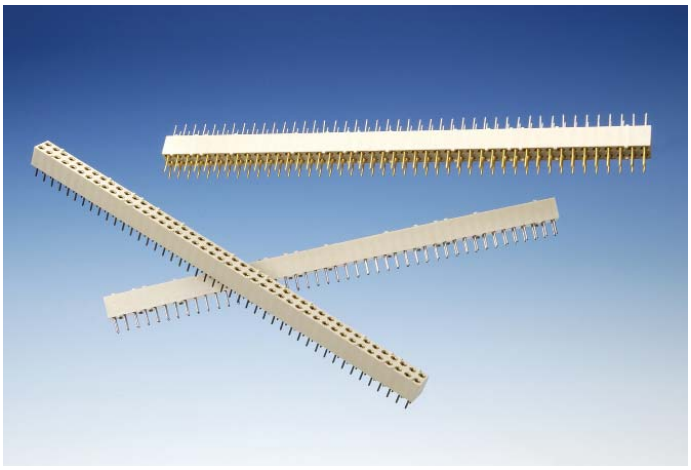


HIGH DENSITY PIN & SOCKET P.C. BOARD CONNECTORS

- Two styles
  - plug (with pins) to receptacle (with sockets)
  - pins (bed of nails) to receptacle (with sockets)
- Alignment pins and keying optional[4]
- Plugs and carriers have male contacts
- Receptacles have female contacts
- Ø.018" (.45mm) pins
- Two rows on .100" (2.54mm) x .100" (2.54mm) centers
- Parallel board connectors
- As little as .240" (6.1mm) or .480" (12.2mm) between boards

GENERAL SPECIFICATIONS

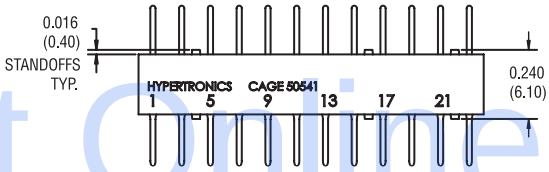
Number of contacts	4 - 90 (any even number contact count up to 90 available)
Contact diameter	.018 (.45)
Current rating	2.5 amps
Contact resistance	<8 milliohms
Extraction force	.3 - 2 oz.
Contact life cycles	100,000
Breakdown voltage between contacts	>1200V RMS
Dielectric withstanding voltage	900V RMS
Insulation resistance	>105 Megohms
Insulator material / temperature rating: LCP material, Vectra E130i 30% glass Color: Natural	V - O flammablility rating: -55ºC to + 160ºC
Contact ***Material:*** ***Plating:***	BeCu (pin) BeCu wires & brass body (socket) (see below plating reference)
Guide hardware	Stainless steel / brass/nickel plated

Plating Reference	
Male pins:	TH = 50µin gold (min) over Ni TBH = Hot solder dip over 50µin gold (min) over Ni
Female sockets:	TAH = 50µin gold (min over Ni on mating surface, gold flashover Ni on termination TABH = 50µin gold (min over Ni on mating surface, tin/lead over Ni on termination (straight D style only)

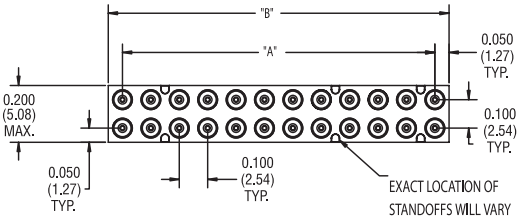
Standard Sizes							
No. of Contacts	***22***	***24***	***44***	***46***	***66***	***68***	***90***
Dim. A	1.000 (25.40)	1.100 (27.94)	2.100 (53.34)	2.200 (55.88)	3.200 (81.28)	3.300 (83.82)	4.400 (111.76)
Dim. B[3]	1.141 (28.99)	1.239 (31.47)	2.239 (56.87)	2.341 (59.47)	3.341 (84.86)	3.441 (87.41)	4.557 (115.76)

CONNECTOR DIMENSIONS[1]

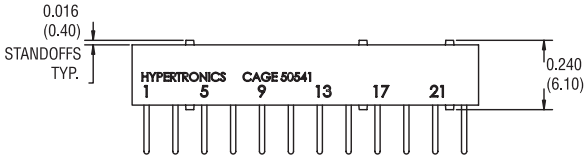
Plug



Mating half of plug and receptacle



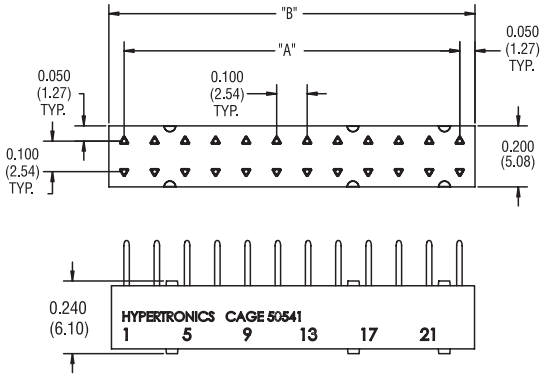
Receptacle



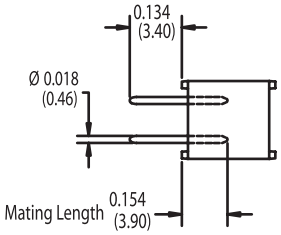
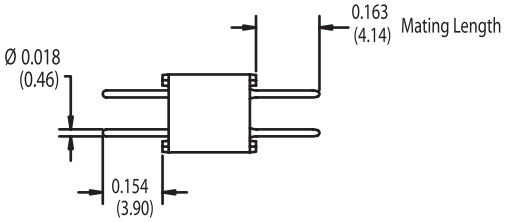
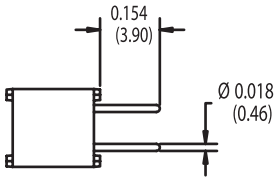
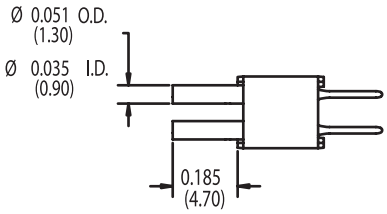
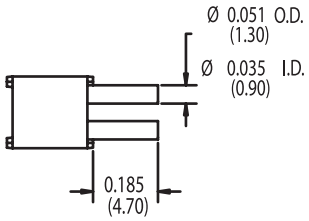
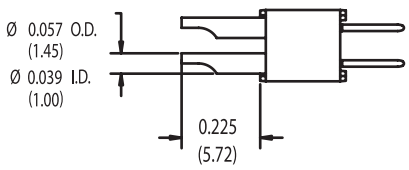
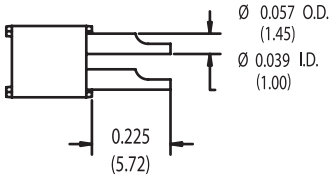
Notes:

1) Dimensions in inches (mm).
2) Standoffs location will vary depending on the number of contact positions.
3) Tolerance: ± .020 (.5)
4) Keying is accomplished by locating alignment pins in different positions.

Pin Carrier Dimensions[1]



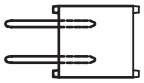
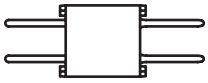
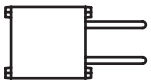
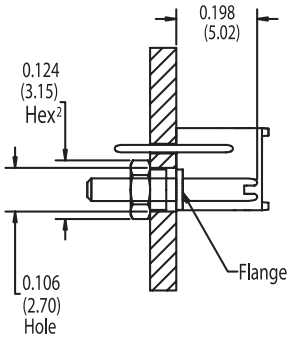
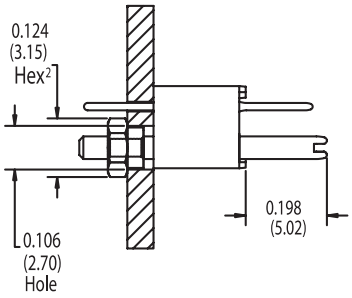
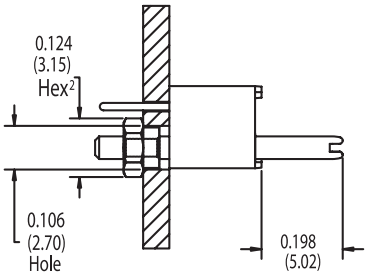
TERMINAL STYLES

Ref.	Pin Carrier	Plugs	Receptacles
D Straight dip solder			
R Crimp accepts 22, 24 and 26 AWG wire stripped back .173 (4.4)			
S Solder cup accepts up to 22 AWG wire stripped back .125 (3.2)			

Notes:

1) Dimensions in inches (mm).
2) All the tails are .015 (.4) long.
3) Crimp contacts will be shipped unmounted.

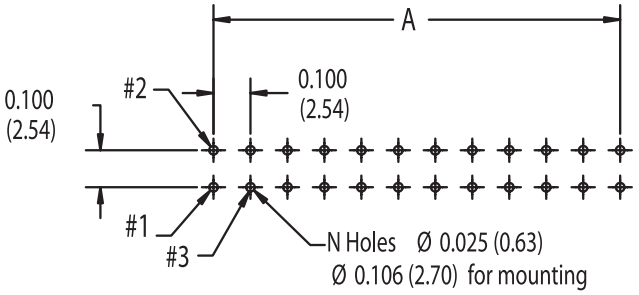
MOUNTING STYLES

Ref.	Pin Carrier	Plugs	Receptacles
00 No mounting hardware			
11			

MOUNTING DIMENSIONS[1]

(Top of Board)

Mother Board Application
Style 00 & 11
(Receptacle)



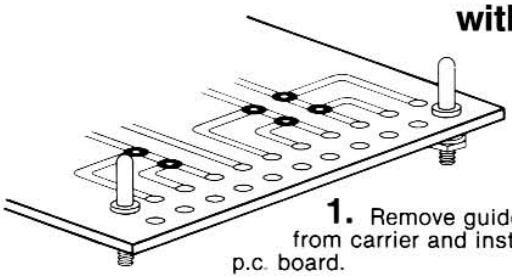
No. of Contacts	22	24	44	46	66	68	90
Dim. A	1.000 (25.40)	1.100 (27.94)	2.100 (53.34)	2.200 (55.88)	3.200 (81.28)	3.300 (83.82)	4.400 (111.76)

Notes:

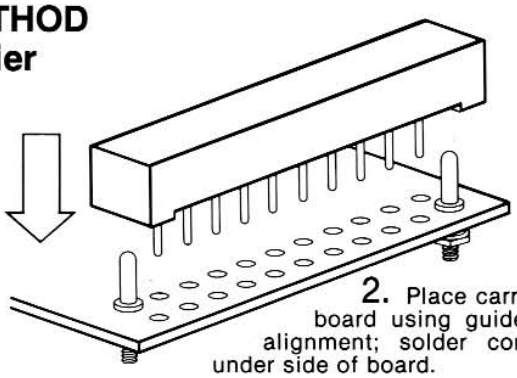
1) Dimensions in inches (mm).

2) 9.5 oz. in [.07 Nm (.68kg cm)] torque

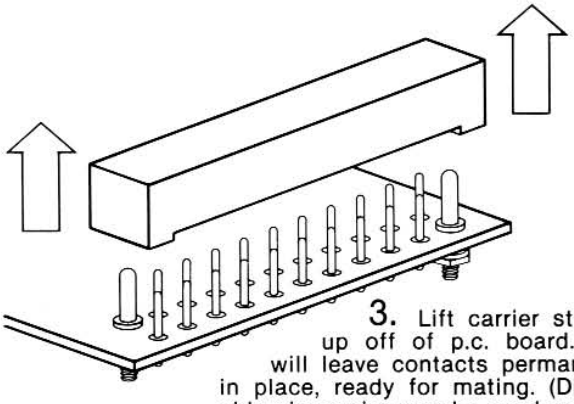
ASSEMBLY METHOD with pin carrier



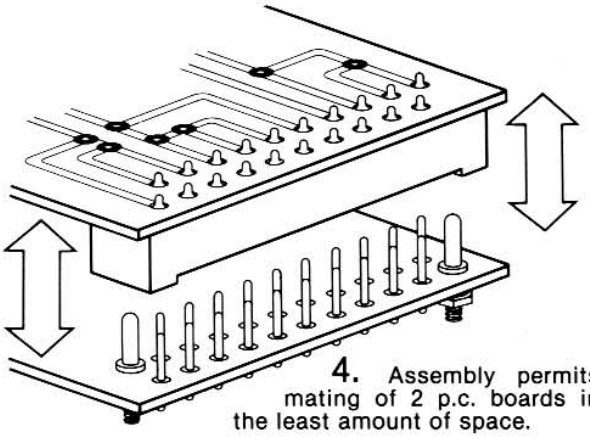
1. Remove guide pins from carrier and install on p.c. board.



2. Place carrier on p.c. board using guide pins for alignment; solder contacts on under side of board.



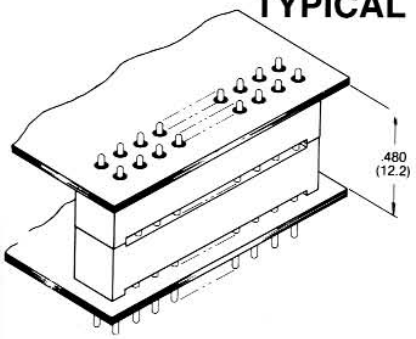
3. Lift carrier straight up off of p.c. board. This will leave contacts permanently in place, ready for mating. (Disposable pin carrier may be used as a pin protector.)



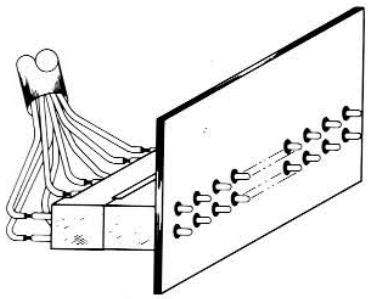
4. Assembly permits mating of 2 p.c. boards in the least amount of space.

Notes:
1) Number of contacts. (special pad configuration required next to mounting holes).
2) See pg. 65 for a description of mounting styles/guides/keys.
3) Dimensions in inches (mm).

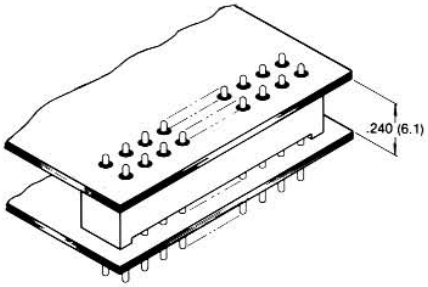
TYPICAL APPLICATIONS



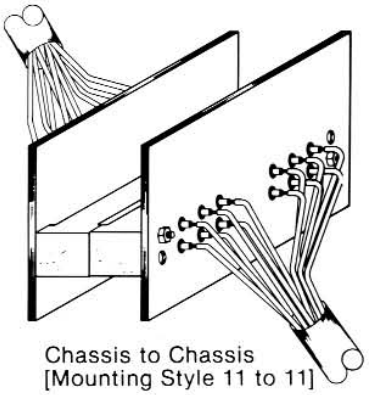
P.C. Board to P. C. Board — Thick Parallel Sandwich for tall board components [Mounting Style 00 to 00]



Cable to P.C. Board [Mounting Style 00 to 00]



P.C. Board to P.C. Board — Thin Parallel Sandwich for maximum density [Mounting Style 00 to 00 (Carrier)]



Chassis to Chassis [Mounting Style 11 to 11]

ORDERING INFORMATION

KGA 22 B P D 11 TH-P2-21-H1-22

see notes

KGA 22 B E D 11 TABH-P1-22-H2-21

Number of Contacts:
Any even number of contact positions up to 90

P = Plug
E = Receptacle
A = Pin Carrier

Terminal Style:
D = Straight solder dip
R = Crimp
S = Solder cup

Guide Hole Locations[1]

Guide Pin Locations[1]

Plating:
TH, TABH, TAH
(see page 64)

Mounting Style[1] = 11
use "00" if hardware is not required

ACCESSORIES	
Crimp Tool	AFM8 or (M22520/2-01)
Positioner	SS1.0045
Insertion Tool	S/MONT1.0045

Notes:

1) Style 11 uses 2 contact position for guide pin. For a mated pair, holes and guides must be complementary (i.e., if position 1 in the plug has a guide pin then, position 1 in the receptacle must have a guide hole, etc.). If omitted, connectors will be shipped fully loaded without guiding hardware.