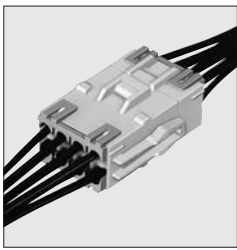




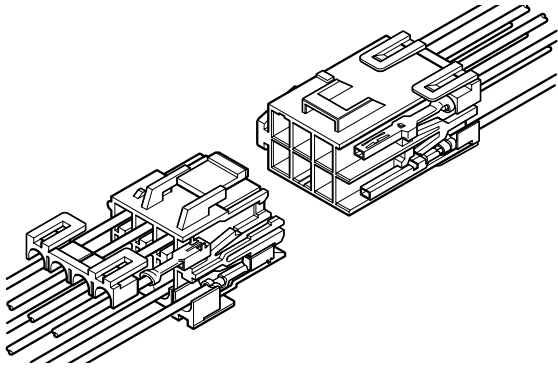
# THE DATASHEET OF VLR-03V





# VL CONNECTOR

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



**This VL connector is 6.2 mm pitch wire-to-wire and wire-to-board connector, designed for 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
- Retainer
- Suited for large current
- Panel lock

## Standards

- Recognized E60389
- Certified LR20812
- R9351103

## Specifications

- Current rating: 20 A AC, DC max. (Refer to the following table.)
  - 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
- \* In using the products, refer to "Handling Precaution for Terminal and Connector" described on our website (Technical documents of Product information page).
- \* Contact JST for details.
- \* RoHS2 compliance

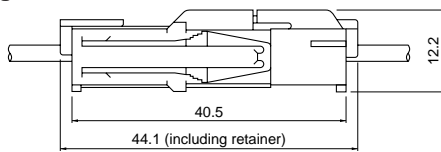
Note: The current rating varies depending on the number of circuits and the wire size used in each connector. The table below lists the current rating as a function of the number of circuits and the wire size.

No. of 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

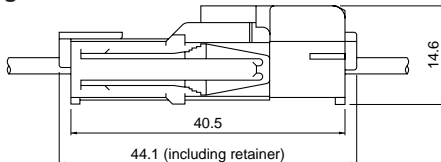
Current unit: A

## Panel layout and Assembly layout

<2, 3, 4 circuits (Single-row)>  
Inner-housing lock

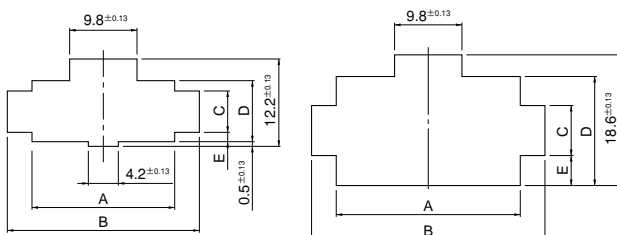


Outer-housing lock

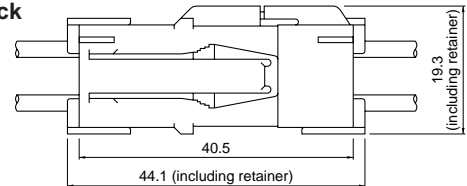


Shape I

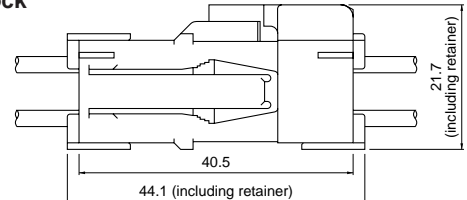
Shape II



<4, 6, 8, 12 circuits>  
Inner-housing lock



Outer-housing lock

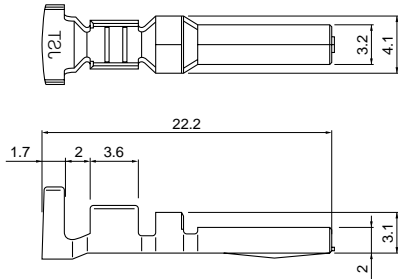


No. of circuits	Receptacle housing Model No.	Panel hole shape	Panel hole dimensions (mm)					Applicable panel thickness (mm)
			General tolerance A, B, D: ±0.13 C, E: ±0.1					
			A	B	C	D	E	
2	VLR-02V	I	13.8	20.6	5.7	8.5	1.4	0.5~2.0
3	VLR-03V	I	20.0	26.8	5.7	8.5	1.4	
4	VLR-04V	II	13.8	20.6	7.0	15.4	4.2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

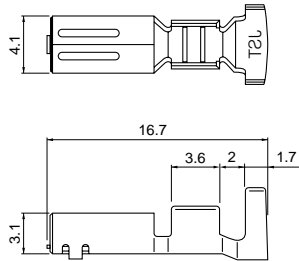
- Note: 1. Punch holes in the panel according to the figures and table shown above. Burrs must be removed.  
2. The strength of the panel must be considered when punching two or more holes.  
3. The connector must be inserted from the same side as the hole is punched.

## 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)

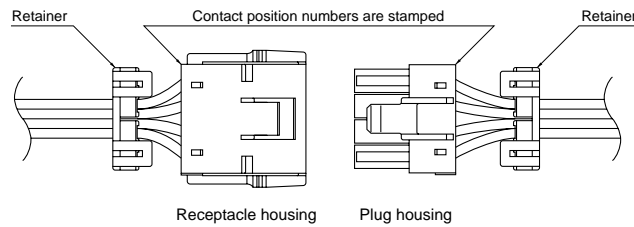
### RoHS2 compliance

Note: Contact JST for special products.

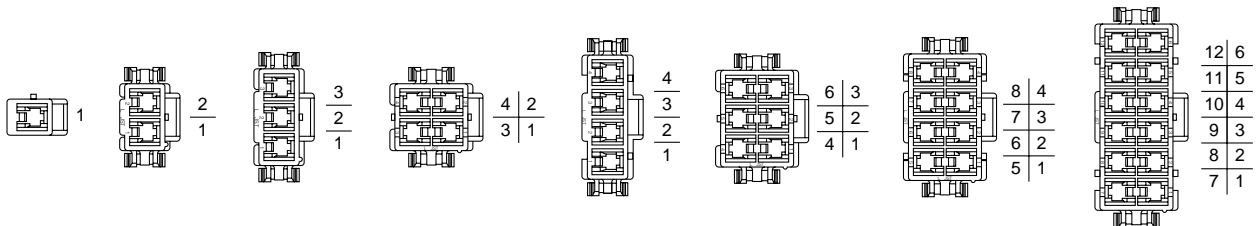
Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
<b>SVM-42T-P2.0</b>	AP-K2N	MKS-L	MK/SVF/M-42-20	APLMK SVF/M42-20
<b>SVF-42T-P2.0</b>		—	—	—
<b>SVM-61T-P2.0</b>		MKS-L	MK/SVF/M-61-20	APLMK SVF/M61-20
<b>SVF-61T-P2.0</b>		—	—	—
<b>SVM-81T-P2.0</b>		MKS-L	MK/SVF/M-81-20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

Note: Contact JST for fully automatic crimping applicator.

## Contact position location numbers

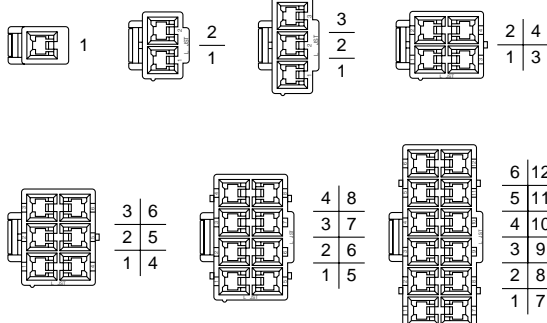


### Receptacle housing

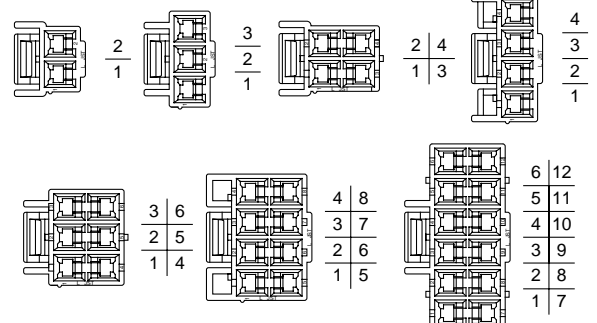


### Plug housing

#### <Inner-housing lock>



#### <Outer-housing lock>



# VL CONNECTOR

## Housing

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

No. of 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 lock product) 		Q'ty/ bag	<b>VLP-01V</b> 		Q'ty/ bag	<b>VLS-01V</b> 	Q'ty/ bag
			500	500	1,000					
2	600V	20A	<b>VLR-02V</b> 		Q'ty/ bag	<b>VLP-02V</b> 		Q'ty/ bag	<b>VLS-02V</b> (commonly used for 2-circuit housing and 4-circuit housing) 	Q'ty/ bag
			500	500	1,000					
	600V	19A	<b>VLR-02VF</b> (Without panel lock product) 		Q'ty/ bag	<b>VLP-02V-1</b> 		Q'ty/ bag	<b>VLS-03V</b> (commonly used for 3-circuit housing and 6-circuit housing) 	Q'ty/ bag
			500	500		1,000				
3	600V	19A	<b>VLR-03V</b> 		Q'ty/ bag	<b>VLP-03V</b> 		Q'ty/ bag	<b>VLS-03V</b> (commonly used for 3-circuit housing and 6-circuit housing) 	Q'ty/ bag
			500	500	1,000					
	600V	18A	<b>VLR-04V</b> 		Q'ty/ bag	<b>VLP-03V-1</b> 		Q'ty/ bag	<b>VLS-02V</b> 	Q'ty/ bag
			500	500	1,000					
4	600V	18A	<b>VLR-04VF</b> (Without panel lock product) 		Q'ty/ bag	<b>VLP-04V</b> 		Q'ty/ bag	<b>VLS-08V</b> (commonly used for 4-circuit housing and 8-circuit housing) 	Q'ty/ bag
			500	500		1,000				
			<b>VLR-04VN</b> 		Q'ty/ bag	<b>VLP-04V-1</b> 		Q'ty/ bag	<b>VLS-08V</b> (commonly used for 4-circuit housing and 8-circuit housing) 	Q'ty/ bag
				500	500	500	1,000			

### RoHS2 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



No. of 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	

### RoHS2 compliance

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

## Looking for pricing, stock, or lifecycle information?

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-  [JST Sales America Inc. Information](#)

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