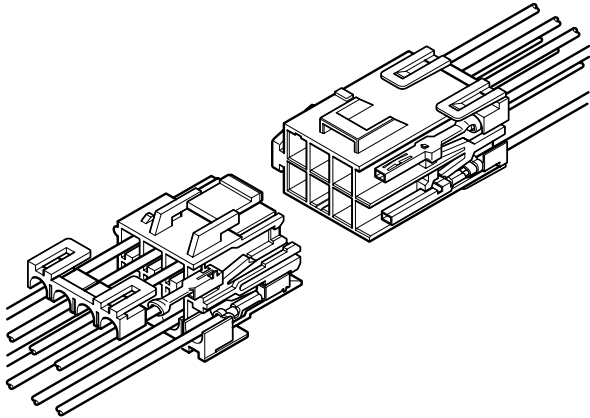


# VL CONNECTOR

6.2mm pitch/Disconnectable Crimp style Wire-to-wire connectors



The VL connector is a 6.2mm pitch wire-to-wire connector designed for circuits requiring up to 20A (1 or 2-circuit with AWG #12 wire).

- Housing lances for contact retention
- Secondary retainer
- Suited for circuits with high power requirements
- Panel lock construction

## Standards

Recognized E60389

Certified LR20812

R9351103

## Specifications

- Current rating: 20 A AC, DC max.
- Voltage rating: 600 V AC, DC max. (300 V in accordance with the Electrical Appliance and Material Safety Law in Japan)
- Temperature range: -25°C to +90°C (including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 7 mΩ max. After environmental tests/ 10 mΩ max.
- Insulation resistance: 1,000 MΩ min.
- Withstanding voltage: 2,000 VAC/minute
- Applicable wire: AWG #22 to #12 0.3 to 3.5 mm<sup>2</sup>
- Applicable panel thickness: 0.5 to 2.0 mm

\* Refer to "General Instruction and Notice when using Terminals and Connectors" at the end of this catalog.

\* Contact JST for details.

\* Compliant with RoHS.

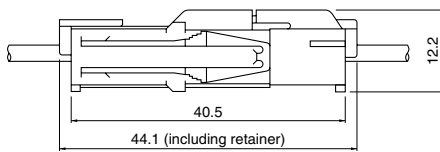
Note: The current rating varies depending on the number of circuits and the wire size used in each connector. The table below lists the current rating as a function of the number of circuits and the wire size.

Current unit: A

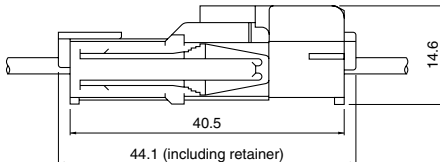
| Circuits | Wire size (AWG) |     |     |     |     |     |
|----------|-----------------|-----|-----|-----|-----|-----|
|          | #12             | #14 | #16 | #18 | #20 | #22 |
| 1        | 20              | 15  | 10  | 8   | 6   | 4   |
| 2        | 20              | 15  | 10  | 8   | 6   | 4   |
| 3        | 19              | 14  | 9   | 8   | 6   | 4   |
| 4        | 18              | 13  | 9   | 7   | 6   | 4   |
| 6        | 16              | 12  | 8   | 7   | 5   | 3   |
| 8        | 16              | 11  | 7   | 6   | 5   | 3   |
| 12       | 15              | 10  | 7   | 6   | 4   | 3   |

(2, 3 and single-row 4 circuits)

<Inner-housing lock>

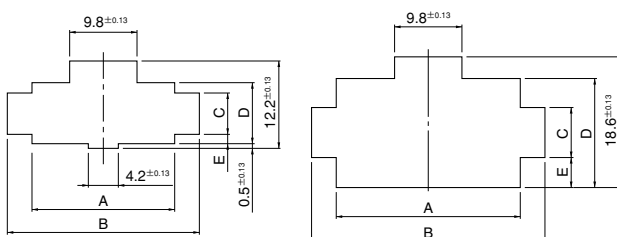


<Outer-housing lock>



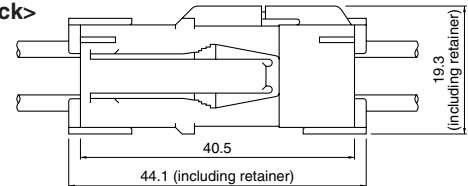
Shape I

Shape II

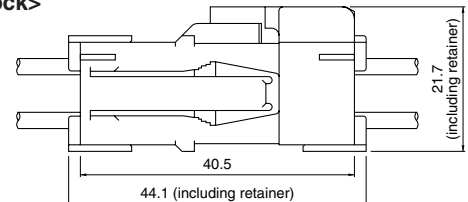


(4, 6, 8 and 12 circuits)

<Inner-housing lock>



<Outer-housing lock>



| Circuits       | Receptacle housing Model No. | Panel hole shape | Panel hole dimensions (mm) General tolerance |      |     |      |     | Applicable panel thickness (mm) |
|----------------|------------------------------|------------------|--|------|-----|------|-----|---------------------------------|
|                |                              |                  | A  | B    | C   | D    | E   |                                 |
| 2              | VLR-02V                      | I                | 13.8   | 20.6 | 5.7 | 8.5  | 1.4 | 0.5~2.0                         |
| 3              | VLR-03V                      | I                | 20.0   | 26.8 | 5.7 | 8.5  | 1.4 |                                 |
| 4              | VLR-04V                      | II               | 13.8   | 20.6 | 7.0 | 15.4 | 4.2 |                                 |
| 4 (Single-row) | VLR-04VN                     | I                | 26.2   | 33.0 | 5.7 | 8.5  | 1.4 |                                 |
| 6              | VLR-06V                      | II               | 20.0   | 26.8 | 7.0 | 15.4 | 4.2 |                                 |
| 8              | VLR-08V                      | II               | 26.2   | 33.0 | 7.0 | 15.4 | 4.2 |                                 |
| 12             | VLR-12V                      | II               | 38.9   | 45.4 | 7.0 | 15.4 | 4.2 |                                 |

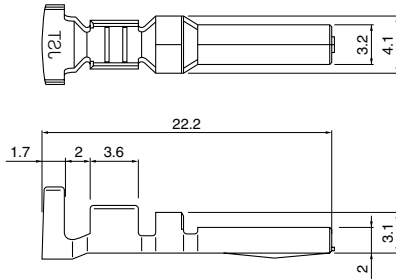
Note: 1. Punch holes in the panel according to the figures and table shown above. Burrs must be removed.

2. The strength of the panel must be considered when punching two or more holes.

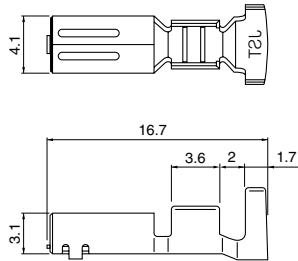
3. The connector must be inserted from the same side as the hole is punched.

## Contact

### Pin contact



### Socket contact



| Model No.     |                | Applicable wire       |                 | Insulation O.D. (mm) | Q'ty / reel |
|---------------|----------------|-----------------------|-----------------|----------------------|-------------|
| Pin contact   | Socket contact | mm <sup>2</sup>       | AWG #           |                      |             |
| *SVM-42T-P2.0 | *SVF-42T-P2.0  | 0.3~1.25              | 22~16           | 1.7~3.2              | 2,000       |
|               |                | 0.3+0.3~<br>0.5+0.75  | 22+22~<br>20+18 | 1.7+1.7~<br>2.5+2.7  |             |
| SVM-61T-P2.0  | SVF-61T-P2.0   | 0.5~2.0               | 20~14           | 1.9~3.4              |             |
|               |                | 0.5+0.5~<br>0.75+1.25 | 20+20~<br>18+16 | 1.9+1.9~<br>2.1+2.7  |             |
| SVM-81T-P2.0  | SVF-81T-P2.0   | 3.5                   | 12              | 4.1                  |             |

### Material and Finish

Phosphor bronze, tin-plated (reflow treatment)

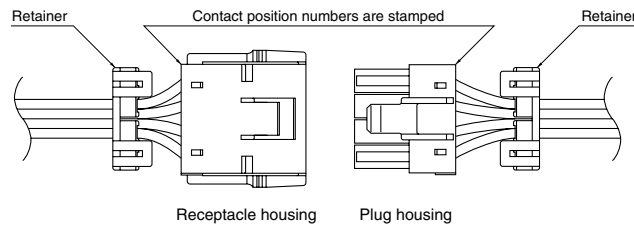
### RoHS compliance

Note: 1. Contact JST for special products.

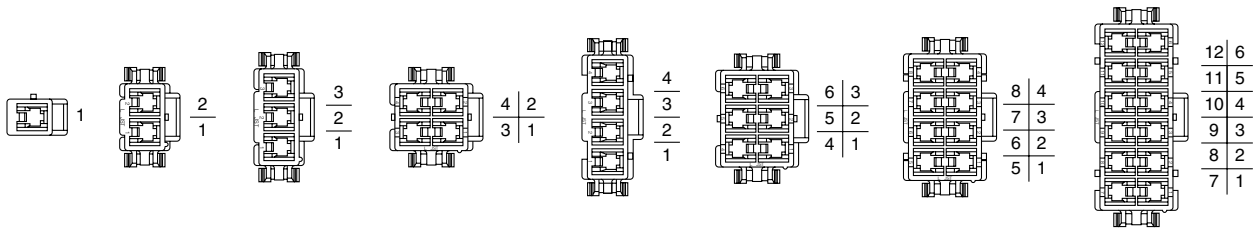
2. \*Marked products are not TÜV approved.

| Contact      | Crimping machine | Applicator       |                |                            |
|--------------|------------------|------------------|----------------|----------------------------|
|              |                  | Crimp applicator | Dies           | Crimp applicator with dies |
| SVM-42T-P2.0 | AP-K2N           | MKS-L            | MK/SVF/M-42-20 | APLMK SVF/M42-20           |
| SVF-42T-P2.0 |                  | —                | —              | —                          |
| SVM-61T-P2.0 |                  | MKS-L            | MK/SVF/M-61-20 | APLMK SVF/M61-20           |
| SVF-61T-P2.0 |                  | —                | —              | —                          |
| SVM-81T-P2.0 |                  | MKS-L            | MK/SVF/M-81-20 | APLMK SVF/M81-20           |
| SVF-81T-P2.0 |                  | —                | —              | —                          |

## Contact position location numbers

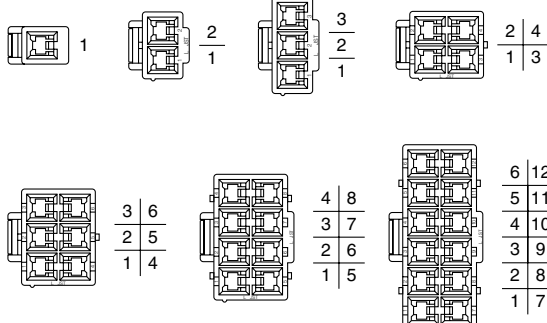


### Receptacle housing

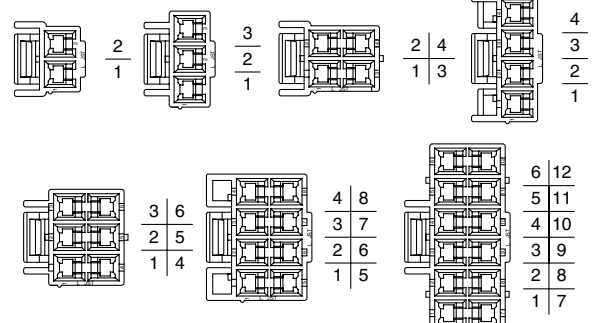


### Plug housing

#### <Inner-housing lock>



#### <Outer-housing lock>



# VL CONNECTOR

## Housing

Material: Housing...PA 66, UL94V-0, white  
Retainer...Glass-filled PA 66, UL94V-0, ivory

| Circuits | Voltage rating | Current rating  | Receptacle housing (for pin contact)           | Plug housing (for socket contact)  | Retainer   |
|----------|----------------|-----------------|--|--|--|
| 1        | 600V           | 20A             | <p>* VLR-01VF (Without panel product)</p>      | <p>VLP-01V</p>   | <p>VLS-01V</p>   |
| 2        | 600V           | 20A             | <p>VLR-02V</p>                                 | <p>VLP-02V</p>   | <p>VLS-02V<br/>(commonly used for 2-circuit housing and 4-circuit housing)</p> |
|          |                |                 | <p>* VLR-02VF (Without panel lock product)</p> | <p>VLP-02V-1</p>   |  |
| 3        | 600V           | 19A             | <p>VLR-03V</p>                                 | <p>VLP-03V</p>   | <p>VLS-03V<br/>(commonly used for 3-circuit housing and 6-circuit housing)</p> |
|          |                |                 |  | <p>VLP-03V-1</p>   |  |
| 4        | 600V           | 18A             | <p>VLR-04V</p>                                 | <p>VLP-04V</p>   | <p>VLS-02V</p>   |
|          |                |                 | <p>* VLR-04VF (Without panel lock product)</p> | <p>VLP-04V-1</p>   |  |
|          |                | <p>VLR-04VN</p> | <p>VLP-04VN-1</p>                              | <p>VLS-08V<br/>(commonly used for 4-circuit housing and 8-circuit housing)</p> |  |

### RoHS compliance

Note: 1. Contact JST for special products.

2. \*Marked products are not TÜV approved.

# VL CONNECTOR

## Housing

Material: Housing...PA 66, UL94V-0, white  
Retainer...Glass-filled PA 66, UL94V-0, ivory

| Circuits | Voltage rating | Current rating | Receptacle housing (for pin contact) | Plug housing (for socket contact) | Retainer  |
|----------|----------------|----------------|--------------------------------------|-----------------------------------|---|
| 6        | 600V           | 16A            | <b>VLR-06V</b><br>                   | <b>VLP-06V</b><br>                | <b>VLS-03V</b><br>(commonly used for 3-circuit housing and 6-circuit housing)<br> |
|          |                |                |                                      | Q'ty / bag<br>500                 |   |
| 8        | 600V           | 16A            | <b>VLR-08V</b><br>                   | <b>VLP-08V</b><br>                | <b>VLS-08V</b><br>(commonly used for 4-circuit housing and 8-circuit housing)<br> |
|          |                |                |                                      | Q'ty / bag<br>100                 |   |
| 12       | 600V           | 15A            | <b>VLR-12V</b><br>                   | <b>VLP-12V</b><br>                | <b>VLS-12V</b><br>  |
|          |                |                |                                      | Q'ty / bag<br>100                 |   |

RoHS compliance

Note: Contact JST for special products.

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