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Dear Gary, Dal, John and Chuck,

I have recently reviewed the connector drawings that AMP supplied for inclusion in the ESDI (See Attachment #1), and wish to make some constructive comments. My comments are based on the assumption that flat ribbon cable will be utilized, although I was unable to find cable descriptions in the present document.

Besides having a great deal of information on the diameter of mounting holes, and the length of solder tails, the 20 pin and 34 pin headers and receptacles (J1/P1 and J2/P2) are depicted as having two polarization bars. I question whether this is really a necessity on these parts. By far the most prevalent polarization feature is a single center bar. Use of the two bar configuration may very well limit the user to a single source of supply.

I recommend that instead of using these connectors, the center polarized non-shielded connectors accepted in the SCSI document (X3.131-1986 p.18 & 19) be adopted with downsizing. These configurations were accepted by all member connector manufacturers, and offer the user multiple sources of supply. I have taken the liberty of modifying these drawings, and show them as attachments #2 and #3.

I do not have a problem with the card edge connectors depicted provided that the width specified (.404") be made a reference dimension.

I hope that these comments can be incorporated to make the ESDI connector guidelines more realistic.

Yours Truly

Harvey R. Waltersdorf
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Product Qualification
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5.6 MECHANICAL

The connectors and cables that interconnect a device and the controller are shown in Table 5-1.

Dev/Ctrl Receptacle	Cable/Connector Description	Cable Plug
J1	Control signals (multiplexed)	P1
J2	Data signals (radial)	P2
J3	DC power input	P3
J4	Frame ground	P4

TABLE 5-2 CABLES AND CONNECTORS

5.6.1 J1/P1 Connector

5.6.1.1 Edge Connector

The dimensions for the J1, 34 pin PCB edge connector, and its P1 mating cable connector are shown in Drawing 5-1. The pins are numbered 1 through 34 with the even pins located on one side of the PCB. A key slot is provided between pins 3 and 5.

See Drawing 5-6 for connector orientation.

5.6.1.2 Header Connector

The dimensions for the J1 34 pin header and its P1 mating cable connector are shown in Drawing 5-1.

5.6.2 J2/P2 Connector

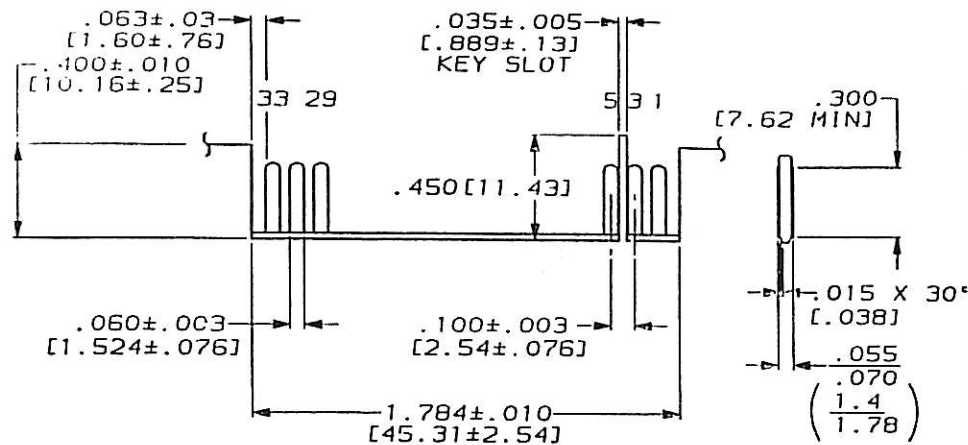
5.6.2.1 Edge Connector

The dimensions for the J2, 20 pin PCB edge connector and its P2 mating cable connector are shown in Drawing 5-3. The pins are numbered 1 through 20 with the even pins located on one side of the PCB. A key slot is provided between pins 3 and 5.

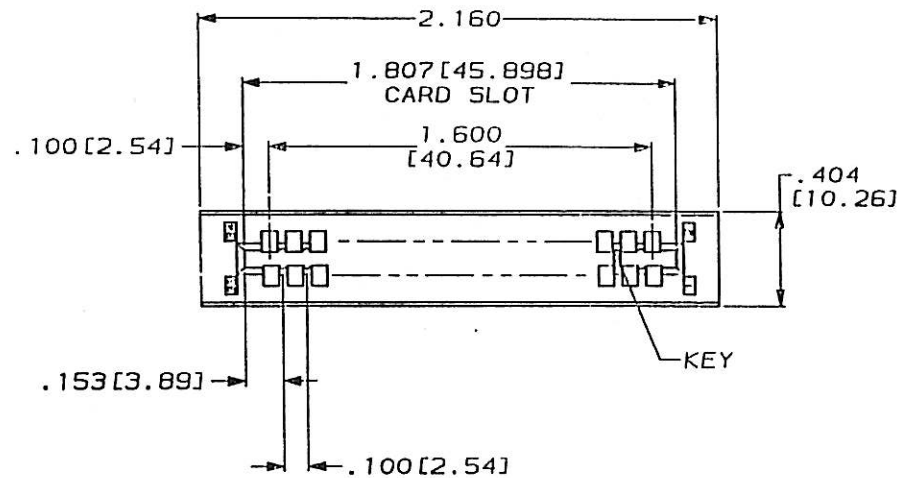
See Drawing 5-6 for orientation.

5.6.2.2 Header Connector

The dimensions for the J2 20 pin header and its P2 mating cable connector are shown in Drawing 5-4.



J1 PCB EDGE CONNECTOR DIMENSIONS

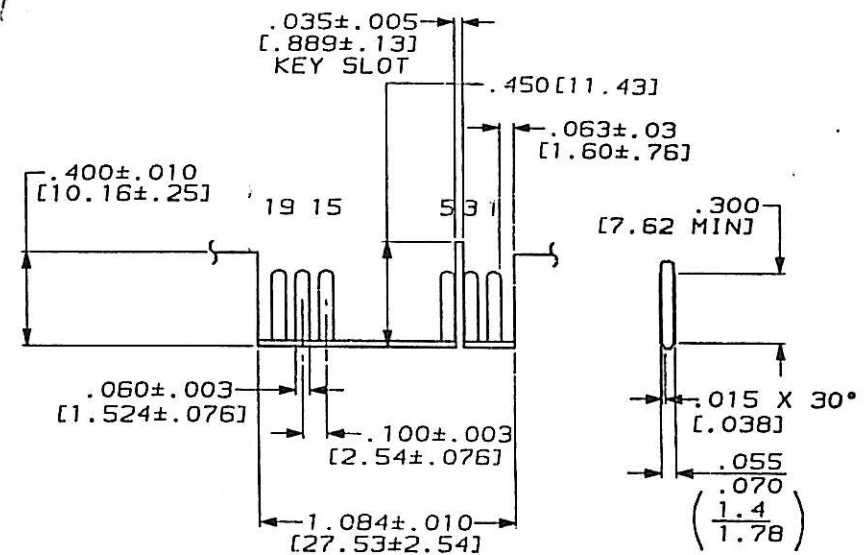


P1 CARD EDGE CONNECTOR DIMENSIONS

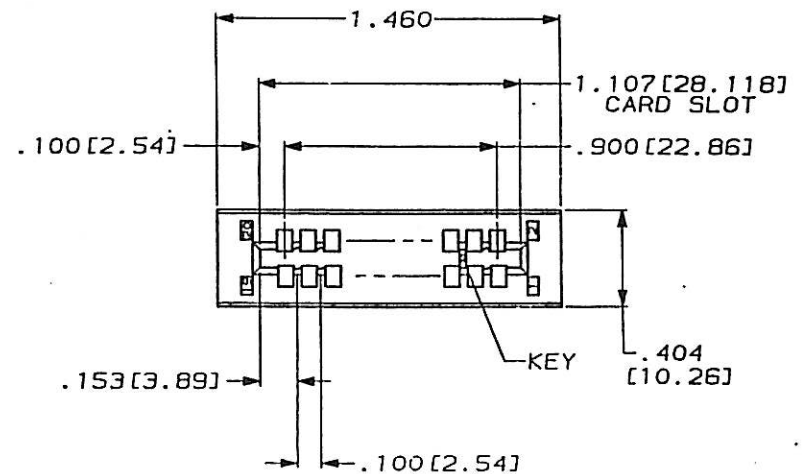
FIGURE 4

METRIC DIMENSIONS ARE IN PARENTHESIS

E-104-1



J2 PCB EDGE CONNECTOR DIMENSIONS

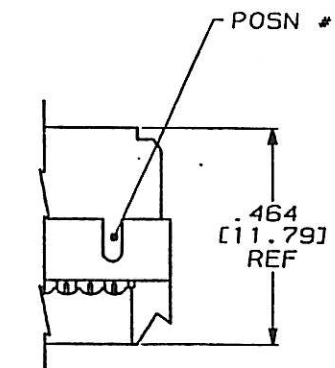
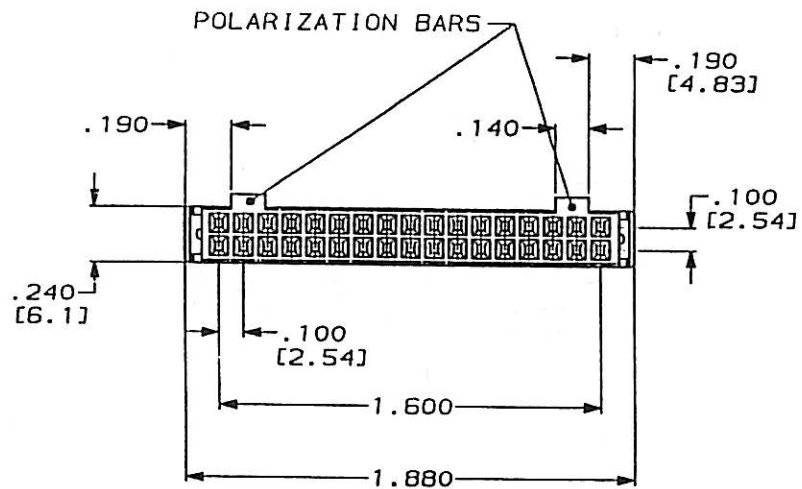


P2 CARD EDGE CONNECTOR DIMENSIONS

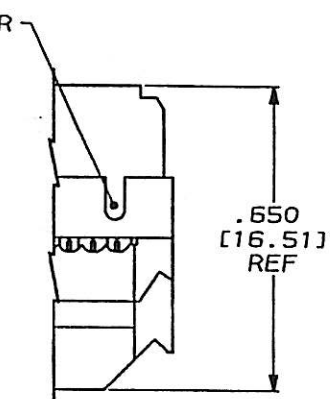
FIGURE 5

METRIC DIMENSIONS ARE IN PARENTHESIS

E-105-1

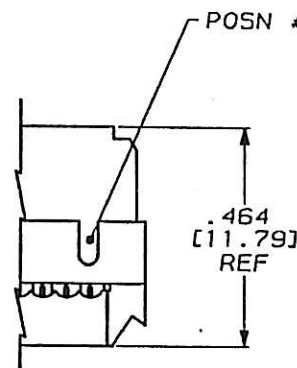
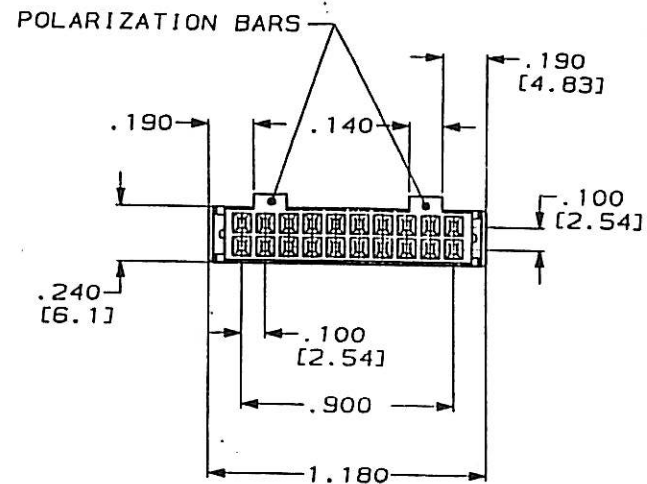


TERMINATED
WITH RECESSED COVER

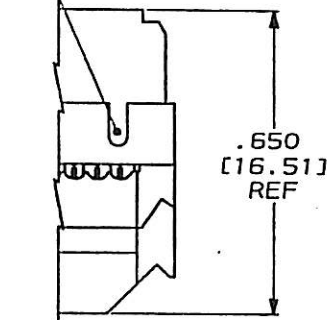


TERMINATED
WITH RECESSED COVER
AND STRAIN RELIEF

P1 RECEPTACLE CONNECTOR DIMENSIONS
METRIC DIMENSIONS ARE IN PARENTHESIS

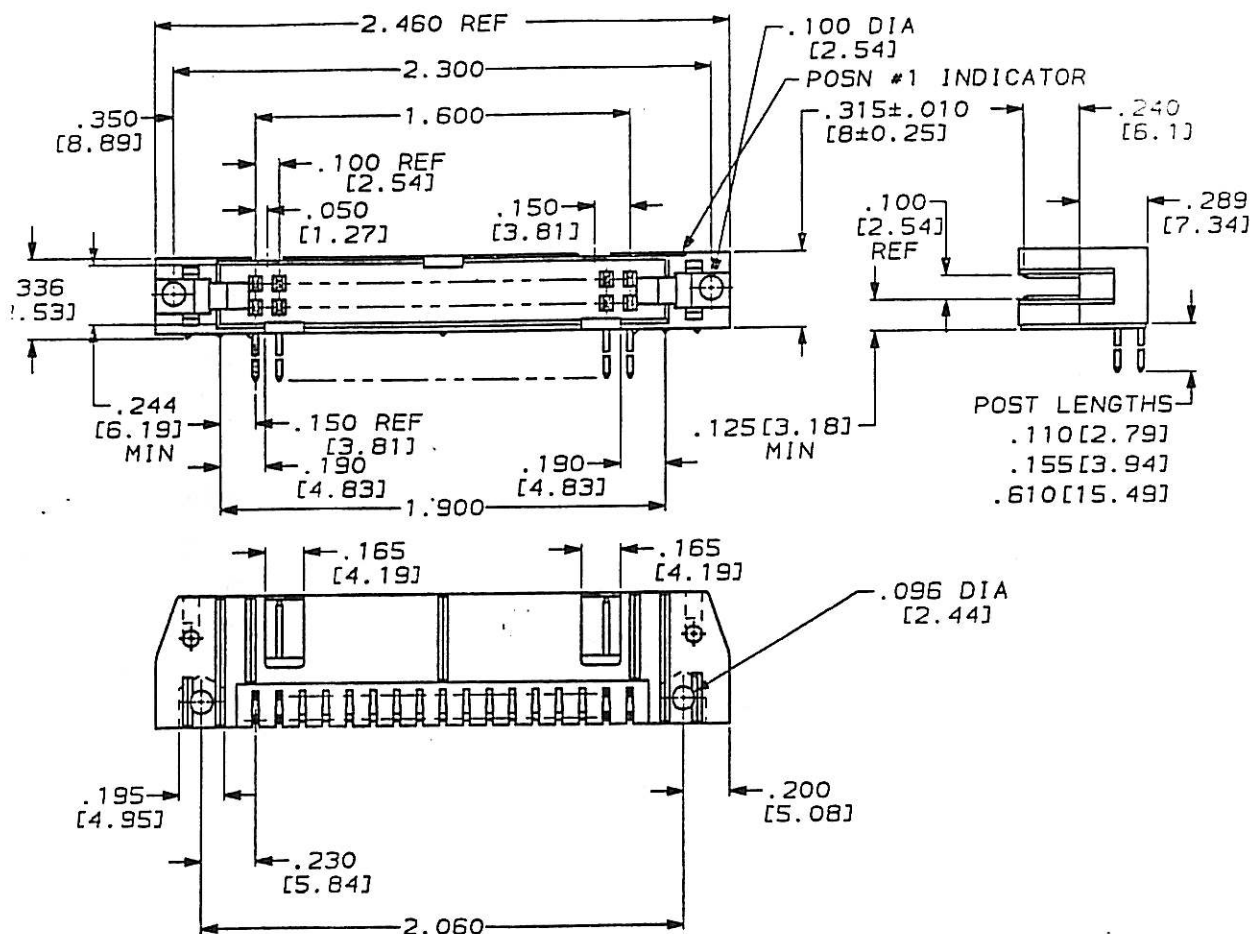


TERMINATED
WITH RECESSED COVER

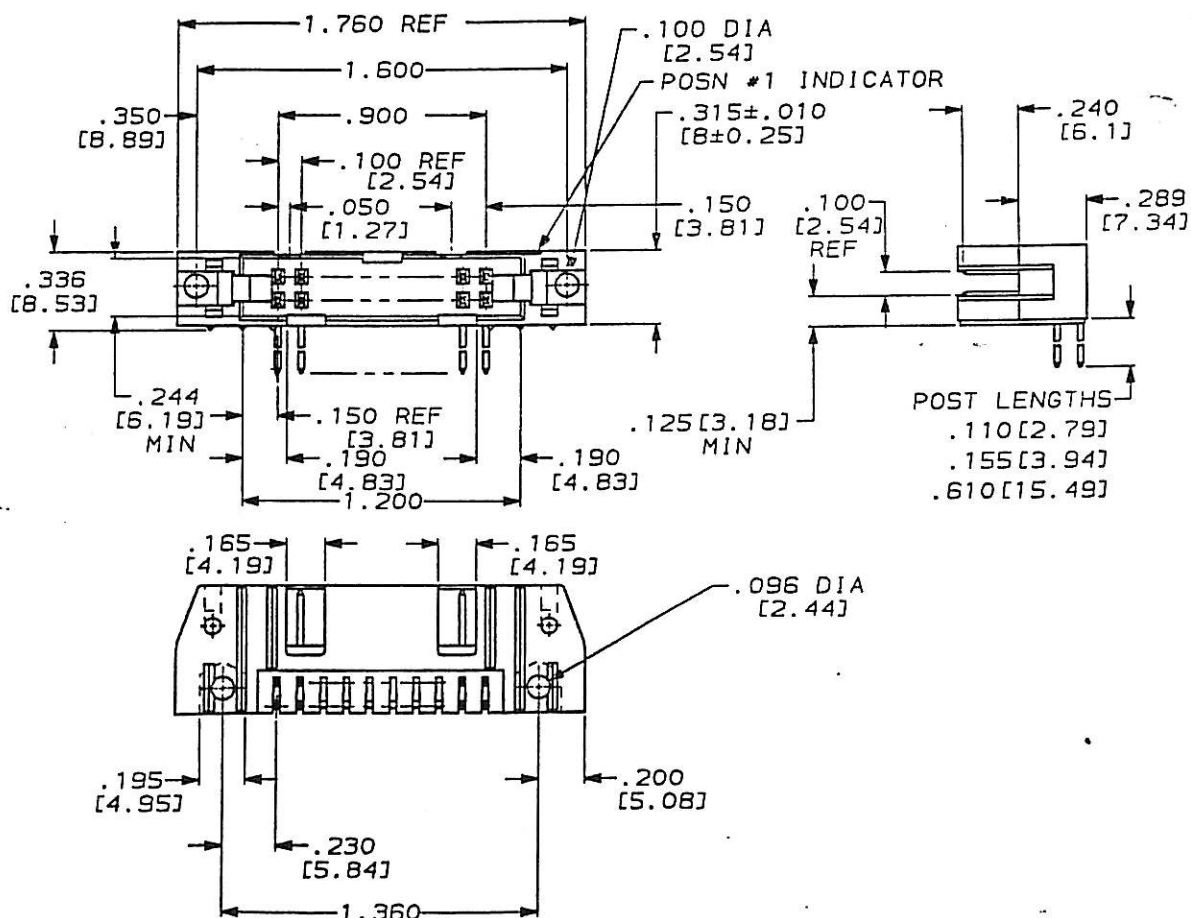


TERMINATED
WITH RECESSED COVER
AND STRAIN RELIEF

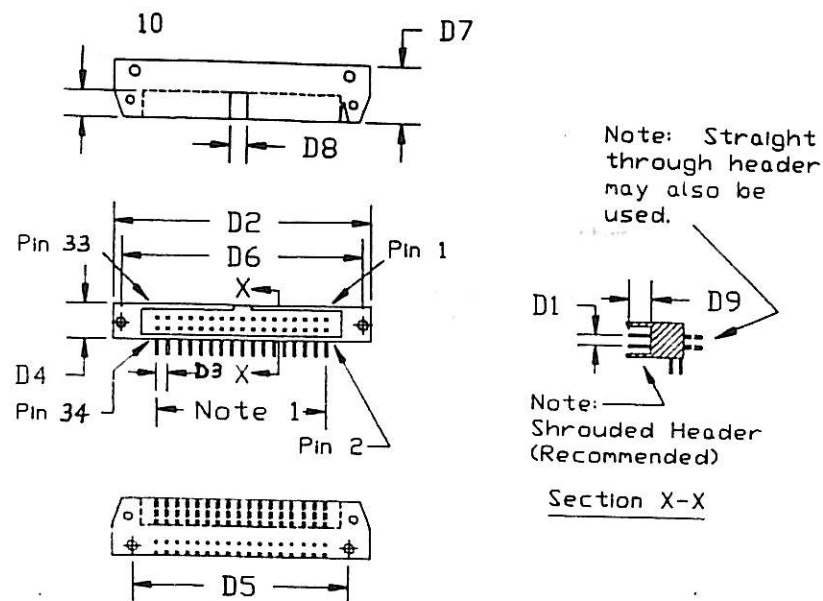
P2 RECEPTACLE CONNECTOR DIMENSIONS
METRIC DIMENSIONS ARE IN PARENTHESIS



J1 PCB HEADER CONNECTOR DIMENSIONS
METRIC DIMENSIONS ARE IN PARENTHESIS



J2 PCB HEADER CONNECTOR DIMENSIONS
METRIC DIMENSIONS ARE IN PARENTHESIS

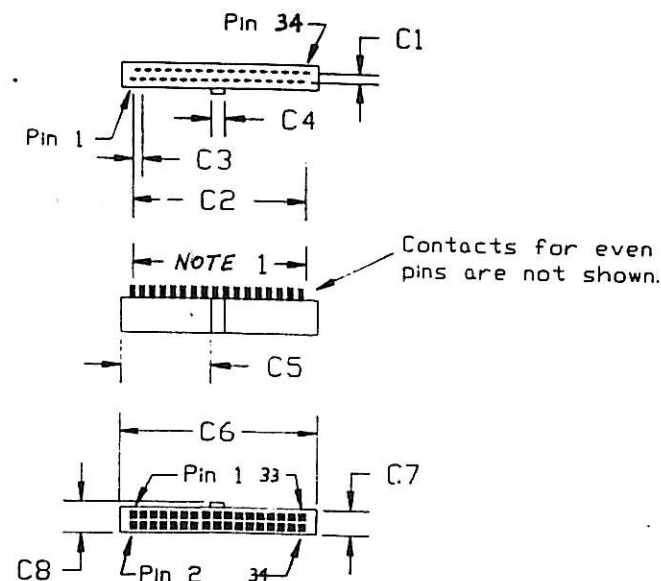


DIMENSION	20 PIN		34 PIN		COMMENTS
	MM	IN	MM	IN	
D1	2.540	0.100	2.540	0.100	
D2	44.700	1.760	62.480	2.460	REF. ONLY
D3	2.540	0.100	2.540	0.100	
D4	8.890	0.350	8.890	0.350	REF. ONLY
D5	34.540	1.360	52.320	2.060	REF. ONLY
D6	40.640	1.600	58.420	2.300	REF. ONLY
D7	13.940	0.549	13.940	0.549	REF. ONLY
D8	4.190	0.165	4.190	0.165	NOTE 4
D9	6.090	0.240	6.090	0.240	
D10	6.600	0.260	6.600	0.260	REF. ONLY

NOTES:

- Two rows of seventeen contacts on 2.54mm (0.100in) spacing = 40.64mm (1.600in). Two rows of ten contacts on 2.54mm (0.100in) spacing = 22.86mm (0.900in).
- Tolerances $\pm 0.127\text{mm}$ (0.005in) noncumulative, unless otherwise specified.
- Connector shown is the 34 pin variation. The 20 pin variation has similar construction.
- The tolerance for dimension D8 is $\pm 0.25\text{mm}$ (0.010in).

Fig. 5-1A: J1 Header Connector



DIMENSION	20 PIN		34 PIN		COMMENTS
	MM	IN	MM	IN	
C1	2.540	0.100	2.540	0.100	
C2	22.860	0.900	40.640	1.600	
C3	2.540	0.100	2.540	0.100	
C4	3.302	0.130	3.302	0.130	
C5	13.335	0.525	22.225	0.875	
C6	29.972	1.180	47.752	1.880	
C7	6.096	0.240	6.096	0.240	
C8	7.620	0.300	7.620	0.300	MAX.

NOTES:

- Thirty-four contacts on 1.27mm (0.05in) staggered spacing = 41.91mm (1.650in). Twenty contacts on 1.27mm (0.05in) staggered spacing = 24.13mm (0.950in). Reference Only.
- Tolerances $\pm 0.127\text{mm}$ (0.005in) noncumulative, unless otherwise specified.
- Connector cover and strain relief are optional.
- Connector shown is the 34 pin variation. The 20 pin variation has similar construction.

Fig. 5-1B: P1 Receptacle Connector