**Type 334 Ramp Meter/Data Station Cabinet**

**Standard Plan J-81.10-00**

**Sheet 1 of 3 Sheets**

**Drawn by** Bill Berens

**Approved for Publication**

**Type 334**

**Ramp Meter/Data Station Cabinet**

**PDA #3LX Rear View (See Note 3)**

**Notes**

1. Equipment shall meet the requirements of and be constructed in accordance with the California Department of Transportation (CalTrans) Transportation Electrical Equipment Specifications (TEES) as currently published, including all errata, with modifications as shown here and described in Standard Specification Section 5-29.13(10) Pre-Terminated Fiber-optic Patch Panel field installed separately.

2. The following Input File Terminal Blocks shall be wired in parallel:
   - T1-3, T1-4       SR-4      Field Output - Sign Off
   - T1-1, T1-2       SR-3      Field Output - Sign On
   - T2-6               MU-3      Energizes TR1 and TR2 when MU is normal
   - T2-8               T4-6       TR1 Output to Field Green 2

3. The model 204 flasher shall include a socket connector cable shall be 4 feet in length.

4. It shall be wired in parallel with the modifications shown here. Do Not include ground bus bars between terminal blocks TB2 through TB9. Relabel the C5 connector as C4P. The C4 connector cable shall be 4 feet in length.

5. Power Distribution Assembly (PDA) #3LX shall be modified as follows:
   - I16   to   J16
   - I17   to   J17

6. The following Input File Terminal Blocks shall be wired in parallel:
   - Patch Panel field installed separately.

7. The Police Control Switch shall be a 3-position, stationary type toggle switch with a 10 amp contact rating.

8. The Police Control Switch shall be a 2-position, stationary type toggle switch with a 10 amp contact rating.

**Power Distribution Block Diagram**

**NOTES**

- Dimensions not shown shall be in accordance with the TEES
- DTU - Drawn to scale
- DTR - Dimensional tolerances
- ECU - Equipment
- C - Circuit
- D - Device
- T - Transformer
- V - Voltage
- R - Resistance
- F - Frequency
- S - Switch
- L - Lamp
- N - Center Neutral
- NC - Normally Closed
- NO - Normally Open
- SP - Single Pole
- DP - Double Pole
- DPH - Double Pole Single Throw
- DPF - Double Pole Double Throw
- DPST - Double Pole Single Throw
- DPDT - Double Pole Double Throw
- DPST - Double Pole Single Throw
- DPDT - Double Pole Double Throw

**Transfer Relay Details**

<table>
<thead>
<tr>
<th>Function</th>
<th>Connect 10</th>
<th>Connect 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Supply</td>
<td>SWP2-1-7</td>
<td>SWP2-8-7</td>
</tr>
<tr>
<td>AC+</td>
<td>CB3</td>
<td>CB3</td>
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<tr>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>TRT-6</td>
<td>TRT-6</td>
<td>TRT-6</td>
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<tr>
<td>AC-</td>
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<td>AC-</td>
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<tr>
<td>MU OK (AC+)</td>
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**Shown De-Energized**

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<th>Connect 11</th>
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<tr>
<td>GRN-3</td>
<td>SWP2-1-7</td>
<td>SWP2-8-7</td>
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<tr>
<td>GRN-OP</td>
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<td>AC-</td>
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<tr>
<td>AC-</td>
<td>12.6</td>
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DISPLAY PANEL NOTES

D1. The Display Panel shall be 0.125" (in) thick aluminum with a brushed finish. All text on the Display Panel shall be a minimum of 0.25" (in).

D2. The Cabinet Name Plate shall be a phenolic label with white minimum 0.375" (in) text on a black background, permanently affixed to the panel. See Contract Plans for cabinet identification number.

D3. The Detector Labels shall have 0.5" (in) black text on a white background. The labels may either be phenolic or industrial grade outdoor vinyl, and shall be permanently affixed to the panel.

D4. All other text shall be black and screened directly onto the panel.

D5. The Sign Relay socket and connectors P1P, P2S, and CSP shall be installed on the back of the panel. Connectors P1P/S and P2P/S are Type D060 D-Sub connectors with pin assignments as shown on sheet 3. The suffix "S" indicates a socket (female connector) and the suffix "P" indicates a plug (male connector).

D6. The Sign Relay shall be DPDT, wired as shown, with a contact rating not less than 10 amps continuous duty. The relay shall operate on ground output from the controller, and draw less than 75 milliamps when energized.

D7. See Standard Specification Section 9-29.13(11) for additional requirements.

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<tr>
<th>FUNCTION</th>
<th>CONNECT TO</th>
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<td>SIGN CTRL</td>
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<td>NA</td>
<td>NC</td>
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<td>AC+</td>
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<td>EN</td>
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<tr>
<td>+24 VDC</td>
<td>24-26VDC</td>
<td>EN</td>
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</table>

SIGN RELAY DETAIL

(SEE NOTE D8)

SHOWN DE-ENERGIZED
(NOT METERING)

C5-10 (AUTO METER)

C5-23 (DC GND)

C1-86 (POLICE CTRL)

DC GND

NOT CONNECTED

TYPE 334
RAMP METER/
DATA STATION CABINET
STANDARD PLAN J-81.10-00

APPROVED FOR PUBLICATION

Washington State Department of Transportation

WA 46597

DATE: May 20, 2010 14:37 AM

DRAWN BY: BILL BERENS

STATE DESIGN ENGINEER

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P1 AND P2 CONNECTOR PIN ASSIGNMENTS

C1 CONNECTOR PIN ASSIGNMENTS

C4, C5, AND C6 CONNECTOR PIN ASSIGNMENTS

C1 CONNECTOR PINS (TO DISPLAY PANEL)

C5 CONNECTOR PINS (TO PDA #3A)

DISPLAY PANEL INPUTS

FUNCTIONAL BLOCK DIAGRAM

NOTE: CONNECTORS P1P AND P2S SHALL BE MOUNTED TO THE BACK OF THE DISPLAY PANEL AND SHALL BE SECURED USING A SPRING LATCH (BAIL) TYPE CONNECTION.

C1 CONNECTOR
C4: C4 Connector
C5: C5 Connector
C6: C6 Connector
CM: Current Monitor
DET: Detector
DP: Display Panel
IFI: Input File I
IFI: Input File J
L#: Lane (#)
MU: Monitor Unit
NA: Not Assigned
NC: Not Connected
P2: P2 Connector
PC: Police Control Switch
SB: Sign Switch
SWPK: Switch Pack
TR: Transfer Relay

LEGEND

DD50 D-SUB CONNECTOR PINS
PLUG (MALE) CONNECTOR SHOWN ~ MIRROR FOR SOCKET (FEMALE) CONNECTOR ~

DRAWN BY BILL MENDS

P1 CONNECTOR PIN ASSIGNMENTS

P2 CONNECTOR PIN ASSIGNMENTS

CONNECTOR P1P

CONNECTOR P2S

CONNECTOR P2P

PIN TABLE EXAMPLES:

J-IF: Input File 2, Slot 1, Terminal F
DP: Display Panel
DET: 7-IN: Display Panel, Detector 7 Position Input Terminal
C1-58: C1 Connector_Pin 58

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STANDARD PLAN J-81.10-00

WASHINGTON
STATE DEPARTMENT OF TRANSPORTATION

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C1-58: C1 Connector_Pin 58

SHEET 3 OF 3 SHEETS

NOTE: MATTEN

REV. A 11/8/30 11:31 AM