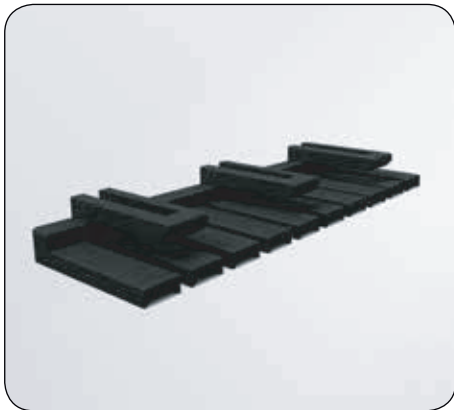


EP 2.5 6-Posn Receptacle Housing with Latch and Tabs, Part Number 1969442-6



EP 2.5 10-Posn TPA Retainer, Part Number 1-1969443-0

# Introducing Economy Power 2.5 (EP 2.5) Connector Series

Economy Power 2.5 connector (EP 2.5) is a new type of single row or dual row crimp connector system. EP 2.5 connector is comprised of new plug housings, contacts, and headers, based on a 2.5mm centerline (0.098" pitch), which makes it a very compact solution. The newly designed contact retainers provide Terminal Position Assurance (TPA). The inserted TPA retainers help prevent the contacts from backing out in applications with random vibration and help ensure full contact insertion within the housing. With board space increasingly at a premium, the EP 2.5 connector series offers an ideal interconnection solution for densely packed printed circuit boards.

EP 2.5 connector halves are available from 2 to 40 positions.

Besides single row solutions, EP 2.5 connector series offers 8-40 position dual row wire-to-board and wire-to-wire connector systems. The wire-to-board dual row connector system for discrete wires AWG 20-26, offers both vertical and right angle header options. The wire-to-wire dual row connector system for discrete wires 0.13 to 0.60mm<sup>2</sup> (26 to 20 AWG), has both free-hanging and panel-mount options available.

EP 2.5 housings and contacts were designed to help the workers on the shop floor. The low-insertion force terminals, for instance, have an asymmetrical shape, which means that they can only be loaded one-way in the housing cavity.

EP 2.5 connectivity solution provides complete connectivity solutions including vertical and right angle headers, optional TPA retainers, wire-to-wire and wire-to-board solutions, as well as resin materials to meet your GWT requirements. EP 2.5 connectors are also intermateable with similar products in the market to facilitate simple retrofitting. In terms of industrial standards, the EP 2.5 connector series offers products meeting GWT and UL 94 V0 standards.

## KEY FEATURES

- Housing locking latch
- Polarization tabs
- Asymmetrical terminals can only be loaded one way
- Low insertion force terminals
- Anti-Fretting contact lubricant
- Complete offering includes vertical and right angle headers in both single and dual row
- Glow Wire products compliant to Glow Wire test required by IEC/EN 60335-1 5th Edition: Household and Similar Appliances- Safety and UL-94 V0

## APPLICATIONS

- Household appliances
- HVAC
- Industrial machinery (e.g. control boards)
- Products can be used for global applications where compliance to IEC 60335-1 and UL94 V0 is required.

## SPECIFICATIONS

- Product specification: 108-2418
- Application specification: 114-13315

## ELECTRICAL

- Voltage rating: 250 VAC
- Current rating: 4.5 A

## MECHANICAL

- Position: 2 to 15 single row wire to wire  
Position: 2 to 20 single row wire to board  
Position: 8 to 40 dual row wire to board
- Wire size: 0.13 to 0.60mm<sup>2</sup> (26 to 20 AWG)
- Centerline pitch: 2.5 mm (0.098")
- Operating temperature: -55 to 105°C
- Selectively loaded headers available upon request

## MATERIALS

- Housings: UL 94 V0 rated nylon
- Contacts: copper alloy
- Colored housings available upon request
- Glow Wire material and UL94 V0 option available

## STANDARDS








- cRUUs recognized E28476
- TUV approval pending

**SAMPLES NOW AVAILABLE**



Product Offering

Single Row

| Product Image   | Type / Style      | Flammability                      | Part Number |    |    |    |    |    |    |    |    |     |      |      |      |      |      |      |      |      |      |      |
|---|-------------------|-----------------------------------|-------------|----|----|----|----|----|----|----|----|-----|------|------|------|------|------|------|------|------|------|------|
| <b>Single Row Plug Housing</b>  |                   |                                   |             |    |    |    |    |    |    |    |    |     |      |      |      |      |      |      |      |      |      |      |
|   |                   |                                   | Position    | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|    | For all types     | UL - 94 V0                        | x-1969442-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 |
|   |                   | GWT acc. IEC 60335-1 and UL 94 V0 | x-1744417-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>Single Row Receptacle Housing</b>  |                   |                                   |             |    |    |    |    |    |    |    |    |     |      |      |      |      |      |      |      |      |      |      |
|   |                   |                                   | Position    | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11   | 12   | 13   | 14   | 15   |      |      |      |      |      |
|    | Free Hanging      | UL - 94 V0                        | x-1969588-y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1-0 | 1--1 | 1--2 | 1--3 | 1--4 | 1--5 |      |      |      |      |      |
|   |                   | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969589-y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1-0 | 1--1 | 1--2 | 1--3 | 1--4 | 1--5 |      |      |      |      |      |
|    | Panel Mount       | UL - 94 V0                        | x-1969590-y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1-0 | 1--1 | 1--2 | 1--3 | 1--4 | 1--5 |      |      |      |      |      |
|   |                   | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969591-y | -2 | -3 | -4 | -5 | -6 | -7 | -8 | -9 | 1-0 | 1--1 | 1--2 | 1--3 | 1--4 | 1--5 |      |      |      |      |      |
| <b>TPA</b>  |                   |                                   |             |    |    |    |    |    |    |    |    |     |      |      |      |      |      |      |      |      |      |      |
|   |                   |                                   | Position    | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|  | Locking plate     | UL - 94 V0                        | x-1969443-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>Shrouded Header</b>  |                   |                                   |             |    |    |    |    |    |    |    |    |     |      |      |      |      |      |      |      |      |      |      |
|   |                   |                                   | Position    | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|  | Vertical w Boss   | UL - 94 V0                        | 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 |
|   |                   | GWT acc. IEC 60335-1 and UL 94 V0 | x-1744418-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 |
|  | Vertical w/o Boss | UL - 94 V0                        | 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 |
|   |                   | GWT acc. IEC 60335-1 and UL 94 V0 | x-1744439-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 |
|  | Right Angle       | UL - 94 V0                        | x-1744426-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 |
|   |                   | GWT acc. IEC 60335-1 and UL 94 V0 | x-1744446-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 |

\* Colored housings are available upon request. Please contact TE sales representatives for more information.

**Part Number Ordering : Example for X-1969588-Y Housing\***

**-2 thru -9**

Substitute dash number listed for "Y", therefore a -2 signifies PN 1969588-2







**1- -0 thru 1- -2**

Substitute first number for "X" and second number listed for "Y", therefore a 1- -2 signifies PN 1-1969588-2

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



**Dual Row**

| Product Image   | Type / Style  | Flammability                      | Part Number |    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---|---------------|-----------------------------------|-------------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Dual Row Plug Housing</b>  |               |                                   |             |    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|    | For all types | UL - 94 V0                        | x-1969540-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|   |               | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969567-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
| <b>Dual Row Receptacle Housing</b>  |               |                                   |             |    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|    | Free Hanging  | UL - 94 V0                        | x-1969592-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|   |               | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969593-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|    | Panel Mount   | UL - 94 V0                        | x-1969594-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|   |               | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969595-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
| <b>Dual Row TPA Device</b>  |               |                                   |             |    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|   | Locking plate | UL - 94 V0                        | x-1969541-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
| <b>Dual Row Vertical Header</b>   |               |                                   |             |    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|  | with Boss     | UL - 94 V0                        | x-1969543-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|   |               | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969570-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|   | without Boss  | UL - 94 V0                        | x-1969582-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|   |               | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969584-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
| <b>Dual Row Right Angle Header</b>  |               |                                   |             |    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|  | Right Angle   | UL - 94 V0                        | x-1969572-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |
|   |               | GWT acc. IEC 60335-1 and UL 94 V0 | x-1969574-y | -8 | 1- -0 | 1- -2 | 1- -4 | 1- -6 | 1- -8 | 2- -0 | 2- -2 | 2- -4 | 2- -6 | 2- -8 | 3- -0 | 3- -2 | 3- -4 | 3- -6 | 3- -8 | 4- -0 |

\* Colored housings are available upon request. Please contact TE sales representatives for more information.

**Part Number Ordering : Example for X-1969540-Y Housing\***

**-2 thru -9**



Substitute dash number listed for "Y", therefore a -2 signifies PN 1969540-2

**1- -0 thru 1- -2**

Substitute first number for "X" and second number listed for "Y", therefore a 1- -2 signifies PN 1-1969540-2

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



| Product Image   | Type / Style   | Finishing   | Size                                     | Part Number |
|---|----------------|-------------|--|-------------|
| <b>Terminals</b>  |                |             |  |             |
|  | socket         | Tin plating | 22-26 AWG (0.13 to 0.33mm <sup>2</sup> ) | 2110989-1   |
|   |                |             | 20-24 AWG (0.20 to 0.52mm <sup>2</sup> ) | 1744423-1   |
|  | pin, Lanceless |             | 22-26 AWG (0.13 to 0.33mm <sup>2</sup> ) | 2238007-1   |
|   |                |             | 20-24AWG (0.20 to 0.52mm <sup>2</sup> )  | 2238008-1   |

**APPLICATION TOOLING**

Both the tab and receptacle contact can be applied to wire using the Ocean applicator for automatic and semi-automatic applications. For low volume production and prototype work, a hand-tool will be available to crimp the contacts to wire.

| Part Number | Description                                 |
|-------------|---|
| 1530232-[ ] | HDI Quick Change Miniature Applicator       |
| 1725950-[ ] | AMP 3/K-40 Press                            |
| 1725900-[ ] | AMP 5/K Press                               |
| 1530232-3   | AMP-O-LECTRIC Model "G" Termination Machine |
| 1530232-2   | AMP-O-LECTRIC Model "K" Termination Machine |
| 1530232-1   | Lead Making Machine                         |
| 354500-[ ]  | AMP-O-LECTRIC Model "G" Terminating Machine |
| 528324-[ ]  | Komax Gamma 333 PC                          |

**APPLICATION TOOLING PN-HAND TOOL**

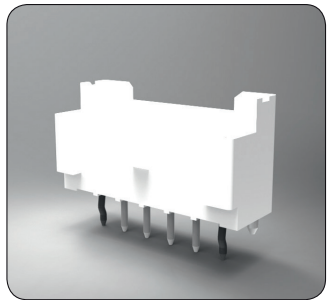
2217074-1 (22-26 AWG)

**FOR MORE INFORMATION**

**TE Connectivity Technical Support Center**

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

For other country numbers, go to [te.com/supportcenter](http://te.com/supportcenter)



EP 2.5 6-Posn Vertical Shrouded Header with Boss, Part Number 2132230-6



AT Hand Tool



Ocean Applicator



Ask us all about Economy Power Connectors: [www.te.com/products/EP](http://www.te.com/products/EP)

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