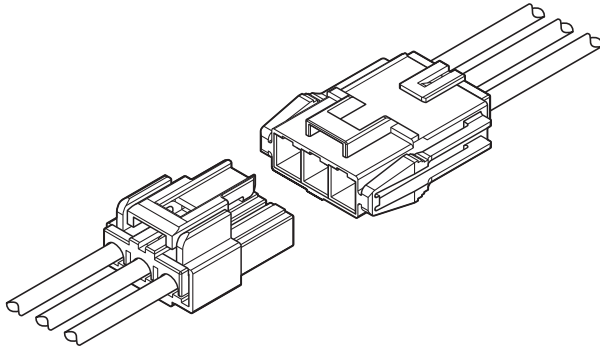


VL CONNECTOR (FOR HIGH CURRENT TYPE)

6.2 mm pitch/Wire-to-Wire connectors/Crimp style and Mating style



This 6.2 mm pitch wire-to-wire connector is designed for high current applications, made possible by the use of high conductivity materials.

- Supports high current carrying capacity up to 23 A
- Housing lance for easy and reliable contact insertion
- Retainers are available to enhance mechanical reliability as a secondary locking mechanism.
- Innovative, space-saving panel lock design that keeps wires tangle-free.
- The VL wire-to-board connector shares the same socket contacts and plug housings to allow for design flexibility within the VL series.

Specifications

- Current rating: 23 A AC/DC
(1 and 2 circuits/ AWG #12)

Note: The table below lists the current rating by number of circuits and wire size, with the assumption that each number of circuits is used.

Unit: A

No. of circuits	Wire size (AWG)				
	#12	#14	#16	#18	#20
1	23	18	15	11	9
2	23	18	15	11	9
3	22	17	14	10	8
4	21	16	13	9	8

Note 1. Range of application for current rating:

The current rating indicated above only applies to the VL high current type pin contacts and socket contacts specified on this datasheet. Please note that, if either contact of the standard type is used in combination with the high current type, then the current rating of the VL standard type will apply.

Note 2. Do not branch in parallel current which exceeds the rated current. If branched in parallel, current imbalance or other problems may occur. If it is absolutely necessary to branch such a large current in parallel, design the circuits without causing any imbalance and provide extra margin for each circuit.

- Voltage rating: 600 V AC/DC

Note: This product complies with the Electrical Appliance and Material Safety Law in Japan.

The rated voltage under the Electrical Appliance and Material Safety Law is 300 V.

- Temperature range: -25°C to +90°C

(including temperature rise in applying electrical current)

- Contact resistance: Initial value/ 7 mΩ max.
After test/ 10 mΩ max.

- Insulation resistance: 1,000 MΩ min.

- Withstanding voltage:

There shall be no breakdown or flashover while applying 2,000 VAC for one minute.

- Applicable wire range:

Conductor size/ AWG #20 to AWG #12

Insulation O.D./ ϕ 1.9 mm to ϕ 4.1 mm

Note: Refer to the Contacts section on page 3 for information on when two wires are crimped together.

- Applicable panel thickness: 0.5 mm to 2.0 mm

- * Please refer to the "Handling Precautions for Terminals and Connectors" on our website (listed in the "Technical Documents" column on the Product Information page) before use.

- * RoHS2 compliance

- * Dimensional unit: mm

- * Contact JST for details.

Standards

For information on overseas standard registrations, please refer to the "List of Registered Overseas Standards" on our website (listed in the "Technical Documents" column on the Product Information page).

- * Specifications registered to overseas standards may differ from the general specifications listed above.

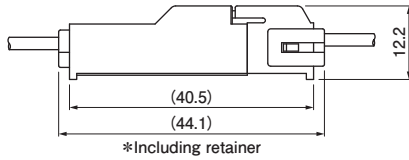
VL CONNECTOR (FOR HIGH CURRENT TYPE)

Assembly layout and Panel layout

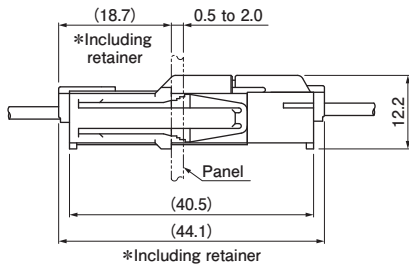
Inner lock type

• Single-row type

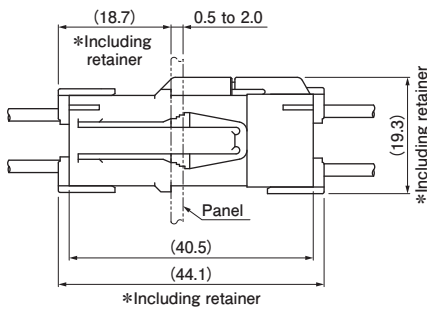
<1 circuit>



<2 circuits or more>

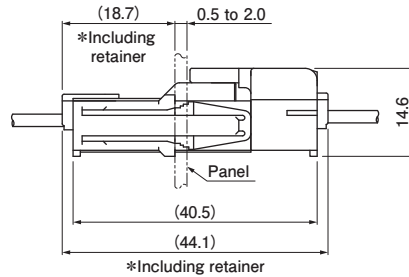


• Dual-row type

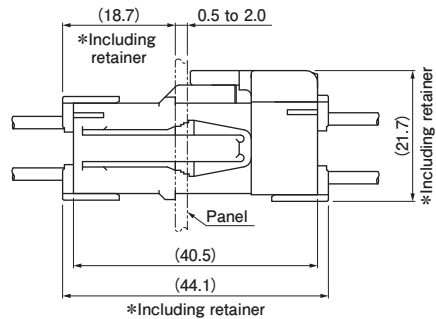


Outer lock type

• Single-row type

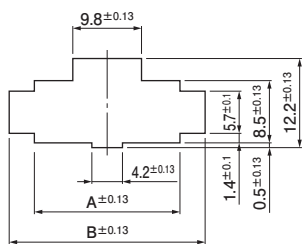


• Dual-row type

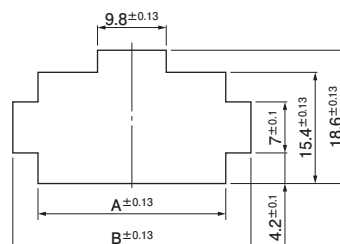


Note: The above figure shows the assembly layout of products with panel locks, except for the 1 circuit inner-lock version, single-row type. Products without panel locks have the same maximum dimensions in mating direction and thickness as products with panel locks.

Single-row type



Dual-row type



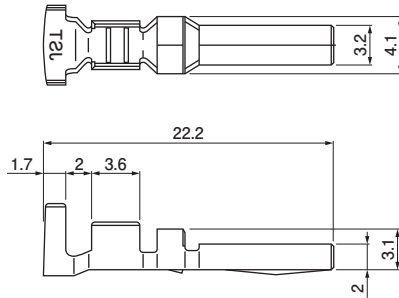
Type	No. of circuits	Receptacle housing	Panel hole dimensions (mm)		Applicable panel thickness (mm)
			A	B	
Single-row type	2	VLR-02V	13.8	20.6	0.5 to 2.0
	3	VLR-03V	20.0	26.8	
	4	VLR-04VN	26.2	33.0	
Dual-row type	4	VLR-04V	13.8	20.6	

Note: 1. Drill holes correspond to panel layout dimensions to prevent the formation of burrs, etc.
 2. When drilling multiple panel holes adjacent to each other, pay sufficient attention to the strength of the panel.
 3. Please ensure that the panel cutout is oriented to match the connector mounting direction.

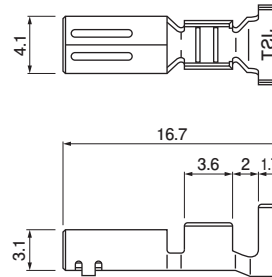
VL CONNECTOR (FOR HIGH CURRENT TYPE)

Contact

Pin contact



Socket contact



Pin contact

Model No.	Applicable wire range		Q'ty/ reel
	Conductor size AWG (mm ²)	Insulation O.D. (mm)	
SVSM-61T-S2.0	#20 to #14 (0.5 to 2.0)	1.9 to 3.4	2,000
	#20+#20 to #18+#16 (0.5+0.5 to 0.75+1.25)	1.9+1.9 to 2.1+2.7	
SVSM-81T-S2.0	#12 (3.5)	4.1	

Material and Surface finish, etc.

Copper alloy, tin-plated

Note: 1. Contact JST for special specifications.
2. Please take caution that even for 2 crimped wires in the 2-circuit version, the retainer cannot be used with 81 style barrel contacts.

Crimping machine

Contact	Crimping machine	Applicator	Crimp applicator with dies
SVSM-61T-S2.0	AP-K2N	MKS-L	APLMK SVF/M61-20
SVSM-81T-S2.0			APLMK SVF/M81-20

Note: Contact JST for fully automatic crimping applicator.

Socket contact

Model No.	Applicable wire range		Q'ty/ reel
	Conductor size AWG (mm ²)	Insulation O.D. (mm)	
SVSF-61T-S2.0	#20 to #14 (0.5 to 2.0)	1.9 to 3.4	2,000
	#20+#20 to #18+#16 (0.5+0.5 to 0.75+1.25)	1.9+1.9 to 2.1+2.7	
SVSF-81T-S2.0	#12 (3.5)	4.1	

Material and Surface finish, etc.

Copper alloy, tin-plated

Note: 1. Contact JST for special specifications.
2. Please take caution that even for 2 crimped wires in the 2-circuit version, the retainer cannot be used with 81 style barrel contacts.

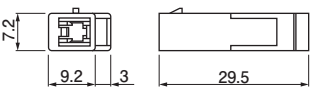
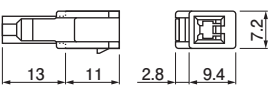
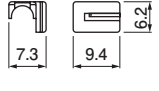
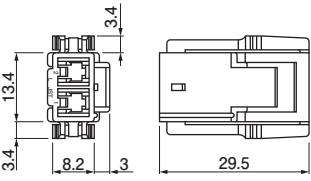
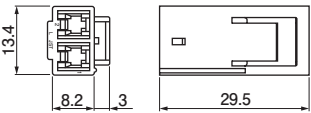
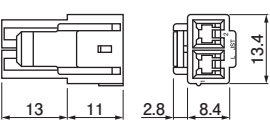
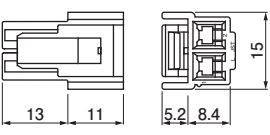
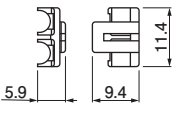
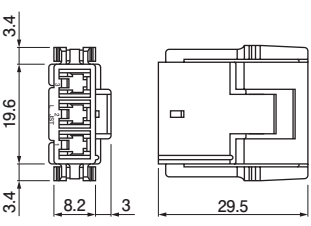
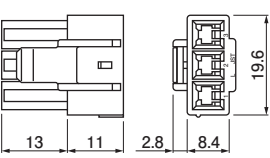
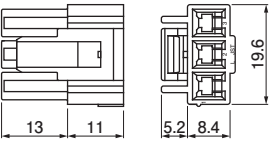
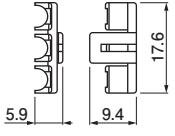
Crimping machine

Contact	Crimping machine	Applicator	Crimp applicator with dies
SVSF-61T-S2.0	AP-K2N	MKS-L	APLMK SVF/M61-20
SVSF-81T-S2.0			APLMK SVF/M81-20

Note: Contact JST for fully automatic crimping applicator.

VL CONNECTOR (FOR HIGH CURRENT TYPE)

Housing

No. of circuits	Receptacle housing (For pin contact)		Plug housing (For socket housing)		Retainer	
1	VLR-01VF * Without panel lock type 	Q'ty/ bag	VLP-01V * Inner lock type 	Q'ty/ bag	VLS-01V 	Q'ty/ bag
2	VLR-02V * With panel lock type  VLR-02VF * Without panel lock type 	Q'ty/ bag	VLP-02V * Inner lock type  VLP-02V-1 * Outer lock type 	Q'ty/ bag	VLS-02V * Common to each housing of 2-circuit and 4-circuit (dual-row type). 	Q'ty/ bag
3	VLR-03V * With panel lock type 	Q'ty/ bag	VLP-03V * Inner lock type  VLP-03V-1 * Outer lock type 	Q'ty/ bag	VLS-03V 	Q'ty/ bag

Material and Surface finish, etc.

Receptacle housing: PA 66, natural (white)

Plug housing: PA 66, natural (white)

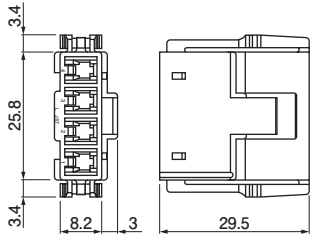
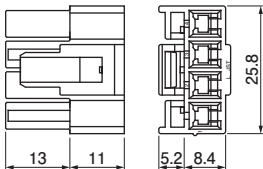
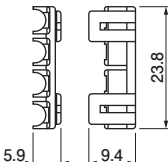
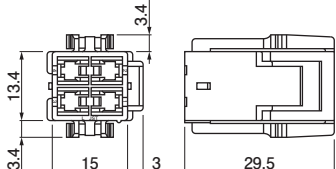
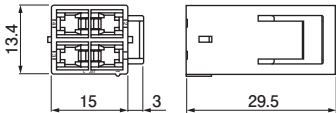
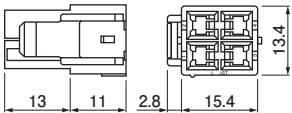
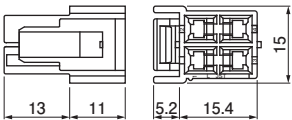
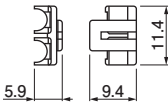
Retainer: PA 66 (GF), ivory

Note: 1. Contact JST for special specifications.

2. For flame retardant grade of resin material used, please refer to the "List of Registered Overseas Standards" on our website (listed in the "Technical Documents" column on the Product Information page).

VL CONNECTOR (FOR HIGH CURRENT TYPE)

Housing

No. of circuits	Receptacle housing (For pin contact)		Plug housing (For socket housing)		Retainer	
4	VLR-04VN * With panel lock type 	Q'ty/ bag	VLP-04VN-1 * Outer lock type 	Q'ty/ bag	VLS-08V 	Q'ty/ bag
	VLR-04V * With panel lock type  VLR-04VF * Without panel lock type 	Q'ty/ bag	VLP-04V * Inner lock type  VLP-04V-1 * Outer lock type 	Q'ty/ bag	VLS-02V * Common to each housing of 2-circuit and 4-circuit (dual-row type). 	Q'ty/ bag

Material and Surface finish, etc.

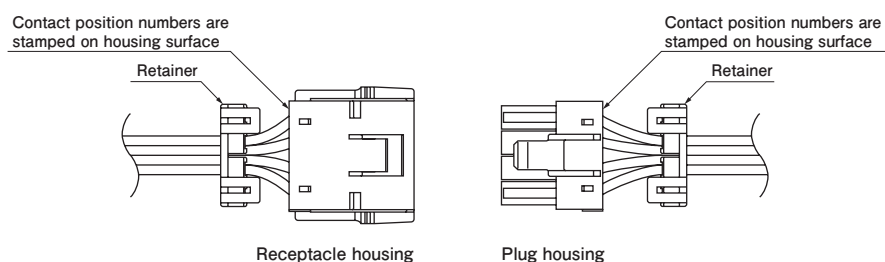
Receptacle housing: PA 66, natural (white)
 Plug housing: PA 66, natural (white)
 Retainer: PA 66 (GF), ivory

Note: 1. Contact JST for special specifications.

2. For flame retardant grade of resin material used, please refer to the "List of Registered Overseas Standards" on our website (listed in the "Technical Documents" column on the Product Information page).

VL CONNECTOR (FOR HIGH CURRENT TYPE)

Housing position location numbers



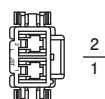
Receptacle housing

Single-row type

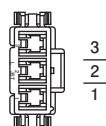
<1 circuit>



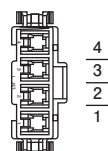
<2 circuits>



<3 circuits>

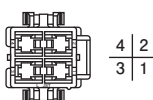


<4 circuits>



Dual-row type

<4 circuits>



Note: The above figure shows the contact insertion side of the housing with panel lock, except for the 1 circuit single-row type. Housings without panel lock have the same contact position numbers as those with panel lock.

Plug housing

Inner lock type

• Single-row type

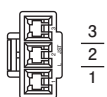
<1 circuit>



<2 circuits>



<3 circuits>



• Dual-row type

<4 circuits>



Outer lock type

• Single-row type

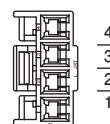
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<3 circuits>



<4 circuits>



• Dual-row type

<4 circuits>



Note: The above figure shows the contact insertion side.