

### INTRODUCTION:

Adam Tech PH Series .100" Pin Headers are a full range headers in a variety of configurations including Single, Dual and Three rows, Straight or Right Angle in Thru-Hole or SMT mounting. Their close tolerance .025" sq. posts are smoothly finished and taper tipped to eliminate insertion damage to the PCB or mating connector. Adam Tech Pin Headers can be easily cut into exact sizes as required. Options include stacked insulator versions and choice of tin, gold or selective gold plating. This series is compatible with all industry standard .100" pitch pin headers.

### FEATURES:

Single, Dual or Three Row  
Tin, gold or selective gold plating options  
Thru-hole or SMT mounting  
Stacked and Custom length versions available  
Versatile Breakaway design  
Hi Temp Insulator available

### MATING RECEPTACLES:

Mates with all industry standard receptacles accepting a .025" square post on .100" [2.54mm] centerlines

### SPECIFICATIONS:

#### Material:

Insulator: PBT, glass reinforced, rated UL94V-0  
Optional Hi-Temp insulator: Nylon 6T, rated UL94V-0  
Insulator Color: Black  
Contacts: Brass

#### Plating:

U = Gold flash (30u" optional) over nickel underplate  
SG = Gold flash (30u" optional) over nickel underplate on contact area, tin over copper underplate on tails.  
T = Tin over copper underplate overall

#### Electrical:

Operating voltage: 250V AC max.  
Current rating: 3 Amps max  
Contact resistance: 20 mΩ max. initial  
Insulation resistance: 5000 MΩ min.  
Dielectric withstanding voltage: 1000V AC for 1 minute

#### Mechanical:

Insertion force: 2 oz lbs max.  
Withdrawal force: .75 oz lbs min  
Mating durability: 1000 cycles min.

#### Temperature Rating:

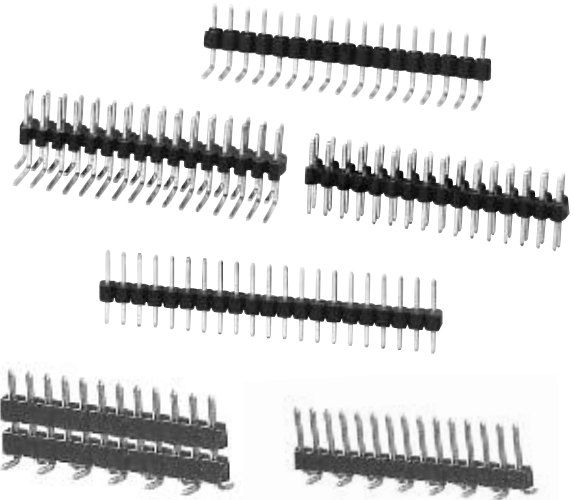
Operating temperature: -40°C to +105°C  
Soldering process temperature:  
Standard insulator: 235°C  
Hi-Temp insulator: 260°C

#### PACKAGING:

Anti-ESD plastic bags

#### SAFETY AGENCY APPROVALS:

UL Recognized & CSA Certified, File no. E224053



### ORDERING INFORMATION

<b>PH1</b>	<b>40</b>	<b>U</b>	<b>A</b>
<b>SERIES INDICATOR</b> <b>PH1</b> = Single Row, Straight <b>PH1RA</b> = Single Row, Right Angle, High Profile <b>PH1RB</b> = Single Row, Right Angle, Low Profile <b>PH2</b> = Dual Row, Straight <b>PH2RA</b> = Dual Row, Right Angle <b>PH3</b> = Three Row, Straight <b>PH3RA</b> = Three Row, Right Angle		<b>MATING/TAIL LENGTH</b> <b>A</b> = Mating Length ("C" dim.) = .235" Solder Tail ("D" dim.) = .120" <b>B</b> = Mating Length ("C" dim.) = .318" Solder Tail Length ("D" dim.) = .120" Special lengths available contact factory	
<b>POSITIONS</b> <b>PH1:</b> 1 thru 40 <b>PH2:</b> 2 thru 80 <b>PH3:</b> 3 thru 120		<b>PLATING</b> <b>U</b> = Gold flash overall <b>V</b> = 15 μin gold on mating area 100 μin tin on solder tail <b>W</b> = 30 μin gold on mating area 100 μin tin on solder tail <b>T</b> = 100 μin tin overall <b>SG</b> = Gold flash on mating area 100 μin tin lead on solder tail	

#### OPTIONS:

Add designator(s) to end of part number

**SMT** = Surface mount leads Dual row with Hi-Temp insulator

**SMT-A** = Surface mount leads Type A with Hi-Temp insulator

**SMT-B** = Surface mount leads Type B with Hi-Temp insulator

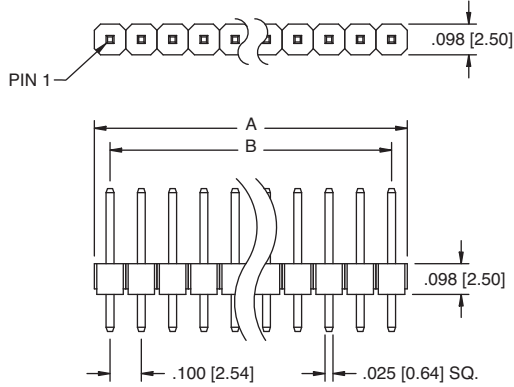
**HT** = Hi-Temp insulator for Hi-Temp soldering processes up to 260°C (Add this option for thru-hole products only.)

All SMT products are manufactured with Hi-Temp insulators)

**L** = Low profile 1.50 mm insulator thickness

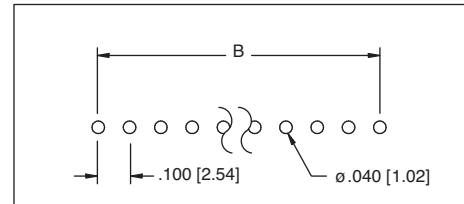
A = .100 [2.54] X No. of Positions.  
B = .100 [2.54] X No. of Spaces.

### PH1 SINGLE ROW



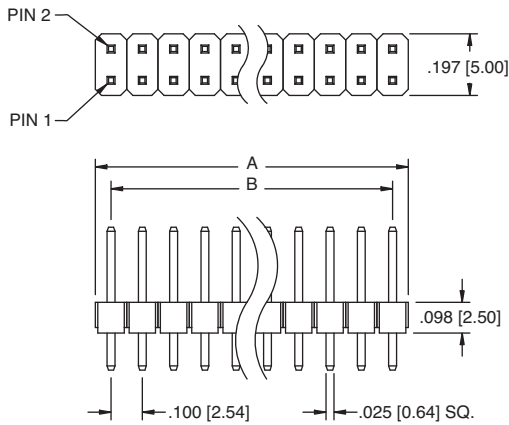
PH1-16-UA

#### Recommended PCB Layout



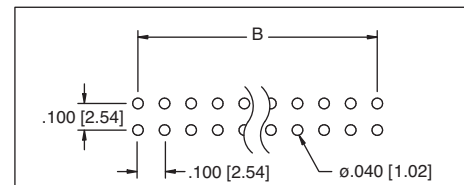
A = .100 [2.54] X No. of Positions per row.  
B = .100 [2.54] X No. of Spaces.

### PH2 DUAL ROW



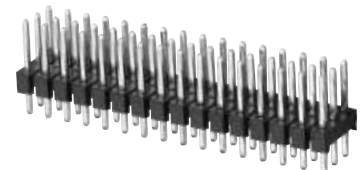
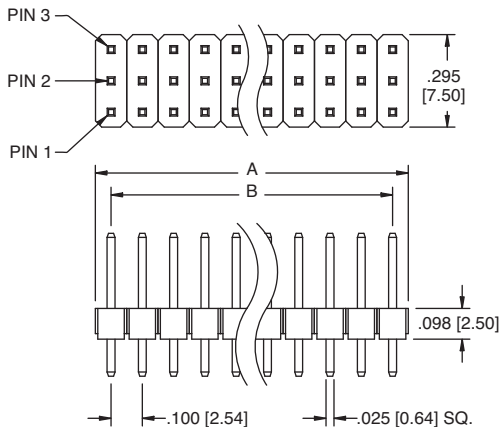
PH2-32-UA

#### Recommended PCB Layout



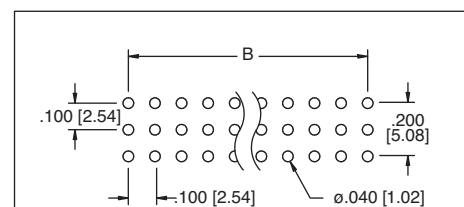
A = .100 [2.54] X No. of Positions per row.  
B = .100 [2.54] X No. of Spaces.

### PH3 TRIPLE ROW



PH3-48-UA

#### Recommended PCB Layout



PIN 1

A = .100 [2.54] X No. of Positions.  
B = .100 [2.54] X No. of Spaces.

**PH1RB**  
SINGLE ROW

**PH1RB-16-UA**

**Recommended PCB Layout**

PIN 2

PIN 1

A = .100 [2.54] X No. of Positions per row.  
B = .100 [2.54] X No. of Spaces.

**PH2RA**  
DUAL ROW

**PH2RA-32-UA**

**Recommended PCB Layout**

PIN 3

PIN 2

PIN 1

A = .100 [2.54] X No. of Positions per row.  
B = .100 [2.54] X No. of Spaces.

**PH3RA**  
TRIPLE ROW

**PH3RA-48-UA**

**Recommended PCB Layout**

<p>PIN 1 TYPE B</p> <p>PIN 1 TYPE A</p> <p>A = .100 [2.54] X No. of Positions. B = .100 [2.54] X No. of Spaces.</p> <p>.098 [2.50]</p> <p>.100 [2.54]</p> <p>.025 [0.64] SQ</p>	<p>A = .100 [2.54] X No. of Positions. B = .100 [2.54] X No. of Spaces.</p> <p>.130 [3.30]</p> <p>.197 [5.00]</p> <p>C</p>	<p><b>PH1</b> <b>SMT-SINGLE ROW</b></p> <p><b>PH1-15-UA-SMT-B</b></p> <p><b>Recommended PCB Layout</b></p> <p><b>SMT-A</b>      <b>SMT-B</b></p>
<p>PIN 2</p> <p>PIN 1</p> <p>A = .100 [2.54] X No. of Positions per row. B = .100 [2.54] X No. of Spaces.</p> <p>.197 [5.00]</p> <p>.100 [2.54]</p> <p>.025 [0.64] SQ</p>	<p>A = .100 [2.54] X No. of Positions per row. B = .100 [2.54] X No. of Spaces.</p> <p>.100 [2.54]</p> <p>.130 [3.30]</p> <p>.295 [7.50]</p> <p>C</p>	<p><b>PH2</b> <b>SMT-DUAL ROW</b></p> <p><b>PH2-26-UA-SMT</b></p> <p><b>Recommended PCB Layout</b></p>
<p>PIN 1</p> <p>A = .100 [2.54] X No. of Positions. B = .100 [2.54] X No. of Spaces.</p> <p>.098 [2.50]</p> <p>.180 [4.57]</p> <p>.100 [2.54]</p>	<p>A = .100 [2.54] X No. of Positions. B = .100 [2.54] X No. of Spaces.</p> <p>.154 [3.90]</p> <p>C</p>	<p><b>PH1RB</b> <b>SMT-SINGLE ROW</b></p> <p><b>PH1RB-10-UA-SMT</b></p> <p><b>Recommended PCB Layout</b></p>
<p>PIN 2</p> <p>PIN 1</p> <p>A = .100 [2.54] X No. of Positions per row. B = .100 [2.54] X No. of Spaces.</p> <p>.197 [5.00]</p> <p>.180 [4.57]</p> <p>.100 [2.54]</p>	<p>A = .100 [2.54] X No. of Positions per row. B = .100 [2.54] X No. of Spaces.</p> <p>.100 [2.54]</p> <p>C</p>	<p><b>PH2RA</b> <b>SMT-DUAL ROW</b></p> <p><b>PH2-20-UA-SMT</b></p> <p><b>Recommended PCB Layout</b></p>