

## INTRODUCTION



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

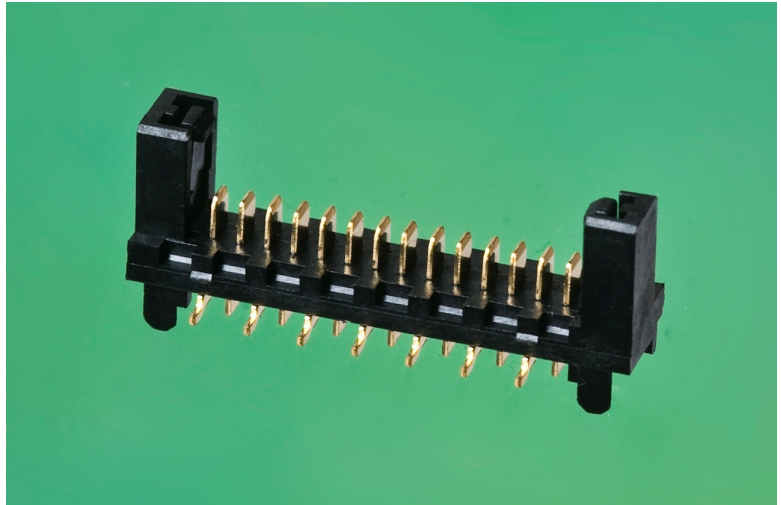
*The new Picoflex® SMT Header with positive retention latches to provide a robust wire-to-board connection with increased retention force for rugged applications and high-vibration environments*

## 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

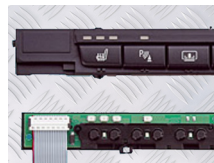
- Industrial
  - Solar
  - Weighing Systems
  - Heating Systems
  - Security Devices
  - Access Controls
  - Industrial Lighting
  - Advertising Displays
  - Power Supplies
- Automotive
  - Car Stereo Systems
  - Navigation Systems
  - In Car Entertainment
  - Dashboard Applications
  - Air-Conditioning
- 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 ± 0.14mm  
 (0.063 ± 0.005")  
 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

Circuit Size	Tube			Reel			Tube			Reel		
	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)

**America**  
 Lisle Illinois 60532 U.S.A.  
 +1-800-78MOLEX  
 amerinfo@molex.com

**Asia Pacific North**  
 Yamato, Kanagawa, Japan  
 +84-46-265-2325  
 apninfo@molex.com

**Asia Pacific South**  
 Jurong, Singapore  
 +65-6268-6868  
 apinfo@molex.com

**Europe**  
 Walldorf, Germany  
 +49 6227-3091-0  
 mxgermany@molex.com

**Corporate Headquarters**  
 2222 Wellington Ct.  
 Lisle, IL 60532 U.S.A.  
 +630-969-4550