.C. SERVICE TO TERMINAL BLOCK 501 (LINE), 502 (NEUTRAL) AND GB2 (EARTH) ON RIGHT SIDEWALL OF CABINET.

①INSTALL 2.2K, 10 WATT LOAD RESISTORS BETWEEN PINS 7 AND 11 ON LOAD SWITCHES 9, 10, 11 & 12.

NOTES: UNLESS SPECIFIED OTHERWISE

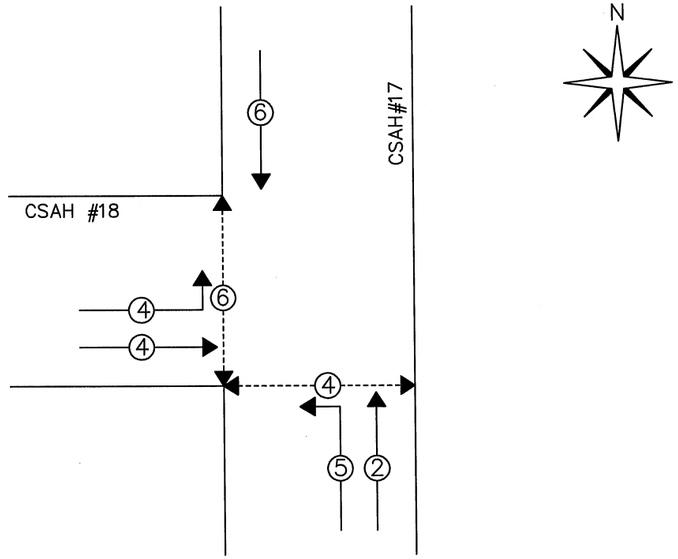
## MAIN PANEL PLUG-IN REQUIREMENTS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ■ BIU2 T&F | □ BIU3 T&F | ■ LS9 PED 2 BEACONS | ■ LS10 PED 4 BEACONS | ■ LS11 PED 6 BEACONS | ■ LS12 PED 8 BEACONS | ■ LS13 OL"A" | ■ LS14 OL"B" | ■ LS15 OL"C" | ■ LS16 OL"D" |
| ■ BIU1 T&F | ☒ LS1 VEH 1 | ■ LS2 VEH 2 | ☒ LS3 VEH 3 | ■ LS4 VEH 4 | ■ LS5 VEH 5 | ■ LS6 VEH 6 | ☒ LS7 VEH 7 | ☒ LS8 VEH 8 | ■ FL1 □1CKT ■2CKT |
| ■ FR1 L\|R V1\|V5 | ■ FR2 L\|R V2\|V6 | ☒ FR3 L\|R V3\|V7 | ■ FR4 L\|R V4\|V8 | ☒ FR5 L\|R A\|C | ☒ FR6 L\|R B\|D | ■ K1 LS 24V CONT. | | | |

■ DENOTES TYPE OF OPERATION AND/OR WHERE PLUG-IN IS REQUIRED. L = LEFT, R = RIGHT.

☒ DENOTES WHERE "UNUSED RED" JUMPER PART NUMBER 32448G1 IS REQUIRED. INSTALL BETWEEN PINS 1 & 3 FOR LOAD SWITCH OR PINS 6 & 8 AND 5 & 7 FOR FLASH TRANSFER RELAY.

FLASH:
- □ ø2&6 YELLOW, ALL OTHERS RED.
- ■ ALL RED.
- ■ RELAYS DE-ENERGIZED FOR FLASH.
- □ RELAYS ENERGIZED FOR FLASH.




SHEET 1 OF 12

| | |
|---|---|
| DESIGNER G.V. T.C.C. | DATE 02/03/97 |
| DRAWN CM TCC | 11/04/08 |
| CABINET SIZE | 77" HOFFMAN GRAY |
| INSPECTED | |
| APPROVED | |
| CUSTOMER P.O. SIG783-09-05 | |

ECONOLITE CONTROL PRODUCTS INC.

TRAFFIC CONTROL CORPORATION
780 W. BELDEN SUITE D
ADDISON, IL 60101

CABINET SPECIFICATION: TS2TYPE1 ANOKA COUNTY SPEC PLUG AND GO

CUSTOMER: X

INTERSECTION: CSAH#17 AT CSAH#18

LOCATION: X

SYSTEM: X

CONTROLLER

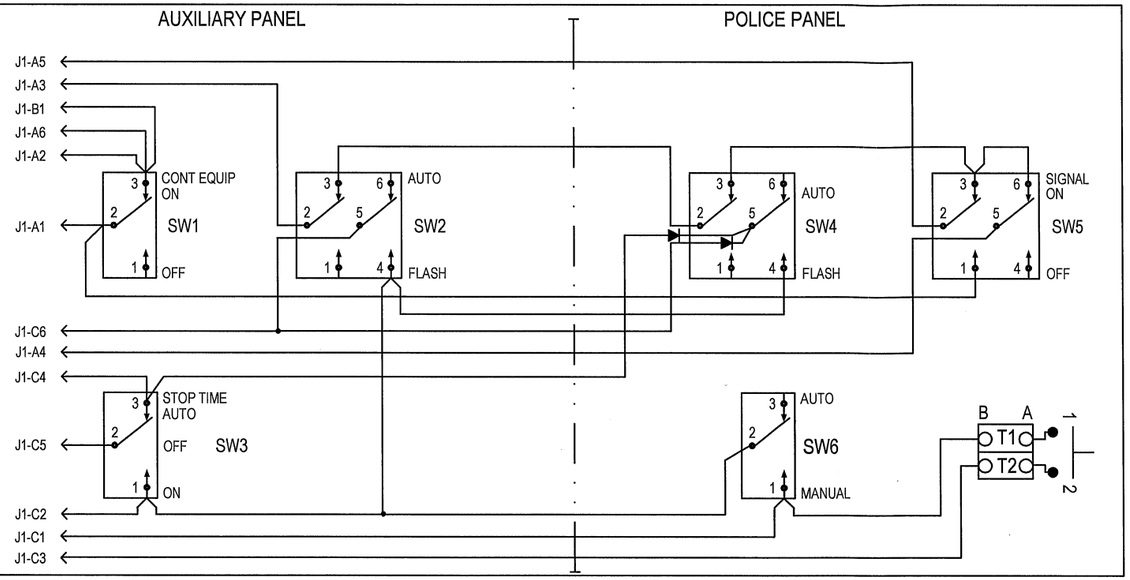
FLASHER

SW.PACKS

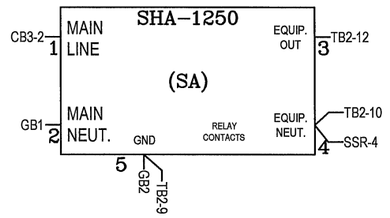
| INSTALLED BY | SALES ORDER NO. | SIZE | DRAWING |
|---|---|---|---|
| | | B | #TS2AC16PG- |

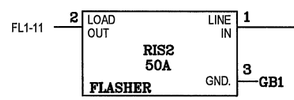
POLICE/AUX SWITCHES
ASSY. NO. 171-1076-510

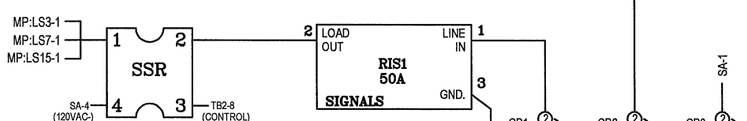
| J1 | POLICE/AUXILIARY SWITCH PANEL | |
|---|---|---|
| PIN | FUNCTION | TO |
| A1 | FILTER AC LINE (IN) | SW1-2 |
| A2 | SWITCHED AC LINE (OUT) | SW1-3 |
| A3 | FLASH CONTROL BUS (IN) | SW2-2 |
| A4 | SIGNAL BUS CONTROL (OUT) | SW5-5 |
| A5 | FLASH RELAY CONT. (OUT) | SW5-2 |
| A6 | START DELAY BUS (OUT) | SW1-3 |
| B1 | MMU FLSH CONT. BUS (OUT) | SW1-3 |
| B2 | SPARE | --- |
| B3 | SPARE | --- |
| B4 | SPARE | --- |
| B5 | SPARE | --- |
| B6 | SPARE | --- |
| C1 | MAN. CONT. ENABLE (OUT) | SW6-1 |
| C2 | LOGIC GROUND | SW3-1 |
| C3 | INTERVAL ADVANCE (OUT) | T2-B |
| C4 | MMU STOP TIME (IN) | SW3-3 |
| C5 | CONT. STOP TIME (OUT) | SW3-2 |
| C6 | LOCAL FLASH STATUS (OUT) | SW2-5 |
| D1 | COORD FREE (OUT) | --- |
| D2 | ALARM 1 (OUT) | --- |
| D3 | ALARM 2 (OUT) | --- |
| D4 | LOADSWITCH TEST (OUT) | --- |
| D5 | MMU 24 VOLT MON. 2 (OUT) | --- |
| D6 | +24 VDC (IN) | --- |



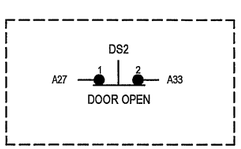

POWER/AUX PANEL (PAP)
PS4-001

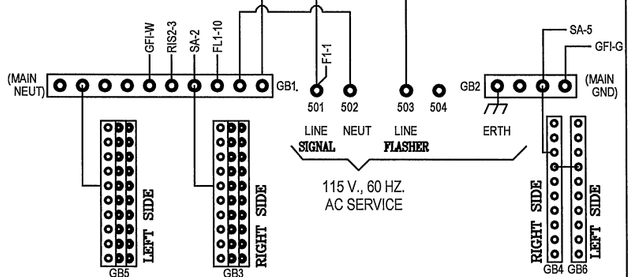


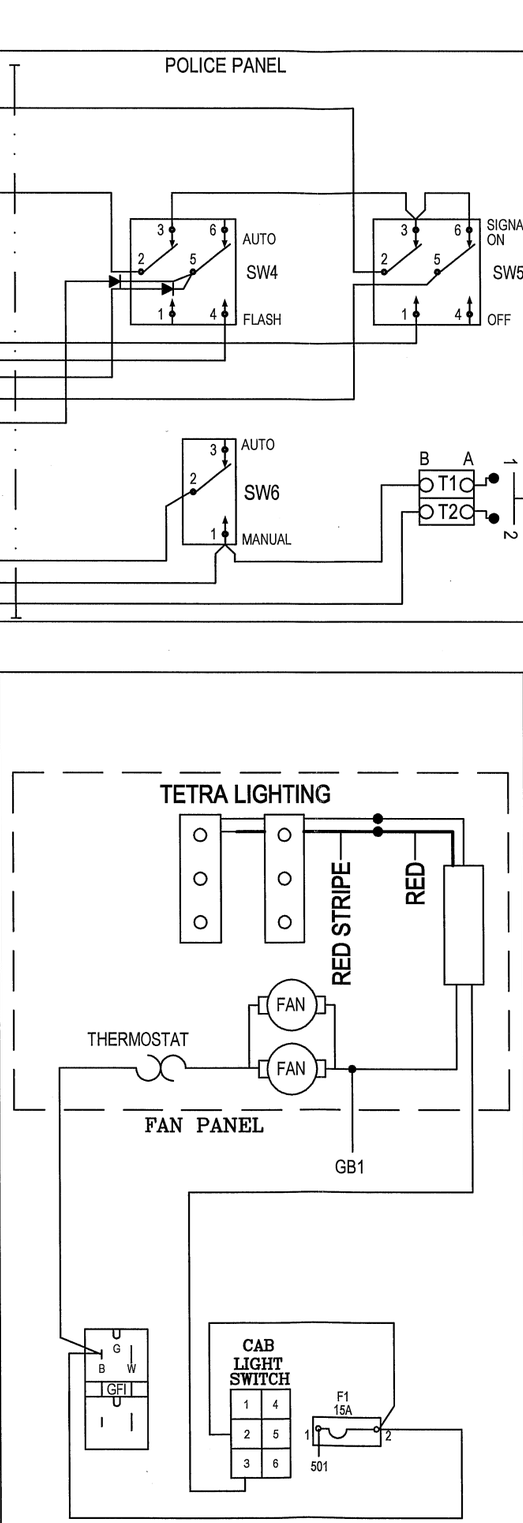



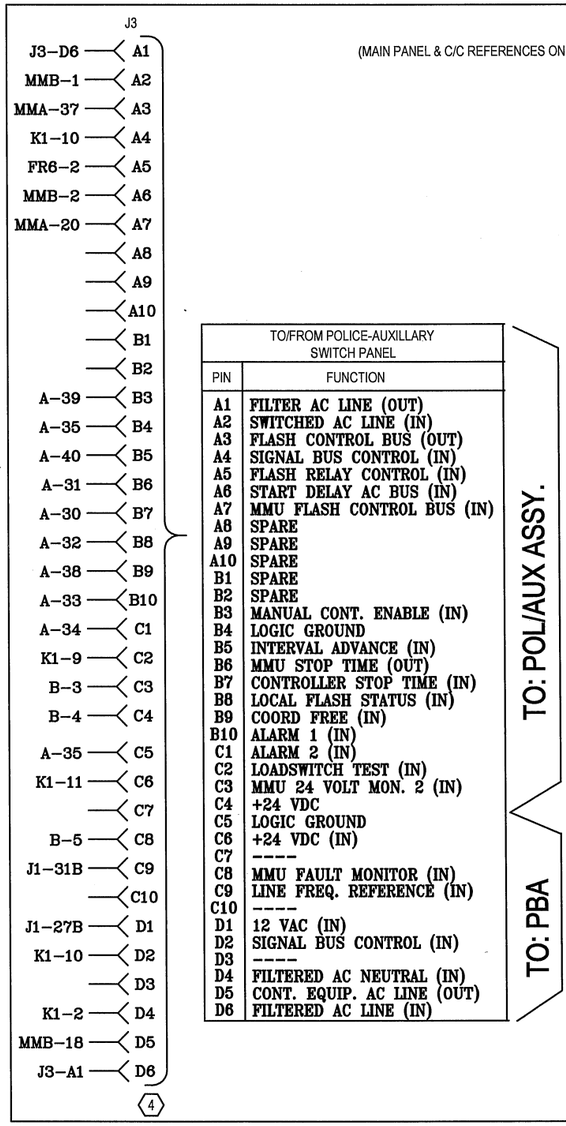




| P2 | PWR PNL TO PB C/C 171-1083-528 | |
|---|---|---|
| FROM | FUNCTION | TO |
| SA-4 | AC NEUTRAL | TB2-10 |
| SA-5 | EARTH GND | TB2-9 |
| SA-3 | FILTERED AC LINE | TB2-12 |
| SSR-3 | SIGNAL BUS CONTROL | TB2-8 |




(MAIN PANEL & C/C REFERENCES ONLY)

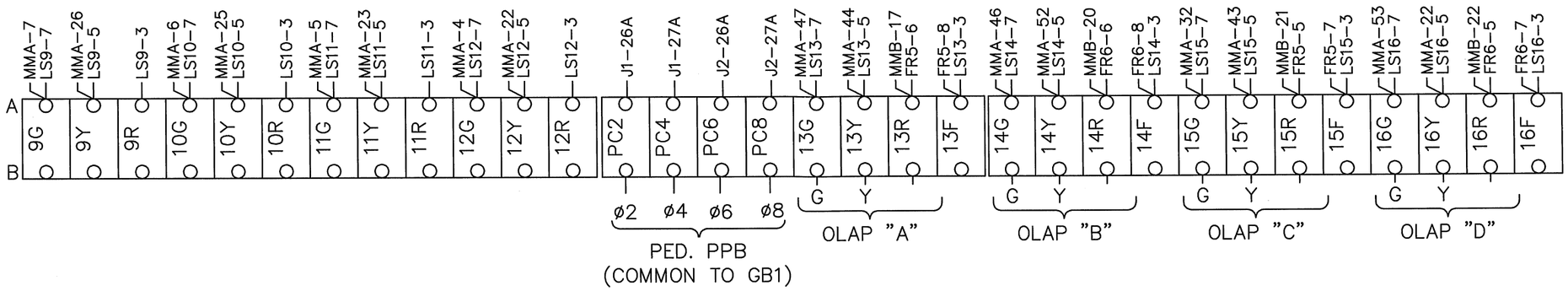
| TO/FROM POLICE-AUXILLARY SWITCH PANEL | |
|---|---|
| PIN | FUNCTION |
| A1 | FILTER AC LINE (OUT) |
| A2 | SWITCHED AC LINE (IN) |
| A3 | FLASH CONTROL BUS (OUT) |
| A4 | SIGNAL BUS CONTROL (IN) |
| A5 | FLASH RELAY CONTROL (IN) |
| A6 | START DELAY AC BUS (IN) |
| A7 | MMU FLASH CONTROL BUS (IN) |
| A8 | SPARE |
| A9 | SPARE |
| A10 | SPARE |
| B1 | SPARE |
| B2 | SPARE |
| B3 | MANUAL CONT. ENABLE (IN) |
| B4 | LOGIC GROUND |
| B5 | INTERVAL ADVANCE (IN) |
| B6 | MMU STOP TIME (OUT) |
| B7 | CONTROLLER STOP TIME (IN) |
| B8 | LOCAL FLASH STATUS (IN) |
| B9 | COORD FREE (IN) |
| B10 | ALARM 1 (IN) |
| C1 | ALARM 2 (IN) |
| C2 | LOADSWITCH TEST (IN) |
| C3 | MMU 24 VOLT MON. 2 (IN) |
| C4 | +24 VDC |
| C5 | LOGIC GROUND |
| C6 | +24 VDC (IN) |
| C7 | ---- |
| C8 | MMU FAULT MONITOR (IN) |
| C9 | LINE FREQ. REFERENCE (IN) |
| C10 | ---- |
| D1 | 12 VAC (IN) |
| D2 | SIGNAL BUS CONTROL (IN) |
| D3 | ---- |
| D4 | FILTERED AC NEUTRAL (IN) |
| D5 | CONT. EQUIP. AC LINE (OUT) |
| D6 | FILTERED AC LINE (IN) |

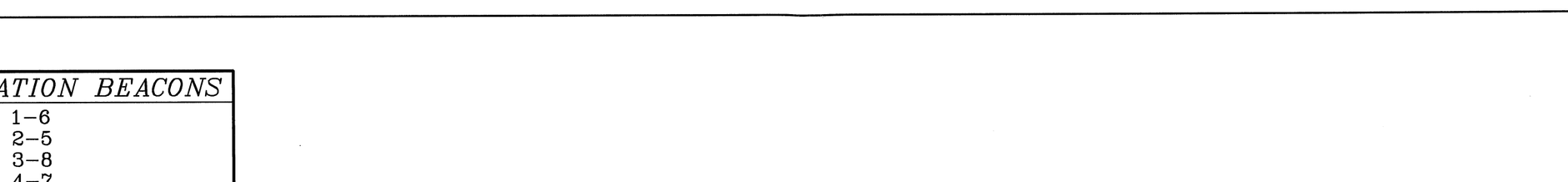
TO: POL/AUX ASSY.

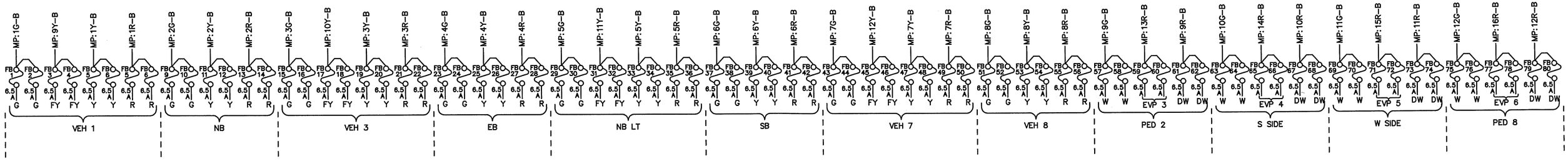
TO: PBA

| MP P3 | MAIN PANEL/CONTROLLER PWR. C/C 171-1083-504/524 | TO POL/AUX P1 |
|---|---|---|
| PIN | FUNCTION | PIN |
| A1 | FILTER AC LINE (OUT) | A1 |
| A2 | SWITCHED AC LINE (IN) | A2 |
| A3 | FLASH CONTROL BUS (OUT) | A3 |
| A4 | SIGNAL BUS CONTROL (IN) | A4 |
| A5 | FLASH RELAY CONTROL (IN) | A5 |
| A6 | START DELAY AC BUS (IN) | A6 |
| A7 | MMU FLASH CONTROL BUS (IN) | B1 |
| A8 | SPARE | B2 |
| A9 | SPARE | B3 |
| A10 | SPARE | B4 |
| B1 | SPARE | B5 |
| B2 | SPARE | B6 |
| B3 | OPT–MAN. CONT. ENABLE (IN) | C1 |
| B4 | LOGIC GROUND | C2 |
| B5 | OPT–INTERVAL ADVANCE (IN) | C3 |
| B6 | MMU STOP TIME (OUT) | C4 |
| B7 | CONTROLLER STOP TIME (IN) | C5 |
| B8 | LOCAL FLASH STATUS (IN) | C6 |
| B9 | OPT–COORD FREE (IN) | D1 |
| B10 | OPT–ALARM 1 (IN) | D2 |
| C1 | OPT–ALARM 2 (IN) | D3 |
| C2 | OPT–LOADSWITCH TEST (IN) | D4 |
| C3 | MMU 24 VOLT MON. 2 (IN) | D5 |
| C4 | +24 VDC | D6 |
| | | 4 |
| | PART OF 171-1083-504/524 | TO PB:(JX) |
| C5 | LOGIC GROUND | A1 |
| C6 | +24 VDC (IN) | A2 |
| C7 | ---- | A3 |
| C8 | MMU FAULT MONITOR (IN) | A4 |
| C9 | LINE FREQ. REFERENCE (IN) | B1 |
| C10 | ---- | B2 |
| D1 | 12 VAC (IN) | B3 |
| D2 | SIGNAL BUS CONTROL (IN) | B4 |
| D3 | ---- | C1 |
| D4 | FILTERED AC NEUTRAL (IN) | C2 |
| D5 | CONT. EQUIP. AC LINE (OUT) | C3 |
| D6 | FILTERED AC LINE (IN) | C4 |

| CONFIRMATION BEACONS |
|---|
| EVP 3 = 1-6 |
| EVP 4 = 2-5 |
| EVP 5 = 3-8 |
| EVP 6 = 4-7 |

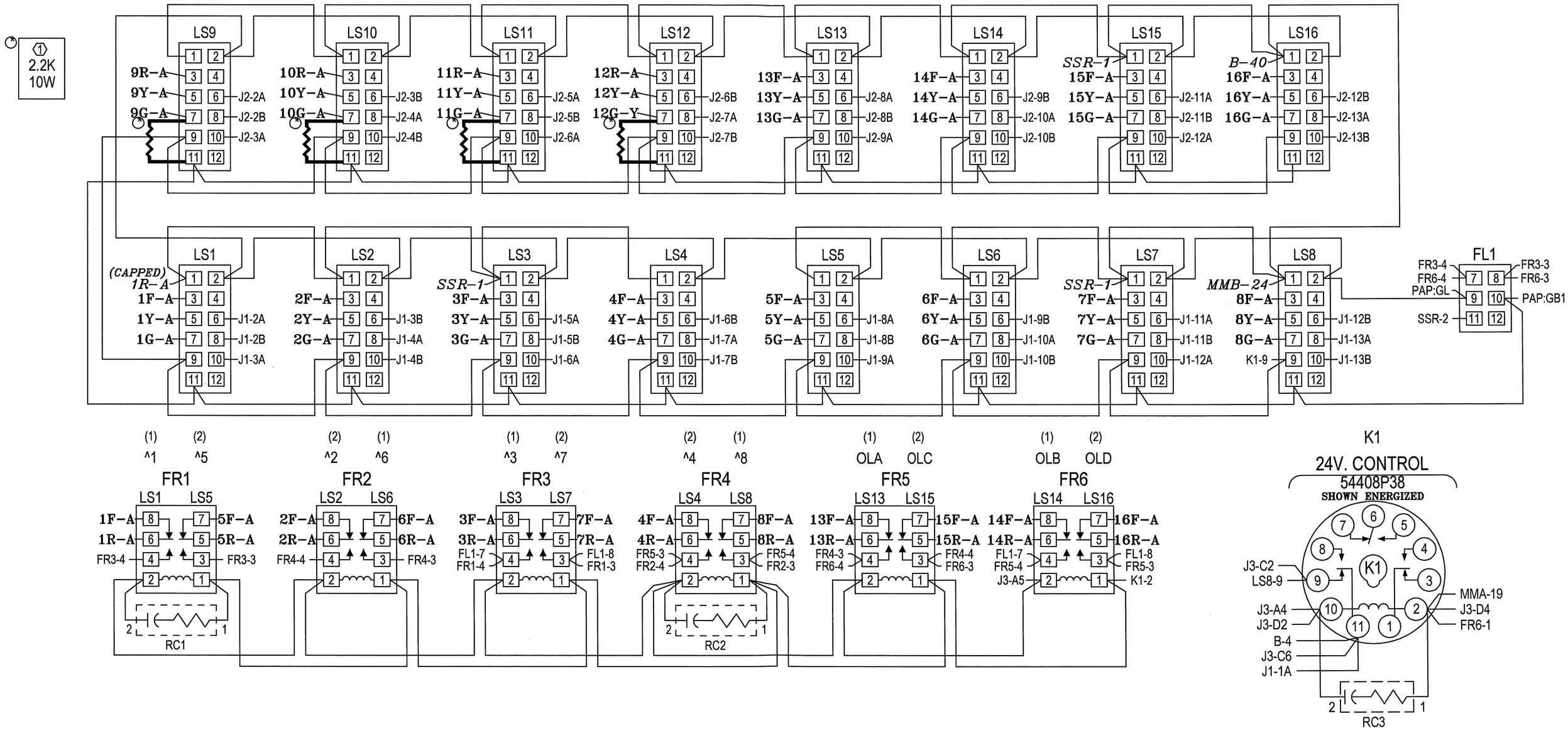


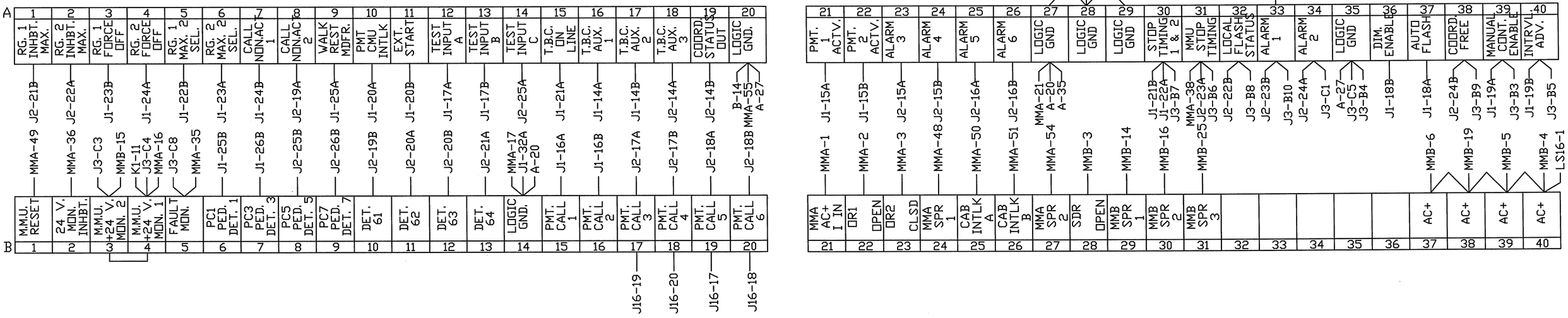

# SIGNAL FIELD TERMINALS

| SHEET 3 OF 12 | SIZE B | CSAH#17 AT CSAH#18 |
|---|---|---|




# LOADBAY AND FLASH RELAY'S

| SHEET 4 OF 12 | SIZE B | CSAH#17 AT CSAH#18 |
|---|---|---|




# INTERFACE TERMINAL BLOCKS

| SHEET 5 OF 12 | SIZE B | CSAH#17 AT CSAH#18 |
|---|---|---|

| J1 | BIU #1 | |
|---|---|---|
| PIN | FUNCTION | TO |
| 1A | +24 VDC | K1-11 |
| 1B | +24 VDC | J2-1B |
| 2A | LS1 RED | LS1-6 |
| 2B | LS1 YELLOW | LS1-8 |
| 3A | LS1 GREEN | LS1-10 |
| 3B | LS2 RED | LS2-6 |
| 4A | LS2 YELLOW | LS2-8 |
| 4B | LS2 GREEN | LS2-10 |
| 5A | LS3 RED | LS3-6 |
| 5B | LS3 YELLOW | LS3-8 |
| 6A | LS3 GREEN | LS3-10 |
| 6B | LS4 RED | LS4-6 |
| 7A | LS4 YELLOW | LS4-8 |
| 7B | LS4 GREEN | LS4-10 |
| 8A | LS5 RED | LS5-6 |
| 8B | LS5 YELLOW | LS5-8 |
| 9A | LS5 GREEN | LS5-10 |
| 9B | LS6 RED | LS6-6 |
| 10A | LS6 YELLOW | LS6-8 |
| 10B | LS6 GREEN | LS6-10 |
| 11A | LS7 RED | LS7-6 |
| 11B | LS7 YELLOW | LS7-8 |
| 12A | LS7 GREEN | LS7-10 |
| 12B | LS8 RED | LS8-6 |
| 13A | LS8 YELLOW | LS8-8 |
| 13B | LS8 GREEN | LS8-10 |
| 14A | TBC AUX 1 | A-16 |
| 14B | TBC AUX 2 | A-17 |
| 15A | PMT ACT 1 | A-21 |
| 15B | PMT ACT 2 | A-22 |
| 16A | PMT CALL 1 | B-15 |
| 16B | PMT CALL 2 | B-16 |
| 17A | TEST A | A-12 |
| 17B | TEST B | A-13 |
| 18A | AUTO FLASH | A-37 |
| 18B | DIM. ENABLE | A-36 |
| 19A | MANUAL CONT. | A-39 |
| 19B | INT. ADVANCE | A-40 |
| 20A | PMT CMU INTLK | A-10 |
| 20B | EXT. START | A-11 |
| 21A | TBC ONLINE | A-15 |
| 21B | STOP TIME (1) | A-30 |
| 22A | STOP TIME (2) | A-30 |
| 22B | MAX. 2 (1) | A-5 |
| 23A | MAX. 2 (2) | A-6 |
| 23B | FORCE OFF (1) | A-3 |
| 24A | FORCE OFF (2) | A-4 |
| 24B | CNA 1 | A-7 |
| 25A | WALK REST MOD. | A-9 |
| 25B | PED. ISO. 1 | B-6 |
| 26A | PED. ISO. 2 | PC2-A |
| 26B | PED. ISO. 3 | B-7 |
| 27A | PED. ISO. 4 | PC4-A |
| 27B | PED. ISO. COMN. | J3-D1 |
| 28A | ADDR. SEL. 0 | ----- |
| 28B | ADDR. SEL. 1 | ----- |
| 29A | ADDR. SEL. 2 | ----- |
| 29B | ADDR. SEL. 3 | ----- |
| 30A | RESERVED | ----- |
| 30B | RESERVED | ----- |
| 31A | EARTH GND. | LS12-2 |
| 31B | LINE FREQ. REF. | J3-C9 |
| 32A | LOGIC GND. | B-14 |
| 32B | LOGIC GND. | J2-32A |

| J2 | BIU #2 | |
|---|---|---|
| PIN | FUNCTION | TO |
| 1A | +24 VDC | J2-1B |
| 1B | +24 VDC | J1-1B |
| 2A | LS9 RED | LS9-6 |
| 2B | LS9 YELLOW | LS9-8 |
| 3A | LS9 GREEN | LS9-10 |
| 3B | LS10 RED | LS10-6 |
| 4A | LS10 YELLOW | LS10-8 |
| 4B | LS10 GREEN | LS10-10 |
| 5A | LS11 RED | LS11-6 |
| 5B | LS11 YELLOW | LS11-8 |
| 6A | LS11 GREEN | LS11-10 |
| 6B | LS12 RED | LS12-6 |
| 7A | LS12 YELLOW | LS12-8 |
| 7B | LS12 GREEN | LS12-10 |
| 8A | LS13 RED | LS13-6 |
| 8B | LS13 YELLOW | LS13-8 |
| 9A | LS13 GREEN | LS13-10 |
| 9B | LS14 RED | LS14-6 |
| 10A | LS14 YELLOW | LS14-8 |
| 10B | LS14 GREEN | LS14-10 |
| 11A | LS15 RED | LS15-6 |
| 11B | LS15 YELLOW | LS15-8 |
| 12A | LS15 GREEN | LS15-10 |
| 12B | LS16-RED | LS16-6 |
| 13A | LS16-YELLOW | LS16-8 |
| 13B | LS16-GREEN | LS16-10 |
| 14A | TBC AUX 3 | A-18 |
| 14B | COORD. STATUS | A-19 |
| 15A | ALARM 3 | A-23 |
| 15B | ALARM 4 | A-24 |
| 16A | ALARM 5 | A-25 |
| 16B | ALARM 6 | A-26 |
| 17A | PMT CALL 3 | B-17 |
| 17B | PMT CALL 4 | B-18 |
| 18A | PMT CALL 5 | B-19 |
| 18B | PMT CALL 6 | B-20 |
| 19A | CNA 2 | A-8 |
| 19B | VEH. DET. 61 | B-10 |
| 20A | VEH. DET. 62 | B-11 |
| 20B | VEH. DET. 63 | B-12 |
| 21A | VEH. DET. 64 | B-13 |
| 21B | INHIBIT MAX (1) | A-1 |
| 22A | INHIBIT MAX (2) | A-2 |
| 22B | LOCAL FLASH | A-32 |
| 23A | MMU FLASH | A-31 |
| 23B | ALARM 1 | A-33 |
| 24A | ALARM 2 | A-34 |
| 24B | COORD FREE IN | A-38 |
| 25A | TEST C | A-14 |
| 25B | PED. ISO. 5 | B-8 |
| 26A | PED. ISO. 6 | PC6-A |
| 26B | PED. ISO. 7 | B-9 |
| 27A | PED. ISO. 8 | PC8-A |
| 27B | PED. ISO. COMN. | J1-27B |
| 28A | ADDR. SEL. 0 | J2-32A |
| 28B | ADDR. SEL. 1 | ----- |
| 29A | ADDR. SEL. 2 | ----- |
| 29B | ADDR. SEL. 3 | ----- |
| 30A | RESERVED | ----- |
| 30B | RESERVED | ----- |
| 31A | EARTH GND. | J1-31A |
| 31B | LINE FREQ. REF. | J1-31B |
| 32A | LOGIC GND. | J1-32B |
| 32B | LOGIC GND. | J2-32A |

| MAIN PANEL CONTROL POWER C/C 171-1083-504 | |
|---|---|
| PIN | FUNCTION |
| A1 | LOGIC GROUND |
| A2 | +24 VDC (IN) |
| A3 | ---- |
| A4 | MMU FAULT MONITOR (IN) |
| B1 | LINE FREQ. REFERENCE (IN) |
| B2 | ---- |
| B3 | +12 VAC (IN) |
| B4 | SIGNAL BUS CONTROL (IN) |
| C1 | ---- |
| C2 | FILTERED AC NEUTRAL (IN) |
| C3 | CONT. EQUIP. AC LINE (OUT) |
| C4 | FILTERED AC LINE (IN) |

## CONTROLLER POWER (CCA2)

■ C/C 171-1083-503

| WIRE | PIN | SIGNAL | TO |
|---|---|---|---|
| 1 | A | FAULT MONITOR | PB-4 |
| 2 | U | AC NEUTRAL | PB-10 |
| 3 | V | EARTH GROUND | PB-9 |
| 4 | W | LOGIC GROUND | PB-1 |
| 5 | p | AC LINE | PB-11 |
| 6 | SHL | EARTH GROUND | CCA2-V |

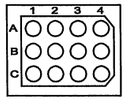
| TYPE 1 CONTROLLER POWER C/C 171-1083-502 | | |
|---|---|---|
| PIN | FUNCTION | TO |
| A | AC NEUTRAL | PB-10 |
| B | ---- | |
| C | AC LINE | PB-11 |
| D | ---- | |
| E | ---- | |
| F | FAULT MON. | PB-4 |
| G | LOGIC GND. | PB-1 |
| H | EARTH GND. | PB-9 |
| I | ---- | |
| J | ---- | |
| SHL | EARTH GND. | PIN H |

| CABINET POWER SUPPLY C/C 171-1083-511 | | |
|---|---|---|
| PIN | FUNCTION | TO |
| A | AC NEUTRAL | PB-10 |
| B | LINE FREQUENCY REF. | PB-5 |
| C | AC LINE | PB-11 |
| D | +12 VDC | PB-3 |
| E | +24 VDC | PB-2 |
| F | RESERVED | |
| G | LOGIC GND. | PB-1 |
| H | EARTH GND. | PB-9 |
| I | +12 VAC | PB-7 |
| J | RESERVED | |
| SHL | EARTH GND. | PIN H |

| CONTROLLER PORT 1 CONNECTOR | | | |
|---|---|---|---|
| PIN | SIGNAL | TO | FUNCTION |
| 1 | TWISTED PAIR 1+ | SDLC-1 | CONT TXD+ |
| 2 | LOGIC GND. | ---- | |
| 3 | TWISTED PAIR 2+ | SDLC-4 | CONT TXC+ |
| 4 | LOGIC GND. | ---- | |
| 5 | TWISTED PAIR 3+ | SDLC-7 | CONT RXD+ |
| 6 | LOGIC GND. | ---- | |
| 7 | TWISTED PAIR 4+ | SDLC-10 | CONT RXC+ |
| 8 | LOGIC GND. | ---- | |
| 9 | TWISTED PAIR 1- | SDLC-2 | CONT TXD- |
| 10 | PORT 1 DISABLE | ---- | |
| 11 | TWISTED PAIR 2- | SDLC-5 | CONT TXC- |
| 12 | EARTH GND. | SHIELD WIRE | |
| 13 | TWISTED PAIR 3- | SDLC-8 | CONT RXD- |
| 14 | RESERVED | ---- | |
| 15 | TWISTED PAIR 4- | SDLC-11 | CONT RXC- |

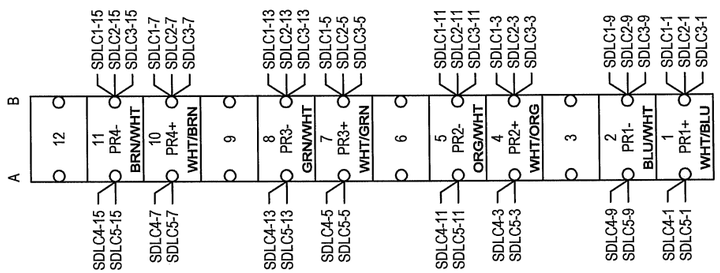
| MMU & BIU PORT 1 CONNECTOR | | | |
|---|---|---|---|
| PIN | SIGNAL | TO | FUNCTION |
| 1 | TWISTED PAIR 1+ | SDLC-1 | BIU RXD+ |
| 2 | LOGIC GND. | ---- | |
| 3 | TWISTED PAIR 2+ | SDLC-4 | BIU RXC+ |
| 4 | LOGIC GND. | ---- | |
| 5 | TWISTED PAIR 3+ | SDLC-7 | BIU TXD+ |
| 6 | LOGIC GND. | ---- | |
| 7 | TWISTED PAIR 4+ | SDLC-10 | BIU TXC+ |
| 8 | LOGIC GND. | ---- | |
| 9 | TWISTED PAIR 1- | SDLC-2 | BIU RXD- |
| 10 | PORT 1 DISABLE | ---- | |
| 11 | TWISTED PAIR 2- | SDLC-5 | BIU RXC- |
| 12 | EARTH GND. | SHIELD WIRE | |
| 13 | TWISTED PAIR 3- | SDLC-8 | BIU TXD- |
| 14 | RESERVED | ---- | |
| 15 | TWISTED PAIR 4- | SDLC-11 | BIU TXC- |

FRONT VIEW OF BU1 - BU5

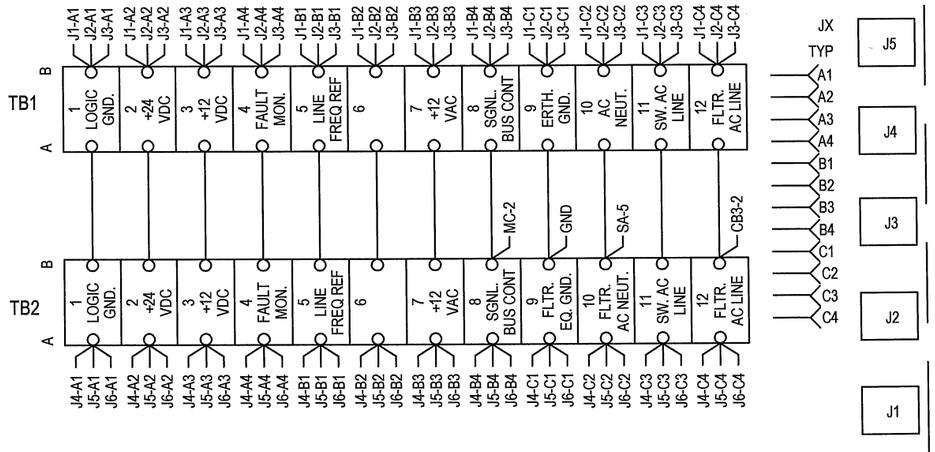



FRONT VIEW OF J1-J6

SDLC CABLE ASSY.
ASSY. NO. 34862G5




-PB- POWER BUS
ASSY. NO. 171-1078-504




# BIU AND CONNECTING CABLES

| SHEET 6 OF 12 | SIZE B | CSAH#17 AT CSAH#18 |
|---|---|---|

# WIRE LIST FOR NEMA MALFUNCTION MANAGEMENT UNIT

## CONNECTOR "A" (MMA)

| PIN | WIRE | MON. FUNCTION | TO | SIG. FUNCTION |
|---|---|---|---|---|
| A | A-1 | AC+ I INPUT | B21 | |
| B | A-2 | OUT RLY 1 OPEN | B22 | |
| C | A-3 | OUT RLY 2 CLSD | B23 | |
| D | A-4 | CH. 12 GREEN | 12G-A | ^8 WLK |
| E | A-5 | CH. 11 GREEN | 11G-A | ^6 WLK |
| F | A-6 | CH. 10 GREEN | 10G-A | ^4 WLK |
| G | A-7 | CH. 9 GREEN | 9G-A | ^2 WLK |
| H | A-8 | CH. 8 GREEN | 8G-A | ^8 GRN |
| J | A-9 | CH. 7 GREEN | 7G-A | ^7 GRN |
| K | A-10 | CH. 6 GREEN | 6G-A | ^6 GRN |
| L | A-11 | CH. 5 GREEN | 5G-A | ^5 GRN |
| M | A-12 | CH. 4 GREEN | 4G-A | ^4 GRN |
| N | A-13 | CH. 3 GREEN | 3G-A | ^3 GRN |
| P | A-14 | CH. 2 GREEN | 2G-A | ^2 GRN |
| R | A-15 | CH. 1 GREEN | 1G-A | ^1 GRN |
| S | A-16 | +24V MON. I | B-4 | LS +24V MON. |
| T | A-17 | LOGIC GND | B-14 | LOGIC GND |
| U | A-18 | CHASSIS GND | LS7-2 | EARTH GND. |
| V | A-19 | AC- (COMMON) | K1-2 | AC NEUTRAL |
| W | A-20 | OUT RLY 1 COM. | J3-A7 | SIG BUS CONT |
| X | A-21 | OUT RLY 2 COM. | A-27 | LOGIC GND |
| Y | A-22 | CH. 12 YELLOW | 12Y-A | VEH. 7 FYA |
| Z | A-23 | CH. 11 YELLOW | 11Y-A | VEH. 5 FYA |
| a | A-24 | CH. 10 WALK | ---- | |
| b | A-25 | CH. 10 YELLOW | 10Y-A | VEH. 3 FYA |
| c | A-26 | CH. 9 YELLOW | 9Y-A | VEH. 1 FYA |
| d | A-27 | CH. 8 YELLOW | 8Y-A | ^8 YEL |
| e | A-28 | CH. 7 YELLOW | 7Y-A | ^7 YEL |
| f | A-29 | CH. 6 YELLOW | 6Y-A | ^6 YEL |
| g | A-30 | CH. 5 YELLOW | 5Y-A | ^5 YEL |
| h | A-31 | CH. 3 YELLOW | 3Y-A | ^3 YEL |
| i | A-32 | CH. 15 GREEN | 15G-A | OLC GRN |
| j | A-33 | CH. 2 YELLOW | 2Y-A | ^2 YEL |
| k | A-34 | CH. 1 YELLOW | 1Y-A | ^1 YEL |
| m | A-35 | CONT. VOLT. MON. | B-5 | VOLT. MON. |
| n | A-36 | +24V MON. INH. | B-2 | |
| p | A-37 | OUT RLY 1 CLSD | J3-A3 | |
| q | A-38 | OUT RLY 2 OPEN | A-31 | STOP TIME |
| r | A-39 | CH. 12 WALK | ---- | |
| s | A-40 | CH. 11 WALK | ---- | |
| t | A-41 | CH. 9 WALK | ---- | |
| u | A-42 | CH. 16 YELLOW | 16Y-A | OLD YEL |
| v | A-43 | CH. 15 YELLOW | 15Y-A | OLC YEL |
| w | A-44 | CH. 13 YELLOW | 13Y-A | OLA YEL |
| x | A-45 | CH. 4 YELLOW | 4Y-A | ^4 YEL |
| y | A-46 | CH. 14 GREEN | 14G-A | OLB GRN |
| z | A-47 | CH. 13 GREEN | 13G-A | OLA GRN |
| AA | A-48 | (SPARE 1) | B24 | |
| BB | A-49 | RESET | B-1 | |
| CC | A-50 | CAB. INTLK A | B25 | |
| DD | A-51 | CAB. INTLK B | B26 | |
| EE | A-52 | CH. 14 YELLOW | 14Y-A | OLB YRL |
| FF | A-53 | CH. 16 GREEN | 16G-A | OLD GRN |
| GG | A-54 | (SPARE 2) | B27 | |
| HH | A-55 | TYPE SELECT | A-20 | MMU/CMU SEL. |
| | A-56 | SHELL GND | LS15-2 | EARTH GND. |

## CONNECTOR "B" (MMB)

| PIN | WIRE | MON. FUNCTION | TO | SIG. FUNCTION |
|---|---|---|---|---|
| A | B-1 | AC+ II INPUT | J3-A2 | MMU POWER |
| B | B-2 | S. DLY RLY COMM. | J3-A6 | MMU POWER |
| C | B-3 | S. DLY RLY OPEN | B28 | |
| D | B-4 | CH. 12 RED | B40 | |
| E | B-5 | CH. 11 RED | B39 | |
| F | B-6 | CH. 9 RED | B37 | |
| G | B-7 | CH. 8 RED | 8R-A | ^8 RED |
| H | B-8 | CH. 7 RED | 7R-A | ^7 RED |
| J | B-9 | CH. 6 RED | 6R-A | ^6 RED |
| K | B-10 | CH. 5 RED | 5R-A | ^5 RED |
| L | B-11 | CH. 4 RED | 4R-A | ^4 RED |
| M | B-12 | CH. 2 RED | 2R-A | ^2 RED |
| N | B-13 | CH. 1 RED | 1R-A | ^1 RED |
| P | B-14 | (SPARE 1) | B29 | |
| R | B-15 | +24V MONITOR II | B-3 | +24V MON. II |
| S | B-16 | (SPARE 2) | B30 | |
| T | B-17 | CH. 13 RED | 13R-A | OLA RED |
| U | B-18 | S. DLY RLY CLSD | J3-D5 | CONT. POWER |
| V | B-19 | CH. 10 RED | B38 | |
| W | B-20 | CH. 14 RED | 14R-A | OLB RED |
| X | B-21 | CH. 15 RED | 15R-A | OLC RED |
| Y | B-22 | CH. 16 RED | 16R-A | OLD RED |
| Z | B-23 | CH. 3 RED | 3R-A | ^3 RED |
| a | B-24 | RED ENABLE | LS8-1 | SIG BUS CON. |
| b | B-25 | (SPARE 3) | B31 | |
| c | B-26 | LOCAL FLASH IN | -T- | POL/AX FLSH |
| | B-27 | SHELL GROUND | LS6-2 | EARTH GND. |

## NOTES FOR 16 CHANNEL M.M.U.

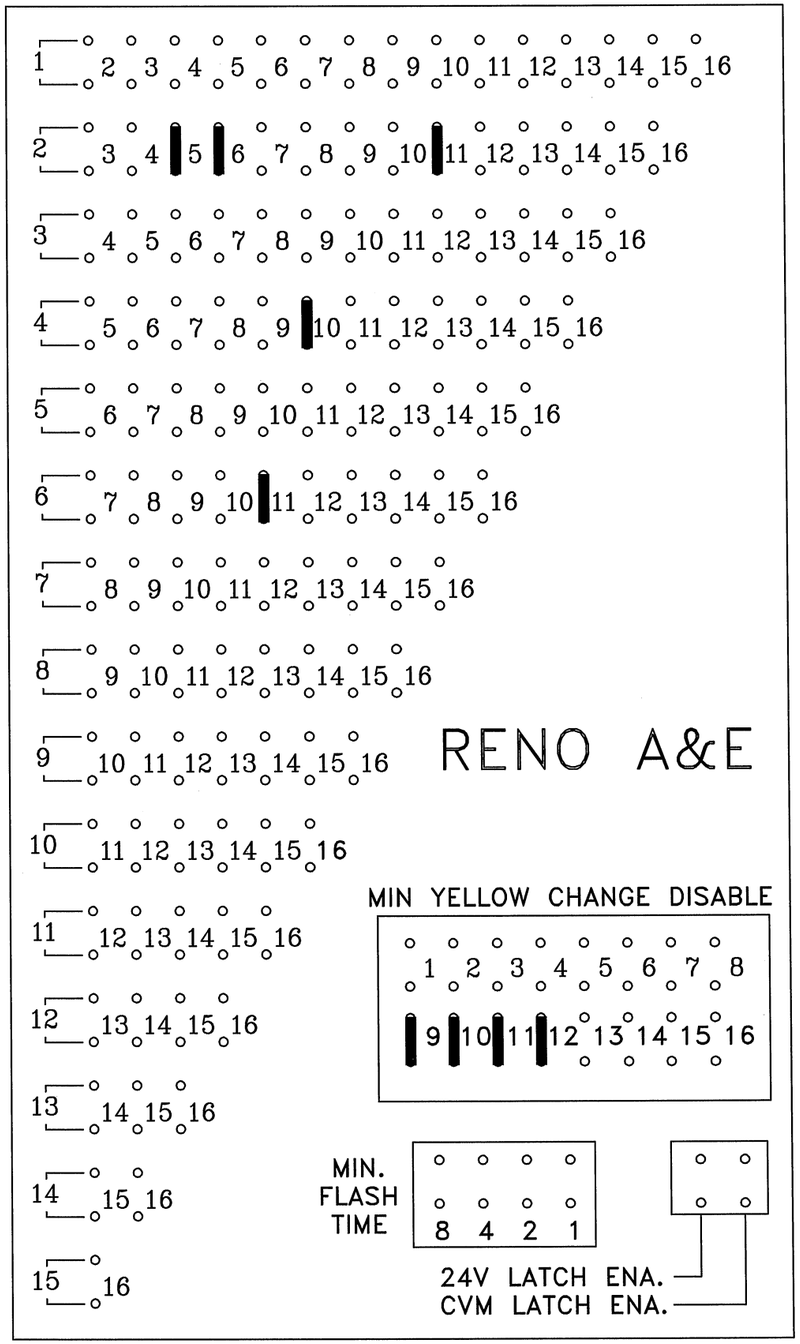
(1) RELAY CONTACT POSITIONS SPECIFIED ARE FOR NON-CONFLICT MODE.

(2) TO PROGRAM MMU, SOLDER JUMPERS IN PROGRAMMING CARD FOR ALL PERMISSABLE PHASE MOVEMENTS, MINIMUM CHANGE DISABLE FOR ALL PEDESTRIAN CHANNELS, AND MIN. FLASH, VOLTAGE MON., AND 24V. MON. LATCH OPTIONS AS DESIRED.

## M.M.U. CHANNEL ASSIGNMENTS

| | | |
|---|---|---|
| CH. 1 = | L/S 1 = | ^1 VEH. |
| CH. 2 = | L/S 2 = | ^2 VEH. |
| CH. 3 = | L/S 3 = | ^3 VEH. |
| CH. 4 = | L/S 4 = | ^4 VEH. |
| CH. 5 = | L/S 5 = | ^5 VEH. |
| CH. 6 = | L/S 6 = | ^6 VEH. |
| CH. 7 = | L/S 7 = | ^7 VEH. |
| CH. 8 = | L/S 8 = | ^8 VEH. |
| CH. 9 = | L/S 9 = | ^2 PED. / VEH. 1 FYA |
| CH. 10 = | L/S 10 = | ^4 PED. / VEH. 3 FYA |
| CH. 11 = | L/S 11 = | ^6 PED. / VEH. 5 FYA |
| CH. 12 = | L/S 12 = | ^8 PED. / VEH. 7 FYA |
| CH. 13 = | L/S 13 = | O'LAP A VEH. |
| CH. 14 = | L/S 14 = | O'LAP B VEH. |
| CH. 15 = | L/S 15 = | O'LAP C VEH. |
| CH. 16 = | L/S 16 = | O'LAP D VEH. |

# MMU PROGRAM CARD




# M.M.U. C/C'S AND PROGRAM CARD

# DETECTOR RACK #1 34030G1

| POWER SUPPLY OR B.I.U. | L3 | L1 | L7 | L5 | L11 | L9 | L15 | L13 | PMT 5 | PMT 3 | PGM. CARD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5-1 | | | 2-1 | 4-3 | 4-1 | | 4-5 | | ☐4CH | |
| | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐2CH | ☐2CH | |
| | 5-2 | | | 6-1 | 4-4 | 4-2 | | | OPTICOM/ OPIC CH. C CH. D | OPTICOM/ OPIC CH. A CH. B | |
| | L4 | L2 | L8 | L6 | L12 | L10 | L16 | L14 | PMT 6 | PMT 4 | |

| J13 | J16 | J14 | J18 | J15 | J17 | J19 |
|---|---|---|---|---|---|---|
| C/C 171-1083-515 DC POWER | C/C 33284G8 EXP. OUTPUTS | C/C 33284G2 LPS 1-8 | C/C 33284G9 SYS. OUTPUTS | C/C 33284G3 LPS 9-16 | C/C 171-1083-515 AC POWER | C/C 33284G17 PGM. CARD |

(1)

| ADDRESS TABLE | | | | | |
|---|---|---|---|---|---|
| RACK # | JMPR | DET. #'S | RACK # | JMPR | DET. #'S |
| 1 | | 1-16 | 5 | | 65-80 |
| 2 | | 17-32 | 6 | | 81-96 |
| 3 | | 33-48 | 7 | | 97-112 |
| 4 | | 49-64 | 8 | | 113-128 |

## DETECTOR ASSIGNMENTS

| CONT. INPUT | PHASE ASGN. | DETECTOR TYPE |
|---|---|---|
| 1 | 2-1 | |
| 2 | 6-1 | |
| 3 | | |
| 4 | | |
| 5 | 5-1 | |
| 6 | 5-2 | |
| 7 | | |
| 8 | | |
| 9 | 4-1 | |
| 10 | 4-2 | |
| 11 | 4-3 | |
| 12 | 4-4 | |
| 13 | 4-5 | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |
| 25 | | |
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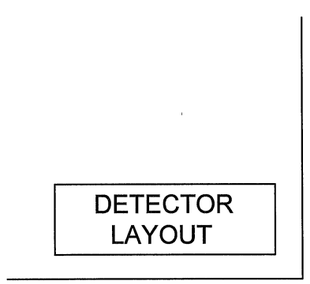
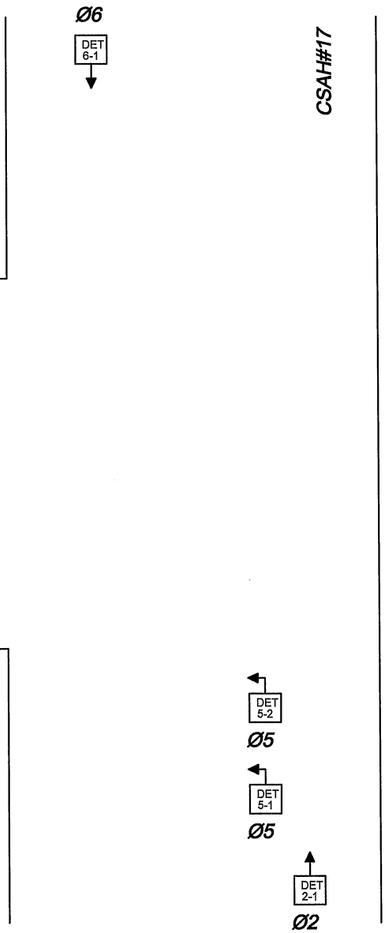
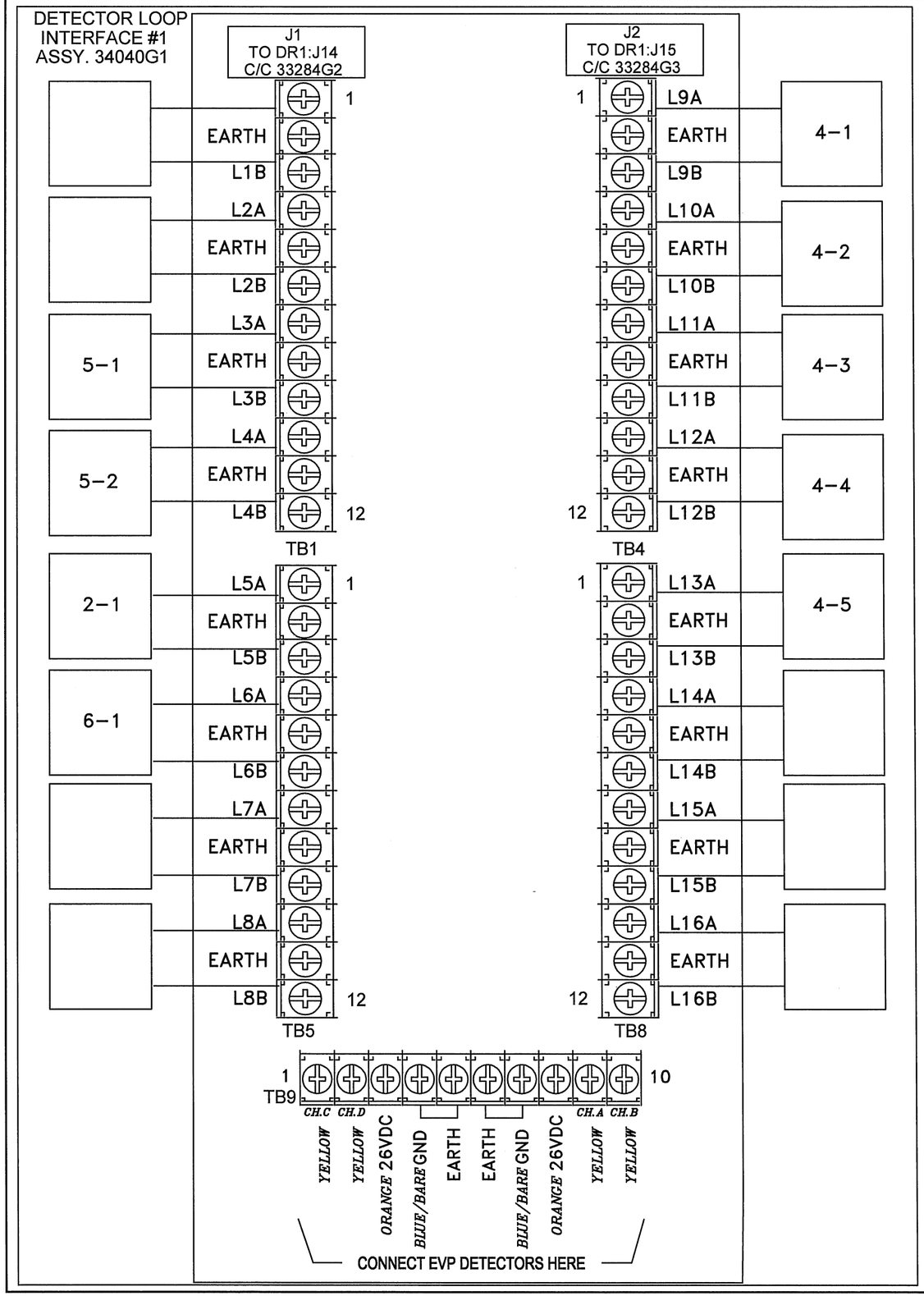
| 26 | | |
| 28 | | |
| 29 | | |
| 30 | | |
| 31 | | |
| 32 | | |




## DETECTOR RACK PROGRAMMING JUMPERS

| DET. TYPE | JP1 | JP2 | SLOT 1/2 (1) JP3 | JP4 | JP5 | JP6 | JP7 | JP8 | JP9 | SLOT 3/4 (1) JP10 | JP11 | JP12 | JP13 | JP14 | JP15 | JP16 | SLOT 5/6 (1) JP17 | JP18 | JP19 | JP20 | JP21 | JP22 | JP23 | SLOT 7/8 (1) JP24 | JP25 | JP26 | JP27 | JP28 | JP29 | JP30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) TS-1 | NO | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (2) TS-2 | YES | YES | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (3) LM-632T / 262-FC | NO | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (4) MAG. | NO | NO | | | | | | | | | | | | | | | | | | | | | | | | | | | | |




| DET. LOOPS 9–16 (J15) C/C 33284G3 | | |
|---|---|---|
| PIN | SIGNAL | TO |
| 1 | LOOP 9+ | LPI2:TB4-1 |
| 2 | LOOP 9– | LPI2: TB4-3 |
| 3 | LOOP 10+ | LPI2: TB4-4 |
| 4 | LOOP 10– | LPI2: TB4-6 |
| 5 | LOOP 11+ | LPI2: TB4-7 |
| 6 | LOOP 11– | LPI2: TB4-9 |
| 7 | LOOP 12+ | LPI2: TB4-10 |
| 8 | LOOP 12– | LPI2: TB4-12 |
| 9 | LOOP 13+ | LPI2: TB8-1 |
| 10 | LOOP 13– | LPI2: TB8-3 |
| 11 | LOOP 14+ | LPI2: TB8-4 |
| 12 | LOOP 14– | LPI2: TB8-6 |
| 13 | LOOP 15+ | LPI2: TB8-7 |
| 14 | LOOP 15– | LPI2: TB8-9 |
| 15 | LOOP 16+ | LPI2: TB8-10 |
| 16 | LOOP 16– | LPI2: TB8-12 |
| 17 | ---- | |
| 18 | ---- | |
| 19 | ---- | |
| 20 | ---- | |

| DET. RACK POWER C/C 171–1083–515 | | | |
|---|---|---|---|
| P1/ DR:J13 | P2/ DR:J17 | FUNCTION | TO |
| 1 | | +12 VDC (DET. POWER) | PB-3 |
| 2 | | +24 VDC (BIU POWER) | PB-2 |
| 3 | | LOGIC GROUND | PB-1 |
| 4 | | EARTH GROUND | PB-9 |
| 5 | | "KEY PIN" | |
| 6 | | LINE FREQUENCY REF. | PB-5 |
| | 1 | EARTH GROUND | ---- |
| | 2 | AC LINE | PB-12 |
| | 3 | AC NEUTRAL | PB-10 |
| | 4 | LOGIC GROUND | ---- |

| DET. LOOPS 1–8 (J14) C/C 33284G2 | | |
|---|---|---|
| PIN | SIGNAL | TO |
| 1 | LOOP 1+ | LPI1:TB1-1 |
| 2 | LOOP 1– | LPI1: TB1-3 |
| 3 | LOOP 2+ | LPI1: TB1-4 |
| 4 | LOOP 2– | LPI1: TB1-6 |
| 5 | LOOP 3+ | LPI1: TB1-7 |
| 6 | LOOP 3– | LPI1: TB1-9 |
| 7 | LOOP 4+ | LPI1: TB1-10 |
| 8 | LOOP 4– | LPI1: TB1-12 |
| 9 | LOOP 5+ | LPI1: TB5-1 |
| 10 | LOOP 5– | LPI1: TB5-3 |
| 11 | LOOP 6+ | LPI1: TB5-4 |
| 12 | LOOP 6– | LPI1: TB5-6 |
| 13 | LOOP 7+ | LPI1: TB5-7 |
| 14 | LOOP 7– | LPI1: TB5-9 |
| 15 | LOOP 8+ | LPI1: TB5-10 |
| 16 | LOOP 8– | LPI1: TB5-12 |
| 17 | PMT. DET. CH. C | LPI1: TB9-1 |
| 18 | PMT. DET. CH. D | LPI1: TB9-2 |
| 19 | KEY PIN | |
| 20 | PMT. CH. C/D +26VDC | LPI1: TB9-3 |
| 21 | PMT. DC GROUND | LPI1: TB9-4,7 |
| 22 | PMT. CH. A/B +26VDC | LPI1: TB9-8 |
| 23 | PMT. DET. CH. A | LPI1: TB9-9 |
| 24 | PMT. DET. CH. B | LPI1: TB9-10 |
| 25 | ---- | |
| 26 | ---- | |

| EXPANSION OUTPUTS C/C 33284G8 | | |
|---|---|---|
| J16 | FUNCTION | TO |
| 17 | DET. 17 / PMT. A OUT | MP:B19 |
| 18 | DET. 18 / PMT. B OUT | MP:B20 |
| 19 | PMT. C OUT | MP:B17 |
| 20 | PMT. D OUT | MP:B18 |

# DETECTOR LOOP INTERFACE



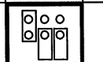
SIZE B

CSAH#17 AT CSAH#18

# DETECTOR RACK #2 34030G1

| POWER SUPPLY OR B.I.U. | L3 | L1 | L7 | L5 | L11 | L9 | L15 | L13 | NOT USED | NOT USED | PGM. CARD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | ☐ 2CH | | | |
| | L4 | L2 | L8 | L6 | L12 | L10 | L16 | L14 | | | |

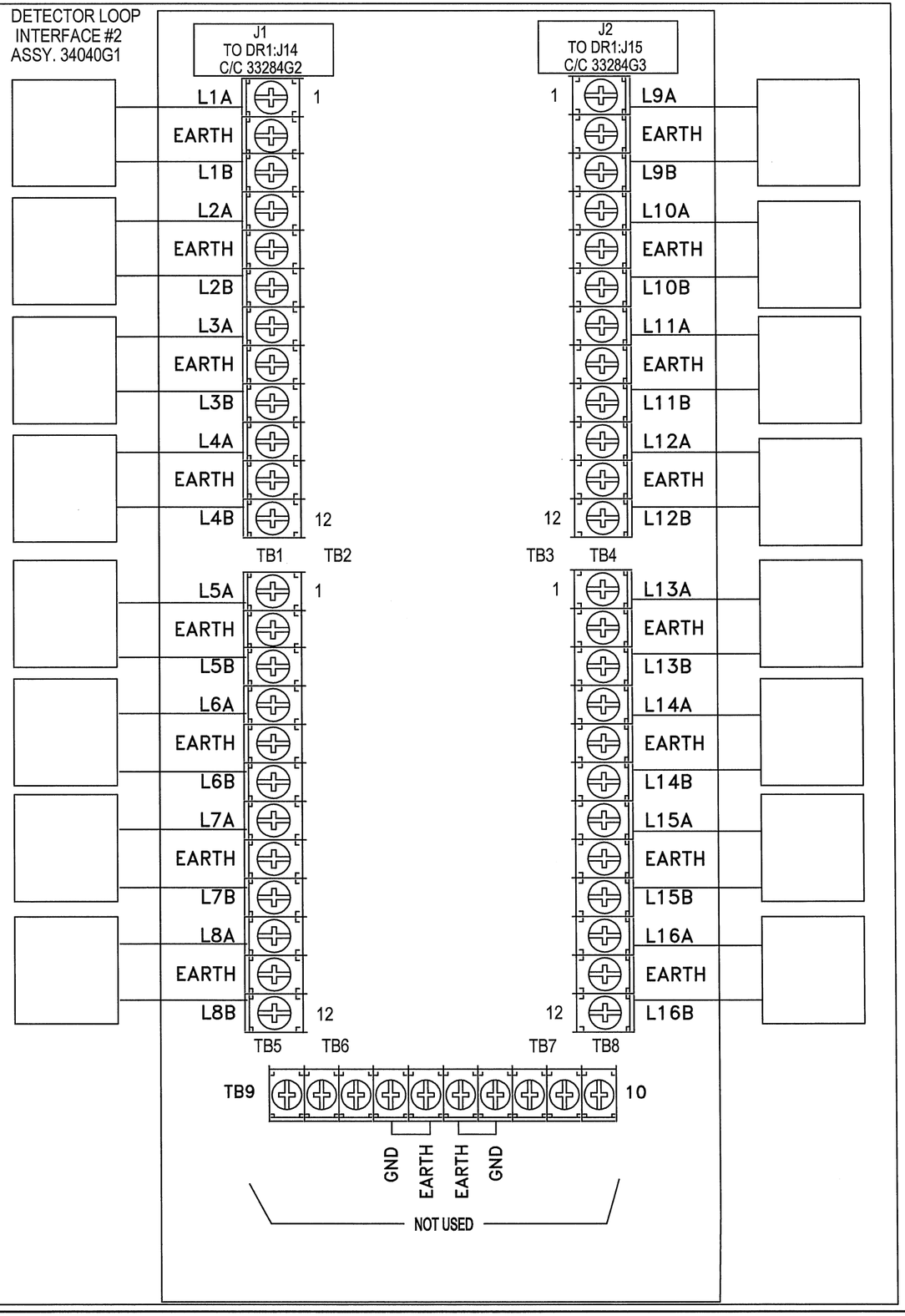
| J13 | J16 | J14 | J18 | J15 | J17 | J19 |
|---|---|---|---|---|---|---|
| C/C 33284G10 DC POWER | C/C 33284G8 EXP. OUTPUTS | C/C 33284G2 LPS 1–8 | C/C 33284G9 SYS. OUTPUTS | C/C 33284G3 LPS 9–16 | C/C 33284G6 AC POWER | C/C 33284G17 PGM. CARD |

| ADDRESS TABLE | | |
|---|---|---|
| RACK # | JMPR | DET. #'S |
| 1 | | 1-16 |
| 2 |  | 17-32 |
| 3 | | 33-48 |
| 4 | | 49-64 |

1. INSTALL JUMPERS ON JP31 THRU JP34 WHEN A SHELF MOUNT POWER SUPPLY IS USED. WARNING - DO NOT INSTALL JUMPERS WHEN A PLUG-IN POWER SUPPLY IS USED.
2. INSTALL JUMPERS ON JP38 - JP55 WHEN PGM. CARD IS NOT USED.
3. PROGRAM CARD AND PLUG-IN POWER SUPPLY ARE FOR TS-1 APPLICATIONS ONLY. REMOVE FOR TS-2 APPLICATIONS.
4. PROGRAM JUMPERS USING CONFIGURATION NUMBER AS SHOWN BY ASTERISK.

## DETECTOR RACK PROGRAMMING JUMPERS

| DC POWER (1) | | | | | DET. TYPE | CONFIGURATION (4) SLOT 1/2 | | | | | | | CONFIGURATION (4) SLOT 3/4 | | | | | | | CONFIGURATION (4) SLOT 5/6 | | | | | | | | CONFIGURATION (4) SLOT 7/8 | | | | | | | | DET. CMNS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JP31 | JP32 | JP33 | JP34 | | | JP3 | JP4 | JP5 | JP6 | JP7 | JP8 | JP9 | JP10 | JP11 | JP12 | JP13 | JP14 | JP15 | JP16 | JP17 | JP18 | JP19 | JP20 | JP21 | JP22 | TP1 | JP23 | JP24 | JP25 | JP26 | JP27 | JP28 | TP2 | JP29 | JP30 | JP38-JP55 |
| ■ ○ | ■ ○ | ■ ○ | ■ ○ | 1 | TS-1 | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ○ ■ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ○ ■ | ■ ○ | ■ ○ | ■ ○ | (2) |
| ○ ■ | ○ ■ | ○ ■ | ○ ■ | 2 | * TS-2 | ○ ■ | ○ ■ | ■ ○ | ■ ○ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ■ ○ | ■ ○ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ■ ○ | ■ ○ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ■ ○ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | (2) |
| ■ ○ | ■ ○ | ■ ○ | ■ ○ | 3 | LM-632T / 262-FC | ■ ○ | ■ ○ | ○ ■ | ○ ■ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ○ ■ | ○ ■ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ■ ○ | ○ ■ | ○ ■ | ■ ○ | ■ ○ | ○ ■ | ■ ○ | ■ ○ | ■ ○ | ○ ■ | ○ ■ | ■ ○ | ○ ■ | ■ ○ | ■ ○ | ■ ○ | (2) |
| ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | 4 | MAG. | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | ○ ▬ | (2) |
| ■ ○ | ■ ○ | ■ ○ | ■ ○ | 5 | LM-642() (TS-2) | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ■ ○ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ○ ■ | ■ ○ | ○ ■ | ○ ■ | ○ ■ | (2) |

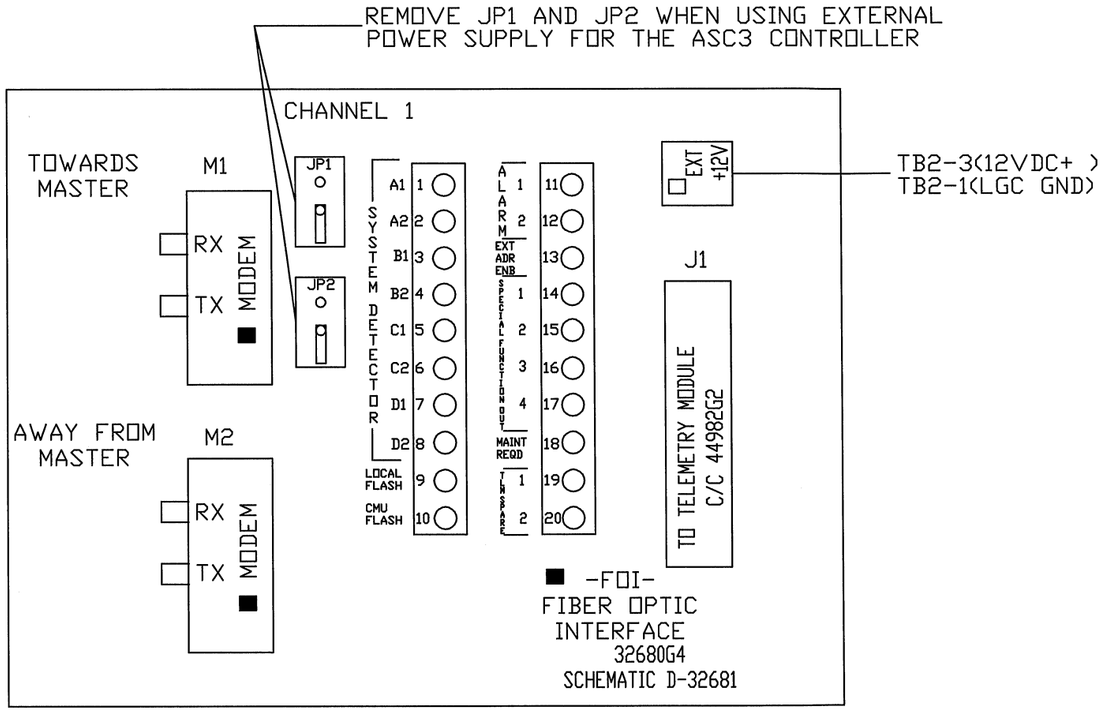



| DET. LOOPS 9–16 (J15) C/C 33284G3 | | |
|---|---|---|
| PIN | SIGNAL | TO |
| 1 | LOOP 9+ | LPI2:TB1-1 |
| 2 | LOOP 9– | LPI2: TB1-3 |
| 3 | LOOP 10+ | LPI2: TB1-4 |
| 4 | LOOP 10– | LPI2: TB1-6 |
| 5 | LOOP 11+ | LPI2: TB1-7 |
| 6 | LOOP 11– | LPI2: TB1-9 |
| 7 | LOOP 12+ | LPI2: TB1-10 |
| 8 | LOOP 12– | LPI2: TB1-12 |
| 9 | LOOP 13+ | LPI2: TB2-1 |
| 10 | LOOP 13– | LPI2: TB2-3 |
| 11 | LOOP 14+ | LPI2: TB2-4 |
| 12 | LOOP 14– | LPI2: TB2-6 |
| 13 | LOOP 15+ | LPI2: TB2-7 |
| 14 | LOOP 15– | LPI2: TB2-9 |
| 15 | LOOP 16+ | LPI2: TB2-10 |
| 16 | LOOP 16– | LPI2: TB2-12 |
| 17 | ---- | |
| 18 | ---- | |
| 19 | ---- | |
| 20 | ---- | |

| DET. LOOPS 1–8 (J14) C/C 33284G2 | | |
|---|---|---|
| PIN | SIGNAL | TO |
| 1 | LOOP 1+ | LPI1:TB1-1 |
| 2 | LOOP 1– | LPI1: TB1-3 |
| 3 | LOOP 2+ | LPI1: TB1-4 |
| 4 | LOOP 2– | LPI1: TB1-6 |
| 5 | LOOP 3+ | LPI1: TB1-7 |
| 6 | LOOP 3– | LPI1: TB1-9 |
| 7 | LOOP 4+ | LPI1: TB1-10 |
| 8 | LOOP 4– | LPI1: TB1-12 |
| 9 | LOOP 5+ | LPI1: TB2-1 |
| 10 | LOOP 5– | LPI1: TB2-3 |
| 11 | LOOP 6+ | LPI1: TB2-4 |
| 12 | LOOP 6– | LPI1: TB2-6 |
| 13 | LOOP 7+ | LPI1: TB2-7 |
| 14 | LOOP 7– | LPI1: TB2-9 |
| 15 | LOOP 8+ | LPI1: TB2-10 |
| 16 | LOOP 8– | LPI1: TB2-12 |
| 17 | PMT. DET. CH. A | LPI1: TB3-1 |
| 18 | PMT. DET. CH. B | LPI1: TB3-2 |
| 19 | KEY PIN | |
| 20 | PMT. CH. A/B +26VDC | LPI1: TB3-3 |
| 21 | PMT. DC GROUND | LPI1: TB3-4,7 |
| 22 | PMT. CH. C/D +26VDC | LPI1: TB3-8 |
| 23 | PMT. DET. CH. C | LPI1: TB3-9 |
| 24 | PMT. DET. CH. D | LPI1: TB3-10 |
| 25 | ---- | ---- |
| 26 | ---- | ---- |

| DET. RACK POWER C/C 171-1083-515 | | | |
|---|---|---|---|
| P1/ DR:J13 | P2/ DR:J17 | FUNCTION | TO |
| 1 | | +12 VDC (DET. POWER) | PB-3 |
| 2 | | +24 VDC (BIU POWER) | PB-2 |
| 3 | | LOGIC GROUND | PB-1 |
| 4 | | EARTH GROUND | PB-9 |
| 5 | | "KEY PIN" | |
| 6 | | LINE FREQUENCY REF. | PB-5 |
| | 1 | EARTH GROUND | ---- |
| | 2 | AC LINE | PB-12 |
| | 3 | AC NEUTRAL | PB-10 |
| | 4 | LOGIC GROUND | ---- |

# DETECTOR LOOP INTERFACE




| CONT. TELM. PORT | FIBER OPTIC INTERF. | -LT- LOCAL TELEMETRY 32680G4 | |
|---|---|---|---|
| J3 | J1 | COLOR | FUNCTION |
| 3 | A4 | BLACK | TRANSMIT |
| 2 | A3 | BLACK | RECEIVE |
| 7 | A5 | RED | +12 VDC |
| 5 | A2 | GRAY | SIG. GND. |

LOCAL RS-232 TELEMETRY (FOI)

| SHEET 12 OF 12 | SIZE B | CSAH#17 AT CSAH#18 |
|---|---|---|

## EVP SENSORS

| CABLE | DISCR. CHAN. | PHASES | POLE# | TERMINAL TB9 SIGNAL | DC(+) | GND |
|---|---|---|---|---|---|---|
| 13,31 | 1 | 6 | 4,6 | 9 | 8 | 7 |
| 18 | 2 | 2-5 | 2 | 10 | 8 | 7 |
| | 3 | | | | | |
| 38 | 4 | 4 | 3 | 2 | 3 | 4 |
| | | | | | | |
| | | | | | | |

## EVP VERIFY LIGHTS

| CABLE | CONTR. CHAN. | PHASES | POLE# | TERM. |
|---|---|---|---|---|
| 29 | 3 | 6 | 4 | 59 |
| 17 | 4 | 2-5 | 2 | 65 |
| | 5 | | | |
| 35 | 6 | 4 | 3 | 71 |
| | | | | |
| | | | | |

## VEHICLE SIGNALS

| CABLE | SIGNAL | TERMINAL G← | FLA | Y← | R← | G | Y | R |
|---|---|---|---|---|---|---|---|---|
| 15 | 2-1 | | | | | 9 | 11 | 13 |
| 14 | 2-2 | | | | | 10 | 12 | 14 |
| 33,14 | 4-1,4-3 | | | | | 23 | 25 | 27 |
| 32 | 4-2 | | | | | 24 | 26 | 28 |
| 15 | 5-1 | 29 | 31 | 33 | 35 | | | |
| 7 | 5-2 | 30 | 32 | 34 | 36 | | | |
| 27 | 6-1 | | | | | 37 | 39 | 41 |
| 26 | 6-2 | | | | | 38 | 40 | 42 |
| | | | | | | | | |
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## VEH DETECTORS

| CABLE | DET | SLOT | FUNC | RACK | TERMINAL |
|---|---|---|---|---|---|
| 40 | 2-1 | 5 | 1 | 1 | L5 |
| 25 | 4-1 | 9 | 3/8 | 1 | L9 |
| 23 | 4-2 | 10 | 1 | 1 | L10 |
| 24 | 4-3 | 11 | 1 | 1 | L11 |
| 21 | 4-4 | 12 | 7 | 1 | L12 |
| 22 | 4-5 | 13 | 7 | 1 | L13 |
| 38 | 5-1 | 3 | 1 | 1 | L3 |
| 39 | 5-2 | 4 | 1 | 1 | L4 |
| 11 | 6-1 | 6 | 1 | 1 | L6 |
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## PED PUSHBUTTONS

| CABLE | PPB | TERMINAL | RETURN |
|---|---|---|---|
| 28 | 4-1 | PC4 | GB1 |
| 34 | 4-2 | PC4 | GB1 |
| 8 | 6-1 | PC6 | GB1 |
| 20 | 6-2 | PC6 | GB1 |
| | | | |
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## PED SIGNALS

| CABLE | SIGNAL | TERMINAL WK | DW |
|---|---|---|---|
| 26 | 4-1 | 63 | 67 |
| 32 | 4-2 | 64 | 68 |
| 7 | 6-1 | 69 | 71 |
| 26 | 6-2 | 70 | 72 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## B.I.U

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 1 | | | | | |
| CH 2 | | | | | |
| CH 3 | 5 | | 5-1 | | |
| CH 4 | 5 | | 5-2 | | |

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 5 | 2 | | 2-1 | | |
| CH 6 | 6 | | 6-1 | | |
| CH 7 | | | | | |
| CH 8 | | | | | |

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 9 | 4 | | 4-1 | | |
| CH 10 | 4 | | 4-2 | | |
| CH 11 | 4 | | 4-3 | | |
| CH 12 | 4 | | 4-4 | | |

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 13 | 4 | | 4-5 | | |
| CH 14 | | | | | |
| CH 15 | | | | | |
| CH 16 | | | | | |

| EVP | PH | POLE # | CONT CH # |
|---|---|---|---|
| CH 1 | 6 | 4 | 3 |
| CH 2 | 2-5 | 2 | 4 |
| CH 3 | | | |
| CH 4 | 4 | 3 | 6 |

## B.I.U

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 17 | | | | | |
| CH 18 | | | | | |
| CH 19 | | | | | |
| CH 20 | | | | | |

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 21 | | | | | |
| CH 22 | | | | | |
| CH 23 | | | | | |
| CH 24 | | | | | |

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 25 | | | | | |
| CH 26 | | | | | |
| CH 27 | | | | | |
| CH 28 | | | | | |

| DET | PH | F | DET | DLY | EXT |
|---|---|---|---|---|---|
| CH 29 | | | | | |
| CH 30 | | | | | |
| CH 31 | | | | | |
| CH 32 | | | | | |