

# Picoflex®

1.27mm IDT Connector System  
for Ribbon Cable Applications



**molex®**

# Picoflex®

## MARKETS & APPLICATIONS

The versatile Picoflex® IDT connector system is ideal for a broad range of applications across all market segments:

### 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 & Set Top Boxes

### Others

- Office Equipment
- Vending Machines
- Smart Card Readers
- Washing Machines, Microwaves, etc.



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## INTRODUCTION

The Molex 1.27mm Picoflex® IDT connector system is a versatile, highly reliable connector system for high-density power and signal ribbon cable applications, where space & real estate is at a premium. Due to the compact size and low profile the Picoflex® IDT system is ideal for a broad range of applications in the automotive, industrial, medical and consumer electronic markets. Its highly reliable terminal design, locking and cable strain relief features guarantee secure electrical connection in applications with high vibrations and intense shock requirements.

The Picoflex® IDT system comprises PCB headers, cable connectors and standard ribbon cable assemblies in various lengths and circuit sizes.

Parts are delivered in a variety of packaging formats to suit individual customer requirements.

## PCB HEADERS

The Picoflex® family offers SMT and SMC PCB headers in high temperature nylon and Polyphthalamide. All headers are polarized both to the PCB and to the female connector. The staggered solder tails with 1.27mm pitch have 2.54mm distance between both solder tail rows, which substantially reduces the risk of solder bridging.

Seven header options are available:

- 90816 latched SMT header is molded with Polyphthalamide, a UL94 HB rated material. Its positive latches give increased retention between the header and the cable connector. It can be used in a RoHS lead-free process up to 260°C and is supplied with tin or select gold plating and either tube or tape and reel blister packaging.
- 90325 low-profile through hole header with tin or select gold plating and 94 V-0 flammability rating, supplied in bag or tube packaging
- 90779 low-profile SMC header has the same features as series 90325, but is molded with a high temperature nylon material with 94 V-0 flammability rating
- 90814 SMT standard (wave solder process) and low-profile (reflow process) header with tin or select gold plating featuring a high temperature nylon material with 94 V-0 flammability rating and is supplied either in tube or tape and reel blister packaging
- 90800 right-angle low-profile header with 94 V-0 flammability rating is delivered with kinked solder tails in tube packaging
- 91714 right-angle low-profile SMC header has the same features as series 90800, but is molded with a high temperature nylon material with 94 V-0 flammability rating
- 91330 bottom-entry low-profile SMT header in high temperature nylon material with 94 V-0 flammability rating can be used in a RoHS lead-free process up to 260°C. It creates a double-sided board effect with a single side SMT process which reduces assembly costs and is supplied in tin plating with tape and reel blister packaging

## CABLE CONNECTORS

The one-piece molded body with preloaded IDT terminals and cable guide removes the need for a separate upper housing, terminals or an insertion tool which significantly reduces applied costs.

The cable entry window on the IDT connectors has a scalloped profile which ensures precise positioning of the 1.27mm 26 to 28 AWG standard ribbon cable. The connector is terminated by the IDT terminal being pushed up into the housing, displacing the cable jacket as well as positioning itself in the top of the housing to

give an effective strain relief. Four contact points per circuit and the integral strain relief ensure excellent electrical contact.

Three optional cable connectors are available:

- 90327 IDT connector with 94 V-0 flammability rating mates with all PCB header versions, supplied with tin or select gold plating
- 90584 board-in connector for permanent board connections. The staggered tail footprint is compatible with the footprint of the standard male header, 94 V-0 flammability rating
- 91577 board-in connector for permanent board connections. The staggered tail footprint is compatible with the footprint of the standard male header, the pin layout of the 91577 layout is the opposite to 90584, giving more options to the customer, 94 V-0 flammability rating

## CABLE ASSEMBLIES

Standard cable assemblies are available from 6cm – 120cm.

Four standard options of cable assemblies are available:

- 92315 cable assembly featuring two 90327 connectors in C-style (page xx)
- 92317 cable assembly featuring two 90327 connectors in Z-style (page xx)
- 92318 cable assembly either featuring one 90327 connector and one 90584 board-in connector in Z-style (page xx)
- 92316 cable assembly featuring one 90327 receptacle and one 90584 board-in connector in C-style (page xx)

A full range of non-standard options, including shorter cable lengths, can be supplied where commercially viable. Please contact your Molex sales office for more information.

## TOOLING

The Picoflex® IDT connectors are designed to minimise assembly cost and are complemented by an extensive range of application tools, from hand-tools for field repair and prototyping to fully automatic, state of the art, computer controlled harness making machines. Depending on the level of tooling chosen, machines are capable of manufacturing double-ended electrical and continuity tested cables. Daisy chaining is also possible.

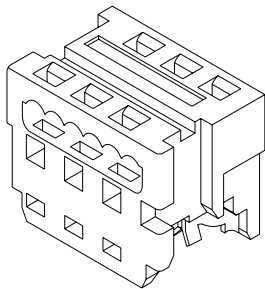
## PCB ASSEMBLIES

Molex offers customized PCB assemblies. Picoflex® is only one product family out of a variety of connector families which can be assembled on demand. Please contact your Molex sales office for more information.

# 1.27mm (.050") Pitch Picoflex® PF-50 Connector

**90327**

**Low Profile, IDT**



## Features and Benefits

- 1-piece housing assures precise positioning of cable
- Molded-in polarization
- 4 points of contact with ribbon cable
- Preloaded contacts
- Accepts 28 or 26 AWG (7 strand) ribbon cable
- Tape option for high-speed termination, contact Molex for part numbers

## Reference Information

Product Specification: PS-99020-0011

Packaging: Bag (tape optional)

Tooling Information: See end of section

UL File No.: E29179

CSA File No.: LR19980-181

Mates With: 90816, 90325, 90779, 90800, 90814, 91330 and 91714

Use Molex Cable: 6800, 8863 and 40158

Designed In: Millimeters

## Electrical

Voltage: 250V

Current: 1.2A

Contact Resistance: 15 milliohms max.

Dielectric Withstanding Voltage: 750V rms

Insulation Resistance: 1000 Megohms min.

## Mechanical

Mating Force: Tin — 1.7N; Gold — 1.1N

Unmating Force: Tin — 0.25N; Gold — 0.25N

Durability: Tin — 30 cycles max.

Gold — 100 cycles max. (using extraction tool)

## Physical

Housing: White polyester, UL 94V-0

Contact: Phosphor Bronze Alloy

Plating: See Table

Cable Accommodation: 26 and 28 AWG stranded

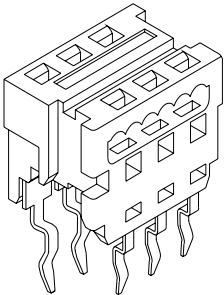
| Circuits | Order No.            |                           |
|----------|----------------------|---------------------------|
|          | Tin 2-4µm (80-160µ") | Select Gold 0.76µm (30µ") |
| 4        | 90327-0304           | 90327-3304                |
| 6        | 90327-0306           | 90327-3306                |
| 8        | 90327-0308           | 90327-3308                |
| 10       | 90327-0310           | 90327-3310                |
| 12       | 90327-0312           | 90327-3312                |
| 14       | 90327-0314           | 90327-3314                |

| Circuits | Order No.            |                           |
|----------|----------------------|---------------------------|
|          | Tin 2-4µm (80-160µ") | Select Gold 0.76µm (30µ") |
| 16       | 90327-0316           | 90327-3316                |
| 18       | 90327-0318           | 90327-3318                |
| 20       | 90327-0320           | 90327-3320                |
| 22       | 90327-0322           | 90327-3322                |
| 24       | 90327-0324           | 90327-3324                |
| 26       | 90327-0326           | 90327-3326                |

# 1.27mm (.050") Pitch Picoflex® PF-50 Connector

**90584**

**Low Profile, IDT  
Board-In**



## Features and Benefits

- For permanent wire-to-board connections
- Kinked solder tails for board retention during solder process
- Fits same board layout pattern as male header
- Height from board when soldered and terminated only 6.40mm (.252")
- 2 points of contact in IDT section
- Accepts 26 to 28 AWG, 7 strands, ribbon cable

## Reference Information

Product Specification: PS-99020-0011

Packaging: Tube (2 options)

Tooling Information: See end of section

Designed In: Millimeters

## Electrical

Voltage: 250V

Current: 1.2A

Contact Resistance: 15 milliohms max.

Dielectric Withstanding Voltage: 750V

Insulation Resistance: 1000 Megohms min.

## Physical

Housing: White polyester, UL 94V-0

Contact: Phosphor Bronze Alloy

Plating: 2-4µm (80-160µ") Tin over Nickel

PCB Thickness: 1.60mm ± 0.20

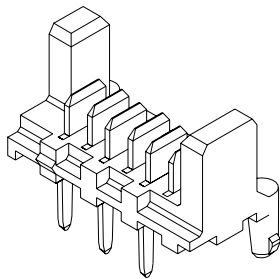
| Circuits | Order No.       |              |
|----------|-----------------|--------------|
|          | Individual Tube | Stacked Tube |
| 4        | 90584-1304      | 90584-2304   |
| 6        | 90584-1306      | 90584-2306   |
| 8        | 90584-1308      | 90584-2308   |
| 10       | 90584-1310      | 90584-2310   |
| 12       | 90584-1312      | 90584-2312   |
| 14       | 90584-1314      | 90584-2314   |

| Circuits | Order No.       |              |
|----------|-----------------|--------------|
|          | Individual Tube | Stacked Tube |
| 16       | 90584-1316      | 90584-2316   |
| 18       | 90584-1318      | 90584-2318   |
| 20       | 90584-1320      | 90584-2320   |
| 22       | 90584-1322      | 90584-2322   |
| 24       | 90584-1324      | 90584-2324   |
| 26       | 90584-1326      | 90584-2326   |

Note: Stacked tube is a group of 7 individual tubes in a stack

# 1.27mm (.050") Pitch Picoflex® PF-50 Header

**90325**  
Low Profile



## Features and Benefits

- Polarizing side posts and PCB pegs
- Stamped contacts with in-line, flat blades
- 2 points of contact with female terminal
- Rigid, staggered solder tails
- Friction lock
- Tube option packaging for robotic delivery, contact Molex for part numbers

## Reference Information

Product Specification: PS-99020-0011  
Packaging: Bag or tube  
UL File No.: E29179  
CSA File No.: LR19980-181  
Mates With: 90327  
Designed In: Millimeters

## Electrical

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

## Mechanical

Contact Retention to Housing: 7N  
Mating Force: Tin — 1.7N; Gold — 1.1N  
Unmating Force: Tin — 0.25N; Gold — 0.25N  
Durability: Tin — 30 cycles max.  
Gold — 100 cycles max. (using extraction tool)

## Physical

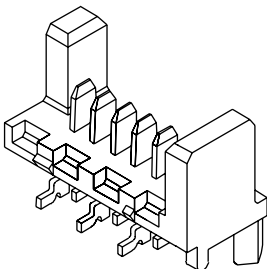
Housing: Black 15% glass-filled polyester, UL 94V-0  
Contact: Brass  
Plating: See Table  
PCB Thickness: 1.60mm ± 0.14

| Circuits | Order No.             |                           |
|----------|-----------------------|---------------------------|
|          | Tin 3-5µm (120-200µ") | Select Gold 0.76µm (30µ") |
| 4        | 90325-0004            | 90325-3004                |
| 6        | 90325-0006            | 90325-3006                |
| 8        | 90325-0008            | 90325-3008                |
| 10       | 90325-0010            | 90325-3010                |
| 12       | 90325-0012            | 90325-3012                |
| 14       | 90325-0014            | 90325-3014                |

| Circuits | Order No.             |                           |
|----------|-----------------------|---------------------------|
|          | Tin 3-5µm (120-200µ") | Select Gold 0.76µm (30µ") |
| 16       | 90325-0016            | 90325-3016                |
| 18       | 90325-0018            | 90325-3018                |
| 20       | 90325-0020            | 90325-3020                |
| 22       | 90325-0022            | 90325-3022                |
| 24       | 90325-0024            | 90325-3024                |
| 26       | 90325-0026            | 90325-3026                |

# 1.27mm (.050") Pitch Picoflex® PF-50 Header

**90814**  
Low Profile, SMT



## Features and Benefits

- Polarizing side posts and PCB pegs
- Stamped SMT contacts with in-line, flat blades
- 2 points of contact with female terminal
- Rigid, staggered SMT solder tails
- Friction lock

## Reference Information

Product Specification: PS-99020-0011  
Packaging: Tube or blister pack (contact Molex)  
Mates With: 90327  
Designed In: Millimeters

## Electrical

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

## Mechanical

Contact Retention to Housing: 7N  
Mating Force: Tin — 1.7N; Gold — 1.1N  
Unmating Force: Tin — 0.25N; Gold — 0.25N

Durability: Tin — 30 cycles max.  
Gold — 100 cycles max. (using extraction tool)

## Physical

Housing: Natural 30% glass-filled nylon, UL 94V-0  
Contact: Brass  
Plating: See Table

| Circuits | Order No.             |                           |                       |                           |
|----------|-----------------------|---------------------------|-----------------------|---------------------------|
|          | Tube Pack             |                           | Blister Pack          |                           |
|          | Tin 3-5µm (120-200µ") | Select Gold 0.76µm (30µ") | Tin 3-5µm (120-200µ") | Select Gold 0.76µm (30µ") |
| 4        | 90814-0X04            | 90814-3X04                | 90814-0X04            | 90814-3X04                |
| 6        | 90814-0X06            | 90814-3X06                | 90814-0X06            | 90814-3X06                |
| 8        | 90814-0X08            | 90814-3X08                | 90814-0X08            | 90814-3X08                |
| 10       | 90814-0X10            | 90814-3X10                | 90814-0X10            | 90814-3X10                |
| 12       | 90814-0X12            | 90814-3X12                | 90814-0X12            | 90814-3X12                |
| 14       | 90814-0X14            | 90814-3X14                | 90814-0X14            | 90814-3X14                |
| 16       | 90814-0X16            | 90814-3X16                | 90814-0X16            | 90814-3X16                |
| 18       | 90814-0X18            | 90814-3X18                | 90814-0X18            | 90814-3X18                |
| 20       | 90814-0X20            | 90814-3X20                | 90814-0X20            | 90814-3X20                |
| 22       | 90814-0X22            | 90814-3X22                | 90814-0X22            | 90814-3X22                |
| 24       | 90814-0X24            | 90814-3X24                | 90814-0X24            | 90814-3X24                |
| 26       | 90814-0X26            | 90814-3X26                | 90814-0X26            | 90814-3X26                |

Replace X with the combination of PEC peg option and polarizing side post height:

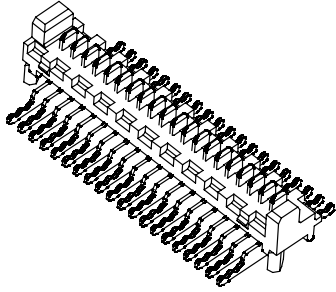
|   | PCB Pegs | Polarizing Side Post Height |
|---|----------|-----------------------------|
| 0 | Yes      | 6.40mm / 0.252"             |
| 3 | No       | 6.40mm / 0.252"             |
| 6 | No       | 4.10mm / 0.161"             |
| 8 | Yes      | 4.10mm / 0.161"             |

|   | PCB Pegs | Polarizing Side Post Height |
|---|----------|-----------------------------|
| 2 | Yes      | 6.40mm / 0.252"             |
| 5 | No       | 6.40mm / 0.252"             |
| 7 | No       | 4.10mm / 0.161"             |
| 9 | Yes      | 4.10mm / 0.161"             |

# 1.27mm (.050") Pitch Picoflex® PF-50 Header

91330

Low Profile, Bottom Entry  
SMT



## Features and Benefits

- Polarizing side posts and PCB pegs
- Stamped SMT contacts
- Two points of contact with female terminal
- Friction lock
- Can be used in RoHS lead-free process up to 260°C
- Kapton tape for pick and place during SMT assembly
- Low profile application which creates a double-sided board effect with a single-side SMT process

## Reference Information

Product Specification: PS-99020-0011  
Packaging: Tape and Reel  
Mates With: 90327  
Designed In: Millimeters

## Electrical

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

## Mechanical

Contact Insertion Force: 1.7N  
Contact Retention to Housing: 7N  
Durability: 30 cycles max.

## Physical

Housing: Natural 30% glass-filled Nylon, UL 94V-0  
Contact: Brass  
Plating: Tin 3 - 5µm (120µ" - 200µ")  
PCB Thickness: 1.57mm ± 0.13

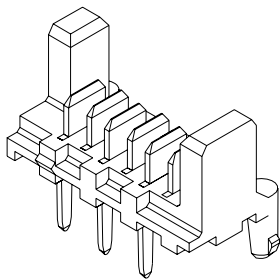
| Circuits | Order No.  |
|----------|------------|
| 6        | 91330-0006 |
| 8        | 91330-0008 |
| 10       | 91330-0010 |
| 12       | 91330-0012 |
| 14       | 91330-0014 |
| 16       | 91330-0016 |

| Circuits | Order No.  |
|----------|------------|
| 18       | 91300-0018 |
| 20       | 91330-0020 |
| 22       | 91330-0022 |
| 24       | 91330-0024 |
| 26       | 91330-0026 |

# 1.27mm (.050") Pitch Picoflex® PF-50 Header

90779

Low Profile  
High Temperature



## Features and Benefits

- Polarizing side posts and PCB pegs
- Stamped contacts with in-line, flat blades
- 2 points of contact with female terminal
- Rigid, staggered solder tails
- Friction Lock
- High Temperature Surface Mount Compatible housing

## Reference Information

Product Specification: PS-99020-0011  
Packaging: Bag (contact Molex for tube part numbers)  
Mates With: 90327  
Designed In: Millimeters

## Electrical

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

## Mechanical

Contact Retention to Housing: 7N  
Mating Force: Tin — 1.7N; Gold — 1.1N  
Unmating Force: Tin — 0.25N; Gold — 0.25N  
Durability: Tin — 30 cycles max.  
Gold — 100 cycles max. (using extraction tool)

## Physical

Housing: Natural 30% glass-filled nylon, UL 94V-0  
Contact: Brass  
Plating: See Table  
PCB Thickness: 1.60mm ± 0.14

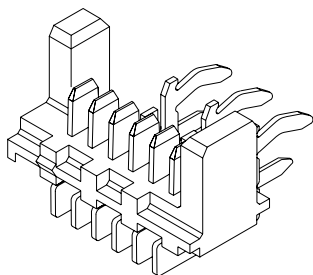
| Circuits | Order No.             |                           |
|----------|-----------------------|---------------------------|
|          | Tin 4-6µm (160-240µ") | Select Gold 0.76µm (30µ") |
| 4        | 90779-0001            | 90779-3001                |
| 6        | 90779-0002            | 90779-3002                |
| 8        | 90779-0003            | 90779-3003                |
| 10       | 90779-0004            | 90779-3004                |
| 12       | 90779-0005            | 90779-3005                |
| 14       | 90779-0006            | 90779-3006                |

| Circuits | Order No.             |                           |
|----------|-----------------------|---------------------------|
|          | Tin 4-6µm (160-240µ") | Select Gold 0.76µm (30µ") |
| 16       | 90779-0007            | 90779-3007                |
| 18       | 90779-0008            | 90779-3008                |
| 20       | 90779-0010            | 90779-3010                |
| 22       | 90779-0011            | 90779-3011                |
| 24       | 90779-0012            | 90779-3012                |
| 26       | 90779-0013            | 90779-3013                |

# 1.27mm (.050") Pitch Picoflex® PF-50 Header

**90800**

**Right Angle, Low Profile**



## Features and Benefits

- Polarizing side posts
- Stamped contacts
- 2 points of contact with female terminal
- Kinked solder tails for board retention during solder process
- Friction lock

## Reference Information

Packaging: Tube  
Tooling Information: See end of section  
Mates With: 90327  
Designed In: Millimeters

## Electrical

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

## Mechanical

Contact Retention to Housing: 7N  
Mating Force: Tin — 1.7N  
Unmating Force: Tin — 0.25N  
Durability: Tin — 30 cycles max. (using extraction tool)

## Physical

Housing: Black 15% glass-filled polyester, UL 94V-0  
Contact: Brass  
Plating: See Table  
PCB Thickness: 1.60mm ± 0.20

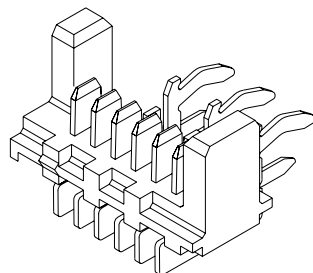
| Circuits | Order No.                 |                           |
|----------|---------------------------|---------------------------|
|          | Tin 3-5µm Tin over Nickel | Select Gold 0.76µm (30µ") |
| 4        | 90800-0004                | 90800-3004                |
| 6        | 90800-0006                | 90800-3006                |
| 8        | 90800-0008                |                           |
| 10       | 90800-0010                |                           |
| 12       | 90800-0012                | 90800-3012                |
| 14       | 90800-0014                | 90800-3014                |

| Circuits | Order No.                 |                           |
|----------|---------------------------|---------------------------|
|          | Tin 3-5µm Tin over Nickel | Select Gold 0.76µm (30µ") |
| 16       | 90800-0016                |                           |
| 18       | 90800-0018                |                           |
| 20       | 90800-0020                | 90800-3020                |
| 22       | 90800-0022                |                           |
| 24       | 90800-0024                | 90800-3024                |
| 26       | 90800-0026                | 90800-3026                |

# 1.27mm (.050") Pitch Picoflex® PF-50 Header

**91714**

**Right Angle, Low Profile  
High Temperature  
Through Hole**



## Features and Benefits

- Polarizing side posts
- Stamped contacts
- Two points of contact with female terminal
- Kinked solder tails for board retention during solder process
- Friction lock
- High-temperature Surface Mount Compatible housing

## Reference Information

Product Specification: PS-99020-0011  
Packaging: Tube  
Mates With: 90327  
Designed In: Millimeters

## Electrical

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

## Mechanical

Contact Insertion Force: 1.7N  
Contact Retention to Housing: 7N  
Durability: 30 cycles min.

## Physical

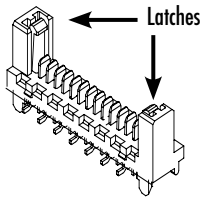
Housing: Natural 30% glass-filled Nylon, UL 94V-0  
Contact: Brass  
Plating: See Table  
PCB Thickness: 1.60mm ± 0.20

| Circuits | Order No.                 |                           |
|----------|---------------------------|---------------------------|
|          | Tin 3-5µm Tin over Nickel | Select Gold 0.76µm (30µ") |
| 4        | 91714-0004                | 91714-3004                |
| 6        | 91714-0006                | 91714-3006                |
| 8        | 91714-0008                | 91714-3008                |
| 10       | 91714-0010                | 91714-3010                |
| 12       | 91714-0012                | 91714-3012                |
| 14       | 91714-0014                | 91714-3014                |

| Circuits | Order No.                 |                           |
|----------|---------------------------|---------------------------|
|          | Tin 3-5µm Tin over Nickel | Select Gold 0.76µm (30µ") |
| 16       | 91714-0016                | 91714-3016                |
| 18       | 91714-0018                | 91714-3018                |
| 20       | 91714-0020                | 91714-3020                |
| 22       | 91714-0022                | 91714-3022                |
| 24       | 91714-0024                | 91714-3024                |
| 26       | 91714-0026                | 91714-3026                |

# 1.27mm (.050") Pitch Picoflex® PF-50 Latched Header

90816  
SMT



## Features and Benefits

- Positive latch for increased retention
- Polarizing side posts and PCB pegs
- Stamped SMT contacts with in-line, flat blades
- 2 points of contact with female terminal
- Rigid, staggered SMT solder tails
- Can be used in RMS lead-free process up to 260°

## Reference Information

Product Specification: PS-99020-0011  
Packaging: Tube or blister pack (contact Molex)  
Mates With: 90327  
Designed In: Millimeters

## Electrical

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

## Mechanical

Contact Retention to Housing: 7N  
Mating Force: Tin — 1.7N; Gold — 1.1N  
Unmating Force: Tin — 0.25N; Gold — 0.25N  
Unmating Force 90327 Header: 0.25N  
Durability: Tin — 5 cycles max. (using extraction tool)  
Gold — 5 cycles max. (using extraction tool)

## Physical

Housing: Black Polyphthalamide 30% glass-filled  
Contact: Brass  
Plating: See Table

| Circuits | Order No.             |                           |                       |                           |
|----------|-----------------------|---------------------------|-----------------------|---------------------------|
|          | Tube Pack             |                           | Blister Pack          |                           |
|          | Tin 3-5µm (120-200µ") | Select Gold 0.76µm (30µ") | Tin 3-5µm (120-200µ") | Select Gold 0.76µm (30µ") |
| 4        | 90816-0X04            | 90816-3X04                |                       |                           |
| 6        | 90816-0X06            | 90816-3X06                | 90816-0X06            | 90816-3X06                |
| 8        | 90816-0X08            | 90816-3X08                | 90816-0X08            | 90816-3X08                |
| 10       | 90816-0X10            | 90816-3X10                | 90816-0X10            | 90816-3X10                |
| 12       | 90816-0X12            | 90816-3X12                | 90816-0X12            | 90816-3X12                |
| 14       | 90816-0X14            | 90816-3X14                | 90816-0X14            | 90816-3X14                |
| 16       | 90816-0X16            | 90816-3X16                | 90816-0X16            | 90816-3X16                |
| 18       | 90816-0X18            | 90816-3X18                | 90816-0X18            | 90816-3X18                |
| 20       | 90816-0X20            | 90816-3X20                | 90816-0X20            | 90816-3X20                |
| 22       | 90816-0X22            | 90816-3X22                | 90816-0X22            | 90816-3X22                |
| 24       | 90816-0X24            | 90816-3X24                | 90816-0X24            | 90816-3X24                |
| 26       | 90816-0X26            | 90816-3X26                | 90816-0X26            | 90816-3X26                |

Replace X with the combination of PEC peg option and polarizing side post height:

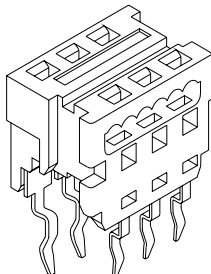
|   | PCB Pegs |
|---|----------|
| 0 | Yes      |
| 3 | No       |

|   | PCB Pegs |
|---|----------|
| 2 | Yes      |
| 4 | No       |

# 1.27mm (.050") Pitch Picoflex® PF-50 Connector

91577

Low Profile, IDT  
Board-In, Opposite Pin Layout



## Features and Benefits

- For permanent wire-to-board connections
- Kinked solder tails for board retention during solder process
- Fits same board layout pattern as male header
- Height from board when soldered and terminated only 6.40mm (.252")
- 2 points of contact in IDT section
- Accepts 26 to 28 AWG, 7 strands, ribbon cable
- Opposite pin layout vs. 90584

## Reference Information

Product Specification: PS-99020-0011  
Packaging: Tube (2 options)  
Tooling Information: See end of section  
Designed In: Millimeters

## Electrical

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

## Physical

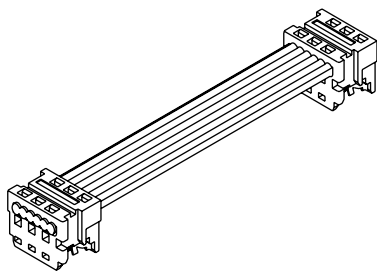
Housing: White polyester, UL 94V-0  
Contact: Phosphor Bronze Alloy  
Plating: 2-4µm (80-160µ") Tin over Nickel  
PCB Thickness: 1.60mm ± 0.20

| Circuits | Order No.       |              |
|----------|-----------------|--------------|
|          | Individual Tube | Stacked Tube |
| 4        | 91577-1304      | 91577-2304   |
| 6        | 91577-1306      | 91577-2306   |
| 8        | 91577-1308      | 91577-2308   |
| 10       | 91577-1310      | 91577-2310   |
| 12       | 91577-1312      | 91577-2312   |
| 14       | 91577-1314      | 91577-2314   |

| Circuits | Order No.       |              |
|----------|-----------------|--------------|
|          | Individual Tube | Stacked Tube |
| 16       | 91577-1316      | 91577-2316   |
| 18       | 91577-1318      | 91577-2318   |
| 20       | 91577-1320      | 91577-2320   |
| 22       | 91577-1322      | 91577-2322   |
| 24       | 91577-1324      | 91577-2324   |
| 26       | 91577-1326      | 91577-2326   |

# 1.27mm (.050") Pitch Picoflex® PF-50 Standard Cable Harness

92315



## Features and Benefits

- Cable assembly with two 90327 connectors, C-style
- Sizes 4 to 26
- UL 2651, 28 AWG (7 strand) ribbon cable
- Lengths from 6 to 120cm

## Reference Information

Packaging: Bag

Mates With: 90816, 90779, 90800, 90814, 91330 and 91714

Designed In: Millimeters

## Electrical

Voltage: 250V

Current: 1.2A

## Mechanical

Mating Force: 1.7N

Unmating Force: 0.25N

Durability: 30 cycles max.

## Physical

Housing: 6/6 nylon, UL 94V-0

Contact: Phosphor Bronze Alloy

Plating: 3 to 6µ" Tin

Insulation: Cable — Gray PVC

Wire Range: 28 AWG

| Circuits | Order No.  |
|----------|------------|
| 4        | 92315-04XX |
| 6        | 92315-06XX |
| 8        | 92315-08XX |
| 10       | 92315-10XX |
| 12       | 92315-12XX |
| 14       | 92315-14XX |

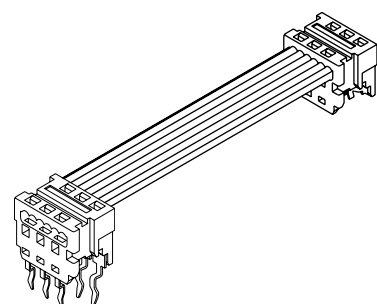
| Circuits | Order No.  |
|----------|------------|
| 16       | 92315-16XX |
| 18       | 92315-18XX |
| 20       | 92315-20XX |
| 22       | 92315-22XX |
| 24       | 92315-24XX |
| 26       | 92315-26XX |

| Length | XX    |
|--------|-------|
| 6-99cm | 06-99 |
| 100cm  | 01    |
| 105cm  | 02    |
| 110cm  | 03    |
| 115cm  | 04    |
| 120cm  | 05    |

Replace XX with length in cm (min. 6cm, max. 120cm), see table  
Example: 92315-0832 is a cable with two 90327-0308, 32cm long

# 1.27mm (.050") Pitch Picoflex® PF-50 Standard Cable Harness

92316



## Features and Benefits

- Cable assembly with 90327 and 90584 connectors, C-style
- Sizes 4 to 26
- UL 2651, 28 AWG (7 strand) ribbon cable
- Lengths from 6 to 120cm

## Reference Information

Packaging: Tube

Mates With: 90816, 90325, 90779, 90800, 90814, 91330 and 91714

Designed In: Millimeters

## Electrical

Voltage: 250V

Current: 1.2A

## Mechanical

Mating Force: 1.7N

Unmating Force: 0.25N

Durability: 30 cycles max.

## Physical

Housing: 6/6 nylon, UL 94V-0

Contact: Phosphor Bronze Alloy

Plating: 3 to 6µ" Tin

Insulation: Cable — Gray PVC

Wire Range: 28 AWG

PCB Thickness: 1.60mm ± 0.20

| Circuits | Order No.  |
|----------|------------|
| 4        | 92316-04XX |
| 6        | 92316-06XX |
| 8        | 92316-08XX |
| 10       | 92316-10XX |
| 12       | 92316-12XX |
| 14       | 92316-14XX |

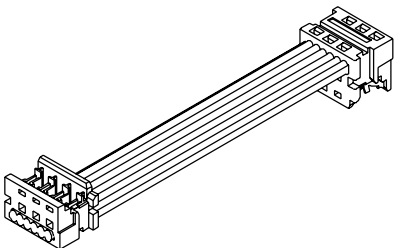
| Circuits | Order No.  |
|----------|------------|
| 16       | 92316-16XX |
| 18       | 92316-18XX |
| 20       | 92316-20XX |
| 22       | 92316-22XX |
| 24       | 92316-24XX |
| 26       | 92316-26XX |

| Length | XX    |
|--------|-------|
| 6-99cm | 06-99 |
| 100cm  | 01    |
| 105cm  | 02    |
| 110cm  | 03    |
| 115cm  | 04    |
| 120cm  | 05    |

Replace XX with length in cm (min. 6cm, max. 120cm), see table  
Example: 92316-0832 is a cable with 90327-0308 and 90584-2308, 32cm long

# 1.27mm (.050") Pitch Picoflex® PF-50 Standard Cable Harness

92317



### Features and Benefits

- Cable assembly with two 90327 connectors, Z-style
- Sizes 4 to 26
- UL 2651, 28 AWG (7 strand) ribbon cable
- Lengths from 6 to 120cm

### Reference Information

Packaging: Bag  
Mates With: 90816, 90325, 90779, 90800, 90814, 91330 and 91714  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 1.2A

### Mechanical

Mating Force: 1.7N  
Unmating Force: 0.25N  
Durability: 30 cycles max.

### Physical

Housing: 6/6 nylon, UL 94V-0  
Contact: Phosphor Bronze Alloy  
Plating: 3 to 6µ" Tin  
Insulation: Cable—Gray PVC  
Wire Range: 28 AWG

| Circuits | Order No.  |
|----------|------------|
| 4        | 92317-04XX |
| 6        | 92317-06XX |
| 8        | 92317-08XX |
| 10       | 92317-10XX |
| 12       | 92317-12XX |
| 14       | 92317-14XX |

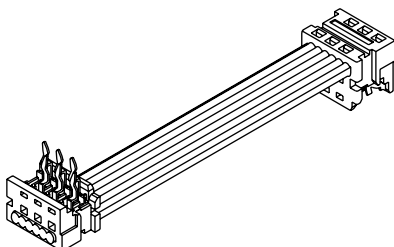
Replace XX with length in cm (min. 6cm, max. 120cm), see table  
Example: 92317-0832 is a cable with two 90327-0308, 32cm long

| Circuits | Order No.  |
|----------|------------|
| 16       | 92317-16XX |
| 18       | 92317-18XX |
| 20       | 92317-20XX |
| 22       | 92317-22XX |
| 24       | 92317-24XX |
| 26       | 92317-26XX |

| Length | XX    |
|--------|-------|
| 6-99cm | 06-99 |
| 100cm  | 01    |
| 105cm  | 02    |
| 110cm  | 03    |
| 115cm  | 04    |
| 120cm  | 05    |

# 1.27mm (.050") Pitch Picoflex® PF-50 Standard Cable Harness

92318



### Features and Benefits

- Cable assembly with 90327 and 90584 connectors, Z-style
- Sizes 4 to 26
- UL 2651, 28 AWG (7 strand) ribbon cable
- Lengths from 6 to 120cm

### Reference Information

Packaging: Tube  
Mates With: 90816, 90325, 90779, 90800, 90814, 91330 and 91714  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 1.2A

### Mechanical

Mating Force: 1.7N  
Unmating Force: 0.25N  
Durability: 30 cycles max.

### Physical

Housing: 6/6 nylon, UL 94V-0  
Contact: Phosphor Bronze Alloy  
Plating: 3 to 6µ" Tin  
Insulation: Cable—Gray PVC  
Wire Range: 28 AWG  
PCB Thickness: 1.60mm ± 0.20

| Circuits | Order No.  |
|----------|------------|
| 4        | 92318-04XX |
| 6        | 92318-06XX |
| 8        | 92318-08XX |
| 10       | 92318-10XX |
| 12       | 92318-12XX |
| 14       | 92318-14XX |

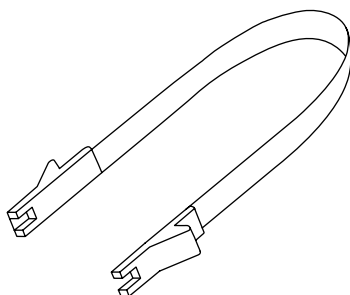
Replace XX with length in cm (min. 6 cm, max. 120cm), see table  
Example: 92318-0832 is a cable with 90327-0308 and 90584-2308, 32cm long

| Circuits | Order No.  |
|----------|------------|
| 16       | 92318-16XX |
| 18       | 92318-18XX |
| 20       | 92318-20XX |
| 22       | 92318-22XX |
| 24       | 92318-24XX |
| 26       | 92318-26XX |

| Length | XX    |
|--------|-------|
| 6-99cm | 06-99 |
| 100cm  | 01    |
| 105cm  | 02    |
| 110cm  | 03    |
| 115cm  | 04    |
| 120cm  | 05    |

## Application Tooling

### Manual Extraction Tool for Picoflex®



This extraction tool is used to unmate the Picoflex connector 90327 from its header

#### Features

- Steel and plastic construction with moulded heads
- Long life spring steel handle
- Designed for "in the field" use, will help prevent damage to termination area and to connectors
- Suitable for all circuit sizes 4 to 26

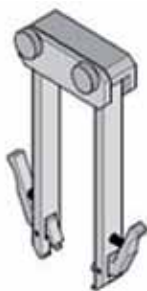
#### Specifications

Size: (open) 105 by 110 by 12mm  
Weight: 0.05kg approximate

| Description                          | Order No.  | Used with Molex Connector |
|--------------------------------------|------------|---------------------------|
| Extraction Tool for 4 to 26 circuits | 69008-1070 | 90327                     |

## Application Tooling

### Manual Extraction Tool for Picoflex®



This extraction tool is used to unmate the Picoflex connector 90327 from the latched header 90816

#### Features

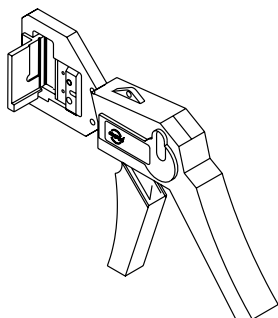
- Steel construction
- Designed for "in the field" use, will help prevent damage to termination area and to connectors
- Suitable for all circuit sizes 4 to 26

#### Specifications

Size: 45mm by 100mm by 17mm  
Weight: 0.13kg

| Description                          | Order No.  | Used with Molex Connector |
|--------------------------------------|------------|---------------------------|
| Extraction Tool for 4 to 26 circuits | 62100-6000 | 90327                     |

### Manual Handtool for Picoflex®



#### Features

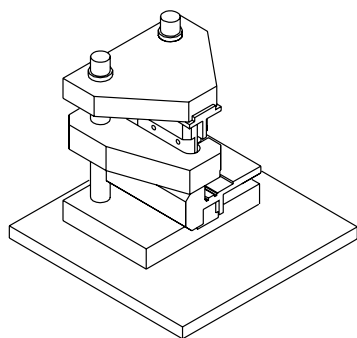
- Terminates Molex connectors 90327 and 90584, 4 to 26 circuits
- Designed for prototype: small batch and field repair applications
- Daisy chain and jumper harnesses can be made on this handtool with a small amount of adjustment
- Parallel Action Handtool with cable guide

#### Specifications

Size: 260 by 150 by 50mm  
Weight: 0.75kg  
Working Services: None  
Engineering Number: 69008-1080

| Description                             | Order No.  | Used with Molex Connector |
|-----------------------------------------|------------|---------------------------|
| Picoflex Hand Tool for 4 to 26 circuits | 69008-1090 | 90327, 90584              |

## Manual Press Tool Kit for Picoflex®



Allows manual termination of pre-cut ribbon cable in an Arbor press

### Features

- Fully-manual operation — requires no electrical or air supply
- Hand loading of connector and cable
- Cable guide
- Fits into Arbor press number 69020-0660
- Optional connector clamp 69020-1935
- Feed-to and feed-through application
- Suitable for all circuit sizes 4 to 26
- Terminates 90327 and 90584 series

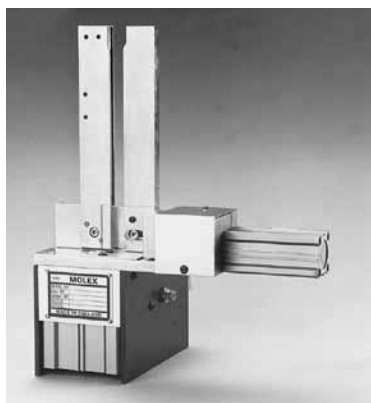
### Specifications

Weight: 1kg  
Dimensions: 15.5 by 110 by 90mm  
Working Services: None  
Engineering Number: 69020-1902

| Description               | Order No.  | Used with Molex Connector |
|---------------------------|------------|---------------------------|
| Tool Kit 4 to 26 circuits | 69020-1902 | 90327, 90584              |
| Manual Press for Tool Kit | 69020-0660 |                           |
| Optional Connector Clamp  | 69020-1935 |                           |

## Application Tooling

### Semi-Automatic PB14 Pneumatic Machine for Picoflex®



### Features

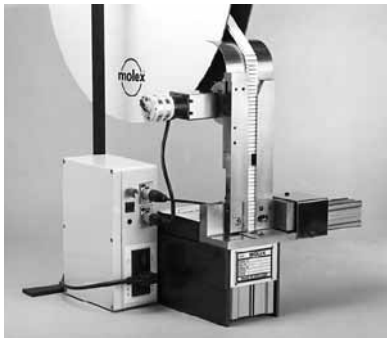
- For Picoflex 90327 connector (4 to 26 circuits)
- Fully pneumatic
- Cable triggers termination
- Production rate: 520 per hour
- Magazine feed
- Cable guidance
- Quick adjustment for different circuit sizes

### Specifications

Weight: 12kg (26.45 lb)  
Pneumatics: Pressure — 6 BAR  
Size: Width — 210mm (8.26")  
Depth — 30mm (1.18")  
Length — 330mm (12.99")

| Description                          | Order No.  | Connector |
|--------------------------------------|------------|-----------|
| PB14 Terminator for 4 to 26 circuits | 69127-1001 | 90327     |

## Semi-Automatic PB14T Tape Feed Machine for Picoflex®



### Features

- Automatic tape feed which increases the production capabilities of the PB14 terminator
- Cable entry triggers termination
- Quick adjustment between circuit sizes
- Sensor automatically keeps magazine track full, allowing the operator to concentrate on production

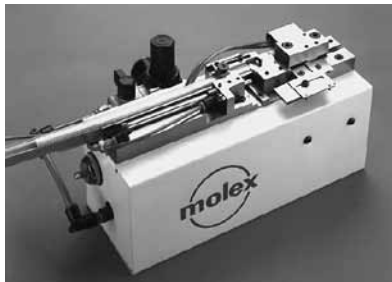
### Specifications

Weight: 25kg (55.12 lb)  
Pneumatics: Pressure — 6 BAR  
Size: Width — 280mm (11.00")  
Depth — 330mm (12.99")  
Height — 500mm (19.69")  
Electrical: 220V — 50 Hz  
120V — 60 Hz  
Rate: Up to 2100 connectors per hour, dependent on operator speed and cable length

| Description                                 | Order No.  | Connector |
|---------------------------------------------|------------|-----------|
| PB14 Terminator (220V) for 4 to 26 circuits | 69127-1004 | 90327     |
| PB14 Terminator (120V) for 4 to 26 circuits | 69127-1024 |           |

## Application Tooling

### Semi-Automatic PB16 Tube Feed Pneumatic Machine for Picoflex®



### Features

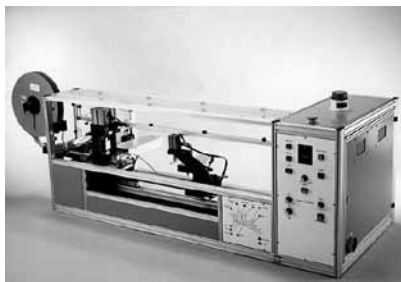
- For Picoflex 90584
- Fully pneumatic
- Automatic connector reloading
- Tube feed with connector orientation
- Timer to ensure complete termination
- Cable entry triggers termination

### Specifications

Weight: 25kg (55.12 lb)  
Pneumatics: Pressure — 6 BAR (90psig)  
Size: Width — 125mm (4.92")  
Depth — 175mm (6.89")  
Length — 700mm (27.56")

| Description     | Order No.  | Connector |
|-----------------|------------|-----------|
| PB16 Terminator | 69127-1010 | 90584     |

### Automatic Desktop (PDT) Machine for Picoflex®



### Features

- Medium volume, with fully-automatic means of termination
- Pneumatically actuated
- Continuity testing built in
- Wire straightener
- PLC control
- Harness collection tray

### Specifications

Weight: 140kg (308 lb)  
Electrical: 240V, 50 Hz single phase  
Pneumatics: Pressure — 6 BAR (90psig)  
Consumption — 6L per minute (0.22 CFM)  
Rate: Up to 360 harnesses per hour, dependent on operator speed and application

| Description              | Order No.     | Connector    |
|--------------------------|---------------|--------------|
| Picoflex Desktop Machine | Contact Molex | 90327, 90584 |







## PICOFLEX® SAMPLE BOX

Sample kits are available on request to demonstrate the versatility of the Picoflex IDT system.

The kit contains a demonstration board with mounted PCB headers and cable assemblies to show the functionality of the Picoflex® IDT system.

In addition to comprehensive product information there are also loose samples of all PCB headers and cable connectors for design purposes in the kit.

There is a CD with a product presentation, including links for all products to the Molex website for further product information. There is also a leaflet where you can see the features and benefits of the Picoflex product family.

If you are interested in being shown a sample kit, please contact your local Molex sales office or Molex distributor.



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

[www.molex.com](http://www.molex.com)

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- Формирование склада под заказчика.
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- Тестирование поставляемой продукции.
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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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[www.lifeelectronics.ru](http://www.lifeelectronics.ru)