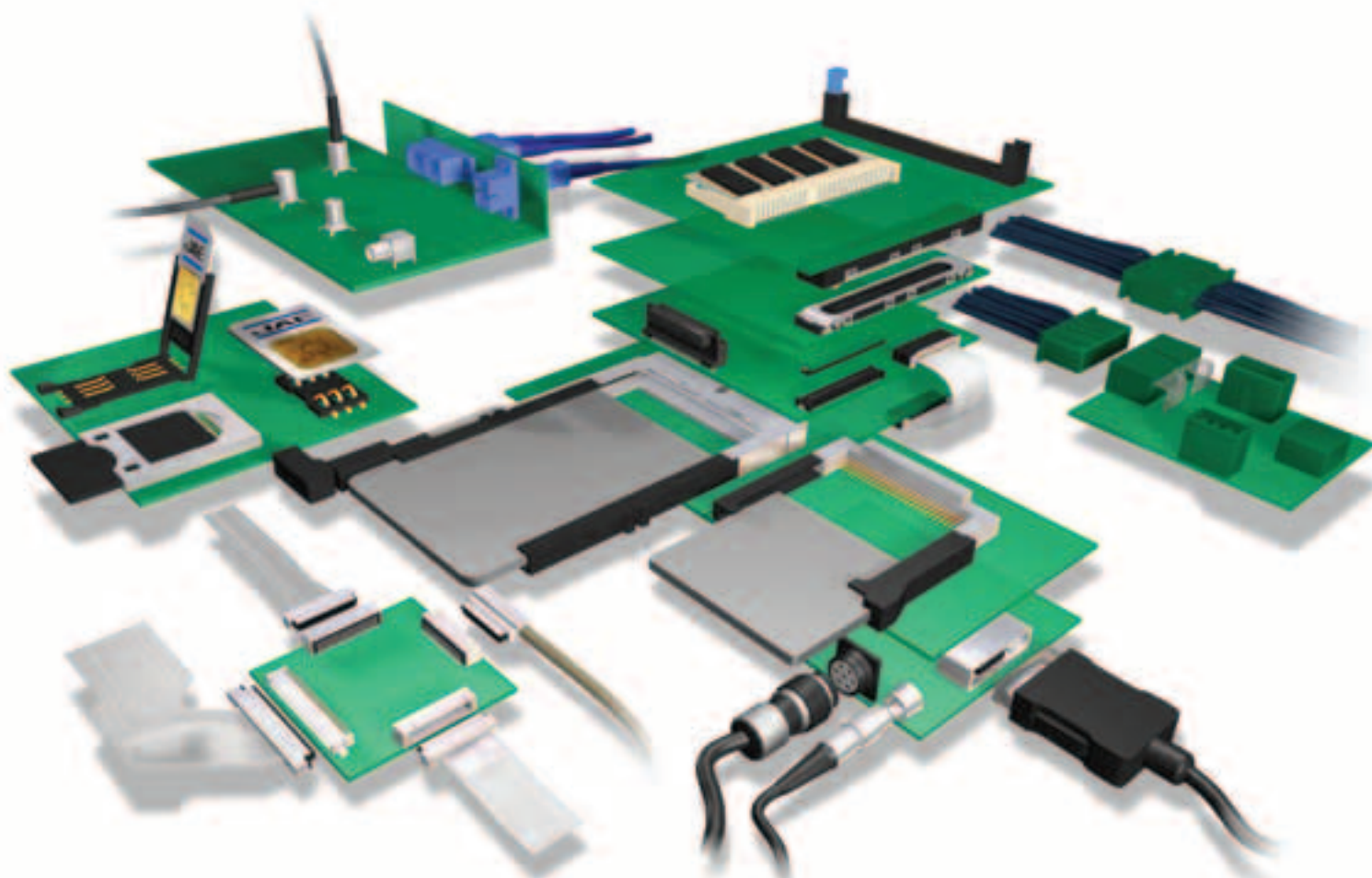


# ***Preferred Connector Products***

Technology to Inspire Innovation

# **JAE**



***JAE Electronics, Inc.***

***For Additional Information Visit [www.jae-connector.com](http://www.jae-connector.com)***

**J**apan Aviation Electronics Industry, Ltd. (JAE) is an international manufacturer and supplier of electronic components and systems. For over four decades, JAE has provided the electronics industry with solutions to complex design requirements. Since its founding, the Company has strived to contribute to society through market-driven, technology-based global business operations under the philosophy: "Technology to Inspire Innovation."

With worldwide and world-class manufacturing certified to ISO 9001 and QS 9000, JAE has made the commitment to meet the global requirements of our customer. In addition to a network of state of the art manufacturing facilities, JAE has technical service offices located around the world, staffed with experts in connector design and application.

This catalog contains a select overview of JAE Connector Products. For in-depth information on our complete product line, and information on new developments, visit JAE's online catalog at [www.jae-connector.com](http://www.jae-connector.com).

Innovative design, quality oriented manufacturing, commitment to our customers and sensitivity to the environment assures JAE's leadership position in the 21<sup>st</sup> century.

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- All JAE connector products shown in this catalog are lead free.
- We reserve the right to modify designs in order to improve quality, keep pace with technological advancements or meet particular requirements in production.
- Products shown in this catalog are made for the applications specified. However, if the above-mentioned products are to be used in aerospace devices, marine cable-connection devices, atomic power control systems, medical equipment for life-support systems, or any other specific application requiring extremely high reliability, please contact JAE for further information. Recommended Applications: Computers, Office Machines, Measuring Devices, Telecommunications Devices (Terminals, Mobile Devices) AV Devices, Household Applications, FA Devices, etc.
- Refer to end of catalog for alphabetical index of products.

# JL05 SERIES CONNECTORS

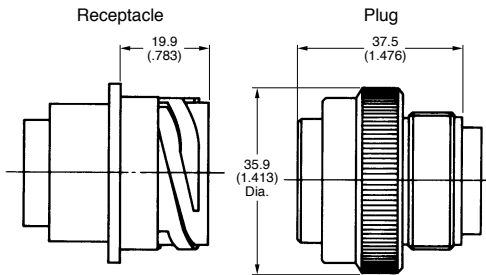
## Waterproof, Circular Connectors



### FEATURES

- Five insert guide keys for easy mating and unmating
- First-to-make/last-to-break contacts
- IP55F class waterproof structure

Connector Profile (Ref.)



• • • • •

The JL05 Series connectors conforms to JISB6015 specifications. JL05 is a circular, waterproof connector using IP55F structure. There is a one-touch locking mechanism for ease in mating and unmating. With first-to-make/last-to-break contacts, you are ensured a good circuit protection. Their ideal application are machining tools, servomotors, robots, and other industrial machines. The JL05 Series has two types of panel mount connectors. One option is waterproof only in the mated condition (JL05-2A/JL05-6A) and the other option is fully waterproof by itself (JL05-2L/JL05-6A).

### GENERAL SPECIFICATIONS

|                                    |                                                                                            |            |            |            |           |
|------------------------------------|--------------------------------------------------------------------------------------------|------------|------------|------------|-----------|
| Rated Current<br>(Per Contact)     | Contact Size                                                                               | #20<br>5A  | #16<br>13A | #12<br>23A | #8<br>46A |
| Rated voltage                      |                                                                                            | INST       | A          | D          |           |
|                                    | DC.V<br>AC.V r.m.s.                                                                        | #16<br>13A | #16<br>13A | #16<br>13A |           |
| Dielectric Withstanding<br>Voltage | AC.V r.m.s                                                                                 | 1,000      | 2,000      | 2,800      |           |
| Insulation Resistance              | 5,000 megohms min. waterproof when mated<br>1,000 megohms min. single waterproof structure |            |            |            |           |
| Contact Resistance                 | Contact Size<br>milliohms max.                                                             | #20<br>15  | #16<br>4   | #12<br>2   | #8<br>0.6 |
| Operating Temperature              | -55°C to +125°C                                                                            |            |            |            |           |
| Humidity                           | Relative Humidity: 85% max.                                                                |            |            |            |           |

|                                 |               |                 |        |             |
|---------------------------------|---------------|-----------------|--------|-------------|
|                                 |               | No. of Contacts | 1 – 28 | 29 – Ground |
| Dielectric Withstanding Voltage | A.C. V r.m.s. | 1,500           | 2,000  |             |
| Rated Voltage                   | A.C. V r.m.s. | 250             | 500    |             |

### MATERIALS AND FINISHES

|                                          |                                     |
|------------------------------------------|-------------------------------------|
| Description                              | Materials/Finishes                  |
| Shell                                    | Aluminum Zinc plating               |
| Coupling Nut                             | Aluminum Olive Drab or Black        |
| Insulator                                | Synthetic Resin (UL94V-0)           |
| Front Insulator (Single Waterproof type) | Synthetic Rubber                    |
| Contact                                  | Copper Alloy, Silver plating        |
| O-Ring                                   | Glass-filled Nylon (UL94V-0, Black) |
| Retaining Ring                           | Copper Alloy, Zinc plating          |
| Stop Ring                                | Stainless Steel                     |
| Wave Spring                              | Stainless Steel                     |
| Earth Lug                                | Copper Alloy, Silver plating        |

Dimensions and specifications subject to change without notice.

# JL05 SERIES CONNECTORS

## Waterproof, Circular Connectors

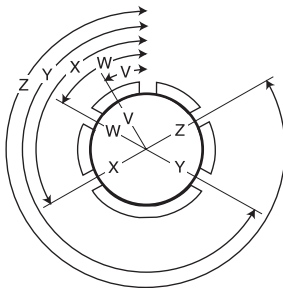
### ORDERING INFORMATION

#### • JL05-A

|                              |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
|------------------------------|-------------|----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|
|                              | <b>JL05</b> | <b>-</b> | <b>**</b> | <b>24</b> | <b>-</b> | <b>10</b> | <b>P</b> | <b>C</b> | <b>*</b> | <b>-</b> | <b>*</b> | <b>-</b> | <b>FO</b> | <b>-</b> | <b>R</b> |
| Series                       |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Shell Style                  |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| 6A – Straight Plug           |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| 2A – Box Mounting Receptacle |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Shell Size                   |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Contact Arrangement          |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Contact Type                 |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| P – Pin Contact              |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| S – Socket Contact           |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Crimp                        |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Alternate Insert Position    |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| V, W, X, Y, Z                |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Blank – Standard Position    |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Color                        |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| A66 – Olive Drab             |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| A72 – Black                  |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Modification Code            |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| FO – Without Contacts        |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |
| Lead Free Version            |             |          |           |           |          |           |          |          |          |          |          |          |           |          |          |

### ALTERNATE INSERT POSITIONS (POLARIZATION)

The position of the guide key of the shell changed by a certain angle in relation to the standard insert position is indicated by the symbols V, W, X, Y and Z. Use this table for reference when instructing since the changeable angle will differ depending on the contact arrangement. This diagram shows the contact pin arrangement as viewed from the pin side coupling.



| No. of Contacts | Polarization |    |    |     |     |       |
|-----------------|--------------|----|----|-----|-----|-------|
|                 | Arrangements | V° | W° | X°  | Y°  | Z°    |
| 4               | 22-22        | 45 | –  | 160 | –   | 300   |
| 5               | 18-11        | 35 | –  | 170 | 265 | –     |
| 7               | 20-15        | 30 | 80 | –   | –   | 280   |
|                 | 24-10        | 30 | 80 | –   | –   | 280   |
| 8               | 22-23        | 25 | 85 | –   | –   | –0325 |
| 9               | 24-11        | –  | 35 | 110 | 190 | 290   |
| 10              | 18-1         | –  | 70 | 145 | 260 | 280   |
| 17              | 18-19A       | –  | 80 | –   | –   | 280   |
| 19              | 18-19A       | –  | 80 | 110 | 250 | 280   |
|                 | 22-14        | –  | 75 | 150 | –   | 285   |
| 24              | 24-28        | –  | 80 | 110 | 250 | 280   |
| 30              | 24-28        | –  | 80 | 110 | 250 | 280   |
| 36              | 28-36B       | –  | 80 | 110 | 250 | 280   |
| 37              | 28-21        | –  | 80 | 110 | 250 | 280   |
| 58              | 24-52A       | –  | 80 | 110 | 250 | 280   |
| 73              | 28-73A       | –  | 80 | 110 | 250 | 280   |

Technology to Inspire Innovation



***"Building Technologies  
to Connect Your World"***



**Japan Aviation Electronics Industry, Limited**

1-19, Aobadai 3-chome, Meguro-ku  
Tokyo 153-8539, Japan  
Telephone: 03-3780-2736  
Fax: 03-3780-2883

**JAE Electronics, Inc.**

142 Technology Drive, Suite 100  
Irvine, California 92618-2430, U.S.A.  
Telephone: 949-753-2600  
Fax: 949-753-2699  
800-523-7278 Toll free in the U.S.A.

**JAE Europe**

Coliseum Business Centre  
Riverside Way, Camberley  
Surrey, GU15 3YL, England  
Telephone: 44-1276-404000  
Fax: 44-1276-404010

**JAE Taiwan, Ltd.**

4F-1, No. 88, Chung Hsiao E. Rd.  
Sec. 2, Taipei, Taiwan, R.O.C.  
Telephone: 886-2-2396-7676  
Fax: 886-2-2392-5929

**JAE Hong Kong, Ltd.**

Suites 1407-11, 14/F, Tower 2, The Gateway,  
25 Canton Road, Tsimshatsui, Kowloon, Hong Kong  
Telephone: 852-2723-7782  
Fax: 852-2723-9028

**JAE Korea, Inc.**

1602, Korea City Air Tower  
159-9 Samsung-Dong, Kangnam-ku  
Seoul, 135-973, Korea  
Telephone: 82-2-551-8959  
Fax: 82-2-551-8958

**JAE Philippines, Inc.**

PEZA Zone, Gateway Business Park, Javalera  
General Trias, 4107 Cavite, Philippines  
Telephone: 63-46-433-0285  
Fax: 63-46-433-0287

**JAE Singapore Pte., Ltd.**

33 Tannery Lane, #02-01 Hoesteel  
Industrial Building  
Singapore 347789  
Telephone: 65-6748-1332  
Fax: 65-6748-2920

**JAE Shanghai Co., Ltd.**

RM 1407, Shanghai Mart 2299 Yanan Rd.  
West Shanghai 200336 P.R.C.  
Telephone: 86-21-6236-0322  
Fax: 86-21-6236-1292

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➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd  
Minhang District, Shanghai , China

➤ Sales :

Direct     +86 (21) 6401-6692  
  
Email       amall@ameya360.com  
  
QQ         800077892  
  
Skype       ameyasales1 ameyasales2

➤ Customer Service :

Email       service@ameya360.com

➤ Partnership :

Tel         +86 (21) 64016692-8333  
  
Email       mkt@ameya360.com