

# Compact In-line Connector HB03 Series

CONNECTOR

MB-0327-3

Nov.2021

**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 ~ #22)
- UL recognized product: File No.E67741

General Specifications

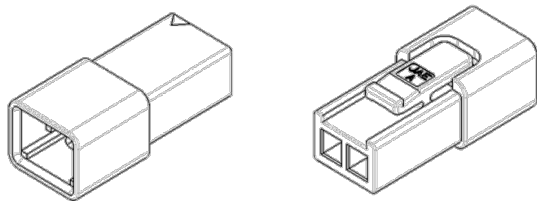
Number of Positions	2, 4, 8 (specs common over all positions)		
Rated Current (per position)	Contact Size	Wire Size	Current Value
	#28	AWG#30	1A
		AWG#28	1A
	#24	AWG#26	2A
		AWG#24	2A
	#22	AWG#22	3A
Rated Voltage	250 VAC, 250 VDC (Voltage category: II, Pollution level: 2)		
Applicable Cables	Contact 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 (including temperature rise)		
UL Recognition	UL Recognized Product UL/ cUL: File No. E67741 (Note 1)		

Note 1: UL/cUL recognized for 2 and 4 positions.

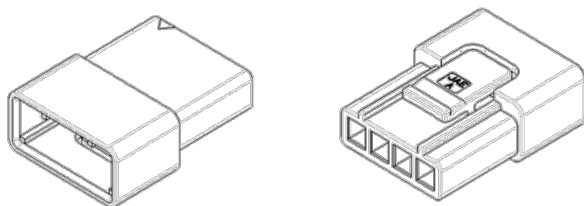
Ordering Information

Pin Housing

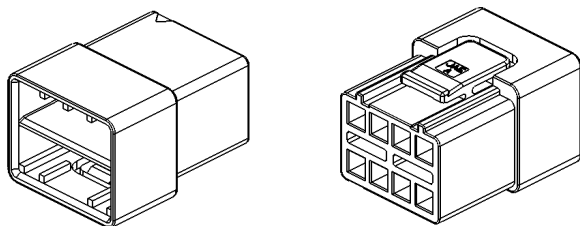
2 pos. pin housing: HB03P002PZ1



4 pos. pin housing: HB03P004PZ1

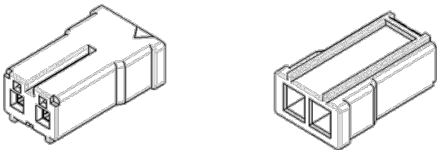


8 pos. pin housing: HB03P008PZ1

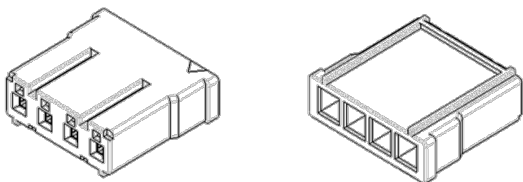


Socket Housing

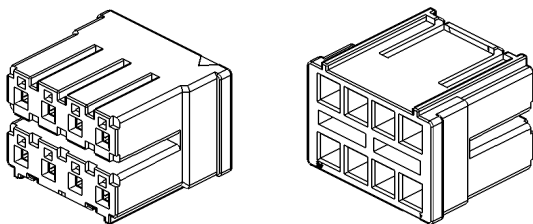
2 pos. socket housing: HB03S002SZ1



4 pos. socket housing: HB03S004SZ1



8 pos. socket housing: HB03S008SZ1

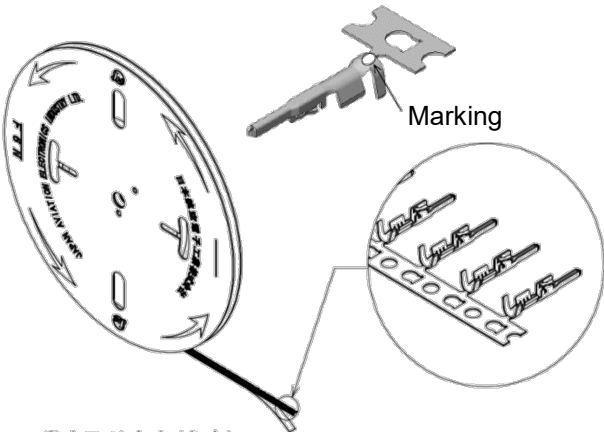


Pin Contact

#28 pin contact: HB03P12K6A1

#24 pin contact: HB03P12K5A1

#22 pin contact: HB03P12K4A1

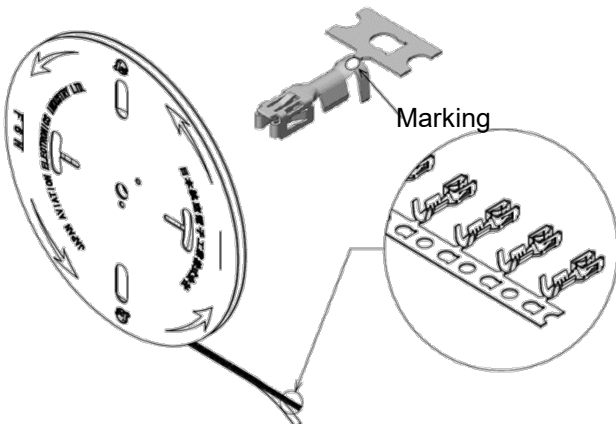


Socket Contact

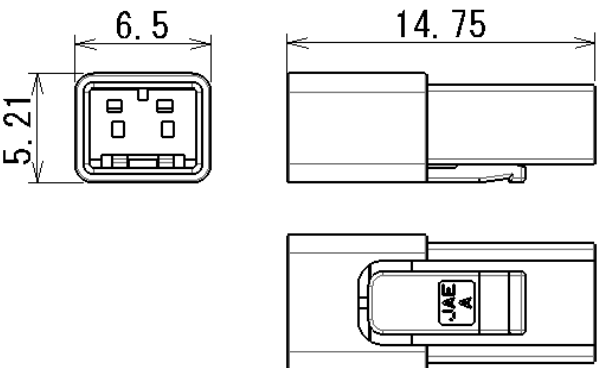
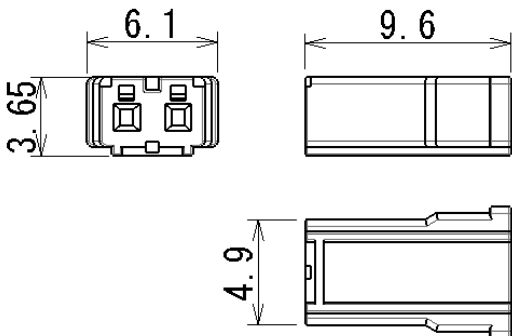
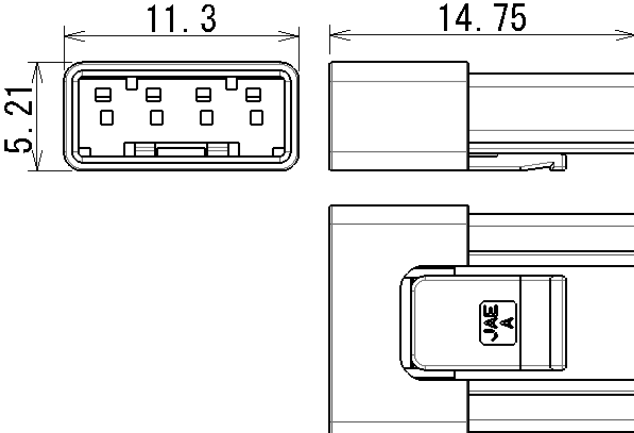
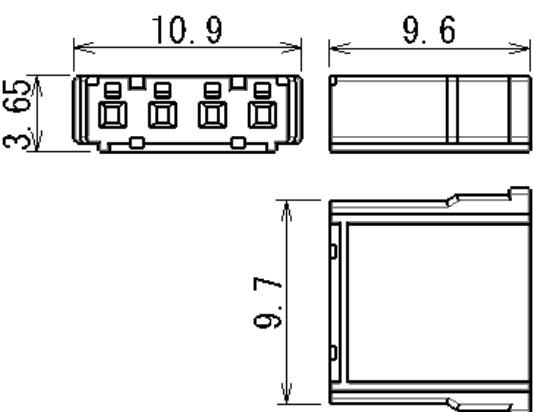
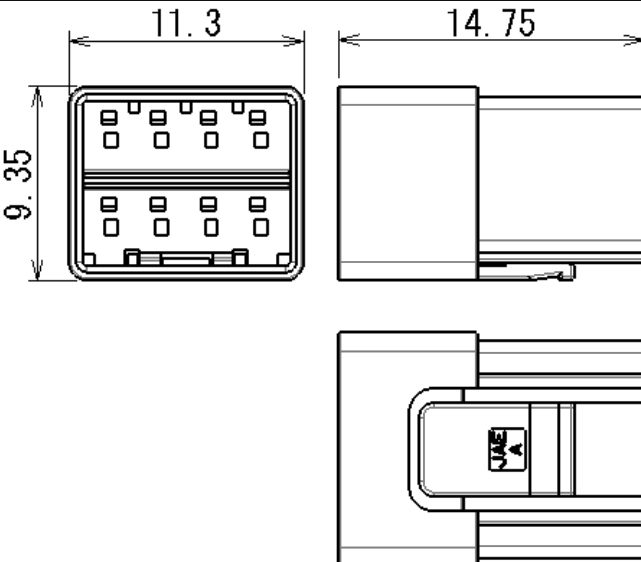
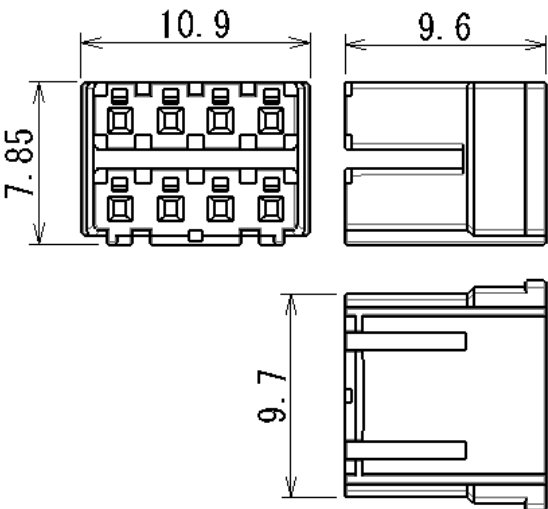
#28 socket contact: HB03S12K6A1

#24 socket contact: HB03S12K5A1

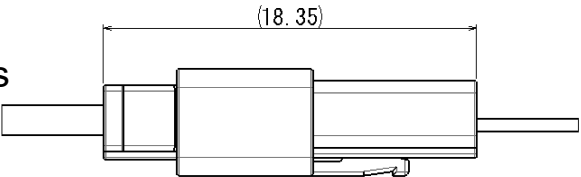
#22 socket contact: HB03S12K4A1



Dimensions

<div>HB03P002PZ1</div> <div></div>	<div>HB03S002SZ1</div> <div></div>
<div>HB03P004PZ1</div> <div></div>	<div>HB03S004SZ1</div> <div></div>
<div>HB03P008PZ1</div> <div></div>	<div>HB03S008SZ1</div> <div></div>

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 (Insulation diameter)
HB03P12K6A1	SJ117819	#28	Pin	1	Reel (12000 pcs.)	AWG#30 ~ #28 ( $\phi$ 0.6 ~ 1.2mm)
HB03P12K5A1	SJ117820	#24	Pin	2	Reel (12000 pcs.)	AWG#26 ~ #24 ( $\phi$ 0.9 ~ 1.5mm)
HB03P12K4A1	SJ122697	#22	Pin	2	Reel (12000 pcs.)	AWG#22 ( $\phi$ 0.9 ~ 1.5mm)
HB03S12K6A1	SJ117821	#28	Socket	1	Reel (12000 pcs.)	AWG#30 ~ #28 ( $\phi$ 0.6 ~ 1.2mm)
HB03S12K5A1	SJ117822	#24	Socket	2	Reel (12000 pcs.)	AWG#26 ~ #24 ( $\phi$ 0.9 ~ 1.5mm)
HB03S12K4A1	SJ122698	#22	Socket	2	Reel (12000 pcs.)	AWG#22 ( $\phi$ 0.9 ~ 1.5mm)

## Technical Documents


Specification	JACS-11168
Handling Instruction	JAHL-11168

Crimping Tool

Applicable Contact	Tool Part Number (Tool Handling Instruction No.)	
	Hand Tool	Applicator for Semi-automatic
HB03P12K6A1	CT150-19B-HB03J (T700424)	3502-HB03-2 (T703556)
HB03P12K5A1		
HB03S12K6A1	CT150-19-HB03J (T700424)	
HB03S12K5A1		
HB03P12K4A1	CT150-19C-HB03-J (T700455)	
HB03S12K4A1		

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 Part Number	
Pin	ET-HB03	
Socket		

**Notice:**

1. 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.  
For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below.  
We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:

(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as :

Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

**Japan Aviation Electronics Industry, Limited**

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