

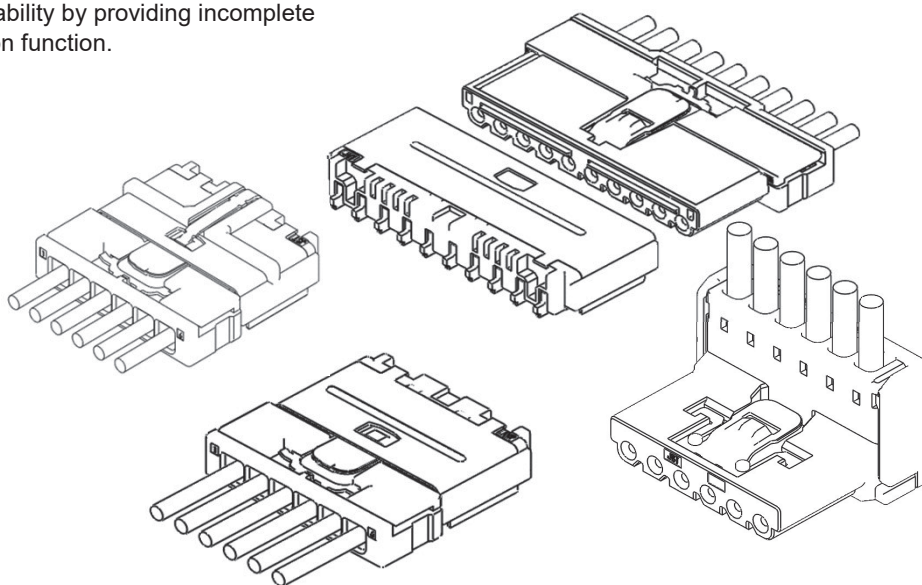


This SMT connector that achieves the world's smallest class connector height of 3.5 mm as a crimped specification while having performance that meets the in-vehicle standards USCAR-2 and LV214.

Electrical CPA type provides unprecedented connection reliability by providing incomplete mating detection function.

### ■ Features

- Conforming the Automotive Standards; USCAR-2 and LV214
- Low Height and Short Mating Length despite crimped specification
- Space-saving Design
- Right-angle type optimizes the wiring work
- Up to 4 key code settings
- Maintains electrical and mechanical properties at temperatures up to 125°C
- UL94 V-0, Halogen-free
- 100% detection of incomplete mating by electrical CPA circuit



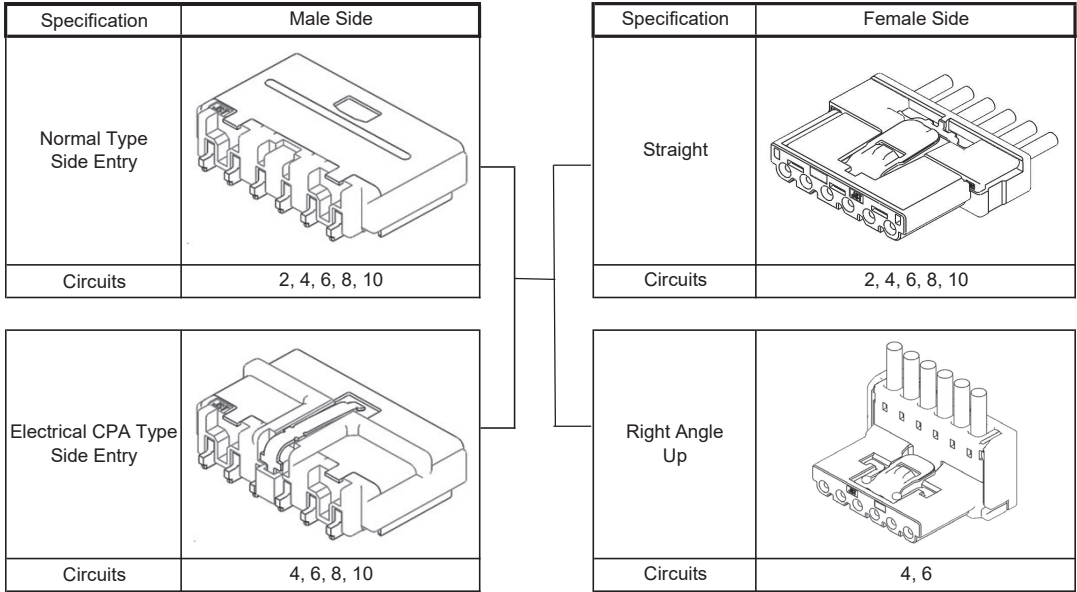
### ■ Specifications

Item	Standard	Condition
● Current rating	5A AC·DC	Wire for more than 125°C· Applying AWG#22, All circuits
● Operating voltage	100V AC·DC	IEC60664-1, Pollution degree2
● Temperature range	-40°C ~ +125°C	Including temperature rise in applying
● Applicable wire	AWG#22	Coating OD: Φ1.5mm max
● Frame resistance	V-0	UL94
● Contact resistance	Initial 10mΩ max	DC 1/10/100mA
● Insulation resistance	100MΩ min	DC 500V
● Withstand voltage	No dielectric breakdown	AC/ DC 1,000V ·1 min.
● Vibration resistance	After endurance 15mΩ max	LV214 PG17 Severity 2 USCAR-2 V2(10G)
● Heat resistance	After endurance 15mΩ max	Under 125°C, Abandoned for 3,000 hours
● Lock Strength	110N min	In case pulling to mating direct
● Halogen	Halogen-free	Meet the definition based on IEC61249-2-21

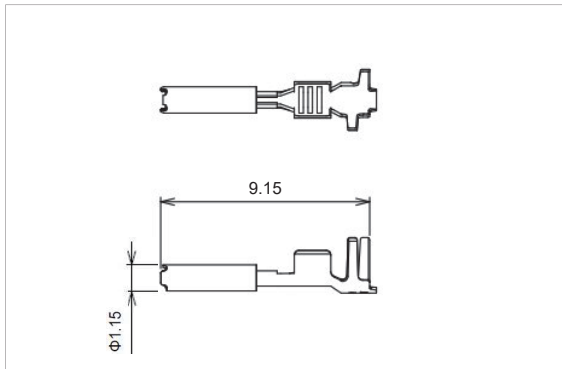
\*Compliant with ELV/RoHS2.

\*If you have any question, please contact JST.

**ULH Series Product Lineup**



## Female terminal / Straight



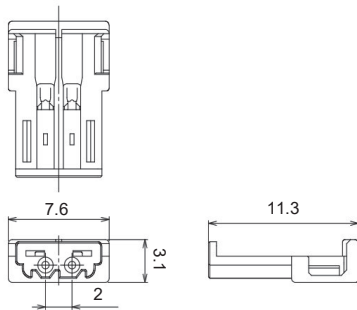
Size	Model No.	Applicable wire size		Q'ty/reel
		Conductor (mm <sup>2</sup> )	Insulation O.D. (mm)	
M	① SULH-A021GF-0.5	0.3 / 0.35	1.5 MAX	9,000
	② SULH-A021T-0.5			

### Material and Finish

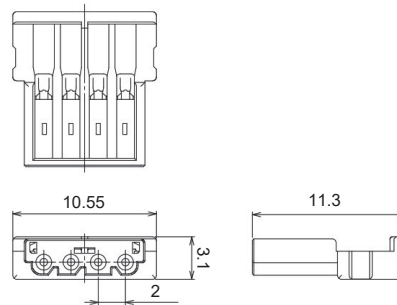
- ① Copper alloy, Nickel-undercoated, Contact area; Gold-plated  
Barrel area; Tin-plated (Reflow treatment)
- ② Copper alloy, Tin-plated (Reflow treatment)

## Female connector / Straight

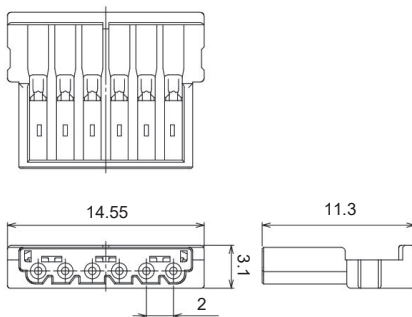
### ● 2 circuits



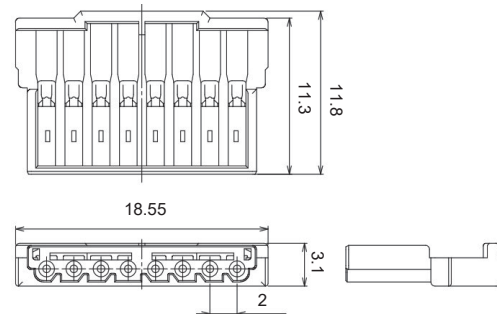
### ● 4 circuits



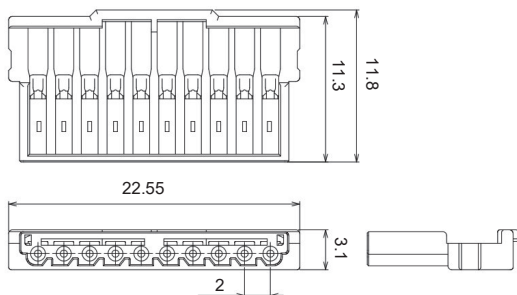
### ● 6 circuits



### ● 8 circuits



### ● 10 circuits



Circuits	Model No.	Q'ty/box
2	ULHRR-02V-1A1-K(HF)	1,000
4	ULHRR-04V-1A1-K(HF)	900
6	ULHRR-06V-1A1-K(HF)	800
8	ULHRR-08V-1A1-K(HF)	700
10	ULHRR-10V-1A1-K(HF)	600

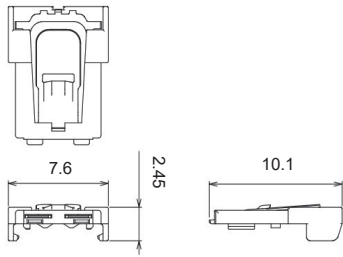
### Material and Finish

Housing: Poly-amide, UL94V-0, Halogen-free, Black

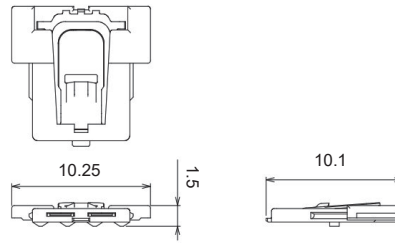
Note: Color/Key codes other than above-mentioned housing are also available.  
Contact JST for details.

Female cover / Straight

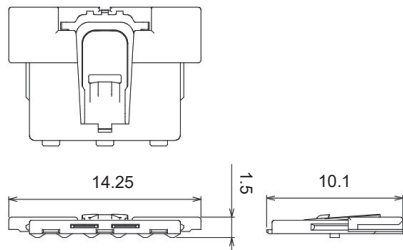
● 2 circuits



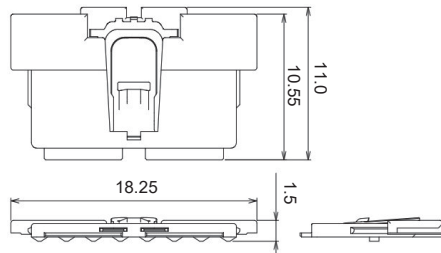
● 4 circuits



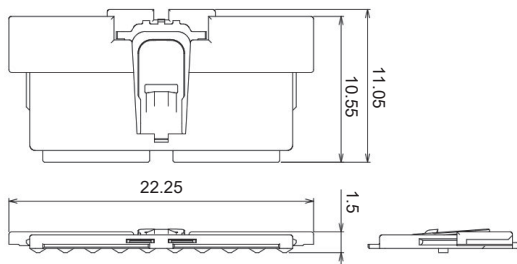
● 6 circuits



● 8 circuits



● 10 circuits

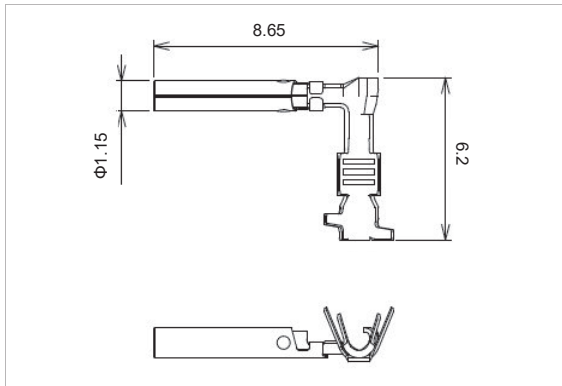


Circuits	Model No.	Q'ty/box
2	ULHCB-02V-A-K(HF)	3,712
4	ULHCB-04V-A-K(HF)	2,784
6	ULHCB-06V-A-K(HF)	2,784
8	ULHCB-08V-A-K(HF)	1,856
10	ULHCB-10V-A-K(HF)	1,856

Material and Finish

Housing: Poly-amide, UL94V-0, Halogen-free, Black  
 Metal lock: Stainless

## Female terminal / Right angle



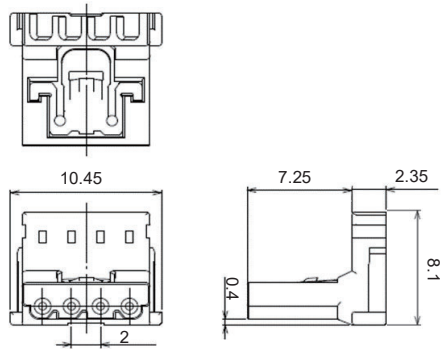
Size	Model No.	Applicable wire size		Q'ty/reel
		Conductor (mm <sup>2</sup> )	Insulation O.D. (mm)	
M	① SRULH-A021GF-0.5	0.3 / 0.35	1.5 MAX	8,000
	② SRULH-A021T-0.5			

### Material and Finish

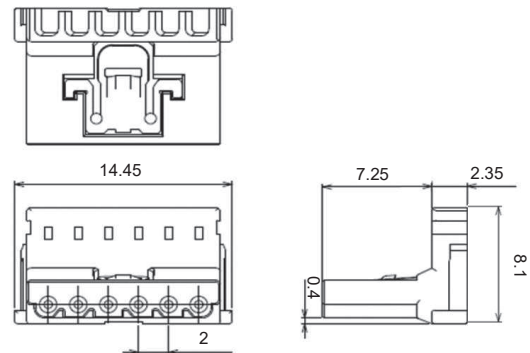
- ① Copper alloy, Nickel-undercoated, Contact area; Gold-plated  
Barrel area; Tin-plated (Reflow treatment)
- ② Copper alloy, Tin-plated (Reflow treatment)

## Female connector / Right angle

### ● 4 circuits



### ● 6 circuits



Circuits	Model No.	Q'ty/box
4	<b>ULHRB-04V-1C1-K(HF)</b>	5,000
6	<b>ULHRB-06V-1C1-K(HF)</b>	3,000

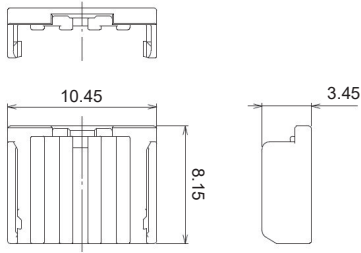
### Material and Finish

Housing: Poly-amide, UL94V-0, Halogen-free, Black  
Metal lock: Stainless

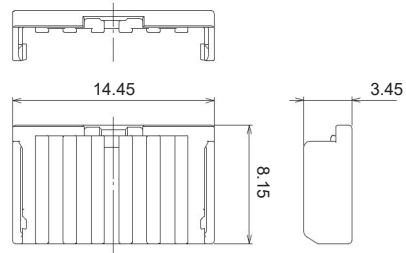
Note: Color/Key codes other than above-mentioned housing are also available.  
Contact JST for details.

**Female cover / Right angle**

● 4 circuits



● 6 circuits



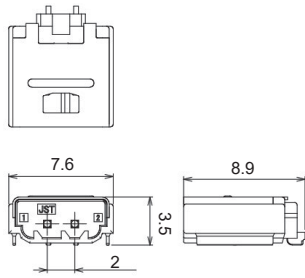
Circuits	Model No.	Q'ty/box
4	<b>ULHCR-04V-A-K(HF)</b>	30,000
6	<b>ULHCR-06V-A-K(HF)</b>	20,000

**Material and Finish**

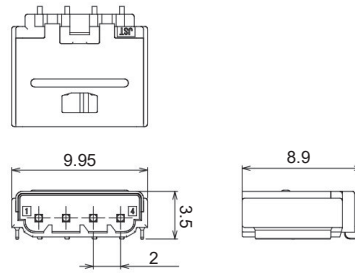
Housing: Poly-amide, UL94V-0, Halogen-free, Black

## Male connector

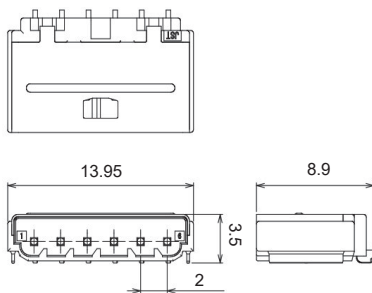
### ● 2 circuits



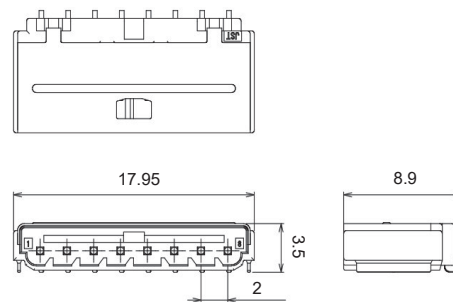
### ● 4 circuits



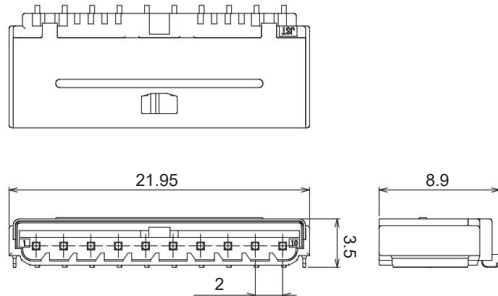
### ● 6 circuits



### ● 8 circuits



### ● 10 circuits



Plating	Circuits	Model No.	Q'ty/reel
Au	2	SM02B-ULHK-1GFA1-ETB(HF)	1,700
	4	SM04B-ULHK-1GFA1-ETB(HF)	1,700
	6	SM06B-ULHK-1GFA1-ETB(HF)	1,700
	8	SM08B-ULHK-1GFA1-ETB(HF)	1,700
	10	SM10B-ULHK-1GFA1-ETB(HF)	1,700
Sn	2	SM02B-ULHK-1TA1-ETB(HF)	1,700
	4	SM04B-ULHK-1TA1-ETB(HF)	1,700
	6	SM06B-ULHK-1TA1-ETB(HF)	1,700
	8	SM08B-ULHK-1TA1-ETB(HF)	1,700
	10	SM10B-ULHK-1TA1-ETB(HF)	1,700

#### Material and Finish

Housing: Poly-amide, UL94V-0, Halogen-free, Black

Metal shell: Copper alloy

Male terminal: Copper alloy, Nickel-undercoated

Au - Contact area / Selective gold-plated

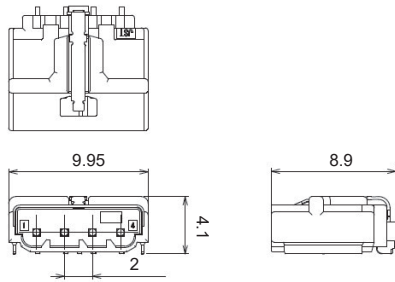
Mounting part / Tin-plated (Reflow treatment)

Sn / Tin-plated (Reflow treatment)

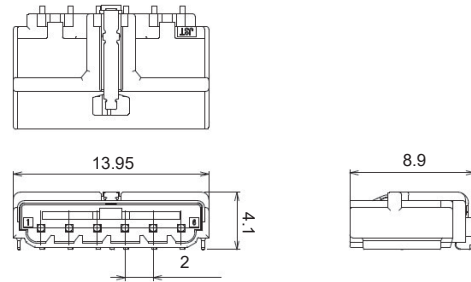
Note: Color/Key codes other than above-mentioned housing are also available.  
Contact JST for details.

Male connector / Electrical CPA Type

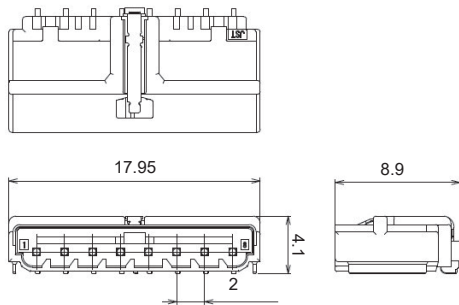
● 4 circuits



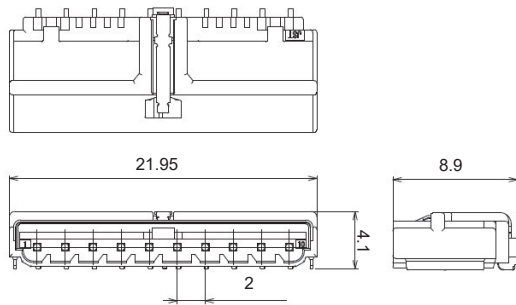
● 6 circuits



● 8 circuits



● 10 circuits



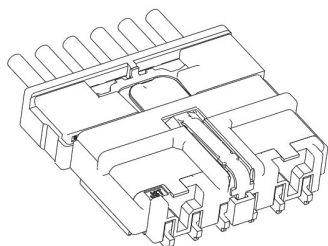
Plating	Circuits	Model No.	Q'ty/reel
Au	4	SM04B-ULHK-1GFD1-ETB(HF)	1,500
	6	SM06B-ULHK-1GFD1-ETB(HF)	1,500
	8	SM08B-ULHK-1GFD1-ETB(HF)	1,500
	10	SM10B-ULHK-1GFD1-ETB(HF)	1,500
Sn	4	SM04B-ULHK-1TD1-ETB(HF)	1,500
	6	SM06B-ULHK-1TD1-ETB(HF)	1,500
	8	SM08B-ULHK-1TD1-ETB(HF)	1,500
	10	SM10B-ULHK-1TD1-ETB(HF)	1,500

Material and Finish

Housing: Poly-amide, UL94V-0, Halogen-free, Black  
 Metal shell: Copper alloy  
 CPA terminal: Copper alloy, No plating  
 Male terminal: Brass, Nickel-undercoated  
 Au - Contact area / Selective gold-plated  
 Mounting part / Tin-plated (Reflow treatment)  
 Sn / Tin-plated (Reflow treatment)

Note: Color/Key codes other than above-mentioned housing are also available.  
 Contact JST for details.

What is electrical CPA?



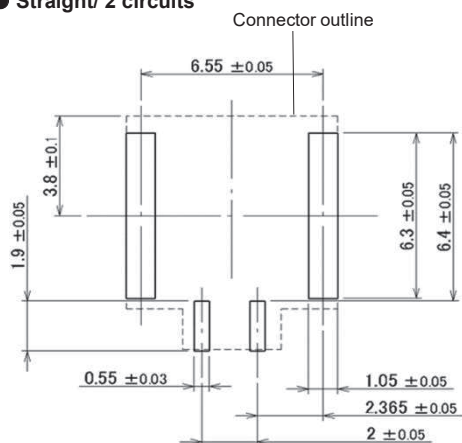
- The electrical CPA of ULH connectors is a mechanism in which the mating lock part and the CPA terminal are interlocked. This mechanism can detect 100% of incomplete mating, as opposed to indirect methods.

- The electrical CPA of ULH connectors is not a function to constantly monitor for complete mating, but is intended to prevent and detect incomplete mating in the assembly process.

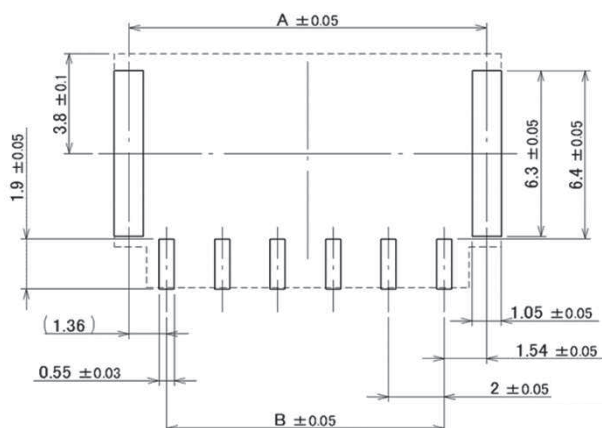


## PCB layout

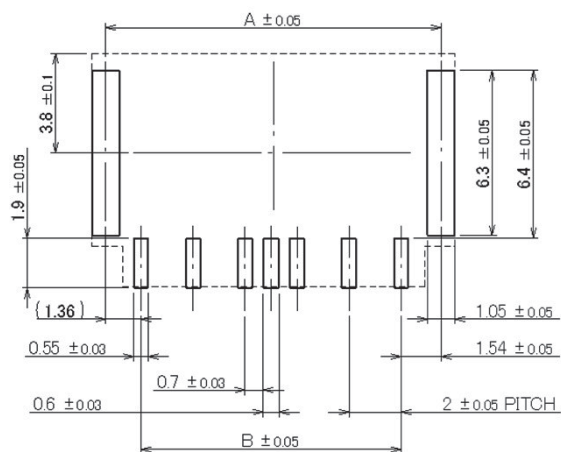
### ● Straight/ 2 circuits



### ● Straight, Right angle/ 4 ~ 10 circuits

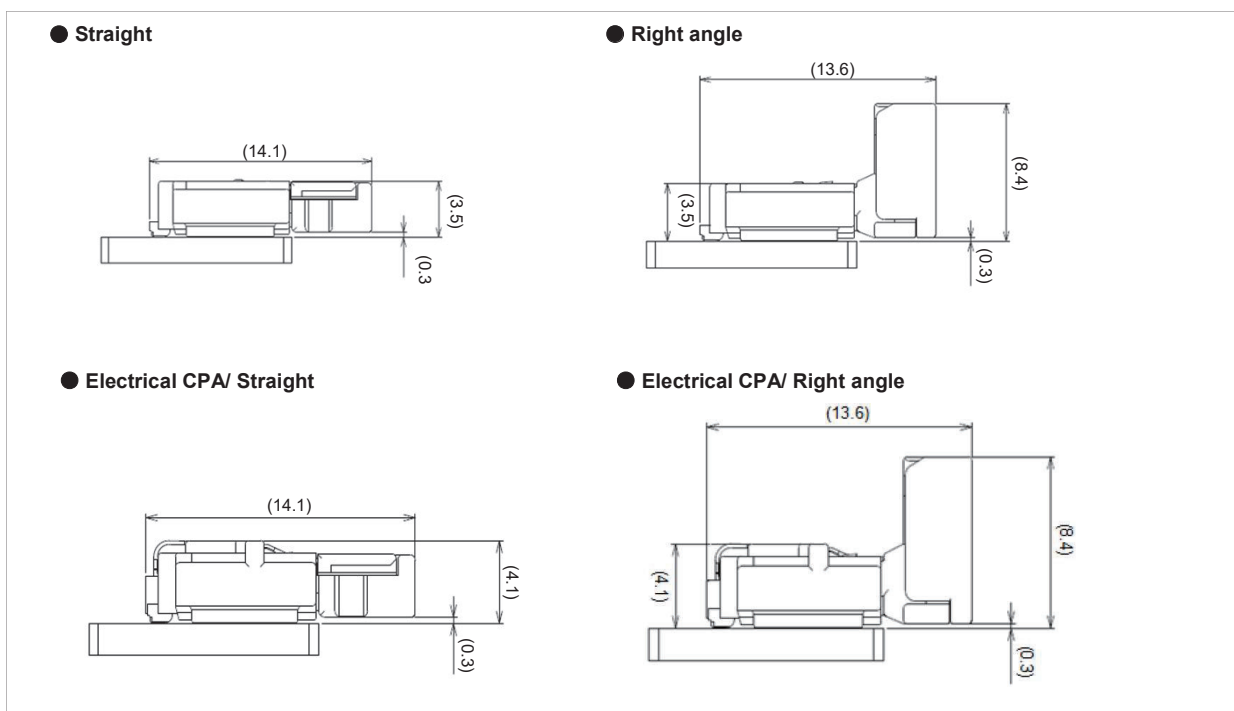


### ● Electrical CPA/ 4 ~ 10 circuits



Circuits	A	B
4	8.9	6
6	12.9	10
8	16.9	14
10	20.9	18

## Assembly layout



## Crimping machine, Applicator

Strip terminal	Crimping machine	Crimp applicator MKS-L	
		Dies	Crimp applicator with dies
SULH-A021GF-0.5	AP-K2N	MK / SULH-A021-05	APLMK SULH-A021-05
SULH-A021T-0.5			
SRULH-A021GF-0.5		MK / SRULH-A021-05	APLMK SRULH-A021-05
SRULH-A021T-0.5			

Note: 1. Contact JST for details.

2. When crimping operation is conducted using an applicator and die set other than the above, JST cannot guarantee the performance of the terminal.