ULH CONNECTOR

Board-to-wire



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

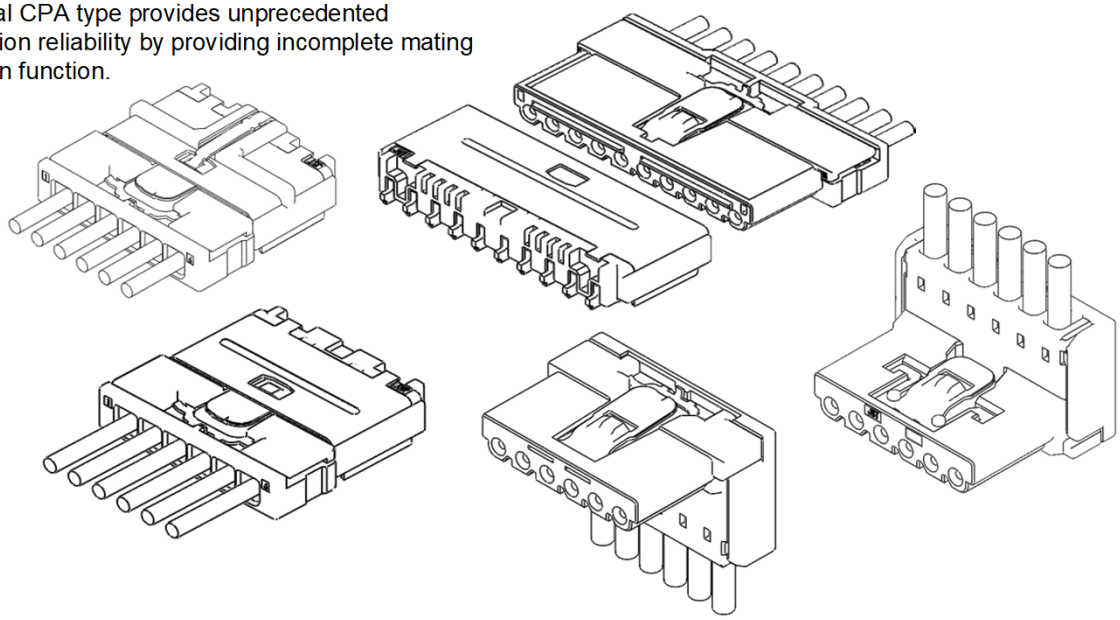
●Up to 4 key code settings

●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

●Machine push mating is available (both straight and



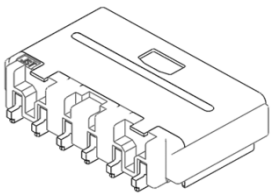
■ Specifications

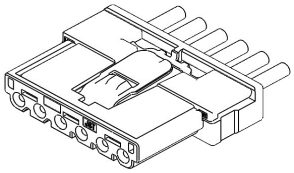
Item	Standard	Condition
●Current rating	5A AC・DC	Wire for more than 125°C・ Applying 0.3/0.35mm^2, All circuits
●Operating voltage	100V AC・DC	IEC60664-1, Pollution degree2
●Temperature range	−40℃～＋125℃	Including temperature rise in applying
●Applicable wire	0.3/0.35mm^2	Coating OD: Φ1.5mm max
●Flame resistance	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℃, 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

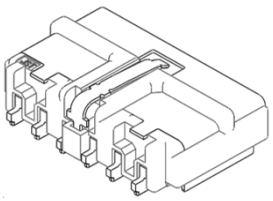
*Compliant with ELV/RoHS2.
*If you have any question, please contact JST.

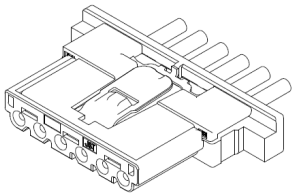
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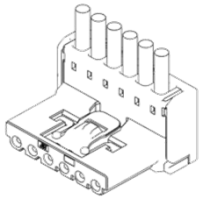
ULH Series Product Lineup

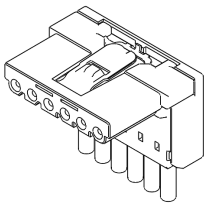
Specification	Male connector
Normal Type Side Entry	
Circuits	2, 4, 6, 8, 10

Specification	Female connector
Straight	
Circuits	2, 4, 6, 8, 10

Electrical CPA Type Side Entry	
Circuits	4, 6, 8, 10

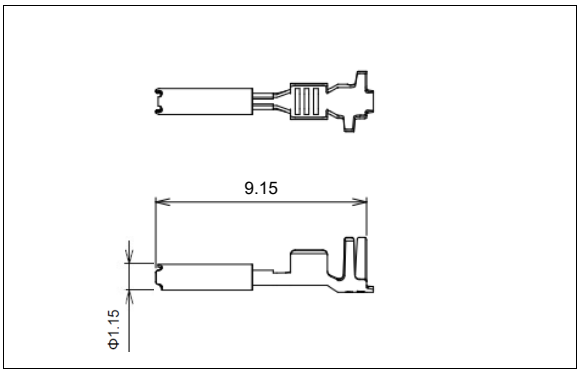
Straight With flange (Correspond to machine push)	
Circuits	4, 6, 8, 10

Right Angle Up	
Circuits	2, 4, 6, 8

Right Angle Down	
Circuits	4, 6

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Female terminal / Straight

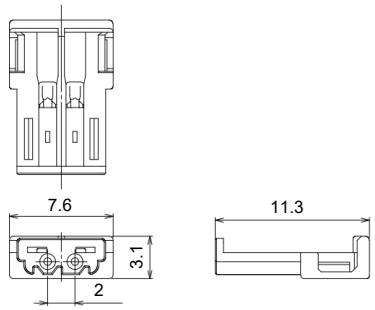


Size	Model No.	Applicable wire size		Q'ty/reel
		Conductor (mm²)	Insulation O.D. (mm)	
M	① SULH-A021GF-0.5	0.3 / 0.35	1.2 - 1.5	9,000
	② SULH-A021T-0.5			

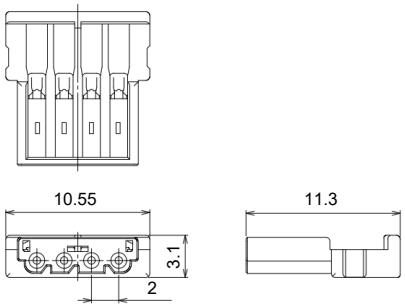
Material and Finish
① Copper alloy, Contacting area; Gold-plated Barrel area; Tin-plated
② Copper alloy, Tin-plated

Female connector / Straight

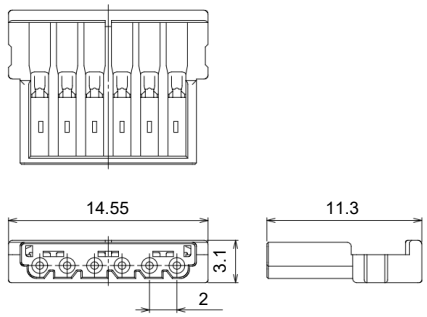
● 2 circuits



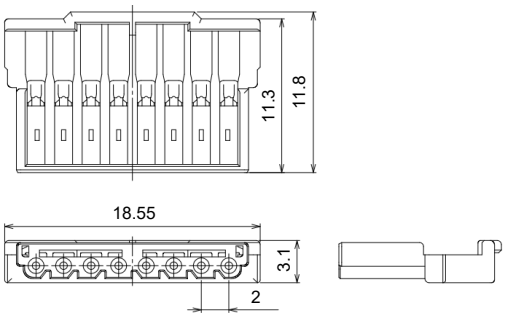
● 4 circuits



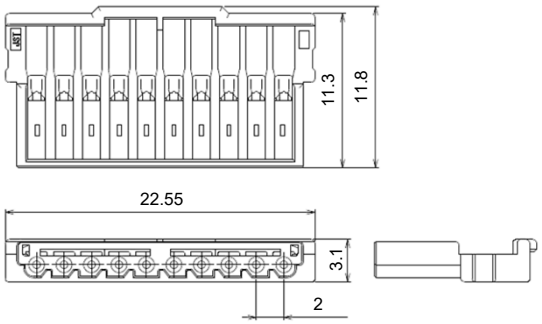
● 6 circuits



● 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

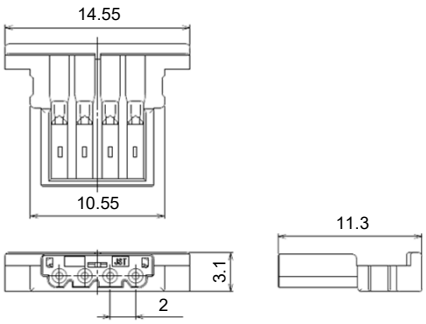
Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black

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

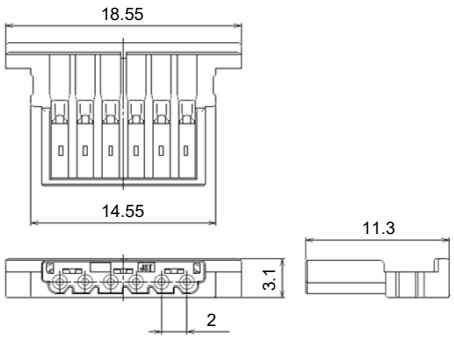
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Female connector / Straight, with flange

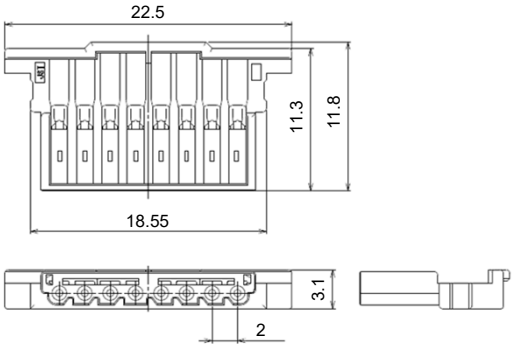
● 4 circuits



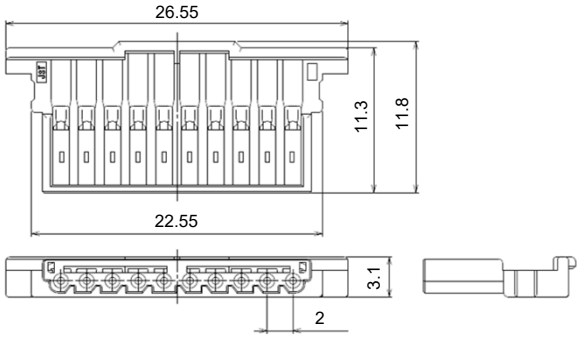
● 6 circuits



● 8 circuits



● 10 circuits



Circuits	Model No.	Q'ty/box
4	**ULHRR-04V-1B1-K(HF)**	900
6	**ULHRR-06V-1B1-K(HF)**	800
8	**ULHRR-08V-1B1-K(HF)**	700
10	**ULHRR-10V-1B1-K(HF)**	600

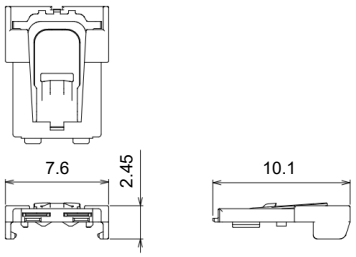
Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black

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

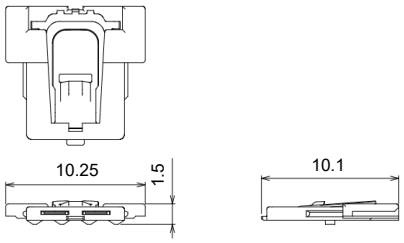
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Female cover / Straight

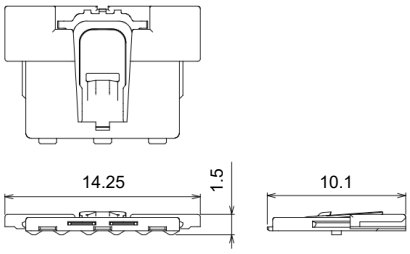
● 2 circuits



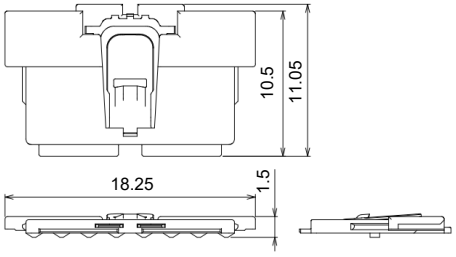
● 4 circuits



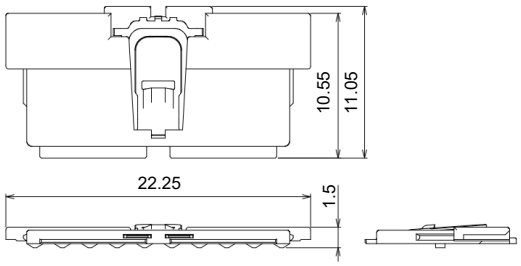
● 6 circuits



● 8 circuits



● 10 circuits

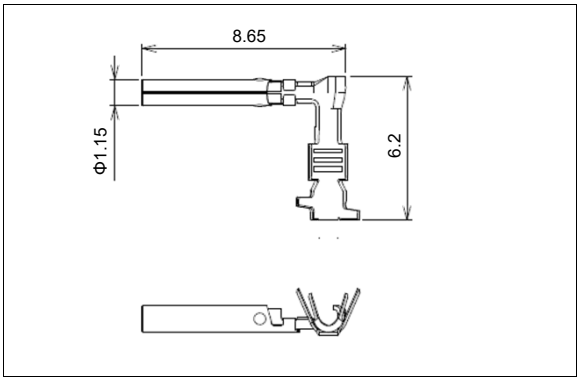


Circuits	Model No.	Q'ty/box
2	**ULHCB-02V-A-K(HF)**	3,712
4	**ULHCB-04V-A-K(HF)**	2,784
6	**ULHCB-06V-A-K(HF)**	2,784
8	**ULHCB-08V-A-K(HF)**	1,856
10	**ULHCB-10V-A-K(HF)**	1,856

Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black Metal lock: Stainless

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Female terminal / Right angle

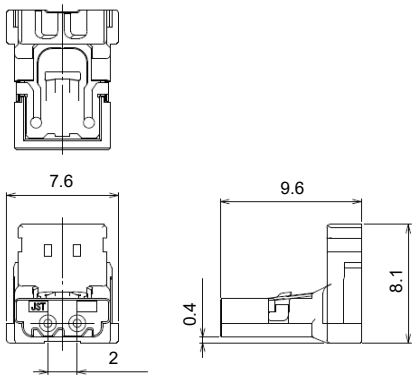


Size	Model No.	Applicable wire size		Q'ty/reel
		Conductor (mm²)	Insulation O.D. (mm)	
M	① SRULH-A021GF-0.5	0.3 / 0.35	1.2 - 1.5	8,000
	② SRULH-A021T-0.5			

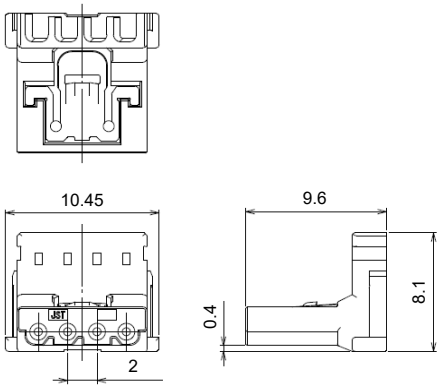
Material and Finish
① Copper alloy, Contacting area; Gold-plated Barrel area; Tin-plated ②Copper alloy, Tin-plated

Female connector / Right angle up

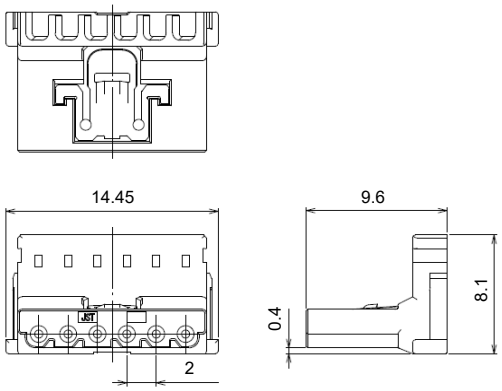
● 2 circuits



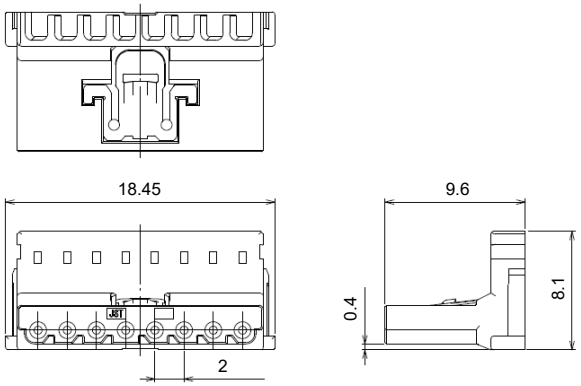
● 4 circuits



● 6 circuits



● 8 circuits



Circuits	Model No.	Q'ty/box
2	**ULHRB-02V-1C1-K(HF)**	7,000
4	**ULHRB-04V-1C1-K(HF)**	5,000
6	**ULHRB-06V-1C1-K(HF)**	3,000
8	**ULHRB-08V-1C1-K(HF)**	2,300

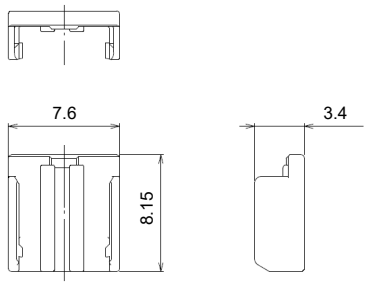
Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black Metal lock: Stainless

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

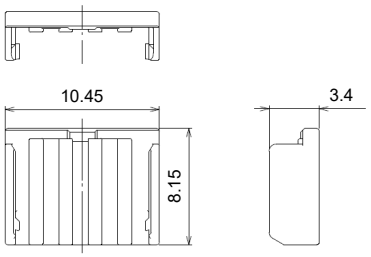
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Female cover / Right angle up

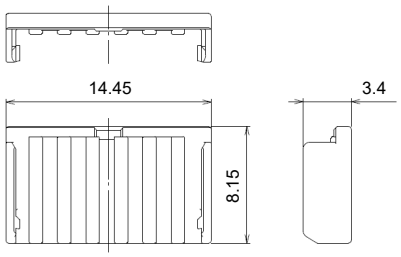
● 2 circuits



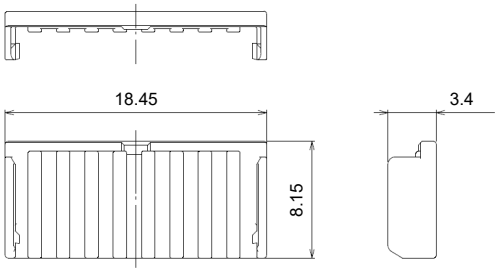
● 4 circuits



● 6 circuits



● 8 circuits



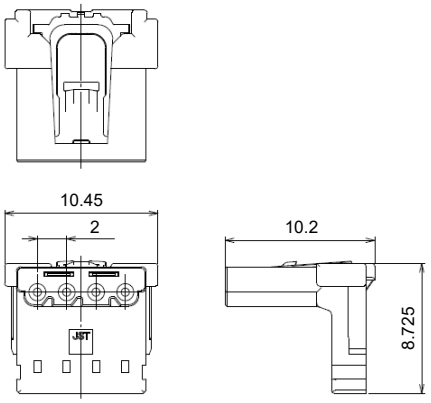
Circuits	Model No.	Q'ty/box
2	**ULHCR-02V-A-K(HF)**	30,000
4	**ULHCR-04V-A-K(HF)**	30,000
6	**ULHCR-06V-A-K(HF)**	20,000
8	**ULHCR-08V-A-K(HF)**	15,000

Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black

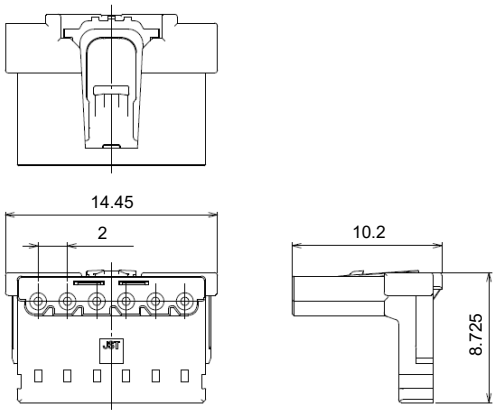
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Female connector / Right angle down

● 4 circuits



● 6 circuits



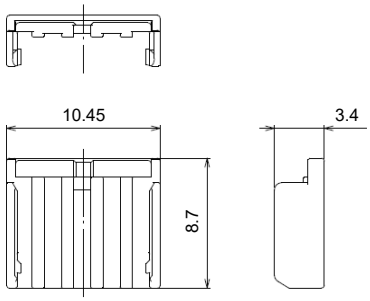
Circuits	Model No.	Q'ty/box
4	**ULHRB-04V-1A1-K(HF)**	2,912
6	**ULHRB-06V-1A1-K(HF)**	2,080

Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black Metal lock: Stainless

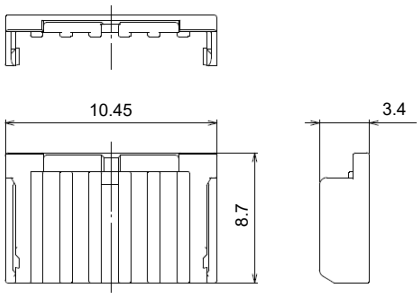
Note: Color/Key codes other than above-mentioned housing are also available.
Contact JST for details.

Female cover / Right angle down

● 4 circuits



● 6 circuits



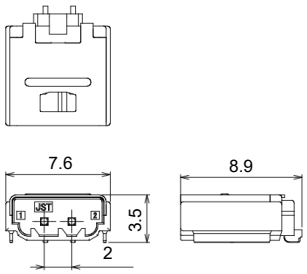
Circuits	Model No.	Q'ty/box
4	**ULHCR-04V-B-K(HF)**	20,000
6	**ULHCR-06V-B-K(HF)**	16,000

Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black

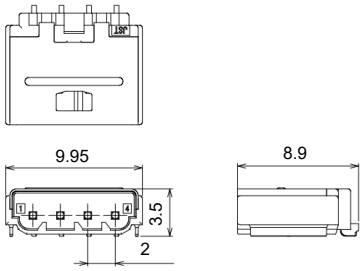
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Male connector

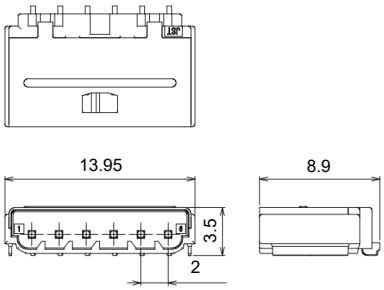
● 2 circuits



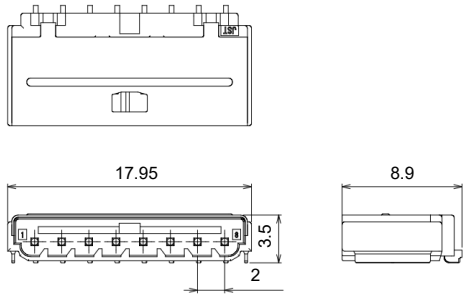
● 4 circuits



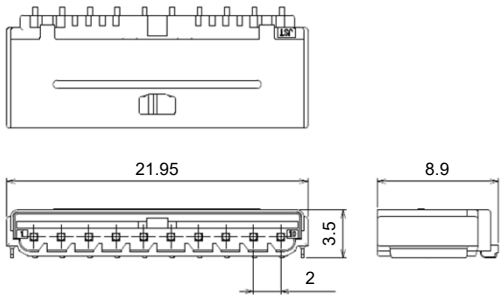
● 6 circuits



● 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

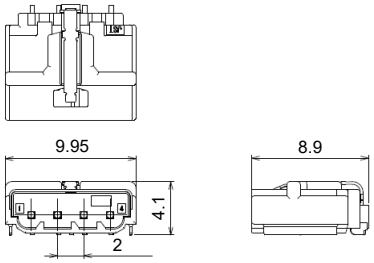
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black
Metal shell: Copper alloy
Male terminal: Copper alloy
Au - Contacting part ／Gold-plated
Soldering part ／Tin-plated
Sn ／Tin-plated

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

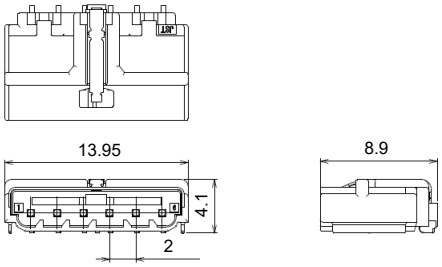
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Male connector / Electrical CPA Type

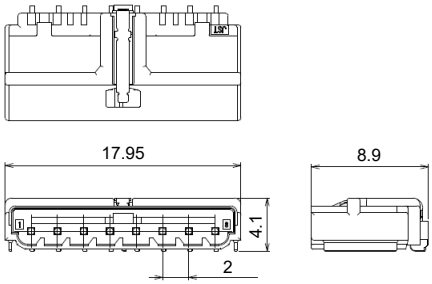
● 4 circuits



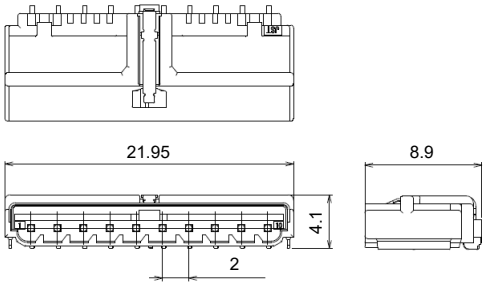
● 6 circuits



● 8 circuits



● 10 circuits

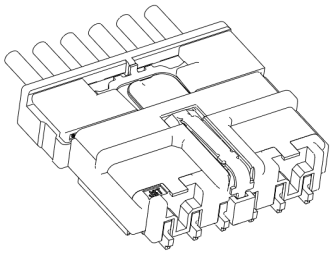


Plating	Circuits	Model No.	Q'ty/reel
Au	4	**SM04B-ULHK-1GFD1-ETB(HF)**	1,500
	6	**SM06B-ULHK-1GFD1-ETB(HF)**	1,500
	8	**SM08B-ULHK-1GFD1-ETB(HF)**	1,500
	10	**SM10B-ULHK-1GFD1-ETB(HF)**	1,500
Sn	4	**SM04B-ULHK-1TD1-ETB(HF)**	1,500
	6	**SM06B-ULHK-1TD1-ETB(HF)**	1,500
	8	**SM08B-ULHK-1TD1-ETB(HF)**	1,500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

Material and Finish
Housing: PA(Heat resistance), UL94V-0, Halogen-free, Black Metal shell: Copper alloy CPA terminal: Copper alloy, No plating Male terminal: Copper alloy Au - Contacting part ／Gold-plated Soldering part ／Tin-plated Sn ／Tin-plated

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

What is electrical CPA?



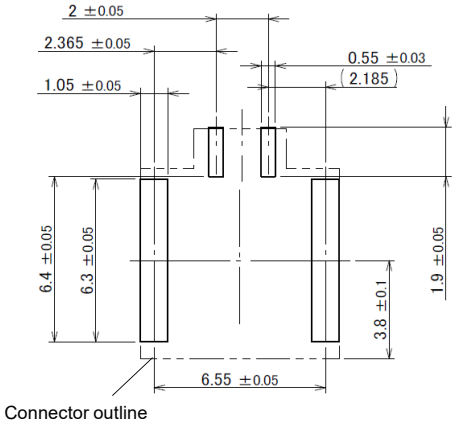
- The electrical CPA of ULH connectors is a mechanism in which the mating lock part and the CPA terminal are interlocked. This mechanism can detect 100% of incomplete mating, as opposed to indirect methods.

- 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.

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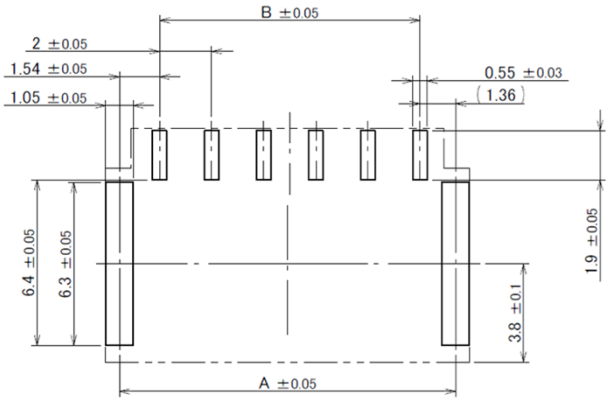
PCB layout

● **2 circuits**

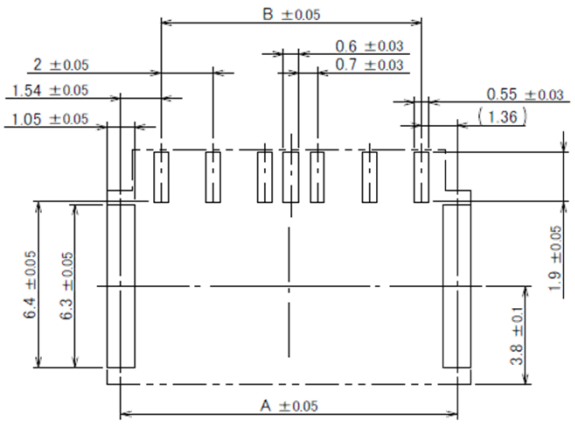


Connector outline

● **4 ~ 10 circuits**



● **Electrical CPA/ 4 ~ 10 circuits**

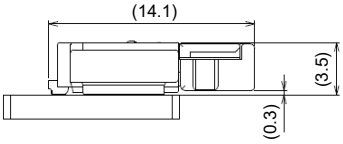


Circuits	A	B
4	8.9	6
6	12.9	10
8	16.9	14
10	20.9	18

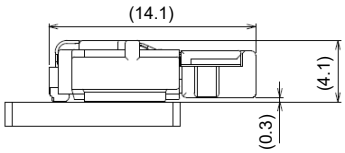
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Assembly layout

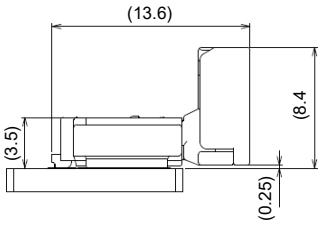
● **Straight**



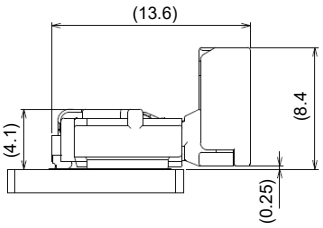
● **Electrical CPA/Straight**



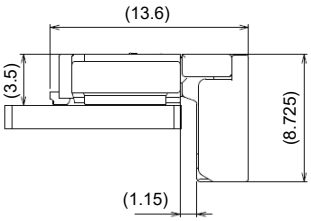
● **Right angle up**



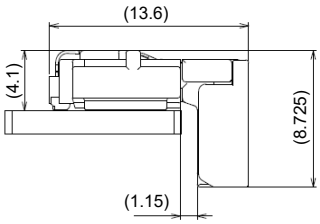
● **Electrical CPA/Right angle up**



● **Right angle down**



● **Electrical CPA/Right angle down**



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.

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