

# **PH** connector







This is a thin, low-profile 2.0 mm pitch connector 8.0 mm in height after mounting and 4.5 mm in width. It is designed to meet the demand for high-density connection of internal wires to printed circuit boards. It is compact, highly reliable and low in cost.

- Reliable contact
- Fully shrouded header
- Printed circuit board retention mechanism
- Surface mount model (SMT)

# PC board layout and Assembly layout

# Specifications -

- 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 m $\Omega$  max. After environmental tests/ 20 m $\Omega$  max.
- Insulation resistance: 1,000 MΩ min.
- Withstanding voltage: 800 VAC/ minute
- Applicable wire: AWG #32 to #24
- Applicable PC board thickness: 0.8 to 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 -





Side entry type



Note: 1. The above figure is the figure viewed from soldering side.

2. Tolerances are non-cumulative:  $\pm$  0.05 mm for all centers.

3. Hole dimensions differ according to the type of PC board and piercing method. If PC boards made of hard material are used, the hole dimensions should be larger. The dimensions above should serve as a guideline. Contact JST for details.

# (SMT type)

#### SM4 type Top entry type





Circuit No.1

SM4 type

1 min



Note: 1. The above figure is the figure viewed from the connector mounting side.

2. Tolerances are non-cumulative:  $\pm$  0.05 mm for all centers.

3. The dimensions above should serve as a guideline. Contact JST for details.

# PH CONNECTOR

## Contact



Contract	Crimping	Applicator				
Contact	machine	Crimp applicator	Dies	Crimp applicator with dies		
SPH-002T-P0.5S		MKS-L -	MK/SPH-002-05S	APLMK SPH002-05S		
SPH-002T-P0.5L	AP-K2N		MK/SPH-002-05L	APLMK SPH002-05L		
SPH-004T-P0.5S		MKS-L-10	MK/SPH-002-05S	APLMK SPH004-05S		

_	Model No.		Q'ty∕					
	Woder No.	mm <sup>2</sup>	AWG #	Insulation O.D. (mm)	reel			
	SPH-002T-P0.5S	0.05 ~ 0.22	30~24	0.8~1.5	0.000			
	SPH-002T-P0.5L	0.08 ~ 0.22	28~24	0.8~1.5	8,000			
	SPH-004T-P0.5S	0.032~0.08	32~28	0.5~0.9	10,000			
	Material and Finish							

Phosphor bronze, tin-plated (reflow treatment)

#### **RoHS2** compliance

Note: 1. Contact JST for gold-plated products.

2. SPH-002T-P0.5L is low-insertion force type contact, for easier insertion/ withdrawal, which would be less resistant to the vibration. The crimp height is different from the standard.

3. Contact JST for details.

Note: Contact JST for fully automatic crimping applicator.

## Housing



<For reference> As the color identification,

the following alphabet shall be put in the underlined part. For availability, delivery and minimum order quantity, contact JST.

PHR-2-00 ex.

(blank)...natural (white)

BK...black R...red TR...tomato red BL...blue Y...yellow L...lemon yellow M...green D...orange N...brown P...purple PK...pink H...gray LE...light blue FY...vivid yellow DPK...dark pink

## Through-hole type Header



No. of	Madal Na	Dimensi	Dimensions (mm)			
circuits	Model No.	A	B	Q'ty∕ box		
2	PHR-2	2.0	5.8	1,000		
3	PHR-3	4.0	7.8	1,000		
4	PHR-4	6.0	9.8	1,000		
5	PHR-5	8.0	11.8	1,000		
6	PHR-6	10.0	13.8	1,000		
7	PHR-7	12.0	15.8	1,000		
8	PHR-8	14.0	17.8	1,000		
9	PHR-9	16.0	19.8	1,000		
10	PHR-10	18.0	21.8	1,000		
11	PHR-11	20.0	23.8	1,000		
12	PHR-12	22.0	25.8	1,000		
13	PHR-13	24.0	27.8	1,000		
14	PHR-14	26.0	29.8	1,000		
15	PHR-15	28.0	31.8	1,000		
16	PHR-16	30.0	33.8	1,000		

Material and Finish PA 66, UL94V-0, natural (white)

**RoHS2** compliance

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

## Material and Finish Post: Brass, copper-undercoated, tin-plated (reflow treatment) Wafer: PA 66, UL94V-0, natural (white)

RoHS2 compliance This product displays (LF)(SN) on a label. <For reference> As the color identification,

the following alphabet shall be put in the underlined part.

For availability, delivery and minimum order quantity, contact JST.

B2B-PH-K-oo ex.

S...natural (white)

K...black R...red TR...tomato red

E...blue Y...yellow L...lemon yellow M...green O...orange N...brown P...purple PK...pink H...gray

LE...light blue FY...vivid yellow (blank)...ivory

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3.4



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

Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment) Wafer: PA 66, UL94V-0, gray

RoHS2 compliance This product displays (LF)(SN) on a label. <For reference> As the color identification,

the following alphabet shall be put in the underlined part.

For availability, delivery and minimum order quantity, contact JST.

B2B-PH-KL-oo ex.

(blank)...gray

R...red E...blue S...natural (white)

# SMT type Header



	Model No.		Dimensions (mm)			
No. of circuits	Top entry type	Side entry type	Α	В		Q'ty/ reel
circuits				Top entry type	Side entry type	ieei
2	B2B-PH-SM4-TB	S2B-PH-SM4-TB	2.0	7.95	7.9	1,000
3	B3B-PH-SM4-TB	S3B-PH-SM4-TB	4.0	9.95	9.9	1,000
4	B4B-PH-SM4-TB	S4B-PH-SM4-TB	6.0	11.95	11.9	1,000
5	B5B-PH-SM4-TB	S5B-PH-SM4-TB	8.0	13.95	13.9	1,000
6	B6B-PH-SM4-TB	S6B-PH-SM4-TB	10.0	15.95	15.9	1,000
7	B7B-PH-SM4-TB	S7B-PH-SM4-TB	12.0	17.95	17.9	1,000
8	B8B-PH-SM4-TB	S8B-PH-SM4-TB	14.0	19.95	19.9	1,000
9	B9B-PH-SM4-TB	S9B-PH-SM4-TB	16.0	21.95	21.9	1,000
10	B10B-PH-SM4-TB	S10B-PH-SM4-TB	18.0	23.95	23.9	1,000
11	B11B-PH-SM4-TB	S11B-PH-SM4-TB	20.0	25.95	25.9	1,000
12	B12B-PH-SM4-TB	S12B-PH-SM4-TB	22.0	27.95	27.9	1,000
13	B13B-PH-SM4-TB	S13B-PH-SM4-TB	24.0	29.95	29.9	1,000
14	B14B-PH-SM4-TB	S14B-PH-SM4-TB	26.0	31.95	31.9	1,000
15	B15B-PH-SM4-TB	S15B-PH-SM4-TB	28.0	33.95	33.9	1,000
16	B16B-PH-SM4-TB	_	30.0	35.95	-	1,000

#### Material and Finish

Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment) Wafer: PA, UL94V-0, natural (ivory) Solder tab: Brass, copper-undercoated, tin-plated (reflow treatment)

RoHS2 compliance This product displays (LF)(SN) on a label. Note: Contact JST for the top entry type headers with suction cap.

<For reference> As the color identification,

the following alphabet shall be put in the underlined part.

For availability, delivery and minimum order quantity, contact JST. ex. B2B-PH-SM4-<u>oo</u>-TB

(blank)...natural (ivory)

R...red E...blue M...green L...lemon yellow K...black DPK...dark pink