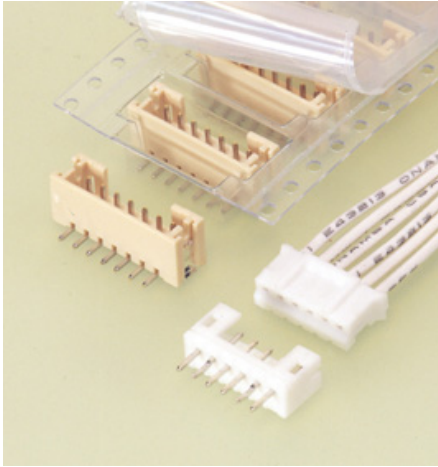




## PH connector

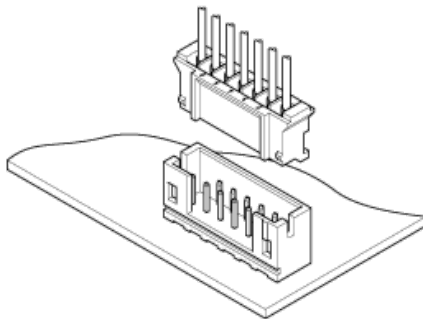


It is designed to meet the demand for the high-density connection of internal wires to PC boards.

It is compact, highly reliable and low in cost.

### Product Profile

|          |   |
|----------|---|
| Series   | PH connector                                  |
| Category | Crimp Style Connectors (Wire-to-Board type)   |
| Type     | Disconnectable type<br>Crimp style, Thin type |



### Specification

|                             |                       |
|-----------------------------|-----------------------|
| Pitch                       | 2.0 mm                |
| Current rating              | 2A (AWG#24)           |
| Voltage rating              | 100V                  |
| PC board mounting direction | Top entry, Side entry |

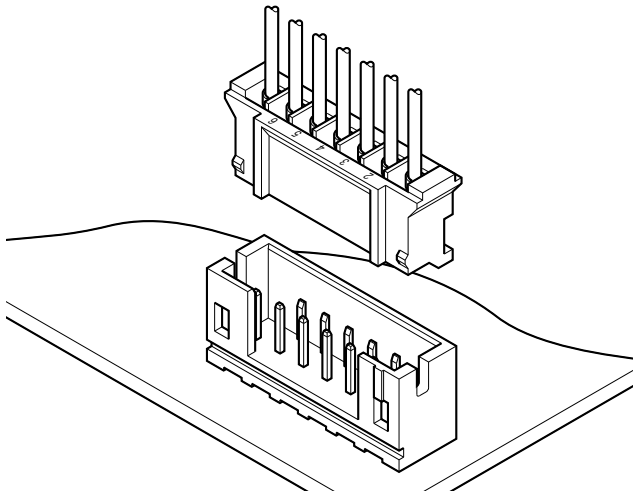
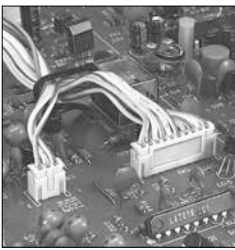

[Further Information](#)

[3D Data](#)
[Shopping Site](#)



# PH CONNECTOR

2.0 mm pitch/Disconnectable Crimp style connectors



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)

## 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 mΩ max.  
After environmental tests/ 20 mΩ 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 Precaution for Terminal and Connector" described on our website (Technical documents of Product information page).
- \* Contact JST for details.
- \* RoHS2 compliance

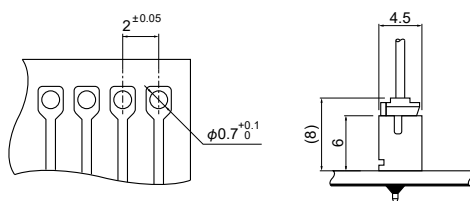
## Standards

- Recognized E60389
- ▲ R75087

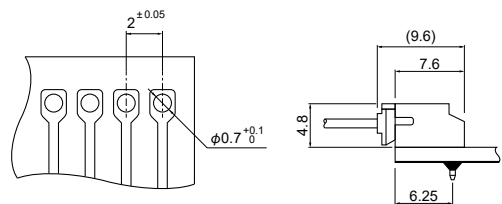
### PC board layout and Assembly layout

<Through-hole type (viewed from soldering side) >

#### Top entry type



#### Side entry type



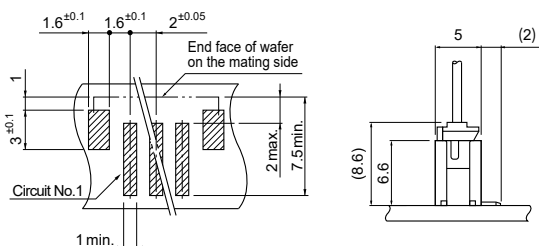
Note: 1. Tolerances are non-cumulative: ±0.05 mm for all centers.

2. 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 (viewed from component side) >

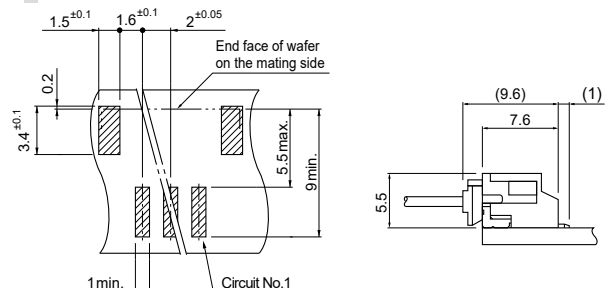
#### SM4 type

##### Top entry type



#### SM4 type

##### Side entry type

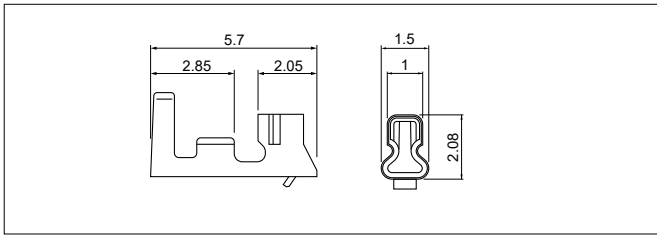


Note: 1. Tolerances are non-cumulative: ±0.05 mm for all centers.

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

# PH CONNECTOR

## Contact



| Model No.             | Applicable wire |       |                      | Q'ty/<br>reel |
|-----------------------|-----------------|-------|----------------------|---------------|
|                       | mm <sup>2</sup> | AWG # | Insulation O.D. (mm) |               |
| <b>SPH-002T-P0.5S</b> | 0.05 ~ 0.22     | 30~24 | 0.8~1.5              | 8,000         |
| <b>SPH-002T-P0.5L</b> | 0.08 ~ 0.22     | 28~24 | 0.8~1.5              |               |
| <b>SPH-004T-P0.5S</b> | 0.032~0.08      | 32~28 | 0.5~0.9              | 10,000        |

### Material and Finish

Phosphor bronze, tin-plated (reflow treatment)

### RoHS2 compliance

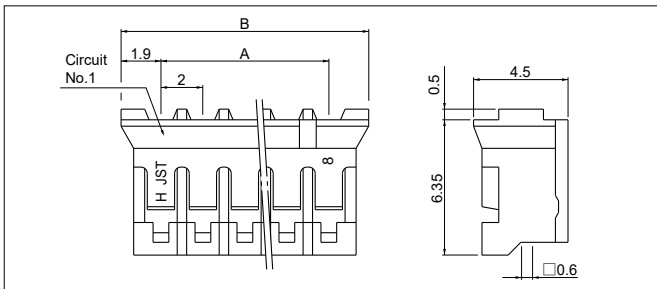
Note:

- Contact JST for gold-plated products.
- 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.
- Contact JST for details.

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

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.  
ex. **PHR-2-oo**

(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

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

### Material and Finish

PA 66, UL94V-0, natural (white)

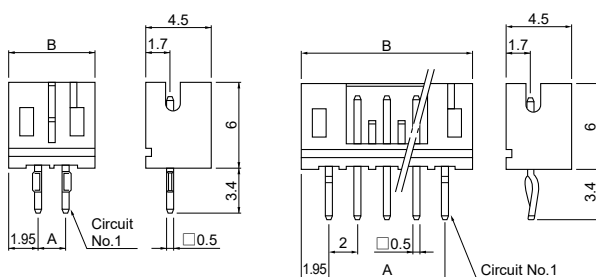
### RoHS2 compliance

## Through-hole type Header

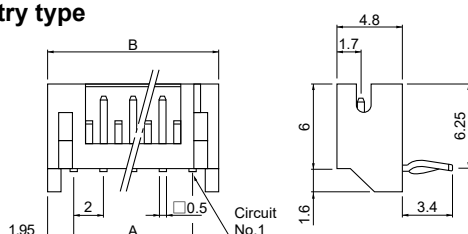
### Top entry type

(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               | <b>B2B-PH-K-S</b>  | <b>S2B-PH-K-S</b>  | 2.0             | 5.9  | 1,000          | 1,000           |
| 3               | <b>B3B-PH-K-S</b>  | <b>S3B-PH-K-S</b>  | 4.0             | 7.9  | 1,000          | 1,000           |
| 4               | <b>B4B-PH-K-S</b>  | <b>S4B-PH-K-S</b>  | 6.0             | 9.9  | 1,000          | 500             |
| 5               | <b>B5B-PH-K-S</b>  | <b>S5B-PH-K-S</b>  | 8.0             | 11.9 | 1,000          | 500             |
| 6               | <b>B6B-PH-K-S</b>  | <b>S6B-PH-K-S</b>  | 10.0            | 13.9 | 1,000          | 500             |
| 7               | <b>B7B-PH-K-S</b>  | <b>S7B-PH-K-S</b>  | 12.0            | 15.9 | 500            | 500             |
| 8               | <b>B8B-PH-K-S</b>  | <b>S8B-PH-K-S</b>  | 14.0            | 17.9 | 500            | 250             |
| 9               | <b>B9B-PH-K-S</b>  | <b>S9B-PH-K-S</b>  | 16.0            | 19.9 | 500            | 250             |
| 10              | <b>B10B-PH-K-S</b> | <b>S10B-PH-K-S</b> | 18.0            | 21.9 | 500            | 250             |
| 11              | <b>B11B-PH-K-S</b> | <b>S11B-PH-K-S</b> | 20.0            | 23.9 | 500            | 250             |
| 12              | <b>B12B-PH-K-S</b> | <b>S12B-PH-K-S</b> | 22.0            | 25.9 | 400            | 250             |
| 13              | <b>B13B-PH-K-S</b> | <b>S13B-PH-K-S</b> | 24.0            | 27.9 | 250            | 250             |
| 14              | <b>B14B-PH-K-S</b> | <b>S14B-PH-K-S</b> | 26.0            | 29.9 | 250            | 250             |
| 15              | <b>B15B-PH-K-S</b> | <b>S15B-PH-K-S</b> | 28.0            | 31.9 | 250            | 200             |
| 16              | <b>B16B-PH-K-S</b> | <b>S16B-PH-K-S</b> | 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.  
ex. **B2B-PH-K-oo**

S...natural (white)

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

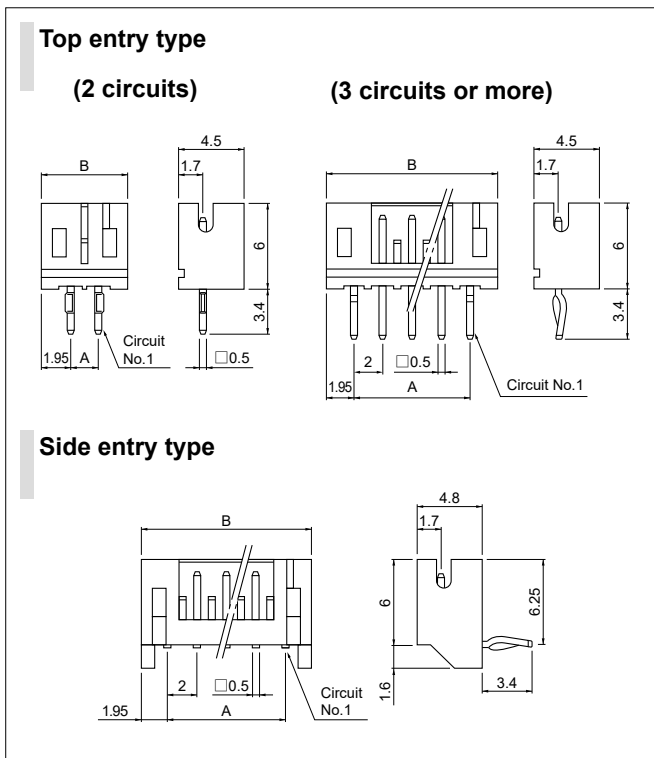
E...blue Y...yellow L...lemon yellow M...green

O...orange N...brown P...purple PK...pink H...gray

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

# PH CONNECTOR

## Through-hole type Header <Low insertion force 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-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

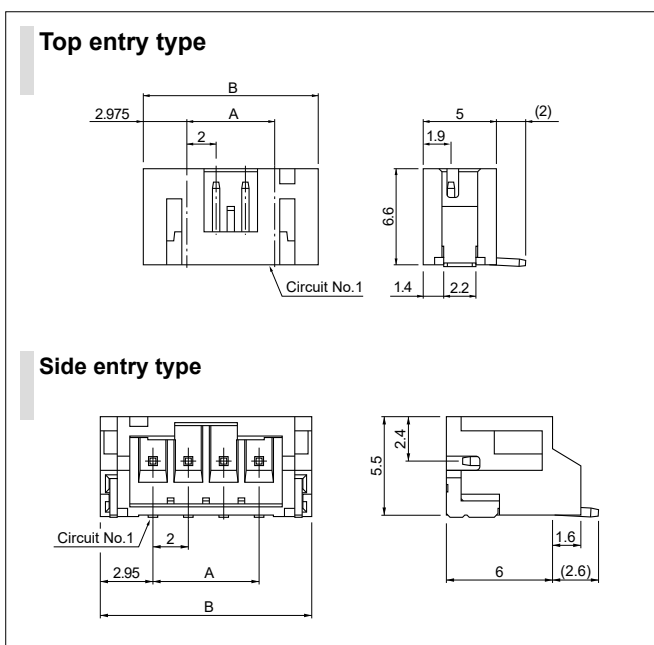
Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)  
Wafer: PA 66, UL94V-0, gray

**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.  
ex. **B2B-PH-KL-oo**

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

## SMT type Header



| No. of circuits | Model No.      |                 | Dimensions (mm) |                |                 | Q'ty/reel |
|-----------------|----------------|-----------------|-----------------|----------------|-----------------|-----------|
|                 | Top entry type | Side entry type | A               | B              |                 |           |
|                 |                |                 |                 | Top entry type | Side entry type |           |
| 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-oo-TB**

(blank)...natural (ivory)  
R...red E...blue M...green L...lemon yellow K...black  
DPK...dark pink