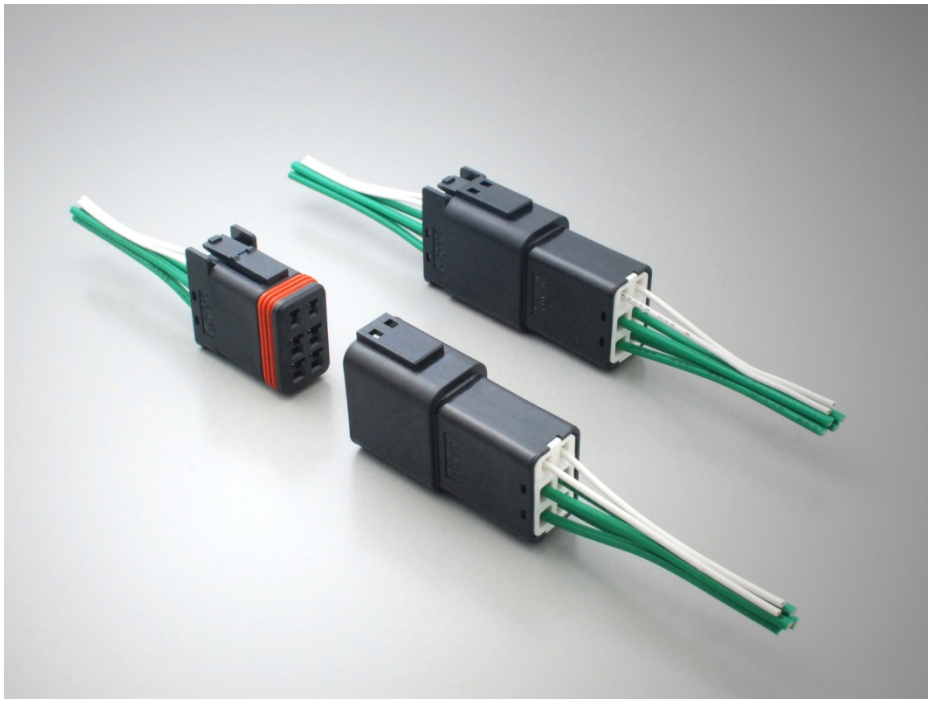
NEW

Waterproof In-line Connector for Industrial Machinery

HB01 Series

CONNECTOR
MB-0311-1
June 2016



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.

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General Specifications

<table>
<tr><td>Number of Contacts</td><td colspan="5">6 (4 power, 2 signal)</td></tr>
<tr><td rowspan="7">Rated Current
(per contact)</td><td>Terminal Type</td><td colspan="2">Current</td><td colspan="2">Cable Size</td></tr>
<tr><td rowspan="3">Power</td><td colspan="2">9A</td><td colspan="2">18 AWG</td></tr>
<tr><td colspan="2">11A</td><td colspan="2">16 AWG</td></tr>
<tr><td colspan="2">13A</td><td colspan="2">14 AWG</td></tr>
<tr><td rowspan="3">Signal</td><td colspan="2">2A</td><td colspan="2">24 AWG</td></tr>
<tr><td colspan="2">3A</td><td colspan="2">22 AWG</td></tr>
<tr><td colspan="2">4A</td><td colspan="2">20 AWG</td></tr>
<tr><td>Rated Voltage</td><td colspan="5">A.C., D.C. 250V (Power Terminal and Signal Terminal have enhanced insulation structure)</td></tr>
<tr><td rowspan="5">Applicable Cable</td><td>Terminal Type</td><td>Barrel Size</td><td>Cable Size</td><td colspan="2">Insulation outer diameter</td></tr>
<tr><td rowspan="2">Power</td><td>#17</td><td>17~19AWG</td><td colspan="2">φ1.6~2.3mm</td></tr>
<tr><td>#14</td><td>14~16AWG</td><td colspan="2">φ2.1~2.8mm</td></tr>
<tr><td rowspan="2">Signal</td><td>#22</td><td>22~24AWG</td><td colspan="2">φ1.1~1.5mm</td></tr>
<tr><td>#19</td><td>19~21AWG</td><td colspan="2">φ1.2~1.8mm</td></tr>
<tr><td>Contact Resistance</td><td colspan="5">10mΩ max. (initial)
20mΩ max. (after test)</td></tr>
<tr><td>Insulation Resistance</td><td colspan="5">5000MΩ min. (initial)
5000MΩ min. (after test)</td></tr>
<tr><td>Dielectric Withstanding Voltage</td><td colspan="5">1500Vr.m.s</td></tr>
<tr><td>Terminal Retention Strength</td><td colspan="5">Power Terminal: 50N min.; Signal Terminal: 30N min.</td></tr>
<tr><td>Durability</td><td colspan="5">30 mating cycles</td></tr>
<tr><td>Operating Temperature</td><td colspan="5">-25 Deg. C ~+85 Deg. C</td></tr>
</table>

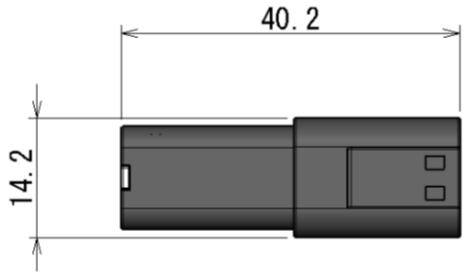
Materials and Finishes

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

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Dimensions

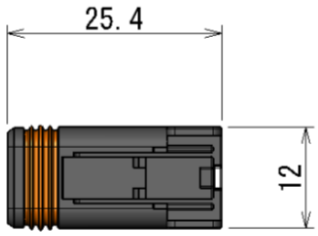
Pin Side

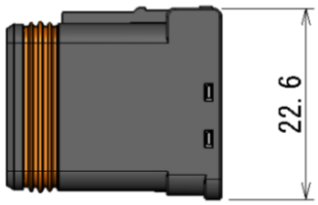


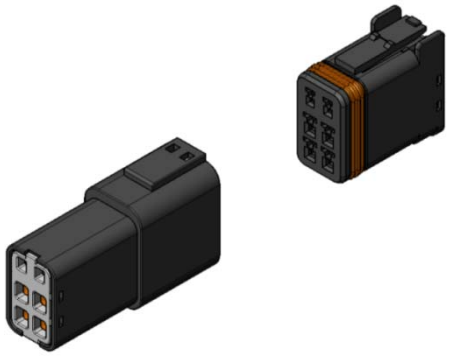


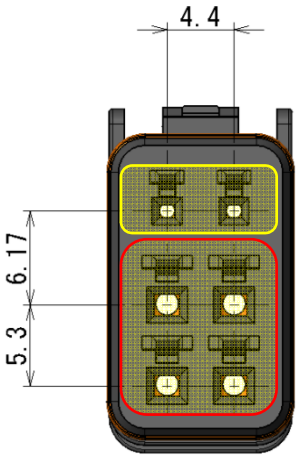
Socket Side

Unit: mm







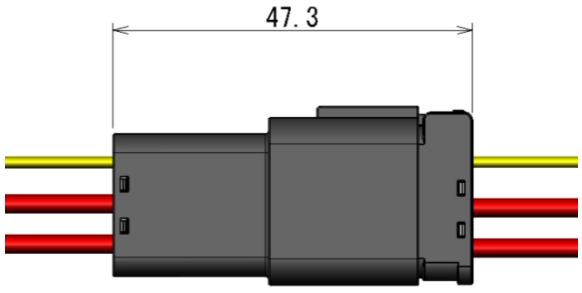


Signal area 2 pos.

Reinforced Insulation

Power supply area 4 pos.

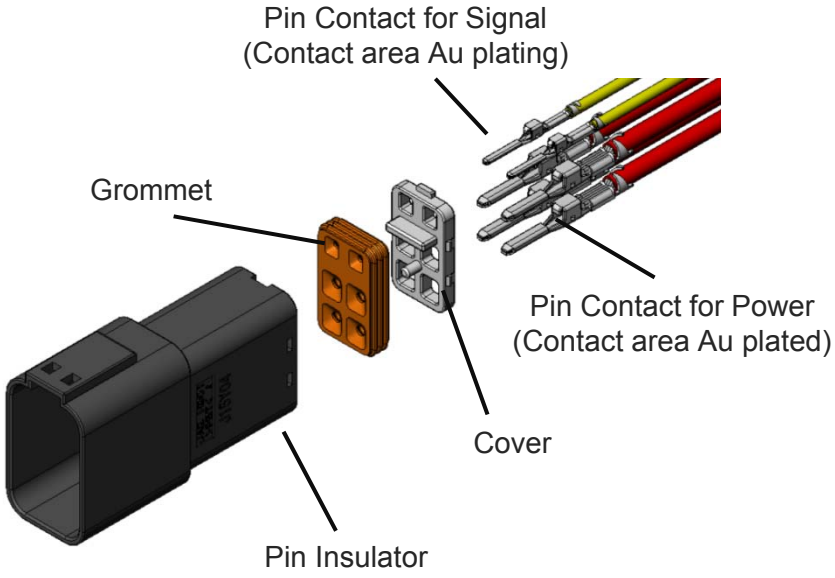
Mated Length



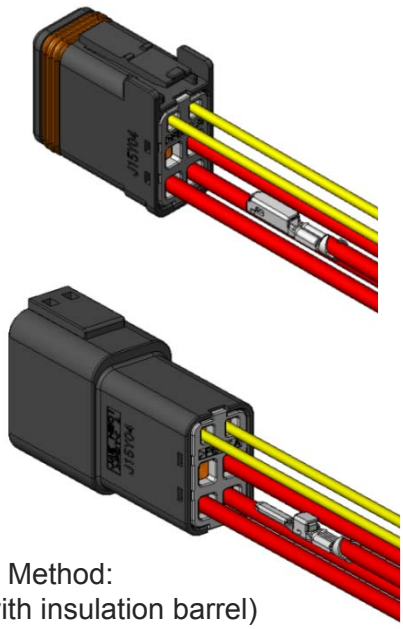
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Parts and Components

Pin Side

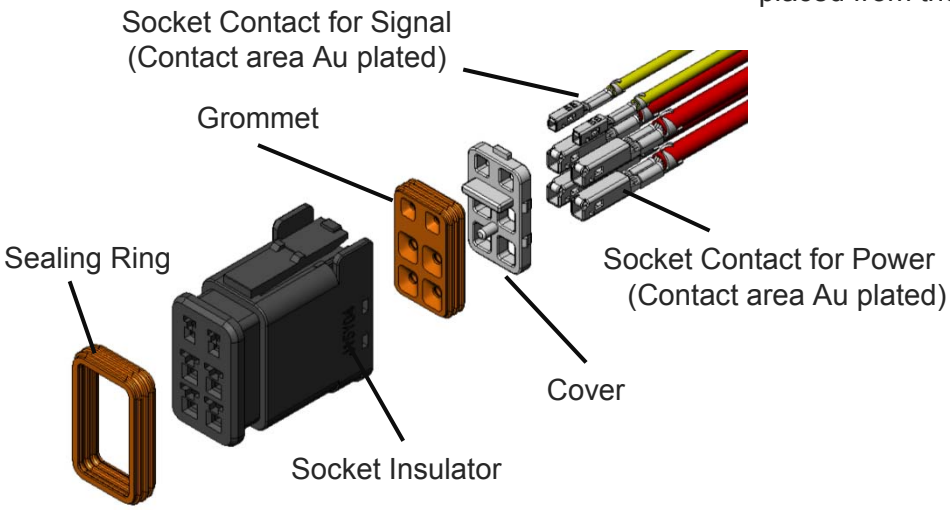


Harness Process



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

Socket Side



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Product Drawings

Connector

Part Number	SJ Drawing	Item
HB01P006PZ1	SJ116693	Pin Connector
HB01S006SZ1	SJ116694	Socket Connector

Terminal

Part Number	SJ Drawing	Contact Type			Supply Type	Applicable Cable Size
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

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Crimping Tools

Applicable Contact	Tool Part Number (Handling Instructions document numbers)	
	Hand Tool	Semi-automatic Applicator
HB01P06K4P1	CT150-19C-HB01-22 (T700385)	3502-HB01S-2 (T703542)
HB01S06K4P1		
HB01P06K4P2	CT150-19C-HB01-19 (T700385)	
HB01S06K4P2		
HB01P25H3P1	CT170-14B-HB01M (T700382)	3502-HB01M-2 (T703540)
HB01S25H3P1		
HB01P25H2P1	CT170-14C-HB01M (T700382)	
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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