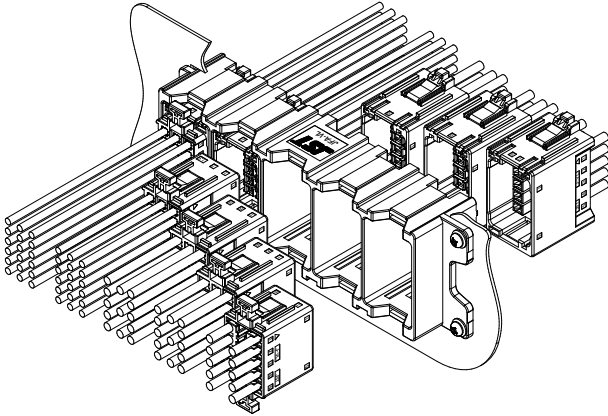


# JFA-VL CONNECTOR

5.6/6.5/6.7 mm pitch/Wire-to-Wire connectors/Crimp style and Mating style



JFA-VL is a highly integrated connector system for electrical circuitry. It is designed for signal and power supply applications for use in factory automation, heavy electric machinery, railway and general industrial equipment.

- Featuring a wide range of wire gauges (AWG #28 to AWG #12)
- Keying available to prevent incorrect mating
- Panel lock type is also available in the JFA-VL connector lineup. It can be attached to the panel by itself.
- Frame housing style for modular system (1 frame, max. 5 modules)
- Pincounts available
  - J300 Series: 90 pins (18 pins x 5 modules)
  - J4000 Series: 65 pins (13 pins x 5 modules)
  - VL Series: 50 pins (10 pins x 5 modules)

## ■ Specifications

• Current rating : AC/DC

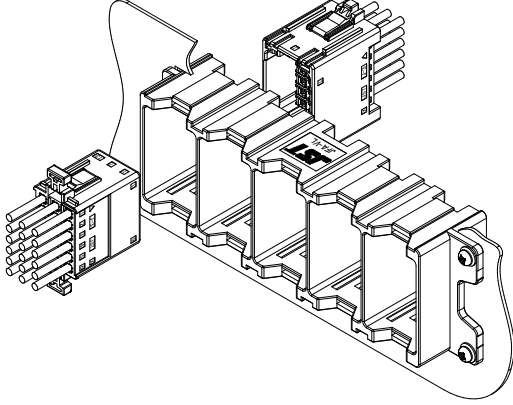
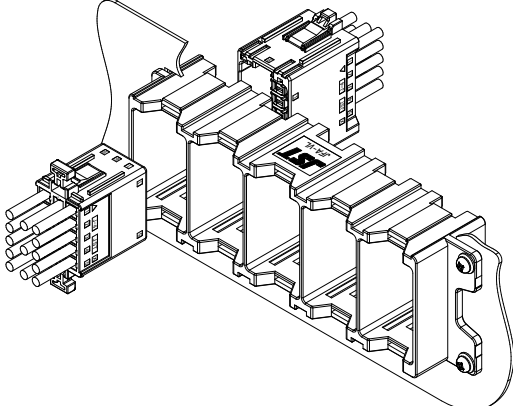
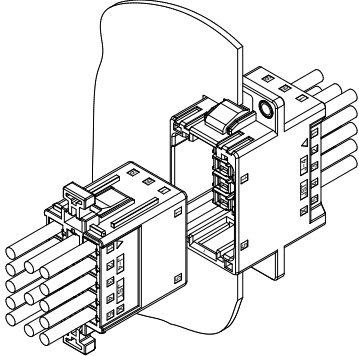
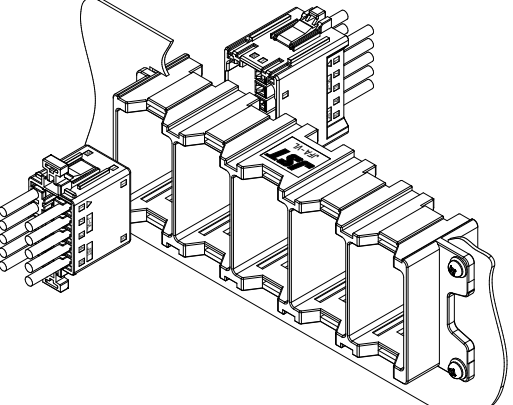
Current unit: A

	#12	#14	#16
J300 Series	-	10.0	8.0
J4000 Series	15.0	12.5	10.0
VL Series	15.0	12.0	9.0

- Voltage rating : 600 V AC/DC
- Temperature range :
  - 55°C to +105°C (J300/J4000 Series)  
(Including temperature rise in applying electrical current)
  - 25°C to +90°C (VL Series)  
(Including temperature rise in applying electrical current)
- Applicable wire range : Conductor size/
  - AWG # 28 to AWG # 14 (J300 Series)
  - AWG # 16 to AWG # 12 (J4000 Series)
  - AWG # 20 to AWG # 12 (VL Series)
- \* Please note that the above general specifications may differ from safety standards.
- \* 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.

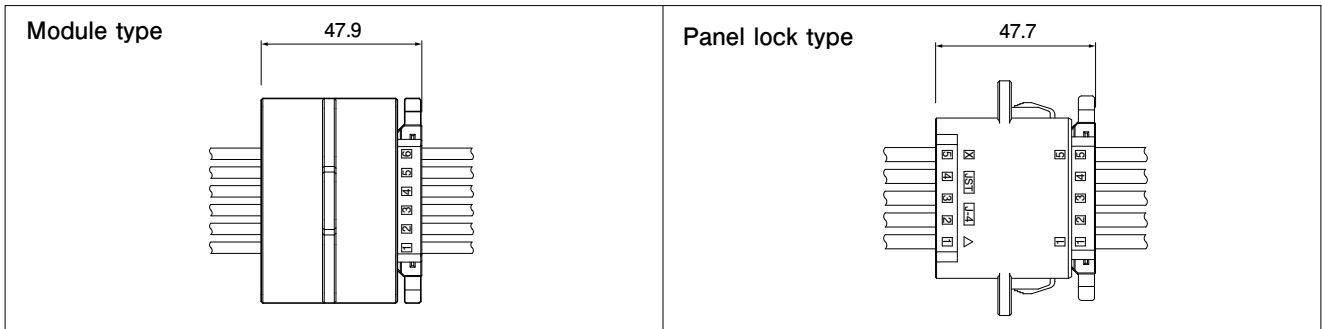
# JFA-VL CONNECTOR

## JFA-VL Line-up

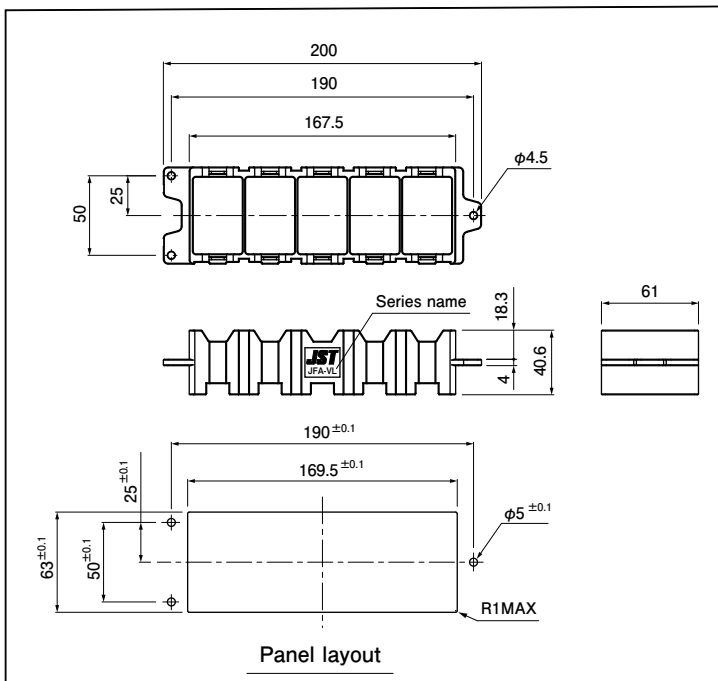
Type	Module type	Panel lock type
J300 Series	 <p data-bbox="531 902 831 931">90 pins (18 pins x 5 modules)</p>	/
J4000 Series	 <p data-bbox="531 1429 831 1458">65 pins (13 pins x 5 modules)</p>	 <p data-bbox="1161 1429 1267 1458">13 circuits</p>
VL Series	 <p data-bbox="531 1955 831 1984">50 pins (10 pins x 5 modules)</p>	/

# JFA-VL CONNECTOR

## Assembly layout



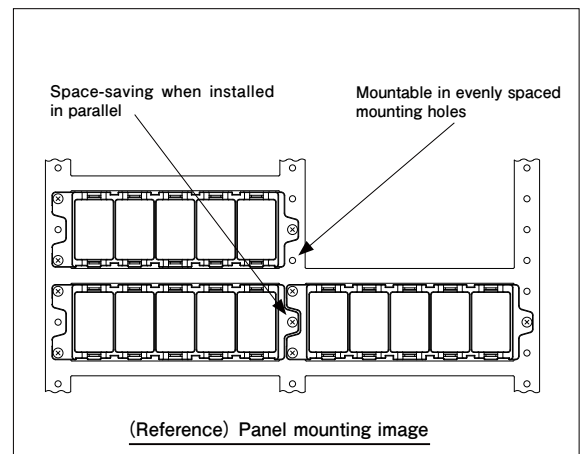
## Frame housing



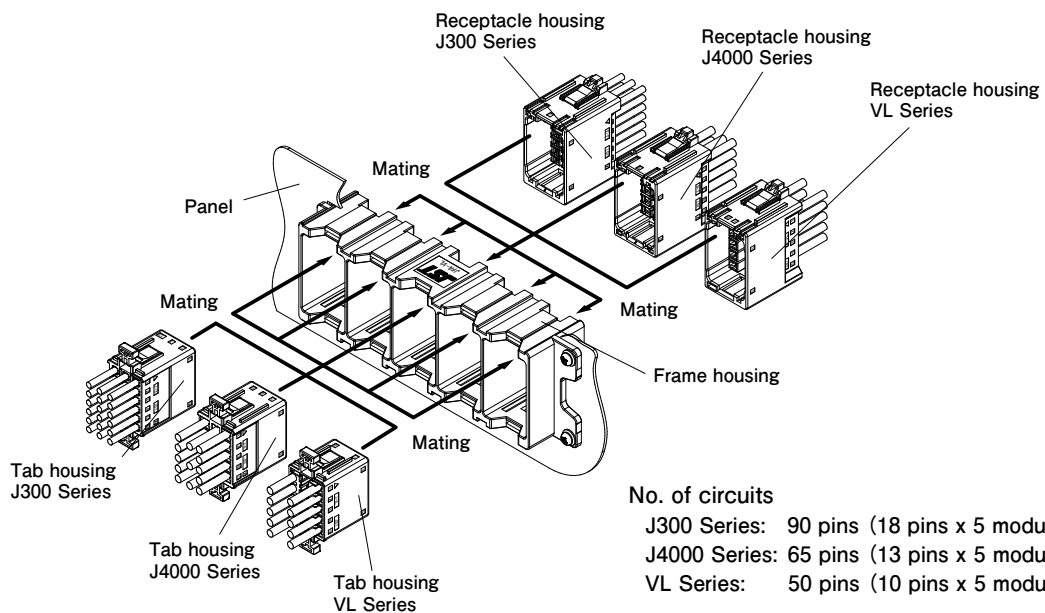
No. of modules	Keying	Model No.	Q'ty/box
5	-	FVFP-05V-K	3

Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0, black



## Mating combinations



### No. of circuits

J300 Series: 90 pins (18 pins x 5 modules)

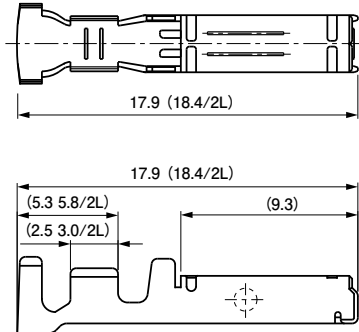
J4000 Series: 65 pins (13 pins x 5 modules)

VL Series: 50 pins (10 pins x 5 modules)

# JFA-VL CONNECTOR

## Receptacle contact / Socket contact

### • J300 Series



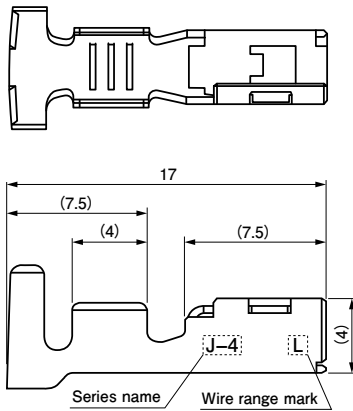
Strip contact Model No.	Loose piece contact Model No.	Size	Applicable wire range			Q'ty	
			Conductor size		Insulation O.D.	reel	box (Loose price)
			AWG	mm <sup>2</sup>	mm		
SF3F-002(*)-P2.0	BF3F-002(*)-P2.0	S	#28 to #24	0.08 to 0.20	0.8 to 1.4	3,700	1,000
SF3F-01(*)-P2.0	BF3F-01(*)-P2.0	M	#24 to #20	0.20 to 0.50	1.2 to 2.6	3,700	1,000
SF3F-41(*)-P2.0	LF3F-41(*)-P2.0	L	#20 to #16	0.50 to 1.25	1.8 to 2.8	3,200	1,000
SF3F-71(*)-P2.0	BF3F-71(*)-P2.0	2L	#16 to #14	1.25 to 2.0	2.4 to 3.4	3,200	1,000

Material and Surface finish, etc.

Copper alloy (superior conductivity), nickel-undercoated, selective gold-plated

Note) Surface finish (\*): GF .....Nickel-undercoated, 0.38 μm selective gold-plated  
 GFA .....Nickel-undercoated, 0.38 μm selective gold-plated (Type A)  
 GI .....Nickel-undercoated, 0.76 μm selective gold-plated  
 GIA .....Nickel-undercoated, 0.76 μm selective gold-plated (Type A)

### • J4000 Series

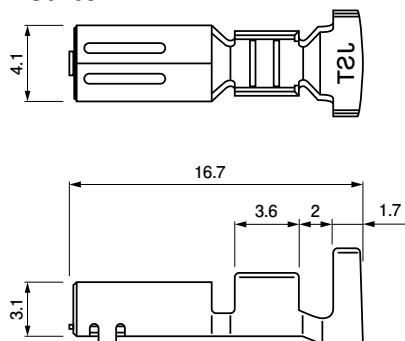


Strip contact Model No.	Loose piece contact Model No.	Size	Applicable wire range			Q'ty	
			Conductor size		Insulation O.D.	reel	box (Loose price)
			AWG	mm <sup>2</sup>	mm		
SJ4F-71GF-M3.0	BJ4F-71GF-M3.0	M	#16 to #14	1.25 to 2.0	2.0 to 3.8	1,400	350
SJ4F-81GF-M3.0	BJ4F-81GF-M3.0	L	#14 to #12	2.0 to 3.5	2.9 to 4.2	1,400	350

Material and Surface finish, etc.

Copper alloy (superior conductivity), nickel-undercoated, 0.38 μm selective gold-plated

### • VL Series



Strip contact Model No.	Loose piece contact Model No.	Size	Applicable wire range			Q'ty	
			Conductor size		Insulation O.D.	reel	box (Loose price)
			AWG	mm <sup>2</sup>	mm		
SVF-61T-P2.0	BVF-61T-P2.0	#20 to #14	0.5 to 2.0	1.9 to 3.4	2,000	1,000	
SVF-81T-P2.0	BVF-81T-P2.0	#12	3.5	4.1	2,000	1,000	

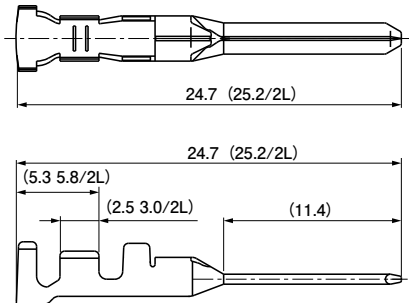
Material and Surface finish, etc.

Phosphor bronze, tin-plated

# JFA-VL CONNECTOR

## Tab contact / Pin contact

### • J300 Series



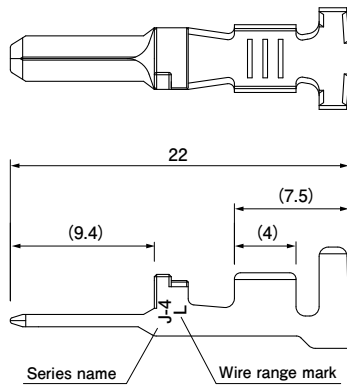
Strip contact Model No.	Loose piece contact Model No.	Size	Applicable wire range			Q'ty	
			Conductor size		Insulation O.D.	reel	box (Loose piece)
			AWG	mm <sup>2</sup>	mm		
SF3M-002(*)-M2.0N	BF3M-002(*)-M2.0N	S	#28 to #24	0.08 to 0.20	0.8 to 1.4	3,500	1,000
SF3M-01(*)-M2.0N	BF3M-01(*)-M2.0N	M	#24 to #20	0.20 to 0.50	1.2 to 2.6	3,500	1,000
SF3M-41(*)-M2.0N	LF3M-41(*)-M2.0N	L	#20 to #16	0.50 to 1.25	1.8 to 2.8	3,300	1,000
SF3M-71(*)-M2.0N	BF3M-71(*)-M2.0N	2L	#16 to #14	1.25 to 2.0	2.4 to 3.4	3,200	1,000

#### Material and Surface finish, etc.

Copper alloy (superior conductivity), nickel-undercoated, selective gold-plated

Note) Surface finish (\*): GF.....Nickel-undercoated, 0.38 μm selective gold-plated  
GI .....Nickel-undercoated, 0.76 μm selective gold-plated

### • J4000 Series

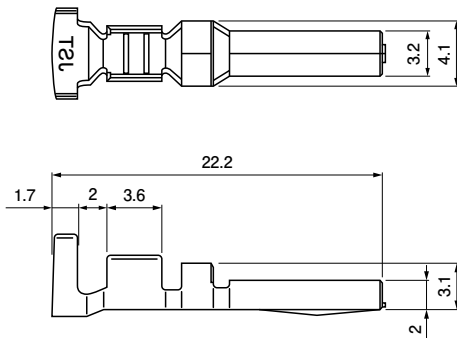


Strip contact Model No.	Size	Applicable wire range			Q'ty/reel
		Conductor size		Insulation O.D.	
		AWG	mm <sup>2</sup>	mm	
SJ4M-71GF-M3.0	M	#16 to #14	1.25 to 2.0	2.0 to 3.8	1,800
SJ4M-81GF-M3.0	L	#14 to #12	2.0 to 3.5	2.9 to 4.2	1,800

#### Material and Surface finish, etc.

Copper alloy (superior conductivity), nickel-undercoated, 0.38 μm selective gold-plated

### • VL Series



Strip contact Model No.	Loose piece contact Model No.	Applicable wire range			Q'ty	
		Conductor size		Insulation O.D.	reel	box (Loose piece)
		AWG	mm <sup>2</sup>	mm		
SVM-61T-P2.0	BVM-61T-P2.0	#20 to #14	0.5 to 2.0	1.9 to 3.4	2,000	1,000
SVM-81T-P2.0	BVM-81T-P2.0	#12	3.5	4.1	2,000	1,000

#### Material and Surface finish, etc.

Phosphor bronze, tin-plated

# JFA-VL CONNECTOR

## Strip contact

Series	Strip contact Model No.	Crimping machine	Applicator	Crimp applicator with dies	Hand tools
J300	SF3F-002(*)-P2.0	AP-K2N	MKS-L	APLMK SF3F/M002-20	YRK-8821
	SF3M-002(*)-M2.0N				
	SF3F-01(*)-P2.0	AP-K2N	MKS-L	APLMK SF3F/M01-20	YRK-8811
	SF3M-01(*)-M2.0N				
	SF3F-41(*)-P2.0	AP-K2N	MKS-L	APLMK SF3F/M41-20	YRK-8801
	SF3M-41(*)-M2.0N				
	SF3F-71(*)-P2.0	AP-K2N	MKS-L	APLMK SF3F/M71-20	YRK-1071
SF3M-71(*)-M2.0N					
J4000	SJ4F-71GF-M3.0	AP-K2N	MKS-L-SIN3	APLMK SJ4F/M71-30	YRK-1130
	SJ4M-71GF-M3.0				
	SJ4F-81GF-M3.0	AP-K2N	MKS-L-SIN3	APLMK SJ4F/M81-30	YRK-1370
	SJ4M-81GF-M3.0				
VL	SVF-61T-P2.0	AP-K2N	MKS-L	APLMK SVF/M61-20	-
	SVM-61T-P2.0				
	SVF-81T-P2.0	AP-K2N	MKS-L	APLMK SVF/M81-20	-
	SVM-81T-P2.0				

Note) Surface finish (\*): GF .....Nickel-undercoated, 0.38  $\mu$ m selective gold-plated  
 GFA .....Nickel-undercoated, 0.38  $\mu$ m selective gold-plated (Type A)  
 GI .....Nickel-undercoated, 0.76  $\mu$ m selective gold-plated  
 GIA ..... Nickel-undercoated, 0.76  $\mu$ m selective gold-plated (Type A)

Note 2) For details on the YRK series of hand tools for strip contacts, please refer to the "Crimping Machines and Tools" on our website (listed in the "Technical Documents" column).

- J300 Series Extraction tool : EJ-JFAJ3
- J4000 Series Extraction tool : EJ-JFAJ4
- VL Series Extraction tool : VLJ-20

## Loose piece contact

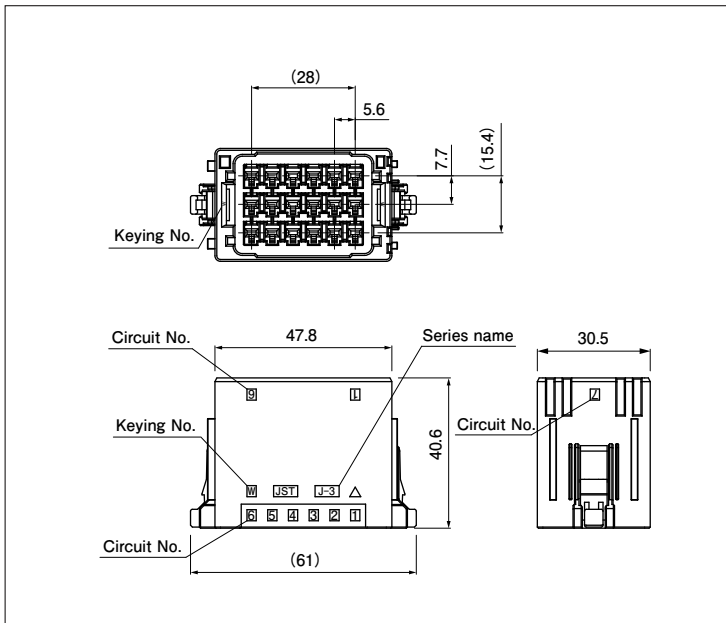
Series	Loose piece contact	Hand tools
J300	BF3F-002(*)-P2.0	YRF-882
	BF3M-002(*)-M2.0N	
	BF3F-01(*)-P2.0	YRF-881
	BF3M-01(*)-M2.0N	
	LF3F-41(*)-P2.0	YRF-880
	LF3M-41(*)-M2.0N	
	BF3F-71(*)-P2.0	YRF-1070
BF3M-71(*)-M2.0N	YRF-1071	
J4000	BJ4F-71GF-M3.0	YRF-1130
	BJ4F-81GF-M3.0	YRF-1370
VL	BVF-61T-P2.0	YRF-590
	BVM-61T-P2.0	
	BVF-81T-P2.0	YRF-591
	BVM-81T-P2.0	

Note) Surface finish (\*): GF .....Nickel-undercoated, 0.38  $\mu$ m selective gold-plated  
 GFA .....Nickel-undercoated, 0.38  $\mu$ m selective gold-plated (Type A)  
 GI .....Nickel-undercoated, 0.76  $\mu$ m selective gold-plated  
 GIA .....Nickel-undercoated, 0.76  $\mu$ m selective gold-plated (Type A)

- J300 Series Extraction tool : EJ-JFAJ3
- J4000 Series Extraction tool : EJ-JFAJ4
- VL Series Extraction tool : VLJ-20

# JFA-VL CONNECTOR / J300 Series

## Receptacle housing

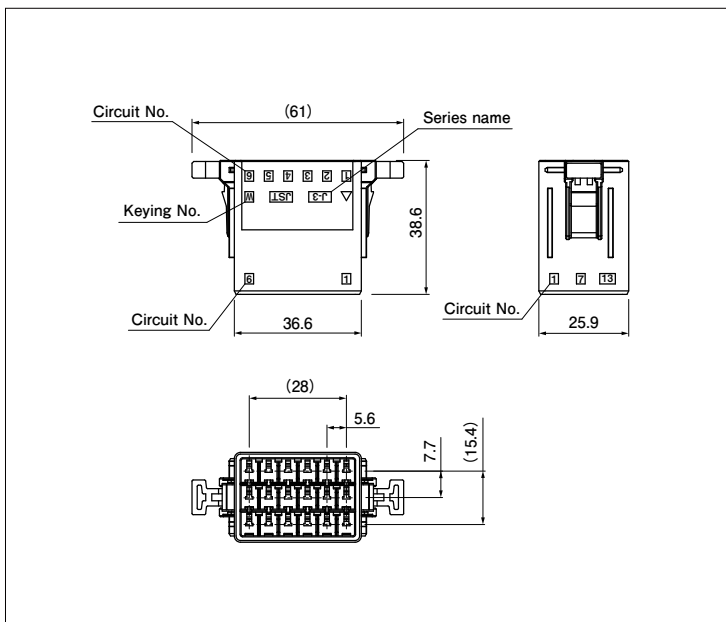


No. of circuits	Keying	Model No.	Q'ty/box
18	X	FV3FTS-18V-KX	6
	Y	FV3FTS-18V-SY	6
	Z	FV3FTS-18V-EZ	6
	W	FV3FTS-18V-MW	6

### Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0  
 X-Keying (black), Y-Keying (white),  
 Z-Keying (blue), W-Keying (green)

## Tab housing



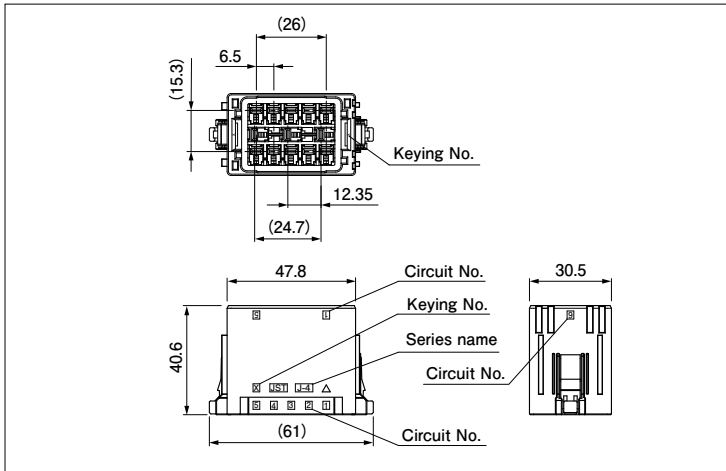
No. of circuits	Keying	Model No.	Q'ty/box
18	X	FV3MTS-18V-KX	6
	Y	FV3MTS-18V-SY	6
	Z	FV3MTS-18V-EZ	6
	W	FV3MTS-18V-MW	6

### Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0  
 X-Keying (black), Y-Keying (white),  
 Z-Keying (blue), W-Keying (green)

# JFA-VL CONNECTOR / J4000 Series

## Receptacle housing

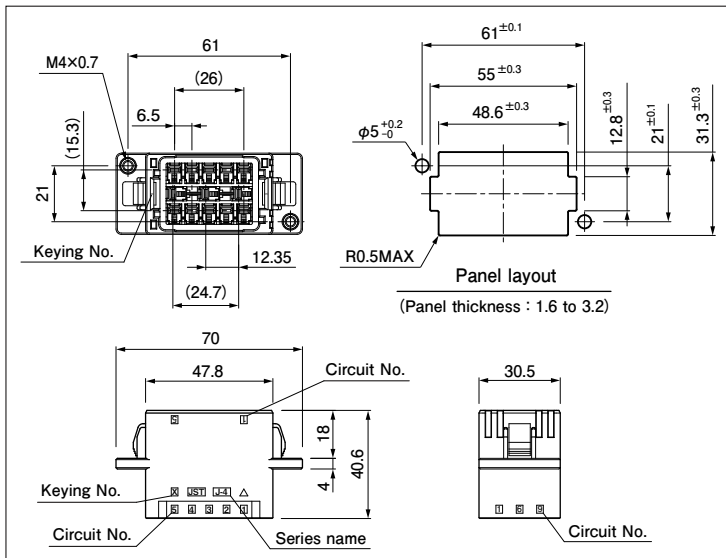


No. of circuits	Keying	Model No.	Q'ty/box
13	X	FV4FTS-13V-KX	6
	Y	FV4FTS-13V-SY	6
	Z	FV4FTS-13V-EZ	6
	W	FV4FTS-13V-MW	6
	V	FV4FTS-13V-RV	6

Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0  
 X-Keying (black), Y-Keying (white),  
 Z-Keying (blue), W-Keying (green), V-Keying (red)

## Receptacle housing Panel lock type

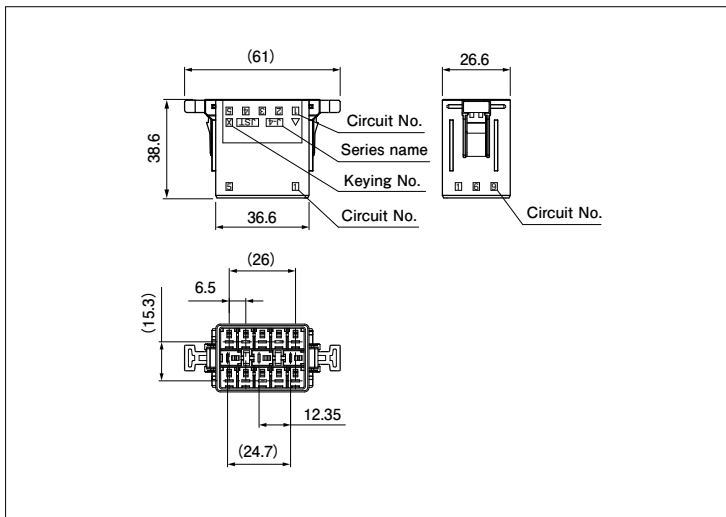


No. of circuits	Keying	Model No.	Q'ty/box
13	X	FV4FTPL-13V-KX-M4	6

Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0, black,  
 Nut: Copper alloy

## Tab housing



No. of circuits	Keying	Model No.	Q'ty/box
13	X	FV4MTS-13V-KX	6
	Y	FV4MTS-13V-SY	6
	Z	FV4MTS-13V-EZ	6
	W	FV4MTS-13V-MW	6
	V	FV4MTS-13V-RV	6

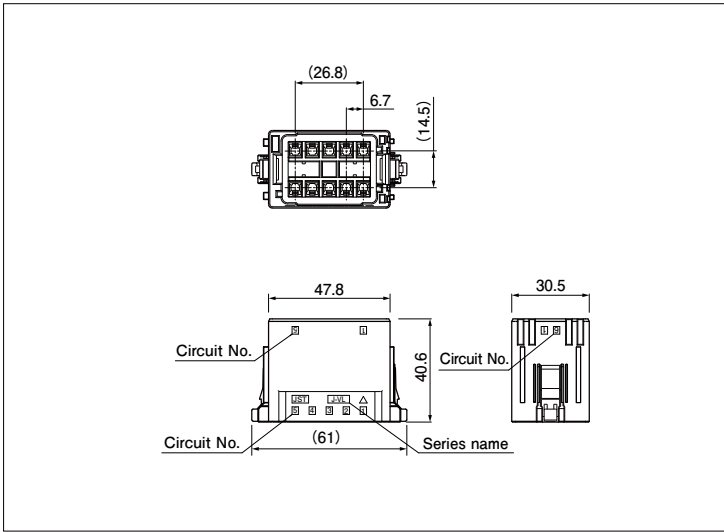
Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0  
 X-Keying (black), Y-Keying (white),  
 Z-Keying (blue), W-Keying (green), V-Keying (red)



# JFA-VL CONNECTOR / VL Series

## Receptacle housing

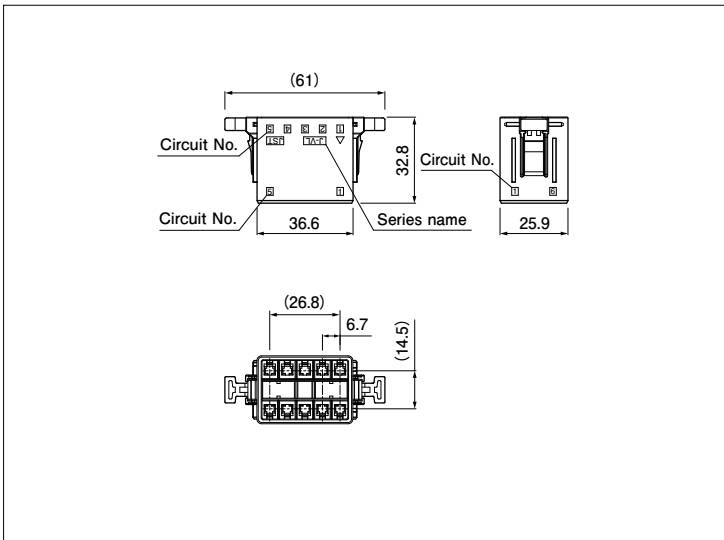


No. of circuits	Keying	Model No.	Q'ty/box
10	-	FVLFDS-10V-S	6

Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0, white

## Tab housing

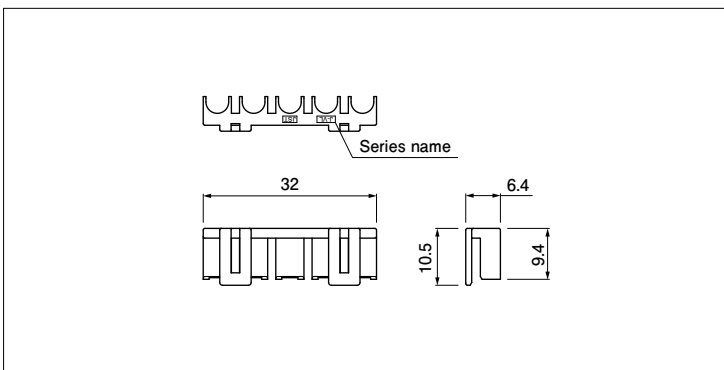


No. of circuits	Keying	Model No.	Q'ty/box
10	-	FVLMDS-10V-S	6

Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0, white

## Retainer



No. of circuits	Keying	Model No.	Q'ty/box
5	-	FVLLS-05V-S	120

Material and Surface finish, etc.

PBT (Glass-filled), UL94V-0, white

## Model number allocation

### Receptacle contact (J300 Series)

**S F3 F - 41 GF - P 2.0**

Supply form : S...Strip from, B...Loose piece  
L...Loose piece with curled burrels

Series name : J300 Series

Part name : Receptacle contact

Applicable wire range : 002...AWG #28 to AWG #24,  
01...AWG #24 to AWG #20, 41...AWG #20 to AWG #16,  
71...AWG #16 to AWG #14

Surface finish :  
GF ...Nickel-undercoated, 0.38 μm selective gold-plated  
GFA...Nickel-undercoated, 0.38 μm selective gold-plated (Type A)  
GI ...Nickel-undercoated, 0.76 μm selective gold-plated  
GIA ...Nickel-undercoated, 0.76 μm selective gold-plated (Type A)

Material : Copper alloy

Applicable contact size

### Tab contact (J300 Series)

**S F3 M - 41 GF - M 2.0 N**

Supply form : S...Strip from, B...Loose piece  
L...Loose piece with curled burrels

Series name : J300 Series

Part name : Tab contact

Applicable wire range : 002...AWG #28 to AWG #24  
01...AWG #24 to AWG #20, 41...AWG #20 to AWG #16  
71...AWG #16 to AWG #14

Surface finish : GF...Nickel-undercoated, 0.38 μm selective gold-plated  
GI ...Nickel-undercoated, 0.76 μm selective gold-plated

Material : Copper alloy

Contact size

Auxiliary symbol

### Receptacle contact (J4000 Series)

**S J4 F - 71 GF - M 3.0**

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

Series name : J4000 Series

Part name : Receptacle contact

Applicable wire range : 71...AWG #16 to AWG #14  
81...AWG #14 to AWG #12

Surface finish : Nickel-undercoated, 0.38 μm selective gold-plated

Material : Copper alloy

Applicable contact size

### Tab contact (J4000 Series)

**S J4 M - 71 GF - M 3.0**

Supply form : Strip from

Series name : J4000 Series

Part name : Tab contact

Applicable wire range : 71...AWG #16 to AWG #14  
81...AWG #14 to AWG #12

Surface finish : Nickel-undercoated, 0.38 μm selective gold-plated

Material : Copper alloy

Contact size

### Socket contact (VL Series)

**S V F - 61 T - P 2.0**

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

Series name : VL Series

Part name : Socket contact

Applicable wire range : 61...AWG #20 to AWG #14  
81...AWG #12

Surface finish : Tin-plated

Material : Phosphor bronze

Applicable contact size

### Pin contact (VL Series)

**S V M - 61 T - P 2.0**

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

Series name : VL Series

Part name : Pin contact

Applicable wire range : 61...AWG #20 to AWG #14  
81...AWG #12

Surface finish : Tin-plated

Material : Phosphor bronze

Ccontact size

### Frame housing

**FV F PA - 05 V - K**

Connector name

Part name : Frame housing

Mounting arrangement : Panel mounting type

No. of modules

Flammability : UL94V-0

Color : Black

## Model number allocation

### Receptacle housing (J300 Series)

**FV 3 F T S - 18 V - KX**

Connector name \_\_\_\_\_

Series name : J300 Series \_\_\_\_\_

Part name : Receptacle housing \_\_\_\_\_

Rows : 3-row \_\_\_\_\_

Mounting arrangement : Side locking \_\_\_\_\_

No. of circuits \_\_\_\_\_

Flammability : UL94V-0 \_\_\_\_\_

Color/Keying : KX...Black/X-Keying \_\_\_\_\_

SY...Natural (White)/Y-Keying \_\_\_\_\_

EZ...Blue/Z-Keying, MW...Green/W-Keying \_\_\_\_\_

### Tab housing (J300 Series)

**FV 3 M T S - 18 V - KX**

Connector name \_\_\_\_\_

Series name : J300 Series \_\_\_\_\_

Part name : Tab housing \_\_\_\_\_

Rows : 3-row \_\_\_\_\_

Mounting arrangement : Side locking \_\_\_\_\_

No. of circuits \_\_\_\_\_

Flammability : UL94V-0 \_\_\_\_\_

Color/Keying : KX...Black/X-Keying \_\_\_\_\_

SY...Natural (White)/Y-Keying \_\_\_\_\_

EZ...Blue/Z-Keying, MW...Green/W-Keying \_\_\_\_\_

### Receptacle housing (J4000 Series)

**FV 4 F T PL - 13 V - KX - M4**

Connector name \_\_\_\_\_

Series name : J4000 Series \_\_\_\_\_

Part name : Receptacle housing \_\_\_\_\_

Rows : 3-row \_\_\_\_\_

Mounting arrangement : PL...Panel lock, S...Side locking \_\_\_\_\_

No. of circuits \_\_\_\_\_

Flammability : UL94V-0 \_\_\_\_\_

Color/Keying : KX...Black/X-Keying \_\_\_\_\_

SY...Natural (White)/Y-Keying, EZ...Blue/Z-Keying \_\_\_\_\_

MW...Green/W-Keying, RV...Red/V-Keying \_\_\_\_\_

Screw size : M4...Panel lock type (M4 screw) \_\_\_\_\_

Blank...Module type \_\_\_\_\_

### Tab housing (J4000 Series)

**FV 4 M T S - 13 V - KX**

Connector name \_\_\_\_\_

Series name : J4000 Series \_\_\_\_\_

Part name : Tab housing \_\_\_\_\_

Rows : 3-row \_\_\_\_\_

Mounting arrangement : Side locking \_\_\_\_\_

No. of circuits \_\_\_\_\_

Flammability : UL94V-0 \_\_\_\_\_

Color/Keying : KX...Black/X-Keying, SY...Natural (White)/Y-Keying \_\_\_\_\_

EZ...Blue/Z-Keying, MW...Green/W-Keying \_\_\_\_\_

RV...Red/V-Keying \_\_\_\_\_

### Receptacle housing (VL Series)

**FV L F D S - 10 V - S**

Connector name \_\_\_\_\_

Series name : VL Series \_\_\_\_\_

Part name : Receptacle housing \_\_\_\_\_

Rows : 2-row \_\_\_\_\_

Mounting arrangement : Side locking \_\_\_\_\_

No. of circuits \_\_\_\_\_

Flammability : UL94V-0 \_\_\_\_\_

Color : Natural (White) \_\_\_\_\_

### Tab housing (VL Series)

**FV L M D S - 10 V - S**

Connector name \_\_\_\_\_

Series name : VL Series \_\_\_\_\_

Part name : Tab housing \_\_\_\_\_

Rows : 2-row \_\_\_\_\_

Mounting arrangement : Side locking \_\_\_\_\_

No. of circuits \_\_\_\_\_

Flammability : UL94V-0 \_\_\_\_\_

Color : Natural (White) \_\_\_\_\_

### Retainer (VL Series)

**FV L L S - 05 V - S**

Connector name \_\_\_\_\_

Series name : VL Series \_\_\_\_\_

Part name : Retainer \_\_\_\_\_

Rows : 1-row \_\_\_\_\_

No. of circuits \_\_\_\_\_

Flammability : UL94V-0 \_\_\_\_\_

Color : Natural (White) \_\_\_\_\_