

## Compact In-line Connector HB03 Series

CONNECTOR  
MB-0327-2  
January, 2019

**RoHS Compliant**



As the on-going trend is for devices to be more compact, industrial equipment, such as robots and automated machines, are also following the same trend. In order to satisfy this requirement, there is an increasing need for connectors that are capable of internal wiring in limited spaces with good workability.

To cater to these trending requirements, JAE has developed the HB03 Series compact in-line connector which is ideal for threading cables through narrow spaces. The connector features a sophisticated one-touch lock mechanism where the locking tab does not protrude from the connector, maintaining the space conscious design.

The HB03 is a UL recognized connector series and can be used with safety assurance.

### Applications

Various industrial equipment, such as robotics, automation machines, machine tools, and other general equipment.

### Features

- Non-waterproof, compact in-line connector
- Secure one-touch locking with tactile click
- Streamline connector with low-profile locking tab.
- Compact housing that can be threaded through tight spaces inside devices
- Crimp type connection allows for easy and secure termination, compatible with a wide range of wire sizes (AWG#30 ~ #24)
- UL recognized product: File No.E67741

## General Specifications

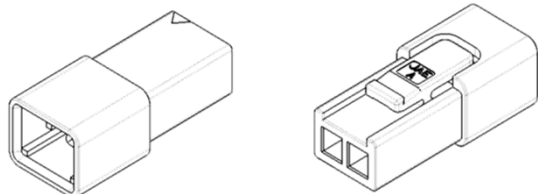
|                                 |                                                                |             |                           |
|---------------------------------|----------------------------------------------------------------|-------------|---------------------------|
| Number of Positions             | 2, 4, 8 (specs common over all positions)                      |             |                           |
| Rated Current<br>(per position) | Contact Size                                                   | Wire Size   | Current Value             |
|                                 | #28                                                            | AWG#30      | 1A                        |
|                                 |                                                                | AWG#28      | 1A                        |
|                                 | #24                                                            | AWG#26      | 2A                        |
|                                 |                                                                | AWG#24      | 2A                        |
| Rated Voltage                   | 250 VAC, 250 VDC<br>(Voltage category: II, Pollution level: 2) |             |                           |
| Applicable Cables               | Contact Size                                                   | Wire Size   | Insulation Outer Diameter |
|                                 | #28                                                            | AWG#30 ~ 28 | φ0.6 ~ 1.2mm              |
|                                 | #24                                                            | AWG#26 ~ 24 | φ0.9 ~ 1.5mm              |
| Contact Resistance              | 10 mΩ max. (initial), 20 mΩ max. (post-test)                   |             |                           |
| Insulation Resistance           | 1000MΩ min. (initial), 1000MΩ min. (post-test)                 |             |                           |
| Dielectric Withstanding Voltage | 1,500 VAC (for 1 minute)                                       |             |                           |
| Terminal Retention Strength     | 3 N min.                                                       |             |                           |
| Durability                      | 100 cycles                                                     |             |                           |
| Operating Temperature Range     | -25 °C to +105 °C<br>(including temperature rise)              |             |                           |
| UL Recognition                  | UL Recognized Product<br>UL/ cUL: File No. E67741 (Note 1)     |             |                           |

Note 1: UL/cUL recognized for 2 and 4 positions, with 8 position to be recognized during 2019.

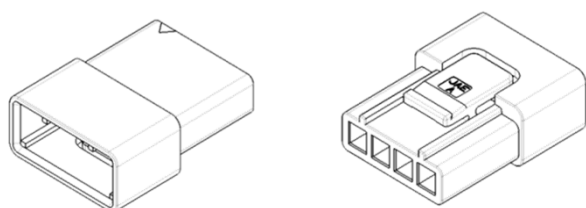
## Ordering Information

### Pin Housing

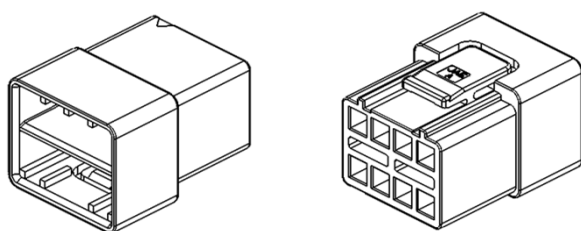
2 pos. pin housing: HB03P002PZ1



4 pos. pin housing: HB03P004PZ1

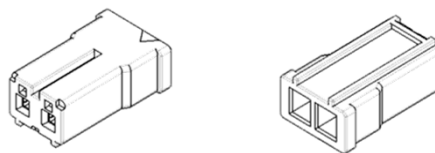


8 pos. pin housing: HB03P008PZ1

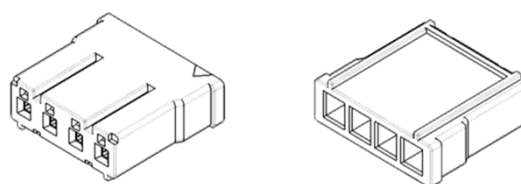


### Socket Housing

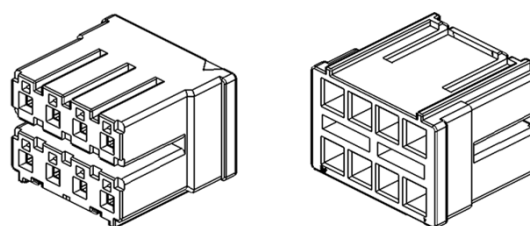
2 pos. socket housing: HB03S002SZ1



4 pos. socket housing: HB03S004SZ1



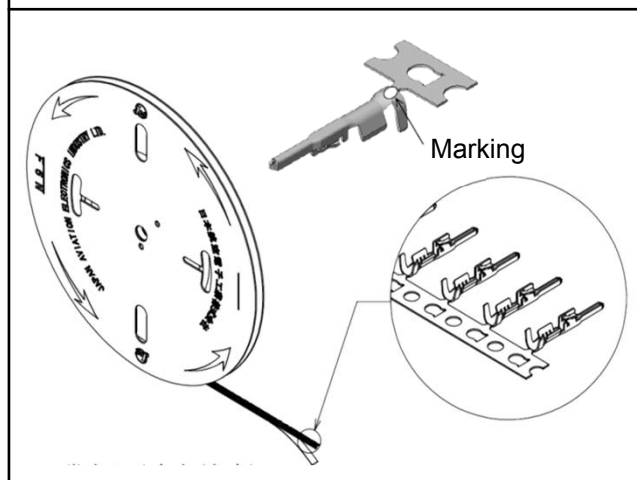
8 pos. socket housing: HB03S008SZ1



### Pin Contact

#28 pin contact: HB03P12K6A1

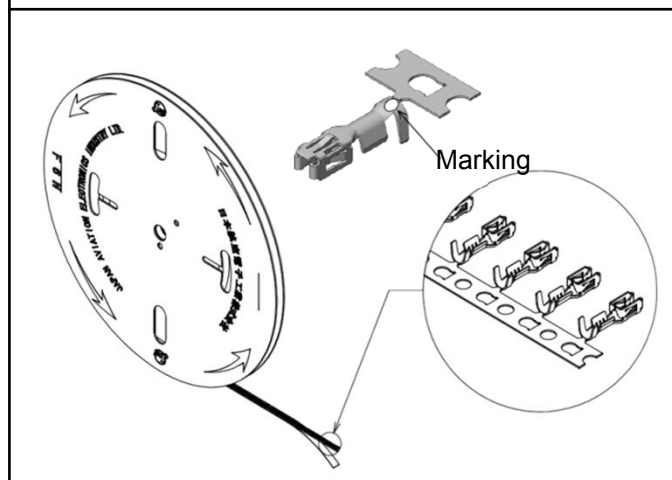
#24 pin contact: HB03P12K5A1



### Socket Contact

#28 socket contact: HB03S12K6A1

#24 socket contact: HB03S12K5A1

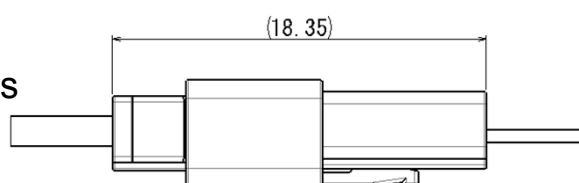


|            |
|------------|
| Dimensions |
|------------|

| HB03P002PZ1 | HB03S002SZ1 |
|-------------|-------------|
|             |             |
| HB03P004PZ1 | HB03S004SZ1 |
|             |             |
| HB03P008PZ1 | HB03S008SZ1 |
|             |             |

Mated Length

Common over all positions



|                                   |
|-----------------------------------|
| Part Numbers and Product Drawings |
|-----------------------------------|

## Housing

| Part Number | Drawing Number | Component Configuration   |
|-------------|----------------|---------------------------|
| HB03P002PZ1 | SJ117815       | 2 position pin housing    |
| HB03P004PZ1 | SJ117816       | 4 position pin housing    |
| HB03P008PZ1 | SJ120486       | 8 position pin housing    |
| HB03S002SZ1 | SJ117817       | 2 position socket housing |
| HB03S004SZ1 | SJ117818       | 4 position socket housing |
| HB03S008SZ1 | SJ120487       | 8 position socket housing |

## Contact

| Part Number | Drawing Number | Contact Size / Type |        | Marking | Supply               | Applicable wire<br>(Insulation diameter) |
|-------------|----------------|---------------------|--------|---------|----------------------|------------------------------------------|
| HB03P12K6A1 | SJ117819       | #28                 | Pin    | 1       | Reel<br>(12000 pcs.) | AWG#30 ~ #28<br>( $\phi$ 0.6 ~ 1.2mm)    |
| HB03P12K5A1 | SJ117820       | #24                 | Pin    | 2       | Reel<br>(12000 pcs.) | AWG#26 ~ #24<br>( $\phi$ 0.9 ~ 1.5mm)    |
| HB03S12K6A1 | SJ117821       | #28                 | Socket | 1       | Reel<br>(12000 pcs.) | AWG#30 ~ #28<br>( $\phi$ 0.6 ~ 1.2mm)    |
| HB03S12K5A1 | SJ117822       | #24                 | Socket | 2       | Reel<br>(12000 pcs.) | AWG#26 ~ #24<br>( $\phi$ 0.9 ~ 1.5mm)    |

|                     |
|---------------------|
| Technical Documents |
|---------------------|

|                      |            |
|----------------------|------------|
| Specification        | JACS-11168 |
| Handling Instruction | JAHL-11168 |

### Crimping Tool

| Applicable Contact | Tool Part Number<br>(Tool Handling Instruction No.) |                               |
|--------------------|-----------------------------------------------------|-------------------------------|
|                    | Hand Tool                                           | Applicator for Semi-automatic |
| HB03P12K6A1        | CT150-19B-HB03J<br>(T700424)                        | 3502-HB03-2<br>(T703556)      |
| HB03P12K5A1        |                                                     |                               |
| HB03S12K6A1        | CT150-19-HB03J<br>(T700424)                         |                               |
| HB03S12K5A1        |                                                     |                               |

Note It may be necessary to choose a crimper and an anvil according to contact type or wire size.  
Adjustment will be necessary when using an applicator.  
Please refer to the Handling Instruction manual for details.

### Extraction Tool

| Contact Type | Extraction Tool<br>Part Number |  |
|--------------|--------------------------------|-------------------------------------------------------------------------------------|
| Pin          | ET-HB03                        |                                                                                     |
| Socket       |                                |                                                                                     |

#### Notice:

- The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products.  
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    - We may separately give you our support with a quality assurance program that you specify, when you think of a use such as :  
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  - Recommended applications include:  
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