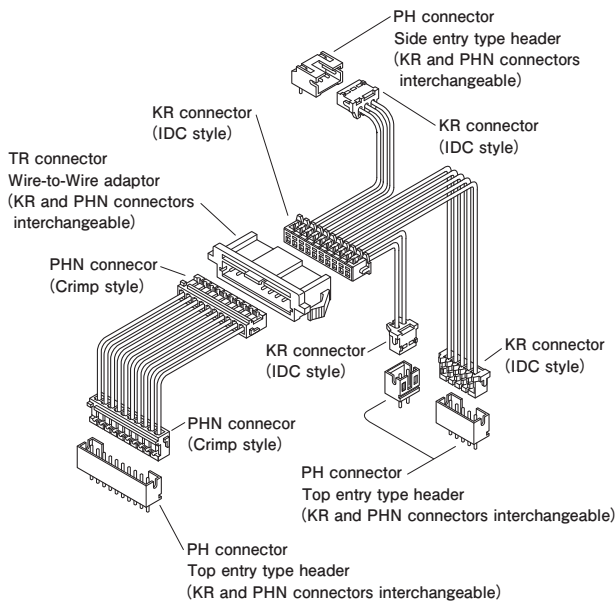


# KR FAMILY/KR·PHN·TR CONNECTOR

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



The KR connector line is a 2.0 mm pitch IDC style connector that features a wide variety of connection configurations centered around the KR connector itself. It offers compatible crimp style connectors, both through-hole and SMT-type headers as well as panel-mount-compatible relay connection units to help expand design flexibility in various electronic equipment and devices. Moreover, multi-crimp harnesses can be produced with a higher level of efficiency on automatic crimp machines which not only increases productivity, but also reduces overall manufacturing costs.

- Various interconnect options centered on KR connectors
- Contributes to greater flexibility in equipment design
- In light of our successful track record with PH connector crimp contacts, the same contacts can be used interchangeably with the PHN connector crimp style receptacle.

## 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.

## Specifications

### KR connector

- Current rating: 1 A AC/DC (AWG #26)
- Voltage rating: 100 V AC/DC
- Temperature range: -25°C to +85°C  
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 10 mΩ max.  
After test/ 20 mΩ max.
- Insulation resistance: 1,000 MΩ min.
- Withstanding voltage:  
There shall be no breakdown or flashover while applying 800 VAC for one minute.
- Applicable wire:  
UL style/ UL1571, UL1061  
Note 1: Please contact JST for details regarding the use of other UL style wires.  
Note 2: UL1061 is the standard applicable wire for KR connectors with 13 circuits or higher  
Wire specification/ AWG #28, AWG #26  
7 strand, tin-plated, annealed copper conductor  
Insulation O.D./  $\phi$  0.9 mm to  $\phi$  1.0 mm

### PHN connector

- Current rating: 2 A AC/DC (AWG #24)
- Voltage rating: 100 V AC/DC
- Temperature range: -25°C to +85°C  
(including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 10 mΩ max.  
After test/ 20 mΩ max.
- Insulation resistance: 1,000 MΩ min.
- Withstanding voltage:  
There shall be no breakdown or flashover while applying 800 VAC for one minute.
- Applicable wire range:  
Conductor size/ AWG #28 to AWG #24  
Insulation O.D. /  $\phi$  0.8 mm to  $\phi$  1.5 mm

### PH connector/ Header

- Applicable PC board thickness: 0.8 mm to 1.6 mm  
Note: For through-hole type.

### TR connector/ Wire-to-Wire adaptor

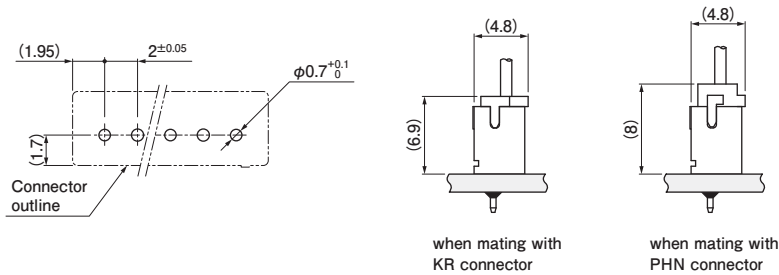
- Applicable panel thickness: 0.5 mm to 2.0 mm

- \* 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.

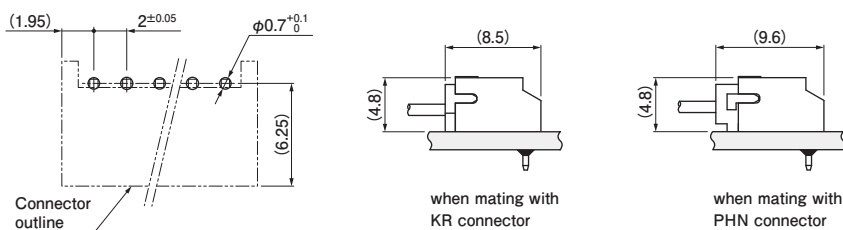
# KR FAMILY/KR·PHN·TR CONNECTOR

## PC board layout and Assembly layout/ PH connector header (Through-hole type)

### Top entry type



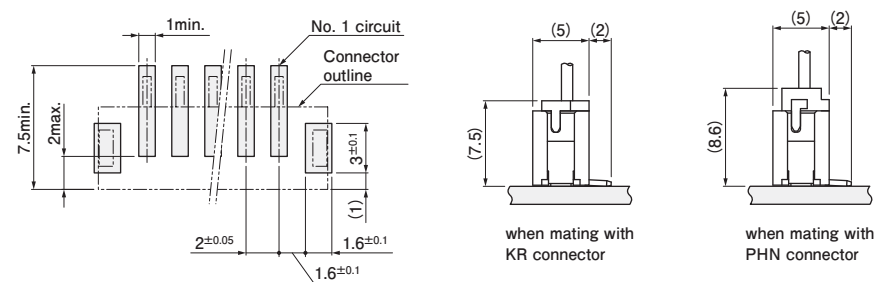
### Side entry type



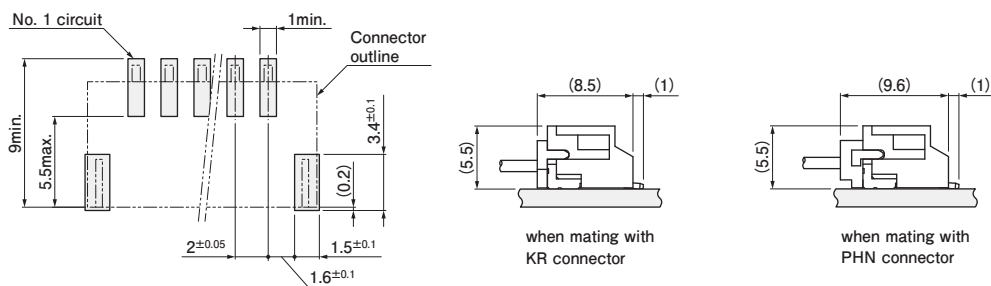
- Note: 1. The PC board layout figure shown is viewed from the connector mounting surface.  
 2. Tolerance for the PCB hole pitch shall be  $\pm 0.05$  and shall not accumulate.  
 3. Hole dimensions differ depending on the type of PCB and PCB drilling method.  
 The above dimensions are for reference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

## PC board layout and Assembly layout/ PH connector header (SMT type)

### Top entry type



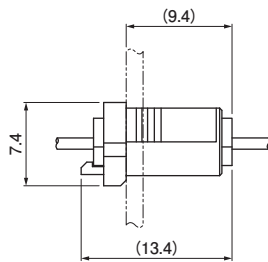
### Side entry type



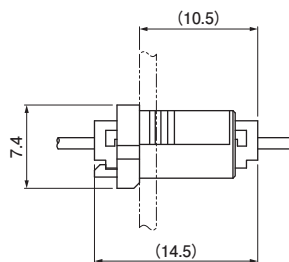
- Note: 1. The PC board layout figure shown is viewed from the connector mounting surface.  
 2. Tolerance for the PCB pattern pitch shall be  $\pm 0.05$  and shall not accumulate.  
 The above dimensions are for reference only. Please contact JST for further details.

# KR FAMILY/KR·PHN·TR CONNECTOR

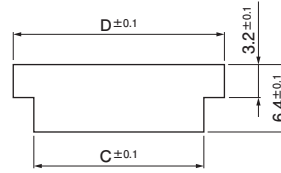
## Assembly layout and Panel layout/ TR connector (Wire-to-Wire adapter)



when mating with  
KR connector



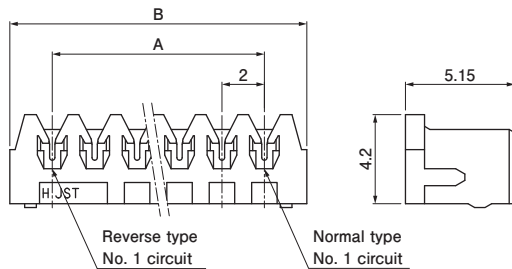
when mating with  
PHN connector



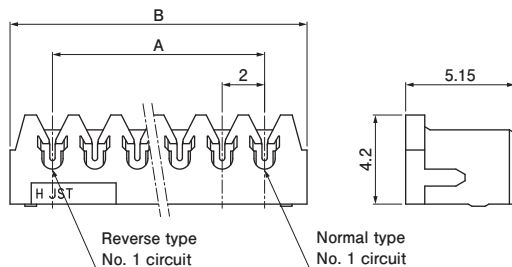
Note: Dimensions C and D:  
See "TR connector (Wire-to-Wire adapter)"  
section on page 7.

## KR connector (IDC style)

### <2 to 12 circuits>



### <13 to 16 circuits>



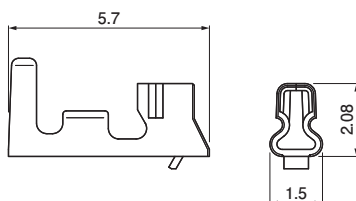
No. of circuits	Model No.		Dimensions (mm)		Q'ty/box
	Normal type	Reverse type	A	B	
2	02KR-6H-P	02KR-6H-PC	2.0	6.0	2,000
3	03KR-6H-P	03KR-6H-PC	4.0	8.0	2,000
4	04KR-6H-P	04KR-6H-PC	6.0	10.0	2,000
5	05KR-6H-P	05KR-6H-PC	8.0	12.0	2,000
6	06KR-6H-P	06KR-6H-PC	10.0	14.0	2,000
7	07KR-6H-P	07KR-6H-PC	12.0	16.0	1,000
8	08KR-6H-P	08KR-6H-PC	14.0	18.0	1,000
9	09KR-6H-P	09KR-6H-PC	16.0	20.0	1,000
10	10KR-6H-P	10KR-6H-PC	18.0	22.0	1,000
11	11KR-6H-P	11KR-6H-PC	20.0	24.0	1,000
12	12KR-6H-P	12KR-6H-PC	22.0	26.0	1,000
13	13KR-6H-P	13KR-6H-PC	24.0	28.0	500
14	14KR-6H-P	14KR-6H-PC	26.0	30.0	500
15	15KR-6H-P	15KR-6H-PC	28.0	32.0	500
16	16KR-6H-P	16KR-6H-PC	30.0	34.0	500

Material and Surface finish, etc.

Contact: Copper alloy, tin-plated  
Housing: 2 to 12 circuits/ PA, gray  
13 to 16 circuits/ PA (GF), gray

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).

## PH connector/ Contact (Crimp style)



Model No.	Applicable wire range		Q'ty/reel
	Conductor size AWG (mm <sup>2</sup> )	Insulation O.D. (mm)	
SPH-002T-P0.5L	#28 to #24 (0.08 to 0.22)	0.8 to 1.5	8,000

Material and Surface finish, etc.

Copper alloy, tin-plated

Note: SPH-002T-P0.5S type is also available.

### Crimping machine

Contact	Crimping machine	Applicator	Crimp applicator with dies
SPH-002T-P0.5L	AP-K2N	MKS-L	APLMK SPH002-05L

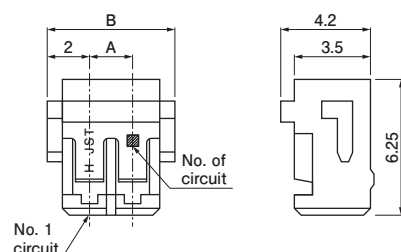
Note: Contact JST for fully automatic crimping applicator.

# KR FAMILY/KR·PHN·TR CONNECTOR

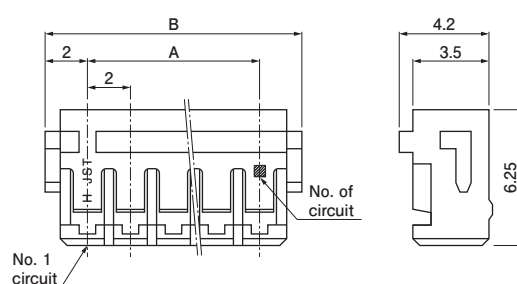
## PHN connector/ Housing (Crimp style)

### Normal type

#### <2 circuits>

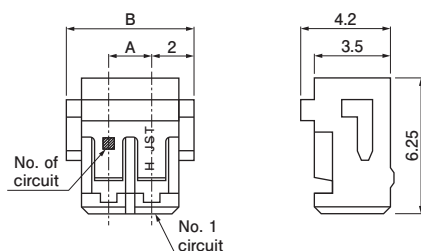


#### <3 to 16 circuits>

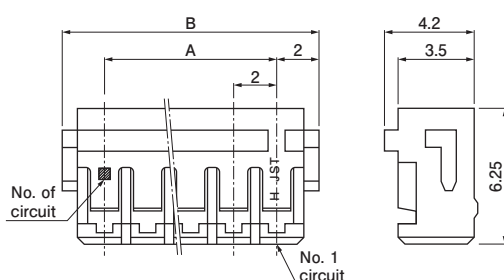


### Reverse type

#### <2 circuits>



#### <3 to 16 circuits>



No. of circuits	Model No.		Dimensions (mm)		Q'ty/bag
	Normal type	Reverse type	A	B	
2	PHNR-02-H	PHNR-02C-H	2.0	6.0	1,000
3	PHNR-03-H	PHNR-03C-H	4.0	8.0	1,000
4	PHNR-04-H	PHNR-04C-H	6.0	10.0	1,000
5	PHNR-05-H	PHNR-05C-H	8.0	12.0	1,000
6	PHNR-06-H	PHNR-06C-H	10.0	14.0	1,000
7	PHNR-07-H	PHNR-07C-H	12.0	16.0	1,000
8	PHNR-08-H	PHNR-08C-H	14.0	18.0	1,000
9	PHNR-09-H	PHNR-09C-H	16.0	20.0	1,000
10	PHNR-10-H	PHNR-10C-H	18.0	22.0	1,000
11	PHNR-11-H	PHNR-11C-H	20.0	24.0	1,000
12	PHNR-12-H	PHNR-12C-H	22.0	26.0	1,000
13	PHNR-13-H	PHNR-13C-H	24.0	28.0	1,000
14	PHNR-14-H	PHNR-14C-H	26.0	30.0	1,000
15	PHNR-15-H	PHNR-15C-H	28.0	32.0	1,000
16	PHNR-16-H	PHNR-16C-H	30.0	34.0	1,000

Material and Surface finish, etc.

PA, gray

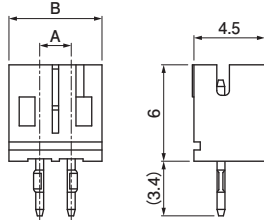
Note: For flame retardant grade of resin material used, please refer to the "List of Registered Overseas Standards" on our website (listed in the "Technical Documents" column on the Product Information page).

# KR FAMILY/KR·PHN·TR CONNECTOR

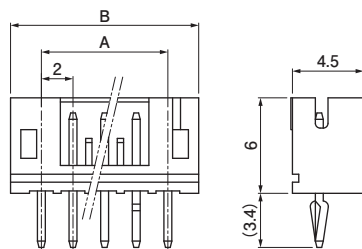
## PH connector/ Header (Through-hole type)

### Top entry type

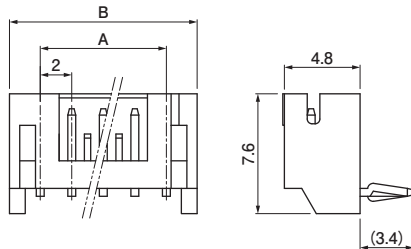
#### <2 circuits>



#### <3 circuits or more>



### Side entry type



No. of circuits	Model No.		Dimensions (mm)		Q'ty/box	
	Top entry type	Side entry type	A	B	Top entry type	Side entry type
2	B2B-PH-K-H	S2B-PH-K-H	2.0	5.9	1,000	1,000
3	B3B-PH-K-H	S3B-PH-K-H	4.0	7.9	1,000	1,000
4	B4B-PH-K-H	S4B-PH-K-H	6.0	9.9	1,000	500
5	B5B-PH-K-H	S5B-PH-K-H	8.0	11.9	1,000	500
6	B6B-PH-K-H	S6B-PH-K-H	10.0	13.9	1,000	500
7	B7B-PH-K-H	S7B-PH-K-H	12.0	15.9	500	500
8	B8B-PH-K-H	S8B-PH-K-H	14.0	17.9	500	250
9	B9B-PH-K-H	S9B-PH-K-H	16.0	19.9	500	250
10	B10B-PH-K-H	S10B-PH-K-H	18.0	21.9	500	250
11	B11B-PH-K-H	S11B-PH-K-H	20.0	23.9	500	250
12	B12B-PH-K-H	S12B-PH-K-H	22.0	25.9	400	250
13	B13B-PH-K-H	S13B-PH-K-H	24.0	27.9	250	250
14	B14B-PH-K-H	S14B-PH-K-H	26.0	29.9	250	250
15	B15B-PH-K-H	S15B-PH-K-H	28.0	31.9	250	200
16	B16B-PH-K-H	S16B-PH-K-H	30.0	33.9	250	200

#### Material and Surface finish, etc.

Post: Copper alloy, tin-plated  
Base housing: PA, gray

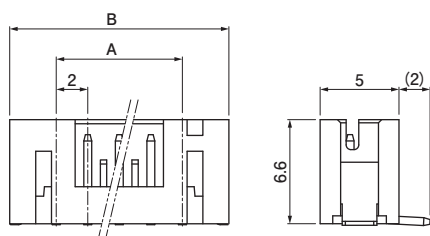
Note: 1. This product displays (LF)(SN) on a label.

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).

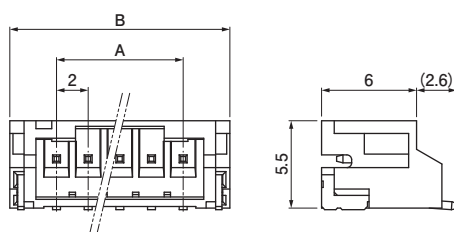
# KR FAMILY/KR·PHN·TR CONNECTOR

## PH connector/ Header (SMT type)

### Top entry type



### Side entry type



### Top entry type

No. of circuits	Model No.	Dimensions (mm)		Q'ty/reel
		A	B	
2	B2B-PH-SM4-TB	2.0	7.95	1,000
3	B3B-PH-SM4-TB	4.0	9.95	1,000
4	B4B-PH-SM4-TB	6.0	11.95	1,000
5	B5B-PH-SM4-TB	8.0	13.95	1,000
6	B6B-PH-SM4-TB	10.0	15.95	1,000
7	B7B-PH-SM4-TB	12.0	17.95	1,000
8	B8B-PH-SM4-TB	14.0	19.95	1,000
9	B9B-PH-SM4-TB	16.0	21.95	1,000
10	B10B-PH-SM4-TB	18.0	23.95	1,000
11	B11B-PH-SM4-TB	20.0	25.95	1,000
12	B12B-PH-SM4-TB	22.0	27.95	1,000
13	B13B-PH-SM4-TB	24.0	29.95	1,000
14	B14B-PH-SM4-TB	26.0	31.95	1,000
15	B15B-PH-SM4-TB	28.0	33.95	1,000
16	B16B-PH-SM4-TB	30.0	35.95	1,000

Material and Surface finish, etc.

Post: Copper alloy, tin-plated

Base housing: PA (Heat resistance), natural (ivory)

Reinforcement: Copper alloy, tin-plated

- Note: 1. This product displays (LF)(SN) on a label.  
 2. Top-entry headers with suction tape are also available.  
 3. 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).

### Side entry type

No. of circuits	Model No.	Dimensions (mm)		Q'ty/reel
		A	B	
2	S2B-PH-SM4-TB	2.0	7.9	1,000
3	S3B-PH-SM4-TB	4.0	9.9	1,000
4	S4B-PH-SM4-TB	6.0	11.9	1,000
5	S5B-PH-SM4-TB	8.0	13.9	1,000
6	S6B-PH-SM4-TB	10.0	15.9	1,000
7	S7B-PH-SM4-TB	12.0	17.9	1,000
8	S8B-PH-SM4-TB	14.0	19.9	1,000
9	S9B-PH-SM4-TB	16.0	21.9	1,000
10	S10B-PH-SM4-TB	18.0	23.9	1,000
11	S11B-PH-SM4-TB	20.0	25.9	1,000
12	S12B-PH-SM4-TB	22.0	27.9	1,000
13	S13B-PH-SM4-TB	24.0	29.9	1,000
14	S14B-PH-SM4-TB	26.0	31.9	1,000
15	S15B-PH-SM4-TB	28.0	33.9	1,000

Material and Surface finish, etc.

Post: Copper alloy, tin-plated

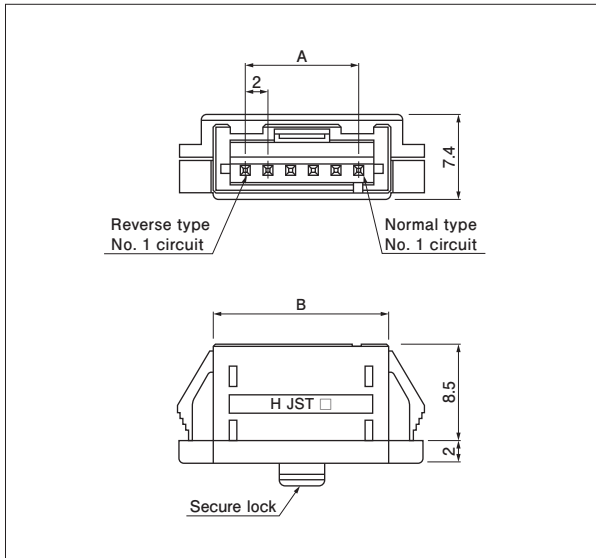
Base housing: PA (Heat resistance), natural (ivory)

Reinforcement: Copper alloy, tin-plated

- 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).

# KR FAMILY/KR·PHN·TR CONNECTOR

## TR connector (Wire-to-Wire adapter)



No. of circuits	Model No.		Dimensions (mm)				Q'ty /box
	Normal type	Reverse type	A	B	C	D	
2	BU02P-TR-P-H	BU02P-TR-PC-H	2.0	7.6	7.9	11.6	500
3	BU03P-TR-P-H	BU03P-TR-PC-H	4.0	9.6	9.9	13.6	500
4	BU04P-TR-P-H	BU04P-TR-PC-H	6.0	11.6	11.9	15.6	500
5	BU05P-TR-P-H	BU05P-TR-PC-H	8.0	13.6	13.9	17.6	250
6	BU06P-TR-P-H	BU06P-TR-PC-H	10.0	15.6	15.9	19.6	250
7	BU07P-TR-P-H	BU07P-TR-PC-H	12.0	17.6	18.0	21.6	200
8	BU08P-TR-P-H	BU08P-TR-PC-H	14.0	19.6	20.0	23.6	250
9	BU09P-TR-P-H	BU09P-TR-PC-H	16.0	21.6	22.0	25.6	250
10	BU10P-TR-P-H	BU10P-TR-PC-H	18.0	23.6	24.0	27.6	200
11	BU11P-TR-P-H	BU11P-TR-PC-H	20.0	25.6	26.0	29.6	200
12	BU12P-TR-P-H	BU12P-TR-PC-H	22.0	27.6	28.0	31.6	200
13	BU13P-TR-P-H	BU13P-TR-PC-H	24.0	29.6	30.0	33.6	150
14	BU14P-TR-P-H	BU14P-TR-PC-H	26.0	31.6	32.0	35.6	150
15	BU15P-TR-P-H	BU15P-TR-PC-H	28.0	33.6	34.0	37.6	150
16	BU16P-TR-P-H	BU16P-TR-PC-H	30.0	35.6	36.0	39.6	150

### Material and Surface finish, etc.

Post: Copper alloy, tin-plated  
Housing: PA, gray

- Note: 1. This product displays (LF)(SN) on a label.  
2. Connectors with the friction lock feature, for less retention force, are also available.  
3. Dimensions C and D: See "Assembly layout and Panel layout /TR connector (Wire-to-Wire adapter)" section on page 3.

## Model number allocation

### KR connector (IDC style)

**02 KR - 6 H - P**

No. of circuits	_____
Series name	_____
Applicable wire: AWG #28, AWG #26	_____
Color: gray	_____
Type: P...Normal, PC...Reverse	_____

### PH connector/ Contact (Crimp style)

**S PH - 002 T - P 0.5 L**

Supply form: Strip form	_____
Series name	_____
Applicable wire range:	_____
Low insertion force type/ AWG #28 to AWG #24	_____
Standard type/ AWG #30 to AWG #24	_____
Surface finish: Tin-plated	_____
Material: Copper alloy	_____
Applicable post size	_____
Type: L...Low insertion force type, S...Standard type	_____

### PHN connector/ Housing (Crimp style)

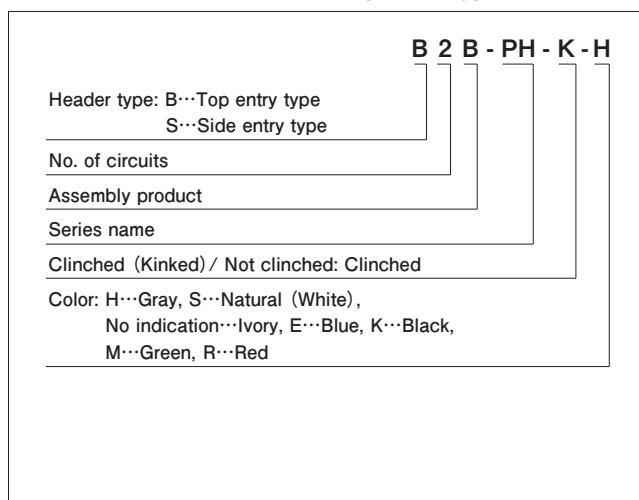
**PHN R - 02 - H**

Series name	_____
Type: For receptacle contact	_____
No. of circuits	_____
Type: No indication...Normal	_____
C...Reverse	_____
Color: gray	_____

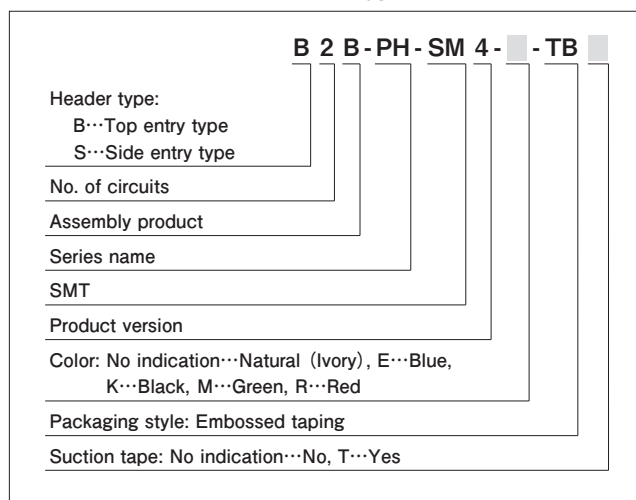
# KR FAMILY/KR·PHN·TR CONNECTOR

## Model number allocation

### PH connector/ Header (Through-hole type)



### PH connector/ Header (SMT type)



### TR connector (Wire-to-Wire adapter)

