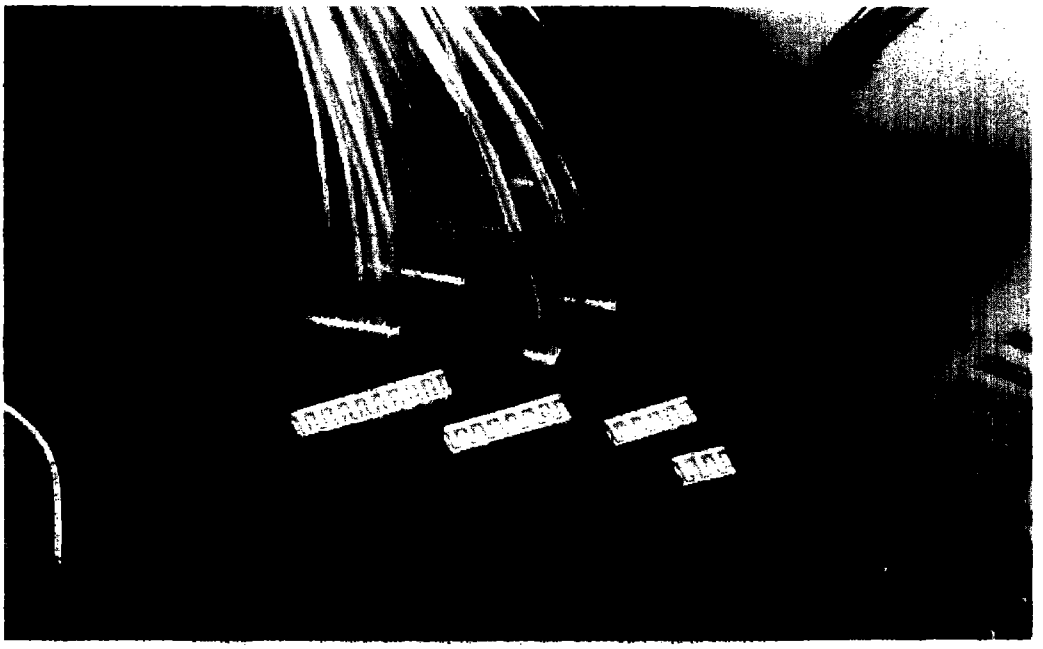
# Wire to Board Connectors
# Low Profile Mini AMP-IN* Headers



**Low Profile Mini AMP-IN Headers are designed to facilitate wire connection to PC board.**
**The contact is crimped or mass terminated at first, then inserted to the PC board hole and soldered.**
**Feature of the contact is that it makes solder process on all PC boards very easy and quick.**
**When inserted to PC board, contacts are held firmly in place until soldering is completed, and a good solder joint can be provided.**
**Low Profile Mini AMP-IN Headrs are available in two varieties —— crimp type and MT type.**

**Performance Data**
UL recognized
File No.E 28476
**Voltage rating:**
Contact pitch and voltage are determind by reguirments of equipment using the header.
**Operating temperature:**
105°C max. (Nylon)
140°C max. (PBTP)
**CSA certified**
Report No.LR38721
**Voltage rating**: 250VAC
**Current rating**: 4A max.

**Crimp Type Header**
This header is of design for miniature size with 5.3mm profile, 3.5mm width and 2 and 2.5mm centerlines. Header housings come in 2 thru 10, 12 and 15 positions for 2mm centerlines, and 2~15 and 20 positions for 2.5mm centerlines.
Thereare partitions provided at the top of the housing to prevent any short circuit between adjacent contacts or wires.
The housing is of housing-lance design and insures positive retention of the contacts in it. The bifurcated contact is tapered and to facilitate easy insertion into the board hole. The bifurcated section are of cantilever spring for self-retaining in the hole.
Compatible PC board thickness is 1.2 thru 1.6 mm, and hole diameter is 1.0 thru 0.8mm.
The contact accommodates wire size ranging from #30 thru 22(0.05~0.35mm$^2$) with insulation diameter ranging 1.1 thru 1.5mm.
The contact can be applied to wires of AWG# 26 and larger sizes by a high speed automatic lead making machine.

**MT Type Header**
As with the above-mentioned crimp type header, this header is of design for miniature size with 5.0 mm profile, 4.2mm width (for 2mm centerlines) and 4.5mm width (for 2.5mm centerlines).
The MT Type can be mass terminated to wires speedily without the need of wire stripping by AMP's unique insulation displacement technique.
Contacts are pre-loaded in the housing and the soldering posts are self-retaining feature in the PC board hole to facilitate soldering operations.
Compatible PC board thickness is 1.2 thru 1.6mm, and hole diameter is 0.85 mm by punching hole fabrication.
The contact on 2.0mm centerline accommodates wire sizes ranging from # 28 thru 26 (0.08~0.15 mm$^2$) with insulation diameter ranging 0.88 thru 1.1mm, and the contact on 2.5mm centerline accommodates wire sizes ranging from # 26 thru 24 (0.12~0.22 mm$^2$) with insulation diameter ranging 0.98thru 1.56mm.
Header housings come in 2 thru 12 positions for 2 mm centerlines, 2 thru 15 positions for 2.5mm centerlines.
For this MT Type header, too, there are a range of mass termination application tooling best suited for every specific requirement.

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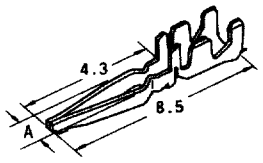
# Low Profile Mini AMP-IN Headers/Crimp Type

## Contacts

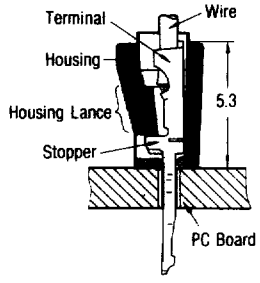



| Wire Size AWG (mm²) | Wire Dns. Dia. | Material/ Finish | PC Board Hole Dia. | Dimension A | Part No. S.T. | Part No. L.P. | Hand Tool Part No. |
|---|---|---|---|---|---|---|---|
| 30-26 (0.05~0.15) | 1.1~1.4 | Brass/ Pre-Tin | $0.8^{\pm 0.1}$ | 0.95 | **172781-1** | **172797-1** | 755405-1 |
| | | | $1.0^{+0.05}_{-0.1}$ | 1.2 | **172781-2** | **172797-2** | |
| 26-22 (0.12~0.35) | 1.4~1.5 | | $0.8^{\pm 0.1}$ | 0.95 | **172782-1** | **172798-1** | |
| | | | $1.0^{+0.05}_{-0.1}$ | 1.2 | **172782-2** | **172798-2** | |

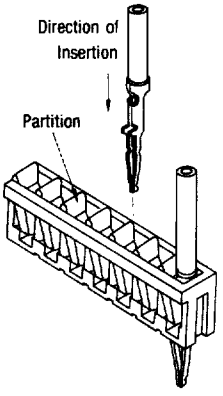
Note: Product Spec.: 108-5163 Application Spec.: 114-5062 Instruction Sheet: IS-206J, (For #755405-1)
Extraction Tool Part No.: 753760-1 (IS-207J)

## Header Housing

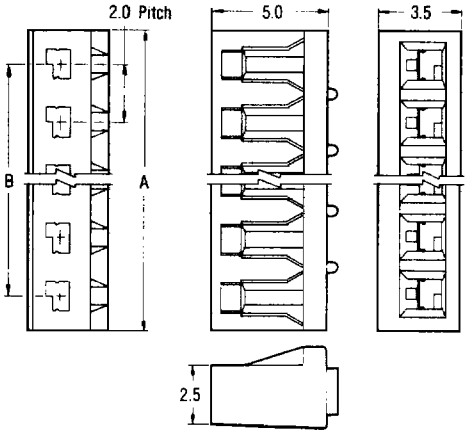
**Material:**
UL94V-0 rated, 66 Nylon
(Natural color)
**Instruction sheet:** IS-208J

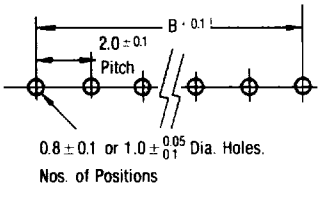



**Cross View of PC Board Mount**



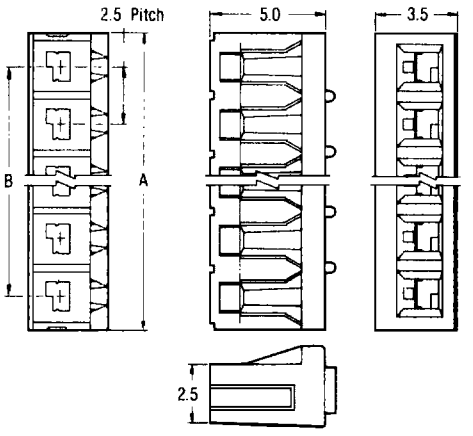

**2mm Pitch**

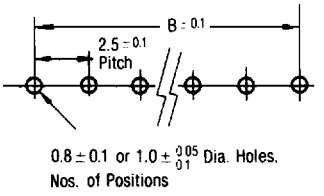



**PC Board Layout**
Recommend PC Board thickness — 1.2~1.6mm

**2.5mm Pitch**




**PC Board Layout**
Recommended PC Board thickness — 1.2~1.6mm

| No. of Pos. | 2mm Pitch Housing Dimensions A | B | Part No. | 2.5mm Pitch Housing Dimensions A | B | Part No. |
|---|---|---|---|---|---|---|
| 2 | 4.8 | 2 | **172890-2** | 6.0 | 2.5 | **172520-2** |
| 3 | 6.8 | 4 | **172890-3** | 8.5 | 5 | **172520-3** |
| 4 | 8.8 | 6 | **172890-4** | 11.0 | 7.5 | **172520-4** |
| 5 | 10.8 | 8 | **172890-5** | 13.5 | 10 | **172520-5** |
| 6 | 12.8 | 10 | **172890-6** | 16.0 | 12.5 | **172520-6** |
| 7 | 14.8 | 12 | **172890-7** | 18.5 | 15 | **172520-7** |
| 8 | 16.8 | 14 | **172890-8** | 21.0 | 17.5 | **172520-8** |
| 9 | 18.8 | 16 | **172890-9** | 23.5 | 20 | **172520-9** |
| 10 | 20.8 | 18 | **1-172890-0** | 26.0 | 22.5 | **1-172520-0** |
| 11 | — | — | — | 28.5 | 25.0 | **1-172520-1** |
| 12 | 24.8 | 22 | **1-172890-2** | 31.0 | 27.5 | **1-172520-2** |
| 13 | — | — | — | 33.5 | 30.0 | **1-172520-3** |
| 14 | — | — | — | 36.0 | 32.5 | **1-172520-4** |
| 15 | 30.8 | 28 | **1-172890-5** | 38.5 | 35 | **1-172520-5** |
| 20 | — | — | — | 51.0 | 47.5 | **2-172520-0** |

# Wire to Board Connectors
# Low Profile Mini AMP-IN Headers/MT Type

## 2.0mm Pitch

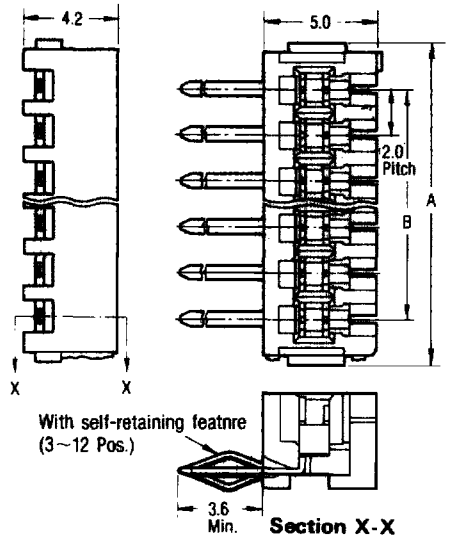
**Material & Finish:**
Housing——
UL94V-0 rated, Glass-filled P.B.T., Natural color
Contact—Pre-Tin plated Phos. Brz. (0.25mm thick)

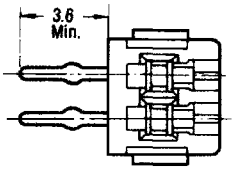
**Wire Size:**
**AWG#28-26**
**(0.08~0.15mm²)**

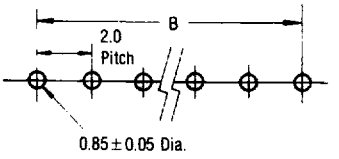
**Insulation Diameter:**
0.88-1.1mm

**Product Spec:** 108-5192

**Application Spec:**
114-5101




**PC Board Layout**
Recommended PC Board thickness——1.2~1.6mm

## 2.5mm Pitch

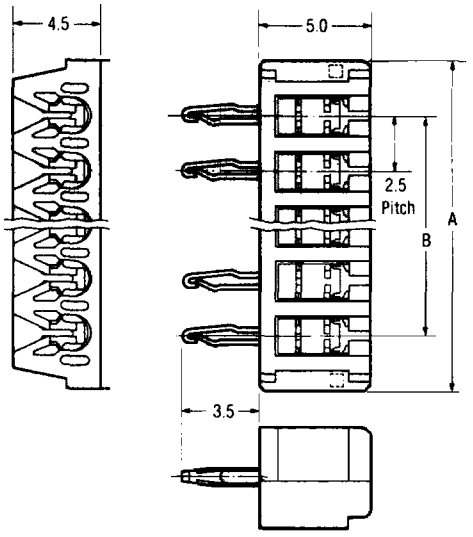
**Material & Finish:**
Housing——
UL94V-0 rated, 66 Nylon Natural color
Contact—Pre-Tin plated Phos. Brz. (0.3mm thick)

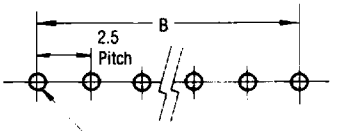
**Wire Size:**
**AWG#26-24**
**(0.12~0.22mm²)**

**Insulation Diameter:**
0.98-1.56mm

**Product Spec:** 108-5266

**Application Spec:**
114-5089



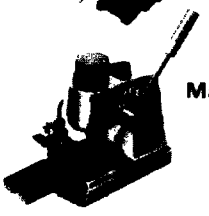

Punched hole dia. 0.85±0.05
Drilled hole dia. 0.9±0.05

**PC Board Layout**
Recommended PC Board thickness——0.8~1.6mm

## Application Tooling For MT Type

**AMP Mini Press**

**Pneumatic**



**Manual**

| No. of Pos. | 2.0mm Pitch Dimensions A | 2.0mm Pitch Dimensions B | 2.0mm Pitch Part No. | 2.5mm Pitch Dimensions A | 2.5mm Pitch Dimensions B | 2.5mm Pitch Part No. |
|---|---|---|---|---|---|---|
| 2 | 6.0 | 2.0 | **173039-2** | 7.5 | 2.5 | **175953-2** |
| 3 | 8.0 | 4.0 | **173039-3** | 10.0 | 5.0 | **175953-3** |
| 4 | 10.0 | 6.0 | **173039-4** | 12.5 | 7.5 | **175953-4** |
| 5 | 12.0 | 8.0 | **173039-5** | 15.0 | 10.0 | **175953-5** |
| 6 | 14.0 | 10.0 | **173039-6** | 17.5 | 12.5 | **175953-6** |
| 7 | 16.0 | 12.0 | **173039-7** | 20.0 | 15.0 | **175953-7** |
| 8 | 18.0 | 14.0 | **173039-8** | 22.5 | 17.5 | **175953-8** |
| 9 | 20.0 | 16.0 | **173039-9** | 25.0 | 20.0 | **175953-9** |
| 10 | 22.0 | 18.0 | **1-173039-0** | 27.5 | 22.5 | **1-175953-0** |
| 11 | 24.0 | 20.0 | **1-173039-1** | 30.0 | 25.0 | **1-175953-1** |
| 12 | 26.0 | 22.0 | **1-173039-2** | 32.5 | 27.5 | **1-175953-2** |
| 13 | — | — | — | 35.0 | 30.0 | **1-175953-3** |
| 14 | — | — | — | 37.5 | 32.5 | **1-175953-4** |
| 15 | — | — | — | 40.0 | 35.0 | **1-175953-5** |