

## INTRODUCTION



## Picoflex® SMT Latched Header 1.27mm (.050") Pitch

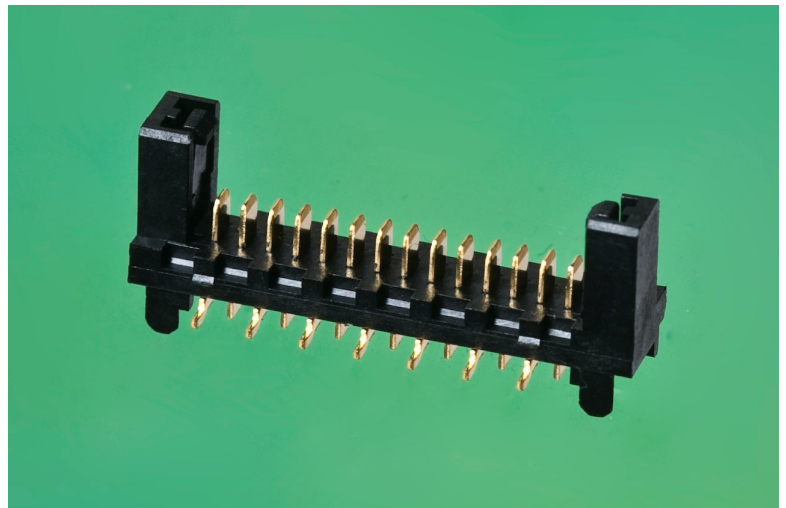
*The new Picoflex® SMT Header with positive retention latches to provide a robust wire-to-board connection with increased retention force for rugged applications and high-vibration environments*

## 90816 Vertical SMT Header with Latches

Picoflex connectors are suitable for many high-density applications where space is at a premium and power and signal are required. The positive-latch system of this new Picoflex SMT Header meets customer requirements for a wire-to-board connection with a greater retention force than can be achieved with the standard Picoflex SMT header. The latches increase the retention force between the header and receptacle by at least 50% compared to the Molex standard friction-lock header, series 90814.

A typical customer requirement for the latched header would exist in an application where part of a harness protrudes from the assembly. Without the positive retention latches, tension on the harness, especially during the final assembly process, can disconnect the header and receptacle. The latches also make this an ideal connector for compact, wire-to-board connections in high-vibration environments in the industrial and automotive markets.

The Picoflex surface-mount latched header features a high-profile polarising peg which avoids mis-mating of the header and receptacle and also acts as a lead-in to aid assembly. The header is backward compatible and mates with existing Picoflex receptacles, series 90327.



## MARKETS AND APPLICATIONS

- Industrial
  - Solar
  - Weighing Systems
  - Heating Systems
  - Security Devices
  - Access Controls
  - Industrial Lighting
  - Advertising Displays
  - Power Supplies
- Automotive
  - Car Stereo Systems
  - Navigation Systems
  - In Car Entertainment
  - Dashboard Applications
  - Air-Conditioning
- Medical
  - Portable Heart Monitor
  - Patient Monitor
  - Blood Analyser
  - Testers
- Multimedia
  - CD Players
  - LCD Projector
  - Satellite Receivers
  - Televisions and Set Top Boxes
- Others
  - Office Equipment
  - Vending machines
  - Smart Card Readers
  - Home Appliances
- Used across all markets where signal and power connections are required



Solar Panels



Weighing Systems



Automotive Applications



Medical Applications



Office Equipment

## FEATURES AND BENEFITS



## Picoflex® SMT Latched Header 1.27mm (.050") Pitch

### 90816 Vertical SMT Header with Latches

- Positive latches increase the retention force between the header and receptacle by at least 50% than is specified for the standard friction-lock series 90814
- SMT solder tails so that header can be soldered directly onto the PCB
- Polarising peg avoids mis-mating of the header and receptacle and acts as a lead-in to aid assembly
- Gold plating option provides easier mating, higher mating cycles and is recommended for parts running at consistently high temperatures and in low-current applications
- Polyphthalamide (PPA) housing material can tolerate RoHS lead-free reflow solder up to +260°C
- Optional PCB pegs polarise the header to the board
- Standard interface design ensures the header is backward compatible and mates with 90327 receptacles

## SPECIFICATIONS

### Reference Information

Packaging: Tube or Blister Pack  
UL file No.: N/A  
CSA File No.: N/A  
Mates with: Series 90327  
Designed In: Millimeters

### Electrical

Voltage (max.): 250V  
Current (max.): 1.2A  
Contact Resistance: 15 milliohms max.  
Dielectric Withstanding Voltage: 750V rms  
Insulation Resistance: 1000 Megohms min.

### Physical

Housing: Black 30% glass filled polyphthalamide  
Contact: Brass  
Plating: See Table  
Contact Area - Tin (Sn) or Gold (Au)  
Solder Tail Area - Tin (Sn) or Gold (Au)  
Underplating - Nickel (Ni)  
PCB Thickness:  $1.60 \pm 0.14\text{mm}$   
( $0.063 \pm 0.005\text{"}\text{'}$ )  
Operating temperature: -40 up to +105°C

### Mechanical

Contact Insertion Force: 1.7N max. on Tin (Sn)  
1.1N max on Gold (Au)  
Contact Retention to Housing: 7N  
Insertion Force to PCB: N/A  
Mating Force: 1.7N max. on Tin (Sn)  
1.1N max on Gold (Au)  
Durability (min.): 5 cycles  
(using extraction tool)

## ORDERING INFORMATION

|              | Tube      |           |          | Reel      |           |          | Tube      |           |          | Reel      |           |          |
|--------------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|
| Circuit Size | Plating 1 | Plating 2 | PCB Pegs | Plating 1 | Plating 2 | PCB Pegs | Plating 1 | Plating 2 | PCB Pegs | Plating 1 | Plating 2 | PCB Pegs |
| 4*           | 908160004 | 908163004 | Yes      | n/a       | n/a       |          | 908160304 | 908163304 | No       | n/a       | n/a       |          |
| 6            | 908160006 | 908163006 | Yes      | 908160206 | 908163206 | Yes      | 908160306 | 908163306 | No       | 908160506 | 908163506 | No       |
| 8            | 908160008 | 908163008 | Yes      | 908160208 | 908163208 | Yes      | 908160308 | 908163308 | No       | 908160508 | 908163508 | No       |
| 10           | 908160010 | 908163010 | Yes      | 908160210 | 908163210 | Yes      | 908160310 | 908163310 | No       | 908160510 | 908163510 | No       |
| 12           | 908160012 | 908163012 | Yes      | 908160212 | 908163212 | Yes      | 908160312 | 908163312 | No       | 908160512 | 908163512 | No       |
| 14           | 908160014 | 908163014 | Yes      | 908160214 | 908163214 | Yes      | 908160314 | 908163314 | No       | 908160514 | 908163514 | No       |
| 16           | 908160016 | 908163016 | Yes      | 908160216 | 908163216 | Yes      | 908160316 | 908163316 | No       | 908160516 | 908163516 | No       |
| 18           | 908160018 | 908163018 | Yes      | 908160218 | 908163218 | Yes      | 908160318 | 908163318 | No       | 908160518 | 908163518 | No       |
| 20           | 908160020 | 908163020 | Yes      | 908160220 | 908163220 | Yes      | 908160320 | 908163320 | No       | 908160520 | 908163520 | No       |
| 22           | 908160022 | 908163022 | Yes      | 908160222 | 908163222 | Yes      | 908160322 | 908163322 | No       | 908160522 | 908163522 | No       |
| 24           | 908160024 | 908163024 | Yes      | 908160224 | 908163224 | Yes      | 908160324 | 908163324 | No       | 908160524 | 908163524 | No       |
| 26           | 908160026 | 908163026 | Yes      | 908160226 | 908163226 | Yes      | 908160326 | 908163326 | No       | 908160526 | 908163526 | No       |

\* 4-Circuit only available in a tube

[www.molex.com/product/ribbon/picoflex.html](http://www.molex.com/product/ribbon/picoflex.html)

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