This small, field-proven connector for printed circuit boards is reliable and has a large current carrying capacity. It can be used with a wide variety of signal, power supply, and output circuits that appear in consumer electronic products.

Features

• **Proven box contact**
  This connector was developed with the same box-shaped contact design used successfully in the NH connectors. The reliable VH connector can be used in a wide variety of applications, from low-voltage, low-current signal circuits to power supply circuits having a relatively large capacity.

• **Compact connector with a large capacity**
  Even though this connector has a large current carrying capacity (10A), it is compact, with a mounting height of 16.5mm (.650”).

• **Secure contact and mounting**
  The housing has a lock mechanism which prevents the connector from coming loose due to vibration. The mechanism also prevents misinsertion (misalignment or reverse insertion).

Specifications

- Current rating: 10A AC, DC (AWG#16)
- Voltage rating: 250V AC, DC
- Temperature range: -25°C to +85°C (including temperature rise in applying electrical current)
- Contact resistance: Initial value/10Ω max. After environmental testing/20Ω max.
- Insulation resistance: 1,000MΩ min.
- Withstanding voltage: 1,500V AC/minute
- Applicable wire: AWG #22 to #16
- Applicable PC board thickness: 1.6mm (.063”)

Note:
Do not branch in parallel current which exceeds the rated current. If branched in parallel, current imbalance or other problems may develop. If it is absolutely necessary to branch such a large current in parallel, be sure to use contacts made of phosphor bronze. Design the circuits without causing imbalance and provide an extra margin for each circuit.

* Contact JST if Lead-Free product is required.
* Temperature Range:
The aforementioned temperature range of this connector is described in JST Standard Product Specification. Maximum temperature registered in UL is 105°C.

* Refer to “General Instruction and Notice when using Terminals and Connectors” at the end of this catalog.
* Contact JST for details.

Standards

- Recognized E60389
- Certified LR20812
- R75122
**Contact**

![Contact Diagram]

**Model No.**

| SVH-21T-P1.1 | 0.33 to 0.83 | 22 to 18 | 1.7 to 3.0 (0.67 to 1.18) | 4,500 |
| SVH-41T-P1.1 | 0.5 to 1.25 | 20 to 16 | 1.7 to 3.0 (0.67 to 1.18) | 3,500 |

**Material and Finish**

Phosphor bronze, tin-plated

---

**Housing**

**N type**

![Housing Diagram - N type]

**M type**

![Housing Diagram - M type]

**Retain er mountable type**

![Housing Diagram - Retainer Mountable Type]

**Note:**

1. Models identified as VHR-(    ) M incorporate measures to prevent electric shock and are thus safer in regard to high voltages.
2. The applicable housing for 2-circuits shrouded header is "VHR-2N" only. "VHRR-2N" is not applicable.
3. Models VHR-11N and VHRR-(    )N are not TÜV approved.

---

**Material**

Nylon 6, UL94V-0, natural (white)
### VH CONNECTOR

#### Retainer

![Diagram of Retainer]

**Note:** Not TÜV approved.

#### Locking header

**Top entry type**

![Diagram of Top entry type]

**Side entry type**

![Diagram of Side entry type]

### Table: Model No., Dimensions mm(in.), Q'ty / box

<table>
<thead>
<tr>
<th>Circuits</th>
<th>Model No.</th>
<th>Dimensions mm(in.)</th>
<th>Q'ty / box</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>B 2P-VH</td>
<td>3.96(0.156) 7.96(0.309)</td>
<td>1,000 1,000</td>
</tr>
<tr>
<td>3</td>
<td>B 3P-VH</td>
<td>7.92(0.312) 11.82(0.465)</td>
<td>1,000 500</td>
</tr>
<tr>
<td>4</td>
<td>B 4P-VH</td>
<td>11.88(0.468) 15.78(0.621)</td>
<td>500 250</td>
</tr>
<tr>
<td>5</td>
<td>B 5P-VH</td>
<td>15.84(0.624) 19.74(0.777)</td>
<td>500 250</td>
</tr>
<tr>
<td>6</td>
<td>B 6P-VH</td>
<td>19.80(0.780) 23.70(0.933)</td>
<td>250 250</td>
</tr>
<tr>
<td>7</td>
<td>B 7P-VH</td>
<td>23.76(0.935) 27.66(1.089)</td>
<td>250 200</td>
</tr>
<tr>
<td>8</td>
<td>B 8P-VH</td>
<td>27.72(1.091) 31.62(1.245)</td>
<td>200 200</td>
</tr>
<tr>
<td>9</td>
<td>B 9P-VH</td>
<td>31.68(1.247) 35.58(1.401)</td>
<td>200 200</td>
</tr>
<tr>
<td>10</td>
<td>B10P-VH</td>
<td>35.64(1.403) 39.54(1.557)</td>
<td>200 200</td>
</tr>
</tbody>
</table>

### Material and Finish

- **Top entry type**
  - Post: Brass, copper-undercoated, tin/lead-plated
  - Wafer: Glass-filled nylon 66, UL94V-0, natural (ivory)

- **Side entry type**
  - Post: Brass, copper-undercoated, tin/lead-plated
  - Wafer: Glass-filled nylon 66, UL94V-0, natural (ivory)

- **Contact JST for details.**

**For reference**
- As the color identification, the following alphabet shall be put in the underlined part.
- For availability, delivery and minimum order quantity, contact JST.
- B2P(S)-VH-oo (blank)...natural (white)
- BK...black R...red TR...tomato red BL...blue M...green
- O...orange Y...yellow PK...pink H...gray

**Note:** Headers with a reduced number of posts are also available.
**VH CONNECTOR**

**Locking header**

Top entry type of PBT

Side entry type with PCB stabilizer

**Shrouded header**

(2, 3 circuits)

(4 to 10 circuits)

---

**Table: VH Connectors**

<table>
<thead>
<tr>
<th>Circuits</th>
<th>Model No.</th>
<th>Dimensions mm(in.)</th>
<th>Qty / box</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>2</td>
<td>B 2P-VH-B</td>
<td>3.96( .156)</td>
<td>7.86( .309)</td>
</tr>
<tr>
<td>3</td>
<td>B 3P-VH-B</td>
<td>7.92( .312)</td>
<td>11.82( .465)</td>
</tr>
<tr>
<td>4</td>
<td>B 4P-VH-B</td>
<td>11.88( .468)</td>
<td>15.78( .621)</td>
</tr>
<tr>
<td>5</td>
<td>B 5P-VH-B</td>
<td>15.84( .624)</td>
<td>19.74( .777)</td>
</tr>
<tr>
<td>6</td>
<td>B 6P-VH-B</td>
<td>19.80( .780)</td>
<td>23.70( .933)</td>
</tr>
<tr>
<td>7</td>
<td>B 7P-VH-B</td>
<td>23.76( .936)</td>
<td>27.66(1.089)</td>
</tr>
<tr>
<td>8</td>
<td>B 8P-VH-B</td>
<td>27.72(1.091)</td>
<td>31.62(1.245)</td>
</tr>
<tr>
<td>9</td>
<td>B 9P-VH-B</td>
<td>31.68(1.247)</td>
<td>35.58(1.401)</td>
</tr>
<tr>
<td>10</td>
<td>B10P-VH-B</td>
<td>35.64(1.403)</td>
<td>39.54(1.557)</td>
</tr>
<tr>
<td>11</td>
<td>B11P-VH-B</td>
<td>39.60(1.559)</td>
<td>43.50(1.713)</td>
</tr>
</tbody>
</table>

---

**Material and Finish**

Post: Brass, copper-undercoated, tin/lead-plated

Wafer: Top entry type of PBT: Glass-filled PBT, UL94V-0, natural (ivory)

Side entry type with PCB stabilizer: Nylon 66, UL94V-0, natural (white)

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Note: B11P-VH-B is not TU V approved.

For reference: As the color identification, the following alphabet shall be put in the underlined part.

For availability, delivery and minimum order quantity, contact JST.

---

**Table: VH Connectors**

<table>
<thead>
<tr>
<th>Circuits</th>
<th>Model No.</th>
<th>Dimensions mm(in.)</th>
<th>Qty / box</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>2</td>
<td>B 2P-VH-FB-B</td>
<td>3.96( .156)</td>
<td>9.80( .386)</td>
</tr>
<tr>
<td>3</td>
<td>B 3P-VH-FB-B</td>
<td>7.92( .312)</td>
<td>13.76( .542)</td>
</tr>
<tr>
<td>4</td>
<td>B 4P-VH-FB-B</td>
<td>11.88( .468)</td>
<td>17.72( .698)</td>
</tr>
<tr>
<td>5</td>
<td>B 5P-VH-FB-B</td>
<td>15.84( .624)</td>
<td>21.68( .854)</td>
</tr>
<tr>
<td>6</td>
<td>B 6P-VH-FB-B</td>
<td>19.80( .780)</td>
<td>25.64(1.009)</td>
</tr>
<tr>
<td>7</td>
<td>B 7P-VH-FB-B</td>
<td>23.76(1.091)</td>
<td>29.60(1.165)</td>
</tr>
<tr>
<td>8</td>
<td>B 8P-VH-FB-B</td>
<td>27.72(1.091)</td>
<td>33.56(1.321)</td>
</tr>
<tr>
<td>9</td>
<td>B 9P-VH-FB-B</td>
<td>31.68(1.247)</td>
<td>37.52(1.477)</td>
</tr>
<tr>
<td>10</td>
<td>B10P-VH-FB-B</td>
<td>35.64(1.403)</td>
<td>41.48(1.633)</td>
</tr>
</tbody>
</table>

---

**Material and Finish**

Post: Brass, copper-undercoated, tin/lead-plated

Wafer: Glass-filled PBT, UL94V-0, natural (white)

---

Note: The applicable housing for 2-circuits shrouded header is "VHR-2N" only.

For reference: As the color identification, the following alphabet shall be put in the underlined part.

For availability, delivery and minimum order quantity, contact JST.
PC board layout (viewed from soldering side) and Assembly layout

**Locking header Top entry type**

- 3.96 ± 0.05 (.156 ± .002)
- 1.65 ± (.065 ± .004) dia.
- 15.5 (.610)

**Locking header Side entry type**

- 3.96 ± 0.05 (.156 ± .002)
- 16.5 (.650)
- 1.65 ± (.065 ± .004) dia.

**Locking header Side entry type with PCB stabilizer**

- 3.96 ± 0.05 (.156 ± .002)
- 1.65 ± (.065 ± .004) dia.
- 19.0 (.748)

**Shrouded header**

- 3.96 ± 0.05 (.156 ± .002)
- 1.65 ± (.065 ± .004) dia.
- 10.5 (.413)

*11.0 (.433) max. when used with the VR connector receptacle.*

---

**Note:**
1. Tolerances are non-cumulative: ±0.05mm(±.002) for all centers.
2. Hole dimensions differ according to the kind of PC board and piercing method. The dimensions above should serve as a guideline. Contact JST for details.

---

### Applicator for the semi-automatic press AP-K2N

<table>
<thead>
<tr>
<th>Contact</th>
<th>Crimp applicator MKS-L</th>
<th>Compact crimp applicator MKS-L5</th>
<th>Strip-crimp applicator MKS-SC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>with safety cover</td>
<td>without safety cover</td>
<td>with safety cover</td>
</tr>
<tr>
<td>SVH-21T-P1.1</td>
<td>APLMK SVH21-11</td>
<td>APLNC SVH21-11</td>
<td>–</td>
</tr>
<tr>
<td>SVT-41T-P1.1</td>
<td>APLMK SVT41-11</td>
<td>APLNC SVT41-11</td>
<td>–</td>
</tr>
</tbody>
</table>