



## Quick Reference Guide

# Economy Power Connector System

TE Connectivity's (TE) Economy Power (EP) wire-to-board connector family is widely used for power circuit applications. Based on the proven EP version the new and advanced EP II and EP 2.5 lines offer additional benefits. EP II connectors are rated for 600VAC at up to 11A and thus offer potential for a larger range of applications. Still their electric properties make it an option to mix signal and power in one connector.

EP II connectors offer two levels of mechanical and electrical reliability: A true locking latch prevents the plug housing and post header from vibrating apart, while a Terminal Position Assurance (TPA) device produces a tangible click once a receptacle contact is fully seated. A visual aid confirms that the contact is home plus it provides easy access to a probe tip for continuity testing. The new EP 2.5 family is a compact version based on a .100" [2.5mm] pitch ideally suited for PC board space restraints. Up to 20 positions make it the perfect choice for combining power and signal.

### FEATURES AND BENEFITS

- Positive audible latch designed for easier mating & unmating
- Polarization tabs help prevent post misalignment
- Complete product offering with color coded housings
- End to end stackable
- Intermateable to similar competitive products for retrofit applications
- Broad portfolio includes .100, .156, .200 and .312 centerline families.

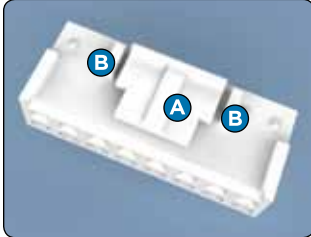
### PRODUCT APPLICATIONS

- Household appliances
- Commercial & building equipment
- HVAC & vending controls
- Industrial machinery & equipment: generators
- Coin changers/vending machines
- Lighting

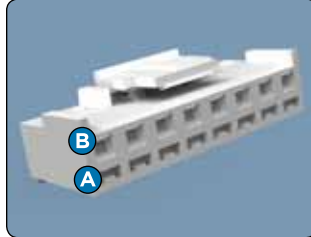
**Electrical and Mechanical Specifications**

| Product                    | Pos  | Current Rating | Centerline  | Voltage Rating | Operating Temperature | Housing Rating | Wire Size |
|----------------------------|------|----------------|-------------|----------------|-----------------------|----------------|-----------|
| Economy Power (EP)         | 1-12 | 7.5            | .156 (3.96) | 250 VAC        | -25°C to 105°C        | UL 94V-0       | 18-22 AWG |
| Economy Power II (EP II)   | 2-12 | 11             | .156 (3.96) | 600 VAC        | -55°C to 105°C        | UL 94V-0       | 16-22 AWG |
| Economy Power 2.5 (EP 2.5) | 2-20 | 3              | .100 (2.50) | 250 VAC        | -55°C to 105°C        | UL 94V-0       | 22-26 AWG |

**Housing Features**



**A** : Positive audible latch on housing helps to ensure complete system mating and provides durability in high vibration applications. **B** : Anti-snag features prevent wires from snagging on the latch.

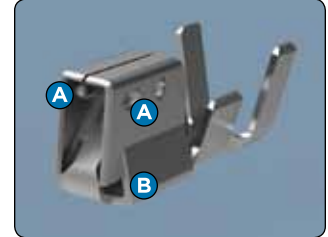


EP II Housing contains **A** window slots for continuity testing simultaneously with **B** contact back-out check.

**Contact Features (EP II)**

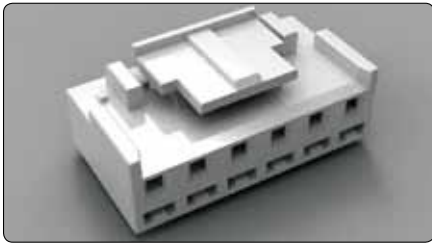


**A** : Lanceless contact design on EP II to ensure reliable contact seating



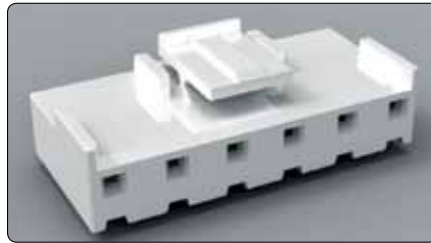
**A** : EP II additional points of contact for increased current rating. **B** : Asymmetrical design prevents mis-insertion.

**Housing\***



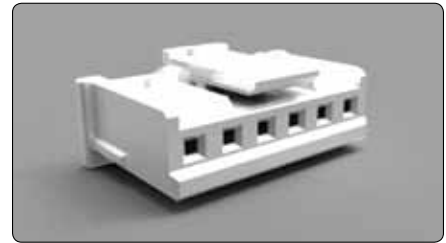
**2132781**

.156 (3.96 mm) EP II Housing



**1744036**

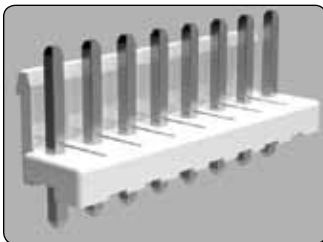
.200 (5.0 mm) EP Housing



**2110992**

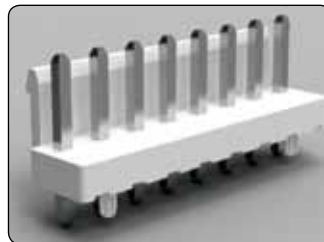
.100 (2.5 mm) EP 2.5 Housing

**Headers\***



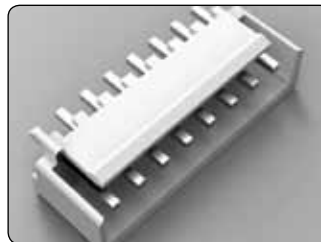
**1123723**

.156 (3.96 mm) low profile header (EP and EP II)



**1744057**

.156 (3.96 mm) low profile post header w/ pegs (EP and EP II)



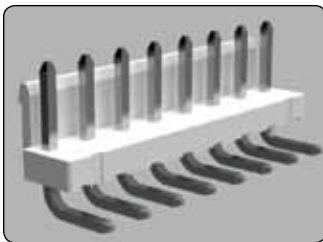
**1877285**

.156 (3.96 mm) Vertical shrouded headers (EP and EP II)



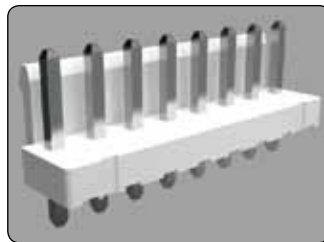
**1123724**

.312 (7.92 mm) straight post header (EP)



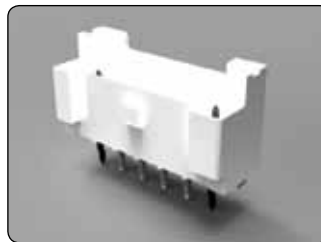
**647676**

.156 (3.96 mm) right angle post header (EP and EP II)



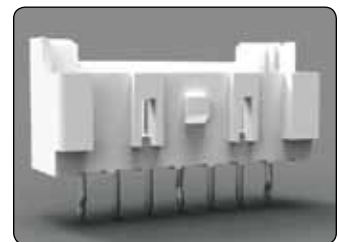
**1744037**

.200 (5.0 mm) straight post header (EP)



**2132230**

.100 (2.5 mm) vertical shrouded header w/ boss (EP 2.5)



**2132415**

.100 (2.5 mm) vertical shrouded header w/o boss (EP 2.5)

\*Base part numbers shown. See following page for specific part numbers.

**Economy Power 2.5 mm (EP 2.5)**

| <b>.100 EP 2.5 CRIMP RECEPTACLE CONTACTS</b> |           |           |
|--|-----------|-----------|
| Phos Bronze, Pre-Tin                         | 26-22 AWG | 8000/reel |
|  |           | 2110989-1 |

**Part Number Ordering : Example for X-2110992-Y Housing\***

**-2 thru -9**  
Substitute dash number listed for "Y", therefore a -2 signifies PN 2110922-2

**1- -0 thru 2- -0**  
Substitute first number for "X" and second number listed for "Y", therefore a 1- -2 signifies PN 1-2110922-2

\* Follow same numbering scheme throughout for other part numbers listed

| <b>.100 EP 2.5 PLUG HOUSINGS</b> |             |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------------|-------------|----|----|----|----|----|----|----|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Position size                    |             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    |
| Housing                          | X-2110992-Y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 | 1- -9 | 2- -0 |

| <b>.100 EP 2.5 VERTICAL SHROUDED HEADERS</b> |             |    |    |    |    |    |    |    |    |       |       |       |       |       |       |       |       |       |       |       |
|--|-------------|----|----|----|----|----|----|----|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Position size                                |             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    |
| With Boss                                    | X-2132230-Y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 | 1- -9 | 2- -0 |
| Without Boss                                 | X-2132415-Y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 | 1- -9 | 2- -0 |

**Economy Power (EP) and EP II**

| <b>.156 ECONOMY POWER CRIMP, RECEPTACLE CONTACTS, BREAKAWAY TPA DEVICE</b> |                     |           |            |             |             |                  |
|--|---------------------|-----------|------------|-------------|-------------|------------------|
|  | Material/Finish     | Wire Size | Strip Form | Loose Piece | TPA         | TPA Type         |
| Economy Power  | Phos Bronze,Pre-Tin | 18-22 AWG | 1123721-1  | 1318912-1   | NA          | NA               |
|  | Brass,Pre-Tin       | 18-22 AWG | 1123721-2  | 1318912-2   | NA          | NA               |
| Economy Power II   | Phos Bronze,Pre-Tin | 18-22 AWG | 1744144-1  | 1744395-1   | 1-2132782-2 | 12 Pos Breakaway |
|  |                     | 16-20 AWG | 1744201-1  | 1744396-1   |             |                  |

| <b>.156 ECONOMY POWER LOW-PROFILE PLUG HOUSINGS</b> |             |           |       |       |       |       |       |       |       |       |       |            |
|---|-------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| Position size                                       |             | 2         | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12         |
| Economy Power                                       | X-1123722-Y | 1- -2     | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 | 1- -9 | 1- -0 | 1- -1 | 1-647690-2 |
| Economy Power II                                    | X-2132781-Y | 2132813-2 | -3    | -4    | -5    | -6    | -7    | -8    | -9    | 1- -0 | 1- -1 | 1- -2      |

| <b>.156 ECONOMY POWER STRAIGHT LOW-PROFILE HEADERS</b> |             |       |       |       |       |       |       |       |       |       |       |            |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| Position size  |             | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12         |
| Bulk Pack  | X-1123723-Y | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 | 1- -9 | 1- -0 | 1- -1 | 1-647689-2 |
| Tube Loaded  | X-1318300-Y | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | 1- -7 | 1- -8 | 1- -9 | 1- -0 | 1- -1 | --         |
| Bulk with Pegs   | X-1744057-Y | -2    | -3    | -4    | -5    | -6    | -7    | -8    | -9    | 1- -0 | 1- -1 | 1- -2      |
| Bulk, High Temperature                                 | X-1744055-Y | -2    | -3    | -4    | -5    | -6    | -7    | -8    | -9    | 1- -0 | 1- -1 | --         |
| Vertical Shrouded                                      | X-1877285-Y | -2    | -3    | -4    | -5    | -6    | -7    | -8    | -9    | 1- -0 | 1- -1 | 1- -2      |

Note : Additional colors available upon request.

| <b>.156 ECONOMY POWER RIGHT-ANGLE LOW-PROFILE POST HEADERS</b> |             |    |    |    |    |    |    |    |    |       |       |       |
|--|-------------|----|----|----|----|----|----|----|----|-------|-------|-------|
| Position size  |             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10    | 11    | 12    |
| Bulk Pack  | X-647676-Y  | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 |
| Bulk, High Temperature   | X-1744056-Y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 |

Note : Additional colors available upon request.

| <b>.312 ECONOMY POWER STRAIGHT POST HEADERS</b> |             |       |       |       |       |       |    |    |    |    |    |    |
|---|-------------|-------|-------|-------|-------|-------|----|----|----|----|----|----|
| Position size                                   |             | 2     | 3     | 4     | 5     | 6     | 7  | 8  | 9  | 10 | 11 | 12 |
| Bulk Pack                                       | X-1123724-Y | 1- -2 | 1- -3 | 1- -4 | 1- -5 | 1- -6 | -- | -- | -- | -- | -- | -- |
| Tube Loaded                                     | X-1318301-Y | 1- -2 | 1- -3 | 1- -4 | 1- -5 | --    | -- | -- | -- | -- | -- | -- |

Note : Additional colors available upon request.

| <b>.200 ECONOMY POWER PLUG HOUSINGS</b> |             |    |    |    |    |    |    |    |    |       |       |       |
|---|-------------|----|----|----|----|----|----|----|----|-------|-------|-------|
| Position size                           |             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10    | 11    | 12    |
| Economy Power                           | X-1744036-Y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 |

Note : Additional colors available upon request.

| <b>.200 ECONOMY POWER POST HEADERS</b> |             |    |    |    |    |    |    |    |    |       |       |       |
|--|-------------|----|----|----|----|----|----|----|----|-------|-------|-------|
| Position size                          |             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10    | 11    | 12    |
| Straight                               | X-1744037-Y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 |
| Right angle                            | X-1744048-Y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1- -0 | 1- -1 | 1- -2 |

Note : Additional colors available upon request.

## Frequently asked questions

### Do I need new tooling to change from EP to EP II housings?

No. The same tooling is used for EP and EP II.

### Is TE's EP 2.5 intermateable with competitors product?

Yes. Our EP 2.5 connectors are intermateable to similar competitive products for retrofit applications

### Is EP, EP II and EP 2.5 available in colors?

Yes. All of these are available in multiple colors.

### What if I have additional product questions?

We've got answers when you need them! You can contact Product Information Specialists by e-mail, telephone or live chat. English, German and Chinese speaking Product Information Specialist are available, providing you with the technical assistance you require.

## FOR MORE INFORMATION

### TE Technical Support Center

|                   |                       |
|-------------------|-----------------------|
| Internet:         | te.com/help           |
| 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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