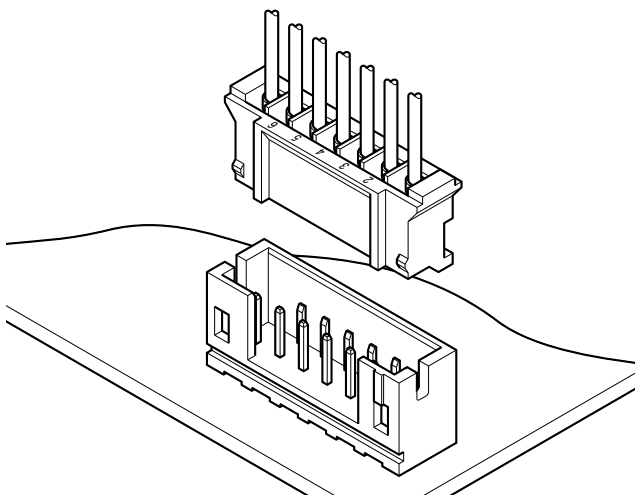


# PH CONNECTOR

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 Precautions for Terminals and Connectors" described on our website (Technical documents of Product information page).

- \* RoHS2 compliance
- \* Dimensional unit: mm
- \* Contact JST for details.

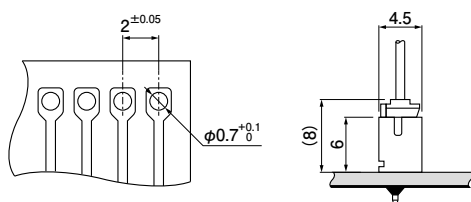
## Standards

- Ⓜ Recognized E60389
- ⚠ R75087

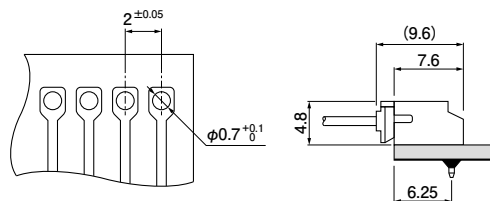
## PC board layout and Assembly layout

### <Through-hole type>

#### Top entry type



#### Side entry type



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

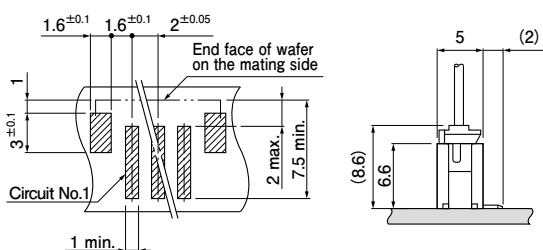
2. Tolerances are non-cumulative: ± 0.05 mm for all centers.

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>

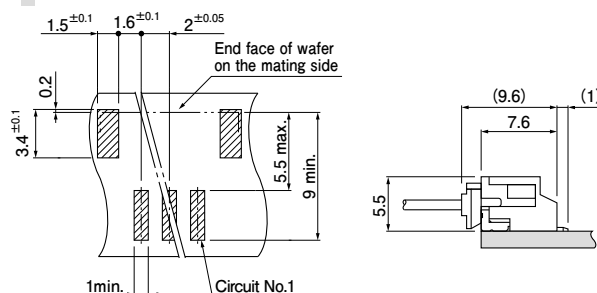
#### SM4 type

#### Top entry type



#### SM4 type

#### Side entry type



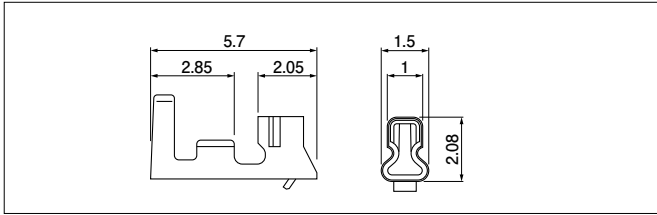
Note: 1. The above figure is the figure viewed from the connector mounting side.

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

3. 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) |               |
| SPH-002T-P0.5S | 0.05 to 0.22    | 30 to 24 | 0.8 to 1.5           | 8,000         |
| SPH-002T-P0.5L | 0.08 to 0.22    | 28 to 24 | 0.8 to 1.5           |               |
| SPH-004T-P0.5S | 0.032 to 0.08   | 32 to 28 | 0.5 to 0.9           | 10,000        |

### Material and Finish

Phosphor bronze, tin-plated (reflow treatment)

### RoHS2 compliance

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

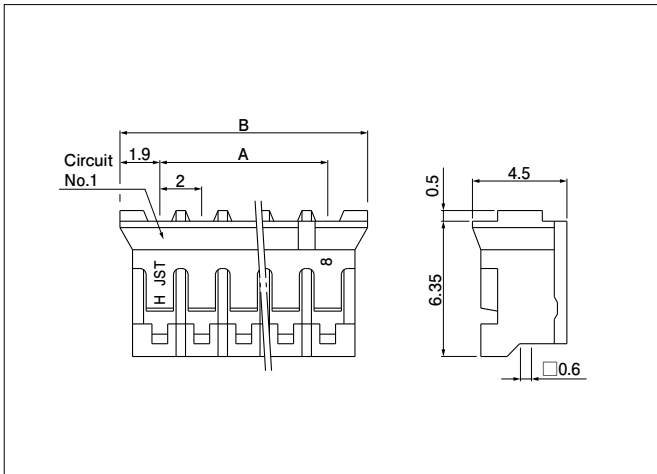
2. SPH-002T-P0.5L is low-insertion force type contact, for easier insertion/ withdrawal, which would be less resistant to the vibration. The crimp height is different from the standard.

3. Contact JST for details.

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

Note: Contact JST for fully automatic crimping applicator.

## Housing



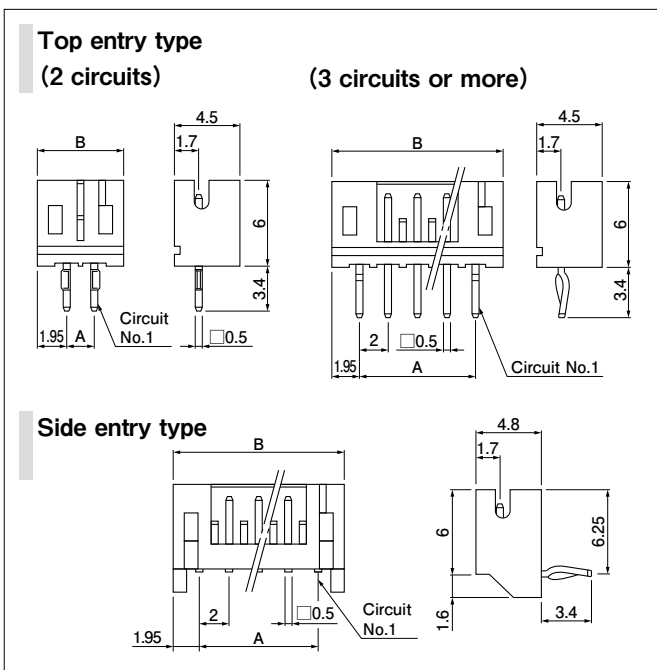
| No. of circuits | Model No. | Dimensions (mm) |      | Q'ty/<br>bag |
|-----------------|-----------|-----------------|------|--------------|
|                 |           | A               | B    |              |
| 2               | PHR-2     | 2.0             | 5.8  | 2,000        |
| 3               | PHR-3     | 4.0             | 7.8  | 2,000        |
| 4               | PHR-4     | 6.0             | 9.8  | 2,000        |
| 5               | PHR-5     | 8.0             | 11.8 | 2,000        |
| 6               | PHR-6     | 10.0            | 13.8 | 2,000        |
| 7               | PHR-7     | 12.0            | 15.8 | 2,000        |
| 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

## Header



| 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-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             |

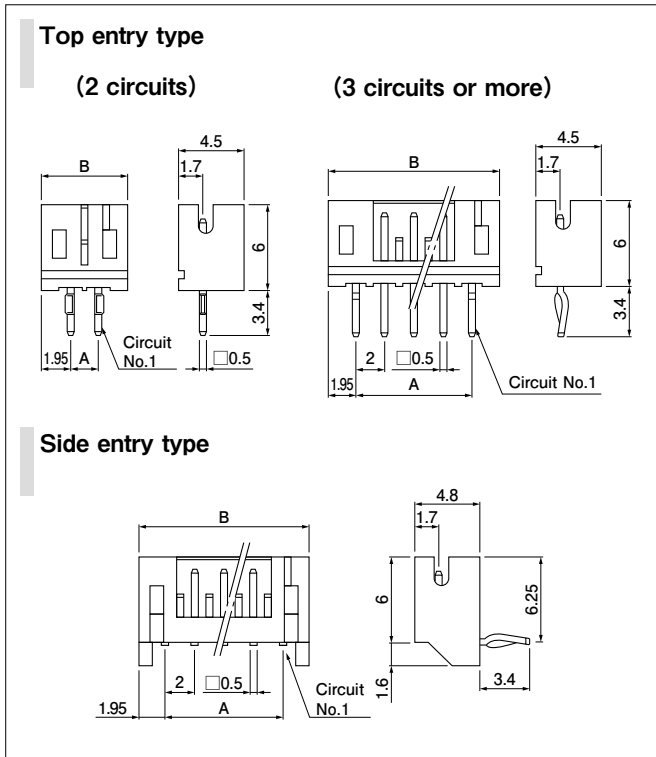
### Material and Finish

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.

# PH CONNECTOR

## Header (Low insertion force type)



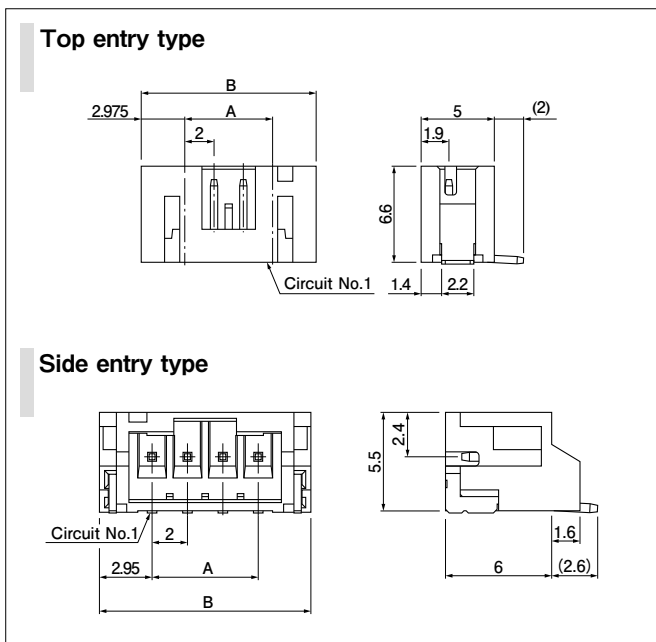
| No. of circuits | Model No.      |                 | Dimensions (mm) |      | Q'ty/box       |                 |
|-----------------|----------------|-----------------|-----------------|------|----------------|-----------------|
|                 | Top entry type | Side entry type | A               | 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.

## Header (SMT type)



| 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.

# PH CONNECTOR

## Model number allocation

### Contact

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

Form: S...Strip form

Series name

Applicable wire range:  
 Normal type 002...AWG #30 to #24  
 004...AWG #32 to #28  
 Low insertion force type 002...AWG #28 to #24

Surface finish: T...Tin-plated (reflow treatment)

Material: P...Phosphor bronze

Terminal size

Type name: S...Normal type, L...Low insertion force type

### Housing

**PH R - 2 -**

Series name

Part name: Receptacle

No. of circuits: 2 to 16

Color: None...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...Fluorescent yellow, DPK...Dark pink

### Header

**B 2 B - PH - K - S**

Shape of assembled product:  
 B...Top entry type S...Side entry type

No. of circuits: Top and side entry types...2 to 16

Part name: Header

Series name

Indication of clinch: K...Clinched

Color: 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...Fluorescent yellow, None...Ivory

### Header (Low insertion force type)

**B 2 B - PH - K L -**

Shape of assembled product:  
 B...Top entry type, S...Side entry type

No. of circuits: Top and side entry types...2 to 16

Part name: Header

Series name

Indication of clinch: K...Clinched

Type name: L...Low insertion force type

Color: None...Gray, R...Red, E...Blue, S...Natural (White)

### Header (SMT type)

**B 2 B - PH - SM4 - -TB**

Shape of assembled product:  
 B...Top entry type  
 S...Side entry type

No. of circuits:  
 Top entry type...2 to 16  
 Side entry type...2 to 15

Part name: Header

Series name

SMT specification: SM4...With solder tab

Color: None...Natural (Ivory), R...Red, E...Blue, M...Green, L...Lemon yellow, K...Black, DPK...Dark pink

Packaging style: TB...Embossed-taping

Suction tape: None...Without suction tape, T...With suction tape

Note: Depending on the colors, it may take some time for delivery.