

**JST**

Crimp

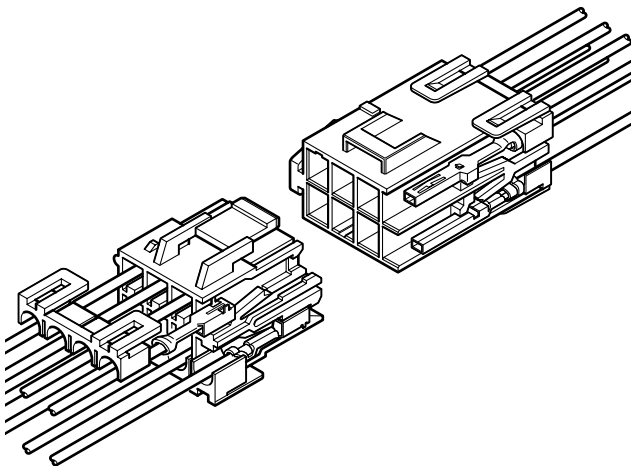
**6.2mm**  
(.244") pitch

# VL CONNECTOR

Disconnectable Crimp style Wire-to-wire connectors



The VL connector is a 6.2mm (.244") pitch wire-to-wire connector designed for circuits requiring up to 20A (1 or 2-circuit with AWG #12 wire).



## Features

- **Housing lances for contact retention**

Since the contact retention lances are part of the housing rather than protruding from the contact, they cannot be damaged by handling. They allow the contact to be easily inserted and securely locked into the housing.

- **Secondary retainer**

The secondary retainer is optionally available. This retainer ensures that the contacts are fully seated and locked in the housing and prevents their accidental release. Installed after the contacts are inserted, it locks and secures the contact.

- **Suited for circuits with high power requirements**

Since these contacts have large cross-sectional areas and high contact pressure, they can accommodate circuits requiring high power.

- **Panel lock construction**

Our unique space-saving panel lock is designed to prevent tangling with wires or breaking in cold or dry weather.

## Specifications

- Current rating: 20A AC, DC max.
  - Voltage rating: 600V AC, DC max.(300V in accordance with the Electrical Appliance and Material Control Law in Japan)
  - Temperature range: -25°C to +90°C  
(including temperature rise in applying electrical current)
  - Contact resistance: Initial value/7m max.  
After environmental testing/10m max.
  - Insulation resistance: 1,000M min.
  - Withstanding voltage: 2,000V AC/minute
  - Applicable wire: AWG #22 to #12  
0.3 to 3.5mm<sup>2</sup>
  - Applicable panel thickness: 0.5 to 2.0mm(.020" to .079")
- \*Contact JST for details.

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
1	20	15	10	8	6
2	20	15	10	8	6
3	19	14	9	8	6
4	18	13	9	7	6
6	16	12	8	7	5
8	16	11	7	6	5
12	15	10	7	6	4

## Standards

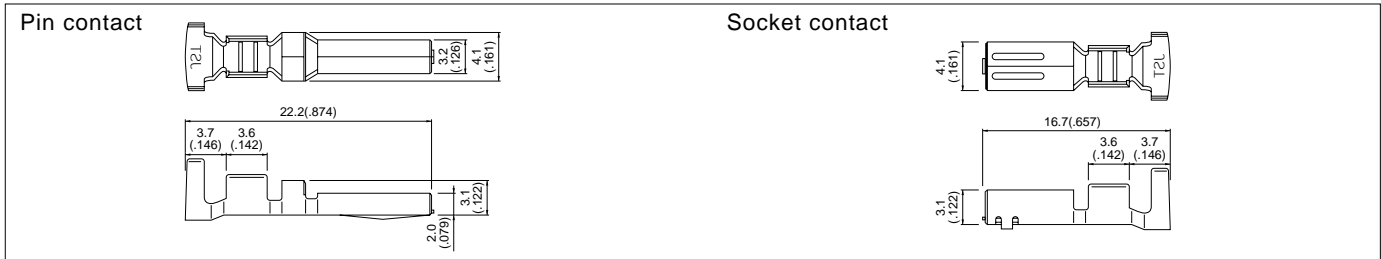
Recognized E60389

Certified LR20812

R9351103

# VL CONNECTOR

## Contact



Model No.		Applicable wire			Q'ty / reel
Pin contact	Socket contact	mm <sup>2</sup>	AWG #	Insulation O.D. mm(in.)	
<b>SVM-42T-P2.0</b>	<b>SVF-42T-P2.0</b>	0.3 to 1.25	22 to 16	1.7 to 3.2(.067+.126)	2,000
		0.3+0.3 to 0.5+0.75	22+22 to 20+18	1.7+1.7 to 2.5+2.7 (.067+.067 to .098+.106)	
<b>BVM-61T-P2.0</b>	<b>BVF-61T-P2.0</b>	0.5 to 2.0	20 to 14	1.9 to 3.4(0.75 to 1.34)	
		0.5+0.5 to 0.75+1.25	20+20 to 18+16	1.9+1.9 to 2.1+2.7 (0.75+0.75 to .083+.106)	
<b>BVM-81T-P2.0</b>	<b>BVF-81T-P2.0</b>	3.5	12	4.1(.161)	

### Material and Finish

Phosphor bronze, Tin-plated

Note: 1. Contact JST for special products.  
2. SVM-42T-P2.0 and SVF-42T-P2.0 are not TÜV approved.

## Housing

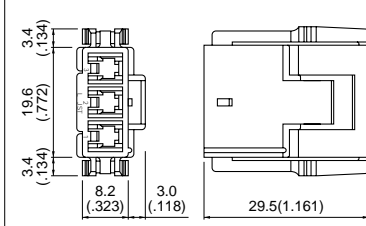
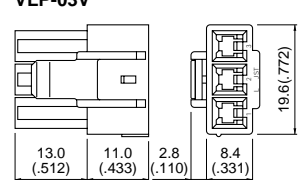
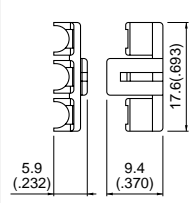
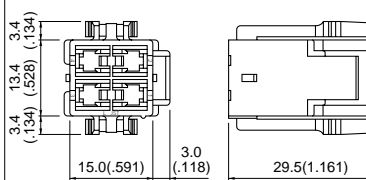
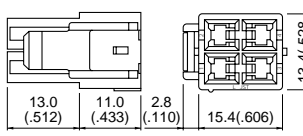
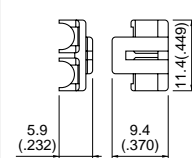
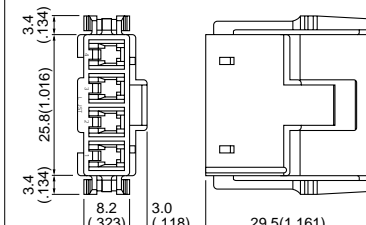
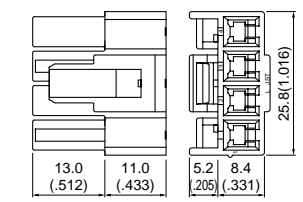
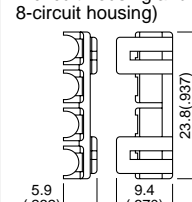
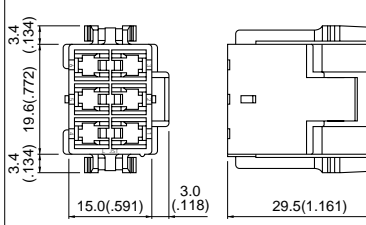
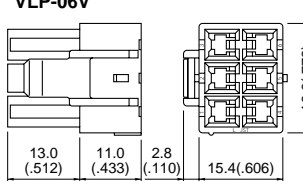
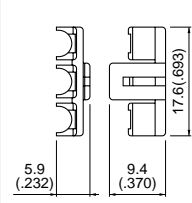
Material: Housing...Nylon 66, UL94V-0, white  
Retainer...Glass-filled nylon 66, UL94V-0, ivory

Circuits	Voltage rating	Current rating	Receptacle housing(for pin contact)	Q'ty / bag	Plug housing(for socket contact)	Q'ty / bag	Retainer	Q'ty / bag
1	600V	20.0A	<b>VLR-01VF</b>  Dimensions: 7.2(.283), 9.2(.362), 3.0(.118), 29.5(1.161)	500	<b>VLP-01V</b>  Dimensions: 13.0(.512), 11.0(.433), 2.8(.110), 9.4(.370), 7.2(.283)	500	<b>VLS-01V</b>  Dimensions: 7.3(.287), 9.4(.370), 6.2(.244)	1,000
2	600V	20.0A	<b>VLR-02V</b>  Dimensions: 3.4(.134), 13.4(.528), 3.4(.134), 8.2(.323), 3.0(.118), 29.5(1.161)	500	<b>VLP-02V</b>  Dimensions: 13.0(.512), 11.0(.433), 2.8(.110), 8.4(.331), 13.4(.528)	500	<b>VLS-02V</b> (commonly used for 2-circuit housing and 4-circuit housing)  Dimensions: 5.9(.232), 9.4(.370), 11.4(.449)	1,000
					<b>VLP-02V-1</b>  Dimensions: 13.0(.512), 11.0(.433), 5.2(.205), 8.4(.331), 15.0(.591)			

Note: 1. VLR-01VF is exclusively for free hanging. The other circuits can be used either for panel mounted or free hanging.  
2. Contact JST for special products.  
3. VLP-02V-1 is not TÜV approved.

## Housing

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

Circuits	Voltage rating	Current rating	Receptacle housing(for pin contact)	Plug housing(for socket contact)	Retainer
3	600V	19.0A	<b>VLR-03V</b> 	<b>VLP-03V</b> 	<b>VLS-03V</b> (commonly used for 3-circuit housing and 6-circuit housing) 
				Q'ty / bag 500	
4	600V	18.0A	<b>VLR-04V</b> 	<b>VLP-04V</b> 	<b>VLS-02V</b> 
				Q'ty / bag 500	
4	600V	18.0A	<b>VLR-04VN</b> 	<b>VLP-04VN-1</b> 	<b>VLS-08V</b> (commonly used for 4-circuit housing and 8-circuit housing) 
				Q'ty / bag 500	
6	600V	16.0A	<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	

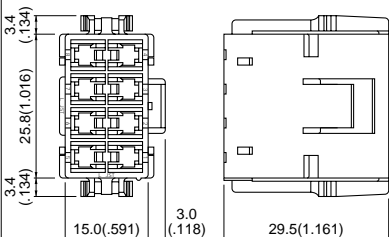
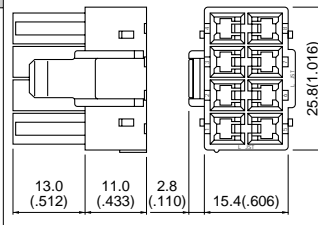
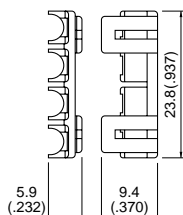
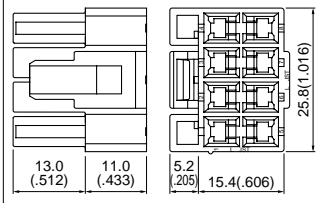
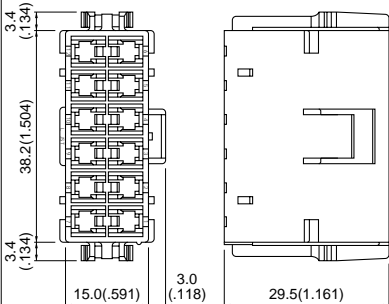
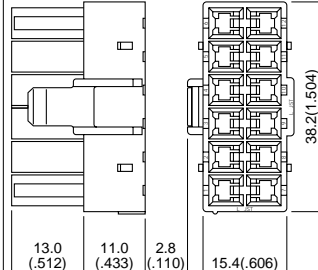
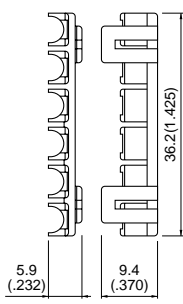
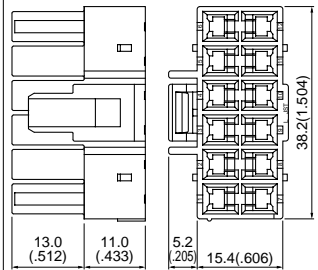
Note: 1. Contact JST for special products.

2. Models VLP-03V-1, VLP-04V-1, VLP-04VN-1 and VLP-06V-1 are not TÜV approved.

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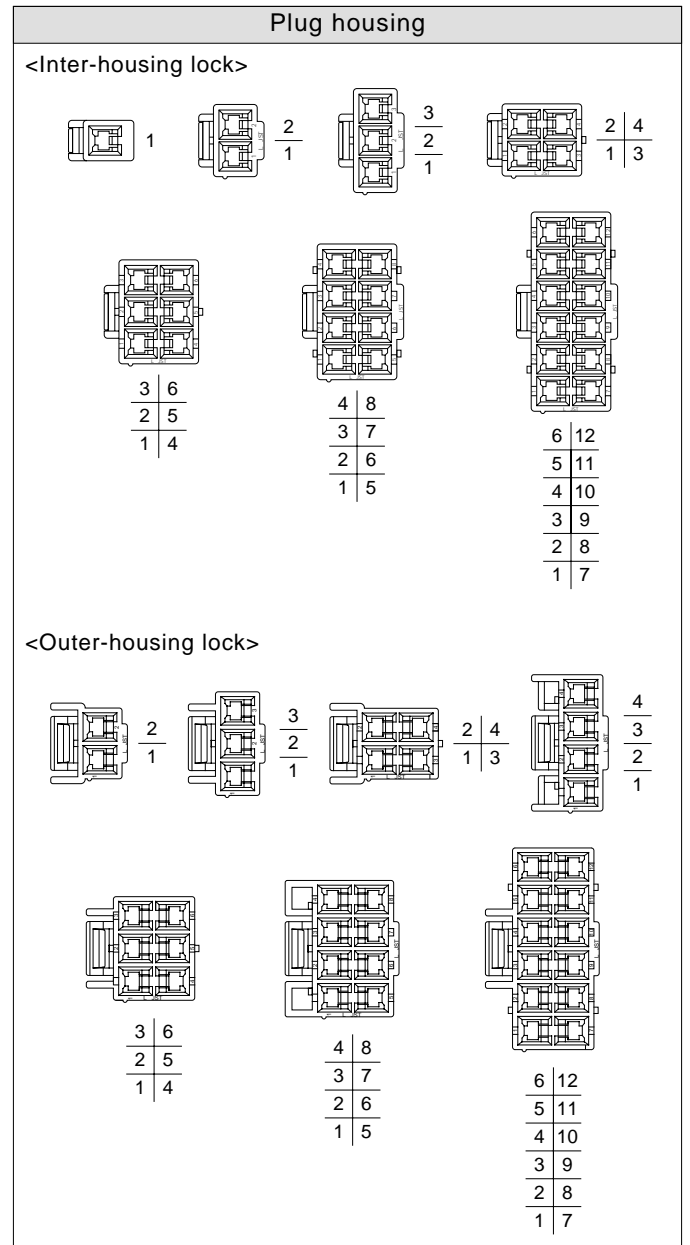
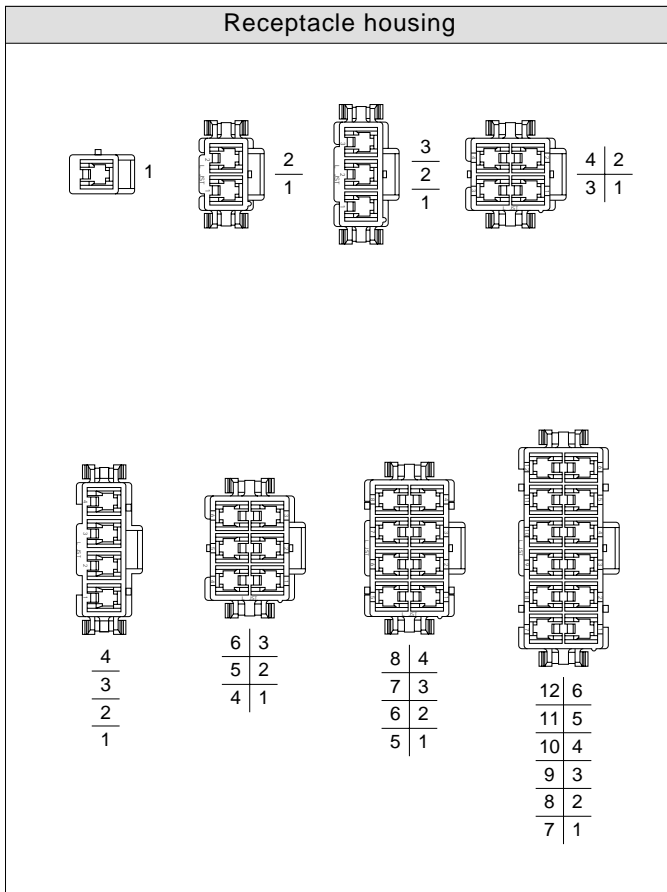
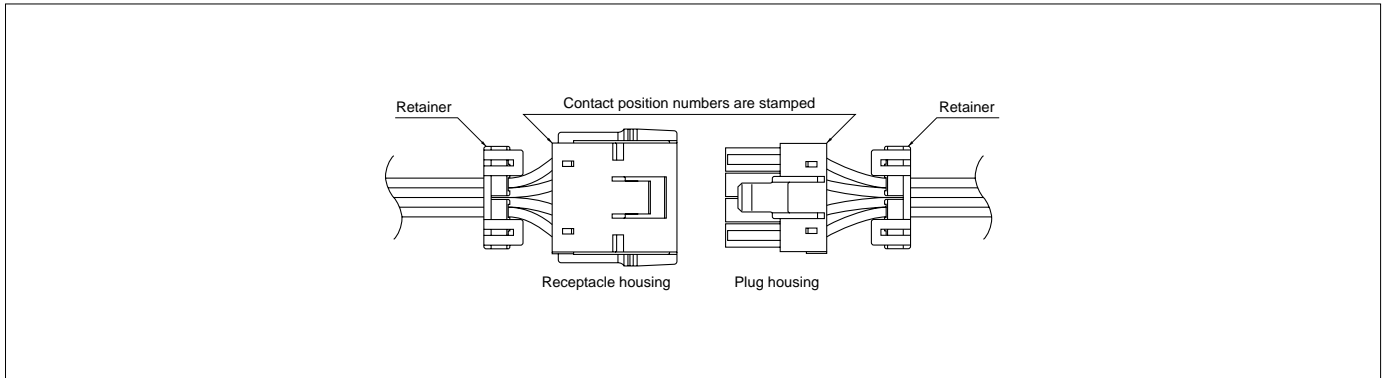
## Housing

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

Circuits	Voltage rating	Current rating	Receptacle housing(for pin contact)	Q'ty / bag	Plug housing(for socket contact)	Q'ty / bag	Retainer	Q'ty / bag
8	600V	16.0A	<b>VLR-08V</b> 	500	<b>VLP-08V</b> 	500	<b>VLS-08V</b> (commonly used for 4-circuit housing and 8-circuit housing) 	1,000
					<b>VLP-08V-1</b> 			
12	600V	15.0A	<b>VLR-12V</b> 	100	<b>VLP-12V</b> 	100	<b>VLS-12V</b> 	1,000
					<b>VLP-12V-1</b> 			

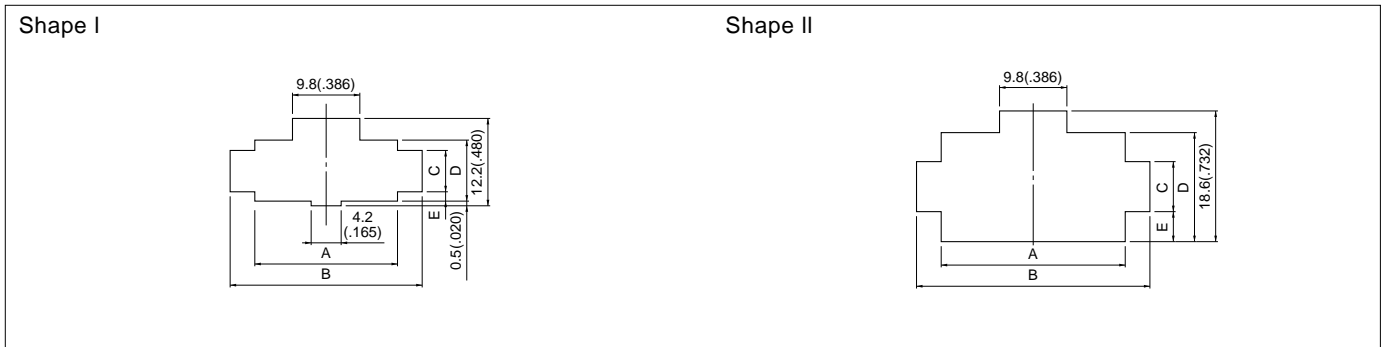
Note: 1. Contact JST for special products.  
2. Models VLP-08V-1 and VLP-12V-1 are not TÜV approved.

## Contact position location numbers



# VL CONNECTOR

## Panel layout

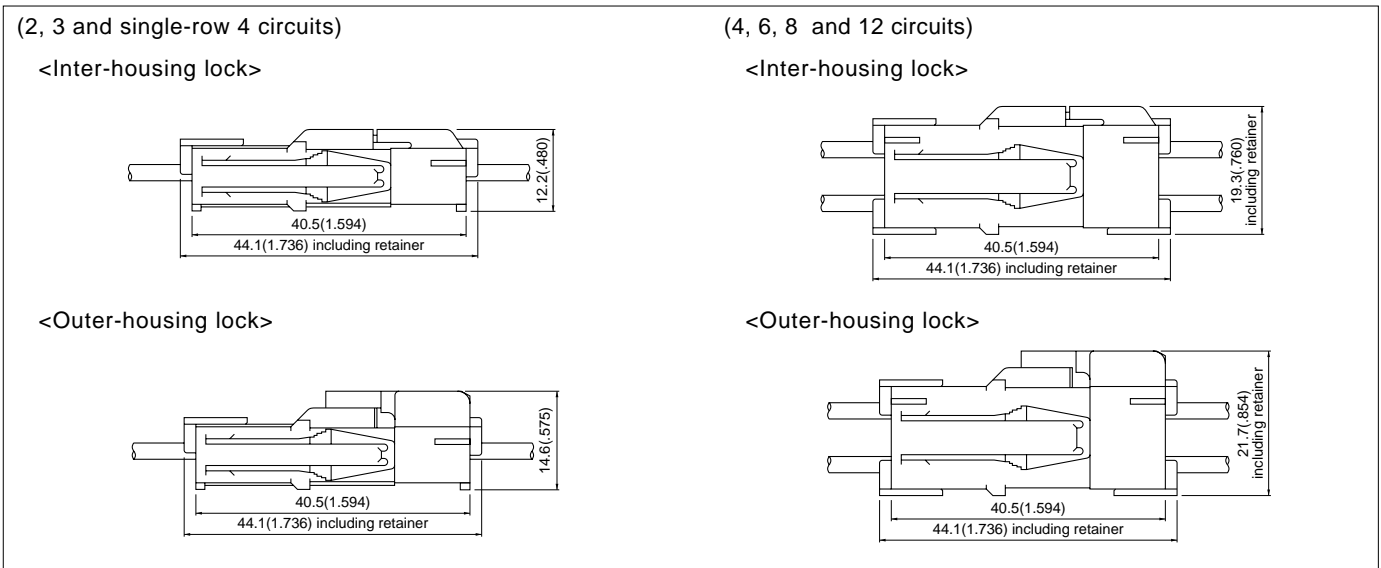


Circuits	Receptacle housing Model No.	Panel hole shape	Panel hole dimensions mm(in.)		General tolerance	A, B, D: $\pm 0.13$ ( $\pm 0.005$ ) C, E: $\pm 0.1$ ( $\pm 0.004$ )			Applicable panel thickness mm(in.)
			A	B		C	D	E	
2	<b>VLR-02V</b>	I	13.8( .543)	20.6( .811)	5.7(.224)	8.5(.335)	1.4(.055)	0.5 to 2.0 (.020 to .079)	
3	<b>VLR-03V</b>	I	20.0( .787)	26.8(1.055)	5.7(.224)	8.5(.335)	1.4(.055)		
4	<b>VLR-04V</b>	II	13.8( .543)	20.6( .811)	7.0(.276)	15.4(.606)	4.2(.165)		
4 (Single-row)	<b>VLR-04VN</b>	I	26.2(1.031)	33.0(1.299)	5.7(.224)	8.5(.335)	1.4(.055)		
6	<b>VLR-06V</b>	II	20.0( .787)	26.8(1.055)	7.0(.276)	15.4(.606)	4.2(.165)		
8	<b>VLR-08V</b>	II	26.2(1.031)	33.0(1.299)	7.0(.276)	15.4(.606)	4.2(.165)		
12	<b>VLR-12V</b>	II	38.9(1.531)	45.4(1.787)	7.0(.276)	15.4(.606)	4.2(.165)		

**Note:**

1. Punch holes in the panel according to the sketch 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.

## Assembly layout



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

Contact	Crimp applicator MKS-L		Compact crimp applicator MKS-LS		Strip-crimp applicator MKS-SC
	with safety cover	without safety cover	with safety cover	without safety cover	with safety cover
SVF-42T-P2.0	APLMK SVF/M42-20	APLNC SVF/M42-20	-	-	-
SVF-61T-P2.0	APLMK SVF/M61-20	APLNC SVF/M61-20	-	-	-
SVM-61T-P2.0	APLMK SVF/M61-20	APLNC SVF/M61-20	-	-	-
SVF-81T-P2.0	APLMK SVF/M81-20	APLNC SVF/M81-20	-	-	-
SVM-81T-P2.0	APLMK SVF/M81-20	APLNC SVF/M81-20	-	-	-

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