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**

![Through-hole Top Entry Diagram](image1)

**Side entry type**

![Through-hole Side Entry Diagram](image2)

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**

![SMT Top Entry Diagram](image3)

**SM4 type Side entry type**

![SMT Side Entry Diagram](image4)

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.
Circuit No.1

Model No. | Applicable wire | Q’ty/ reel |
---|---|---|
SPH-002T-P0.5S | 0.05 to 0.22 | 8,000 |
SPH-002T-P0.5L | 0.08 to 0.22 | 10,000 |
SPH-004T-P0.5S | 0.032 to 0.08 | |

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

Applicable wire

Top entry type
(2 circuits)

Side entry type
(3 circuits or more)

No. of circuits

Model No. | Dimensions (mm) | Q’ty/ box |
---|---|---|
PHR-2 | 2.0 | 1,000 |
PHR-3 | 4.0 | 1,000 |
PHR-4 | 6.0 | 1,000 |
PHR-5 | 10.0 | 1,000 |
PHR-6 | 12.0 | 1,000 |
PHR-7 | 14.0 | 1,000 |
PHR-8 | 16.0 | 1,000 |
PHR-9 | 18.0 | 1,000 |
PHR-10 | 20.0 | 1,000 |
PHR-11 | 22.0 | 1,000 |
PHR-12 | 24.0 | 1,000 |
PHR-13 | 26.0 | 1,000 |
PHR-14 | 28.0 | 1,000 |
PHR-15 | 30.0 | 1,000 |
PHR-16 | 32.0 | 1,000 |

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

RoHS2 compliance
This product displays (LF)(SN) on a label.
PH CONNECTOR

Header (Low insertion force type)

Top entry type
(2 circuits)

Side entry type
(3 circuits or more)

Material and Finish

- Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)
- Wafer: PA66, UL94V-0, gray

RoHS2 compliance: This product displays (LF)(SN) on a label.

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Header (SMT type)

Top entry type

Side entry type

Material and Finish

- Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)
- 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
  - 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
- **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, D—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 - KL -
```

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