

VAL-U-LOK CONNECTOR SYSTEM

PRODUCT DESCRIPTION

The VAL-U-LOK connector system offers wire-to-wire and wire-to-board connections with contacts on a 4.20 mm [0.165] in centerline and high current product offering available up to 13 Amps per line. Plug and receptacle housings allow wire-to-wire and wire-to-panel configurations and header assemblies offer wire-to-board connections in vertical and right angle configurations. VAL-U-LOK connector system configurations are available in dual row 2-24 position and 3-5 position single row. Vertical headers are available with or without polarization pegs and with or without drain holes and offer a blind mate version. The right angle headers are available with or without screw mount flanges. Crimp, snap-in pin and socket contacts are used to terminate 26-16 [0.12-1.2 mm²] AWG wire with insulation diameters up to 3.10 mm [0.122 in].

INDUSTRIES

- Small home appliances
- Major home appliances
- Indoor / outdoor lighting
- Security systems
- Industrial controls
- HVAC system controls
- Storage and networking systems

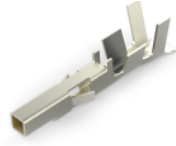
FEATURES AND BENEFITS

- Discrete wire interconnect available in 2-24 position
- Wire-to-wire and wire-to-board pin and socket connector system
- Contacts are on 4.20 mm centerline spacing
- Contacts are available in strip form or loose piece
- Mate first/break last feature on 3 position single row receptacle housings
- Vertical and right-angle pin headers
- Housings offered in glow wire compatible material
- UL & CSA approved

VAL-U-LOK CONNECTOR SYSTEM



Pin



Socket

The VAL-U-LOK pins and sockets are available in phosphor bronze and brass, with either pre-tin or gold plating. Plug housings accept the pin contacts and the receptacle housings accept the socket contacts.

CONTACTS

| Wire Range AWG | Insulation Range | Material & Finish | Pin | | Socket | | Applicator Part No. | Hand Tool |
|----------------|-------------------------|---------------------|------------|-------------|------------|-------------|---------------------|-----------|
| | | | Strip Form | Loose Piece | Strip Form | Loose Piece | | |
| 26-22 | .047-.069 / [1.2-1.75] | Brass, Pre-Tin | 794957-1 | 1586316-1 | 794958-1 | 1586317-1 | 1385448-x | 91387-1 |
| 26-22 | .047-.069 / [1.2-1.75] | Phos. Brz., Pre-tin | 794957-3 | 1586316-3 | 794958-3 | 1586317-3 | 1385448-x | 91387-1 |
| 26-22 | .047-.069 / [1.2-1.75] | Brass, Gold | 794957-2 | 1586316-2 | 794928-2 | 1586319-2 | 1385448-x | 91387-1 |
| 26-22 | .047-.069 / [1.2-1.75] | Phos. Brz., Gold | 794957-4 | 1586316-4 | 794958-4 | 1586317-4 | 1385448-x | 91387-1 |
| 22-18 | .060-.122 / [1.50-3.10] | Brass, Pre-Tin | 794955-1 | 1586314-1 | 794956-1 | 1586315-1 | 1852668-x | 91388-1 |
| 22-18 | .060-.122 / [1.50-3.10] | Phos. Brz., Pre-tin | 794955-3 | 1586314-3 | 794956-3 | 1586315-3 | 1852668-x | 91388-1 |
| 22-18 | .060-.122 / [1.50-3.10] | Brass, Gold | 794955-2 | 1586314-2 | 794956-2 | 1586315-2 | 1852668-x | 91388-1 |
| 22-18 | .060-.122 / [1.50-3.10] | Phos. Brz., Gold | 794955-4 | 1586314-4 | 794956-4 | 1586315-4 | 1852668-x | 91388-1 |
| 16 | .071-.122 / [1.8-3.10] | Brass, Pre-Tin | 1586054-1 | 1586840-1 | 1586055-1 | 1586841-1 | 1852294-x | 1976444-1 |
| 16 | .071-.122 / [1.8-3.10] | Phos. Brz., Pre-tin | 1586054-3 | 1586840-3 | 1586055-3 | 1586841-2 | 1852294-x | 1976444-1 |
| 16 | .071-.122 / [1.8-3.10] | Brass, Gold | 1586054-2 | 1586840-2 | 1586055-2 | 1586841-3 | 1852294-x | 1976444-1 |
| 16 | .071-.122 / [1.8-3.10] | Phos. Brz., Gold | 1586054-4 | 1586840-4 | 1586055-4 | 1586841-4 | 1852294-x | 1976444-1 |

VAL-U-LOK CONNECTOR SYSTEM



Free-Hanging Plug



Panel Mount Plug

Plug housings for the VAL-U-LOK product line are available in panel mount or freehanging versions. The receptacles are easy to mate and un-mate to the various plug housings and headers. They also feature a positive latch design.

HOUSINGS

| No. of Positions | Single Row | Dual Row | UL 94 V-2 | | | UL94 V-0 | | |
|------------------|------------|----------|-------------|--------------|------------|-------------|--------------|-------------|
| | | | Panel Mount | Free-Hanging | Receptacle | Panel Mount | Free-Hanging | Receptacle |
| 2 | — | x | 794953-2 | 1586000-2 | 794954-2 | 1586018-2 | 1586017-2 | 1586019-2 |
| 3 | x | — | 1586101-3 | 1586103-3 | 1586105-3 | 1586102-3 | 1586104-3 | 1586106-3 |
| 4 | x | — | 1586022-4 | 1586024-4 | 1586026-4 | 1586023-4 | 1586024-4 | 1586027-4 |
| 4 | - | x | 794953-4 | 1586000-4 | 794954-4 | 1586018-4 | 1586017-4 | 1586019-4 |
| 5 | x | — | 1586022-5 | 1586024-5 | 1586026-5 | 1586023-5 | 1586025-5 | 1586027-5 |
| 6 | — | x | 794953-6 | 1586000-6 | 794954-6 | 1586018-6 | 1586017-6 | 1586019-6 |
| 8 | — | x | 794953-8 | 1586000-8 | 794954-8 | 1586018-8 | 1586017-8 | 1586019-8 |
| 10 | — | x | 1-794953-0 | 1-1586000-0 | 1-794954-0 | 1-1586018-0 | 1-1586017-0 | 1-1586019-0 |
| 12 | — | x | 1-794953-2 | 1-1586000-2 | 1-794954-2 | 1-1586018-2 | 1-1586017-2 | 1-1586019-2 |
| 14 | — | x | 1-794953-4 | 1-1586000-4 | 1-794954-4 | 1-1586018-4 | 1-1586017-4 | 1-1586019-4 |
| 16 | — | x | 1-794953-6 | 1-1586000-6 | 1-794954-6 | 1-1586018-6 | 1-1586017-6 | 1-1586019-6 |
| 18 | — | x | 1-794953-8 | 1-1586000-8 | 1-794954-8 | 1-1586018-8 | 1-1586017-8 | 1-1586019-8 |
| 20 | — | x | 2-794953-0 | 2-1586000-0 | 2-794954-0 | 2-1586018-0 | 2-1586017-0 | 2-1586019-0 |
| 22 | — | x | 2-794953-2 | 2-1586000-2 | 2-794954-2 | 2-1586018-2 | 2-1586017-2 | 2-1586019-2 |
| 24 | — | x | 2-794953-4 | 2-1586000-4 | 2-794954-4 | 2-1586018-4 | 2-1586017-4 | 2-1586019-4 |

RECEPTACLE & PLUG HOUSINGS (DUAL ROW) GLOW WIRE

| No. of Positions | Receptacles | Plugs | |
|------------------|-------------|--------------|-------------|
| | | Free-Hanging | Panel Mount |
| 2 | 1586765-2 | 1586862-2 | 1586861-2 |
| 4 | 1586765-4 | 1586862-4 | 1586861-4 |
| 6 | 1586765-6 | 1586862-6 | 1586861-6 |
| 8 | 1586765-8 | 1586862-8 | 1586861-8 |
| 10 | 1-1586765-0 | 1-1586862-0 | 1-1586861-0 |
| 12 | 1-1586765-2 | 1-1586862-2 | 1-1586861-2 |
| 14 | 1-1586765-4 | 1-1586862-4 | 1-1586861-4 |
| 16 | 1-1586765-6 | 1-1586862-6 | 1-1586861-6 |
| 18 | 1-1586765-8 | 1-1586862-8 | 1-1586861-8 |
| 20 | 2-1586765-0 | 2-1586862-0 | 2-1586861-0 |
| 22 | 2-1586765-2 | 2-1586862-2 | 2-1586861-2 |
| 24 | 2-1586765-4 | 2-1586862-4 | 2-1586861-4 |



First Mate/Last Break Receptacle Housing

VAL-U-LOK CONNECTOR SYSTEM

COLORED HOUSINGS

| Color | No. of Positions | UL 94 V-2 Housings | | | UL 94 V-0 Housings | | |
|-------|------------------|--------------------|-------------------|--------------------|--------------------|-------------------|--------------------|
| | | Panel Mount Plug | Free-Hanging Plug | Receptacle Housing | Panel Mount Plug | Free-Hanging Plug | Receptacle Housing |
| Black | 2-24 | x-2029088-x | x-2029027-x | x-1586075-x | x-2029035-x | x-2029028-x | x-2029029-x |
| Red | 4-24 | x-2029089-x | x-2029090-x | x-2029091-x | x-2029092-x | x-2029093-x | x-2029094-x |
| Blue | 6-24 | x-2029095-x | x-2029096-x | x-12029097-x | x-2029098-x | x-2029099-x | x-2029100-x |

PIN HEADERS

| No. of Positions | UL 94 V-2 | | | | UL 94 V-0 | | | |
|------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|
| | Vertical | | Right Angle | | Vertical | | Right Angle | |
| | Without Pegs | With Pegs | Without Pegs | Screw Mount | Without Pegs | With Pegs | Without Pegs | Screw Mount |
| 2 | 1586037-2 | 1586039-2 | 1586041-2 | 1586043-2 | 1586038-2 | 1586040-2 | 1586042-2 | 1586044-2 |
| 4 | 1586037-4 | 1586039-4 | 1586041-4 | 1586043-4 | 1586038-4 | 1586040-4 | 1586042-4 | 1586044-4 |
| 6 | 1586037-6 | 1586039-6 | 1586041-6 | 1586043-6 | 1586038-6 | 1586040-6 | 1586042-6 | 1586044-6 |
| 8 | 1586037-8 | 1586039-8 | 1586041-8 | 1586043-8 | 1586038-8 | 1586040-8 | 1586042-8 | 1586044-8 |
| 10 | 1-1586037-0 | 1-1586039-0 | 1-1586041-0 | 1-1586043-0 | 1-1586038-0 | 1-1586040-0 | 1-1586042-0 | 1-1586044-0 |
| 12 | 1-1586037-2 | 1-1586039-2 | 1-1586041-2 | 1-1586043-2 | 1-1586038-2 | 1-1586040-2 | 1-1586042-2 | 1-1586044-2 |
| 14 | 1-1586037-4 | 1-1586039-4 | 1-1586041-4 | 1-1586043-4 | 1-1586038-4 | 1-1586040-4 | 1-1586042-4 | 1-1586044-4 |
| 16 | 1-1586037-6 | 1-1586039-6 | 1-1586041-6 | 1-1586043-6 | 1-1586038-6 | 1-1586040-6 | 1-1586042-6 | 1-1586044-6 |
| 18 | 1-1586037-8 | 1-1586039-8 | 1-1586041-8 | 1-1586043-8 | 1-1586038-8 | 1-1586040-8 | 1-1586042-8 | 1-1586044-8 |
| 20 | 2-1586037-0 | 2-1586039-0 | 2-1586041-0 | 2-1586043-0 | 2-1586038-0 | 2-1586040-0 | 2-1586042-0 | 2-1586044-0 |
| 22 | 2-1586037-2 | 2-1586039-2 | 2-1586041-2 | 2-1586043-2 | 2-1586038-2 | 2-1586040-2 | 2-1586042-2 | 2-1586044-2 |
| 24 | 2-1586037-4 | 2-1586039-4 | 2-1586041-4 | 2-1586043-4 | 2-1586038-4 | 2-1586040-4 | 2-1586042-4 | 2-1586044-4 |

BLINDMATE HEADERS

| No. of Positions | UL 94 V-2 | | UL 94 V-0 | |
|------------------|------------------|---------------------|------------------|---------------------|
| | With Drain Holes | Without Drain Holes | With Drain holes | Without Drain Holes |
| 2 | 1586585-2 | 1586586-2 | 1586587-2 | 1586588-2 |
| 4 | 1586585-4 | 1586586-4 | 1586587-4 | 1586588-4 |
| 6 | 1586585-6 | 1586586-6 | 1586587-6 | 1586588-6 |
| 8 | 1586585-8 | 1586586-8 | 1586587-8 | 1586588-8 |
| 10 | 1-1586585-0 | 1-1586586-0 | 1-1586587-0 | 1-1586588-0 |
| 12 | 1-1586585-2 | 1-1586586-2 | 1-1586587-2 | 1-1586588-2 |
| 14 | 1-1586585-4 | 1-1586586-4 | 1-1586587-4 | 1-1586588-4 |
| 16 | 1-1586585-6 | 1-1586586-6 | 1-1586587-6 | 1-1586588-6 |
| 18 | 1-1586585-8 | 1-1586586-8 | 1-1586587-8 | 1-1586588-8 |
| 20 | 2-1586585-0 | 2-1586586-0 | 2-1586587-0 | 2-1586588-0 |
| 22 | 2-1586585-2 | 2-1586586-2 | 2-1586587-2 | 2-1586588-2 |
| 24 | 2-1586585-4 | 2-1586586-4 | 2-1586587-4 | 2-1586588-4 |

VAL-U-LOK CONNECTOR SYSTEM

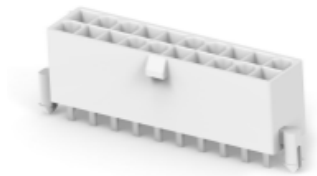
SINGLE ROW VERTICAL HEADERS

| No. of Positions | UL 94 V2 Housings | | UL 94 V0 Housings | |
|------------------|-------------------|-------------------|-------------------|-------------------|
| | w/ drain holes | w/out drain holes | w/ drain holes | w/out drain holes |
| 3 | 2029054-3 | 2029058-3 | 2029056-3 | 2029167-3 |
| 4 | 2029054-4 | 2029058-4 | 2029056-4 | 2029167-4 |
| 5 | 2029054-5 | 2029058-5 | 2029056-5 | 2029167-5 |

MATING RECEPTACLE HOUSINGS

| No. of Positions | UL 94 V2 housings | UL 94 V0 housings |
|------------------|-------------------|-------------------|
| 3 | 1586105-3 | 1586106-3 |
| 4 | 1586026-4 | 1586027-4 |
| 5 | 1586026-5 | 1586027-5 |

VAL-U-LOK headers are available in both right angle and vertical mount for added flexibility in your board design. Vertical headers are available with or without mounting pegs.



HEADERS (DUAL ROW) GLOW WIRE

| No. of Positions | Vertical w/out pegs; w/ drain holes | Vertical w/ pegs; w/ drain holes | Vertical w/ pegs; w/out drain holes | Right Angle w/out pegs |
|------------------|--|-------------------------------------|--|------------------------|
| 2 | 1586768-2 | 2029059-2 | 2029265-2 | 1586863-2 |
| 4 | 1586768-4 | 2029059-4 | 2029265-4 | 1586863-4 |
| 6 | 1586768-6 | 2029059-6 | 2029265-6 | 1586863-6 |
| 8 | 1586768-8 | 2029059-8 | 2029265-8 | 1586863-8 |
| 10 | 1-1586768-0 | 1-2029059-0 | 1-2029265-0 | 1-1586863-0 |
| 12 | 1-1586768-2 | 1-2029059-2 | 1-2029265-2 | 1-1586863-2 |
| 14 | 1-1586768-4 | 1-2029059-4 | 1-2029265-4 | 1-1586863-4 |
| 16 | 1-1586768-6 | 1-2029059-6 | 1-2029265-6 | 1-1586863-6 |
| 18 | 1-1586768-8 | 1-2029059-8 | 1-2029265-8 | 1-1586863-8 |
| 20 | 2-1586768-0 | 2-2029059-0 | 2-2029265-0 | 2-1586863-0 |
| 22 | 2-1586768-2 | 2-2029059-2 | 2-2029265-2 | 2-1586863-2 |
| 24 | 2-1586768-4 | 2-2029059-4 | 2-2029265-4 | 2-1586863-4 |

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VAL-U-LOK right angle headers are available with or without screw mount. Blind mate headers are also available.

SINGLE ROW RIGHT ANGLE HEADERS

| No. of Positions | UL 94 V2 Housings | | UL 94 V0 Housings | |
|------------------|-------------------|--------------|-------------------|--------------|
| | With Pegs | With Flanges | With Pegs | With Flanges |
| 3 | 2029150-3 | 2029152-3 | 2029151-3 | 2029153-3 |
| 4 | 2029150-4 | 2029152-4 | 2029151-4 | 2029153-4 |
| 5 | 2029150-5 | 2029152-5 | 2029151-5 | 2029153-5 |

QUESTIONS THAT WILL HELP YOU BETTER SELECT THE PRODUCT THAT YOU NEED:

What are the current and voltage requirements for your application?

The VAL-U-LOK connector system has a maximum current rating of 9 Amps per line and is rated for 600 VAC.

What are the wire type and size requirements?

The VAL-U-LOK connector system contacts are approved for use with 3 different wire ranges from 26 AWG [0.12] to 16 AWG [1.20] wire with a maximum insulation diameter of 3.10 [0.122].

What are the number of positions?

The VAL-U-LOK connector system is available in wire-to-board and wire-to-wire, free-hanging or panel mount options in 2-24 position dual row and 3-5 position singlerow configurations.

What are the operating temperature requirements?

The VAL-U-LOK connector system has a maximum operating temperature of 105°C. For more information regarding operating temperatures refer to Product Specification 108-2112.

Do you need to differentiate this connector from other connectors in the application?

In addition to natural, the VAL-U-LOK connector system offers red, black and blue colored housings for ease of connector identification during manufacturing and assembly.

What is the benefit of choosing headers with a polarization peg?

The VAL-U-LOK connector system offers headers with or without polarization pegs. The purpose of this feature is to polarize the headers to the PCB so the header cannot be placed on the PCB in the wrong orientation. For more information regarding PCB layout please refer to the product drawing.

What is the benefit of choosing glow wire housings?

The VAL-U-LOK connector system offers glow wire housings that allow manufacturers of home appliances sold into the European market to comply with the IEC/EN 60335-1 4th edition standard.

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

*as defined www.te.com/leadfree

te.com

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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