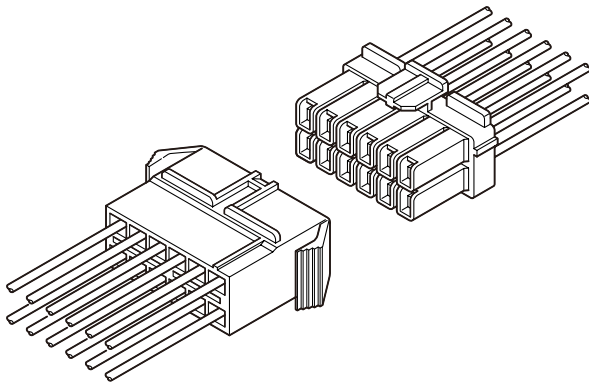


XL CONNECTOR

5.0mm pitch/Disconnectable Crimp style Wire-to-wire connectors



XL connectors are reliable wire-to-wire connectors, used for such electrical and electronic equipment as home appliances, vending machines, and office machines.

- **Reliable housing construction**
- **Easy contact insertion**
- **Box-shaped contact**
- **Two kinds of connections**

Specifications

- Current rating: 10A AC, DC max.
- Voltage rating: 300V AC, DC max.
- Temperature range: -25°C to +90°C
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/7m Ω max.
After environmental testing/10m Ω max.
- Insulation resistance: 1,000M Ω min.
- Withstanding voltage: 1,500V AC/minute
- Applicable wire: AWG #26 to #16
0.13 to 1.25mm²
- Applicable panel thickness: 0.7 to 2.4mm
- * Compliant with RoHS.
- * Refer to "General Instruction and Notice when using Terminals and Connectors" at the end of this catalog.
- * 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 wire size.

Current unit: A

Circuits	Wire size (AWG)					
	#16	#18	#20	#22	#24	#26
2	10	6	5	4	3	3
4	9	5	4	3	3	2
8	6	4	3	3	2	2
12	6	4	3	3	2	2
16	5	3	2	2	1	1

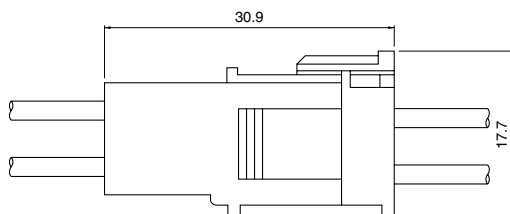
Standards

Recognized E60389

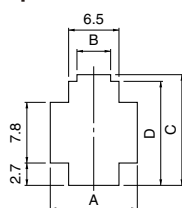
Certified LR20812

R75052

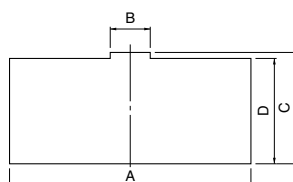
Panel layout and Assembly layout



Shape I



Shape II



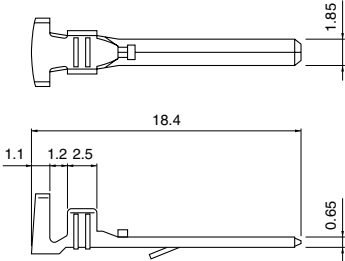
Circuits	Receptacle housing	Panel hole shape	Panel hole dimensions (mm)				Applicable panel thickness (mm)
			A	B	C	D	
2	XLR-02V	I	11.5	4.4	13.95	13.2	0.7~2.4
4	XLR-04V	II	16.5	5.2	13.95	13.2	
8	XLR-08V	II	26.5	5.2	13.95	13.2	
12	XLR-12V	II	36.5	5.2	13.95	13.2	
16	XLR-16V	II	46.5	5.2	13.95	13.2	

- 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.

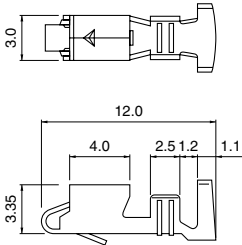
XL CONNECTOR

Contact

Pin contact



Socket contact



Model No.		Applicable wire		Insulation O.D. (mm)	Q'ty / reel
Pin contact	Socket contact	mm ²	AWG #		
SYM-01T-P0.7	SXF-01T-P0.7	0.13~0.5	26~20	1.3~2.7	Pin contact SYM-01T-P0.7 : 6,000 SYM-41T-P0.7 : 4,000
SYM-41T-P0.7	SXF-41T-P0.7	0.5 ~1.25 0.3+0.3~ 0.5+0.5	20~16 22+22~ 20+20	1.9~3.1 1.7+1.7~ 2.0+2.0	
					Socket contact: : 3,000

Material and Finish

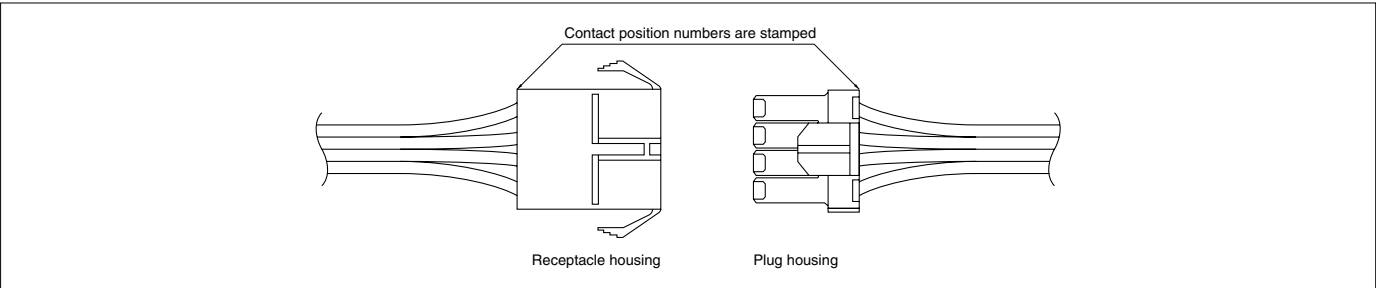
Phosphor bronze, tin-plated (reflow treatment)

RoHS compliance

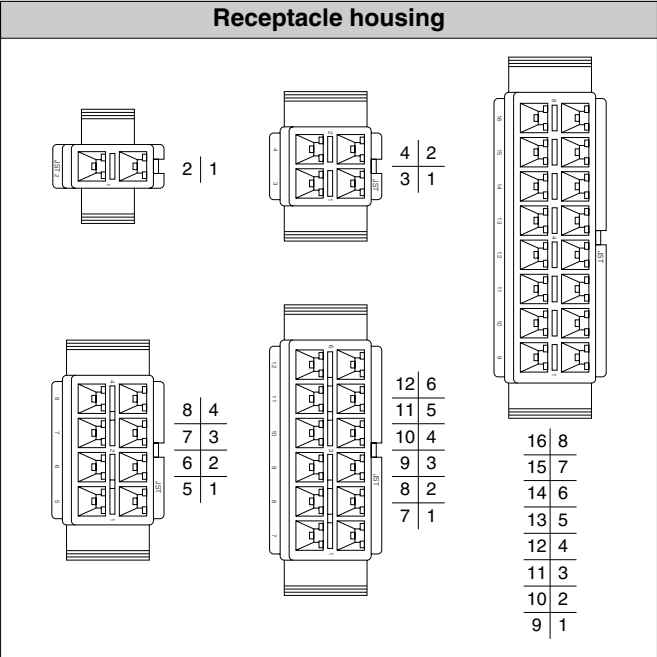
Note: 1. Contact JST for special products.
2. Contact JST for brass products.

Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
SYM-01T-P0.7	AP-K2N	MKS-L	MK/SYM-01-07	APLMK SYM01-07
		—	—	—
SXF-01T-P0.7		MKS-L	MK/SXF-01-07	APLMK SXF01-07
		—	—	—
SYM-41T-P0.7		MKS-L	MK/SYM-41-07	APLMK SYM41-07
		—	—	—
SXF-41T-P0.7		MKS-L	MK/SXF-41-07	APLMK SXF41-07
		—	—	—

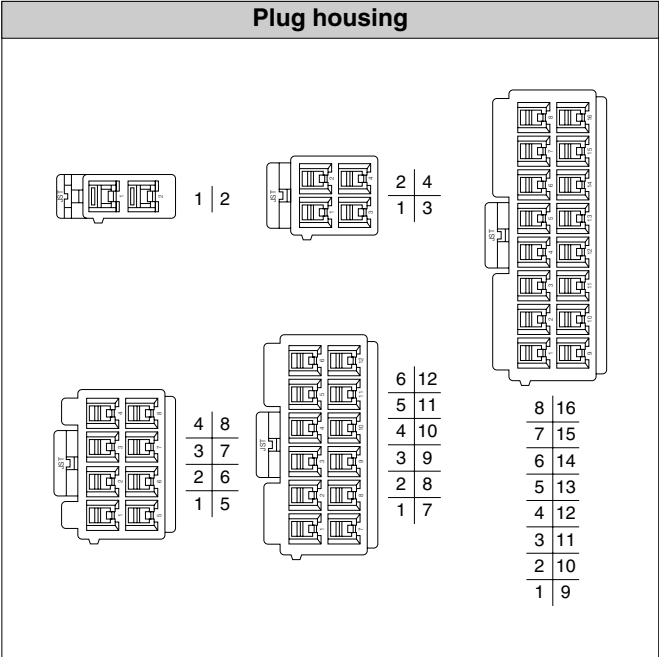
Contact position location numbers



Receptacle housing



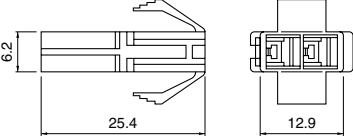
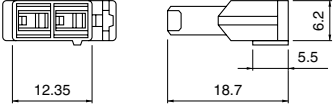
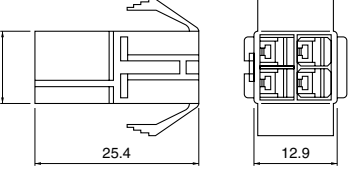
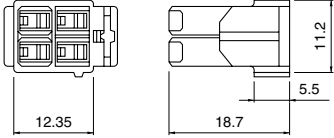
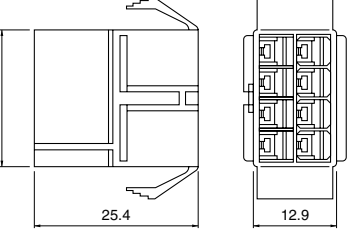
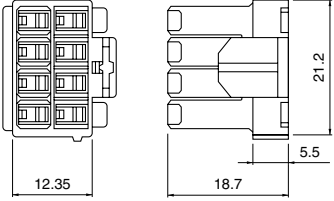
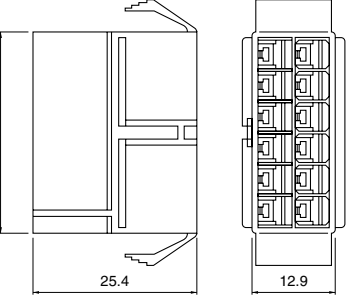
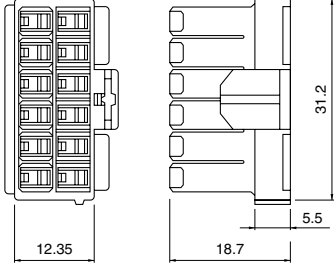
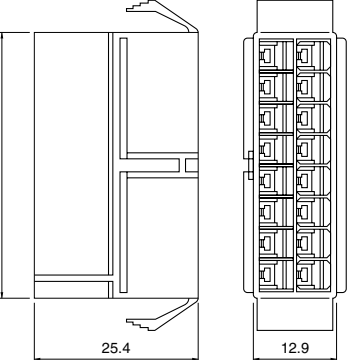
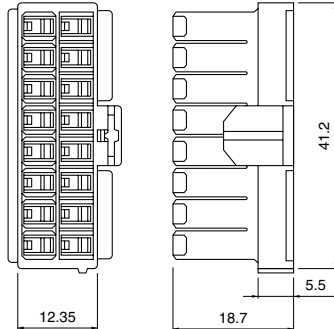
Plug housing



XL CONNECTOR

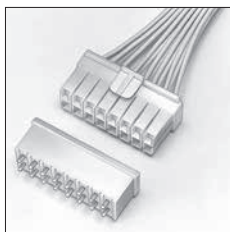
Housing

Material: PA 66, UL94V-0, white

Circuits	Voltage rating	Current rating	Receptacle housing(for pin contact)		Plug housing(for socket contact)	
2	300V	10A	XLR-02V 	Q'ty / bag	XLP-02V 	Q'ty / bag
				500		500
4	300V	9A	XLR-04V 	Q'ty / bag	XLP-04V 	Q'ty / bag
				500		500
8	300V	6A	XLR-08V 	Q'ty / bag	XLP-08V 	Q'ty / bag
				500		500
12	300V	6A	XLR-12V 	Q'ty / bag	XLP-12V 	Q'ty / bag
				200		200
16	300V	5A	XLR-16V 	Q'ty / bag	XLP-16V 	Q'ty / bag
				100		200

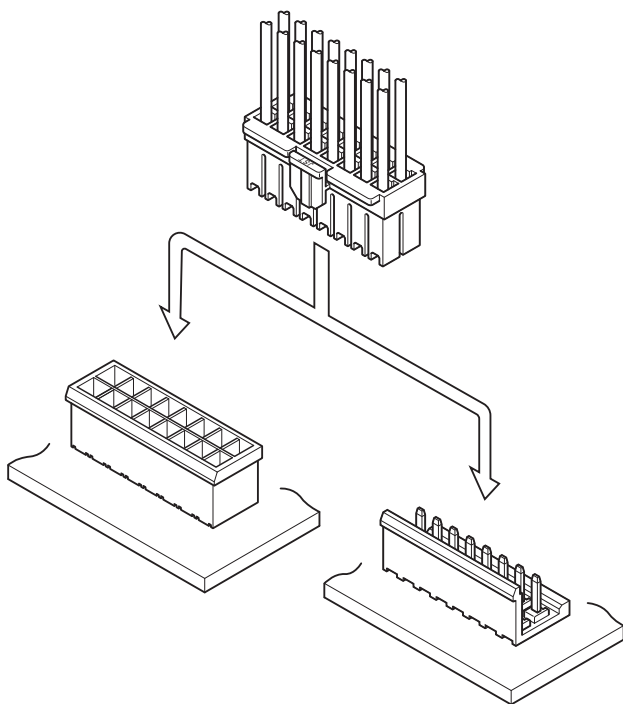
RoHS compliance

Note: 1. XL connectors with any number of circuits can be used either panel mounted or free hanging. See "Panel layout" for the hole dimensions.
2. Contact JST for special products.



XL CONNECTOR

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



This highly reliable wire-to-board connector was developed based on the proven track record of the VH connector, which is widely used in numerous electronic and electrical equipment such as home appliances, vending machines and office machines.

- Excellent contact insertion workability
- High-reliability box-type leaf contact
- Wire-to-wire type also available

Specifications

- Current rating: 10 A AC/DC (2 circuits/ AWG #16)

※ The following table shows the rated current when applying current for all circuits in each combination of the number of circuits and the wire to be used.

Unit: A

No. of circuits	Wire size (AWG)					
	# 16	# 18	# 20	# 22	# 24	# 26
2	10	6	5	4	3	3
3	9	5	4	3	3	2
4	9	5	4	3	3	2
8	6	4	3	3	2	2
12	6	4	3	3	2	2
16	5	3	2	2	1	1

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.

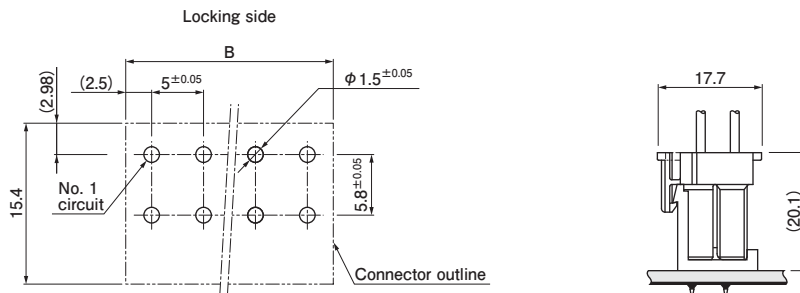
- Voltage rating: 150 V AC/DC
- Temperature range: -25°C to +90°C
(including temperature rise in applying electrical current)
- Contact resistance:
Initial value/ 7 mΩ max.
After environmental tests/ 10 mΩ max.
- Insulation resistance: 1,000 MΩ min.
- Withstanding voltage:
There shall be no breakdown or flashover while applying 1,500 VAC for one minute.
- Applicable wire range:
Conductor size/ AWG #26 to AWG #16
Insulation O.D./ ϕ 1.3 mm to ϕ 3.1 mm
Note: Refer to the Socket Contacts section on page 3 for information on when two wires are crimped together.
- Applicable PC board thickness: 1.6 mm
- * In using the products, refer to "Handling Precautions for Terminals and Connectors" described on our website (Technical documents of Product information page).
- * 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.

PC board layout and Assembly layout

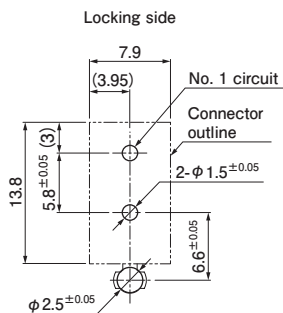


- Note: 1. The PC board layout figure shown is viewed from the connector mounting surface.
 2. Dimension B: See "Header" section on page 4.
 3. Tolerance for the PCB hole pitch shall be ± 0.05 and shall not accumulate.
 4. Hole dimensions differ depending on the type of PCB and PCB drilling method.
 The above dimensions are reference values. Please contact JST for details.

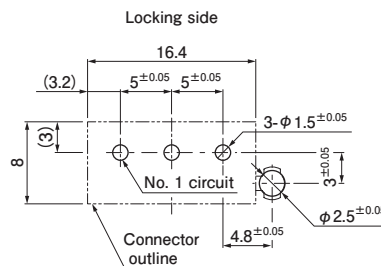
PC board layout and Assembly layout/ HDB type

Top entry type

<2 circuits>

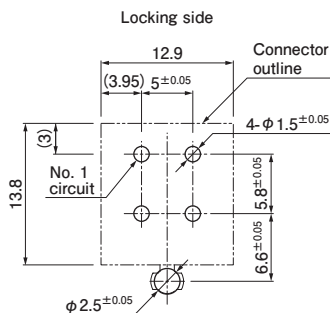


<3 circuits>

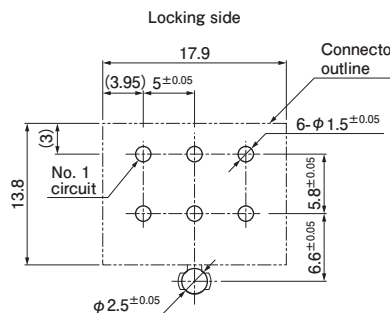


Top entry type :
3 circuits

<4 circuits>



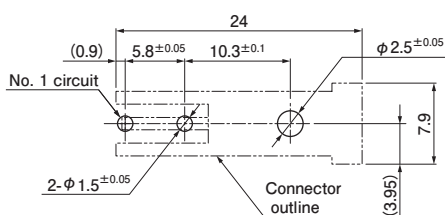
<6 circuits>



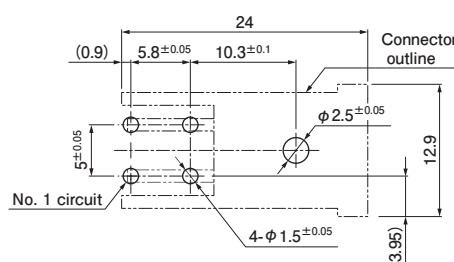
Top entry type :
2, 4, 6 circuits

Side entry type

<2 circuits>



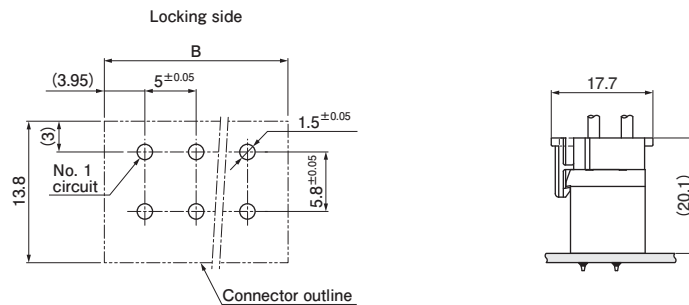
<4 circuits>



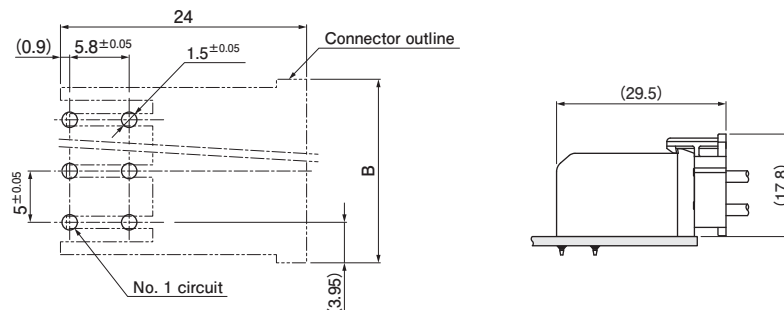
- Note: 1. The PC board layout figure shown is viewed from the connector mounting surface.
 2. Tolerance for the PCB hole pitch shall be ± 0.05 and shall not accumulate.
 3. Hole dimensions differ depending on the type of PCB and PCB drilling method.
 The above dimensions are reference values. Please contact JST for details.

PC board layout and Assembly layout/ HDS type

Top entry type

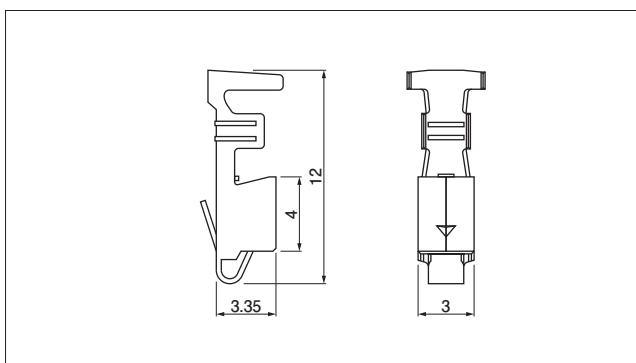


Side entry type



- Note: 1. The PC board layout figure shown is viewed from the connector mounting surface.
 2. Dimension B: See "Header/HDS type" section on page 6
 3. Tolerance for the PCB hole pitch shall be ± 0.05 and shall not accumulate.
 4. Hole dimensions differ depending on the type of PCB and PCB drilling method.
 The above dimensions are reference values. Please contact JST for details.

Socket contact



Model No.	Applicable wire range		Q'ty/ reel
	Conductor size AWG (mm ²)	Insulation O.D. (mm)	
SXF-01T-P0.7	#26 to #20 (0.13 to 0.5)	1.3 to 2.7	3,000
SXF-41T-P0.7	#20 to #16 (0.5 to 1.25)	1.9 to 3.1	
	#22×2 wires to #20×2 wires (0.3×2 wires to 0.5×2 wires)	1.7×2 wires to 2.0×2 wires	
Material and Surface finish, etc.			
Phosphor bronze, tin-plated			

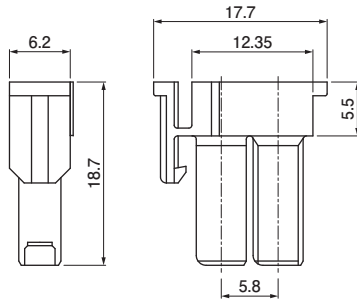
Crimping machine

Contact	Crimping machine	Applicator	Crimp applicator with dies
SXF-01T-P0.7	AP-K2N	MKS-L	APLMK SXF01-07
SXF-41T-P0.7			APLMK SXF41-07

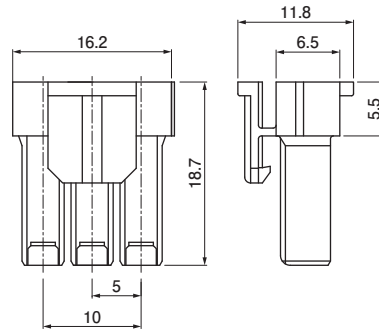
Note: Contact JST for fully automatic crimping applicator.

Plug housing

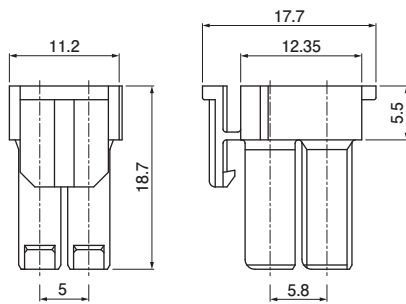
<2 circuits>



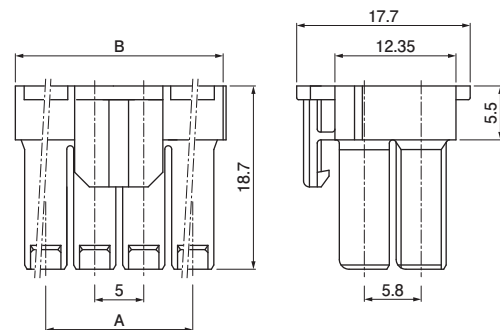
<3 circuits>



<4 circuits>



<8, 12, 16 circuits>



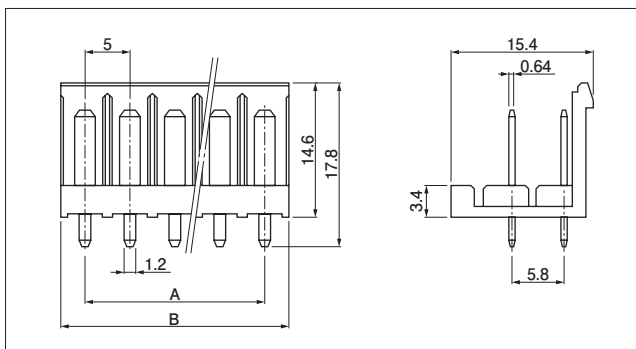
No. of circuits	Model No.	Dimensions (mm)		Q'ty/bag
		A	B	
2	XLP-02V	—	—	500
3	XLP-03V	—	—	500
4	XLP-04V	—	—	500
8	XLP-08V	15.0	21.2	500
12	XLP-12V	25.0	31.2	200
16	XLP-16V	35.0	41.2	200

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).

Header



No. of circuits	Model No.	Dimensions (mm)		Q'ty/box
		A	B	
2	B02P-XL	—	5.0	250
4	B04P-XL	5.0	10.0	200
8	B08P-XL	15.0	20.0	100
12	B12P-XL	25.0	30.0	50
16	B16P-XL	35.0	40.0	50

Material and Surface finish, etc.

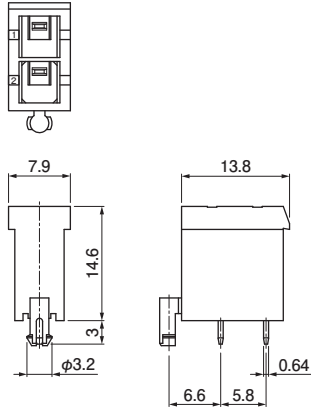
Post: Brass, copper-undercoated, tin-plated
Wafer: PA 66, natural (white)

Note: 1. This product displays (LF)(SN) on a label.
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).

Header/ HDB type

Top entry type

<2 circuits>



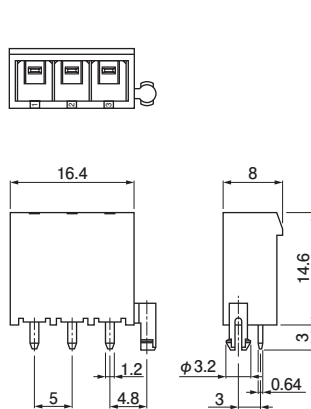
No. of circuits	Model No.		Q'ty/box	
	Top entry type	Side entry type	Top entry type	Side entry type
2	B02P-XL-HDB	S02P-XL-HDB	200	100
3	B03P-XL-HDB	—	200	—
4	B04P-XL-HDB	S04P-XL-HDB	200	100
6	B06P-XL-HDB	—	100	—

Material and Surface finish, etc.

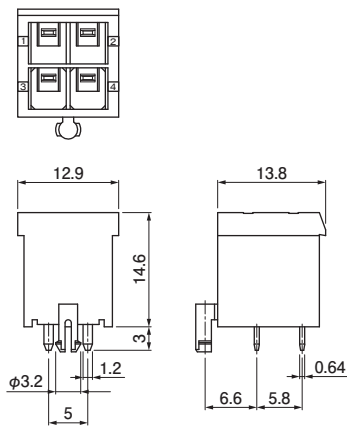
Post: Brass, copper-undercoated, tin-plated
Wafer: PA 66, natural (white)

Note: 1. This product displays (LF)(SN) on a label.
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).

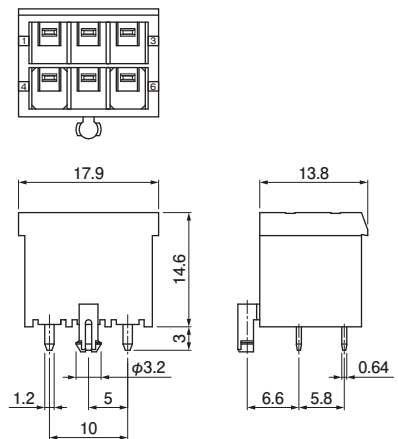
<3 circuits>



<4 circuits>

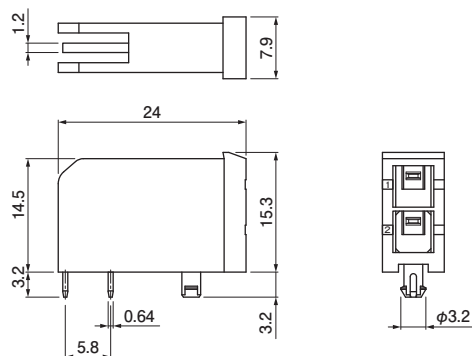


<6 circuits>

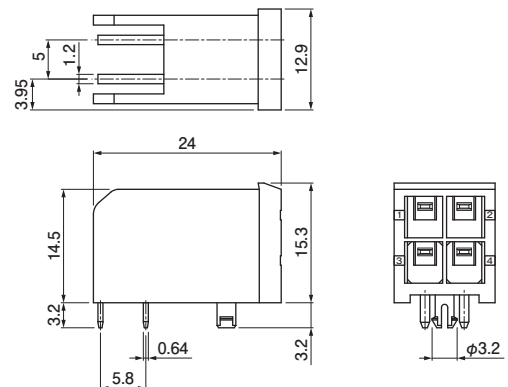


Side entry type

<2 circuits>

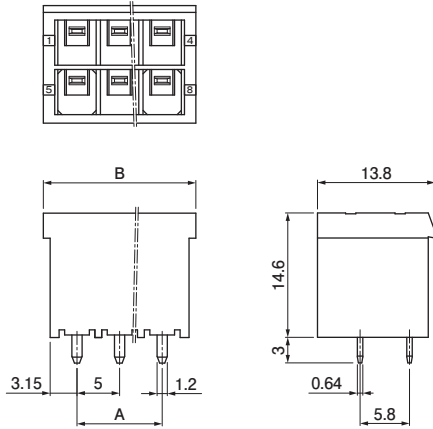


<4 circuits>

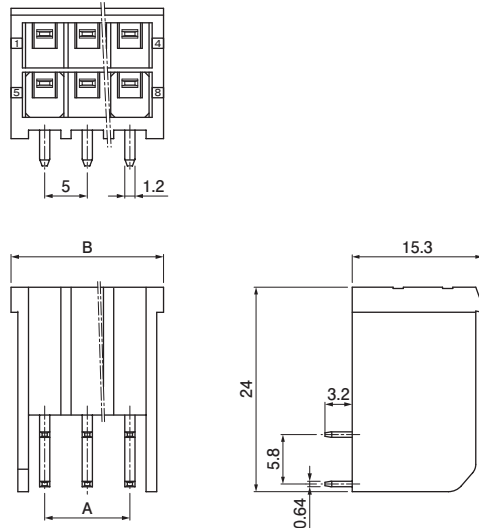


Header/ HDS type

Top entry type



Side entry type



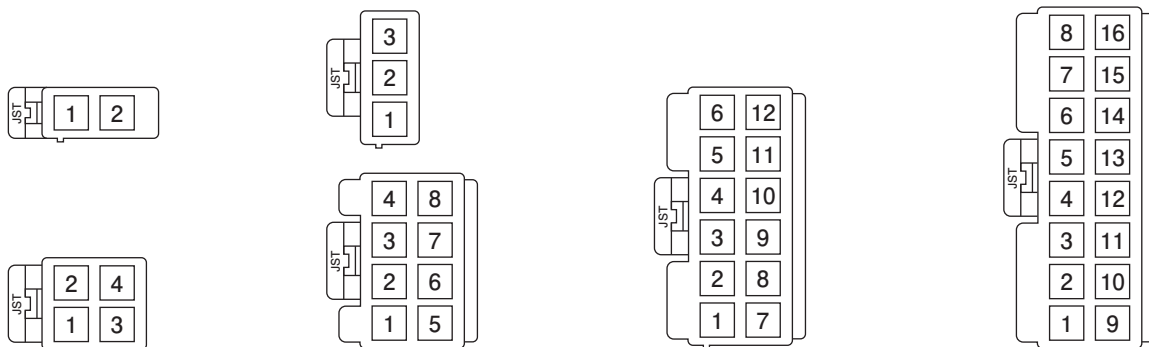
No. of circuits	Model No.		Dimensions (mm)		Q'ty/box	
	Top entry type	Side entry type	A	B	Top	Side
2	B02P-XL-HDS	—	—	7.9	200	—
4	B04P-XL-HDS	—	5.0	12.9	200	—
8	B08P-XL-HDS	S08P-XL-HDS	15.0	22.9	100	40
12	B12P-XL-HDS	S12P-XL-HDS	25.0	32.9	50	30
16	B16P-XL-HDS	S16P-XL-HDS	35.0	42.9	40	20

Material and Surface finish, etc.

Post: Brass, copper-undercoated, tin-plated
Wafer: PA 66, natural (white)

- Note: 1. This product displays (LF)(SN) on a label.
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).

Plug housing position location numbers



Model number allocation

Socket contact

SXF - 01 T - P 0.7

Supply form: S...Strip form
B...Loose piece

Series name

Type: Socket

Applicable wire range:
01...AWG #26 to AWG #20
41...AWG #20 to AWG #16
41...AWG #22 × 2 wires
to AWG #20 × 2 wires

Surface finish: Tin-plated

Material: Phosphor bronze

Applicable post size

Plug housing

XL P - 02 V -

Series name

Type: Plug

No. of circuits

Sub model number

Color: Blank...Natural (White), K...Black, R...Red
E...Blue, Y...Yellow

Header

B 02 P - XL -

Header type: Top entry type

No. of circuits

Assembly product

Series name

Color : Blank...Natural (White), K...Black, R...Red
E...Blue, Y...Yellow

Header/ HDB type

B 02 P - XL - HDB -

Header type: B...Top entry type
S...Side entry type

No. of circuits

Assembly product

Series name

Type name

Color: Blank...Natural (White), K...Black, R...Red
E...Blue, Y...Yellow, M...Green, N...Brown
D...Orange, L...Lemon yellow

Header/ HDS type

B 08 P - XL - HDS -

Header type: B...Top entry type
S...Side entry type

No. of circuits

Assembly product

Series name

Type name

Color: Blank...Natural (White), K...Black, R...Red
E...Blue, Y...Yellow, L...Lemon yellow