

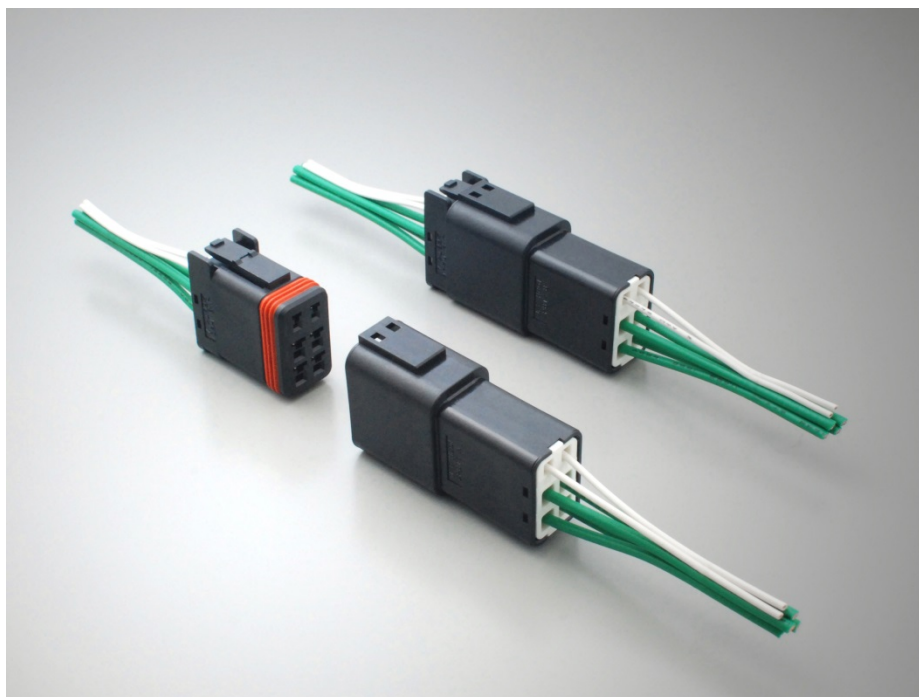
NEW


Waterproof In-line Connector for Industrial Machinery CONNECTOR

HB01 Series

MB-0311-2

March 2017

RoHS Compliant

Recently, robots and other industrial machinery are becoming increasingly compact, multi-axis and multi-functional, and the wiring inside the devices more complex. There are also growing demands for waterproof performance to be utilized in several different types of environments.

The HB01 Series connector is a waterproof cable in-line type connector to cater to these demands.

Features

- Hybrid structure that enables both power and signal.
- Terminals are compatible with a wide range of cable sizes, AWG# 14~24.
- Mechanical locking structure ensures secure mating and an audible click at mate.
- Connector's back cover acts as a terminal guide.
- IP67 rated, water and dust proof when mated.

Applications

Robotics, machine tools, servo motors, and other various industrial machinery.

General Specifications

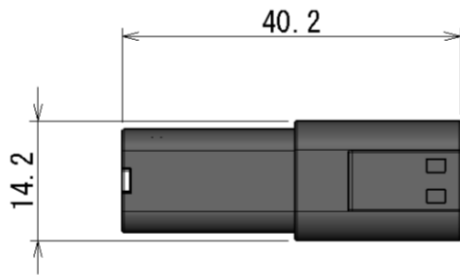
Number of Contacts	6 (4 power, 2 signal)				
Rated Current (per contact)	Power	Terminal Type	Current	Cable Size	
			9A	18 AWG	
			11A	16 AWG	
	Signal		13A	14 AWG	
			2A	24 AWG	
			3A	22 AWG	
		4A	20 AWG		
Rated Voltage	A.C., D.C. 250V (Power Terminal and Signal Terminal have enhanced insulation structure)				
Applicable Cable	Power	Terminal Type	Barrel Size	Cable Size	Insulation outer diameter
			#17	17~19AWG	φ1.6~2.3mm
	Signal		#14	14~16AWG	φ2.1~2.8mm
			#22	22~24AWG	φ1.1~1.5mm
		#19	19~21AWG	φ1.2~1.8mm	
Contact Resistance	10mΩ max. (initial) 20mΩ max. (posttest)				
Insulation Resistance	5000MΩ min. (initial) 5000MΩ min. (posttest)				
Dielectric Withstanding Voltage	1500Vr.m.s				
Terminal Retention Strength	Power Terminal: 50N min. Signal Terminal: 30N min.				
Durability	30 mating cycles				
Operating Temperature	-25 Deg. C ~+85 Deg. C				

Materials and Finishes

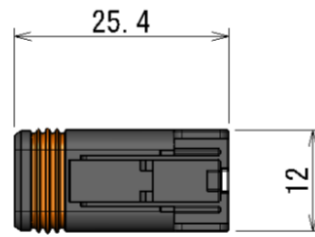
Components	Material and Finish
Insulator	PBT
Contact	Copper alloy Contact area: Au plating over Ni Connection area: Sn plating over Ni Others: Ni plating
Grommet	Silicone rubber
Cover	PBT
Sealing Ring	Silicone rubber

Dimensions

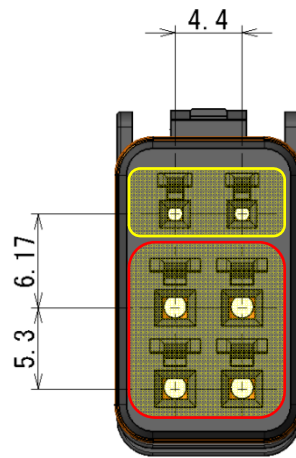
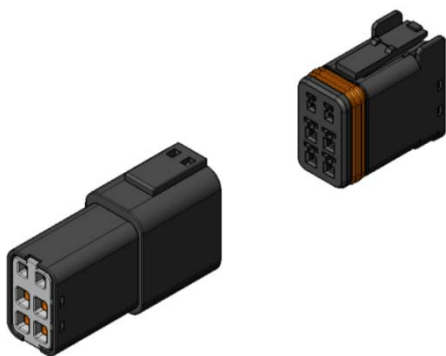
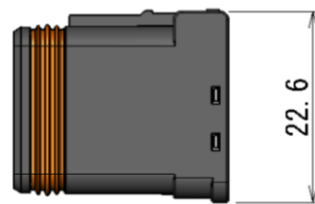
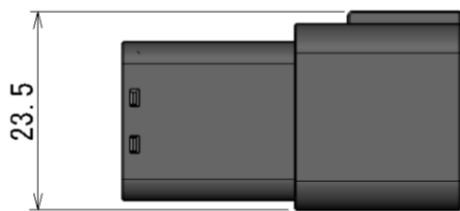
Pin Side



Socket Side



Unit: mm

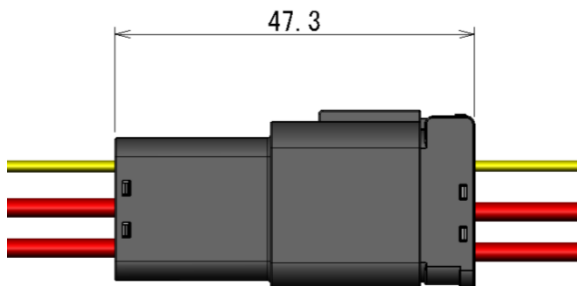


Signal area 2 pos.

Reinforced Insulation

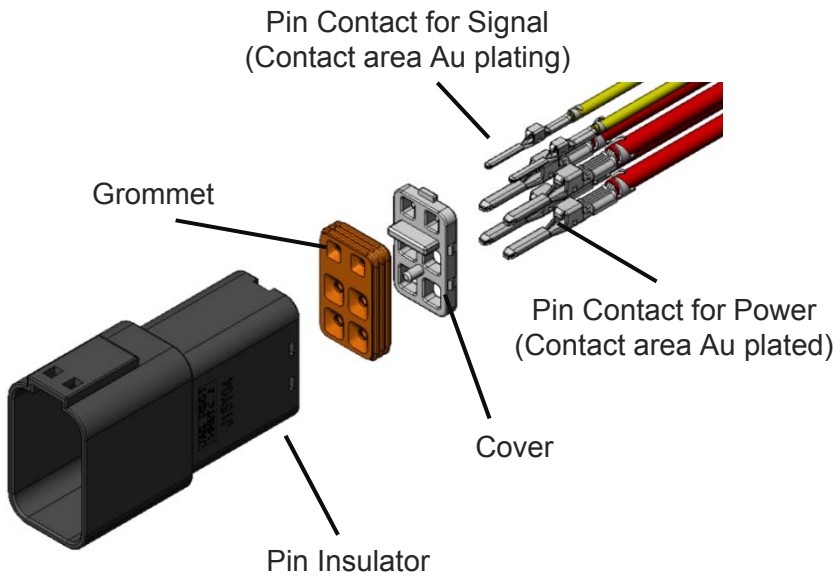
Power supply area 4 pos.

Mated Length

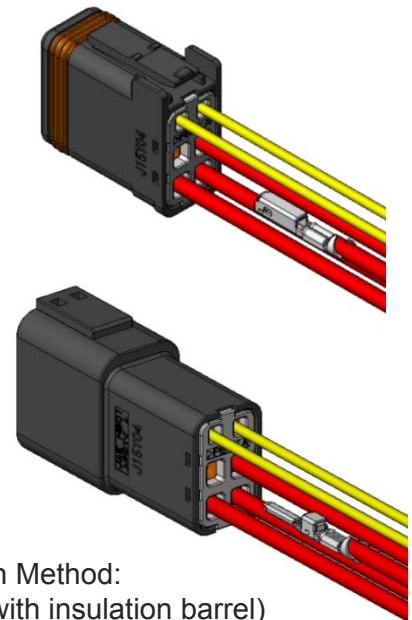


Parts and Components

Pin Side

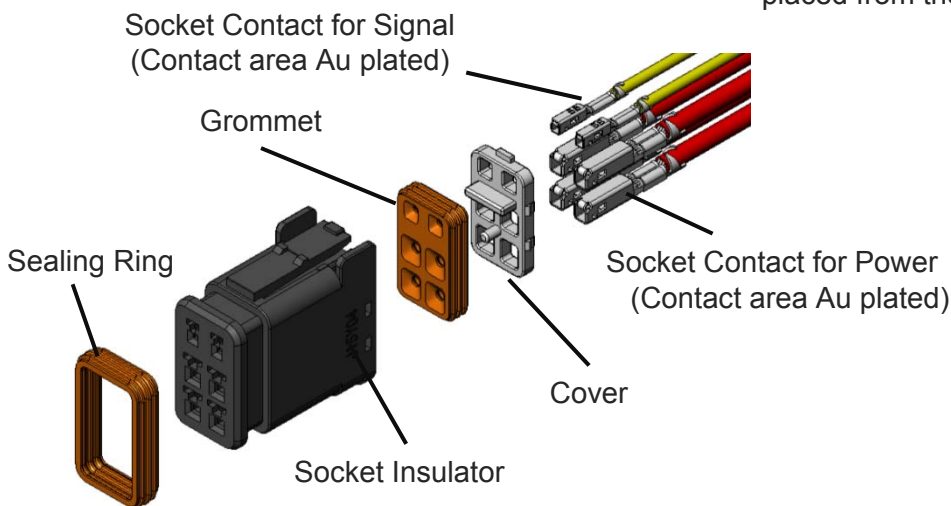


Harness Process



Termination Method:
Crimping (with insulation barrel)
Cable Side Waterproof: contacts are placed from the back side.

Socket Side



Product Drawings

Connector

Part Number	Drawing No.	Item
HB01P006PZ1	SJ116693	Pin Connector
HB01S006SZ1	SJ116694	Socket Connector

Terminal

Part Number	Drawing No.	Contact Type			Supply Type	Applicable Cable Size
		#	Pin	Signal		
HB01P06K4P1	SJ116695	#22	Pin	Signal	Reeled 6000 pcs. per reel	22~24 AWG
HB01P06K4P2	SJ116696	#19	Pin	Signal	Same as above	19~21 AWG
HB01S06K4P1	SJ116697	#22	Socket	Signal	Same as above	22~24 AWG
HB01S06K4P2	SJ116698	#19	Socket	Signal	Same as above	19~21 AWG
HB01P25H3P1	SJ116699	#17	Pin	Power	Reeled 2500 pcs. per reel	17~19 AWG
HB01P25H2P1	SJ116700	#14	Pin	Power	Same as above	14~16 AWG
HB01S25H3P1	SJ116701	#17	Socket	Power	Same as above	17~19 AWG
HB01S25H2P1	SJ116702	#14	Socket	Power	Same as above	14~16 AWG

Technical Documents

Specifications: JACS-11114

Handling Instructions: JAHL-11114

Crimping Tools

Applicable Contact	Tool Part Number (Handling Instructions document numbers)	
	Hand Tool	Semi-automatic Applicator
HB01P06K4P1	CT150-19C-HB01S (T700429)	3502-HB01S-2 (T703542)
HB01S06K4P1		
HB01P06K4P2		
HB01S06K4P2		
HB01P25H3P1	CT160-23B-HB01M (T700423)	3502-HB01M-2 (T703540)
HB01S25H3P1		
HB01P25H2P1		
HB01S25H2P1		

Note) In some cases gear teeth should be selected according to the size of the contact and/or cable.

When using an applicator an adjustment will be needed.

For more information on tools please refer to our Handling Instructions.

*Contact Extraction Tool: ET-HB01(Same for both power supply contact and signal contact)

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.

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