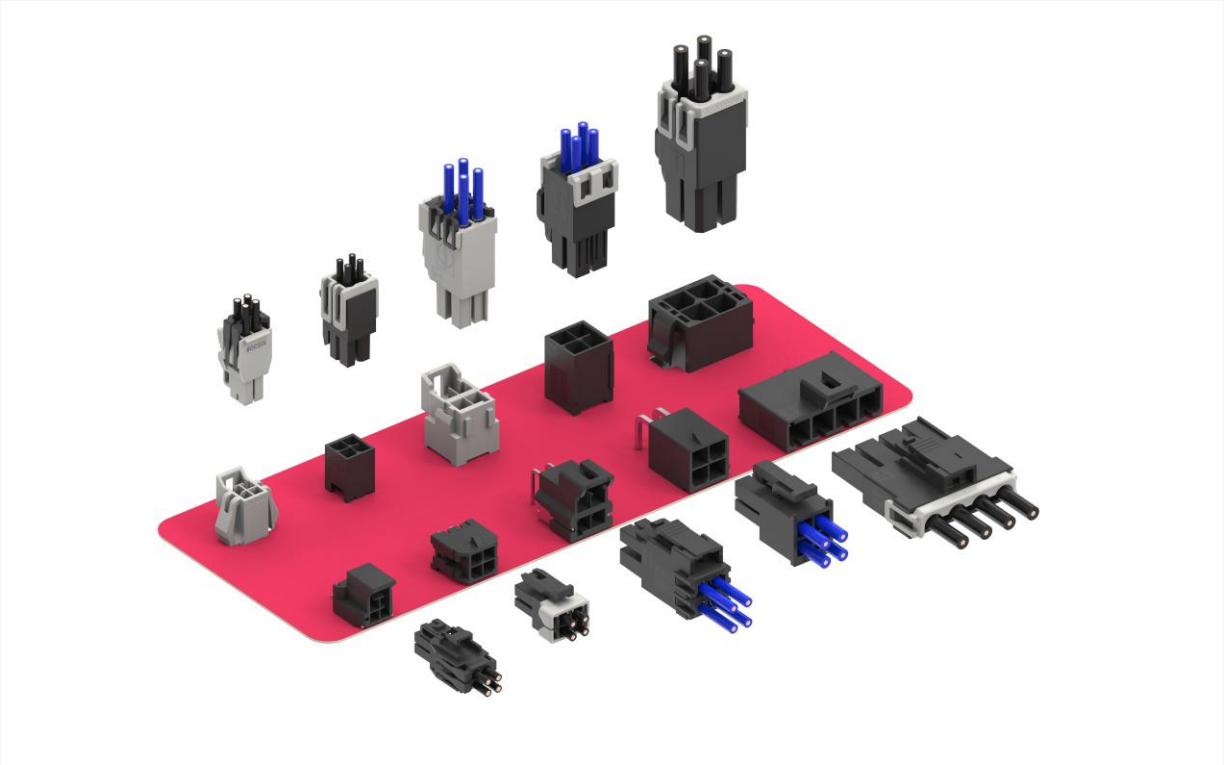
molex creating connections for life

# Fit Family Connectors



Power and Signal Business Unit

2026

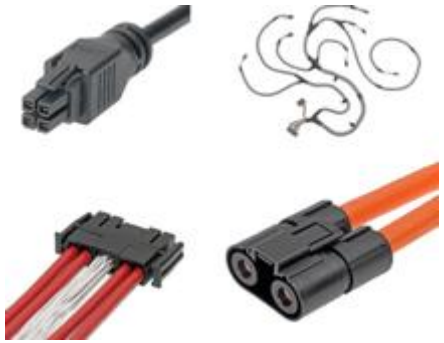
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# Power & Signal Business Unit



## HIGH-POWER CONNECTORS

- EXTreme B-to-B Connectors
- COEUR CST Socket Connectors
- Busbar Connectors



## CABLE ASSEMBLIES

- Complex Cable Assy
- Discrete Wire Assy
- Sealed Cable Assy
- Over molded Cable Assy
- High Power Cable Assy
- NTC Sensor Cables
- Ribbon Cable Assy



## BUSBARS

- Rigid
- Flexible
- Laminated
- Hybrid
- Including COEUR Socket Technology
- Powder Coated
- ORV3
- Liquid-cooled



## WIRE-TO-WIRE & WIRE-TO-BOARD

- Over 90+ Product families
- Application Tooling excellence
- 0.8mm to 2.0mm Signal portfolio
- Low Power > 2.0mm including:
  - Fit Families
  - Pin and Socket
  - Custom headers
  - RAST


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# Driving Innovation in a Changing World



## CONSUMER/ MOBILE

Advancing IoT-enabled connectivity solutions that power the next generation of mobile devices, wearables and smart home technologies



## AEROSPACE & DEFENSE

Providing robust, dependable connectivity solutions that meet the stringent demands of today's mission-critical aerospace and defense applications



## DATA CENTER, CLOUD & TELECOM

Powering high-speed, reliable networking solutions to keep data flowing, enable rapid scaling and accelerate the future of data centers



## TRANSPORTATION/ AUTOMOTIVE

Enabling seamless vehicle connectivity and electrification with solutions that adapt to the evolving needs of modern transportation



## INDUSTRIAL

Collaborating with customers to drive digital manufacturing while optimizing automation, power management and operational efficiency



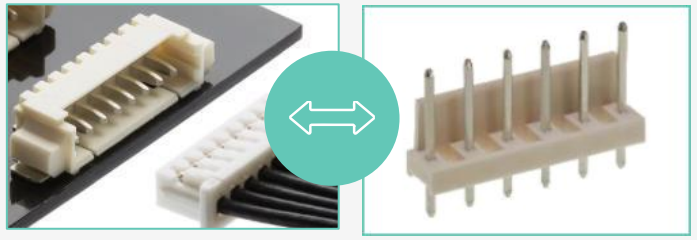
## MEDICAL & PHARMA

Developing and manufacturing innovative products that help people live healthier and more productive lives


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# Portfolio Overview

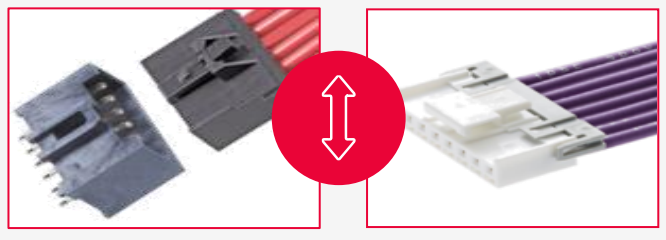
## Basic, Enhanced, Pro Framework



### BASIC CONNECTORS

Nothing fancy, just everyday reliable connectors

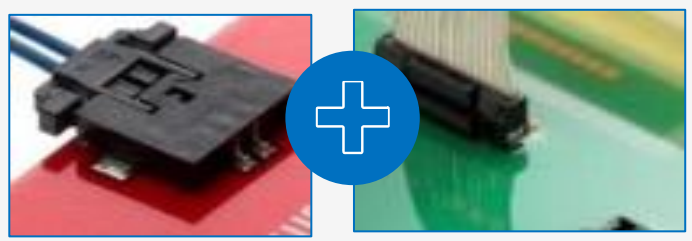
- Friction locking
- Unshrouded housings
- Tin plating



### ENHANCED CONNECTORS

A step up from basic. Same reliable contacts with options for extra security

- Positive locking
- Fully protected tin / gold plating
- Terminal Position Assurance (TPA)



### PRO CONNECTORS

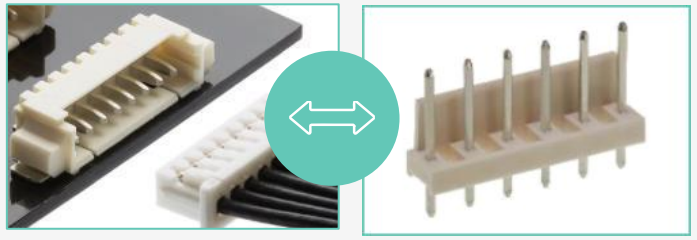
Best in class connectors! Selected for applications in need of extra performance

- Potting capable
- Sealing
- Isolated contacts
- Ultra-low profile
- Independent Secondary Locking (ISL)


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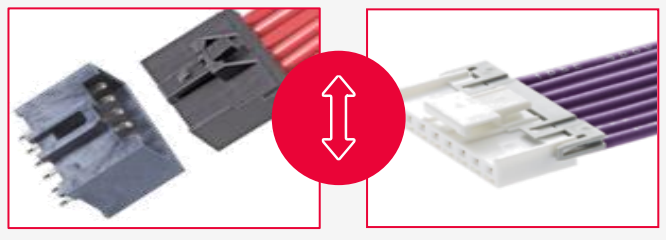
# Low Power Connectors

## Basic, Enhanced, Pro Framework



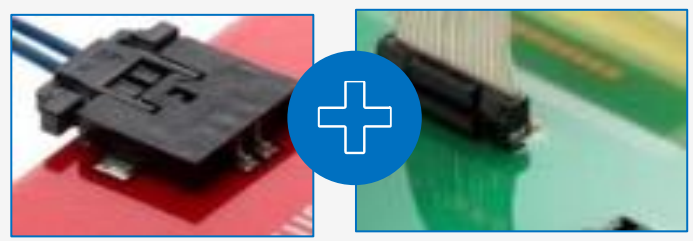
### BASIC CONNECTORS

Milli-Grid 2.0
KK254
KK 396
KK 508
MLX
Standard 0.093
RAST



### ENHANCED CONNECTORS

SL
KK Plus 250
KK Plus 396
KK Plus 300
C Grid



### PRO CONNECTORS

Nano-Fit
Micro-Fit
Micro-Fit+
Ultra-Fit
Mini-Fit Sr.
Mini-Fit
Mini-Fit Sigma
Mini-Fit Max
Mega-Fit
Sabre
Squba

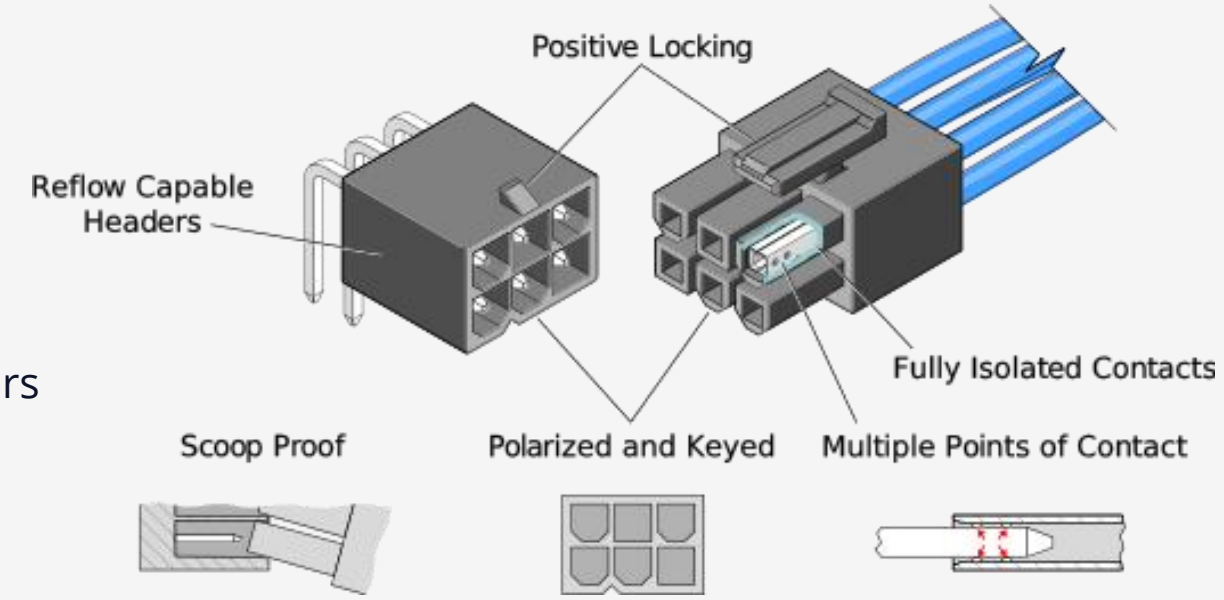
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# Fit Family Product Line

## Why Choose the Fits?

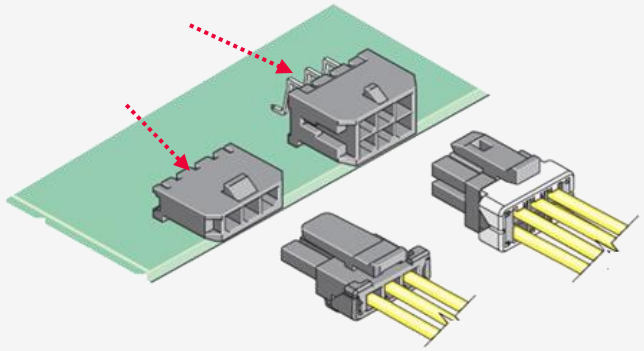
- Polarized and keyed to virtually eliminate misalignment
- Fully isolated contacts that inhibit arcing between terminals and provide higher voltage ratings
- Scoop Proof housing design to protect terminals from mis-mating
- Terminals with multiple points of contact – Providing a stable path for current
- Positive locking
- TPA
- Tangless terminals
- Reflow capable headers
- Low mating force options
- Keys and colors



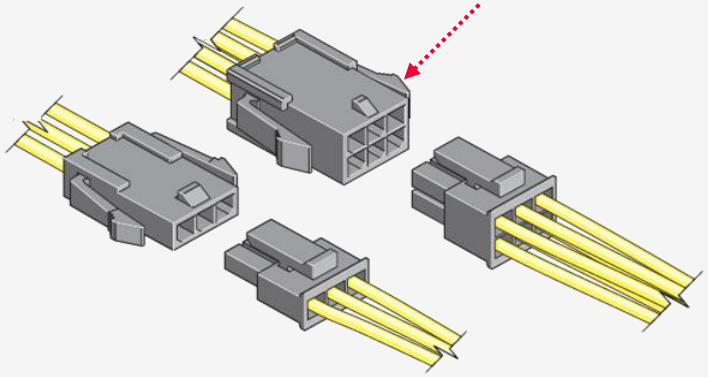


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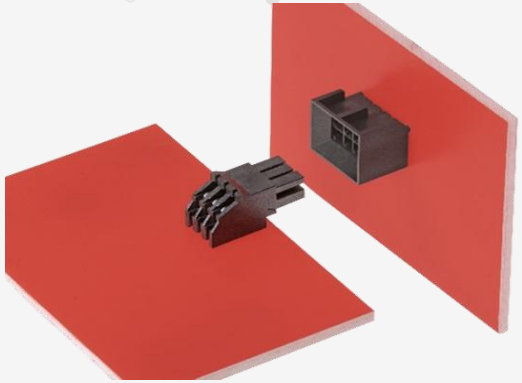
# Configuration & Application Styles



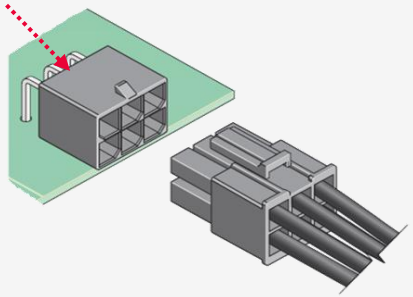
WTB (WIRE-TO-BOARD)



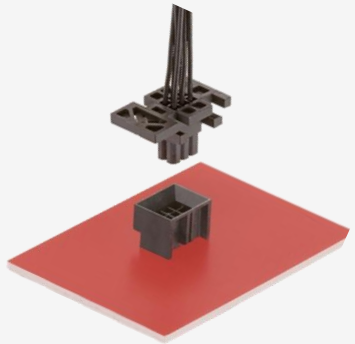
WTW (WIRE-TO-WIRE)



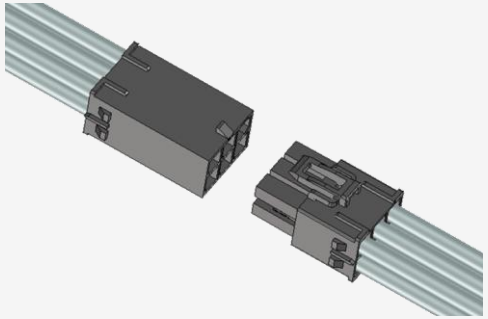
BTB (BOARD-TO-BOARD)



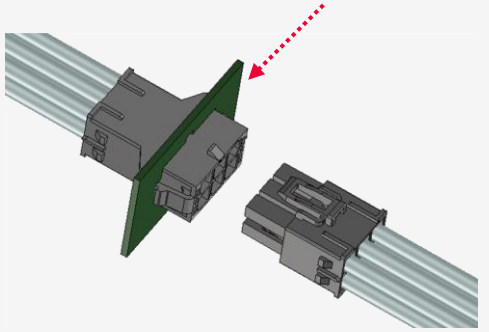
WTB RIGHT ANGLE



WTB VERTICAL



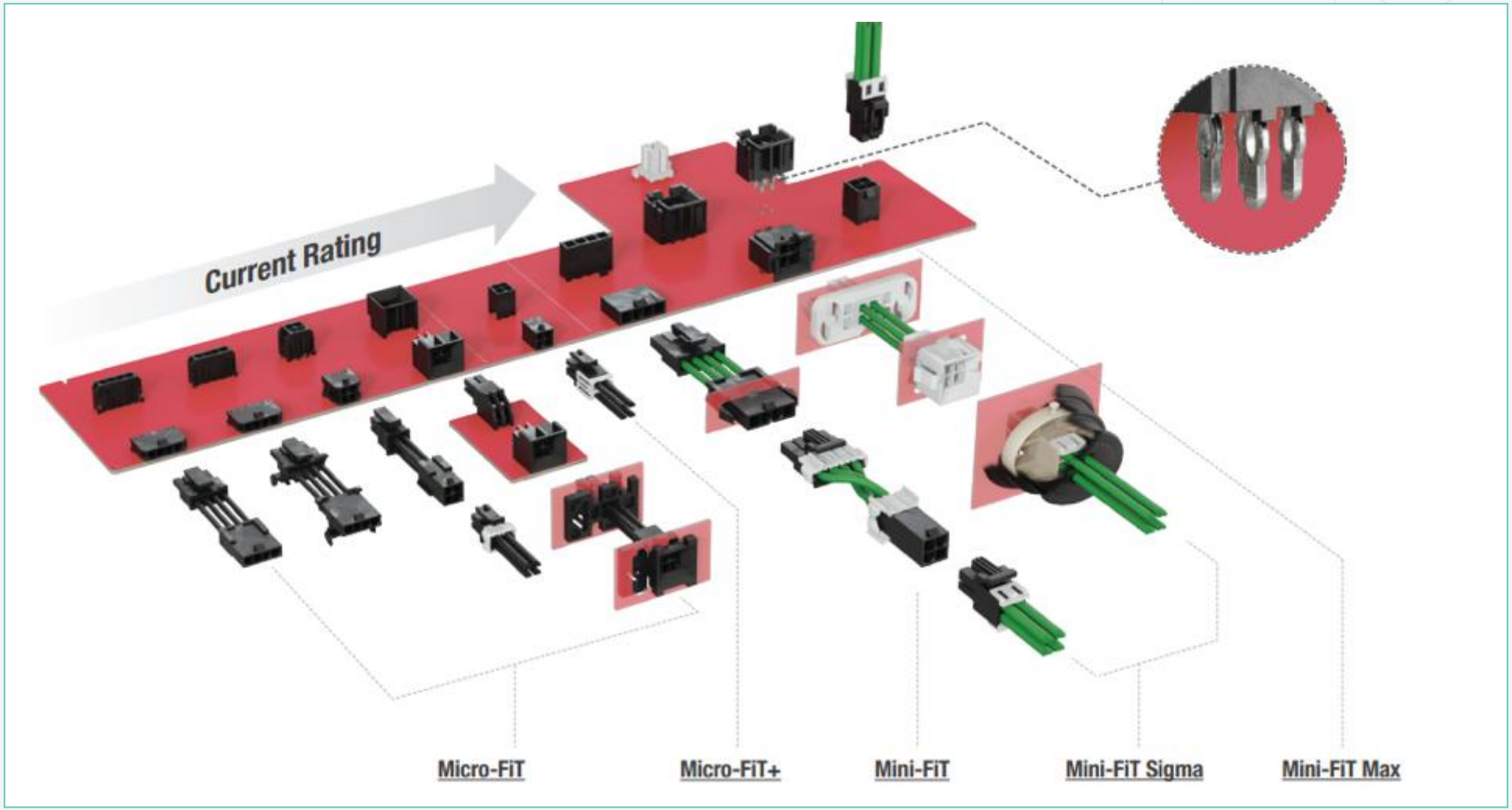
WTW FREE HANG



WTW PANEL MOUNT


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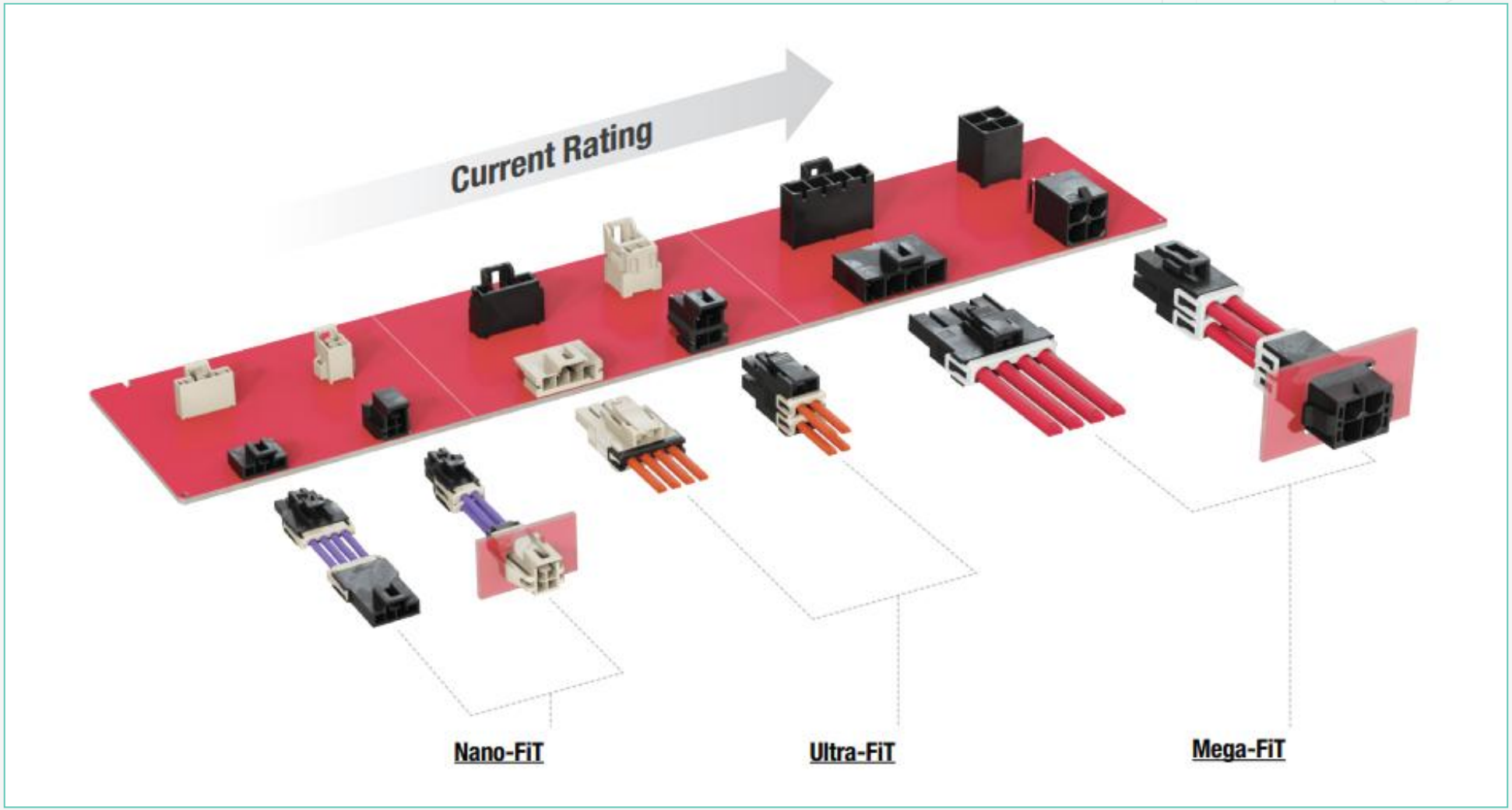
# Fit Family Product Roadmap





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# Fit Family Product Roadmap





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# Fit Family Overview | Core Products

| | Nano-Fit | Micro-Fit | Micro-Fit+ | Ultra-Fit | Mini-Fit | Mini-Fit Sigma<br>Mini-Fit TPA2 | Mini-Fit MAX | Mega-Fit |
|---|---|---|---|---|---|---|---|---|
| **Pitch** | 2.50mm | 3.00mm | 3.00mm | 3.50mm | 4.20mm | 4.20mm | 4.20mm | 5.70mm |
| **Style** | W to B<br>W to W<br>W to P | B to B<br>W to B<br>W to W<br>W to P | W to B<br>W to W<br>W to P | W to B<br>W to W<br>W to P | B to B<br>W to B<br>W to W<br>W to P | W to B<br>W to W<br>W to P | W to B<br>W to W (in development) | W to B<br>W to W<br>W to P |
| **Circuit Size** | 2-16 | 2-24 | 2-24 | 2-16 | 2 - 24, 36 | 2-18 | 2-12 | 2-12 |
| **Wire Gauge (AWG)** | 20-26 AWG | 18-30 AWG | 16-30 AWG | 16-22 AWG | 16-28 AWG (double-crimp options) | 16-24 AWG (double crimp options) | 14-16 AWG | 10-16 AWG (double crimp options) |
| **Current (Max.)** | 8.0A | 10.5A | 13.0A | 14.0A | 13.0A | 13.5A | 20.5A | 30.0A |
| **Voltage (Max.)** | 250V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC |
| **Reflow Capable, Glow Wire/ UL 94 V0, TPA Option** | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Colors** | Black, Natural | Black | Black | Black, Natural | Black, Natural | Black | Black | Black |
| **Keys** | 2 keys | 1 key | 1 key<br>Versa Color<br>4 keys/4Colors | 2 keys | 1 key<br>Versa Color<br>1 keys / 4 Colors | 1 key | 1 key | 1 key<br>Versa Color<br>4 keys/4 Colors |
| **Soldering** | TH, SMT | TH, SMT, TH CPI, TH Kinked Pin | SMT, TH | TH | TH, SMT, CPI | Mates with Mini-FIt Headers | TH, SMT | TH |
| **Operating Temperature (Max.)** | Tin/Gold +125°C | Tin 105°C<br>Gold +125°C | Tin/Gold +125°C | Tin/Gold +125°C | Tin 105°C<br>Gold +125°C | Tin 105°C<br>Tin HCS 125°C<br>Gold +125°C | Tin +105°C | Tin +105°C<br>Gold +120°C |
| **Blind Mating** | Yes: Nano-Fit BMI | Yes: Micro-Fit BMI | No | No | Yes: Mini-Fit BMI | No | No | No |


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# Fit Family Overview | All Products

| | Nano-Fit | Nano-Fit BMI | Micro-Fit | Micro-Fit+ | Micro-Fit+ Versa | Micro-Fit TPA | Micro-Fit+ PCIe | Micro-Fit BMI | Ultra-Fit | Mini-Fit | Mini-Fit Sigma / TPA2 | Mini-Fit MAX | Mini-Fit Versa | Mini-Fit Plus HCS | Mini-Fit BMI | Mega-Fit | Mega-Fit Versa | Mini-Fit Sr. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pitch** | 2.50mm | 2.50mm | 3.00mm | 3.00mm | 3.00mm | 3.00mm | 3.00mm for power 2.00mm for Signal | 3.00mm | 3.50mm | 4.20mm | 4.20mm | 4.20mm | 4.20mm | 4.20mm | 4.20mm | 5.70mm | 5.70mm | 10.00mm |
| **Style** | W to B W to W W to P | W to B W to W W to P | B to B W to B W to W W to P | W to B W to W W to P | W to B W to W W to P | W to B W to W W to P | W to B | B to B W to B W to W W to P | W to B W to W W to P | B to B W to B W to W W to P | W to B W to W W to P | W to B | W to B W to W W to P | B to B W to B W to W W to P | B to B W to B W to P | W to B W to W W to P | W to B W to W W to P | W to B W to W W to P |
| **Circuit Size** | 2-16 | 4-16 | 2-24 | 2-24 | 2-24 | 2 - 24 | 16 (12 Power, 4 Signal) | 2-24 | 2-16 | 2 - 24, 36 | 2-18 | 2-12 | 2 -14 | 2 - 24 | 2 to 36 | 2-12 | 2-12 | 2 to 14 |
| **Wire Gauge AWG** | 20 to 26 AWG | 20 - 26 AWG | 18-30 AWG | 16-30 AWG | 16-30 AWG | 20-30 AWG | 16AWG for power 28 AWG for Signal | 18-30 AWG | 16-22 AWG | 16-28 AWG (double-crimp options) | 16-24 AWG (double crimp options) | 14-16 AWG | 16-24 AWG | 16-24 AWG | 16 – 24 AWG | 10-16 AWG (double crimp options) | 10-16 AWG (double crimp options) | 8 -16 AWG |
| **Current (Max.)** | 8.0A | 8.0A | 8.5A | 13.0A | 13.0A | 7A | 9.2A (Power) 1.0A (Signal) | 6.5A | 14.0A | 13.0A | 13.5A | 20.5A | 13.5A | 13.0A | 13.0A | 30.0A | 30.0A | 50.0A |
| **Voltage (Max.)** | 250V AC | 600VAC | 600V AC | 600V AC | 600V AC | 600V | 250V | 600V | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V AC | 600V |
| **Reflow Capable, Glow Wire/ UL 94 V0, TPA Option** | Yes | Yes | Yes | Yes | Yes | Yes | Reflow capable , UL94-V0 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Colors** | Black, Natural | Black, Natural | Black | Black | Natural, Red, Blue, Yellow | Black | Black | Black | Black, Natural | Black, Natural | Black | Black | Natural, Red, Green, Blue | Black, Natural | Black, Natural | Black | Natural, Red, Blue, Yellow | Black |
| **Keys** | 2 keys | 2 keys | 1 key | 1 key | 4 keys | 1 key | 1 key | 1 key | 2 keys | 1 key | 1 key | 1 key | 1 key | 1 key | 1 key | 1 key | 4 keys | 1 key |
| **Soldering** | TH, SMT | TH | TH, SMT, TH CPI, TH Kinked Pin | SMT, TH | TH | SMT, TH | TH | TH, SMT, CPI | TH | Through Hole, SMT, CPI | Mates with Minifit Headers | TH, SMT | TH | TH | Through Hole, CPI | TH | TH | TH |
| **Operating Temp. (max)** | Tin/Gold +125°C | Tin/Gold +125°C | Tin 105°C Gold +125°C | Tin/Gold +125°C | Tin/Gold +125°C | Tin/Gold +105°C | Tin +105°C | Tin/Gold +105°C | Tin/Gold +125°C | Tin 105°C Gold +125°C | Tin 105°C Tin HCS 125°C Gold +125°C | Tin +105°C | Tin+105°C | Tin 105°C Gold +125°C | Tin 105°C Gold +125°C | Tin +105°C Gold +120°C | Tin 105°C | Tin/Gold + 120°C |
| **Blind Mating** | Yes: Nano-Fit BMI | Yes | Yes: Micro-Fit BMI | No | No | No | No | Yes | No | Yes: Mini-Fit BMI | No | No | No | No | Yes | No | No | No |


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# Product Roadmap

## Fit Families

Pitch (mm)

5.70



Mega-Fit 10AWG TML



Mega-Fit CPA



Mega-Fit 18AWG TML



Mega-Fit ColorLock

4.20



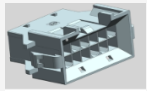
Mini-Fit Max Single Row



Mini-Fit Sigma LMF TML



Mini-Fit Sigma 150C



Mini-Fit Sigma BMI



Mini-Fit 18AWG TML



Mini-Fit Sigma ColorLock

3.00



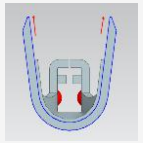
Micro-Fit + SMT



Micro-Fit + Single Row WtW



Micro-Fit+ ColorLock



Micro-Fit+ Add Double Crimp

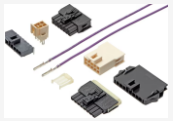
2.50



Nano-Fit 20 AWG UL1569/1007



Nano-Fit WtB, WtW (BMI and Gold flash TML)



Nano-Fit High-Density (20,30,40)

2025

2026

Planned Release

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molex creating connections for life

# Key Product Details

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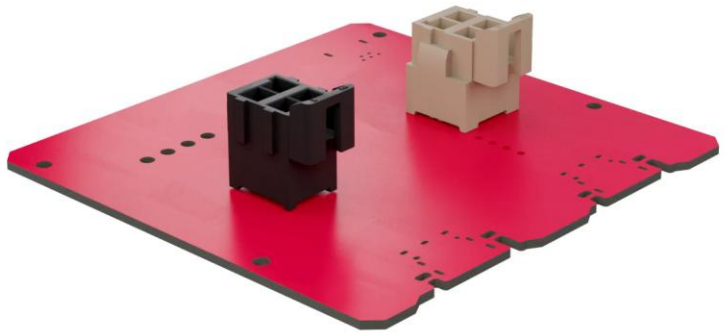
# Polarized and Keying

## Protecting the terminal pins for added safety

- Fit Family power connectors are polarized and keyed to virtually eliminate misalignment and significantly reduces the number of errors associated with improper installation.

Key Benefits:

- Easier assembly on a production line
- Cost savings on the bill of materials by having the same product family
- Cost savings during production of products by reducing errors
- Cost savings to OEMs on reduction of quality errors



Allows for zero chance of mis-mating connectors


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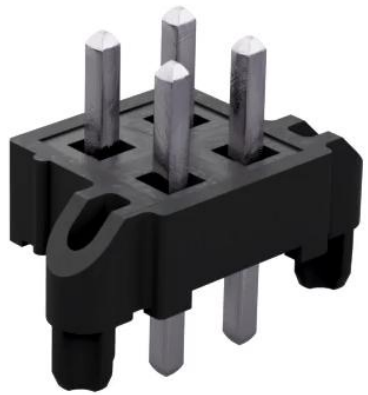
# Isolated Contacts

## Protecting header pins from damage

- Fully isolated contacts that inhibit arcing between contacts and provide the use of higher voltages as well as better electrical isolation between adjacent contacts.

Key Benefits:

- Cost savings to OEMs by reducing damage to the headers
- Cost savings to OEMs by reducing electrical arching and preventing unexpected failures in the field
- Reduction of injuries as it prevents electrical injuries



IP20 rating protects both the contacts and the operator

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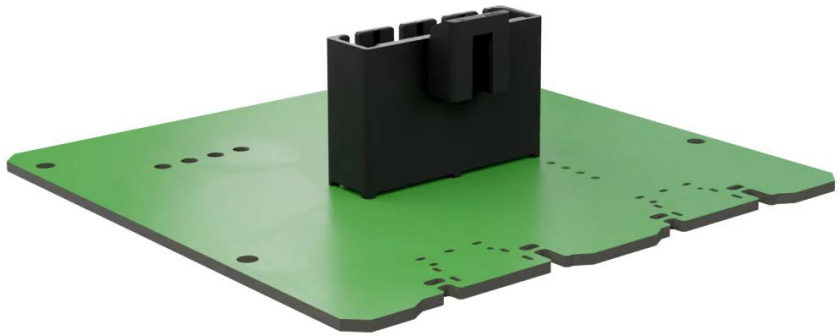
# Scoop Proof

## Eliminating damage from mating and unmating

- Scoop proof contacts are designed to protect critical contacts from damage associated with mating and un-mating. With a scoop proof design, contacts are protected until the mating connectors are properly aligned.

Key Benefits:

- Cost savings to OEMs by reducing damage to the header housings and their pins
- Provides stability and security for the receptacle terminals and the header pins



Damages related to aggressive unaligned mating and un-mating are virtually eliminated

molex © Molex, LLC

# Multiple Contact Points

## Advantages over contact systems with less or with only two current paths

- Multiple points of contacts on terminals are designed to provide a variety of critical contact points between the terminal and the mating contact point. This is crucial for reliable electrical connectivity in any application.

Key Benefits:

- Engages a stable and reliable path of current
- Provides availability for Hot plugging power connectors to be mated/unmated without having to turn off the power source
- Saves OEMs money and time by not closing down a power source



Ensures proper and long-term performance and reliability

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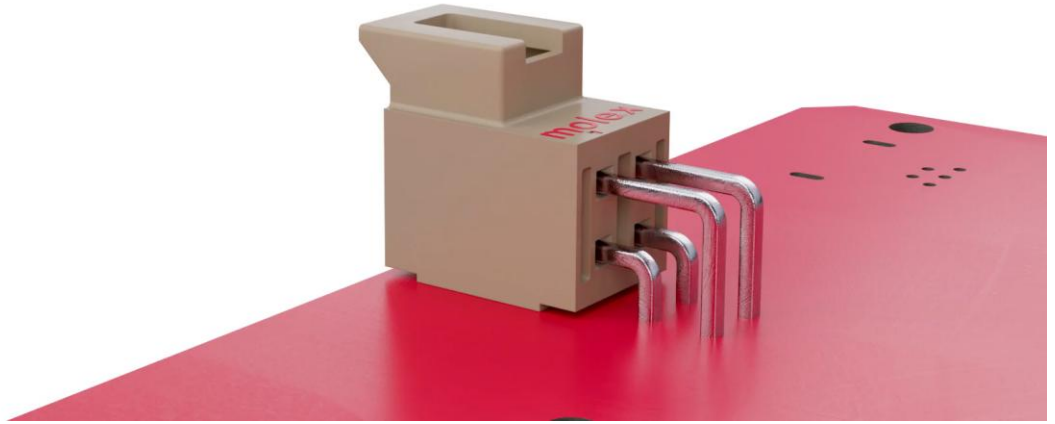
# Positive Lock

## Ease of assembly and secure retention to mating tabs

- Positive locking latches are designed with an audible click to give operators feedback that the parts have been securely mated.
- In addition, positive locking also prevents accidental un-mating from shock, vibration or moderate strain being placed on the cable

Key Benefits:

- Saves OEMs money by preventing accidental un-mating from shock, vibration or moderate strain being placed on the cable
- Saves OEM's and contract manufacturers time and cost by audibly signalling a positive lock, indicating that they are fully mated and ultimately prevent assembly errors



Ensures mated connector assemblies will not accidentally disengage. Indicates to the operator that the part is fully mated through audible click


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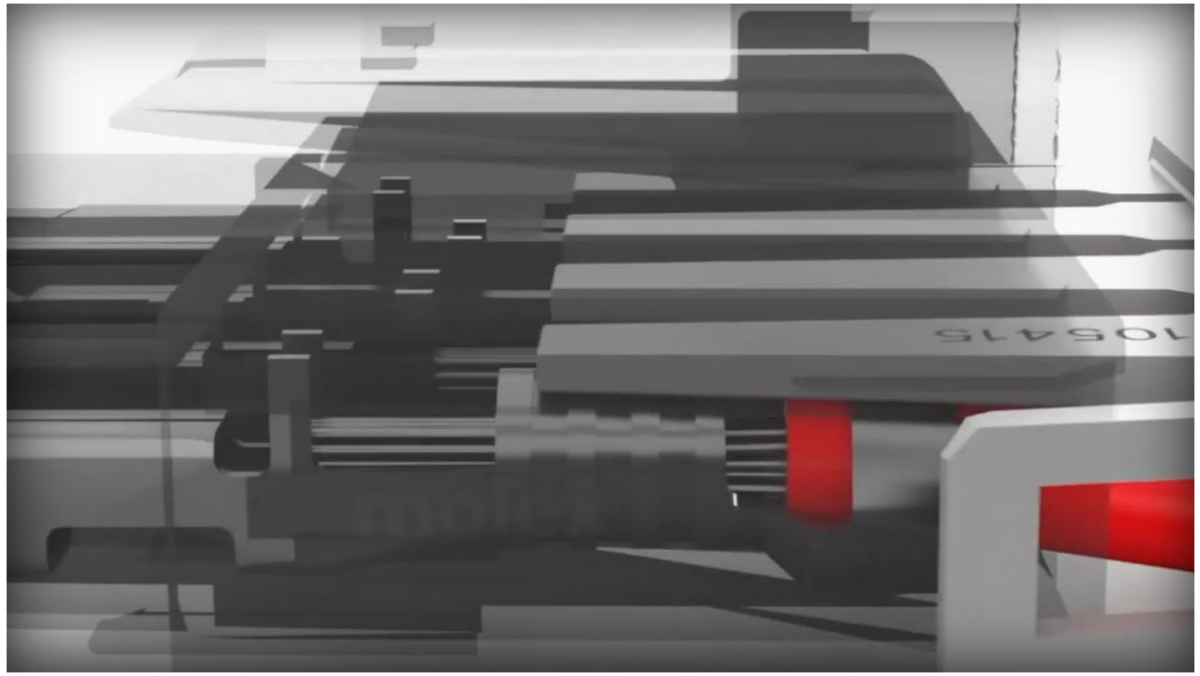
# Terminal Position Assurance

## Fixing terminal backout issues

- TPAs are snapped into place on the mating face of a connector after the connector is populated with terminals, a TPA holds terminals in correct alignment for mating and prevents them from being removed.

Key Benefits:

- Low-cost secondary locking mechanism
- Prevents OEM quality issues ultimately saving time and money
- Helps prevent stress on the electrical contacts during the assembly process



Ensures terminals are fully seated in housing to reduce back-out.
Retains terminals if main retention feature fails

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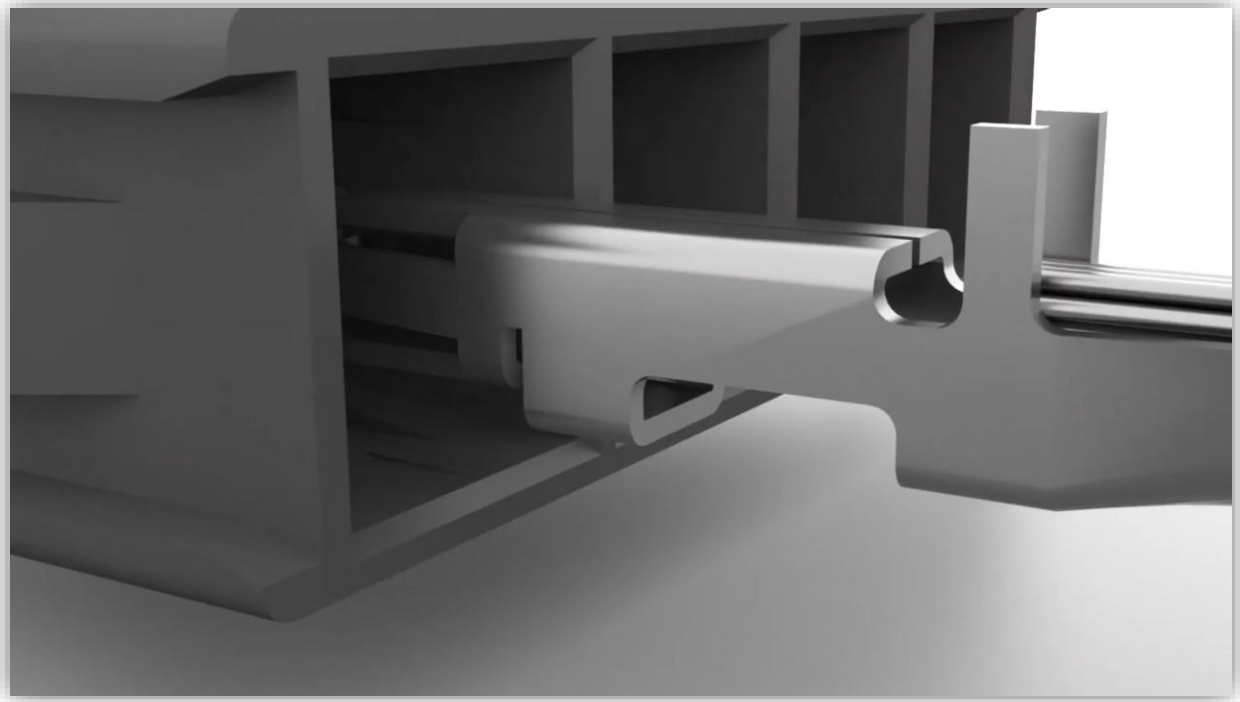
# Tangless Terminals

## Eliminating damage during mating

- Molex tangless terminals provide safety for the terminals during packaging and assembly insertion for manufacturers and cable harness assembly teams.

Key Benefits:

- Cost savings to OEMs by reducing quality issues during the assembly process
- Cost and time savings by reducing damage of terminals during the shipping and handling process



Ensures safety and security of terminals during packing and shipping. Provides a more robust terminal design

molex © Molex, LLC

# Reflow Capable Headers

## Saves customers money by reducing labor and assembly costs

- Reflow soldering is the largest method of connector termination, attaching surface mount components to printed circuit boards (PCBs). The goal of the process is to form acceptable solder joints by first pre-heating the components/PCB/solder paste and then melting the solder without causing damage by overheating.

Key Benefits:

- Designed to be automated assembly–ready, which can optimize installation times
- Provides reduction in human error and saves significant processing costs to OEMs

Reflow soldering is the most widely used form of soldering for PCB assembly both in mass production and for prototype PCB assembly. Reflow soldering is reliable and effective for all pitches of leads and pads, enabling very high-quality circuit boards to be manufactured.


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# Sealed Protection

## Helps protect the electrical contacts and TPAs inside of the seal

- Mini-Fit Sigma Sealed Wire-to-Wire Connectors utilize traditional Mini-Fit TPA2 terminals and wire gauges while providing protection from water, foam and dust debris ingress

Key Benefits:

- Saves OEMs and contract manufacturers time and money by reducing quality issues of the end design
- Provides moisture, dust and debris protection for high value designs



Protective rubber cap ensures quality seal to the connector and to the associated panel

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# Blind Mate Interface

## Key Products



Nano-Fit



Micro-Fit



Mini-Fit

### FEATURES

- Self-aligning interface enables the operator to mate connectors in hard-to-reach areas
- Decreases assembly time and errors for a wide range of applications
- Markets include commercial, consumer, and enterprise industries

**A valuable option that will eliminate misalignment and significantly reduce the number of errors associated with improper installation**




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# USCAR2

## (US Auto Makers connector test specification) Vibration and shock

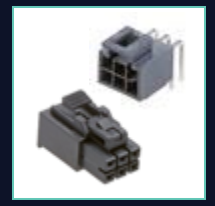
### LOW POWER PRODUCTS WITH USCAR2 RATING



Mega-Fit



Ultra-Fit



Nano-Fit

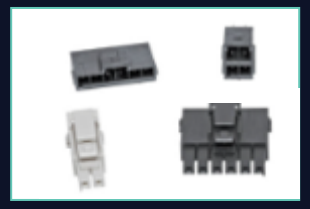


Micro-Fit



Super Sabre





Squba, Micro-Fit+, Mini-Fit, Mini-Fit Sigma

**** Testing pending***

THESE CONNECTORS ARE **NOT** SUITABLE FOR ENGINE AND SAFETY APPLICATIONS

## SAE Definition[1]

This specification covers performance testing at all phases of development, production, and field analysis of electrical terminals, connectors, and components that constitute the electrical connection systems in road vehicle applications that are: low voltage (0 to 20 VDC) or Coaxial.

## Test Summary

| | | |
|---|---|---|
| **Vibration / Mechanical Shock (SAE/USCAR2)** | USCAR2 Rev 6 per sequence M per section 5.9.6, Classification: V1, S1, T2<br><br>Shock: 35 G, 10 shocks per axis<br><br>Vibration: 8 hours per axis, 1.81 G | No discontinuity of resistance exceeds 7.0 Ω for more than 1 microsecond during Vibration & Shock<br><br>Dry Circuit Resistance: 10mΩ Max change for initial. (less the appropriate conductor resistance); Voltage drp was not evaluated |

1.https://global.ihs.com/doc_detail.cfm?document_name=SAE%20USCAR%2D2&item_s_key=00305481


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creating connections for life

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