

## Quick Reference Guide

### 1.5 mm AMP Mini CT Connector Series

The AMP Mini CT connectors are miniature wire-to-board and wire-to-wire connectors. Like the standard AMP CT connector series, these connectors are tailored for improved harness productivity and feature a compact design with contacts on 1.5 mm pitch. Wire-side connectors can be used to produce a variety of harness styles by fully automatic high-speed assembling machines.

#### FEATURES AND BENEFITS

- 2 kinds of termination method: IDC, crimp
- Discrete wire interconnect
- Circuits range from 2-20 single row, 22-40 dual row
- AWG 24-28
- Both T/H and SMT mounting styles are available
- Kinks for self-retention on boards
- Many components are recognized under the component program of Underwriters Laboratories Inc., file No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

#### PRODUCT APPLICATIONS

- Business equipment
- Industrial machines
- PC, Printer and Fax
- C-TV
- Audio
- Air conditioner
- Routed power & signals
- LED lighting controls
- Indoor & outdoor lighting
- LED illumination

### How to select an AMP Mini CT connector part number

The charts on this page highlight the relationship between the number of contacts (positions) to the part number. Please see the sample chart below that was designed to help you select the correct part number for your needs. For single digit position to dash numbers, attach the digit to the end base number. For double digit position to dash numbers, attach the first digit to the front of the part number, add a dash and the base part number, then follow the base part number with a dash and the second digit.

| Example Base Part Number | Your Criteria                          | Example Position to Dash Selection | End Part Number Based on Criteria |    |     |     |     |            |
|--------------------------|--|------------------------------------|-----------------------------------|----|-----|-----|-----|------------|
|                          |  | Position                           | 8                                 | 9  | 10  | 11  | 12  |            |
| 353293                   | You require and 8 position MT housing  | Dash Number                        | -8                                | -9 | -10 | -11 | -12 | 353293-8   |
| 353293                   | You require and 12 position MT housing | Dash Number                        | -8                                | -9 | -10 | -11 | -12 | 1-353293-2 |

### Mass Termination (MT) VS. Crimp Poke

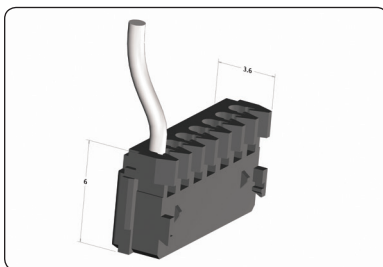
**MT**

- Time savings
- Preloaded IDC contacts
- Automation
- Mates with all headers

**Crimp Poke**

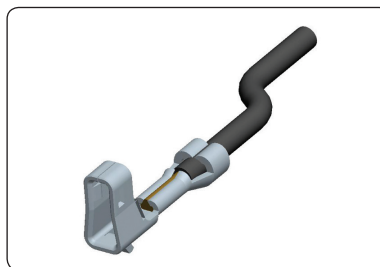
- Cost effective
- Flexibility (AWG)
- Manual labor
- Mates with all headers

MT AMP Mini CT Housing : 353293



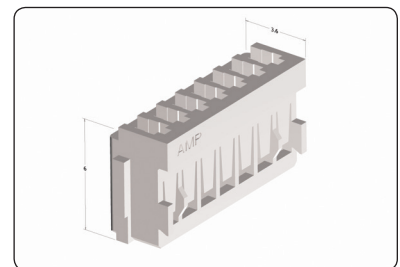
Unstripped wires inserted into MT housing.

Crimp AMP Mini CT Contact : 353907



Contact crimped onto a stripped wire to be inserted into a crimp housing.

Crimp AMP Mini CT Housing : 353908



### Cable Side Connectors

**RECEPTACLE CONNECTORS (WIRE APPLICATION)**

| Description   | PN     | Photo | Position to Dash |    |    |    |    |    |    |    |                      |     |     |     |     |     |     |     |     |     |     |
|---|--------|-------|------------------|----|----|----|----|----|----|----|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|   |        |       | 2                | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10                   | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| MT receptacle housing - AWG : 26-28   | 353293 | A     | -2               | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10                  | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |
| Mating Part Numbers: 292206; 292207; 292227; 292228; 292239; 292231; 292215; 292208; 292216 |        |       |                  |    |    |    |    |    |    |    | Specifications: C, X |     |     |     |     |     |     |     |     |     |     |

**CONTACTS**

| Description              | PN       | Photo | Specifications |
|--------------------------|----------|-------|----------------|
| Reel-AWG: 24-28          | 353907-1 | B     | B,Y            |
| Loose Piece - AWG: 24-28 | 353918-1 | B     | B,Y            |

**CRIMP TYPE HOUSING**

| Description   | PN     | Photo | Position to Dash |    |    |    |    |    |    |    |                   |     |     |     |     |     |     |     |     |     |     |
|---|--------|-------|------------------|----|----|----|----|----|----|----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|   |        |       | 2                | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10                | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| Crimp receptacle housing - White  | 353908 | C     | -2               | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10               | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |
| Mating Part Numbers: 292206; 292207; 292227; 292228; 292239; 292231; 292215; 292208; 292216 |        |       |                  |    |    |    |    |    |    |    | Specifications: B |     |     |     |     |     |     |     |     |     |     |

### Cable Side Connectors : Tooling Options

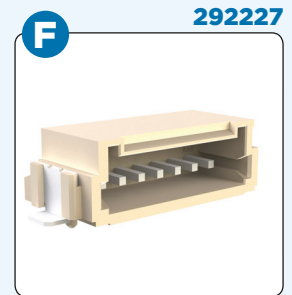
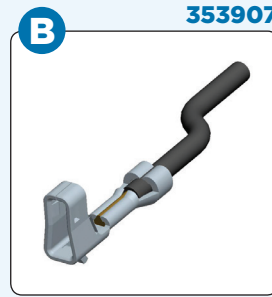
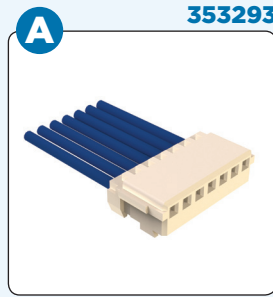
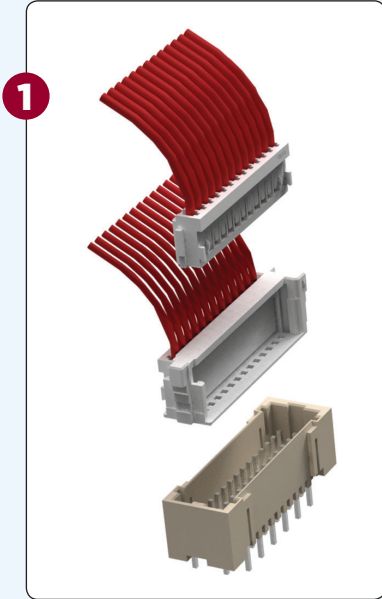
**APPLICATION TOOLING**

| AMP Mini CT PN | Description           | Tooling PN | Tooling Description  | Application Specification | Instruction Sheet |
|----------------|-----------------------|------------|----------------------|---------------------------|-------------------|
| 393293         | MT Housing            | 937317-1   | Pistol Tool          | 114-5223                  | 411-5826          |
| 353907-1       | Crimp Contact - Strip | 1426169-1  | Leadmaker Applicator | 114-5245                  | 411-78049         |
|                |                       | 1426169-2  | Bench Application    | 114-5245                  | 411-78049         |
| 179518-1       | Crimp Contact - Loose | 1729069-1  | Hand Tool            | 114-5245                  | 411-78106         |

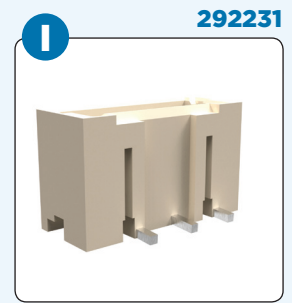
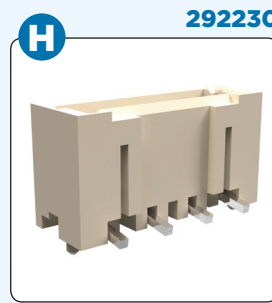
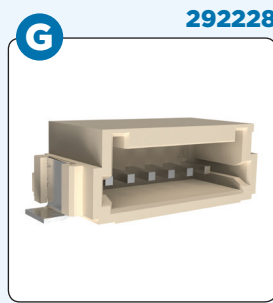
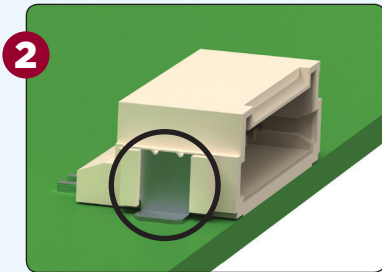
\* Applicators listed are used in the AMP-O-ELECTRIC Model G, AMP 3K/40 and AMP 5K/40 Terminators. Call the Tooling Assistance Center at 800-722-1111 for applicator numbers for Automatic Cut, Strip and Terminate Leadmakers.  
 \*\* Power tooling options are also available. Call Tooling Sales at 888-777-5917 (717-810-2080) for more information

Photo Key

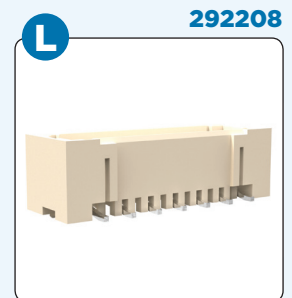
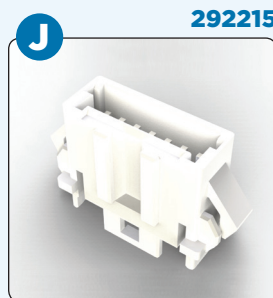
Dual Row Assemblies



Solder Pad



Locating Boss



1 Dual Row Assemblies

Two single row receptacle housings, either MT or crimp, that use a holder to mate with a dual row header.

2 Solder Pad

Designed to secure the SMT headers onto the PCB

3 Locating Boss

A mechanical feature that helps orientate the headers onto the PCB.



| SINGLE ROW POST HEADER ASSEMBLIES : BOARD-MOUNT |        |          |                  |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|---|--------|----------|------------------|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Description                                     | PN     | Photo    | Position to Dash |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|   |        |          | 2                | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| T/H Type Horizontal-Mount Type, w/o Boss        | 292206 | <b>D</b> | -2               | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |
| T/H Type Vertical-Mount Type, w/ Boss           | 292207 | <b>E</b> | -2               | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |
| SMT Type Horizontal-Mount Type, w Boss          | 292227 | <b>F</b> | -2               | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |
| SMT Type Horizontal-Mount Type, w/o Boss        | 292228 | <b>G</b> | -2               | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |
| SMT Type Vertical-Mount Type, w Boss            | 292230 | <b>H</b> |                  | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |
| SMT Type Vertical-Mount Type, w/o Boss          | 292231 | <b>I</b> |                  | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |

Mating Part Numbers: (MT) 353293 or (Crimp) 353908 w/ 353907-1 or 353918-1      Specifications: A, X

| SINGLE ROW POST HEADER ASSEMBLIES : PANEL-MOUNT |        |          |                  |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|---|--------|----------|------------------|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Description                                     | PN     | Photo    | Position to Dash |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |
|   |        |          | 2                | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| Single Row Panel-Mount                          | 292215 | <b>J</b> | -2               | -3 | -4 | -5 | -6 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -20 |

Mating Part Numbers: (MT) 353293 or (Crimp) 353908 w/ 353907-1 or 353918-1      Specifications: A, X

| DUAL ROW HEADERS                             |        |          |                  |     |     |     |     |     |     |     |     |     |  |
|--|--------|----------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Description                                  | PN     | Photo    | Position to Dash |     |     |     |     |     |     |     |     |     |  |
|  |        |          | 22               | 24  | 26  | 28  | 30  | 32  | 34  | 36  | 38  | 40  |  |
| Receptacle Housing Connector Mounting Holder | 353294 | <b>K</b> | -22              | -24 | -26 | -28 | -30 | -32 | -34 | -36 | -38 | -40 |  |

Note: Two receptacle housings are applied per holder and one holder per dual row header  
Mating Part Numbers: 2 x (MT) 353293 or 2 x (Crimp) 353908 w/ 353907-1 or 353918-1      Specifications: C, X

| DUAL ROW POST HEADER ASSEMBLIES : BOARD-MOUNT     |        |          |                  |     |     |     |     |     |     |     |     |     |  |
|---|--------|----------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Description                                       | PN     | Photo    | Position to Dash |     |     |     |     |     |     |     |     |     |  |
|   |        |          | 22               | 24  | 26  | 28  | 30  | 32  | 34  | 36  | 38  | 40  |  |
| Dual Row T/H Type/ Vertical-Mount                 | 292208 | <b>L</b> | -22              | -24 | -26 | -28 | -30 | -32 | -34 | -36 | -38 | -40 |  |
| Dual Row SMT Type/ Vertical Mount Type w/Boss     | 292229 | <b>M</b> |                  | -24 | -26 | -28 | -30 | -32 | -34 | -36 | -38 | -40 |  |
| Dual Row T/H Type/ Horizontal Mount w/ Board Lock | 292262 | <b>N</b> | -22              | -24 | -26 | -28 | -30 | -32 | -34 | -36 | -38 | -40 |  |

Mating Part Numbers: 353294 w/ 2 x MT or 2 x Crimp Single Row Housings      Specifications: A, C, X

| DUAL ROW POST HEADER ASSEMBLIES : PANEL-MOUNT |        |                  |     |     |     |     |     |     |     |     |     |  |  |
|---|--------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Description                                   | PN     | Position to Dash |     |     |     |     |     |     |     |     |     |  |  |
|   |        | 22               | 24  | 26  | 28  | 30  | 32  | 34  | 36  | 38  | 40  |  |  |
| Dual Row Panel-Mount                          | 292216 | -22              | -24 | -26 | -28 | -30 | -32 | -34 | -36 | -38 | -40 |  |  |

Mating Part Numbers: 353294 w/ 2 x MT or 2 x Crimp Single Row Housings      Specifications: C, X

**4 Panel-Mount**

Transmits signal through a notch in a panel or a PCB and requires two housings to complete a circuit.

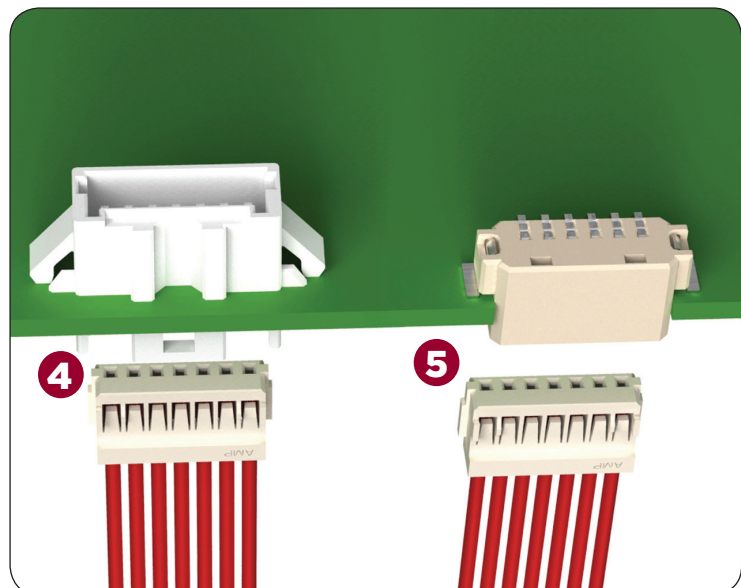
**5 SMT Inverted Thru Board**

Positioned thru a cutout or notch in a PCB and requires only one housing to complete a circuit. The innovative design eliminates wire dress management issues.

| INVERTED THRU BOARD |         |          |                  |    |    |    |    |
|---------------------|---------|----------|------------------|----|----|----|----|
| Description         | PN      | Photo    | Position to Dash |    |    |    |    |
|                     |         |          | 2                | 3  | 4  | 5  | 6  |
| SMT Type Thru Board | 2106091 | <b>O</b> | -1               | -2 | -3 | -4 | -5 |

Mating Part Numbers: MT 353293 or crimp 353908 w/ 333907-1 or 333918-1      Specifications: D, Z

| MINI CT CABLE ASSEMBLY |         |                  |    |    |    |    |
|------------------------|---------|------------------|----|----|----|----|
| Description            | PN      | Position to Dash |    |    |    |    |
|                        |         | 2                | 3  | 4  | 5  | 6  |
| Cable Assembly         | 2058943 | -1               | -2 | -3 | -4 | -5 |

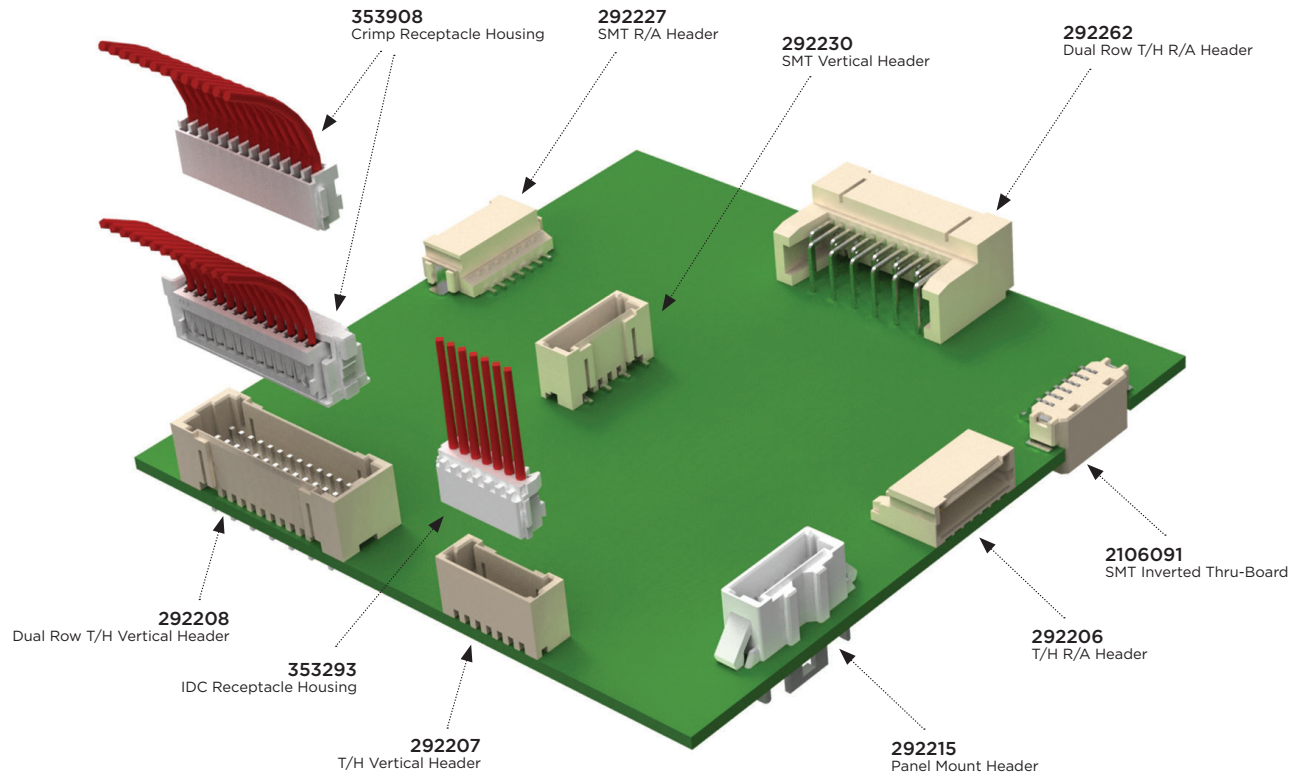




### Product/Application Specification

| RATINGS       |           |              |                          |        |        |        |              | Application Specs |           |
|---------------|-----------|--------------|--------------------------|--------|--------|--------|--------------|-------------------|-----------|
| Product Specs |           | Voltage      | Operating Current (Amps) |        |        |        | Temperature  |                   |           |
|               |           |              | 24 AWG                   | 26 AWG | 28 AWG | 30 AWG |              |                   |           |
| A             | 108-60018 | 50 V (AC/DC) | —                        | 2      | 1      | —      | -30 to 105°C | X                 | 114-5223  |
| B             | 108-60025 | 50 V (AC/DC) | 3                        | 2.5    | 1.5    | —      | -30 to 105°C | Y                 | 114-5245  |
| C             | 108-5525  | 50 V AC      | —                        | 2      | 2      | —      | -65 to 105°C | Z                 | 114-13245 |
| D             | 108-2376  | 50 V (AC/DC) | 3                        | 2.5    | 1.5    | —      | -30 to 105°C |                   |           |

### AMP Mini CT Mount Styles



### AMP Mini CT Design Kits\*

| Design Kits |   |
|-------------|---|
| PN          | Description   |
| 2110828-1   | AMP Mini CT T/H Deluxe Vertical and Right Angle Kit         |
| 2110828-2   | AMP Mini CT T/H Vertical Header Kit                         |
| 2110828-3   | AMP Mini CT T/H Right Angle Header Kit                      |
| 2110828-4   | AMP Mini CT SMT Deluxe Vertical and Right Angle Kit         |
| 2110828-5   | AMP Mini CT SMT Vertical Header                             |
| 2110828-6   | AMP Mini CT SMT Right Angle Kit                             |
| 2110828-7   | AMP Mini CT Deluxe T/H and SMT Vertical and Right Angle Kit |
| 2110828-8   | AMP Mini CT Deluxe T/H Vertical and Right Angle Kit         |
| 2110829-8   | AMP Mini CT Deluxe SMT Vertical and Right Angle Kit         |

\*Design kits are designed and assembled by Waldom and are available for purchase through your local distribution channel.

## Frequently asked questions

### What wire gauge will you be using?

There is more flexibility with AWG when using Crimp (24-28 AWG) vs. MT (26-28 AWG).

### Are the connectors available for IDC?

Yes, we offer an MT version that is preloaded with IDC contacts.

### Is your process automated?

MT housings are suitable for automated processes.

### What current, voltage and operating temperature is required?

Please see product specification information on the charts on page 3 of this document.

### Which is a more standard header, with or without a locating boss?

The most standard headers tend to have a locating boss as it makes it easier for the customer to align the connector onto their board.

**What special retention mechanisms are available to provide stability?** The TE T/H headers have a staggered tine design to provide stability.

### What are my tooling options?

TE offers comprehensive tooling options including manual pistol-grips, manual mini-press, pneumatic mini-press, semi-auto DECAM and an automatic DECAM tool. For more information, please visit [www.tooling.te.com](http://www.tooling.te.com).

### What if my application is constrained for space with the 1.5 mm Mini CT?

TE continues to develop and design interconnects that meet the needs of miniaturized applications. If your application is constrained for space, browse our HPI products at [www.te.com/products/hpi](http://www.te.com/products/hpi)

### Does TE offer pre-made cable assemblies?

Yes, we do offer single ended Mini CT pigtailed in various lengths often used in lighting applications. Please reference part number 2058943.

## FOR MORE INFORMATION

### TE Technical Support Center

|                   |                       |
|-------------------|-----------------------|
| USA:              | +1 (800) 522-6752     |
| Canada:           | +1 (905) 475-6222     |
| Mexico            | +52 (0) 55-1106-0800  |
| Latin/S. America: | +54 (0) 11-4733-2200  |
| Germany:          | +49 (0) 6251-133-1999 |
| UK:               | +44 (0) 800-267666    |
| France:           | +33 (0) 1-3420-8686   |
| Netherlands:      | +31 (0) 73-6246-999   |
| China:            | +86 (0) 400-820-6015  |

Part numbers in this brochure are RoHS Compliant\*, unless marked otherwise.

\*as defined [www.te.com/leadfree](http://www.te.com/leadfree)

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