



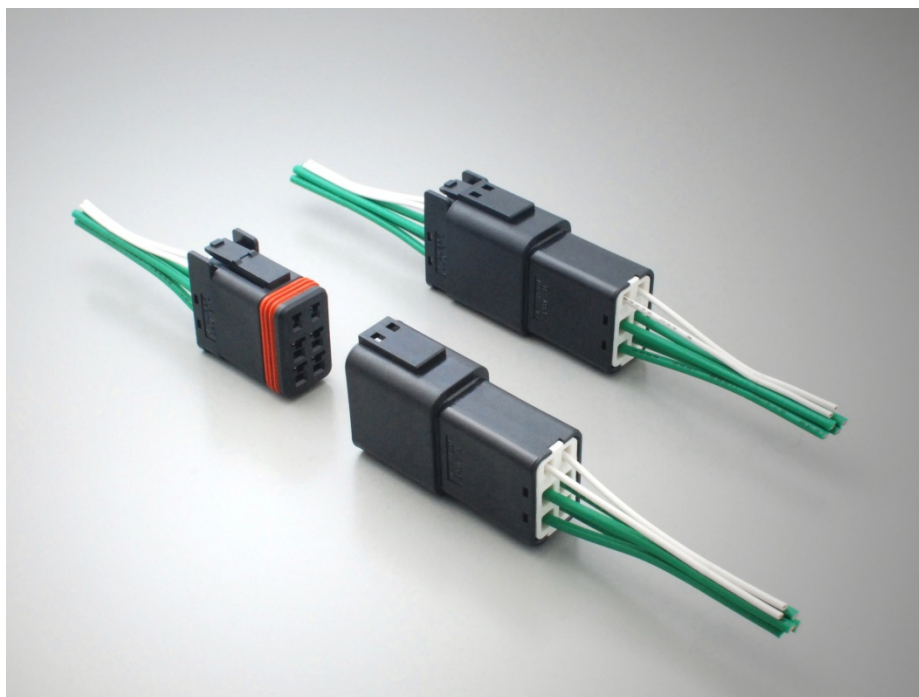
Waterproof In-line Connector for Industrial Machinery

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

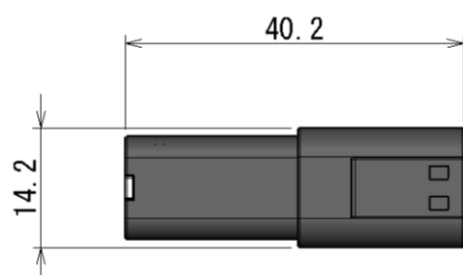
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|---------------------------------|---|-------------|------------|---------------------------|
| Number of Contacts | 6 (4 power, 2 signal) | | | |
| Rated Current (per contact) | Terminal Type | Current | | Cable Size |
| | Power | 9A | | 18 AWG |
| | | 11A | | 16 AWG |
| | | 13A | | 14 AWG |
| | Signal | 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 | Terminal Type | Barrel Size | Cable Size | Insulation outer diameter |
| | Power | #17 | 17~19AWG | φ1.6~2.3mm |
| | | #14 | 14~16AWG | φ2.1~2.8mm |
| | Signal | #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

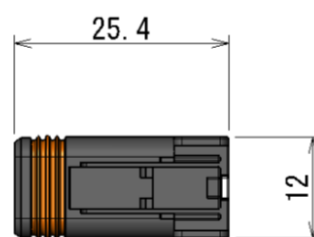
| | |
|--------------|---|
| Components | Material and Finish |
| Insulator | PBT |
| Contact | Copper alloy Contact area: Au plating over Ni Connection area: Sn plating over Ni Others: Ni plating |
| Grommet | Silicone rubber |
| Cover | PBT |
| Sealing Ring | Silicone rubber |

Dimensions

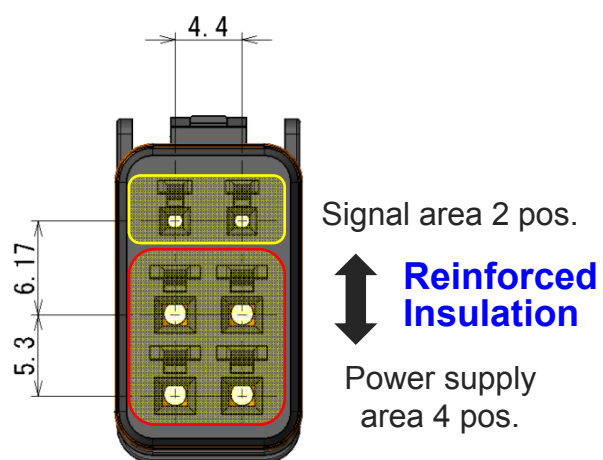
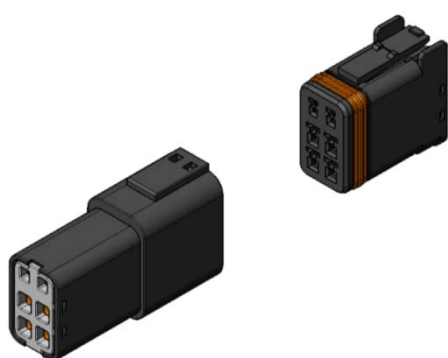
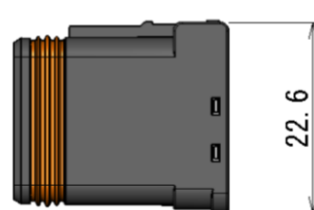
Pin Side



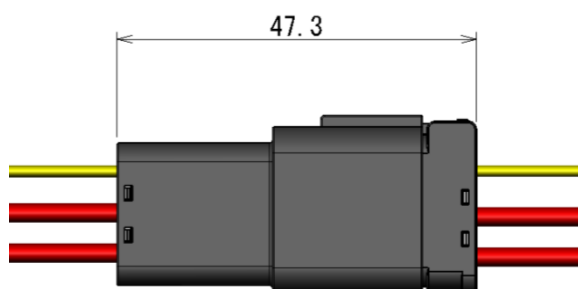
Socket Side



Unit: mm

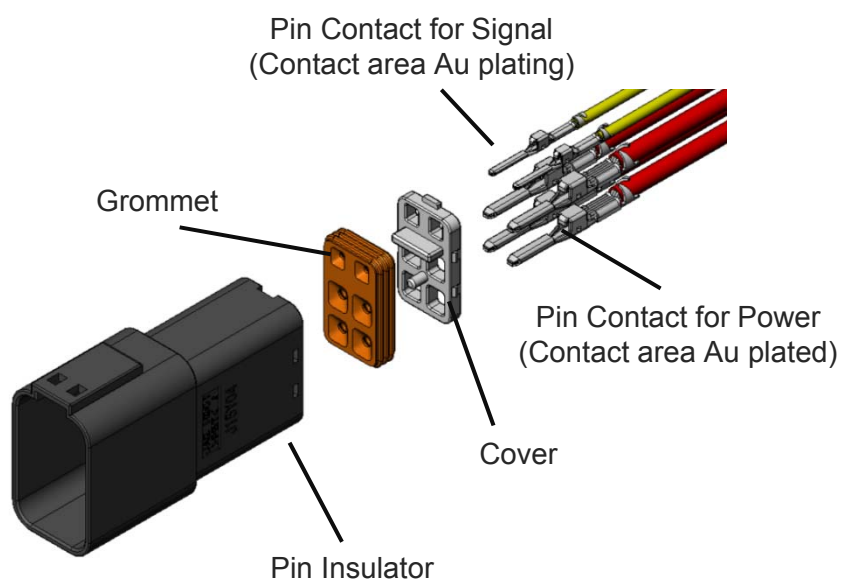


Mated Length

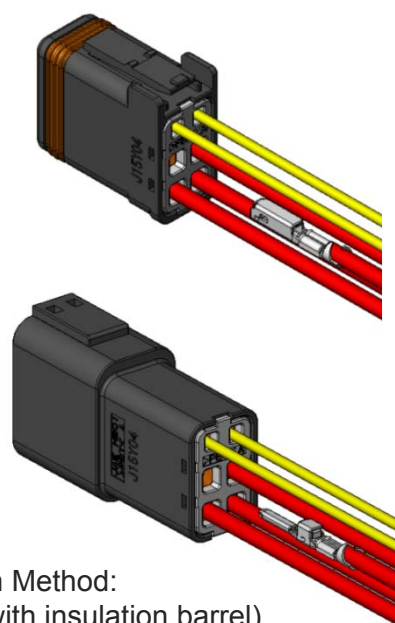


Parts and Components

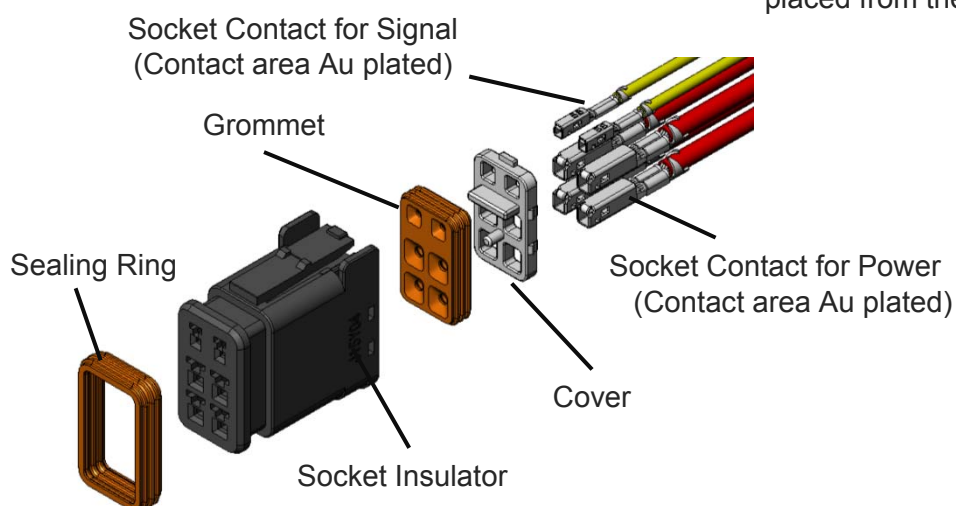
Pin Side



Harness Process



Socket Side



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

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| 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 |
|-------------|-------------|--------------|--------|--------|------------------------------|-----------------------|
| 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 |

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|---------------------|
| 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-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:

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(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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