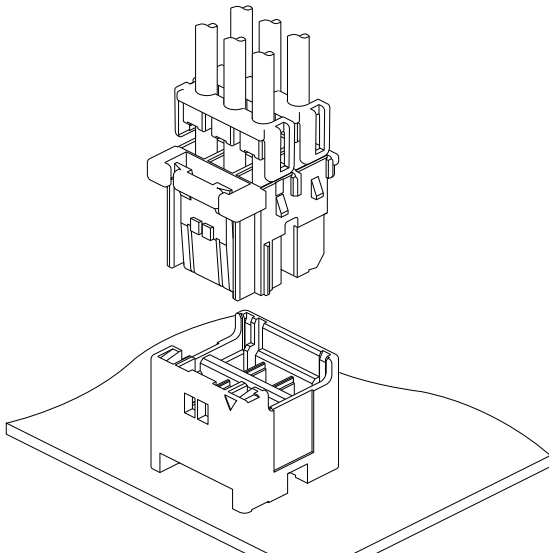


# HYV CONNECTOR

5.0mm pitch/Disconnectable Crimp style connectors



This HYV connector is 5.0 mm pitch wire-to-board type connector and has the mechanism to suppress the incomplete mating in mating operation.

Box-shaped contact to prevent the influence by external forces, thereby increasing safety of large current circuit connection. 4 type key patterns prevents mismatching insertion when using multiple pieces connector in the same model.

- Keying structure
- Secure locking structure
- Inertia lock structure
- Retainer mountable type
- Header suitable for potting process

## Specifications

- Current rating: 10 A AC, DC (Refer to the table below.)
- Voltage rating: 300 V AC, DC
- Temperature range: -30°C to +105°C  
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 10 mΩ max.  
After environmental tests/ 20 mΩ max.
- Insulation resistance: 1,000 MΩ min.
- Withstanding voltage: 1,500 VAC/minute
- Applicable wire: Conductor size 21 type/ AWG #22 to #18  
41 type/ AWG #18 to #16  
Insulation O.D. 21 type/ 1.8 mm to 2.7 mm  
41 type/ 2.3 mm to 3.0 mm  
(41 type: Insulation O.D. when mounting a retainer/ 2.3 mm to 2.9 mm)
- Applicable PC board thickness: 1.6 mm

Note: The current rating differs 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

No. of circuits	Wire size (AWG)			
	#16	#18	#20	#22
2	10	7	5	3
3	9	7	5	3
4	9	7	5	3
6	8	7	5	3

Note: Do not branch in parallel current which exceeds the rated current (e.g. more than 10 A in the case of 2 circuits with AWG #16). If branched in parallel, current imbalance or other problems may develop. If it is absolutely necessary to branch such a large current in parallel, design the circuits without causing any imbalance and provide an extra margin for each circuit.

- \* Refer to "General Instruction and Notice when using Terminals and Connectors" at the end of this catalog.
- \* Contact JST for details.
- \* Compliant with RoHS.

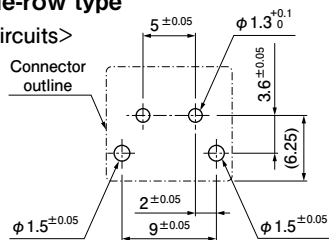
## Standards

- Ⓜ Recognized E60389
- Ⓢ Certified LR20812

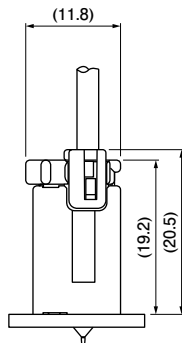
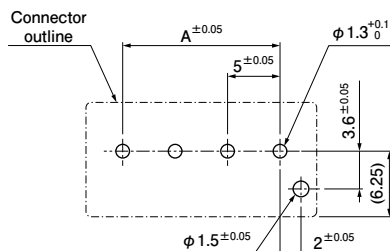
## PC board layout and Assembly layout

### Single-row type

<2 circuits>

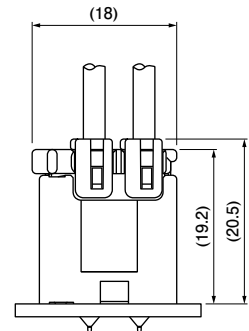
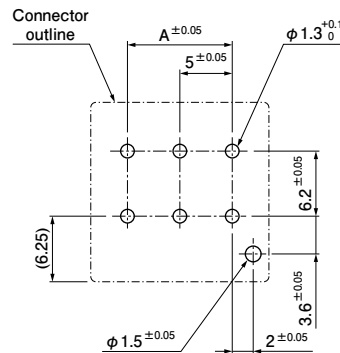


<3 & 4 circuits>



### Dual-row type

<4 & 6 circuits>



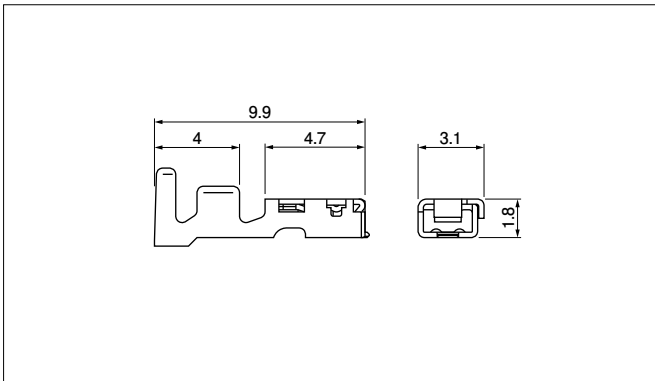
Note: 1. The above figure is the figure viewed from the connector mounting side .

2. Tolerances are non-cumulative: ± 0.05 mm for all centers.

3. Hole dimensions differ according to the type of PC board and piercing method. The dimensions above should serve as a guideline. Contact JST for details.

# HYV CONNECTOR

## Contact



Model No.	Applicable wire		Insulation O.D. (mm)	Q'ty/reel
	mm <sup>2</sup>	AWG#		
SHYVF-21T-M0.5	0.33 to 0.83	22 to 18	1.8 to 2.7	4,000
SHYVF-41T-M0.5	0.83 to 1.25	18 to 16	2.3 to 3.0	3,000

### Material and Finish

Copper alloy, tin-plated (reflow treatment)

### RoHS compliance

Note: Insulation O.D. of 41 barrel when mounting a retainer shall be 2.3 mm to 2.9 mm dia.

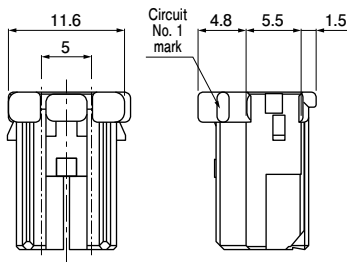
Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
SHYVF-21T-M0.5	AP-K2N	MKS-L	MK/SHYVF-21-05	APLMK SHYVF21-05
		—	—	—
SHYVF-41T-M0.5	—	MKS-L	MK/SHYVF-41-05	APLMK SHYVF41-05
		—	—	—

Note: Contact JST for fully automatic crimping applicator.

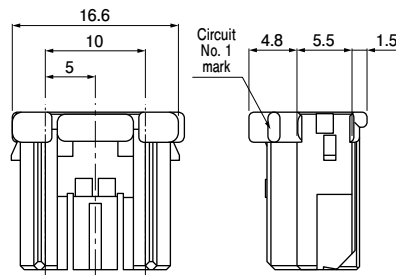
## Housing

### Single-row type

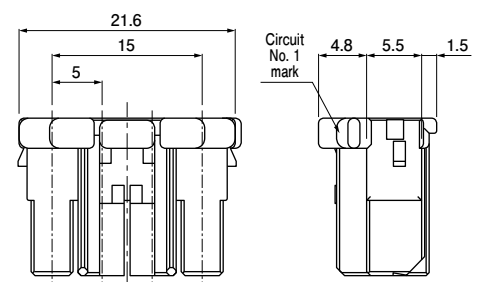
<2 circuits>



<3 circuits>

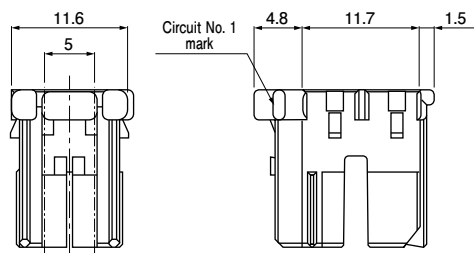


<4 circuits>

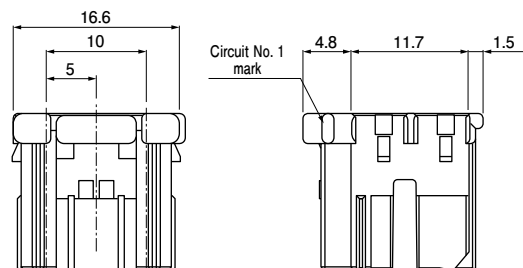


### Dual-row type

<4 circuits>



<6 circuits>



Type	No. of circuits	Model No.	Q'ty/bag
Single-row type	2	HYVRP-02V-A-S	1,000
	3	HYVRP-03V-A-S	1,000
	4	HYVRP-04V-A-S	600
Dual-row type	4	HYVRP-04V-W-A-S	600
	6	HYVRP-06V-W-A-S	600

### Material

Glass-filled PA 66, UL94V-0, natural

### RoHS compliance

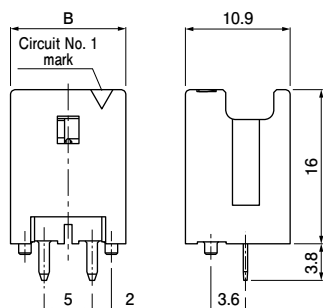
Note: Contact JST for key pattern.

# HYV CONNECTOR

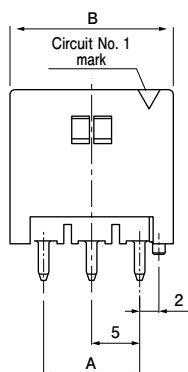
## Header

### Single-row type

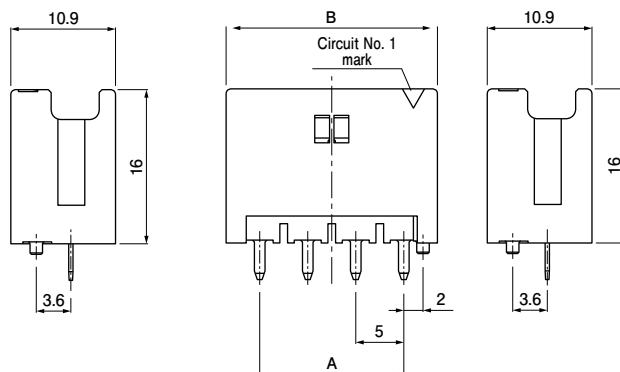
<2 circuits>



<3 circuits>

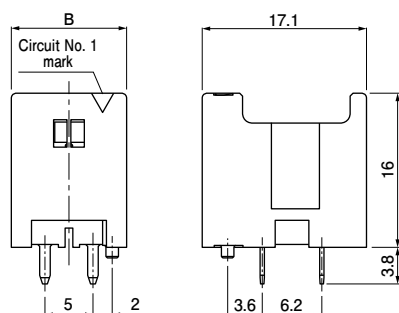


<4 circuits>

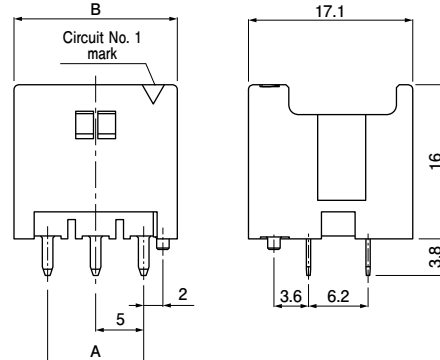


### Dual-row type

<4 circuits>



<6 circuits>



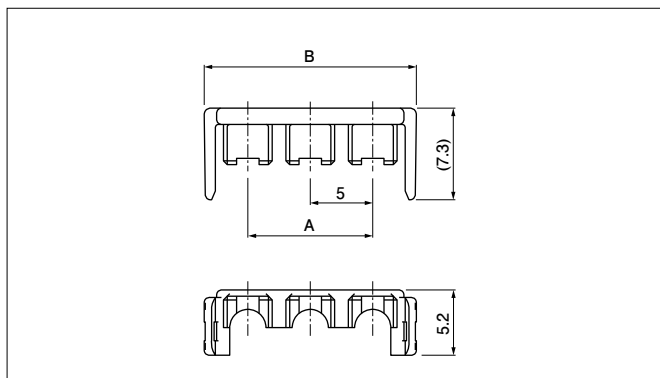
Type	No. of circuits	Model No.	Dimensions (mm)		Q'ty/box
			A	B	
Single-row type	2	B02B-HYVSS-A-1	—	12.0	150
	3	B03B-HYVSS-A-1	10.0	17.0	100
	4	B04B-HYVSS-A-1	15.0	22.0	100
Dual-row type	4	B04B-HYVSS-A-1W	—	12.0	100
	6	B06B-HYVSS-A-1W	10.0	17.0	50

#### Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)  
Wafer: Glass-filled PA 66, UL94V-0

RoHS compliance  
Note: Contact JST for key pattern.

## Retainer



No. of circuits	Model No.	Dimensions (mm)		Q'ty/bag
		A	B	
2	HYVS-02V	—	12.0	2,000
3	HYVS-03V	10.0	17.0	2,000
4	HYVS-04V	15.0	22.0	1,000

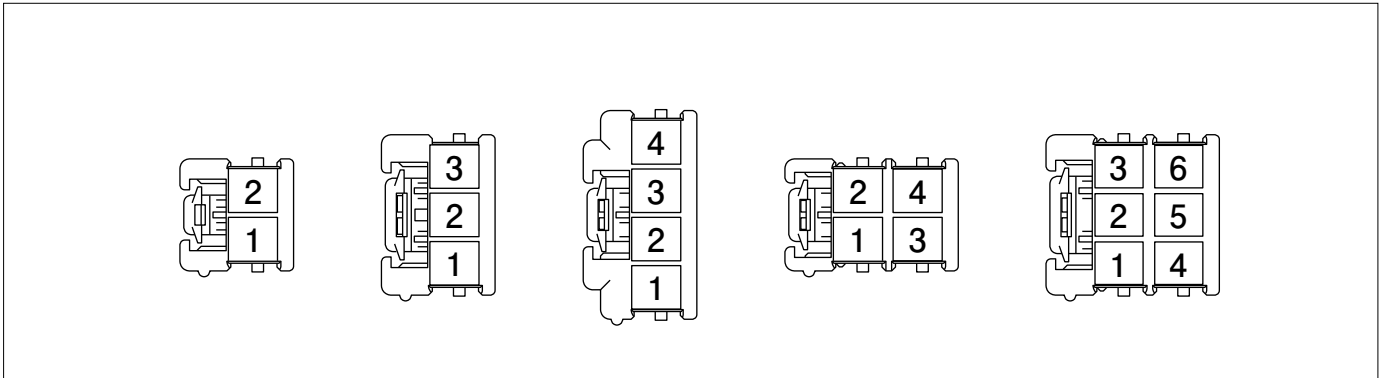
#### Material

Glass-filled PA 66, UL94V-0, natural

RoHS compliance

# HYV CONNECTOR

## Contact position location numbers



## Model number allocation

### Contact

**S HYV F - 21 T - M 0.5**

Form: S...Strip form

Series name

Shape: F...Socket contact

Applicable wire range: 21...AWG #22 to AWG #18  
41...AWG #18 to AWG #16

Surface finish: T...Tin-plated (reflow treatment)

Material: M...Copper alloy

Terminal size

### Housing

**HYV RP - 02 V - - A - S**

Series name

Part name: Plug (Retainer mountable type)

No. of circuits: 2 to 6

Flammability: V...UL94V-0

Shape: None...Single-row, W...Dual-row

Key pattern: A...Key pattern A

Color: S...Natural

### Header

**B 02 B - HYV S S - A - 1**

Shape of assembled product

No. of circuits: 2 to 6

Part name: Header

Series name

Color: S...Natural

Indication of clinch: S...Straight pin

Key pattern: A...Key pattern A

With/Without boss: 1...With boss

Shape: None...Single-row, W...Dual-row

### Retainer

**HYV S - 02 V**

Series name

Part name: Retainer

No. of circuits: 2 to 4

Flammability: V...UL94V-0