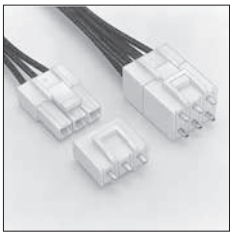
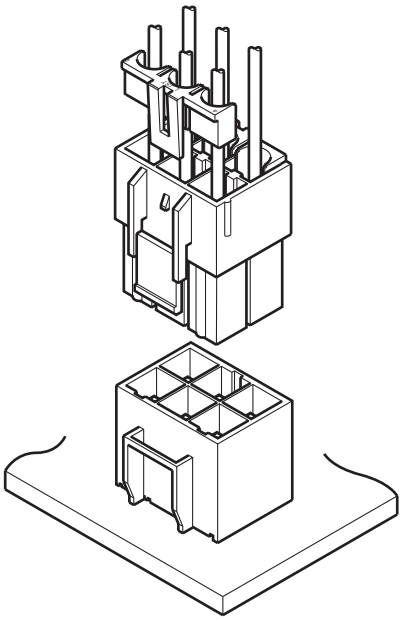


VL CONNECTOR

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



This is a 6.2 mm pitch wire-to-board connector with a maximum current rating of 20 A. It comes with a large housing lock to ensure a safe connection for high-current circuits. Additionally, using a retainer prevents incomplete insertion and contact backout, further enhancing connection reliability.

• High current capability

2 circuits versions can carry a maximum current of 20 A per circuit when used with AWG #12.

• Housing lance mechanism

The housing features an integrated lance mechanism that is not affected by external forces, providing a clear contact insertion feel and stable contact retention force.

• Retainer compatible

Retainers are available. The retainer prevents incomplete insertion and secures the contact in the housing while improving the mechanical reliability of the connection.

• Wire-to-Wire connectors are also available.

We offer a lineup of connectors for Wire-to-Wire connections that share the same contacts and housings, allowing for standardization of connectors used in internal power circuits on electrical equipment.

■ Specifications

• Current rating: 20 A AC/DC (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	#22
2	20	15	10	8	6	4
3	17	14	9	8	6	4
4	16	13	9	7	6	4
6	15	12	8	7	5	3
8	14	11	7	6	5	3
12	13	10	7	6	4	3

Note: 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
• Temperature range: −25℃ to +90℃
(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 #22 to AWG #12
Insulation O.D./ ϕ 1.7 mm to ϕ 4.1 mm
• Applicable PC board thickness: 1.6 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

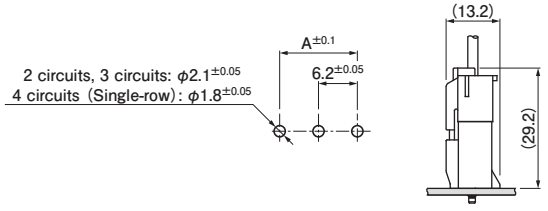
For information on overseas standard registrations, please refer to the "List of Registered Overseas Standards" on our website (listed in the “Technical Documents” column on the Product Information page).
* Specifications registered to overseas standards may differ from the general specifications listed above.

JST

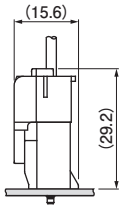
PC board layout and Assembly layout

Top entry type

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

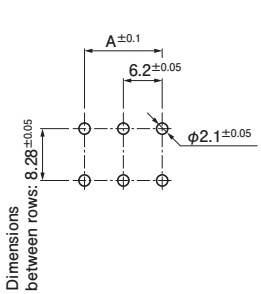


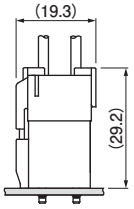
Inner lock type



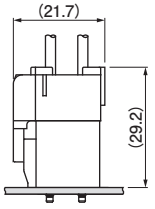
Outer lock type

<4 circuits (Dual-row), 6 circuits, 8 circuits, 12 circuits>



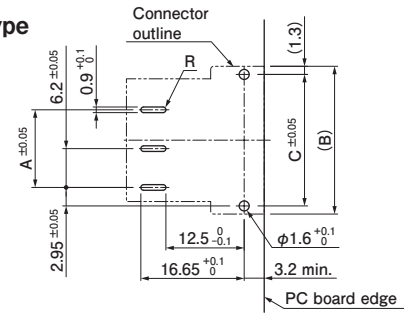


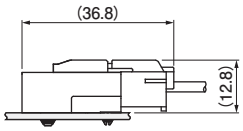
Inner lock type



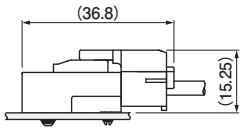
Outer lock type

Side entry type





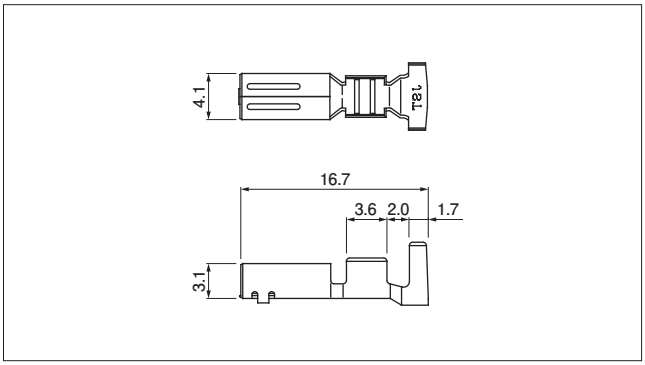
Inner lock type



Outer lock type

Note: 1. The PC board layout figure shown is viewed from the connector mounting surface.
2. Dimensions A, B and C: See header section on pages 6 and 7.
3. Tolerance for the PCB hole pitch shall be ± 0.05, and shall not accumulate more than ± 0.1 for the top entry type and more than ± 0.05 for the side entry type.
4. Hole dimensions differ depending on the type of PCB and PCB drilling method.
The above dimensions are for reference only. Please contact JST for further details.

Contact



Model No.	Applicable wire range		Q'ty/ reel
	Conductor size AWG (mm²)	Insulation O.D. (mm)	
SVF-42T-P2.0	#22 to #16 (0.3 to 1.25)	1.7 to 3.2	2,000
SVF-61T-P2.0	#20 to #14 (0.5 to 2.0)	1.9 to 3.4	2,000
SVF-81T-P2.0	#12 (3.5)	4.1	2,000

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.

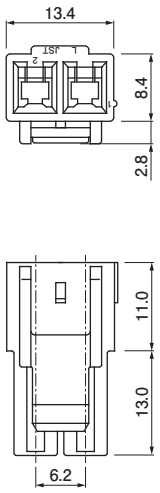
Crimping machine

Contact	Crimping machine	Applicator	Crimp applicator with dies
SVF-42T-P2.0	AP-K2N	MKS-L	APLMK SVF/M42-20
SVF-61T-P2.0			APLMK SVF/M61-20
SVF-81T-P2.0			APLMK SVF/M81-20

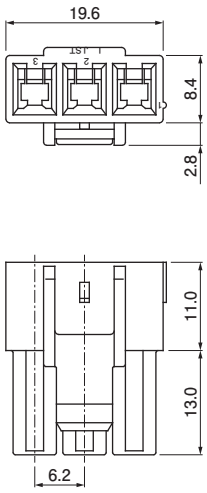
Note: Contact JST for fully automatic crimping applicator.

Housing (Inner lock type)

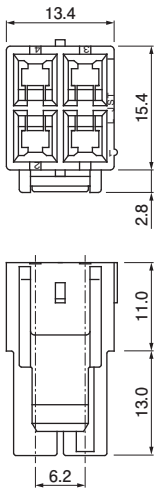
<2 circuits>



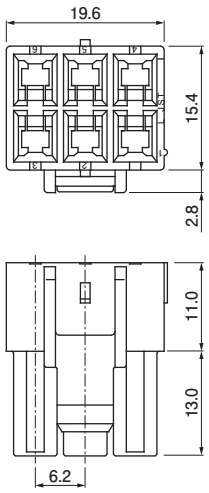
<3 circuits>



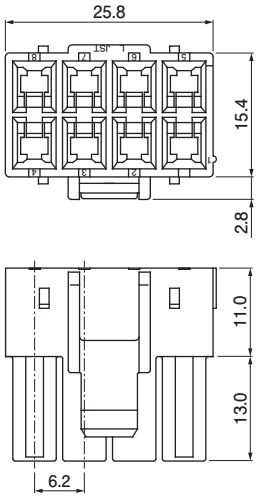
<4 circuits>



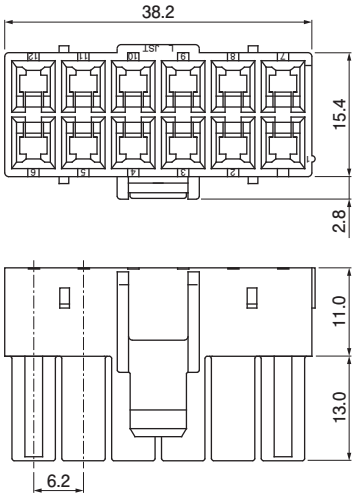
<6 circuits>



<8 circuits>



<12 circuits>



Inner lock type

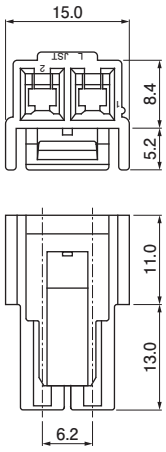
No. of circuits	Model No.	Q'ty/bag
2	**VLP-02V**	500
3	**VLP-03V**	500
4	**VLP-04V**	500
6	**VLP-06V**	500
8	**VLP-08V**	200
12	**VLP-12V**	100

Material and Surface finish, etc.
PA 66, natural (white)

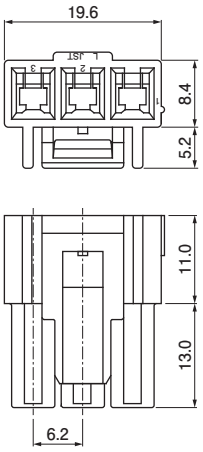
Note: For flame retardant grade of resin material used, please refer to the "List of Registered Overseas Standards" on our website (listed in the "Technical Documents" column on the Product Information page).

Housing (Outer lock type)

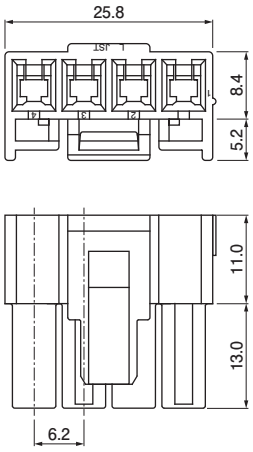
<2 circuits>



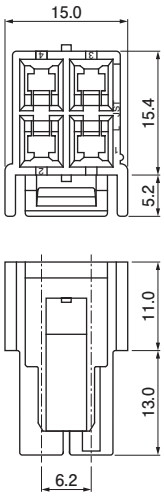
<3 circuits>



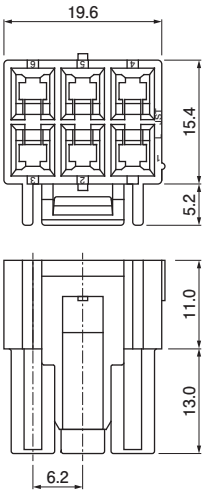
<4 circuits (Single-row)>



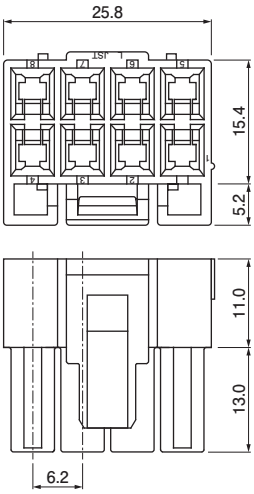
<4 circuits (Dual-row)>



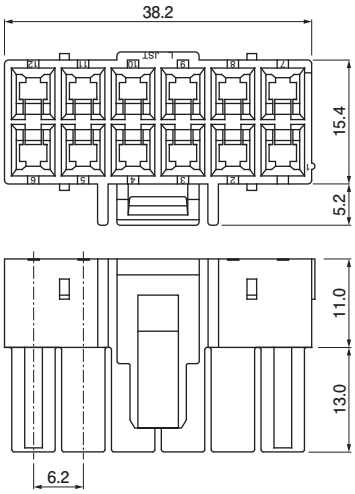
<6 circuits>



<8 circuits>



<12 circuits>



Outer lock type

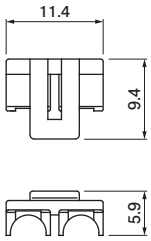
No. of circuits	Model No.	Q'ty/bag
2	**VLP-02V-1**	500
3	**VLP-03V-1**	500
4 (Single-row)	**VLP-04VN-1**	500
4 (Dual-row)	**VLP-04V-1**	500
6	**VLP-06V-1**	500
8	**VLP-08V-1**	200
12	**VLP-12V-1**	100

Material and Surface finish, etc.
PA 66, natural (white)

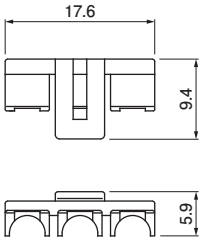
Note: For flame retardant grade of resin material used, please refer to the "List of Registered Overseas Standards" on our website (listed in the "Technical Documents" column on the Product Information page).

Retainer

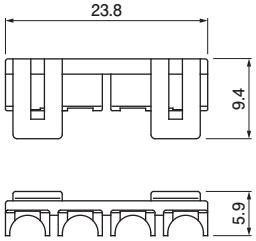
<2 circuits, 4 circuits (Dual-row)>



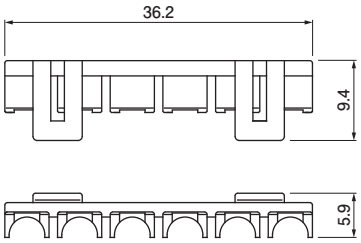
<3 circuits, 6 circuits>



<4 circuits (Single-row), 8 circuits>



<12 circuits>



No. of circuits	Model No.	Q'ty/bag
2, 4 (Dual-row)	**VLS-02V**	1,000
3, 6	**VLS-03V**	1,000
4 (Single-row), 8	**VLS-08V**	1,000
12	**VLS-12V**	1,000

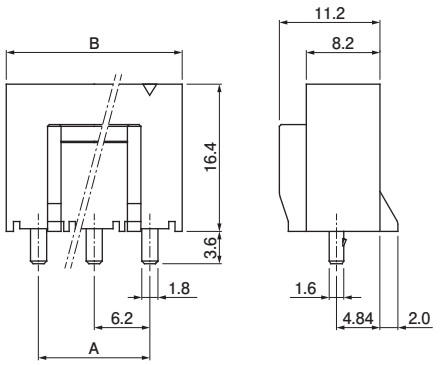
Material and Surface finish, etc.
PA 66 (GF), natural (ivory)

Note: 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).

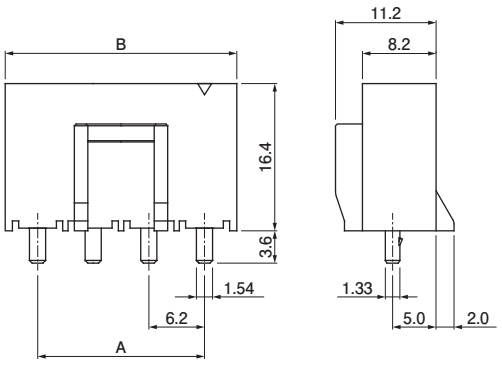
Header

Top entry type

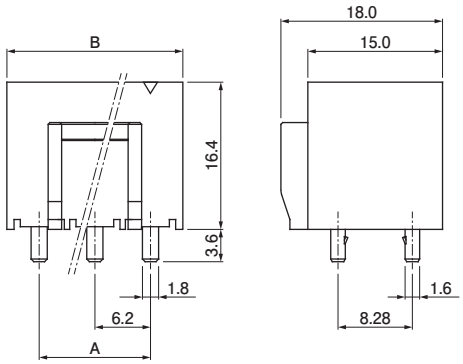
<2 circuits, 3 circuits>



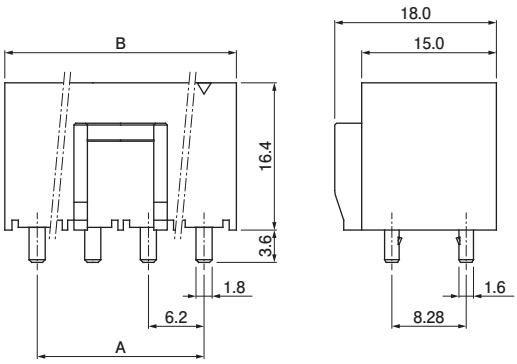
<4 circuits (Single-row)>



<4 circuits (Dual-row), 6 circuits>



<8 circuits, 12 circuits>



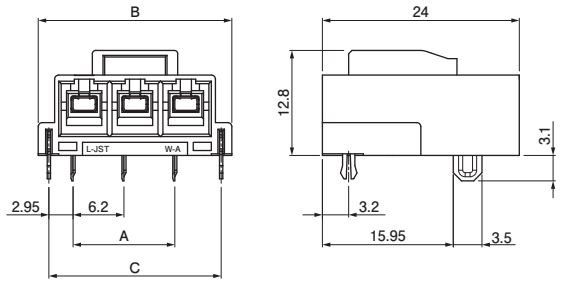
No. of circuits	Model No.	Dimensions (mm)		Q'ty/box
		A	B	
2	**B02P-VL**	6.2	13.4	100
3	**B03P-VL**	12.4	19.6	100
4 (Single-row)	**B04P-VL-VN-1.8**	18.6	26.2	100
4 (Dual-row)	**B04P-VL**	6.2	13.4	100
6	**B06P-VL**	12.4	19.6	50
8	**B08P-VL**	18.6	26.2	50
12	**B12P-VL**	31.0	38.6	35

Material and Surface finish, etc.
Base contact: Copper-alloy, tin-plated Base housing: PA 66, natural (white)

Note: 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).

Header

Side entry type



No. of circuits	Model No.	Dimensions (mm)			Q'ty/box
		A	B	C	
2	S02P-VL-13	6.2	17.4	14.8	425
3	S03P-VL-13	12.4	23.6	21.0	300

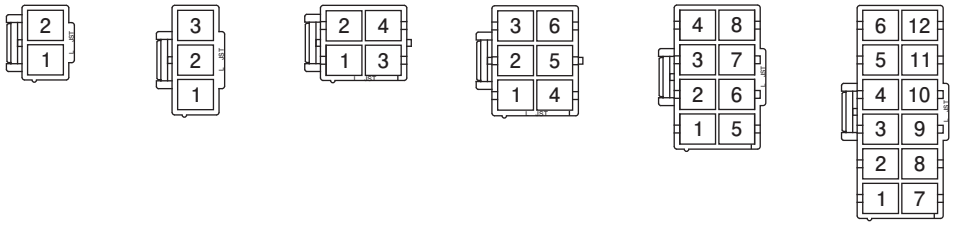
Material and Surface finish, etc.
Base contact: Copper alloy, tin-plated Reinforcement: Copper alloy, tin-plated Base housing: PA 66 (GF), natural (ivory)

Note: 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).

Housing position location numbers

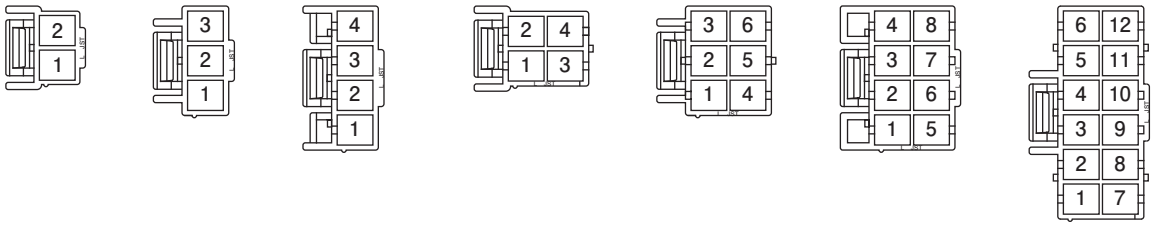
Inner lock type

<2 circuits> <3 circuits> <4 circuits> <6 circuits> <8 circuits> <12 circuits>



Outer lock type

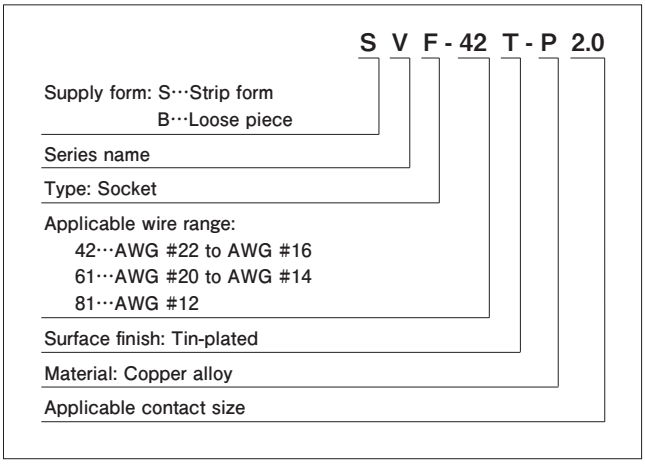
<2 circuits> <3 circuits> <4 circuits (Single-row)> <4 circuits (Dual-row)> <6 circuits> <8 circuits> <12 circuits>



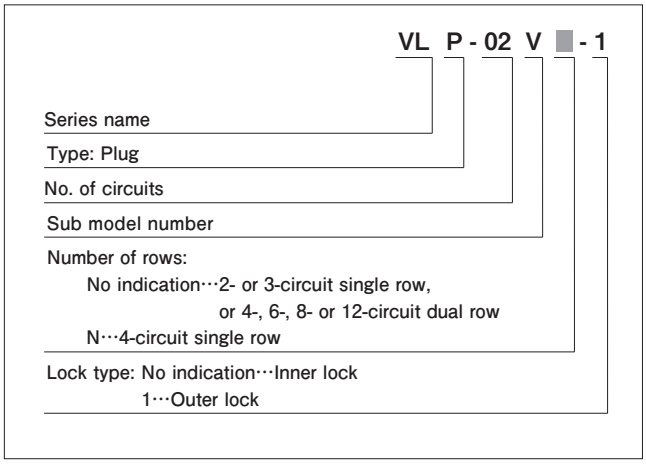
Note: The above figure shows the contact insertion side.

Model number allocation

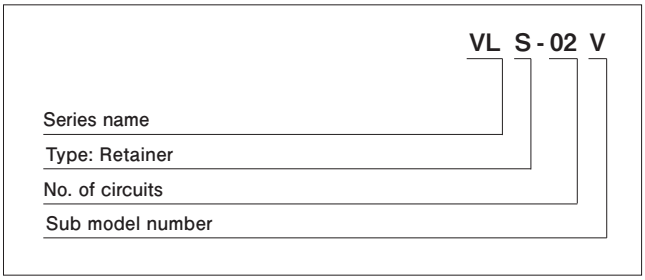
Contact



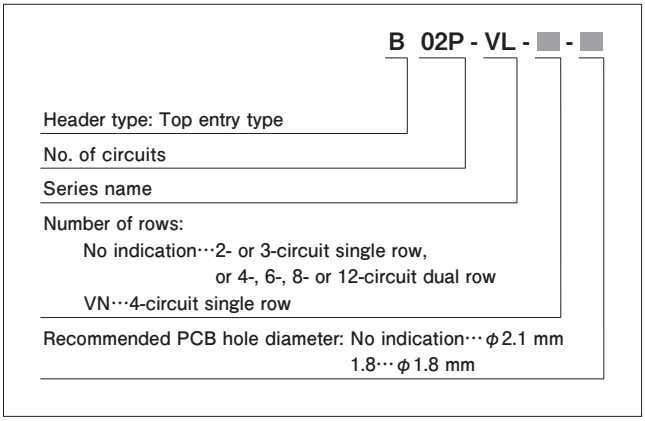
Housing



Retainer



Header/ Top entry type



Header/ Side entry type