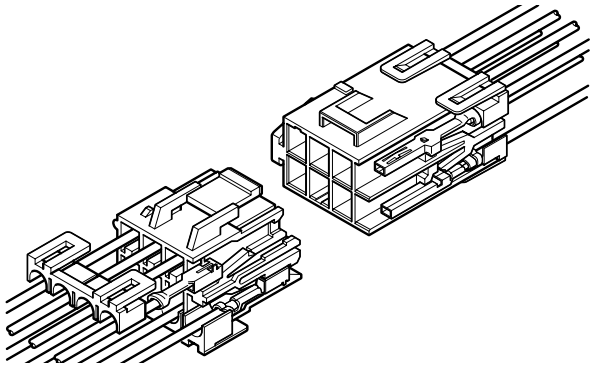


# VL CONNECTOR

**6.2mm pitch/Disconnectable Crimp style Wire-to-wire connectors**  
 (Combined use for both wire-to-board and wire-to-wire connections)



**This VL connector is designed for wire-to-wire and wire-to-board 6.2 mm pitch connector corresponding to large current up to 20 A (1 or 2-circuit with 3.5 mm<sup>2</sup> wire). Secondary retainer, which prevents from insufficient insertion of contact and coming off contact, may use and large current circuit can be connected certainly and safety.**

- 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.
- 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.

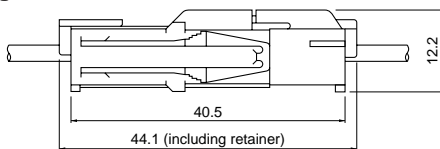
Current unit: A

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

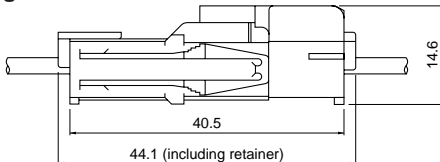
## Panel layout and Assembly layout

<2, 3, 4 circuits (single-row)>

Inner-housing lock

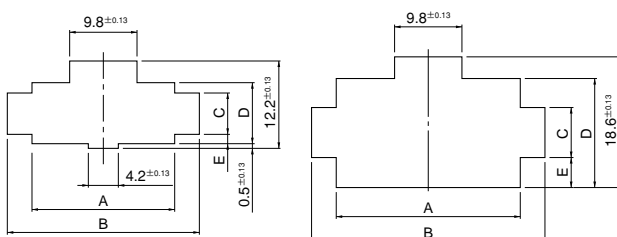


Outer-housing lock



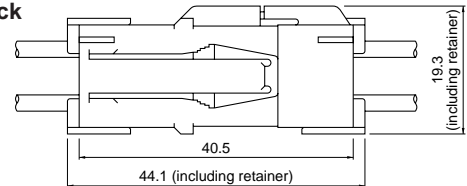
Shape I

Shape II

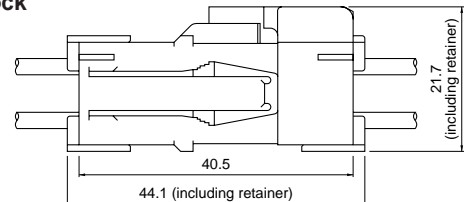


<4, 6, 8, 12 circuits>

Inner-housing lock



Outer-housing lock

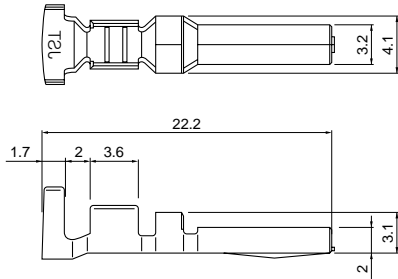


Circuits	Receptacle housing Model No.	Panel hole shape	Panel hole dimensions (mm)					Applicable panel thickness (mm)
			General tolerance A, B, D: ±0.13 C, E: ±0.1					
			A	B	C	D	E	
2	VLR-02V	I	13.8	20.6	5.7	8.5	1.4	0.5~2.0
3	VLR-03V	I	20.0	26.8	5.7	8.5	1.4	
4	VLR-04V	II	13.8	20.6	7.0	15.4	4.2	
4 (Single-row)	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	

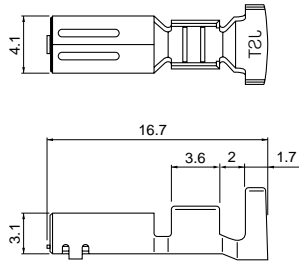
- Note: 1. Punch holes in the panel according to the figures and table shown above. Burrs must be removed.  
 2. The strength of the panel must be considered when punching two or more holes.  
 3. The connector must be inserted from the same side as the hole is punched.

## 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 #		
<b>SVM-42T-P2.0</b>	<b>SVF-42T-P2.0</b>	0.3~1.25	22~16	1.7~3.2	2,000
		0.3+0.3~ 0.5+0.75	22+22~ 20+18	1.7+1.7~ 2.5+2.7	
<b>SVM-61T-P2.0</b>	<b>SVF-61T-P2.0</b>	0.5~2.0	20~14	1.9~3.4	
		0.5+0.5~ 0.75+1.25	20+20~ 18+16	1.9+1.9~ 2.1+2.7	
<b>SVM-81T-P2.0</b>	<b>SVF-81T-P2.0</b>	3.5	12	4.1	

### Material and Finish

Phosphor bronze, tin-plated (reflow treatment)

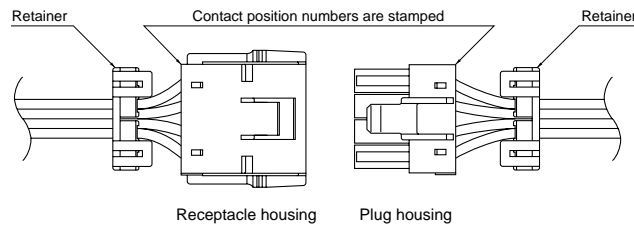
### RoHS compliance

Note: Contact JST for special products.

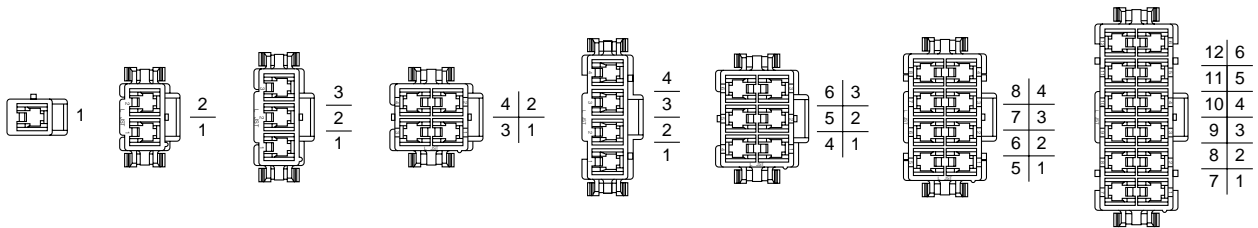
Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
<b>SVM-42T-P2.0</b>	AP-K2N	MKS-L	MK/SVF/M-42-20	APLMK SVF/M42-20
<b>SVF-42T-P2.0</b>		—	—	—
<b>SVM-61T-P2.0</b>		MKS-L	MK/SVF/M-61-20	APLMK SVF/M61-20
<b>SVF-61T-P2.0</b>		—	—	—
<b>SVM-81T-P2.0</b>		MKS-L	MK/SVF/M-81-20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

Note: Contact JST for fully automatic crimping applicator.

## Contact position location numbers

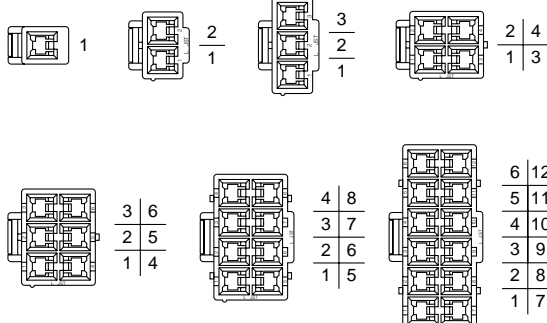


### Receptacle housing

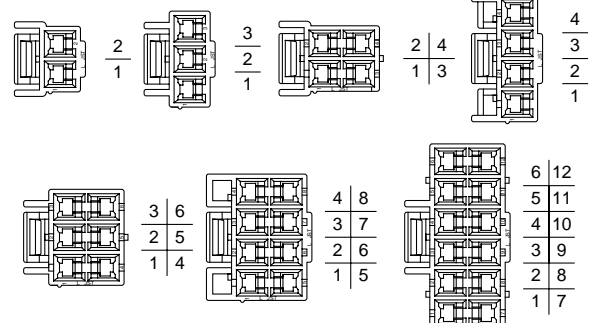


### Plug housing

#### <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	<b>VLR-01VF</b> (Without panel product) 	<b>VLP-01V</b> 	<b>VLS-01V</b> 
2	600V	20A	<b>VLR-02V</b> 	<b>VLP-02V</b> 	<b>VLS-02V</b> (commonly used for 2-circuit housing and 4-circuit housing) 
			<b>VLR-02VF</b> (Without panel lock product) 	<b>VLP-02V-1</b> 	
3	600V	19A	<b>VLR-03V</b> 	<b>VLP-03V</b> 	<b>VLS-03V</b> (commonly used for 3-circuit housing and 6-circuit housing) 
				<b>VLP-03V-1</b> 	
4	600V	18A	<b>VLR-04V</b> 	<b>VLP-04V</b> 	<b>VLS-02V</b> 
			<b>VLR-04VF</b> (Without panel lock product) 	<b>VLP-04V-1</b> 	
		<b>VLR-04VN</b> 	<b>VLP-04VN-1</b> 	<b>VLS-08V</b> (commonly used for 4-circuit housing and 8-circuit housing) 	

### RoHS compliance

Note: 1. Contact JST for special products.

2. Contact JST for Glow Wire compliant connectors.

# 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> 	<b>VLP-06V</b> 	<b>VLS-03V</b> (commonly used for 3-circuit housing and 6-circuit housing) 
				Q'ty/ bag 500	
8	600V	16A	<b>VLR-08V</b> 	<b>VLP-08V</b> 	<b>VLS-08V</b> (commonly used for 4-circuit housing and 8-circuit housing) 
				Q'ty/ bag 100	
12	600V	15A	<b>VLR-12V</b> 	<b>VLP-12V</b> 	<b>VLS-12V</b> 
				Q'ty/ bag 100	

### RoHS compliance

- Note: 1. Contact JST for special products.  
2. Contact JST for Glow Wire compliant connectors.

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