

1. SUBJECT:

This Application Specification covers application guidelines for the MICRO-FIT PLUS 3.00 mm (.118 inch) centerline (pitch) wire to board, wire to wire connector system with tin and gold plating terminated with combinations of 16 to 30 AWG stranded copper wire using crimp technology.

2. PURPOSE:

Instruct users to use the product correctly.

3. REFERENCE:

See the appropriate sales drawings for information on specific part numbers and materials.

4. DEFINITIONS:

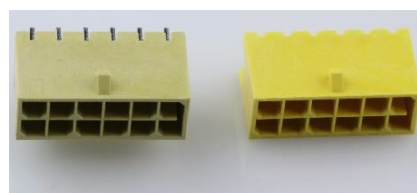
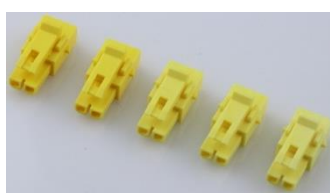
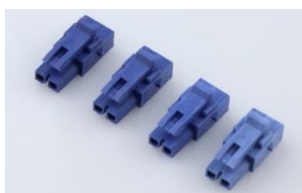
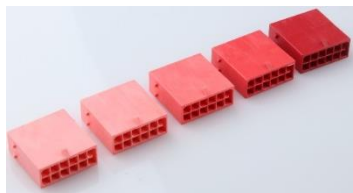
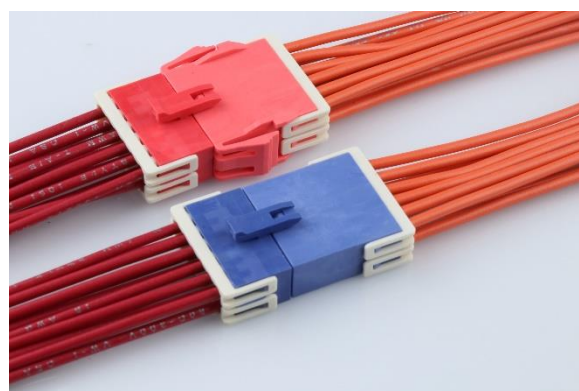
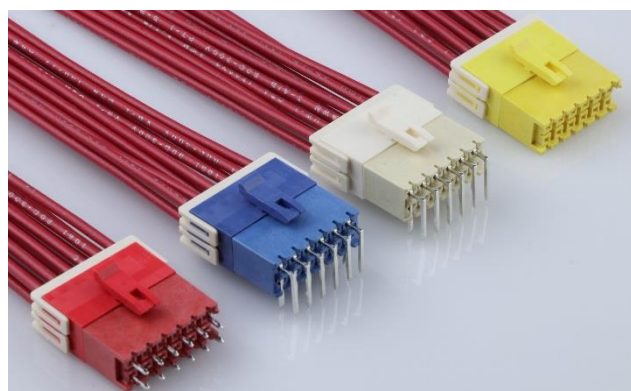
| SERIES NUMBER | DEFINITION |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 206460 | Female Crimp Terminal |
| 215953 | Male Crimp Terminal |
| 206461 | Receptacle Housing, Dual Row |
| 215759 | Receptacle Housing, Single Row |
| 215922 | Plug Housing |
| 206462 | TPA |
| 212528 | Header Assembly, Dual Row, Right Angle, Plastic Peg, Through Hole |
| 206832, 224246 | Header Assembly, Dual Row, Vertical, Through Hole |
| 215760 | Header Assembly, Single Row, Right Angle, Plastic Peg, Through Hole |
| 216571 | Header Assembly, Single Row, Vertical, Through Hole |
| 218216 | Header Assembly, Dual Row -Right Angle, Nail, SMT -Right Angle, Clip, SMT -Vertical, Nail, SMT -Vertical, Clip, SMT - Right Angle, Clip, Through Hole |
| 218989 | Header Assembly, Single Row -Right Angle, Nail, SMT -Right Angle, Clip, SMT -Vertical, Nail, SMT -Vertical, Clip, SMT |
| 223794 | Plug Housing, Single Row |

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| REVISION DESCRIPTION | MICRO FIT + APPLICATION SPEC | | | | | | |
|----------------------|------------------------------|------|------------|----------|--------------------------------|----------|--------|
| CHANGE NO. | 798345 | | | DOC TYPE | DOC TYPE DESCRIPTION | DOC PART | SERIES |
| REVISED BY | VENKAS5 | DATE | 2024/09/16 | PS | APPLICATION SPECIFICATION WORD | 000 | 206460 |
| REV APPR BY | MRAMAKRISHNA | DATE | 2024/09/17 | | | | |
| INITIAL RELEASE | | | CUSTOMER | | DOCUMENT NUMBER | REVISION | SHEET |
| INITIAL DRWN | ZIXUAQ | DATE | 2022/11/28 | | 2064600001-AS | B1 | 1 OF 6 |
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5. PROCEDURE:
Appearance:

- Parts conform to class "B" requirements of cosmetic specification PS-45499-002 except where noted on the sales drawings.
- There is no influence in the product performance though the black spots or bubbles etc. might be confirmed to the plastic part of this product and the shade might be different (discoloration by aged due to aging etc.).
- There is no influence of product performance with difference in color shades of receptacles and headers.


Acceptable Color variation within same parts

Acceptable Color variation within mating parts
Connector Application

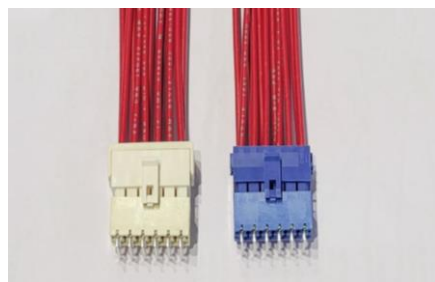
- This connector system is designed to mate gold plating to gold plating OR tin plating to tin plating. Never cross mate tin plated parts to gold plated parts.
- This connector system is not designed for current sharing (i.e., splitting one current load across multiple circuits)
- Connectors are not to be mated or unmated while circuits are live except per the current interrupt rating listed in product specification: 2064600000-PS
- UL rating only maintained when used with Molex application tooling
- The product was tested and qualified with Molex application tooling
- Do not attempt to mate wrong polarization parts. This will cause physical failure (Cracks/stubbing/ excessive mate -unmate force) of the parts. Such parts must not be re-used.

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Incorrect mating: The Polarization feature resists the mating. However, with excessive force, the parts will mate, causing the header housing to crack. Refer Product Specification for force limits.



Correct mating: The Polarization feature self-aligns the mating parts, such that the latch on the receptacle touches the ramp on header without any resistance.



Correct mating: The connector halves are correctly mated within the mate force limits specified in the Product Specification.

Packaging

- The parts should remain in the original Molex packaging until ready for use to prevent damage.

Chemical Exposure

- Do not store terminals or header assemblies near any chemicals listed below as they may cause corrosion in the terminal contacts.

Alkalis Ammonia Citrates Phosphates Citrates Sulfur Compounds
Amines Carbonates Nitrites Sulfur Nitrites Tartrates

Crimped Terminal Extraction

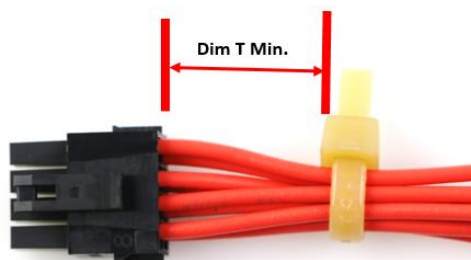
- Female terminal extraction tool: See Molex part# 11030043 instructions online on website. Do not reuse terminals that have been removed with the extraction tool. The receptacle housing can be reused if it was not damaged.

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- **Minimum wire bend, cable tie or twist location**

| CKT Size | | Dim T Min. |
|----------|----|-----------------|
| 2-6 | | 0.50" (12.7mm) |
| 7 | 8 | 0.75" (19.1mm) |
| 10 | 12 | 1.00" (25.40mm) |
| 14 | 16 | 1.25" (31.75mm) |
| 18 | 20 | 1.50" (38.09mm) |



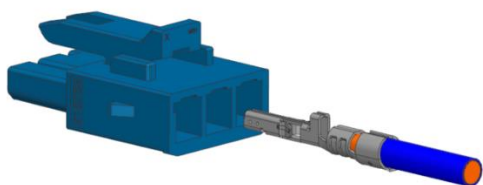
- The "T" dimension defines a "free" length of wire, or a length of wire that is not subject to significant bias by external factors such as a wire tie, wire twisting, or other means of bending or deforming of the wires that repositions them from their natural relaxed state or location where they enter the housing. This dimension is a general recommendation and may need to be adjusted for different wire gauges and wire type and insulation thickness and insulation material.
- Wires are to be dressed in such a manner to allow the terminals to float freely in the receptacle pocket.

Connector Testing

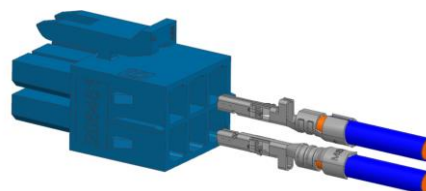
- Do not use Micro fit + connectors as test parts, they are not intended to be used with repeated mating. Follow durability cycles as listed in 2064600000-PS.

Crimped Terminal Insertion

- Terminals are inserted in opposite orientation for top and bottom row. Details refer to below **pictures**.



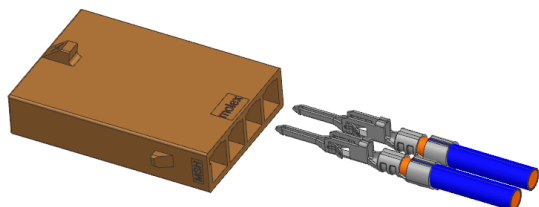
Single Row Receptacle –
Terminal position into the housing



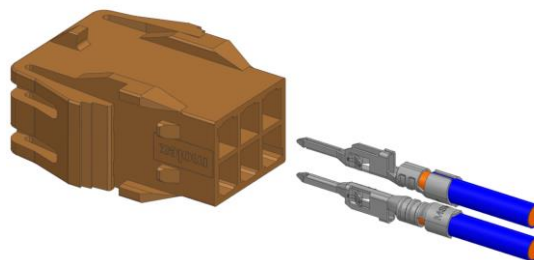
Dual Row Receptacle –
Terminal position into the housing

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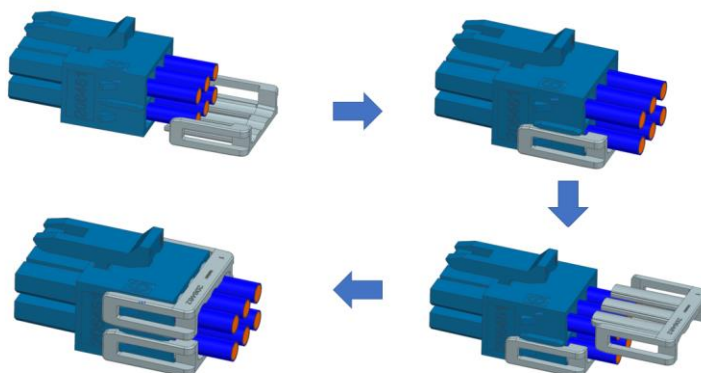
Single Row Plug –
Terminal position into the housing



Dual Row Plug –
Terminal position into the housing

- Ensure terminals are fully seated and locked during terminal insertion to the receptacle housing

TPA Assembly over the wires



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Crimp Terminal Appearance

- Forming marks on female terminal are normal. These are due to stretching of the plating during the forming process and are superficial cracks on the plating surface. Refer to cosmetic specification PS-45499-002.


Forming Mark
Crimp Terminal Handling

- Due to exposed terminal interface, keep crimp terminals on prepackaged reel until they are crimped onto wires. Do not precut and bulk pack terminals due to risk of damaging the contact interface. Store and handle crimped terminals so the interface does not make contact with other terminals or foreign objects. If terminal interface is damaged, please discard prior to assembly.

Crimping

- For acceptable crimp tools and specifications see application tooling section on Molex.com listed for each terminal part number.
- Use with multi strand wire only. Single strand wire should not be used.
- This female crimp terminal is designed for single wire crimping only, no double wire crimping is allowed.
- Use only Molex specified crimp tooling, refer to Molex.com for acceptable crimp tooling. Crimped terminals must also meet Molex crimp specifications. Using crimp tooling/specifications other than specified voids any product warranties and will negatively impact mechanical and electrical performance.

Header Appearance

- Discoloration in the bandolier carrier area of the pin is inherent to the plating process and is due to the masking effect of the carrier. This discoloration is in a non-functional area of the pin and will not affect the performance of the header assembly. Refer to cosmetic specification PS-45499-002.

Solder Process Temperatures

- Wave Solder: 260°C Max
- Reflow Solder: 260°C Max

Reflow Soldering Profile

- See AS-40000-5013

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