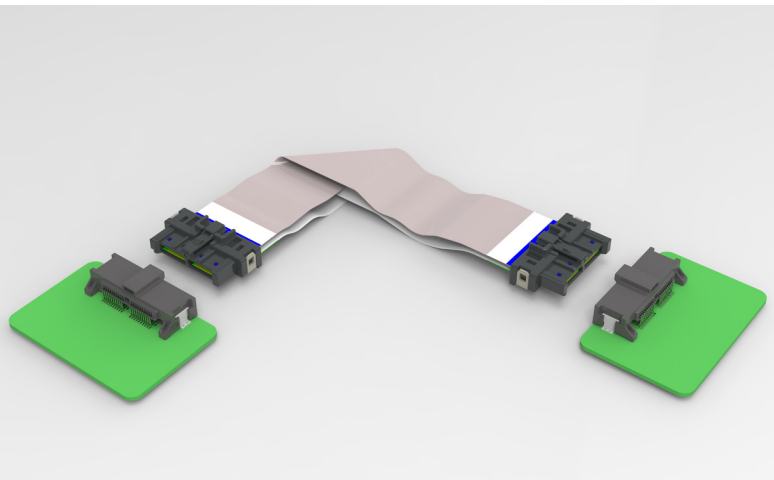


## AMPFOIL ULTRA CONNECTOR

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# SERIES INTRODUCTION

TE Connectivity (TE)'s AMPFOIL ULTRA connector is designed to meet the needs of Flexible Flat Cable (FFC) and Flexible Printed Circuit (FPC) applications, particularly in Battery Energy Storage Systems (BESS). This advanced connector facilitates efficient connections between battery cells and Battery Management Systems (BMS).



## APPLICATIONS

- Battery energy storage
- Battery cell to system
- Battery management system

## PRODUCT HIGHLIGHTS

### Miniaturized size

The AMPFOIL ULTRA connector's noteworthy plug design allows for the parallel installation of two foils, significantly increasing signal density. With a 1.0 mm pitch for the foils and a compact 0.5 mm pitch on the PCB layout, it dramatically conserves board space.

### Reliable Connection and Positive Latch

The AMPFOIL ULTRA connector's positive locking mechanism helps ensure that the connection remains secure, preventing accidental unmating or loosening due to unexpected pull forces from any direction. For added convenience, the plug features a transitional sinking surface, making it easier to unlatch when needed.

### Easily Assembly for Plug

The plug assembly for AMPFOIL ULTRA connector is quick and simple by two steps without any additional tools.

### High Performance in Vibration and Aging

The AMPFOIL ULTRA connector meets the rigorous vibration performance standards of LV 214, achieving Severity 2. For aging performance, the AMPFOIL ULTRA connector complies with the USCAR-2 standard. This confirms the connector's ability to maintain its electrical and mechanical performance even under prolonged, demanding conditions.

## PERFORMANCE

| Series                | AMPFOIL ULTRA Connector |
|-----------------------|-------------------------|
| Pitch                 | 1.0 mm                  |
| Rated voltage (max.)  | 29.6 V AC               |
| Rated current (max.)  | 1A                      |
| Contact resistance    | 30mΩ Max                |
| Withstanding voltage  | 500V AC                 |
| Operating temperature | -40 °C ~ 125 °C         |

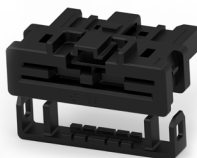
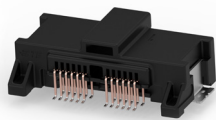
## MATERIALS AND PLATING

| Category               | Material                                       |
|------------------------|--|
| Contact                | Copper alloy                                   |
| Plating in mating area | Gold   |
| Plastic housing        | UL94 V-0 high temperature thermoplastic, black |
| Retention pin          | Copper alloy                                   |

## PRODUCT SPECIFICATION AND INSTRUCTION SHEET

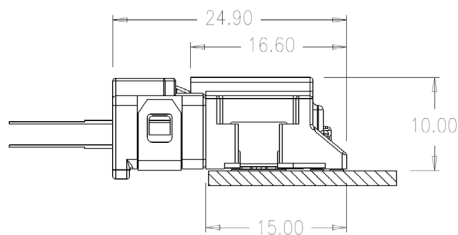
|                           |  |
|---------------------------|--|
| Product specification     | 108-137689                                     |
| Test report               | 501-137689                                     |
| Application Specification | 114-137689 (for receptacle connector assembly) |

## CONFIGURATIONS

| Pos. | Key | Plug kit assembly   | Board-mounting header   |
|------|-----|---|---|
| -    | -   |  |  |
| 40   | 1   | 1-2834723-1   | 1-2834696-1   |
|      | 2   | 2-2834723-1   | 2-2834696-1   |
|      | 3   | 3-2834723-1   | 3-2834696-1   |
|      | 4   | 4-2834723-1   | 4-2834696-1   |
| 36   | 1   | 1-2834723-2   | 1-2834696-2   |
|      | 2   | 2-2834723-2   | 2-2834696-2   |
|      | 3   | 3-2834723-2   | 3-2834696-2   |
|      | 4   | 4-2834723-2   | 4-2834696-2   |
| 32   | 1   | 1-2834723-3   | 1-2834696-3   |
|      | 2   | 2-2834723-3   | 2-2834696-3   |
|      | 3   | 3-2834723-3   | 3-2834696-3   |
|      | 4   | 4-2834723-3   | 4-2834696-3   |
| 28   | 1   | 1-2834723-4   | 1-2834696-4   |
|      | 2   | 2-2834723-4   | 2-2834696-4   |
|      | 3   | 3-2834723-4   | 3-2834696-4   |
|      | 4   | 4-2834723-4   | 4-2834696-4   |
| 24   | 1   | 1-2834723-5   | 1-2834696-5   |
|      | 2   | 2-2834723-5   | 2-2834696-5   |
|      | 3   | 3-2834723-5   | 3-2834696-5   |
|      | 4   | 4-2834723-5   | 4-2834696-5   |

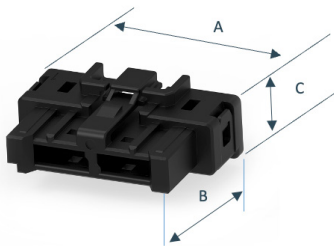
# MATED DIMENSIONS

Units: mm



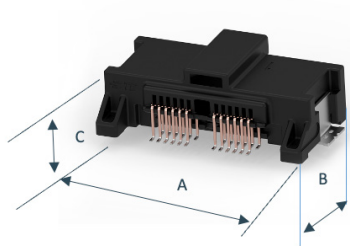
# EXTERNAL DIMENSIONS

Plug kit assembly (status of spacer and foil installed)



| Pos. | Key | Part Number | Dimensions (mm) |       |       |
|------|-----|-------------|-----------------|-------|-------|
|      |     |             | A               | B     | C     |
| 40   | 1   | 1-2834723-1 | 36.80           | 19.50 | 10.80 |
|      | 2   | 2-2834723-1 |                 |       |       |
|      | 3   | 3-2834723-1 |                 |       |       |
|      | 4   | 4-2834723-1 |                 |       |       |
| 36   | 1   | 1-2834723-2 | 34.80           | 19.50 | 10.80 |
|      | 2   | 2-2834723-2 |                 |       |       |
|      | 3   | 3-2834723-2 |                 |       |       |
|      | 4   | 4-2834723-2 |                 |       |       |
| 32   | 1   | 1-2834723-3 | 32.80           | 19.50 | 10.80 |
|      | 2   | 2-2834723-3 |                 |       |       |
|      | 3   | 3-2834723-3 |                 |       |       |
|      | 4   | 4-2834723-3 |                 |       |       |
| 28   | 1   | 1-2834723-4 | 30.80           | 19.50 | 10.80 |
|      | 2   | 2-2834723-4 |                 |       |       |
|      | 3   | 3-2834723-4 |                 |       |       |
|      | 4   | 4-2834723-4 |                 |       |       |
| 24   | 1   | 1-2834723-5 | 28.80           | 19.50 | 10.80 |
|      | 2   | 2-2834723-5 |                 |       |       |
|      | 3   | 3-2834723-5 |                 |       |       |
|      | 4   | 4-2834723-5 |                 |       |       |

Board-Mounting Header



| Pos. | Key | Part Number | Dimensions (mm) |       |       |
|------|-----|-------------|-----------------|-------|-------|
|      |     |             | A               | B     | C     |
| 40   | 1   | 1-2834696-1 | 40.19           | 16.60 | 10.00 |
|      | 2   | 2-2834696-1 |                 |       |       |
|      | 3   | 3-2834696-1 |                 |       |       |
|      | 4   | 4-2834696-1 |                 |       |       |
| 36   | 1   | 1-2834696-2 | 38.19           | 16.60 | 10.00 |
|      | 2   | 2-2834696-2 |                 |       |       |
|      | 3   | 3-2834696-2 |                 |       |       |
|      | 4   | 4-2834696-2 |                 |       |       |
| 32   | 1   | 1-2834696-3 | 36.19           | 16.60 | 10.00 |
|      | 2   | 2-2834696-3 |                 |       |       |
|      | 3   | 3-2834696-3 |                 |       |       |
|      | 4   | 4-2834696-3 |                 |       |       |
| 28   | 1   | 1-2834696-4 | 34.19           | 16.60 | 10.00 |
|      | 2   | 2-2834696-4 |                 |       |       |
|      | 3   | 3-2834696-4 |                 |       |       |
|      | 4   | 4-2834696-4 |                 |       |       |
| 24   | 1   | 1-2834696-5 | 32.19           | 16.60 | 10.00 |
|      | 2   | 2-2834696-5 |                 |       |       |
|      | 3   | 3-2834696-5 |                 |       |       |
|      | 4   | 4-2834696-5 |                 |       |       |

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## About TE Connectivity

TE Connectivity plc (NYSE: TEL) is a global industrial technology leader creating a safer, sustainable, productive, and connected future. Our broad range of connectivity and sensor solutions enable the distribution of power, signal and data to advance next-generation transportation, energy networks, automated factories, data centers, medical technology and more. With more than 85,000 employees, including 9,000 engineers, working alongside customers in approximately 130 countries, TE ensures that EVERY CONNECTION COUNTS. Learn more at [www.te.com](http://www.te.com) and on [LinkedIn](#), [Facebook](#), [WeChat](#) and [Instagram](#).

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