

Connectors Profile

CAT.No.CP-D018A.DEC.2016

プリント基板実装から 機器間インターフェース接続まで 豊富な品種で 多様な接続を実現します。

A BROAD LINE OF JAE's CONNECTORS FOR DIVERSE APPLICATIONS,
INCLUDING MOUNT ON P.C.BOARD, INTERFACING BETWEEN UNITS...

FIND ITEMS MOST SUITABLE FOR
YOUR PROJECT AMONG THE CONNECTORS PRESENTED HERE.

最新電子機器は、デジタル技術の発展とともに多機能化は元より、信頼性の向上、小型高密度化、軽量化、更には高生産性、コストダウン等により、機器の実装形態も大きく変革し、多様な接続形態が生み出されてきました。昭和30年からコネクタの製造、販売を開始した当社は、コネクタの総合メーカーとして、航空宇宙機器用を主としたMIL規格品をベースに蓄積されたノウハウと共に、民生機器、OA機器、通信機器、産業機器等幅広い分野でのどのようなニーズにも即応できるよう、高度な技術力と品質管理を駆使し、多岐にわたるコネクタの開発を続けてまいりました。

このカタログは、携帯電話、パソコン、TV、FAX、コピー機、交換機、音響機器、放送機器、計測器、工作機械、医療機器、車輛、自動車、船舶、航空機等、幅広い電子機器分野で、機器内のプリント基板を中心とした内部実装用コネクタから機器間のインターフェース接続用コネクタまで、多様な接続にお応えできる最適なコネクタを抜粋し、一覧表化したものです。

尚、ここにご紹介した製品の他にも、ケーブルアッセンブリ加工及び新規設計にもお応え致します。コネクタ選択の際には、是非とも航空電子にご一報下さい。

The latest electronic equipment has revolutionized equipment mounting types through developments in digital technologies and addition of multifunction capabilities. Improved reliability, smaller size and greater compactness, lighter weight, as well as higher productivity and lower cost have all contributed to these developments, and a variety of connectors have been devised. We have been in the business of manufacturing and marketing connectors since 1955. As an integrated connector manufacturer, we take pride in expertise accumulated through development of products conformed to MIL standard, primarily for aeronautics and space flight. We combine top notch technological skills with carefully monitored product quality to continue to develop connectors for multiple applications. Our products meet needs in a wide variety of fields including commercial / household appliances, office - automation, communications equipment, industrial machinery. This catalog brings together a sampling of the best connectors to meet a variety of needs. Here you will find everything from connectors for internal parts, printed circuit board, to interface connectors for linking devices. Besides the products you see here, we are also able to provide cable assembly processing and custom design. Look to Japan Aviation Electronics when choosing connectors.

当社は、ISO9001(品質マネジメントシステム)及びISO14001(環境マネジメントシステム)の認証を取得しております。
JAE has been awarded the certificate of ISO9001(quality management system) and ISO14001(environmental management system).

機器内の基板対基板 基板対電線 基板対モジュール接続

P.C.BOARD TO P.C.BOARD
P.C.BOARD TO CABLE
P.C.BOARD TO MODULE APPLICATION
INSIDE EQUIPMENT

●ご注意

電気用品安全法の適合品をお求めの場合は、電気用品安全法で定める基準を満たした認証品をお選び下さい。認証品については弊社販売窓口までお問い合わせ下さい。

●お願い

このカタログは、各種コネクタの概要をご紹介したものです。詳細につきましては、当社窓口までお問い合わせ下さい。尚、製品の改良などの為、予告なしに形状、仕様、種類、極数などの変更(販売中止含む)をすることがありますので、掲載製品のご使用のご検討やご注文に際しては、予め当社営業部までお問い合わせのうえ、ご確認くださいませよう願致します。

PLEASE NOTE

This catalog is a summary of various types of connectors. Please consult your nearest JAE representative for details. Product configuration, specifications, models, and number of contacts are subject to change (including discontinuing an item) without notice as we endeavor to improve our product line. If you are considering using one of the products listed in this catalog, or when you get ready to order an item, please check first with our business department to confirm its availability.

カードとシステム機器の接続

CARD TO SYSTEM EQUIPMENT
APPLICATION

機器内のサブアッセンブリ間、 及び機器間の接続

APPLICATION BETWEEN
SUBASSEMBLIES INSIDE
EQUIPMENT,
AND BETWEEN UNITS

INDEX

| | |
|--|----------|
| プリント基板用コネクタ早見表 LIST OF P.C.BOARD CONNECTORS | 4 to 5 |
| 機器内の基板と基板との接続 P.C.BOARD TO P.C.BOARD APPLICATION INSIDE EQUIPMENT | 6 to 12 |
| 機器内の基板と電線との接続 (プリント基板用) P.C.BOARD TO P.C.CABLE APPLICATION INSIDE EQUIPMENT | 14 to 21 |
| 機器内の基板と電線との接続 (自動車用) P.C.BOARD TO P.C.CABLE APPLICATION INSIDE EQUIPMENT (FOR AUTOMOTIVE ELECTRONICS) | 22 to 33 |
| 機器内の基板と FPC / FFC との接続 P.C.BOARD TO FPC / FFC APPLICATION INSIDE EQUIPMENT | 34 to 35 |
| 機器内の基板とモジュールとの接続 P.C.BOARD TO MODULE APPLICATION INSIDE EQUIPMENT | 36 to 39 |
| カードとシステム機器との接続 CARD TO SYSTEM EQUIPMENT APPLICATION | 40 to 45 |
| 機器内サブアッセンブリ間／機器間の接続 (角型) APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT, AND BETWEEN UNITS (RECTANGULAR) | 46 to 65 |
| 物理的に離れた機器間の接続 (丸型) APPLICATION BETWEEN REMOTE UNITS (CIRCULAR) | 66 to 73 |
| 機器内サブアッセンブリ間／機器間の接続 (同軸) APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT, AND BETWEEN UNITS (COAXIAL) | 74 to 76 |
| 光ファイバケーブルによる光伝送路の接続 (光コネクタ) APPLICATION FOR OPTIC TRANSMISSION THROUGH OPTIC FIBER (FIBER OPTIC CONNECTORS) | 78 to 80 |
| ご注文に際してのお願い BEFORE PLACING AN ORDER | 83 |

プリント基板用コネクタ早見表

LIST OF P.C.BOARD CONNECTORS

■ 基板対基板、基板対 FPC / FFC 接続
P.C.Board to P.C.Board、P.C.Board to FPC / FFC Application

| 接続形態 Connection Styles | 基板対基板 P.C.Board to P.C.Board | | | | | | 基板対 FPC / FFC P.C.Board to FPC / FFC | |
|------------------------------|---------------------------------|----------------|-------------|------------------|----------------|----------------|---|-----------------------|
| | ツーピース型 Two - Piece | | | | | | ワンピース型 One - piece | ワンピース型 One - piece |
| | | | | | | | | |
| コンタクトピッチ Contact Spacing | SMT | Through - hole | SMT | Through - hole | SMT | Through - hole | SMT | SMT |
| 0.2 mm (.008 inch) | | | | | | | | FF08 FR02 |
| 0.3 mm (.012 inch) | | | | | | | | FB10 |
| 0.35 mm (.014 inch) | WP21 WP26, WP25D | | | | | | | |
| 0.4 mm (.016 inch) | WP10 WP6, WP6C WP7, WP9 | | | | | | | |
| 0.5 mm (.020 inch) | WR (WD2) | | WR (DD1) | | (DD1) (DD2) | | | FA5 FM8 FA10 |
| 0.8 mm (.031 inch) | KX14 / 15 | | KX14 / 15 | KX24 / 25 | | KX24 / 25 | | |
| 1.27 mm (.050 inch) | | TX24 / 25 | | TX24 / 25 | | TX24 / 25 | | |
| 1.8 mm (.071 inch) | | | | MJ06 (Note 1) | | | | |
| 2.54 mm (.100 inch) | | PS | | PS | | | | |
| 2.8 mm (.110 inch) | | | | | | | ES6 | |
| 3.6 mm (.142 inch) | | | | | | | ES3 - WF1 | |

(Note 1) MJ06 は、無半田接続プレスフィット型 MJ06 is Solderless press - fit type.

(Note 2) () は、機器間インターフェース用 The items in parenthesis are for interface between units.

この一覧表は、プリント基板用コネクタを接続形態、コンタクトピッチ別に分類してあります。
各シリーズ名 (WP21, FF08, FI - R...) に対応する製品概要は、6 頁以降をご参照下さい。

Connectors for PC boards are classified in this list by the connection style and contact spacing.
The description for the products of each series (WP21, FF08, FI - R, etc.) is given on page 6 sq.

■ 基板対電線、電線中継接続
P.C.Board to Cable、Cable Connecting Application

| 接続形態 Connection Styles | 基板対電線 P.C.Board to Cable | | | | | | | | | | | 電線中継 Cable Connection | |
|------------------------------|-----------------------------|---------------|-----------|--|--------------------------------------|-----------|--------------|-------------|-------------|-----------------------|-----------------------------|--------------------------------------|--|
| | ツーピース型 Two - Piece | | | | | | | | | | ワンピース型 One - piece | ツーピース型 Two - piece | |
| | | | | | | | | | | | | | |
| コンタクトピッチ Contact Spacing | 半田 Solder | 圧着 Crimp | 圧接 IDC | 半田 Solder | 圧着 Crimp | 圧接 IDC | 半田 Solder | 圧着 Crimp | 圧着 Crimp | — | 圧着 Crimp | 半田 Solder | |
| 0.25 mm (.010 inch) | | | | | | | FI - JZ * | | | | | | |
| 0.3 mm (.012 inch) | | | | | | | FI - JW * | | | | | | |
| 0.4 mm (.016 inch) | | | | HJ1 * | | | | | | | | | |
| 0.5 mm (.020 inch) | FI - R * | FI - R * | | HD1 / HD2 * FI - Z * FI - R * (DX07) (Note3) (RA1) * (DD1) * (DD2) * | FI - R * | | | | | | | | |
| 0.8 mm (.031 inch) | | | | | | | | | | | | | |
| 1.0 mm (.039 inch) | | | | FI - X * (DC1) | FI - X * | | | | | | | MX53 | |
| 1.25 mm (.049 inch) | | | | | FI * | | | | | | | | |
| 1.5 mm (.059 inch) | | | | MX50 | | | | | | | | | |
| 1.8 mm (.071 inch) | MJ06 | | | MJ06 | | | | | | | | | |
| 2.0mm (.079 inch) | | LY | | MX48, MX49, MX49A, MX49B MX62 | LY | | | | | | | MX49A MX49C MX49CB MX62 | |
| 2.2 mm (.087 inch) | MX39 MX39B MX39D | MX34 | | MX39, MX39B MX39C, MX39D | MX34 (Note 4) MX57A * | | | | | | MX34 | MX39B MX39D | |
| 2.5 mm (.098 inch) | | IL - AG5 | | | IL - AG5 MX23A MX47 | | | | | | | IL - AG5 IL - AG9 MX19 MX36 | |
| 2.54 mm (.100 inch) | | PS PS - LA | PS | | PS PS - LA | PS | | | | | | | |
| 3.0 mm (.118 inch) | | | | | | | | ES9 * | EW3 - WF2 * | | | | |
| 3.5 mm (.138 inch) | | | | | MX44 | | | | | | | | |
| 特殊 Special | | | | MX45A | CE2 MX17 MX25 MX31 ES5 * | | | | | ES3 - JF3 * ES10 * | CE2 MX17 MX25 MX37 | MX45 | |

(Note 1) *印の基板実装側は、SMT(サーフェスマウント)型 * : Board side is SMT type.

(Note 2) () は、機器間インターフェース用 The items in parenthesis are for interface between units.

(Note 3) 半田タイプと半田/SMTハイブリッドタイプの2種類有り 2 types available : solder and hybrid (solder / SMT)




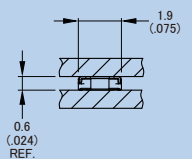
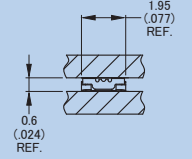
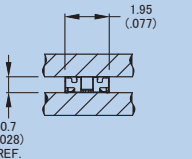
(Note 4) スルーホールタイプ8極のみ、2.4mmピッチ Only 8 - contact through - hole type has 2.4 mm (.094 inch) contact spacing.

機器内の基板と基板との接続

P.C.BOARD TO P.C.BOARD APPLICATION INSIDE EQUIPMENT

プリント基板用
PCB to PCB

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | | WP26 | WP21 | WP25D |
|--|--|---|--|--|
| コンタクトピッチ Contact Spacing | | 0.35mm (.014 inch) | 0.35 mm (.014 inch) | 0.35 mm (.014 inch) |
| 接続形態 Connection Styles | | 平行 Parallel | 平行 Parallel | 平行 Parallel |
| 結線方法 Termination Styles | | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance | |  |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | |  |  |  |
| 極 数 No. of Contacts | | 10, 24, 34, 40, 42, 54, 60 | 10, 20, 22, 24, 30, 34, 40, 42, 46, 54 | 10, 28, 38 |
| コネクタ形状 Connector Styles | | Plug Receptacle | Straight Straight | Straight Straight |
| 適用基板厚 Applicable PCB Thickness | | — | — | — |
| 定格電流 Current Rating | | 0.3 Amps | 0.3 Amps | Signal : 0.3 Amps Power : 3.0 Amps |
| 耐電圧 D.W.Voltage | | 250 VACrms (1 minute) | 250 VACrms (1 minute) | 250 VACrms (1 minute) |
| 絶縁抵抗 Insulation Resistance | | 100 megohms min. | 100 megohms min. | 100 megohms min. |
| 接触抵抗 Contact Resistance | | 70 milliohms max. | 70 milliohms max. | Signal : 70 milliohms max. Power : 20 milliohms max. |
| 使用温度 Operating Temperature | | - 40 °C to + 85 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | Gold plating | Gold plating |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● エンボステーピング品で納入 ● 破損防止・金属強化型 ● Embossed-taped supply ● The solid armored structure stop damage | <ul style="list-style-type: none"> ● エンボステーピング品で納入 ● Embossed-taped supply | <ul style="list-style-type: none"> ● エンボステーピング品で納入 ● Embossed-taped supply |

■プリント基板用コネクタ・P.C.BOARD CONNECTORS

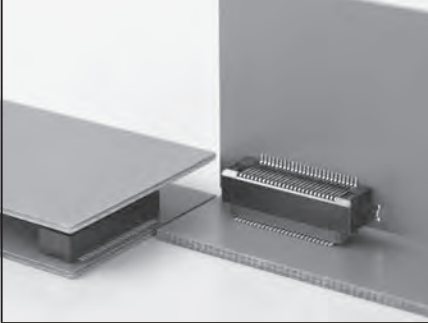
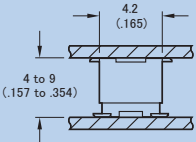
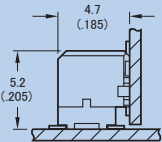
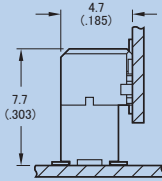
| WP10 | WP6 / WP6C | WP7 | WP9 |
|---|---|---|---|
| 0.4 mm (.016 inch) | 0.4 mm (.016 inch) | 0.4 mm (.016 inch) | 0.4 mm (.016 inch) |
| 平行 Parallel | 平行 Parallel | 平行 Parallel | 平行 Parallel |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| | | | |
| | <p>WP6・H : 0.6mm type</p> <p>WP6・H : 0.8mm type</p> <p>WP6C</p> | | |
| Signal : 2, 4 Power : 4 | WP6・H:0.6mm : (10), 14, 16, (20), 24, (26), (30), (34), (36), (40), 50, 60, (80) WP6・H:0.8mm : 10, 12, 16, 20, 24, 30, (34), (36), (40), (60), (80) WP6C : 24, 30 (Note) | WP7A : 10, 16, 20, 24, 26, 28, 30, 32 WP7B : 34, 40, 50, 60, 70 (Note 1, 2) | 10, 14, (16), (18), 20, 24, 30, 32, (34), 40, (50), 60 (Note) |
| Straight | Straight | Straight | Straight |
| Straight | Straight | Straight | Straight |
| Signal : 0.4 Amps (per contact) Power : 5.0 Amps (per contact) | 0.3 Amps | 0.3 Amps | 0.3 Amps |
| 250 VACrms (1 minute) | 250 VACrms (1 minute) | 250 VACrms (1 minute) | 250 VACrms (1 minute) |
| 100 megohms min. | 100 megohms min. | 100 megohms min. | 100 megohms min. |
| Signal : 20 milliohms max. Power : 5 milliohms max. | 70 milliohms max. | 70 milliohms max. | 70 milliohms max. |
| - 40 °C to + 85 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| Gold plating | Gold plating | Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● 電源端子は 10A 通電に対応 ● エンボステープ品で納入 ● Power terminals compatible with 10A power supply ● Embossed-taped supply | <ul style="list-style-type: none"> ● エンボステープ品で納入 ● WP6C はシールド付 EMI 対策強化型 ● Embossed-taped supply ● WP6C Series is enforced GND for EMI with shield (Note) () 内の極数については別途お問い合わせ下さい。Please contact us for no.of contacts in parenthesis | <ul style="list-style-type: none"> ● エンボステープ品で納入 ● Embossed-taped supply (Note 1) WP7A : High removal force type WP7B : Low insertion force type (Note 2) () 内の極数については別途お問い合わせ下さい。Please contact us for no.of contacts in parenthesis | <ul style="list-style-type: none"> ● エンボステープ品で納入 ● Embossed-taped supply (Note) () 内の極数については別途お問い合わせ下さい。Please contact us for no.of contacts in parenthesis |

機器内の基板と基板との接続


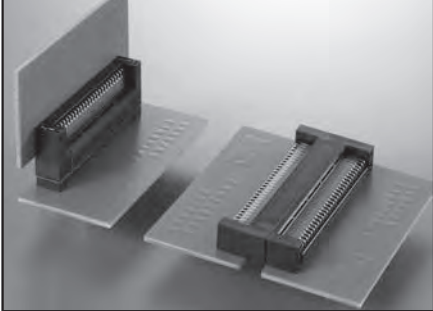
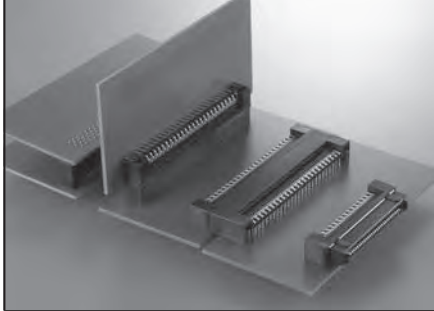
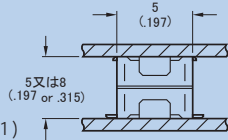
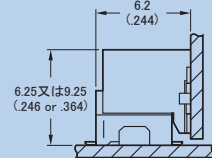
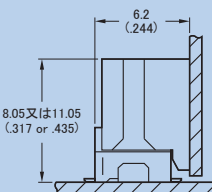
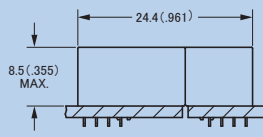
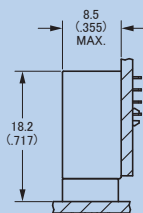
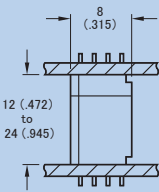
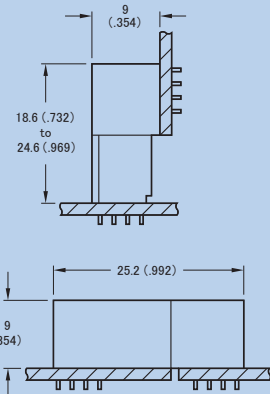
P.C.BOARD TO P.C.BOARD APPLICATION INSIDE EQUIPMENT

プリント基板用
PCB to PCB

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | | WR | |
|--|------------|--|--|
| コンタクトピッチ Contact Spacing | | 0.5 mm (.020 inch) | |
| 接続形態 Connection Styles | | 垂直・平行 Vertical・Parallel | |
| 結線方法 Termination Styles | | 半田 (SMT) Solder (Surface mount) | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | |    | |
| 極 数 No. of Contacts | | 30, 40, 50, 60, 70, 80, 100, 120, 160 | |
| コネクタ形状 Connector Styles | Plug | Straight・Right-angle | |
| | Receptacle | Straight | |
| 適用基板厚 Applicable PCB Thickness | | — | |
| 定格電流 Current Rating | | 0.3 Amps | |
| 耐電圧 D.W.Voltage | | 500 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | | 100 megohms min. | |
| 接触抵抗 Contact Resistance | | 50 or 70 (Vertical) milliohms max. | |
| 使用温度 Operating Temperature | | - 40 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● 平行基板間 4 ~ 9mm の範囲 (9 種) に対応 ● For distance between parallel boards 4 thru 9 mm (.157 thru .354 inch) [9 distances] | |

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

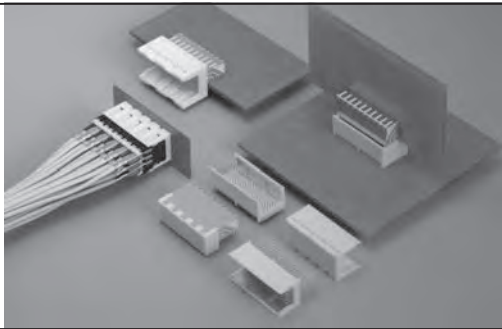
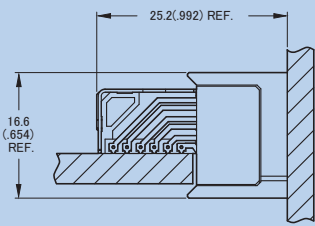
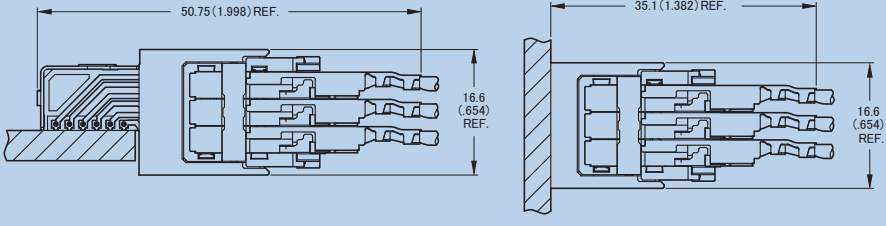
| KX14 / KX15 | KX24 / KX25 | TX24 / TX25 |
|--|--|---|
| 0.8 mm (.031 inch) | 0.8 mm (.031 inch) | 1.27 mm (.050 inch) |
| 垂直・平行 Vertical・Parallel | 垂直・水平 Vertical・Horizontal | 垂直・平行・水平 Vertical・Parallel・Horizontal |
| 半田 (SMT) Solder (Surface mount) | 半田 (スルーホール) Solder (Through-hole) | 半田 (スルーホール) Solder (Through-hole) |
|  |  |  |
|  <p>(Note 1)</p> <p>Hold-down type (Right-angle side)</p>  <p>Screw type (Right-angle side)</p>  |   |   |
| 20, 30, 60, 70, 80 (Note 2) | 80, 100, 120, 140, 180 | 30, 40, 50, 60, 80, 100 |
| Straight・Right-angle | Right-angle | Straight・Right-angle |
| Straight | Straight・Right-angle | Straight・Right-angle |
| 0.5 Amps | 0.5 Amps | 1 Amps |
| 500 VACrms (1 minute) | 500 VACrms (1 minute) | 500 VACrms (1 minute) |
| 100 megohms min. | 100 megohms min. | 100 megohms min. |
| 70 milliohms max. | 70 milliohms max. | 40 milliohms max. |
| - 40 °C to + 80 °C | - 40 °C to + 80 °C | - 40 °C to + 80 °C |
| Gold plating | Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● エンボステーピング品可 ● Embossed-taped supply optionally available (Note 1) 5, 8mm 以外の対応高さについては別途お問い合わせ下さい。 Please contact us for mating height other than 5 or 8 mm (Note 2) 記載以外の極数については別途お問い合わせ下さい。 Please contact us for other than those listed no. of contacts | <ul style="list-style-type: none"> ● ラック&パネル接続 ● Rack to panel connection | <ul style="list-style-type: none"> ● ラック&パネル接続 ● 平行基板間 12 ~ 24 mm の範囲 (2mm 間隔に対応) ● Rack to panel connection ● For distance between parallel boards 12 thru 24 mm (.472 thru .945 inch) [in 2 mm (.079 inch) increment] |

機器内の基板と基板との接続

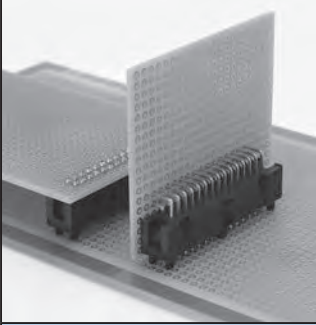
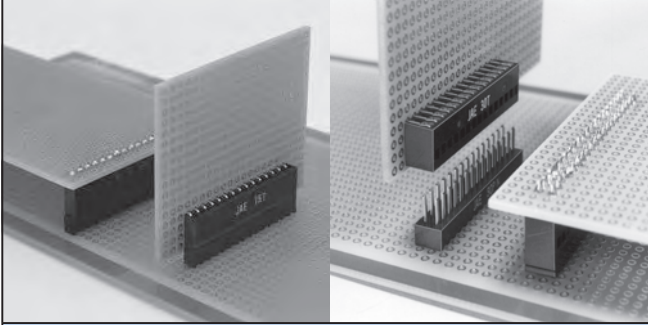
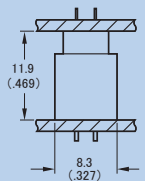
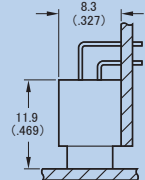
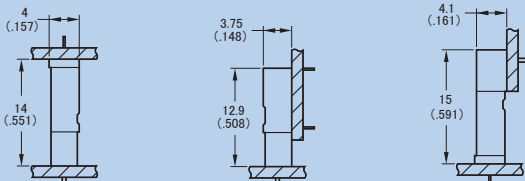
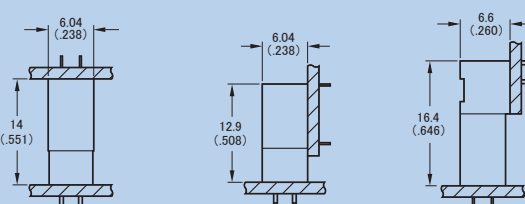
P.C.BOARD TO P.C.BOARD APPLICATION INSIDE EQUIPMENT

プリント基板用
PCB to PCB

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | MJ06 | |
|--|---|-----------------------------------|
| コンタクトピッチ Contact Spacing | 1.8 mm (.070 inch) | |
| 接続形態 Connection Styles | 垂直 Vertical | |
| 結線方法 Termination Styles | プレスフィット Press-fit | |
| 外 観 Appearance |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | <p style="text-align: center;">Board to board</p>  <p style="text-align: center;">Board to cable (Note1)</p>  | |
| 極 数 No. of Contacts | 120 (signal + ground / module) | |
| コネクタ形状 Connector Styles | Plug | Straight / Right-angle (Note 2) |
| | Receptacle / Socket | Right-angle / Straight (Note 3) |
| 適用基板厚 Applicable PCB Thickness | 1.4 to 5.0 mm (.055 to .197 inch)(Note 4) | |
| 定格電流 Current Rating | 1 Amps | |
| 耐電圧 D.W.Voltage | 500 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | 1000 megohms min. | |
| 接触抵抗 Contact Resistance | 25 milliohms max. | |
| 使用温度 Operating Temperature | - 35 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | |
| 特記事項 Remarks | <p>(Note 1) ケーブル接続側はコネクタ単体として供給。ハーネス加工につきましては別途お問い合わせ下さい。 Cable connector supplied as individual part, please consult us about cable harness product</p> <p>(Note 2) ライトアングルピンヘッダの相手側はケーブル接続ソケットのみ。 (ライトアングルピンヘッダとライトアングルソケットとの組合せはご使用頂けません) The right-angle pin header mates only with the cable connection socket (The combination of right-angle pin header with right-angle socket is not available)</p> <p>(Note 3) ライトアングルソケットは基板実装タイプのみ。ストレートソケットはケーブル接続タイプのみ。 Right-angle socket is available only in on-board type. Straight socket is available only in cable connection type</p> <p>(Note 4) 適用基板厚は品目により異なります。詳細は別途お問い合わせ下さい。 Applicable P.C.B thickness varies product, please consult us for details</p> | |

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS



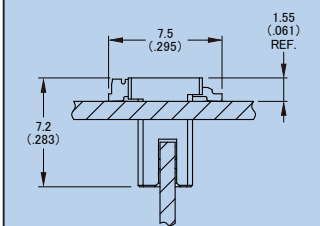
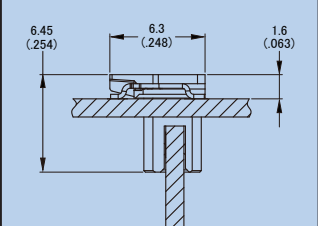
| PS (Box type) | PS |
|---|--|
| 2.54 mm (.100 inch) | 2.54 mm (.100 inch) |
| 垂直・平行 Vertical・Parallel | 垂直・平行 Vertical・Parallel |
| 半田 (スルーホール) Solder (Through-hole) | 半田 (スルーホール) Solder (Through-hole) |
|  |  |
|   | <p>1 row</p>  <p>2 rows</p>  |
| 40, 50 | 1 row: 5, 10, 15, 20, 25, 30 2 rows: 10, 16, 20, 26, 30, 34, 40, 50, 60 |
| Straight・Right-angle | Straight・Right-angle |
| Straight | Straight・Right-angle |
| 1.6mm (.063 inch) | 1.6mm (.063 inch) |
| 3 Amps | 3 Amps |
| 1000 VACrms (1 minute) | 1000 VACrms (1 minute) |
| 1000 megohms min. | 1000 megohms min. |
| 10 milliohms max. | 10 milliohms max. |
| -55 °C to +85 °C | -55 °C to +85 °C |
| Gold plating | Gold plating |

機器内の基板と基板との接続

P.C.BOARD TO P.C.BOARD APPLICATION INSIDE EQUIPMENT

プリント基板用
PCB to PCB

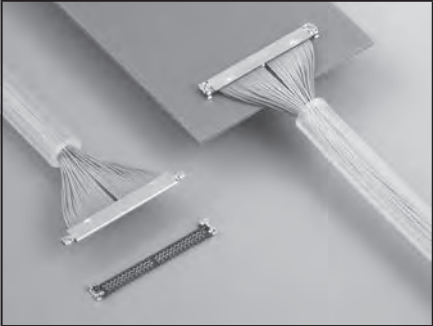

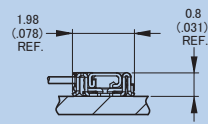
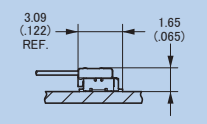
■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | ES6 | ES3-WF1 |
|--|---|--|
| コンタクトピッチ Contact Spacing | 2.8 mm (.110 inch) | 3.6 mm (.142 inch) |
| 接続形態 Connection Styles | 垂直 (カードエッジタイプ) Vertical (Card edge type) | 垂直 (カードエッジタイプ) Vertical (Card edge type) |
| 結線方法 Termination Styles | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  |  |
| 極 数 No. of Contacts | 2 | 2 |
| コネクタ形状 Connector Styles | Plug Receptacle / Socket | Plug Receptacle / Socket |
| 適用基板厚 Applicable PCB Thickness | Bottom Mount | Bottom Mount |
| 定格電流 Current Rating | 1mm (.039 inch) | 1.2mm (.047 inch) |
| 耐電圧 D.W.Voltage | 1 Amps | 1 Amps |
| 絶縁抵抗 Insulation Resistance | 500 VACrms (1 minute) | 500 VACrms (1 minute) |
| 接触抵抗 Contact Resistance | 10 megohms min. | 10 megohms min. |
| 使用温度 Operating Temperature | 30 milliohms max. | 60 milliohms max. |
| コンタクト接触部仕上 Finish of Connecting Area | - 40 °C to + 105 °C | - 40 °C to + 105 °C |
| 特記事項 Remarks | Tin plating | Tin plating |
| | ● cULus 認証品 ● cULus Recognized | ● cULus 認証品 ● cULus Recognized |

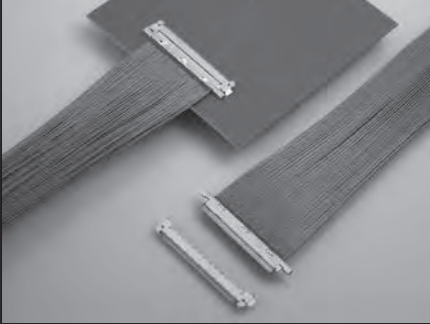
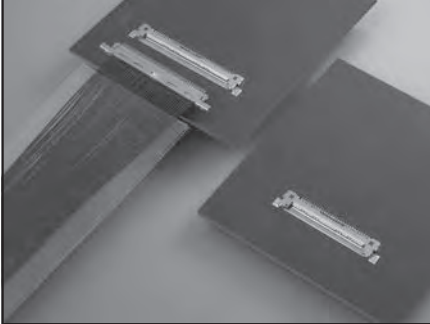

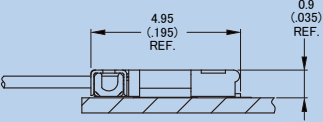
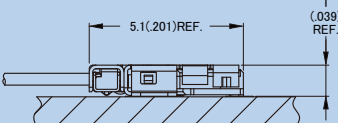
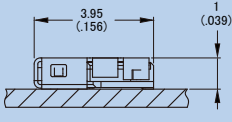
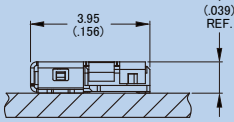
機器内の基板と電線との接続

P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | FI-JZ | FI-JW |
|--|---|---|
| コンタクトピッチ Contact Spacing | 0.25 mm (.010 inch) | 0.3 mm (.012 inch) |
| 接続形態 Connection Styles | ストレート Straight | ストレート Straight |
| 結線方法 Termination Styles | 半田 Solder | 半田 Solder |
| | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| 電線側 Cable Side |  |  |
| | | |
| 外 観 Appearance | | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  |  |
| | 極 数 No. of Contacts | 50 |
| 基板側コネクタ形状 PCB Side Connector Styles | Straight | Straight |
| 適用基板厚 Applicable PCB Thickness | — | — |
| 適用電線 Applicable Wire Size | # 44 to # 46 AWG (Fine coaxial cable) | # 42 to # 44 AWG (Fine coaxial cable) |
| 定格電流 Current Rating | 0.2 Amps | 0.25 Amps |
| 耐電圧 D.W.Voltage | 100 VACrms (1 minute) | 100 VACrms (1 minute) |
| 絶縁抵抗 Insulation Resistance | 100 megohms min. | 100 megohms min. |
| 接触抵抗 Contact Resistance | 70 milliohms max. | 40 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● AWG # 44 ~ # 46 の細線同軸ケーブルに対応 ● レセプタクルはエンボステーピング品で納入 ● Compatible with AWG # 44 to # 46 cables ● Receptacle supplied in embossed tape | <ul style="list-style-type: none"> ● AWG#42 ~ #44 の細線同軸ケーブルに対応 ● レセプタクルはエンボステーピング品可 ● Compatible with AWG # 42 to # 44 cables ● Receptacle available in embossed tape |

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS


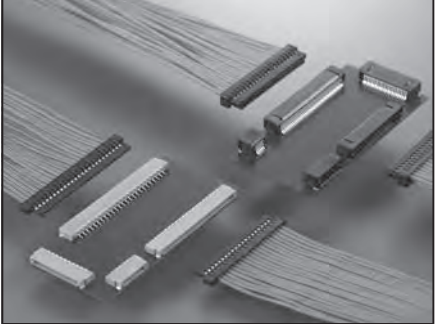
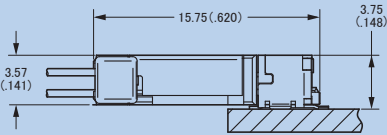
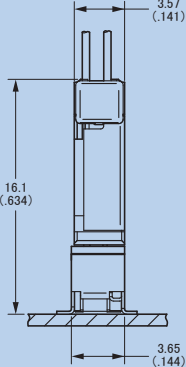
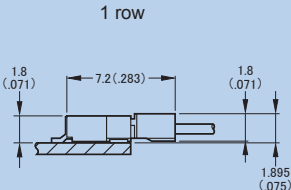
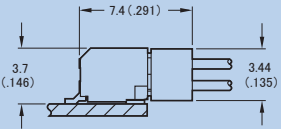
| HJ1 | HD1 / HD2 | FI-Z |
|--|---|---|
| 0.4 mm (.016 inch) | 0.5 mm (.020 inch) | 0.5 mm (.020 inch) |
| ライトアングル Right-angle | ライトアングル Right-angle | ライトアングル Right-angle |
| 半田 Solder | 半田 Solder | — |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
|  |  |  |
|  | <p>HD1</p>  <p>HD2</p>  |  |
| 50 | HD2 Series : 30 / HD1 Series : 40 | 30,40 |
| Right-angle | Right-angle | Right-angle |
| — | — | — |
| #36 to #44AWG (Fine coaxial cable) #34 to #36AWG (Stranded) | # 36 to # 44 AWG (Fine coaxial cable) # 32 to # 36 AWG (Stranded) | # 36 to # 44 AWG (Fine coaxial cable) # 32 to # 36AWG (Stranded) |
| 1 Amps / #34AWG | 1 Amps / # 32 , # 34 AWG | 1 Amps / #32 , #34AWG |
| 250 VACrms (1 minute) | 250 VACrms (1 minute) | 250 VACrms (1 minute) |
| 1000 megohms min. | 1000 megohms min. | 1000 megohms min. |
| 70 milliohms max. | 180 milliohms max. (# 34 AWG) | 180 milliohms max. (# 34 AWG) |
| - 40 °C to + 85 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| Gold plating | Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● eDP1.4 (5.4Gbps) の高速伝送対応 ● AWG # 36 ~ # 44 の細線同軸ケーブルに対応 ● レセプタクルはエンボステーピング品で納入 ● Compatible with eDP1.4(5.4Gbps) high-speed transmission ● Compatible with AWG # 36 to # 44 cables ● Receptacle supplied in embossed tape | <ul style="list-style-type: none"> ● 第一精工株式会社 (I-PEX) 製 CABLINE®-VS ライセンス品 ● Licensed products for the Dai-ichi Seiko Co.Ltd. (I-PEX) CABLINE®-VS | <ul style="list-style-type: none"> ● HD シリーズプラグ用レセプタクルコネクタ ● 第一精工株式会社 (I-PEX) 製 CABLINE®-VS ライセンス品 ● Receptacle connector for HD series plug ● Licensed products for the Dai-ichi Seiko Co.Ltd. (I-PEX) CABLINE®-VS |

機器内の基板と電線との接続

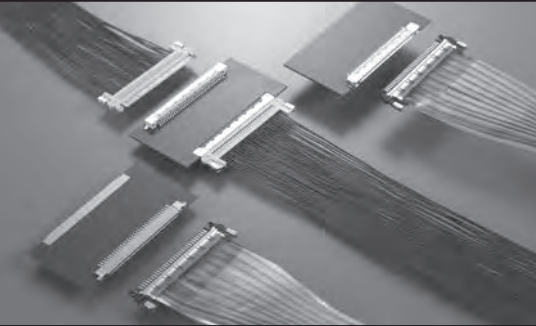
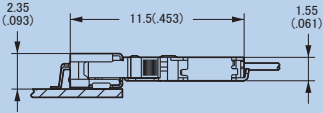
P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

プリント基板用
PCB to Cable

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | FI-R | FI |
|--|---|--|
| コンタクトピッチ Contact Spacing | 0.5 mm (.020 inch) | 1.25 mm (.049 inch) |
| 接続形態 Connection Styles | ストレート・ライトアングル Straight・Right-angle | ライトアングル Right-angle |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp |
| | 基板側 PCB Side | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |   |   |
| 極 数 No. of Contacts | 21, 31, 41, 51 | 1 row : 2 to 6, 8, 10, 15, 20, 25, 30 2 rows : 5 to 21 (every 2 pins), 31, 41 |
| 基板側コネクタ形状 PCB Side Connector Styles | Straight・Right-angle | Right-angle |
| 適用基板厚 Applicable PCB Thickness | — | — |
| 適用電線 Applicable Wire Size | Crimp type : # 30, # 32, #36 AWG (Stranded) Solder type : # 40 AWG (Fine coaxial cable) | # 28 to # 32 AWG (Stranded) |
| 定格電流 Current Rating | 0.8 Amps (Crimp type), 0.7 Amps (Solder type) | 1 Amps |
| 耐 電 圧 D.W.Voltage | 500 VACrms (1 minute) | 500 VACrms (1 minute) |
| 絶縁抵抗 Insulation Resistance | 100 megohms min. | 100 megohms min. |
| 接触抵抗 Contact Resistance | 40 milliohms max. (Crimp type), 50 milliohms max. (Solder type) | 40 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 80 °C | - 40 °C to + 80 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 液晶 TV 用 LCD インターフェースの VESA スタンドコネクタ ● レセプタクルはエンボスレーピング品有 ● VESA standard connector for LCD interface of LCD television ● Receptacle in embossed tape are available | <ul style="list-style-type: none"> ● SMT タイプはエンボスレーピング品有 ● SMT type in embossed tape are available |

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

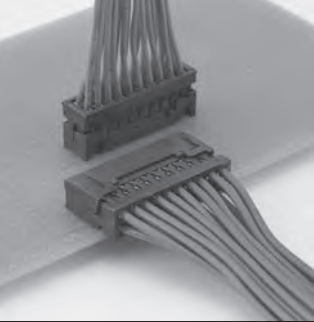
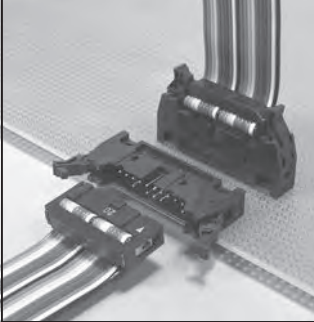
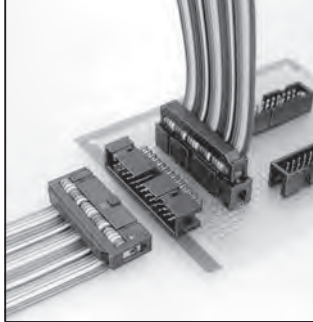
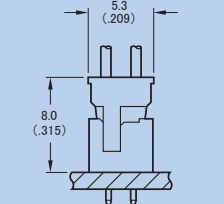
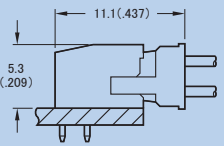
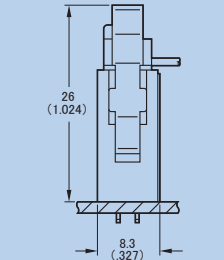
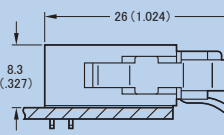
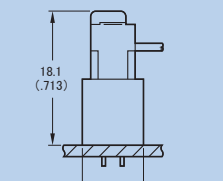
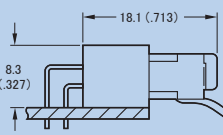
| FI-X [Interface For LCD] | |
|--|--|
| 1.0 mm (.039 inch) | |
| ライトアングル Right - angle | |
| 圧着・半田 Crimp・Solder | |
| 半田 (SMT) Solder (Surface mount) | |
|  | |
| <p>基板側：基板上面実装タイプ PCB side : Board face mount type</p>  | |
| <p>(Note) 上図は組合せの一例です。他の組合せも有ります。 Drawings shown above are some examples of combinations. Other combinations are also available.</p> | |
| 30 | |
| Right - angle or Mid - mount type right - angle | |
| — | |
| # 30 to # 36 AWG (Stranded) or # 32, # 40 AWG (Fine coaxial cable) | |
| 1 Amps | |
| 500 VACrms (1 minute) | |
| 100 megohms min. | |
| 40 milliohms max. | |
| - 40 °C to + 80 °C | |
| Gold plating | |
| <ul style="list-style-type: none"> ● 高速差動伝送に対応 ● レセプタクル強度アップタイプ ● SMTタイプはエンボステーピング品有 ● 金属シェル付き品 ● For high-speed differential transmisson ● Reinforced receptacle type ● SMT type in embossed tape are available ● With metallic shell | |

機器内の基板と電線との接続


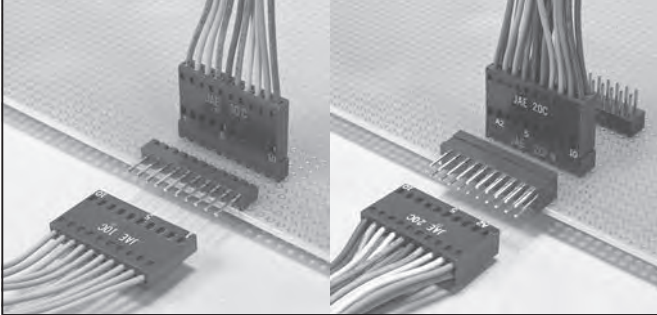
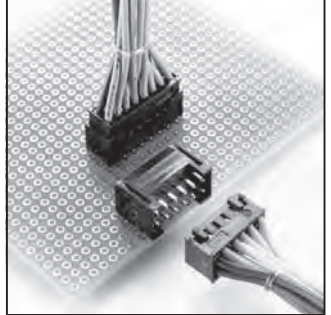
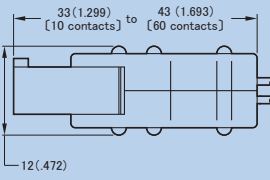
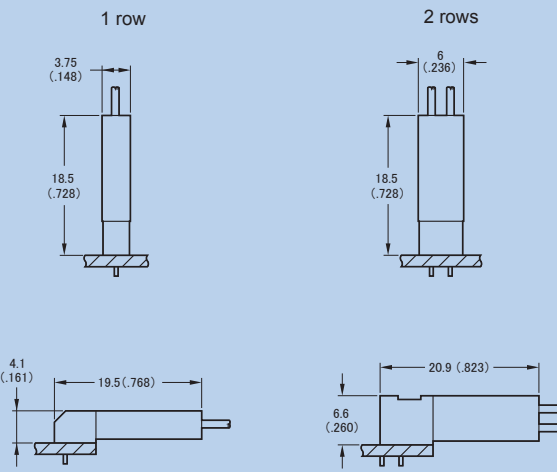
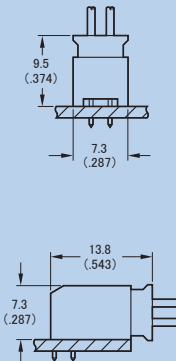
P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

プリント基板用
PCB to Cable

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | LY | PS (Conformed to MIL standard) | PS (Box Type) |
|--|---|---|--|
| コンタクトピッチ Contact Spacing | 2.0 mm (.079 inch) | 2.54 mm (.100 inch) | 2.54 mm (.100 inch) |
| 接続形態 Connection Styles | ストレート・ライトアングル Straight・Right-angle | ストレート・ライトアングル Straight・Right-angle | ストレート・ライトアングル Straight・Right-angle |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp | 圧着・圧着 IDC (F.R.C.)・Crimp |
| | 基板側 PCB Side | 半田 (スルーホール) Solder (Through-hole) | 半田 (スルーホール) Solder (Through-hole) |
| 外 観 Appearance |  |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |   |   | IDC type   |
| 極 数 No. of Contacts | 4 to 44 (double row) | 10, 16, 20, 26, 30, 34, 40, 50, 60 | 10, 16, 20, 26, 30, 34, 40, 50, 60 |
| 基板側コネクタ形状 PCB Side Connector Styles | Straight・Right-angle | Straight・Right-angle | Straight・Right-angle |
| 適用基板厚 Applicable PCB Thickness | 1.6mm (.063 inch) | 1.6 or 2.0mm (.063 or 0.79 inch) | 1.6 mm (.063 inch) |
| 適用電線 Applicable Wire Size | #22 to #30AWG (Stranded) | 1.27 mm (.050 inch) pitch FRC : #28AWG | IDC : 1.27 mm (.050 inch) pitch FRC : #28 AWG Crimp : #22 to #36 AWG (Stranded) |
| 定格電流 Current Rating | 3 Amps | 1 Amps | 1 Amps |
| 耐電圧 D.W.Voltage | 1000 VACrms (1 minute) | 500 VACrms (1 minute) | 500 VACrms (1 minute) |
| 絶縁抵抗 Insulation Resistance | 1000 megohms min. | 1000 megohms min. | 1000 megohms min. |
| 接触抵抗 Contact Resistance | 10 milliohms max. | 20 milliohms max. | 20 milliohms max. |
| 使用温度 Operating Temperature | -40 °C to +85 °C | -55 °C to +105 °C | -55 °C to +105 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold, Tin or Tin alloy plating | Gold plating | Gold plating |
| 特記事項 Remarks | | ● ピンヘッダ側のレバー操作で ロック / イジェクト ● Lever on pin header for locking / ejection | (Note) 仕様は電線側が圧接型の場合 The specifications given above are for IDC-type wire-termination connectors |

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

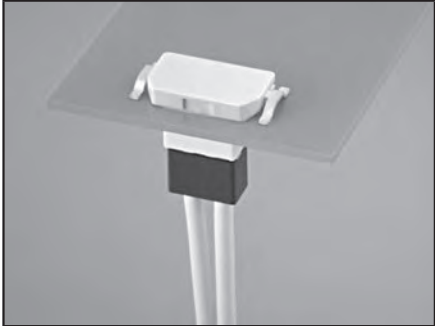
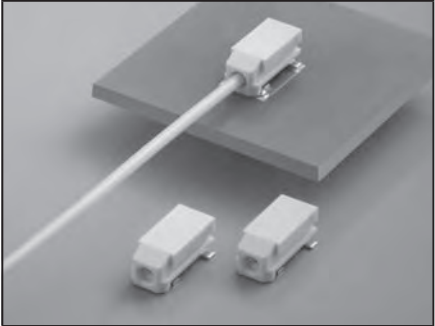
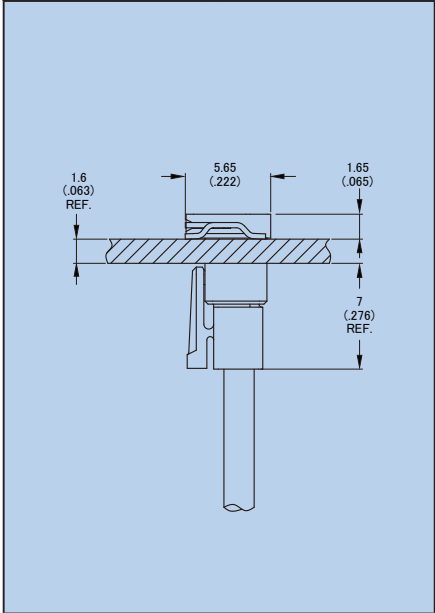
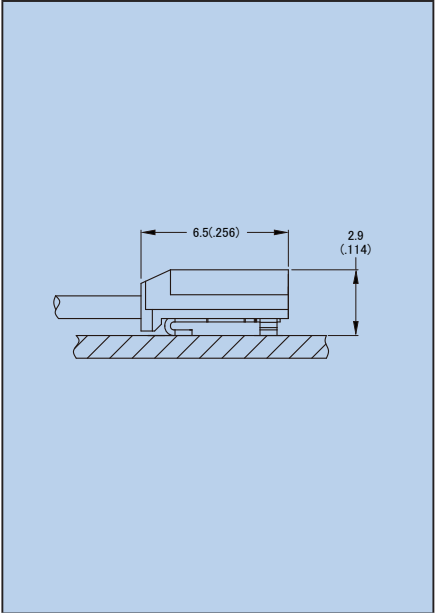
| PS (Socket With key for Discrete Wire) | PS (Open Pin-header to Discrete Wire) | PS-LA |
|--|---|---|
| 2.54 mm (.100 inch) | 2.54 mm (.100 inch) | 2.54 mm (.100 inch) |
| ストレート・ライトアングル Straight・Right-angle | ストレート・ライトアングル Straight・Right-angle | ストレート・ライトアングル Straight・Right-angle |
| 圧着 Crimp | 圧着 Crimp | 圧着 Crimp |
| — | 半田 (スルーホール) Solder (Through-hole) | 半田 (スルーホール) Solder (Through-hole) |
|  |  |  |
|  |  |  |
| 10, 16, 20, 26, 30, 34, 40, 50, 60 | 1 row : 5, 10, 15, 20, 25, 30 2 rows : 10, 16, 20, 26, 30, 34, 40, 50, 60 | 4 to 30 (double row) |
| — | Straight・Right-angle | Straight・Right-angle |
| — | 1.6 mm (.063 inch) | 1.6 mm (.063 inch) |
| # 22 to # 36 AWG (Stranded) | # 22 to # 36 AWG (Stranded) | # 24 to # 28 AWG (Stranded) |
| 3 Amps | 3 Amps | 3 Amps |
| 1000 VACrms (1 minute) | 1000 VACrms (1 minute) | 1000 VACrms (1 minute) |
| 1000 megohms min. | 1000 megohms min. | 1000 megohms min. |
| 10 milliohms max. | 10 milliohms max. | 10 milliohms max. |
| - 25 °C to + 80 °C | - 55 °C to + 85 °C | - 40 °C to + 85 °C |
| Gold plating | Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● 嵌合相手: PS (MIL型) ロックレバー付ピンヘッダ ● 専用ケーブルクランプフード有 (別売) ● Intermatable with PS Series (MIL type) pin header with lock lever ● Clamp hood for dedicated cable(option) | | |

機器内の基板と電線との接続

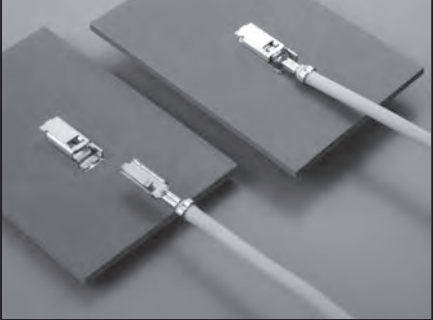
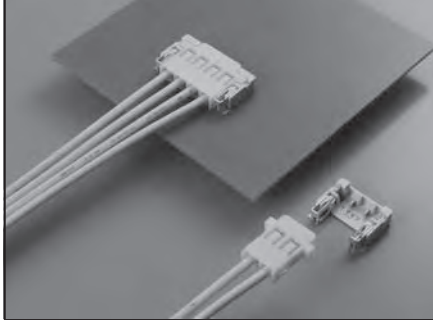

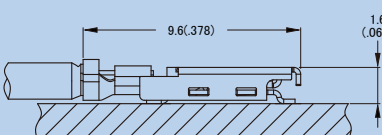
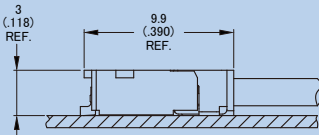
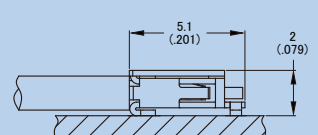
P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

プリント基板用
PCB to Cable

| シリーズ名 Series Prefix | ES3-WF2 | ES3-JF3 |
|--|---|---|
| コンタクトピッチ Contact Spacing | 3 mm (.118 inch) | ————— |
| 接続形態 Connection Styles | 垂直 Vertical | ライトアングル Right-angle |
| 結線方法 Termination Styles | 電線側 Cable Side | ————— |
| | 基板側 PCB Side | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  |  |
| 極 数 No. of Contacts | 2 | 1 |
| 基板側コネクタ形状 PCB Side Connector Styles | Bottom Mount | Right-angle |
| 適用基板厚 Applicable PCB Thickness | 1.6mm (.063 inch) | ————— |
| 適用電線 Applicable Wire Size | #22 to #26AWG | 単線 / Single wire : # 24 to # 26 AWG (Diameter : 0.51mm to 0.4mm) |
| 定格電流 Current Rating | 2 Amps | 2 Amps |
| 耐電圧 D.W.Voltage | 2000 VACrms (1 minute) | ————— |
| 絶縁抵抗 Insulation Resistance | 10 megohms min. | ————— |
| 接触抵抗 Contact Resistance | 30 milliohms max. | 30 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 105 °C | - 40 °C to + 105 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Tin plating | Tin plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● cULus 認証品 ● cULus Recognized | <ul style="list-style-type: none"> ● cULus 認証品 ● cULus Recognized |

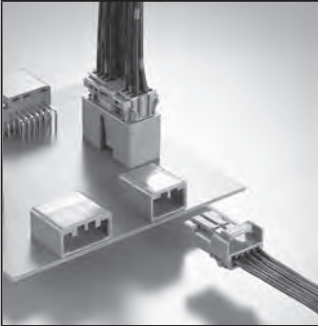
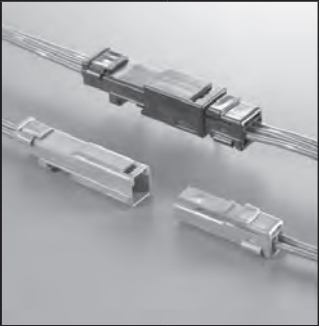

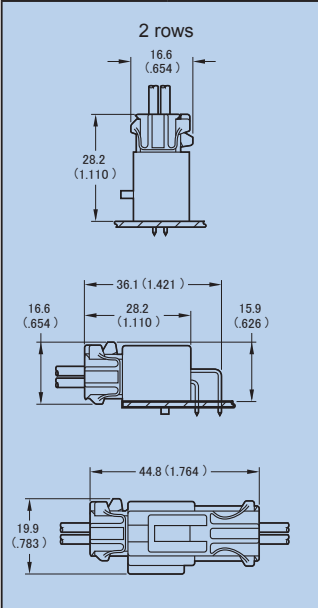
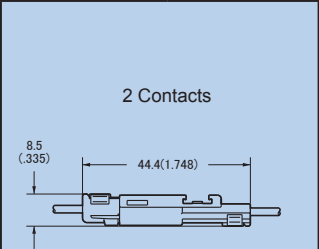
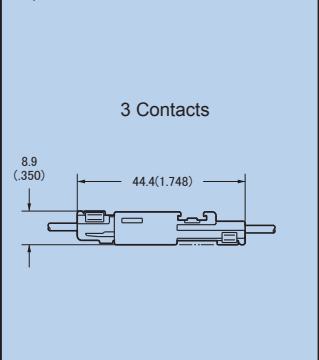
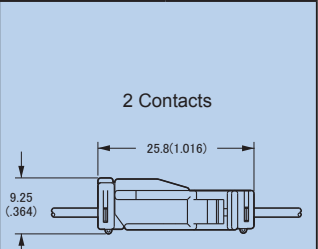
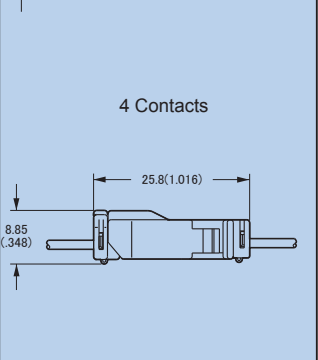
■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| ES5 | ES9 | ES10 |
|---|--|--|
| — | 3 mm (.118 inch) | — |
| ライトアングル Right-angle | ライトアングル Right-angle | ライトアングル Right-angle |
| 圧着 Crimp | 圧着 Crimp | — |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
|  |  |  |
|  <p>9.6(.378) 1.6 (.063)</p> |  <p>3 (.118) REF. 9.9 (.390) REF.</p> |  <p>5.1 (.201) 2 (.079)</p> |
| 1 | 2, 4 | 1 |
| Right-angle | Straight | Right-angle |
| — | — | — |
| # 22 to # 28 AWG | # 22 to # 26 AWG | 単線 / Single wire : #24 to #26 AWG (Diameter : 0.51 to 0.4mm) |
| 4 Amps , 6Amps (#22 AWG) | 4 Amps / 2cont, 3 Amps / 4cont. | 2 Amps |
| — | 1000 VACrms (1 minute) | — |
| 30 milliohms max. | 10 megohms min. | — |
| - 40 °C to + 105 °C | 30 milliohms max. | 30 milliohms max. |
| — | - 40 °C to + 105 °C | - 40 °C to + 105 °C |
| Tin plating | Tin plating | Tin plating |
| <ul style="list-style-type: none"> ● cULus 認証タイプもあり ● cULus Recognized types is available | <ul style="list-style-type: none"> ● cULus 認証タイプもあり ● cULus Recognized type is available | <ul style="list-style-type: none"> ● cULus 認証品 ● cULus Recognized |

機器内の基板と電線との接続

P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| シリーズ名 Series Prefix | IL-AG5 | IL-AG9 | MX19 (Waterproof) |
|--|---|--|--|
| コンタクトピッチ Contact Spacing | 2.5 mm (.098 inch) | 2.5 mm (.098 inch) | 2.5 mm (.098 inch) |
| 接続形態 Connection Styles | ストレート・ライトアングル Straight・Right-angle | ストレート Straight | ストレート Straight |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp | 圧着 Crimp |
| | 基板側 PCB Side | — | — |
| 外 観 Appearance |  |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  | <p>2 Contacts</p>  <p>3 Contacts</p>  | <p>2 Contacts</p>  <p>4 Contacts</p>  |
| 極 数 No. of Contacts | 1 row : 4 (Straight), 5, 6, 7, 10 2 rows : 14, 16, 18, 22, 30 | 2, 3 | 2, 4 |
| 基板側コネクタ形状 PCB Side Connector Styles | Straight・Right-angle | — | — |
| 適用基板厚 Applicable PCB Thickness | 1.6 to 2.4 mm (.063 to .094 inch) | — | — |
| 適用電線 Applicable Wire Size | Cable Type | AV, AVS, AVSS | CAVS |
| | AWG No. | AVS, AVSS | AVSS |
| | # 20 to # 22 Equivalent | # 20 to # 22 Equivalent | # 20 to # 22 Equivalent |
| | # 18 Equivalent | # 18 Equivalent | # 20 Equivalent |
| 定格電流 Current Rating | 3 Amps | 3 Amps | 5 Amps |
| 耐 電 圧 D.W.Voltage | 1000 VACrms (1 minute) | 1000 VACrms (1 minute) | 1000 VACrms (1 minute) |
| 絶 縁 抵 抗 Insulation Resistance | 100 megohms min. | 100 megohms min. | 100 megohms min. |
| 接 触 抵 抗 Contact Resistance | 10 milliohms max. | 10 milliohms max. | 10 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Tin plating | Tin plating | Tin plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 電線中継用有 (5, 6, 7, 16, 22 極) ● Version for cable - to - cable application is available (5, 6, 16, 22 contacts) | | |

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

MX34

2.2 mm
(.087 inch) (Note 1)

ストレート・ライトアングル
Straight・Right-angle

圧着
Crimp

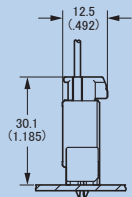
半田 (スルーホール・SMT)
Solder (Through-hole・Surface mount)



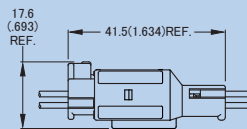
1 row

2 rows

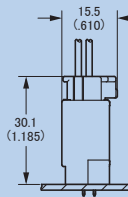
Through-hole type



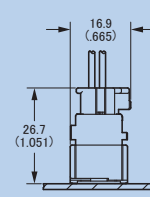
Cable to Cable type



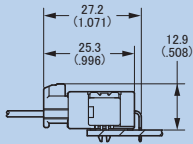
Through-hole type



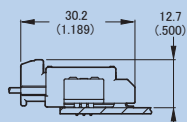
SMT type



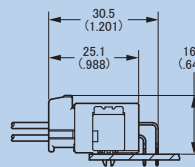
Through-hole type



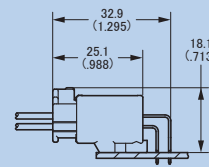
SMT type



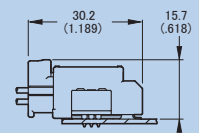
Through-hole type
8 Contacts



Through-hole type
12 to 40 Contacts



SMT type



Through-hole type 1 row : 3, 5, 7 2 rows : 8, 12, 16, 20, 24, 28, 32, 36, 40
Surface mount type 1 row : 3, 5, 7 2 rows : 8, 12, 16, 20, 24, 32, 36 (Note 2)

Straight・Right-angle

1.6 mm (.063 inch)

AVSS

18 to # 22 Equivalent

CAVS

18 to # 20 Equivalent

CHFS

18 Equivalent

CHFUS

18 to # 24 Equivalent

CAN SD

22 Equivalent

3 Amps

1000 VACrms (1 minute)

100 megohms min.

5 milliohms max.

- 40 °C to + 85 °C

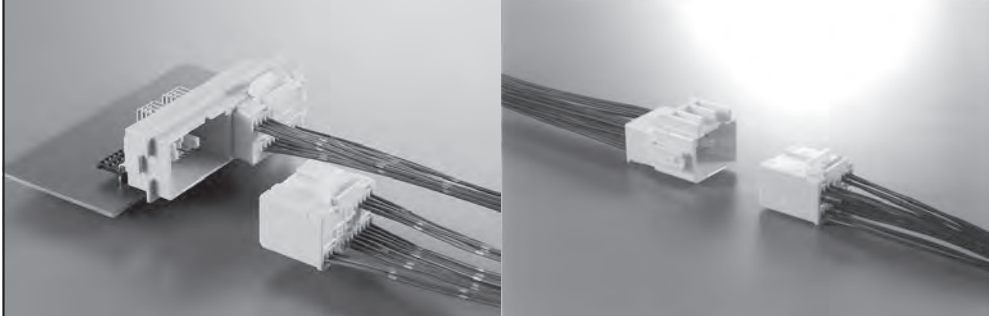
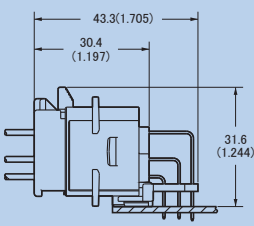
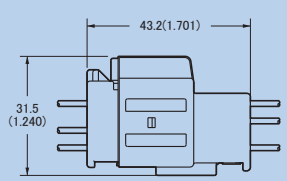
Tin plating

- (Note 1) スルーホールタイプ 8 極のみ 2.4 mm ピッチ
Only 8 - contact through - hole type has 2.4 mm (.094 inch) contact spacing
- (Note 2) スルーホールタイプピンヘッダ : 3, 8 極はライトアングルタイプのみ
SMT タイプピンヘッダのストレートタイプは 12, 20, 32 極のみ
ケーブル中継タイプは、12, 16, 20 極のみ
Through-hole type pin header : 3, 8 contacts are available only in right-angle
Straight SMT pin header only in 12, 20, 32 contacts
Cable to cable type : only in 12, 16, 20 contacts

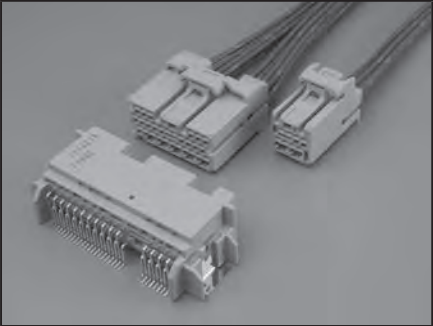
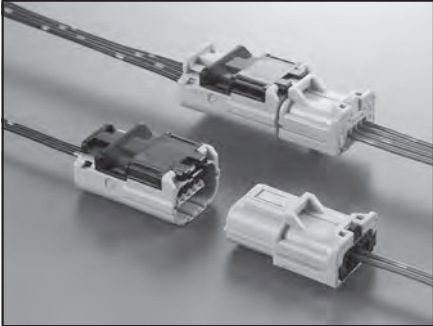

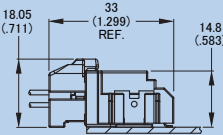
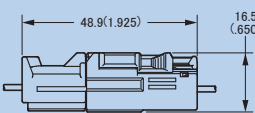
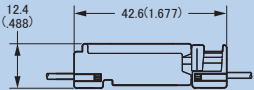
機器内の基板と電線との接続

P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| シリーズ名 Series Prefix | MX17 | | | | |
|---|---|---------------------------------------|--------------------------------------|---------------------------------|--|
| コンタクトピッチ Contact Spacing | Signal : 2.5 mm (.098 inch) 廃棄用 (Activation connector) : 1.25 mm (.049 inch) | | | | |
| 接続形態 Connection Styles | ストレート・ライトアングル Straight・Right-angle | | | | |
| 結線方法 Termination Styles | 電線側 Cable Side | | 圧着 Crimp | | |
| | 基板側 PCB Side | | 半田 (スルーホール) Solder (Through-hole) | | |
| 外観 Appearance |  | | | | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>16 contacts</p> </div> <div style="text-align: center;">  <p>28 Contacts</p> </div> </div> | | | | |
| 極数 No. of Contacts | Board to Cable : 27 (Signal) + 5 (廃棄用 / Activation connector) (Note) Cable to Cable : 16, 28 | | | | |
| 基板側コネクタ形状 PCB Side Connector Styles | Right-angle | | | | |
| 適用基板厚 Applicable PCB Thickness | 1.6 mm (.063 inch) | | | | |
| 適用電線 Applicable Wire Size | Socket | | Pin (Cable to Cable) | | |
| | AVSS fTA # 20 Equivalent | AVSS, CAVS # 20 to # 22 Equivalent | AVS # 22 Equivalent | AVSS # 18 to # 22 Equivalent | AVSS fTA, AVSSX fTA # 19 to # 20 Equivalent |
| AWG No. | 3 Amps | | | | |
| 定格電流 Current Rating | 1000 VACrms (1 minute) | | | | |
| 耐電圧 D.W.Voltage | 100 megohms min. | | | | |
| 絶縁抵抗 Insulation Resistance | 5 milliohms max. | | | | |
| 接触抵抗 Contact Resistance | - 40 °C to + 85 °C | | | | |
| 使用温度 Operating Temperature | Tin or Gold plating | | | | |
| コンタクト接触部仕上 Finish of Connecting Area | (Note) 最大 61 極 (信号 56 + 廃棄 5) まで可能 Maximum 61 positions are possible (For signal : 56 pins + For disposal : 5 pins) | | | | |
| 特記事項 Remarks | | | | | |

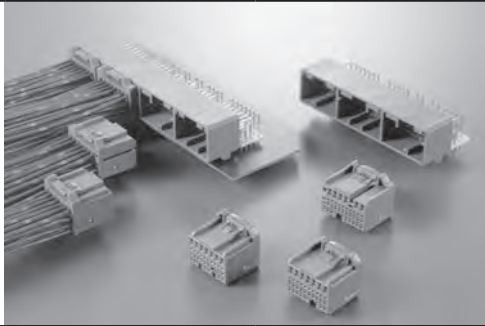
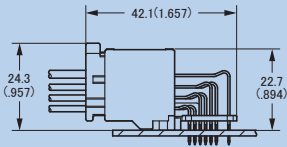
自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| MX57A | MX36 (Waterproof) | MX37 |
|--|---|--|
| 2.2 mm (.087 inch) | 2.5 mm (.098 inch) | 2.2 mm (Note) (.087 inch) |
| ライトアングル Right-angle | ストレート Straight | ストレート Straight |
| 圧着 Crimp | 圧着 Crimp | 圧着 Crimp |
| 半田 (SMT) Solder (Surface mount) | — | — |
|  |  |  |
|  |  |  |
| PCB Side (Pin) : 22 (20 / Signal terminal + 2 / Diagnosis terminal) 30 (26 / Signal terminal + 4 / Diagnosis terminal) , Cable Side (Socket) : 8, 28 (Note 1) | 2, 4 | 4 |
| Right-angle 1.6 mm (.063 inch) | — | — |
| AVSS 0.3, AVSS 0.5, AVSSC 0.5f, AVSSX 0.5f, TVSSX 0.5f | AVSS, AVSSC, AVSSX, TVSSX | AVSS, AVSSC, AVSSX, TVSSX |
| — | # 20 Equivalent 3 Amps | # 20 Equivalent 3 Amps |
| 1000 VACrms (1 minute) 100 megohms min. | 1000 VACrms (1 minute) 100 megohms min. | 1000 VACrms (1 minute) 100 megohms min. |
| Signal terminal : 5 milliohms max. Diagnosis terminal : 20milliohms max. Short terminal : 50milliohms max. | Signal : 5 milliohms max. Short terminal : 60 milliohms max. | Signal : 5 milliohms max. Short terminal : 60 milliohms max. |
| - 40 °C to + 80 °C | - 40 °C to + 120 °C | - 40 °C to + 105 °C |
| Tin plating (Note 2) | Gold plating | Gold plating |
| (Note 1) ソケット側コンタクト構成については、 別途お問い合わせ下さい。 Please contact us for socket side terminal combination (Note 2) 30 極ピンヘッダは、ランダム金めっきの 設定可能 30-pole pin connector : Optional gold plated contacts are available | | (Note) コンタクト No.1-2 間、3-4 間は 2.2mm ピッチ、 No.2-3 間は 6mm ピッチとなります。 Spacing : 2.2 mm between contacts No. 1 and 2, No. 3 and 4, 6 mm between No. 2 and 3 |


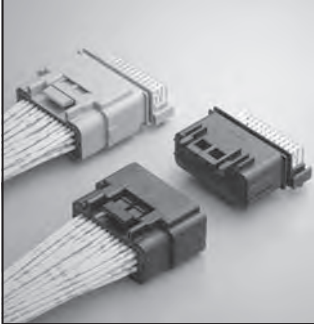
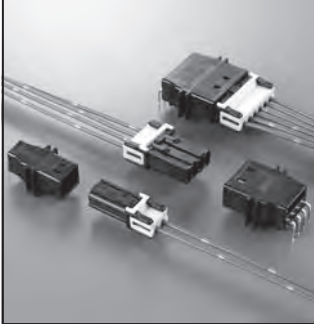
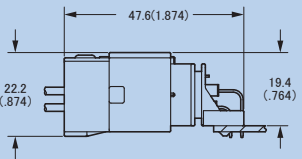
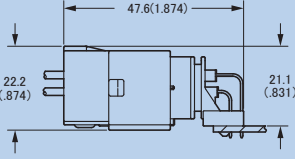
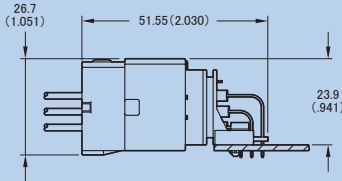
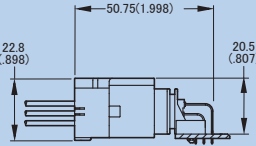
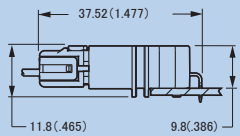
機器内の基板と電線との接続

P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| シリーズ名 Series Prefix | | MX31 | | | |
|--|-------------------|---|---|-------------------------|--------------------------|
| コンタクトピッチ Contact Spacing | | Signal : 2.2 mm (.087 icch) Power : 3.2 mm (.126 inch) | | | |
| 接続形態 Connection Styles | | ライトアングル Right-angle | | | |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp | | | |
| | 基板側 PCB Side | 半田 (スルーホール) Solder (Through-hole) | | | |
| 外 観 Appearance | |  | | | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | |  | | | |
| 極 数 No. of Contacts | | PCB Side (Pin) : 70, 98, 104, 135 Cable Side (Socket) : 31, 34, 35 (2 types) | | | |
| 基板側コネクタ形状 PCB Side Connector Styles | | Right-angle | | | |
| 適用基板厚 Applicable PCB Thickness | | 1.6 mm (.063 inch) | | | |
| 適用電線 Applicable Wire Size | Cable Type | AVSS, CAVS, CAVUS | CHFUS | CHFS | CPEX |
| | AWG No. | Signal : # 20 to # 22 Equivalent Power : # 16 to # 22 Equivalent | Signal : # 20 to # 24 Equivalent Power : # 16 to # 22 Equivalent | Power : # 18 Equivalent | Signal : # 24 Equivalent |
| 定格電流 Current Rating | | Signal : 2.2 Amps Power : 5.7 Amps | | | |
| 耐電圧 D.W.Voltage | | 1000 VACrms (1 minute) | | | |
| 絶縁抵抗 Insulation Resistance | | 100 megohms min. | | | |
| 接触抵抗 Contact Resistance | | Signal : 8 milliohms max. Power : 5 milliohms max. | | | |
| 使用温度 Operating Temperature | | - 40 °C to + 85 °C | | | |
| コンタクト接触部仕上 Finish of Connecting Area | | Tin or Gold plating | | | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● ソケットは、ピンヘッダ 1 個に対し複数の組合せ ● 基板側 70/135 極には嵌合部形状が異なる誤組合せ防止タイプ有り ● Multiple socket mated with a single pin header ● 70 and 135 contacts right-angle pin headers are available polarized version | | | |

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| MX23A (Waterproof) | | MX47 (Waterproof) | | MX44 (Waterproof) | |
|--|-------------------------|--|--|---|--|
| 2.5 mm (.098inch) | | 2.5 mm (.098inch) | | 3.5 mm (.138inch) | |
| ライトアングル Right-angle | | ライトアングル Right-angle | | ライトアングル Right-angle | |
| 圧着 Crimp | | 圧着 Crimp | | 圧着 Crimp | |
| 半田 (スルーホール) Solder (Through-hole) | | 半田 (スルーホール) Solder (Through-hole) | | 半田 (スルーホール) Solder (Through-hole) | |
|  | |  | |  | |
| <p>2 rows Standard type</p>  <p>2 rows Reverse type</p>  <p>3 rows Standard type</p>  | |  | |  | |
| 2 rows : 12, 18, 26, 34, 40 3 rows : 36 | | 39 | | 2, 4, 6 | |
| Right-angle | | Right-angle | | Right-angle | |
| 1.6 mm (.063 inch) | | 1.6 mm (.063 inch) | | 1.6 mm (.063 inch) | |
| AVSS (Note 1) | AVS (Note 1) | AVSS (Note 1) | | AVSS, AESSX | |
| # 16 to # 22 Equivalent | # 18 to # 20 Equivalent | # 16 to # 22 Equivalent | | # 20 to # 22 Equivalent | |
| 3 Amps (Note 2) | | 3 Amps (Note 2) | | 3 Amps | |
| 1000 VACrms (1 minute) | | 1000 VACrms (1 minute) | | 1000 VACrms (1 minute) | |
| 100 megohms min. | | 100 megohms min. | | 100 megohms min. | |
| 5 milliohms max. | | 5 milliohms max. | | 5 milliohms max. | |
| - 40 °C to + 125 °C | | - 40 °C to + 125 °C | | - 40 °C to + 125 °C | |
| Tin plating | | Tin plating | | Tin plating | |
| (Note 1) 使用電線の位置指定有り Position of using wire is specified (Note 2) 使用条件により 7A まで対応可能、詳細は別途お問い合わせ下さい。 Configuration for 7A current is possible, please consult us for details | | <ul style="list-style-type: none"> ● 高密度型 / キー違い品有 ● High density / Different Keying available (Note 1) 使用電線の位置指定有り Position of using wire is specified (Note 2) 使用条件により 7A まで対応可能。 詳細は別途お問い合わせ下さい。 Configuration for 7A current is possible, please consult us for details | | | |

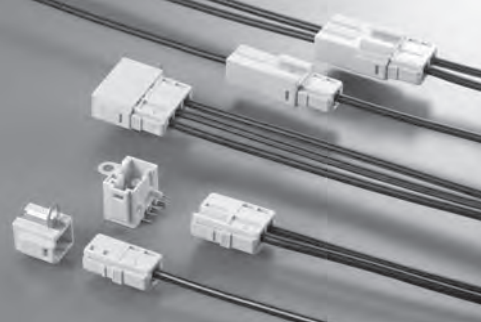
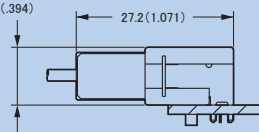
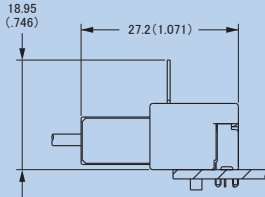
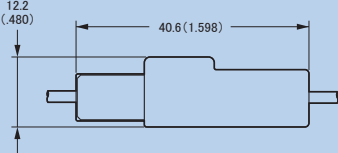
自動車用
For Automotive

機器内の基板と電線との接続

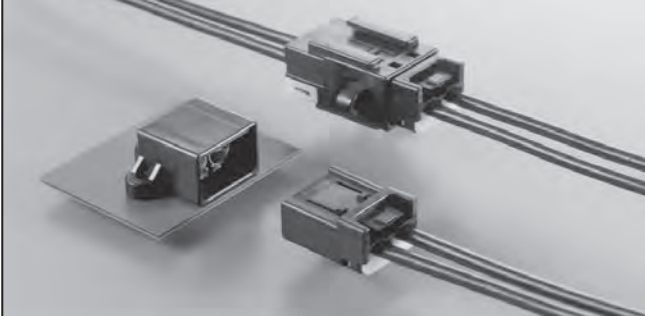
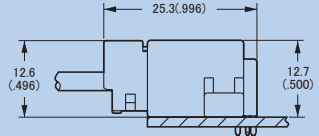
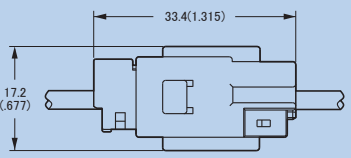
P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

自動車用
For Automotive

| シリーズ名 Series Prefix | CE2 |
|---|---|
| 適用周波数 Applicable Frequency Range | 75 Ω Type : DC to 1 GHz / 50 Ω Type : DC to 1.5 GHz |
| 接続形態 Connection Styles | ストレート・ライトアングル Straight・Right-angle |
| 結線方法 Termination Styles | 圧着 Crimp |
| | 半田 (スルーホール) Solder (Through-hole) |
| 電線側 Cable Side | |
| 基板側 PCB Side | |
| 外 観 Appearance |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Bracket : Sideway type</p>  </div> <div style="text-align: center;"> <p>Bracket : Upward type</p>  </div> </div> <div style="text-align: center; margin-top: 20px;">  </div> |
| 極 数 No. of Contacts | Coaxial : 1, 2 Coaxial + Power : 2 (Coaxial / 1, Power / 1), 3 (Coaxial / 2, Power / 1) (Note 1) |
| 基板側コネクタ形状 PCB Side Connector Styles | Right-angle |
| 適用基板厚 Applicable PCB Thickness | 1.6 mm (.063 inch) |
| 適用電線 Applicable Wire Size | Coaxial (Note 2) : 75 Ω Type / 1.5 C Equivalent, 50 Ω Type / 1.5 DS-QEHV or 1.5 D-2V Equivalent Power : HAV # 20 AWG Equivalent |
| 耐 電 圧 D.W.Voltage | 1000 VACrms (1 minute) |
| 絶 縁 抵 抗 Insulation Resistance | 100 megohms min. |
| 接 触 抵 抗 Contact Resistance | Coaxial inner contact : 25 milliohms max. Coaxial outer contact : 30 milliohms max. Power : 5 milliohms max. |
| 挿入損失 Insertion Loss | 75 Ω Type : 0.3 dB max. (DC to 1GHz) / 50Ω Type : 1.0 dB max. (DC to 1.5 GHz) |
| 電圧定在波比 Voltage Standing Wave Ratio | 75 Ω Type : 1.5 max. (DC to 1GHz) / 50Ω Type : 1.8 max. (DC to 1.5 GHz) |
| 使用温度 Operating Temperature | 75 Ω Type : -30 °C to +70 °C / 50Ω Type : -30 °C to +105 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Coaxial inner contact : Gold plating Coaxial outer contact : Tin plating Power contact : Tin plating |
| 特記事項 Remarks | (Note 1) 3 極は 75Ω タイプのみ 3 contacts version is an only 75Ω type (Note 2) 詳細は別途お問い合わせ下さい。 Please consult us for details |

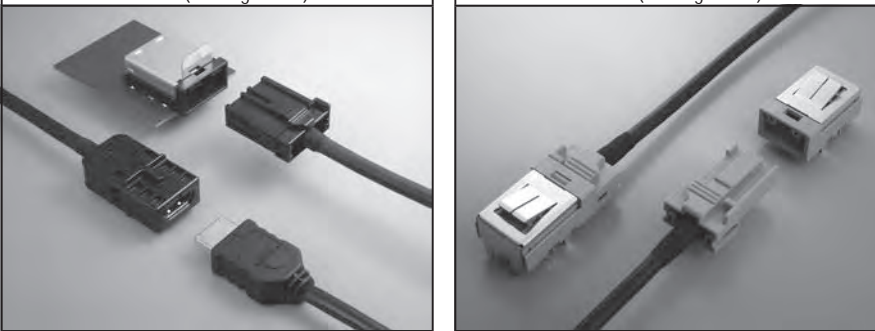
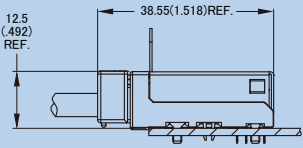
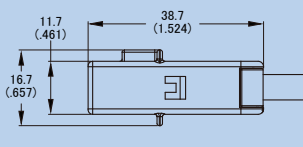
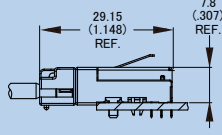
自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| シリーズ名 Series Prefix | | MX25 | |
|--|-------------------|--|--|
| 適用周波数 Applicable Frequency Range | | Board to Cable : DC to 3GHz Cable to Cable : DC to 6GHz | |
| 接続形態 Connection Styles | | ストレート・ライトアングル Straight・Right-angle | |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp | |
| | 基板側 PCB Side | 半田 (スルーホール) Solder (Through-hole) | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | |   | |
| 極 数 No. of Contacts | | 2 | |
| 基板側コネクタ形状 PCB Side Connector Styles | | Right-angle | |
| 適用基板厚 Applicable PCB Thickness | | 1.6 mm (.063 inch) | |
| 適用電線 Applicable Wire Size | | 1.5 D Equivalent (Note) | |
| 耐 電 圧 D.W.Voltage | | 1000 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | | 100 megohms min. | |
| 接触抵抗 Contact Resistance | | Inner contact : 5 milliohms max. Outer contact : 30 milliohms max. | |
| 挿入損失 Insertion Loss | | Board to Cable : 0.4 dB max. (DC to 2.5 GHz) 0.5 dB max. (2.5 GHz to 3 GHz) Cable to Cable : 0.3 dB max. (DC to 2.5 GHz) 0.5 dB max. (2.5 GHz to 6 GHz) | |
| 電圧定在波比 Voltage Standing Wave Ratio | | Board to Cable : 1.4 max. (DC to 2.5 GHz) 1.5 max. (2.5 GHz to 3 GHz) Cable to Cable : 1.3 max. (DC to 2.5 GHz) 1.5 max. (2.5 GHz to 6 GHz) | |
| 使用温度 Operating Temperature | | -40 °C to +85 °C | |
| 特記事項 Remarks | | (Note) 詳細は別途お問い合わせ下さい。 Please consult us for details | |

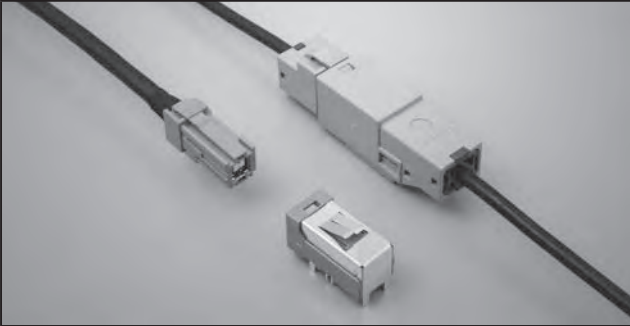
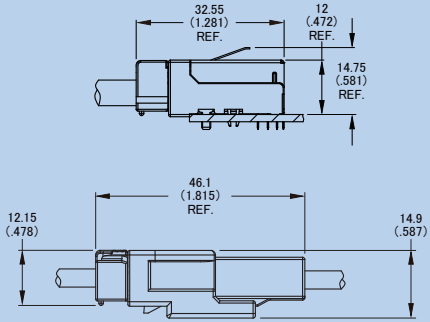
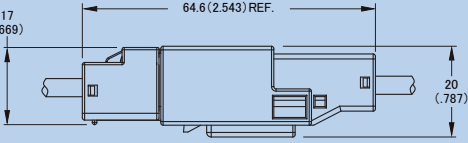
機器内の基板と電線との接続

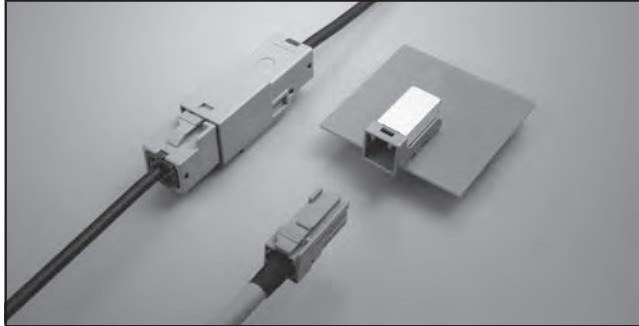
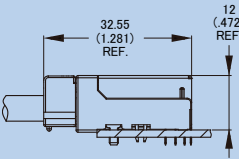
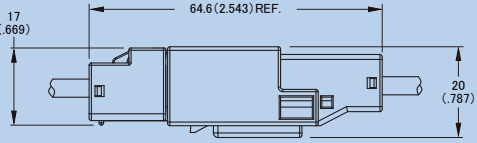
P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| シリーズ名 Series Prefix | MX50 (HDMI Type E) MX53 (HDMI Type A) | MX48 (LVDS) |
|---|---|---|
| コンタクトピッチ Contact Spacing | MX50 : 1.5 mm (.059inch) MX53 : 1.0 mm (.039inch) | 2.0 mm (.079inch) |
| 接続形態 Connection Styles | ライトアングル Right-angle | ライトアングル Right-angle |
| 結線方法 Termination Styles | 半田 Solder | 半田 Solder |
| | 半田 (スルーホール) Solder (Through-hole) | 半田 (スルーホール) Solder (Through-hole) |
| 外 観 Appearance |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | <p style="text-align: center;">MX50</p>  <p style="text-align: center;">MX53</p>  |  |
| 極 数 No. of Contacts | 19 | 2 |
| 基板側コネクタ形状 PCB Side Connector Styles | Right-angle | Right-angle |
| 適用基板厚 Applicable PCB Thickness | 1.6 mm (.063 inch) | 1.6 mm (.063 inch) |
| 適用電線 Applicable Wire Size | 電線側はハーネス品にて販売 Cable-harnessed connectors are standard | 電線側はハーネス品にて販売 Cable-harnessed connectors are standard |
| 定格電流 Current Rating | 0.5 Amps | — |
| 耐電圧 D.W.Voltage | 500 VACrms (1 minute) (Unmated) | 1000 VACrms (1 minute) |
| 絶縁抵抗 Insulation Resistance | 100 megohms min. (Unmated) | 100 megohms min. |
| 接触抵抗 Contact Resistance | Contact : 30 milliohms max. (Change from initial) Shell : 50 milliohms max. (Change from initial) | 8 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● MX50 : HDMI Type E (基板対電線用) ● MX53 : HDMI Type A 中継タイプ ● MX50 : HDMI Type E (Board to cable type) ● MX53 : HDMI Type A relay receptacle <p>* HDMI は、HDMI Licensing, LLC の登録商標 * HDMI is a trademark of HDMI Licensing, LLC</p> | |

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

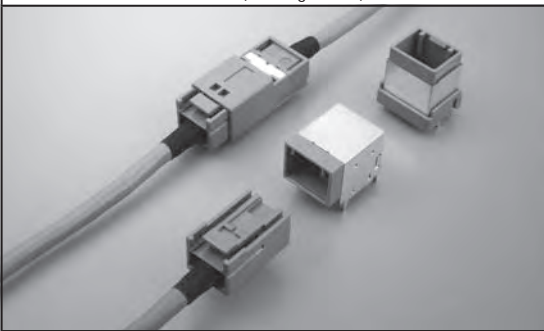

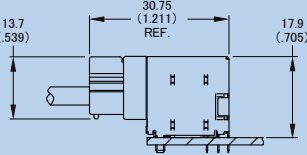
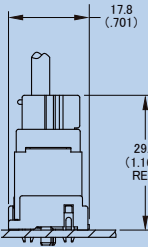
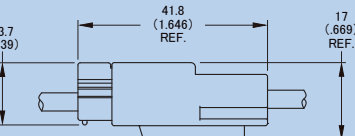
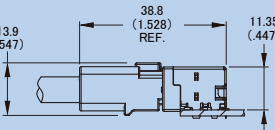
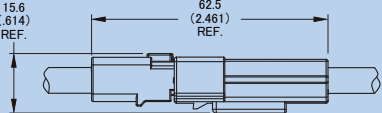
| MX49A / MX49C (Water Proof) (LVDS) |
|--|
| 2.0 mm (.079inch) |
| ストレート・ライトアングル Straight・Right-angle |
| 半田 Solder |
| 半田(スルーホール) Solder (Through-hole) |
|  |
| <p>MX49 A</p>  <p>MX49C (Water Proof Type)</p>  |
| 4 |
| Right-angle |
| 1.6 mm (.063 inch) |
| 電線側はハーネス品にて販売 Cable-harnessed connectors are standard |
| 1000 VACrms (1 minute, mated) |
| 100 megohms min. (mated) |
| 8 milliohms max. |
| MX49A: -40 °C to +85 °C MX49C: -40 °C to +100 °C |
| Gold plating |
| <ul style="list-style-type: none"> ● MX49A: 基板対電線 / ケーブル中継タイプ ● MX49C: 防水型ケーブル中継タイプ ● MX49A: Board to Cable / Cable to Cable ● MX49C: Waterproof・Cable to Cable |

| MX49 / MX49B / MX49CB (Water Proof) (USB 2.0) |
|--|
| 2.0 mm (.079inch) |
| ストレート・ライトアングル Straight・Right-angle |
| 半田 Solder |
| 半田(スルーホール・SMT) Solder (Through-hole・Surface mount) |
|  |
| <p>MX49 / MX49B</p>  <p>MX49CB (Water Proof Type)</p>  |
| 4 |
| Right-angle |
| 1.6 mm (.063 inch) |
| 電線側はハーネス品にて販売 Cable-harnessed connectors are standard |
| 1000 VACrms (1 minute, mated) |
| 100 megohms min. (mated) |
| 8 milliohms max. |
| -40 °C to +85 °C |
| Gold plating |
| <ul style="list-style-type: none"> ● MX49: 基板対電線・太線タイプ ● MX49B: 基板対電線・細線タイプ ● MX49CB: 防水型ケーブル中継タイプ ● MX49: Board to Cable / For thick cable ● MX49B: Board to Cable / For thin cable ● MX49CB: Waterproof Cable to Cable |




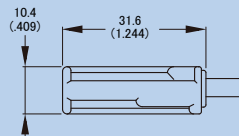
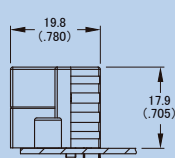
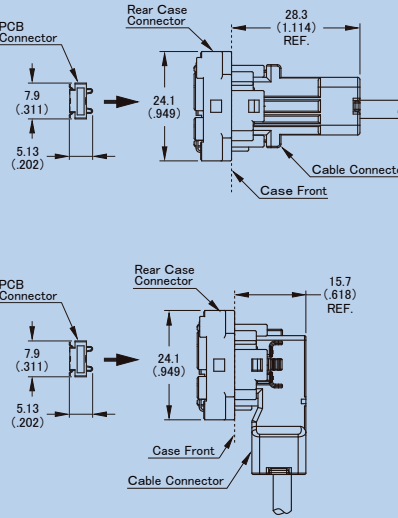
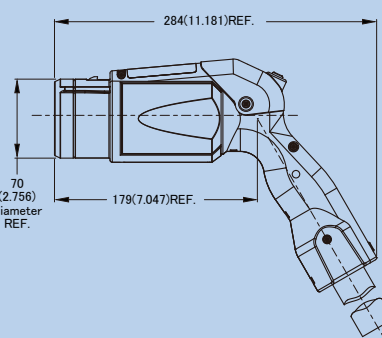
機器内の基板と電線との接続

P.C.BOARD TO CABLE APPLICATION INSIDE EQUIPMENT

自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| シリーズ名 Series Prefix | MX39 / MX39B / MX39C / MX39D (USB 2.0) | MX62 (USB 3.0) |
|--|--|--|
| コンタクトピッチ Contact Spacing | 2.2 mm (.087inch) | 2.0 mm (.079 inch) |
| 接続形態 Connection Styles | ストレート・ライトアングル Straight・Right-angle | ストレート・ライトアングル Straight・Right-angle |
| 結線方法 Termination Styles | 半田 Solder | 半田 Solder |
| 外 観 Appearance |  |  |
| | | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | Receptacle : MX39 / MX39C  Receptacle : MX39  MX39B / MX39D  |   |
| | 極 数 No. of Contacts | 4 |
| 基板側コネクタ形状 PCB Side Connector Styles | Right-angle / Straight | Right-angle |
| 適用基板厚 Applicable PCB Thickness | 1.6 mm (.063 inch) | 1.6 mm (.063 inch) |
| 適用電線 Applicable Wire Size | 電線側はハーネス品にて販売 Cable-harnessed connectors are standard | ハーネス品にて販売 Cable-harnessed connectors are standard |
| 定格電流 Current Rating | — | Power / GND : DC 2.2Amps Others : DC 0.25Amps |
| 耐電圧 D.W.Voltage | 1000 VACrms (1 minute, mated) | 1000 VACrms (1 minute, mated) |
| 絶縁抵抗 Insulation Resistance | 100 megohms min. (mated) | 100 megohms min. (mated) |
| 接触抵抗 Contact Resistance | 8 milliohms max. | 8 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● MX39 : 基板実装用レセプタクル MX39C : ボス付き基板実装用レセプタクル (ライトアングルのみ) MX39B : プラグハーネス/中継用レセプタクル (電線細線タイプ) MX39D : プラグハーネス/中継用レセプタクル (電線太線タイプ) ● MX39 : On-board receptacle connector MX39C : On-board receptacle connector with boss (Only right-angle) MX39B : Plug harness / Relay receptacle harness (For thin cable) MX39D : Plug harness / Relay receptacle harness (For thick cable) | |



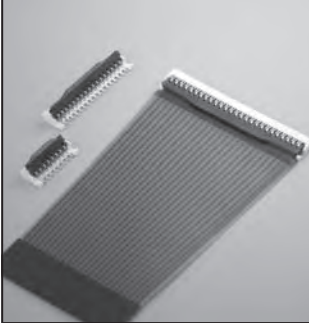
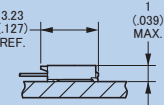
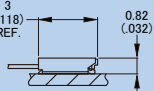
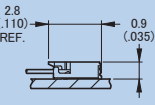
自動車用コネクタ・AUTOMOTIVE ELECTRONICS CONNECTORS

| MX45 / MX45A (USB 2.0) | MX55 | KW1 (CHademo Specifications) |
|---|---|---|
| <p>MX45 : ストレート・MX45A : ライトアングル MX45 : Straight・MX45A : Right-angle</p> | <p>2.2 mm (.087inch)</p> <p>ストレート・ライトアングル Straight・Right-angle</p> | <p>—</p> |
| <p>半田 Solder</p> | <p>圧着 Crimp</p> | <p>—</p> |
| <p>半田 (スルーホール) Solder (Through-hole)</p> | <p>半田 (SMT) Solder (Surface mount)</p> | <p>—</p> |
|  |  |  |
| <p>MX45</p>  <p>MX45A</p>  |  |  |
| <p>MX45 : 4 / MX45A : 4×2 rows</p> | <p>Cable side : 4 PCB side : 6</p> | <p>Power : 2 / Signal : 7</p> |
| <p>Right-angle</p> | <p>Straight</p> | <p>—</p> |
| <p>1.2mm (.047 inch)</p> | <p>1.6 mm (.063 inch) min.</p> | <p>—</p> |
| <p>電線側はハーネス品にて販売 Cable -harnessed connectors are standard</p> | <p>電線側はハーネス品にて販売 Cable -harnessed connectors are standard</p> | <p>ハーネス品にて販売 Cable -harnessed connectors are standard</p> |
| <p>500 VACrms (1 minute)</p> | <p>500 VACrms (1 minute, mated)</p> | <p>Power : 125 Amps / Signal : 2 Amps</p> |
| <p>1000 megohms min.</p> | <p>100 megohms min. (Mated)</p> | <p>2200 VACrms (1 minute)</p> |
| <p>30 milliohms max.</p> | <p>16 milliohms max.</p> | <p>100 megohms min.</p> |
| <p>- 40 °C to + 85 °C</p> | <p>- 40 °C to + 85 °C</p> | <p>- 10 °C to + 40 °C</p> |
| <p>Gold plating</p> | <p>Gold plating</p> | <p>Silver plating</p> |
| <ul style="list-style-type: none"> ● USB Type A コネクタ対応レセプタクル ● MX45 : ケーブルハーネスタイプ ● MX45A : 基板実装タイプ ● ケーブルハーネスの反対側は MX49B コネクタ ● USB Type A receptacle ● MX45 : Cable harness type ● MX45A : Board mount type ● The other end of cable harness has MX49B Series | <ul style="list-style-type: none"> ● 車載用デジタルカメラ対応コネクタ ● Connectors for automotive digital camera applications | <ul style="list-style-type: none"> ● 電気自動車急速充電器用コネクタ ● Electric vehicle quick charger connector |



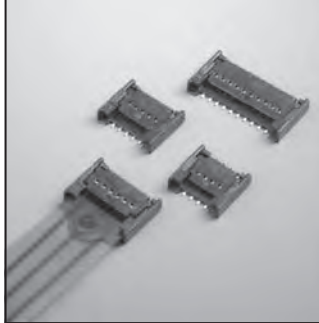
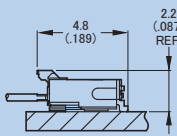
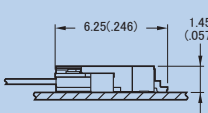
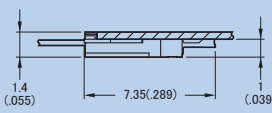
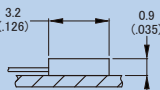
機器内の基板と FPC / FFC との接続

P.C.BOARD TO FPC / FFC APPLICATION INSIDE EQUIPMENT

■ プリント基板用コネクタ・P.C.BOARD CONNECTORS

| シリーズ名 Series Prefix | FF08 (ZIF Type) | FR02 (LIF Type) | FB10 (ZIF Type) |
|--|--|---|--|
| 適用 FPC ピッチ Applicable FPC Conductor Spacing | 0.2 mm (.008 inch) | 0.2 mm (.008 inch) | 0.3 mm (.012 inch) |
| 接続形態 Connection Styles | 平行 Parallel | 平行 Parallel | 平行 Parallel |
| 結線方法 Termination Styles | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  |  |  |
| 極 数 No. of Contacts | 25, 29, 41, 51, 71, 81 | 23, 41, (45), 51, 61 (Note) | 11, 13, 15, (19), 21, 27, 31, 33, (35), (39), 41, 45, 51, 61 (Note) |
| コネクタ形状 Connector Styles | Right-angle | Right-angle | Right-angle |
| 適用基板厚 Applicable PCB Thickness | — | — | — |
| 適用 FPC 厚 Applicable FPC Thickness | 0.15 mm (.0059 inch) with reinforcement | 0.2 mm (.008 inch) with reinforcement | 0.2 mm (.008 inch) with reinforcement |
| 定格電流 Current Rating | 0.3 Amps | 0.25 Amps | 0.35 Amps |
| 耐電圧 D.W.Voltage | 250 VACrms(1 minute) | 250 VACrms(1 minute) | 250 VACrms(1 minute) |
| 絶縁抵抗 Insulation Resistance | 100 megohms min. | 50 megohms min. | 100 megohms min. |
| 接触抵抗 Contact Resistance | 70 milliohms max. | 奇数極 / Odd Pin Count : 120 milliohms max. 偶数極 / Even Pin Count : 100 milliohms max. | 80 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 下側接触構造 ● エンボステーピング品で納入 ● Lower-side contact ● Embossed-taped supply | <ul style="list-style-type: none"> ● 上下両面接触構造 ● エンボステーピング品で納入 ● Top-and-bottom surface connection type ● Embossed-taped supply <p>(Note) () 内の極数については別途お問い合わせ下さい。 Please contact us for no. of contacts in parenthesis</p> | <ul style="list-style-type: none"> ● 下側接触構造 ● エンボステーピング品可 ● Lower-side contact ● Embossed-taped supply optionally available <p>(Note) () 内の極数については別途お問い合わせ下さい。 Please contact us for no. of contacts in parenthesis</p> |

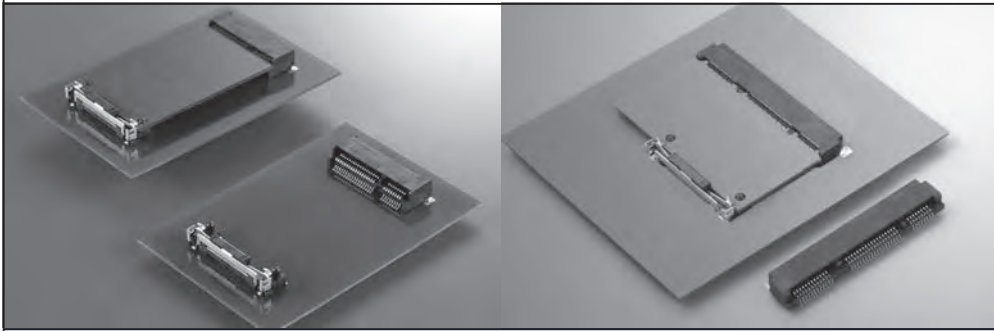
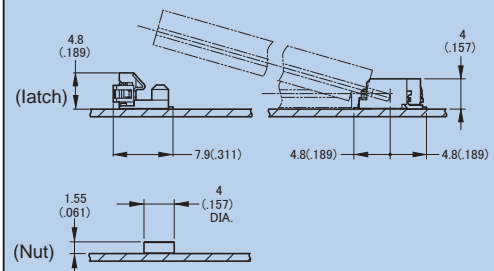
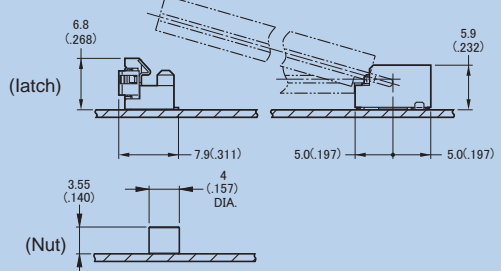
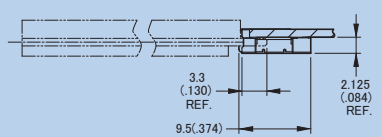
■プリント基板用コネクタ・P.C.BOARD CONNECTORS

| FM8 (ZIF Type) | FA5 (ZIF Type) | FA10 (LIF Type) |
|---|---|---|
| 0.5 mm (.020 inch) | 0.5 mm (.020 inch) | 0.5 mm (.020 inch) |
| 平行 Parallel | 平行 Parallel | 平行 Parallel |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
|  |  |  |
|  |  <p>基板落とし込みタイプ Mid-mount type</p>  |  |
| 41, 51, 60 | 6, 8, 10, 15, 16, 18, 20, 22, 24, 26, 30, 36, 40, 45, 50 (Note) | 4, 5, 6, (10) (Note) |
| Right-angle | Right-angle | Right-angle |
| — | — | — |
| 0.3 mm (.012 inch) with reinforcement | 0.3 mm (.012 inch) with reinforcement | 0.2 mm (.008 inch) with reinforcement |
| 0.5 Amps | 0.8 Amps | 0.5 Amps |
| 250 VACrms(1 minute) | 250 VACrms(1 minute) | 250 VACrms(1 minute) |
| 100 megohms min. | 100 megohms min. | 50 megohms min. |
| 60 milliohms max. | 40 milliohms max. | 70 milliohms max. |
| - 40 °C to + 85 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| <ul style="list-style-type: none"> ● シールド FFC 対応 ● 下側接触構造 ● エンボステーピング品で納入 ● Compatible with shielded FFC ● Lower-side contact ● Embossed-taped supply | <ul style="list-style-type: none"> ● 下側接触構造 ● エンボステーピング品可 ● Lower-side contact ● Embossed-taped supply optionally available <p>(Note) 基板落とし込みタイプの極数 : Mid-mount type no. of contacts : 6, 8, 10, 16, 20, 30, 36, 40, 45, 50</p> | <ul style="list-style-type: none"> ● 挿入・抜去はワンアクションロック式 ● 上下両面接触構造 ● エンボステーピング品で納品 ● One action mating ● Top-and-bottom surface connection type ● Embossed-taped supply <p>(Note) () 内の極数については別途お問い合わせ下さい。 Please contact us for no. of contacts in parenthesis</p> |

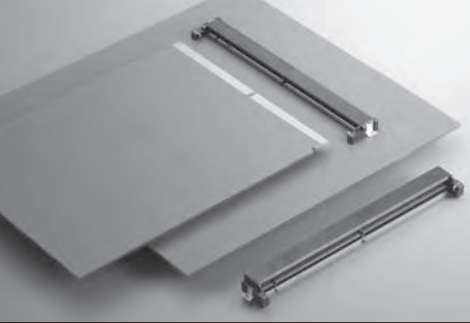
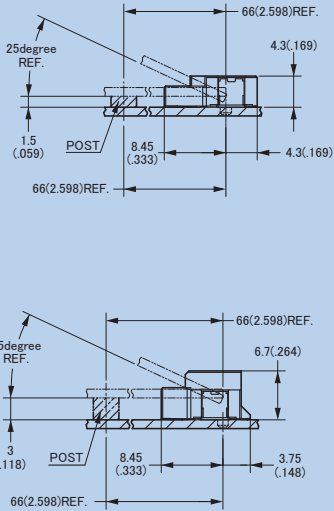
機器内の基板とモジュールとの接続

P.C.BOARD TO MODULE APPLICATION INSIDE EQUIPMENT

メモリモジュール用ソケット・MEMORY MODULE SOCKETS

| シリーズ名 Series Prefix | MM60 |
|--|---|
| タイプ Type | Conformed to PCI Express Mini Card Electromechanical SPEC. of PCI - SIG® |
| コンタクトピッチ Contact Spacing | 0.8 mm (.031 inch) |
| 結線方法 Termination Styles | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>On-board type</p>  </div> <div style="text-align: center;"> <p>On-board stand-off type</p>  </div> </div> <div style="text-align: center; margin-top: 20px;"> <p>Mid-mount type</p>  <p>(Note 1)</p> </div> |
| 極 数 No. of Contacts | 52, 76 (Note 2) |
| 適用基板厚 Applicable PCB Thickness | — |
| 定格電流 Current Rating | 0.5 Amps |
| 耐電圧 D.W.Voltage | 300 VACrms(1 minute) |
| 絶縁抵抗 Insulation Resistance | 500 megohms min. |
| 接触抵抗 Contact Resistance | 60 milliohms max. |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 76 極は DMC (Display Mini Card) 対応ソケット ● ソケット本体と別体のモジュール基板固定用ラッチとナット有 ● エンボステーピング品で納入 ● 76-contact socket is compatible with DMC (Display Mini Card) ● Board-mount module latch and nut are available separate from the socket body ● Embossed-taped supply <p>(Note 1) モジュール基板はソケットに嵌合させた後、機器内で水平を保てるよう固定して下さい。 Please secure the board-mount module to keep stability in the device after mating the socket</p> <p>(Note 2) 76 極はオンボード (高さ 4mm) タイプのみ 76 contacts is available only in on-board [height 4mm (.157 inch)] type</p> <p>* PCI-SIG is a registered trademark of PCI-SIG</p> |

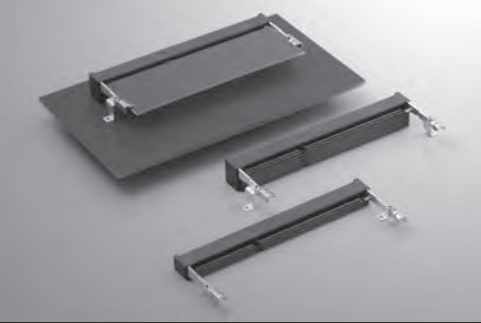
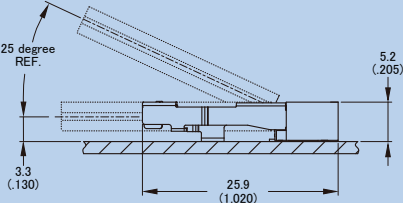
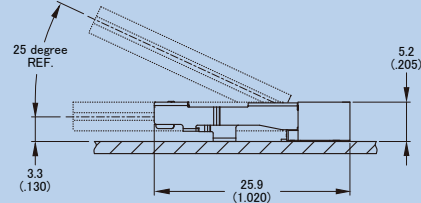
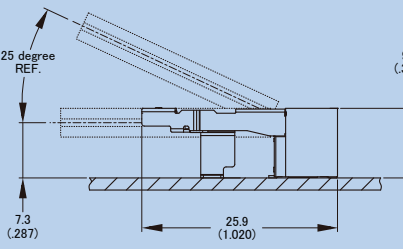
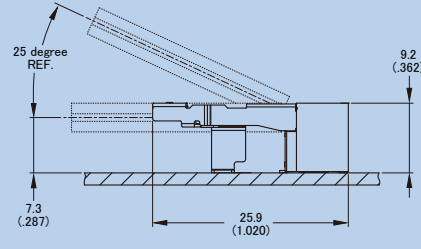
拡張グラフィックボード用コネクタ・ADD-IN GRAPHICS BOARD CONNECTOR

| |
|---|
| MM70 |
| MXM* 3.0 規格対応 Conformed to MXM* 3.0 standard |
| 0.5 mm (.020 inch) |
| 半田 (SMT) Solder (Surface mount) |
|  |
|  |
| 314 |
| — |
| 0.5 Amps |
| 250 VACrms(1 minute) |
| 250 megohms min. |
| 55 milliohms max. |
| -40 °C to + 85 °C |
| Gold plating |
| <ul style="list-style-type: none"> ● エンボステーピング品で納入 ● Embossed-taped supply * MXM : The Mobile PCI Express Module |


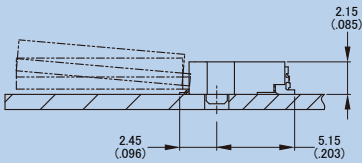
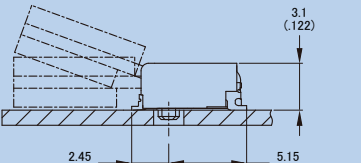
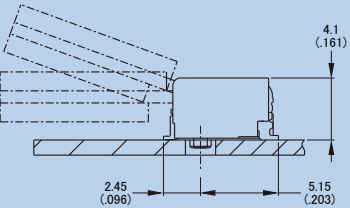
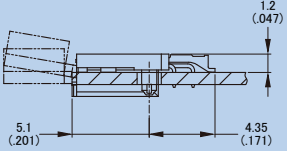
機器内の基板とモジュールとの接続

P.C.BOARD TO MODULE APPLICATION INSIDE EQUIPMENT

メモリモジュール用ソケット・MEMORY MODULE SOCKETS

| シリーズ名 Series Prefix | MM80 | |
|--|--|--|
| タイプ Type | JEDEC Standard (MO-268C) DDR3 SDRAM SODIMM | |
| コンタクトピッチ Contact Spacing | 0.6 mm (.024 inch) | |
| 結線方法 Termination Styles | 半田 (SMT) Solder (Surface mount) | |
| 外 観 Appearance |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <p style="text-align: center;">H : 5.2 mm type</p> <p style="text-align: center;">Standard</p>  </div> <div style="width: 50%;"> <p style="text-align: center;">Reverse</p>  </div> <div style="width: 50%;"> <p style="text-align: center;">H : 9.2 mm type</p> <p style="text-align: center;">Standard</p>  </div> <div style="width: 50%;"> <p style="text-align: center;">Reverse</p>  </div> </div> | |
| 極 数 No. of Contacts | 204 | |
| 適用基板厚 Applicable PCB Thickness | — | |
| 定格電流 Current Rating | 0.3 Amps | |
| 耐電圧 D.W.Voltage | 500 VACrms(1 minute) | |
| 絶縁抵抗 Insulation Resistance | 100 megohms min. | |
| 接触抵抗 Contact Resistance | 40 milliohms max. | |
| 使用温度 Operating Temperature | - 55 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | |
| 特記事項 Remarks | | |

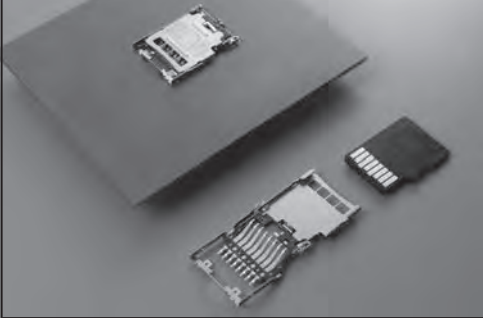

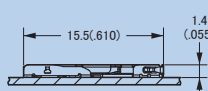
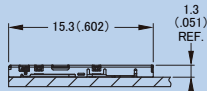
メモリモジュール用ソケット・MEMORY MODULE SOCKETS

| SM3 | |
|---|--|
| PCI Express® M.2 Specification | |
| 0.5 mm (.020 inch) | |
| 半田 (SMT) Solder (Surface mount) | |
|  | |
| <p>On-board ・ H : 2.15mm type</p>  | <p>On-board ・ H : 3.1mm type</p>  |
| <p>On-board ・ H : 4.1mm type</p>  | <p>Mid-mount type</p>  |
| 67 | |
| 0.8 mm (.031 inch) | |
| 0.5 Amps | |
| 300 VACrms(1 minute) | |
| 500 megohms min. | |
| 55 milliohms max. | |
| - 40 °C to + 80 °C | |
| Gold plating | |
| <p>● A/B/E/Mの4種類のキイに対応 ● 4 types of polarizing keys are available : A, B, E and M</p> <p>* PCI Express® is a registered trademark of PCI-SIG</p> | |

小型カードとシステム機器との接続

SMALL CARD TO SYSTEM EQUIPMENT APPLICATION

■ 小型カード用コネクタ・SMALL CARD CONNECTORS

| シリーズ名 Series Prefix | ST1-G / ST1-T | ST11-H |
|--|--|--|
| タイプ Type | For microSD™ Card | For microSD™ Card |
| コンタクトピッチ Contact Spacing | — | — |
| 結線方法 Termination Styles | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  |  |
| 極 数 No. of Contacts | ST1 - G : 8 ST1 - T : 8 + 1 (Switch terminals) | 8 + 2 (Switch terminals) |
| コネクタ形状 Connector Styles | Straight | Straight |
| 定格電流 Current Rating | 0.5 Amps max. | 0.5 Amps |
| 耐 電 圧 D.W.Voltage | 500 VACrms(1 minute) | 500 VACrms(1 minute) |
| 絶縁抵抗 Insulation Resistance | 1000 megohms min. | 1000 megohms min. |
| 接触抵抗 Contact Resistance | 100 milliohms max. (Switch : 500 milliohms max.) | 100 milliohms max. (Switch : 1 ohm max.) |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C | - 30 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● プッシュスライドロック式ヒンジタイプコネクタ ● ST1 - T : カード挿入有無検出スイッチ付 ● Hinge type connector for push slide lock ● ST1 - T : With card detection switch * microSD™ は、SD CARD Association の商標です * microSD™ is the trademark of SD CARD Association | <ul style="list-style-type: none"> ● カードの挿抜は、カード PUSH - PUSH 方式 ● カード挿入有無検出スイッチ付 ● Push - push card insertion / removal ● With card detection switch * microSD™ は、SD CARD Association の商標です * microSD™ is the trademark of SD CARD Association |

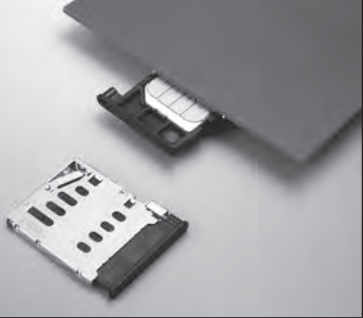
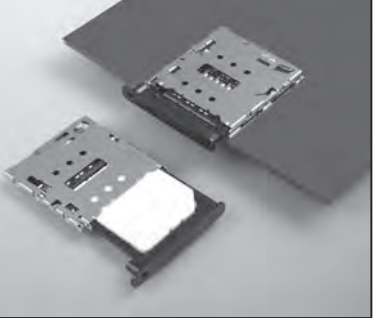
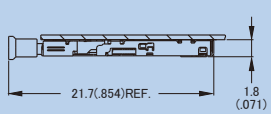
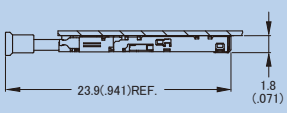
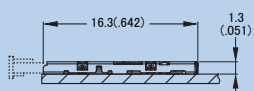
■ 小型カード用コネクタ・SMALL CARD CONNECTORS

| ST12 | SF56 | SF50 |
|--|--|---|
| For micro SD™ Card | For micro SIM Card | For micro SIM Card |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| | | |
| | | |
| 10 + 2 (Switch terminals) | 6 + 2 (Switch terminals) | 6 (Note) |
| Straight | Straight | Straight |
| 0.5 Amps | 0.5 Amps | 0.5 Amps |
| 500 VACrms(1 minute) | 500 VACrms(1 minute) | 500 VACrms(1 minute) |
| 1000 megohms min. | 1000 megohms min. | 1000 megohms min. |
| 100 milliohms max. (Switch:1 ohm max.) | 100 milliohms max. (Switch : 1 ohm max.) | 100 milliohms max. |
| - 25 °C to + 85 °C | - 25 °C to + 85 °C | - 25 °C to + 85 °C |
| Gold plating | Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● カードの挿抜は、カード PUSH-PUSH 方式 ● カード挿入有無検出スイッチ付き ● Push-push card insertion/removal ● With Card detection switch <p>* microSD™ は、SD CARD Association の商標です * microSD™ is the trademark of SD CARD Association</p> | <ul style="list-style-type: none"> ● カードの挿抜は、カード PUSH - PUSH 方式 ● カード挿入有無検出スイッチ付 ● Push - push card insertion / removal ● With card detection switch | <ul style="list-style-type: none"> ● カードの挿抜は、シンプルで操作性良好なプルレバータイプ ● Simple structure and easy operation with Pull - lever <p>(Note) 8 極にも対応可能 Compatible with 8 position</p> |

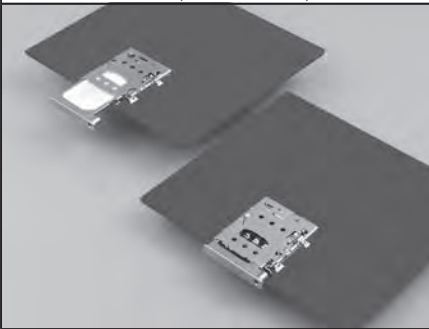
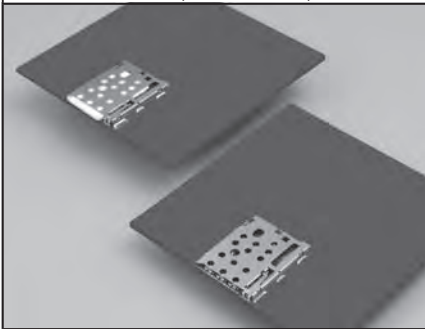
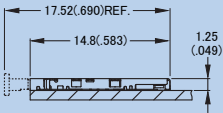
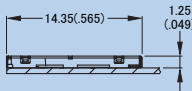
小型カードとシステム機器との接続

SMALL CARD TO SYSTEM EQUIPMENT APPLICATION

■ 小型カード用コネクタ・SMALL CARD CONNECTORS

| シリーズ名 Series Prefix | SF51 | SF58 |
|--|---|--|
| タイプ Type | For micro SIM Card | For micro SIM Card |
| コンタクトピッチ Contact Spacing | ——— | ——— |
| 結線方法 Termination Styles | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |   <p>(Tray ejected)</p> <p>(Note) 図示のトレイ形状は参考形状です。 Tray Configuration shown in this figure is reference only.</p> |  <p>(Note) 図示のトレイ形状は参考形状です。 Tray configuration in this figure is reference only.</p> |
| 極 数 No. of Contacts | 6, 8 | 6 + 2 (Switch terminals) |
| コネクタ形状 Connector Styles | Straight | Straight |
| 定格電流 Current Rating | 0.5 Amps | 0.5 Amps |
| 耐電圧 D.W.Voltage | 500 VACrms(1 minute) | 500 VACrms(1 minute) |
| 絶縁抵抗 Insulation Resistance | 1000 megohms min. | 1000 megohms min. |
| 接触抵抗 Contact Resistance | 100 milliohms max. | 100 milliohms max. (Switch : 1 ohm max.) |
| 使用温度 Operating Temperature | - 25 °C to + 85 °C | - 40 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 本体から引き出したトレイにカードを乗せ、挿入するトレイタイプ ● トレイ検出スイッチ付 ● In this tray type, you place the card in the trap that pops out from the connector shell and push it in ● With tray detection switch | <ul style="list-style-type: none"> ● カードの挿抜は、プッシュイジェクトトレイタイプ (ピンを挿してトレイをイジェクト) ● カード挿入有無検出スイッチ付 ● Push - eject tray type (ejected by pushing pin) ● With Card detection switch |



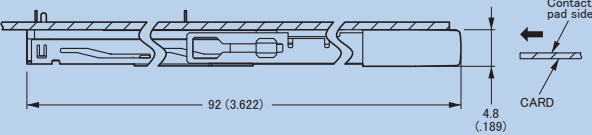
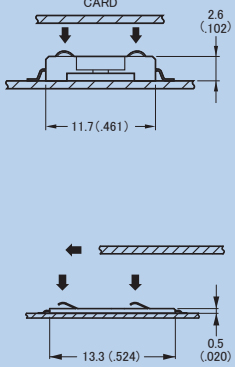
■ 小型カード用コネクタ・SMALL CARD CONNECTORS

| SF70 | SF72 |
|--|---|
| For nano SIM Card | For nano SIM Card |
| ————— | ————— |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
|  |  |
|  |  |
| (Note) 図示のトレイ形状は参考形状です。 Tray configuration in this figure is reference only. | |
| 6 + 2 (Switch terminals) | 6 + 1 (Switch terminal) |
| Straight | Straight |
| 0.5 Amps | 0.5 Amps |
| 500 VACrms(1 minute) | 500 VACrms(1 minute) |
| 1000 megohms min. | 1000 megohms min. |
| 100 milliohms max. (Switch : 1 ohm max.) | 100 milliohms max. (Switch : 1 ohm max.) |
| - 25 °C to + 85 °C | - 25 °C to + 85 °C |
| Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● カードの挿抜は、プッシュイジェクトトレイタイプ (ピンを挿してトレイをイジェクト) ● カード挿入有無検出スイッチ付 ● Push - eject tray type (ejected by pushing pin) ● With Card detection switch | <ul style="list-style-type: none"> ● カードの挿抜は、カードプッシュ-プッシュタイプ ● カード挿入有無検出スイッチ付 ● Push - push card insertion / removal ● With Card detection switch |


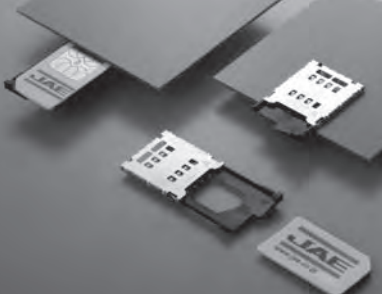

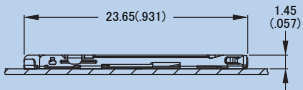
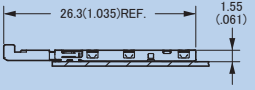
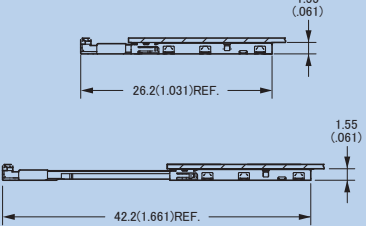
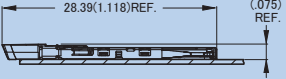
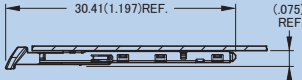
IC カードとシステム機器との接続

IC CARD TO SYSTEM EQUIPMENT APPLICATION

IC カード用コネクタ・IC CARD CONNECTORS

| シリーズ名 Series Prefix | SF6 | SF2 |
|---|---|---|
| タイプ Type | For ISO 7816 Standard Smart Card | For Plug-In SIM Card per GSM11.11 Standard |
| コンタクトピッチ Contact Spacing | 2.54 mm (.100 inch) | 2.54 mm (.100 inch) |
| 結線方法 Termination Styles | 半田 (スルーホール) Solder (Through-hole) | 半田 (SMT) Solder (Surface mount) |
| 外 観 Appearance |  |  |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  |  |
| 極 数 No. of Contacts | 6 + 2 (Switch terminals) | 6 |
| コネクタ形状 Connector Styles | Straight | Straight |
| 定格電流 Current Rating | Signal : 10 μ Amps to 1Amp Switch : 0.1 mA to 10mA | 10 μ Amps to 1Amp |
| 耐電圧 D.W.Voltage | Signal : 500 VACrms(1 minute) Switch : 100 VACrms(1 minute) | 250 VACrms(1 minute) |
| 絶縁抵抗 Insulation Resistance | Signal : 1000 megohms min. Switch : 100 megohms min. | 1000 megohms min. |
| 接触抵抗 Contact Resistance | Signal : 100 milliohms max. Switch : 1 ohm max. | 100 milliohms max. |
| 使用温度 Operating Temperature | - 30 $^{\circ}$ C to + 85 $^{\circ}$ C | - 40 $^{\circ}$ C to + 90 $^{\circ}$ C |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● ETC 車載器用 ● スマートカードとの接触は ZIF ランディング式 ● イジェクトボタン式 ● カード挿入有無検出用スイッチ付 ● For on - board ETC equipment ● ZIF landing mating with smart card ● With ejector button ● With card detecting switch | <ul style="list-style-type: none"> ● カードの接触はコネクタ上側からのカード押付け式 ● Mating with card by pushing the connector face |

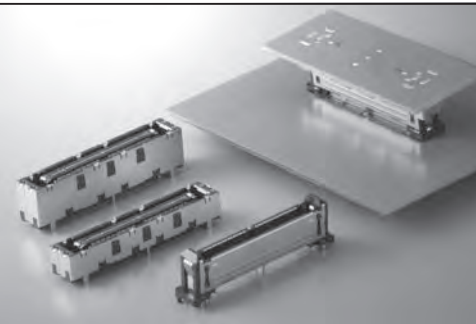
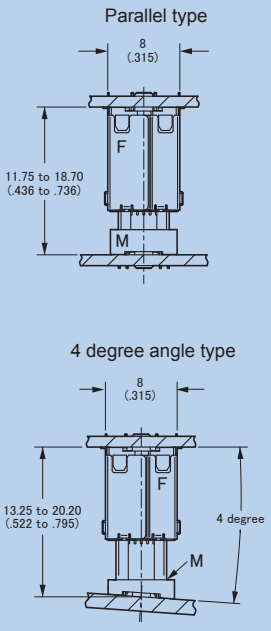
IC カード用コネクタ・IC CARD CONNECTORS

| SF7-H | SF8 | SF11 |
|---|--|--|
| For Plug-In SIM Card per GSM 11.11 Standard | For Plug-In SIM Card per GSM 11.11 Standard | For Plug-In SIM Card per GSM 11.11 Standard |
| 2.54 mm (.100 inch) | 2.54 mm (.100 inch) | 2.54 mm (.100 inch) |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
|  |  |  |
| <p data-bbox="220 1160 523 1249">  </p> | <p data-bbox="742 896 901 918">A type (Standard)</p> <p data-bbox="710 952 965 1041">  </p> <p data-bbox="742 1220 901 1243">B type (Reverse)</p> <p data-bbox="630 1265 997 1489">  </p> | <p data-bbox="1197 884 1316 907">Standard type</p> <p data-bbox="1141 918 1428 996">  </p> <p data-bbox="1197 1030 1316 1052">Tray ejected</p> <p data-bbox="1197 1176 1316 1198">Reverse type</p> <p data-bbox="1125 1220 1428 1299">  </p> <p data-bbox="1197 1332 1316 1355">Tray ejected</p> <p data-bbox="1077 1467 1428 1534">(Note) 図示のトレイ形状は参考形状です。 Tray configuration in this figure is reference only.</p> |
| 6 | 6 | 6 |
| Straight | Straight | Straight |
| 0.5 Amps | 0.5 Amps max. | 0.5 Amps |
| 500 VACrms(1 minute) | 500 VACrms(1 minute) | 500 VACrms(1 minute) |
| 1000 megohms min. | 1000 megohms min. | 1000 megohms min. |
| 100 milliohms max. | 100 milliohms max. | 100 milliohms max. (Switch : 1 ohm max.) |
| - 30 °C to + 85 °C | - 25 °C to + 85 °C | - 25 °C to + 85 °C |
| Gold plating | Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● プッシュスライドロック式ヒンジタイプコネクタ ● エンボステーピング品で納入 ● Hinge type connector for push side lock ● Embossed-taped supply | <ul style="list-style-type: none"> ● 本体から引き出したトレイにカードを乗せ、挿入するトレイタイプ ● コネクタ本体はエンボス供給、スライドトレイはトレイ供給 ● In this tray type, you place the card in the trap that pops out from the connector shell and push it in ● Connector main body is provided in embossed tape, slide tray provided in trays | <ul style="list-style-type: none"> ● 本体から引き出したトレイにカードを乗せ、挿入するトレイタイプ ● カード挿入有無検出スイッチ付品有 ● トレイはご使用になる機器の外観に合わせて製作する必要があります。 ● 詳細は別途お問い合わせ下さい。 ● In this tray type, you place the card in the trap that pops out from the connector shell and push it in ● Available with and without card detect switch ● Tray can be made to suit the exterior appearance of the device, please consult us for details |



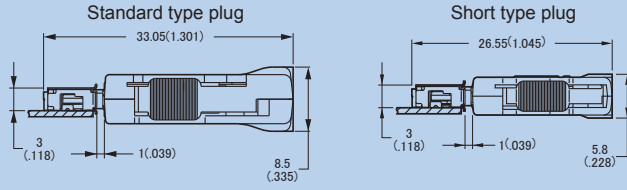
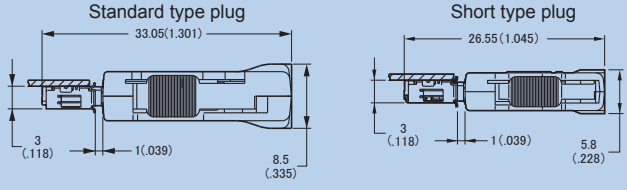
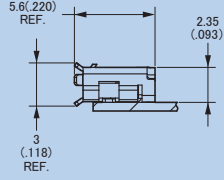
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

■ 角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | WD2 (EMI Shielded) | |
|--|------------|--|--|
| コンタクトピッチ Contact Spacing | | 0.5 mm (.020 inch) | |
| 接続形態 Connection Styles | | 基板対基板 (平行・4° 傾斜タイプ) PCB to PCB (Parallel・4 degree angle) | |
| 結線方法 Termination Styles | | 半田 (SMT) Solder (Surface mount) | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations | |  | |
| mm(inch) | | | |
| 極 数 No. of Contacts | | 100 (Signal) + 4 (Power) 144 (Signal) + 4 (Power) | |
| コネクタ形状 Connector Styles | Plug | Straight・4 degree angle | |
| | Receptacle | Straight | |
| 適用基板厚 Applicable PCB Thickness | | — | |
| 定格電流 Current Rating | | 0.5 Amps (Signal), 10 Amps (Power) | |
| 耐電圧 D.W.Voltage | | 500 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | | 100 megohms min. | |
| 接触抵抗 Contact Resistance | | 190 milliohms max. | |
| 使用温度 Operating Temperature | | - 40 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● PCI Express[®], DisplayPort[™] 等の高速シリアル伝送対応 ● For high-speed serial transmission formats such as PCI Express[™], DisplayPort[™] * PCI Express is a registered trademark of PCI-SIG * DisplayPort is a trademark of VESA | |


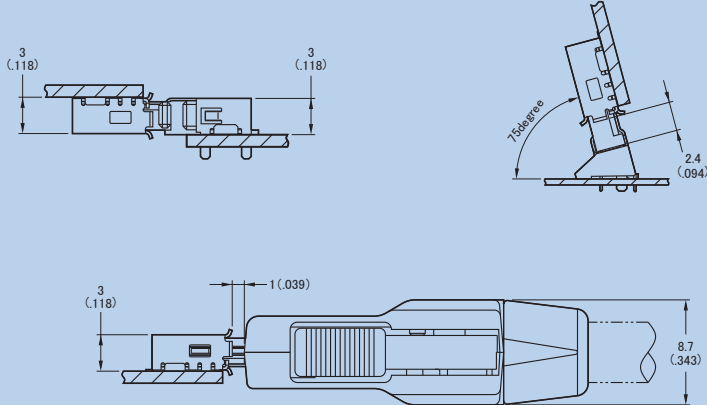
角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | RA1 (EMI Shielded) | | DX4 (EMI Shielded) | |
|---|-------------------|---|--|---|--|
| コンタクトピッチ Contact Spacing | | 0.5 mm (.020 inch) | | 0.65 mm (.026 inch) | |
| 接続形態 Connection Styles | | 基板対電線 PCB to Cable | | 基板対電線 PCB to Cable | |
| 結線方法 Termination Styles | 電線側 Cable Side | 半田 Solder | | — | |
| | 基板側 PCB Side | 半田 (SMT) Solder (Surface mount) | | 半田 (SMT) Solder (Surface mount) | |
| 外 観 Appearance | |  | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations | | 基板側：基板上実装型 PCB Side : Board face mount type  基板側：基板下面実装型 PCB Side : Board back mount type  | |  | |
| mm(inch) | | | | | |
| 極 数 No. of Contacts | | Signal / 10 Coaxial / 1 (Note 1) | | 5 | |
| コネクタ形状 Connector Styles | Plug | Straight | | — | |
| | Receptacle | Right-angle | | Right-angle | |
| 適用基板厚 Applicable PCB Thickness | | — | | — | |
| 適用電線 Applicable Wire Size | | Signal : #28 AWG max. Coaxial : 1.5D Equivalent | | — | |
| 定格電流 Current Rating | | 0.5 Amps [1 Amps for 5 terminals (Note 2)] | | 0.5 Amps [1.8 Amps for 2 terminals (Note)] | |
| 耐電圧 D.W.Voltage | | Signal : 300 VACrms (1 minute) (Note 3) | | 500 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | | 1000 megohms min. | | 1000 megohms min. | |
| 接触抵抗 Contact Resistance | | 50 milliohms max. | | 30 milliohms max. | |
| 使用温度 Operating Temperature | | - 25 °C to + 70 °C | | - 30 °C to + 80 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● Conformed to EIAJ RC-5238 Connector "A" for IMT-2000 Mobile phones (Note 1) ショートタイププラグは、同軸コンタクト無し The short type plug is not provided with coaxial contacts (Note 2) " 5 terminals " indicates terminals 1, 4, 5, 6 and 10 (Note 3) Coaxial : 100 VACrms (1 minute) | | <ul style="list-style-type: none"> ● USB2.0 規格準拠・Micro-B / AB レセプタクル ● Micro-B / AB Receptacle conforming to USB2.0 standard (Note) " 2 terminals " indicates terminal 1 and 5 | |

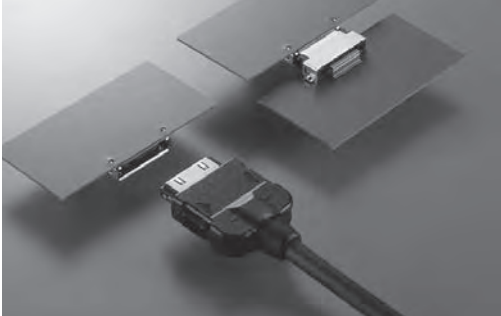
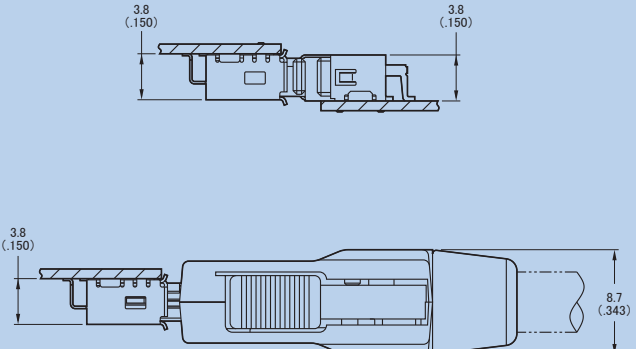
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

■ 角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | DD1 (EMI Shielded) | |
|--|-------------------|---|--|
| コンタクトピッチ Contact Spacing | | 0.5 mm (.020 inch) | |
| 接続形態 Connection Styles | | 基板対基板・基板対電線 PCB to PCB・PCB to Cable | |
| 結線方法 Termination Styles | 電線側 Cable Side | 半田 Solder | |
| | 基板側 PCB Side | 半田 (SMT) Solder (Surface mount) | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations | |  | |
| 極 数 No. of Contacts | | 30 | |
| コネクタ形状 Connector Styles | Plug | Right-angle, 75 degree angle (PCB side)・Straight (Cable side) | |
| | Receptacle | Right-angle | |
| 適用基板厚 Applicable PCB Thickness | | — | |
| 適用電線 Applicable Wire Size | | #28 AWG max. | |
| 定格電流 Current Rating | | 0.5 Amps (Signal) 1.0 Amps (Power) | |
| 耐電圧 D.W.Voltage | | 500 VDC (1 minute) | |
| 絶縁抵抗 Insulation Resistance | | 1000 megohms min. | |
| 接触抵抗 Contact Resistance | | 50 milliohms max. | |
| 使用温度 Operating Temperature | | - 25 °C to + 70 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● USB2.0 規格に対応の高速伝送型 ● For high speed transmission conforming to USB2.0 Standard | |

■ 角型コネクタ・RECTANGULAR CONNECTORS

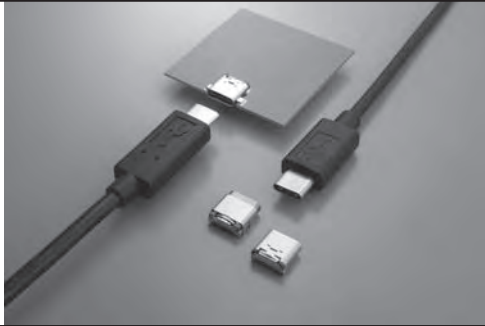
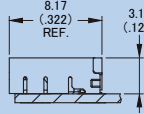
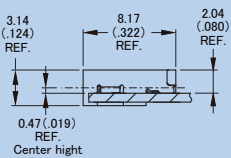
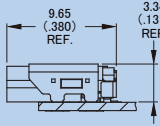
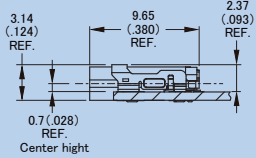

| |
|---|
| DD2 (EMI Shielded) |
| 0.5 mm (.020 inch) |
| 基板対基板・基板対電線 PCB to PCB・PCB to Cable |
| 半田 Solder |
| 半田 (SMT) Solder (Surface mount) |
|  |
|  |
| 40 |
| Right-angle, (PCB side) ・ Straight (Cable side) |
| Right-angle |
| #28 AWG max. |
| 0.5 Amps (Signal) 1.0 Amps (Power) |
| 300 VACrms (1 minute) |
| 1000 megohms min. |
| 50 milliohms max. |
| - 25 °C to + 70 °C |
| Gold plating |
| <ul style="list-style-type: none"> ● USB2.0 規格に対応の高速伝送型 ● For high speed transmission conforming to USB2.0 Standard |

角型
Rectangular



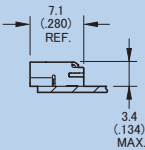
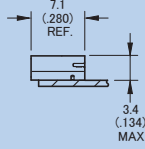
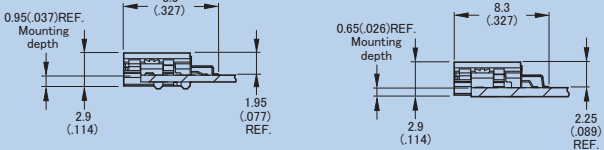

機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | DX07 (EMI Shielded) | |
|--|-------------------|---|--|
| コンタクトピッチ Contact Spacing | | 0.5 mm (.020 inch) | |
| 接続形態 Connection Styles | | 基板対電線 PCB to Cable | |
| 結線方法 Termination Styles | 電線側 Cable Side | 半田 Solder | |
| | 基板側 PCB Side | 半田 (スルーホール) / SMT Solder (Through-hole) / SMT | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations | | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>SMT Type</p> <p>On-board</p>  </div> <div style="text-align: center;"> <p>Mid-mount</p>  </div> <div style="text-align: center;"> <p>Hybrid Type</p> <p>On-board</p>  </div> <div style="text-align: center;"> <p>Mid-mount</p>  </div> </div> <p style="text-align: center;">Plug ※ 外形は参考図です Configuration in this figure is reference only</p>  | |
| 極 数 No. of Contacts | | 24 | |
| コネクタ形状 Connector Styles | Plug | Straight | |
| | Receptacle | Right-angle | |
| 適用基板厚 Applicable PCB Thickness | | — | |
| 適用電線 Applicable Wire Size | | 詳細は別途お問い合わせ下さい Please consult us for details | |
| 定格電流 Current Rating | | Power (V _{BUS}) : Total 5.0 Amps, Power (GND) : Total 6.25 Amps V _{CONN} : 1.25 Amps, Others : 0.25 Amps per contact | |
| 耐電圧 D.W.Voltage | | 100 VACrms (1minute) | |
| 絶縁抵抗 Insulation Resistance | | 100 megohms min. | |
| 接触抵抗 Contact Resistance | | 40 milliohms max. | |
| 使用温度 Operating Temperature | | - 30 °C to + 80 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● USB Type-C™ コネクタ ● USB 3.1 / USB 2.0 対応 ● USB Type-C™ Connector ● Conforming to USB 3.1 or USB 2.0 Standard * USB Type-C は、USB Implementers Forum の登録商標です。 * USB Type-C is a trademark of USB Implementers Forum, Inc. | |


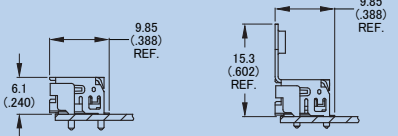
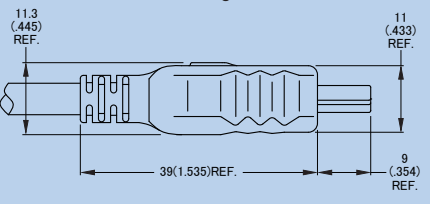
角型コネクタ・RECTANGULAR CONNECTORS

| DC2 (EMI Shielded) | DC3 (EMI Shielded) |
|---|---|
| 0.4 mm (.016 inch) | 0.4 mm (.016 inch) |
| 基板対電線 PCB to Cable | 基板対電線 PCB to Cable |
| — | — |
| 半田 (SMT) Solder (Surface mount) | 半田 (SMT) Solder (Surface mount) |
|  |  |
| <p>Shell dip type</p>  <p>7.1 (280) REF. 3.4 (134) MAX.</p> <p>All SMT type</p>  <p>7.1 (280) REF. 3.4 (134) MAX.</p> | <p>Mid-mount type</p> <p>Mounting depth : 0.95 mm version Mounting depth : 0.65 mm version</p>  <p>0.95(037)REF. Mounting depth 0.65(026)REF. Mounting depth 8.3 (327) 8.3 (327) 2.9 (.114) 1.95 (.077) REF. 2.9 (.114) 2.25 (.089) REF.</p> <p>On-board type</p> <p>Shell dip type All SMT type</p>  <p>7.15 (281) 6.75 (266) 2.9 (.114) 2.9 (.114)</p> |
| 19 | 19 |
| — | — |
| Right-angle | Right-angle |
| — | — |
| 0.5 Amps | 0.3 Amps |
| 500 VACrms (1 minute) | 250 VACrms (1 minute) |
| 100 megohms min. | 100 megohms min. |
| 60 milliohms max. (Contact area), 30 milliohms max. (Shell area) | 60 milliohms max. (Contact area), 50 milliohms max. (Shell area) |
| - 20 °C to + 85 °C | - 20 °C to + 85 °C |
| Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● HDMI Type C 規格対応レセプタクル ● Receptacle compliant with HDMI Type C standard * HDMI は、HDMI Licensing, LLC の登録商標です。 * HDMI is a trademark of HDMI Licensing, LLC | <ul style="list-style-type: none"> ● HDMI Type D 規格対応レセプタクル ● Receptacle compliant with HDMI Type D standard * HDMI は、HDMI Licensing, LLC の登録商標です。 * HDMI is a trademark of HDMI Licensing, LLC |

機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS



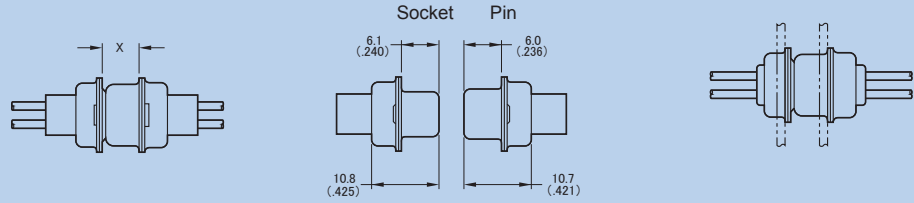
■ 角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | DC1 (EMI Shielded) | |
|--|-------------------|---|--|
| コンタクトピッチ Contact Spacing | | 1.0 mm (.039 inch) | |
| 接続形態 Connection Styles | | 基板対電線 PCB to Cable | |
| 結線方法 Termination Styles | 電線側 Cable Side | 半田 Solder | |
| | 基板側 PCB Side | 半田 (SMT) Solder (Surface mount) | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | | <p>Receptacle</p>  <p>With Right - angle flange type</p> <p>Plug</p>  | |
| 極 数 No. of Contacts | | 19 | |
| コネクタ形状 Connector Styles | Plug | Straight | |
| | Receptacle | Right-angle | |
| 適用基板厚 Applicable PCB Thickness | | — | |
| 適用電線 Applicable Wire Size | | 電線側はハーネス品にて販売 Cabel-harnessed connectors are standard | |
| 定格電流 Current Rating | | 0.5 Amps | |
| 耐電圧 D.W.Voltage | | 500 VACrms (1 minute)(Unmated) | |
| 絶縁抵抗 Insulation Resistance | | 100 megohms min. (Unmated) | |
| 接触抵抗 Contact Resistance | | 10 milliohms max. | |
| 使用温度 Operating Temperature | | - 20 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● HDMI 規格対応 ● Compatible with HDMI standard | |





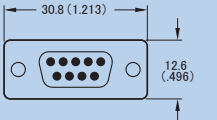
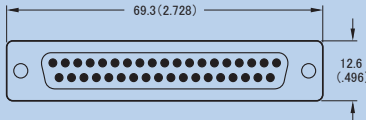
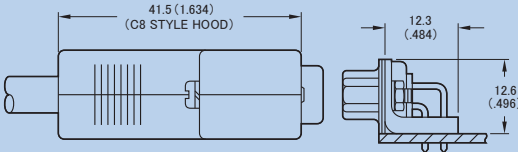
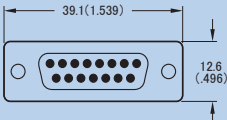
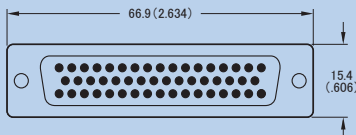
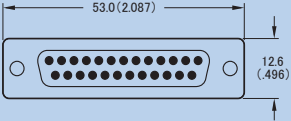
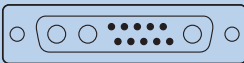

機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

■角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | D sub | | | | | | | |
|---|-------------------|--|---|-----------------|-------------|-------|-------------------|------------|-------------------|
| | | D ※ U | D ※ SP | | | | | | |
| タイプ Type | | D ※ U (Standard) D ※ U - F (EMI shielded) | D ※ SP (Standard) D ※ SP - F (EMI shielded) | | | | | | |
| 接続形態 Connection Styles | | ラック対パネル・パネル対電線・基板対電線・基板対基板・電線中継 Rack & Panel・Panel to Cable・PCB to Cable・PCB to PCB・Cable connecting | | | | | | | |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp | 圧接 IDC (F.R.C.) | | | | | | |
| | 基板側 PCB Side | 半田 (スルーホール) Solder (Through-hole) | — | | | | | | |
| 外 観 Appearance | |  |  | | | | | | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations | | <p>● D subシリーズは、圧着、圧接、半田付結線型及び基板用スルーホール型等、多品種が有り、各々互換性があります。加えて、ケーブルクランプ、嵌合固定部品等、豊富なアクセサリがあります。各々の組合せで、多様な接続ができます。</p> <p>Dsub Series offers a wide range of connectors intermatable with each other. The wire termination types include crimp contact, IDC, solder, through-hole board-mount. Versatile accessories are available such as cable clamp, coupling lock. Pairs of connectors of this series enable diversified connection styles.</p>  <table border="1" data-bbox="462 1400 853 1489"> <thead> <tr> <th>No. of contacts</th> <th>Dimension X</th> </tr> </thead> <tbody> <tr> <td>9, 15</td> <td>6.1 mm (.240 in.)</td> </tr> <tr> <td>25, 37, 50</td> <td>6.0 mm (.236 in.)</td> </tr> </tbody> </table> | | No. of contacts | Dimension X | 9, 15 | 6.1 mm (.240 in.) | 25, 37, 50 | 6.0 mm (.236 in.) |
| No. of contacts | Dimension X | | | | | | | | |
| 9, 15 | 6.1 mm (.240 in.) | | | | | | | | |
| 25, 37, 50 | 6.0 mm (.236 in.) | | | | | | | | |
| 極 数 No. of Contacts | | 9, 15, 25, 37, 50 | 9, 15, 25, 37 | | | | | | |
| コネクタ形状 Connector Styles | Plug | Straight | Straight | | | | | | |
| | Receptacle | Straight | Straight | | | | | | |
| 適用基板厚 Applicable PCB Thickness | | 1.6 mm (.063 inch) | — | | | | | | |
| 適用電線 Applicable Wire Size | | # 18 to # 30 AWG (Stranded) | 1.27 mm (.050 inch) or 1.38 mm (.054 inch) pitch FRC, # 26 to # 28 AWG | | | | | | |
| 定格電流 Current Rating | | 5 Amps | 1 Amp | | | | | | |
| 耐電圧 D.W.Voltage | | 1000 VACrms (1 minute) | 600 VACrms (1 minute) | | | | | | |
| 絶縁抵抗 Insulation Resistance | | 5000 megohms min. | 1000 megohms min. | | | | | | |
| 接触抵抗 Contact Resistance | | 2.7 milliohms / # 20 AWG (Example) | 15 milliohms max. | | | | | | |
| 使用温度 Operating Temperature | | - 65 °C to + 125 °C | - 55 °C to + 105 °C | | | | | | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | Gold plating | | | | | | |
| 特記事項 Remarks | | <p>● プレスとマシンコンタクトの2種有</p> <p>● Stamped contacts and machined contacts</p> <p>(Note) スルーホールタイプの使用温度 Operating temperature (for through-hole type): -65°C to +105°C</p> | | | | | | | |




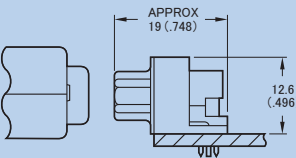
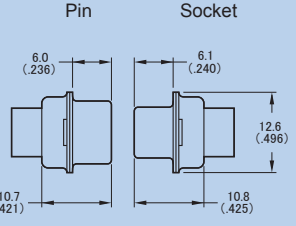
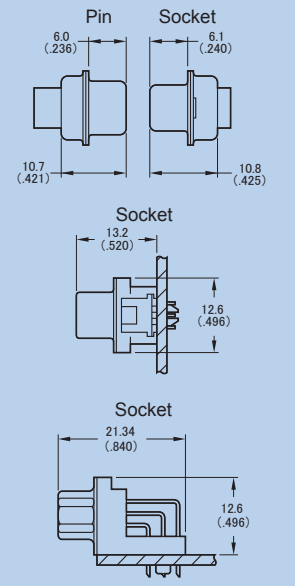
角型コネクタ・RECTANGULAR CONNECTORS

| D sub | | | |
|---|---|---|---|
| D ※ - N | D ※ M | D ※ - T | D ※ - A - N |
| D ※ - N (Standard) D ※ - F - N (EMI shielded) | Standard and Multiple special contacts type | D ※ - T / D ※ - T - N (Standard) D ※ - F - T - N (EMI shielded) | D ※ - A - N / D ※ - A - J4 (Standard) D ※ - AF - N (EMI shielded) |
| ラック対パネル・パネル対電線・基板対電線・基板対基板・電線中継 Rack & Panel • Panel to Cable • PCB to Cable • PCB to PCB • Cable connecting | | | |
| 半田 Solder | 半田 Solder | — | — |
| — | — | 半田 (スルーホール) Solder (Through-hole) | 半田 (スルーホール) Solder (Through-hole) |
|  |  |  |  |
| Shell Size : E No. of cont. : 9  | Shell Size : C No. of cont. : 37  |  | |
| Shell Size : A No. of cont. : 15  | Shell Size : D No. of cont. : 50  | | |
| Shell Size : B No. of cont. : 25  | REF. Special Layouts (D ※ M / DBML)  | |  |
| 9, 15, 25, 37, 50 | 9, 15, 25, 37, 50 and special | 9, 15, 25, 37, 50 | 9, 15, 25, 37, 50 |
| Straight | Straight | Straight | Right-angle |
| Straight | Straight | Straight | Right-angle |
| — | — | 1.6 mm (.063 inch) | 1.6 mm (.063 inch) |
| # 20 AWG max. (Stranded) | # 20 AWG max. (Stranded) and other | — | — |
| 5 Amps | 5 Amps | 5 Amps | 5 Amps |
| 1250 VACrms (1 minute) | 1250 VACrms (1 minute) | 1250 VACrms (1 minute) | 1250 VACrms (1 minute) |
| 5000 megohms min. | 5000 megohms min. | 5000 megohms min. | 5000 megohms min. |
| 2.7 milliohms max | 2.7 milliohms max. | 4 milliohms max. | 4 milliohms max. |
| - 55 °C to + 105 °C | - 55 °C to + 120 °C | - 55 °C to + 105 °C | - 55 °C to + 105 °C |
| Gold plating | Gold plating | Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● ローコストプレスコンタクト ● Low cost stamped contacts | <ul style="list-style-type: none"> ● 特殊コンタクトには、同軸用、高電流用 (40 Amps)(別売) ● Optional contacts include coaxial and high current rating (40 Amps) contacts (Note) 仕様は標準型の場合 The specifications given above are for standard type | <ul style="list-style-type: none"> ● D ※ - T - N / D ※ - F - T - N : プレスタイプコンタクト Stamped contacts ● D ※ - T : マシンタイプコンタクト Machined contacts | <ul style="list-style-type: none"> ● D ※ - A - N / D ※ - AF - N : プレスタイプコンタクト Stamped contacts ● D ※ - A - J4 : マシンタイプコンタクト Machined contacts |

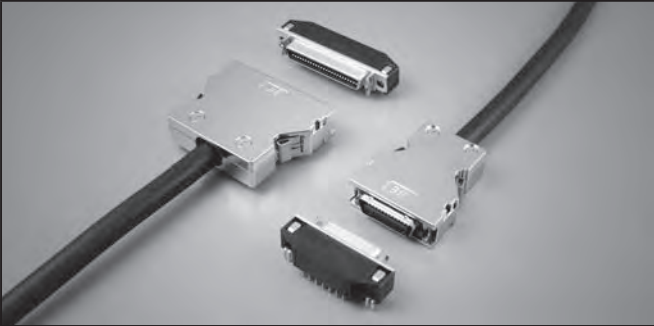
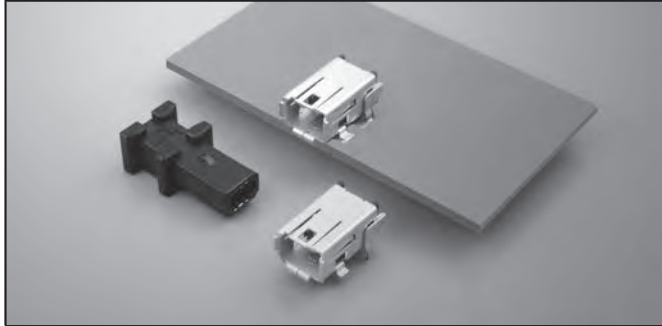
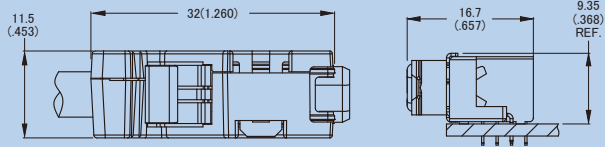
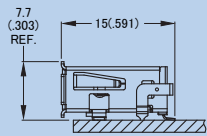
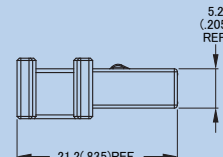
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

■ 角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | D sub D ※ LC | | D sub DBML | | D02 - M15 | |
|--|--|--------------------------------------|---|-----------------------|---|----|
| タイプ Type | EMI Shielded | | 同軸／信号複合タイプ Multiple coaxial / signal | | 小型・EMI 対策型 Small size・EMI shielded | |
| 接続形態 Connection Styles | 基板対電線 PCB to Cable | | 電線中継 Cable connecting | | パネル／基板対電線・電線中継 Panel / PCB to Cable・Cable connecting | |
| 結線方法 Termination Styles | 電線側 Cable Side | — | 圧着 Crimp | — | 圧着 Crimp | — |
| | 基板側 PCB Side | 半田 (スルーホール) Solder (Through-hole) | — | — | 半田 (スルーホール) Solder (Through-hole) | — |
| 外 観 Appearance |  | |  | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  | |  | |  | |
| | 極 数 No. of Contacts | 9, 15, 25, 37 | | 3 (3 Coaxial), 13 (3) | | 15 |
| コネクタ形状 Connector Styles | Plug | Right-angle | Straight | | Straight | |
| | Receptacle | Right-angle | Straight | | Straight・Right-angle | |
| 適用基板厚 Applicable PCB Thickness | 1.6 mm (.063 inch) | | — | | 1.6 mm (.063 inch) | |
| 適用電線 Applicable Wire Size | — | | Signal : # 18 to # 30 AWG Coaxial : 1.5C - 2V | | # 22 to # 28 AWG (Stranded) | |
| 定格電流 Current Rating | 5 Amps | | Signal : 5 Amps Coaxial : 2 Amps | | 3 Amps | |
| 耐電圧 D.W.Voltage | 1250 VACrms (1 minute) | | 1000 VACrms (1 minute) | | 900 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | 5000 megohms min. | | 5000 megohms min. | | 5000 megohms min. | |
| 接触抵抗 Contact Resistance | 13 milliohms max. | | 20 milliohms max. | | 20 milliohms max. | |
| 使用温度 Operating Temperature | - 55 °C to +105 °C | | - 55 °C to +105 °C | | - 55 °C to +105 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | Gold plating | | Gold plating | | Gold plating | |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 嵌合固定ネジ付き ● With screw lock assembly | | <ul style="list-style-type: none"> ● ローコストプレスコンタクト ● EMI 対策型 ● Low cost stamped contacts ● EMI shielded | | <ul style="list-style-type: none"> ● D sub サイズ E (9 極) に 15 極を 配備した小型高密度型 ● High density with 15 contacts in the size of D sub E (9 contacts) | |

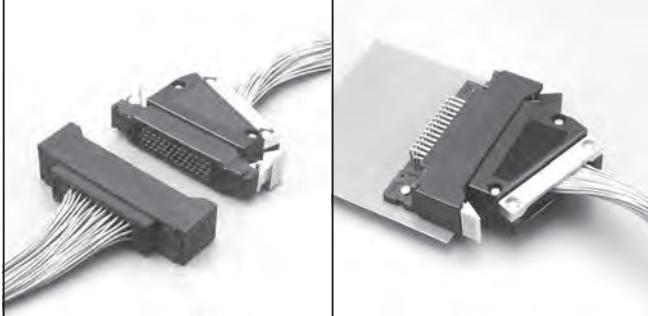
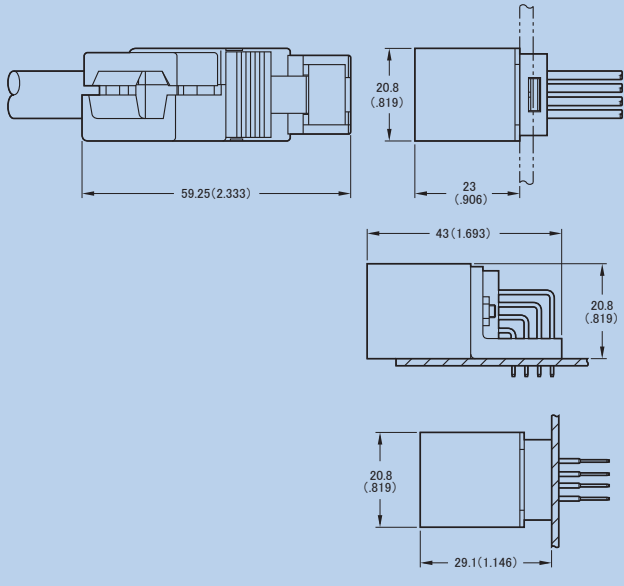
角型コネクタ・RECTANGULAR CONNECTORS

| DF02 | DZ02 |
|---|--|
| 1.27 mm (.050 inch) Pitch • EMI Shielded | 0.635 mm (.025 inch) Pitch • EMI Shielded |
| 基板対電線 PCB to Cable | 基板対電線 PCB to Cable |
| 半田 / 圧接 Solder / IDC | — |
| 半田 (スルーホール) Solder (Through-hole) | 半田 (SMT) Solder (Surface mount) |
|  |  |
|  | <p>Receptacle</p>  <p>Short-circuit plug</p>  |
| 14, 20, 26, 36, 50 | 8 |
| Straight | — |
| Right-angle | Right-angle |
| 1.6 mm (.063 inch) | — |
| Solder : # 24 AWG max. IDC : # 28 to # 30 AWG | — |
| 0.5 Amps | 0.5 Amps |
| 500 VACrms (1 minute) | 250 VACrms (1 minute) (Individual connector) |
| 100 megohms min. | 500 megohms min. (Individual connector) |
| 35 milliohms max. | Receptacle : 40 milliohms max. Short - circuit plug : 80 milliohms max. |
| - 20 °C to + 80 °C | - 40 °C to + 85 °C |
| Gold plating | Gold plating |
| | <ul style="list-style-type: none"> ● IEC61508 における製品規格 IEC / EN61800-5-2 適用レセプタクルとして使用可 ● It can be used as a receptacle compatible with the product standard IEC / EN 61800 - 5 - 2 of the international standard IEC 61508 |

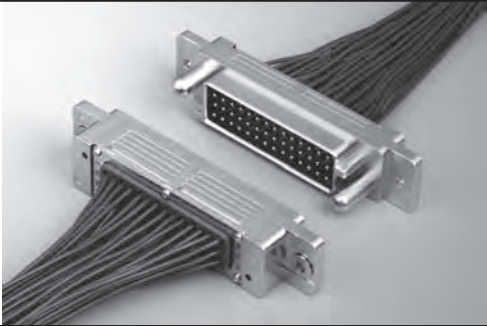
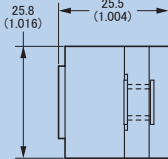
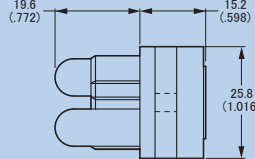
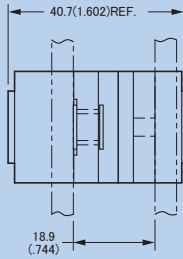
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

■ 角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | QX (EMI Shielded) | |
|--|-------------------|--|--|
| タイプ Type | | One-touch lock type | |
| 接続形態 Connection Styles | | パネル対電線・基板対電線 Panel to Cable・PCB to Cable | |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp | |
| | 基板側 PCB Side | 半田 (スルーホール) Solder (Through-hole) | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | |  | |
| 極 数 No. of Contacts | | 52 | |
| コネクタ形状 Connector Styles | Plug | Straight | |
| | Receptacle | Straight・Right-angle | |
| 適用基板厚 Applicable PCB Thickness | | 1.6 to 2 mm (.063 to 079 inch) | |
| 適用電線 Applicable Wire Size | | # 18 to # 30 AWG | |
| 定格電流 Current Rating | | 1 to 5 Amps | |
| 耐電圧 D.W.Voltage | | 1500 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | | 1000 megohms min. | |
| 接触抵抗 Contact Resistance | | Crimp : 15 milliohms max. / Through-hole : 35 milliohms max. (# 24 AWG) | |
| 使用温度 Operating Temperature | | - 55 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● 3.18mm ピッチ 4列千鳥配列 ● プラグ側のレバー操作でロック/イジェクト ● スルーホールタイプ (レセプタクル) は、ピンインサートのみ ● 3.18mm (.125 inch) contact spacing (4 rows staggered) ● Lever on plug for locking / ejection ● For thru - hole (receptacle), pin insert only is available | |

角型コネクタ・RECTANGULAR CONNECTORS


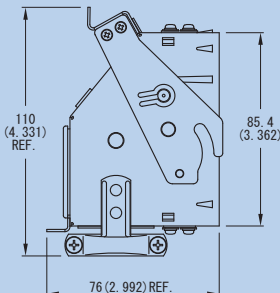
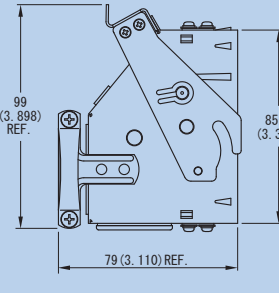
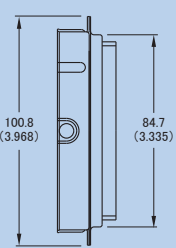
| DB1 | |
|---|--|
| 堅牢・ラック&パネル型 Rugged・Rack and Panel | |
| パネル対電線 Panel to Cable | |
| 圧着 Crimp | |
| — | |
|  | |
| <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Receptacle</p>  </div> <div style="text-align: center;"> <p>Plug</p>  </div> </div> <div style="text-align: center; margin-top: 20px;">  </div> | |
| 42 | |
| Straight | |
| Straight | |
| — | |
| # 14 to # 24 AWG | |
| 13 Amps max. | |
| 1500 VACrms (1 minute) | |
| 5000 megohms min. | |
| 5 milliohms max. / # 14 AWG (Example) | |
| - 55 °C to + 125 °C | |
| Gold plating | |
| <ul style="list-style-type: none"> ● 嵌合時 ±1mm のフローティング機構付き ● Floating mechanism offsets location error when mated up to ±1mm | |

角型
Rectangular


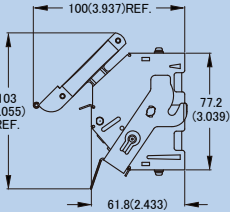
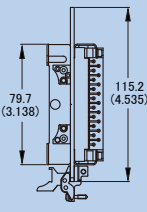
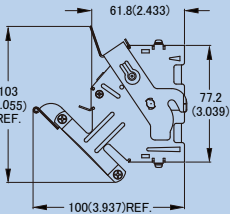
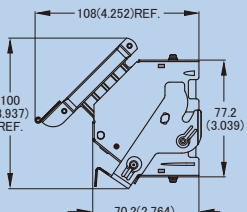
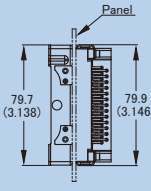
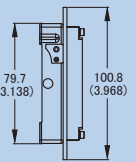
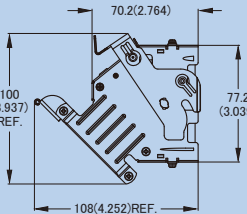
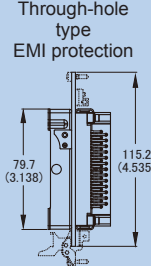
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | | QE | |
|---|-------------------|---|--|
| タイプ Type | | 堅牢・汎用型 Rugged・General purpose | |
| 接続形態 Connection Styles | | パネル対電線・基板対電線 Panel to Cable・PCB to Cable | |
| 結線方法 Termination Styles | 電線側 Cable Side | 圧着 Crimp | |
| | 基板側 PCB Side | 半田 (スルーホール) Solder (Through-hole) | |
| 外 観 Appearance | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) | | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Plug</p> <p>Right-angle type</p>  </div> <div style="text-align: center;"> <p>Straight type</p>  </div> <div style="text-align: center;"> <p>Receptacle</p>  </div> </div> <p>(Note) 上記寸法は 30 極の場合 The figure shows the version with 30 contacts</p> | |
| 極 数 No. of Contacts | | 27, 29, 30, 44, 50 | |
| コネクタ形状 Connector Styles | Plug | Straight・Right-angle | |
| | Receptacle | Straight | |
| 適用基板厚 Applicable PCB Thickness | | — | |
| 適用電線 Applicable Wire Size | | # 14 to # 24 AWG | |
| 定格電流 Current Rating | | 13 Amps max | |
| 耐電圧 D.W.Voltage | | 2000 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | | 5000 megohms min. | |
| 接触抵抗 Contact Resistance | | 5 millivolt max. (DC 1Amps) | |
| 使用温度 Operating Temperature | | - 55 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | | Gold plating | |
| 特記事項 Remarks | | <ul style="list-style-type: none"> ● レバー操作によるワンタッチロック機構 ● One-touch lock with lever | |



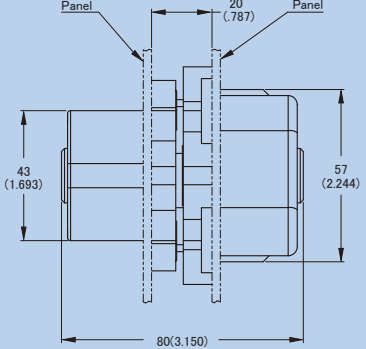
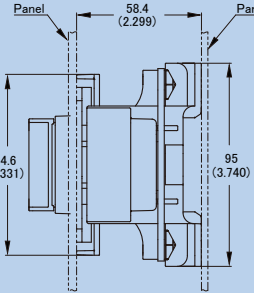
角型コネクタ・RECTANGULAR CONNECTORS

| QE6 | |
|--|--|
| 堅牢・汎用型 Rugged・General purpose | |
| パネル対電線・基板対電線 Panel to Cable・PCB to Cable | |
| 圧着 Crimp | |
| 半田(スルーホール)・圧着(40極のみ) Solder(Through-hole)・Crimp(only 40 cont.) | |
|  | |
| <p>19, 30 Contacts</p> <p>Plug SH type</p>  <p>Receptacle Through-hole type</p>  <p>Plug SL type</p>  | <p>40 Contacts</p> <p>Plug SH type</p>  <p>Receptacle Through-hole type</p>  <p>Panel type EMI protection</p>  <p>Plug SL type</p>  <p>Receptacle Through-hole type EMI protection</p>  |
| 19, 30, 40 | |
| Straight | |
| Right-angle / Straight (only 40 cont.) | |
| Right-angle through-hole type : 1.6 mm (.063 inch) | |
| 0.2 mm ² to 2 mm ² (仕上り外径 / Finished outer diameter : 3.1 mm max) | |
| 5 Amps | |
| 1500 VACrms (1 minute) | |
| 5000 megohms min. | |
| 5 milliohms max. | |
| - 55 °C to + 85 °C | |
| Gold plating | |
| <ul style="list-style-type: none"> ● 3U4HP ラック対応品 ● 40 極は EMI 対策型 ● For 3U4HP Rack ● 40 contacts : EMI protection type | |

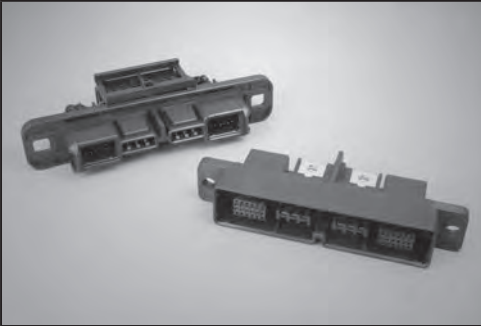
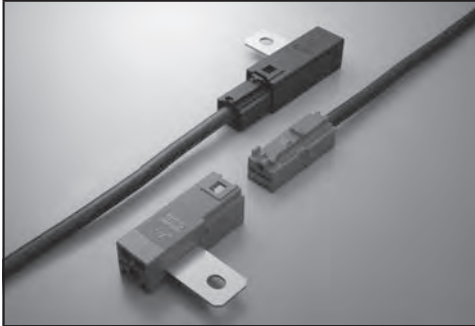
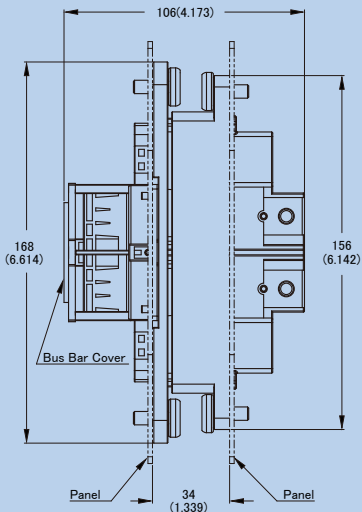
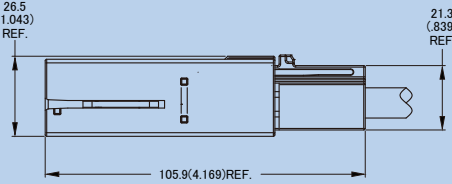
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

■ 角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | DW1 | | DW2 | |
|---|---|---------------------------------------|---|--------------------------------|
| タイプ Type | 大電流用 High-current connector | | 大電流用 High-current connector | |
| 接続形態 Connection Styles | ラック & パネル型 Rack and Panel | | ラック & パネル型 Rack and Panel | |
| 結線方法 Termination Styles | Power | 圧着端子ねじ止め Screw on crimped terminal | Power | ブスバー / ねじ止め Bus bar / Screw |
| | Signal | Crimp | Signal | Crimp |
| 外 観 Appearance |  | |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  | |  | |
| 極 数 No. of Contacts | Power : 2 Signal : 20 | | Power : 2 Signal : 20 | |
| コネクタ形状 Connector Styles | Plug | Straight | Plug | Straight |
| | Receptacle | Straight | Receptacle | Straight |
| 適用パネル厚 Applicable Panel Thickness | 2.75 mm (.108 inch) | | 3.0 mm (.118 inch) max. | |
| 適用電線 Applicable Wire Size | Signal : # 22 AWG (被覆外径 / Outer cable diameter : 1.5 mm) | | Signal : # 22 AWG (被覆外径 / Outer cable diameter : 1.5 mm) | |
| 定格電流 Current Rating | Power : 500 Amps / Signal : 2 Amps | | Power : 200 Amps / Signal : 2 Amps | |
| 耐電圧 D.W.Voltage | Power - Signal : 1800 VDC (1 minute) Signal - Signal : 300 VACrms (1 minute) | | Power - Signal : 3000 VDC (1 minute) Signal - Signal : 300 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | Power - Signal : 5000 megohms min. Signal - Signal : 100 megohms min. | | Power - Signal : 5000 megohms min. Signal - Signal : 100 megohms min. | |
| 接触抵抗 Contact Resistance | Power : 0.2 milliohms max. Signal : 20 milliohms max. | | Power : 0.2 milliohms max. Signal : 20 milliohms max. | |
| 使用温度 Operating Temperature | - 40 °C to + 95 °C | | - 25 °C to + 115 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | Silver plating | | Silver plating | |
| 特記事項 Remarks | | | | |

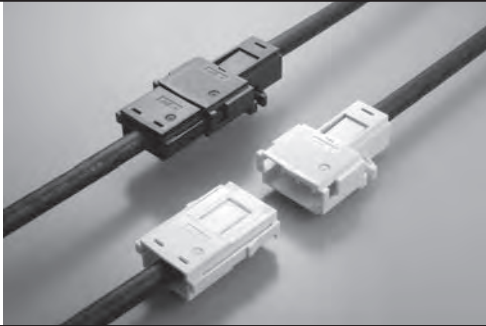
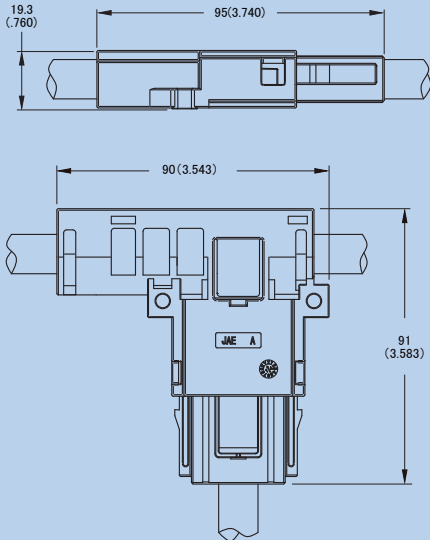
角型コネクタ・RECTANGULAR CONNECTORS

| DW3 | DW4 |
|---|--|
| 大電流用 High-current connector | 大電流用 High-current connector |
| ラック&パネル型 Rack and Panel | 基板対電線 PCB to Cable |
| ブスバー/ねじ止め Bus bar / Screw | Pin : 超音波溶着 / Ultrasonic weld Socket : ねじ止め (M8) / Screw (M8) |
| Crimp | — |
|  |  |
|  |  |
| Power : 2 Signal : 24 | 1 |
| Straight | Straight |
| Straight | Straight |
| — | — |
| Signal : # 22 AWG (被覆外径 / Outer cable diameter : 1.5 mm) | 22 mm ² (# 4 AWG Equivalent) |
| Power : 150 Amps / Signal : 2 Amps | 100 Amps |
| Power - Power / Power - Signal : 3000 VDC (1 minute) Signal - Signal : 300 VACrms (1 minute) | 1200 VDC (1 minute) |
| Power - Power / Power - Signal : 5000 megohms min. Signal - Signal : 100 megohms min. | 100 megohms min. |
| Power : 0.3 milliohms max. Signal : 20 milliohms max. | 0.3 milliohms max. |
| - 25 °C to + 105 °C | - 40 °C to + 75 °C |
| Silver plating | Tin plating |


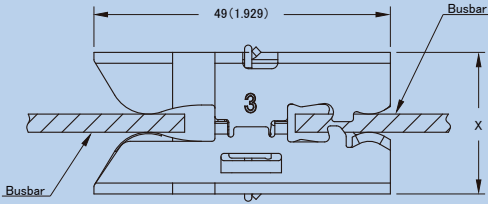
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

■ 角型コネクタ・RECTANGULAR CONNECTORS

| シリーズ名 Series Prefix | DW05 | |
|--|--|-----------------------|
| タイプ Type | 高電流用 High-current connector | |
| 接続形態 Connection Styles | 電線中継 Cable connecting | |
| 結線方法 Termination Styles | Power | 圧着 Crimp |
| | Signal | — |
| 外 観 Appearance |  | |
| コネクタ組合せと実装寸法 Dimension of Connector Combinations mm(inch) |  | |
| 極 数 No. of Contacts | 1 | |
| コネクタ形状 Connector Styles | Plug | Straight |
| | Receptacle | Straight, Right-angle |
| 適用パネル厚 Applicable Panel Thickness | — | |
| 適用電線 Applicable Wire Size | Straight : 14 to 42mm ² / # 6 AWG, # 4 AWG, # 2 AWG (被覆外径 / Outer cable diameter : 13.0 mm max.) Right-angle : 38 to 60 mm ² / #1 AWG, #1/0 AWG (被覆外径 / Outer cable diameter : 16.0mm max.) | |
| 定格電流 Current Rating | 150 Amps | |
| 耐電圧 D.W.Voltage | — | |
| 絶縁抵抗 Insulation Resistance | — | |
| 接触抵抗 Contact Resistance | 0.2 milliohms max. | |
| 使用温度 Operating Temperature | - 40 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | Silver plating | |
| 特記事項 Remarks | | |



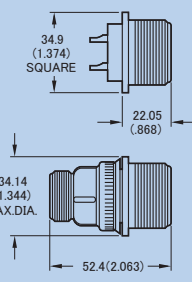
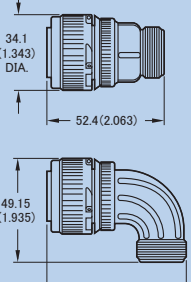
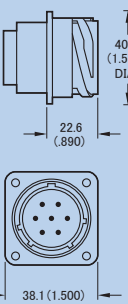
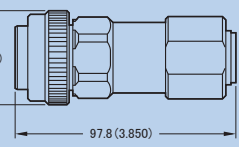
■ 角型コネクタ・RECTANGULAR CONNECTORS

| DW07 | | | | | | | | | | | |
|--|-------------|-----------------------------|-------------|-----|------|-----|------|-----|------|-----|------|
| 高電流用 High-current connector | | | | | | | | | | | |
| ブスバー接続 Busbar Connection | | | | | | | | | | | |
| — | | | | | | | | | | | |
| — | | | | | | | | | | | |
|  | | | | | | | | | | | |
|  | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Applicable Busbar Thickness</th> <th>Dimension X</th> </tr> </thead> <tbody> <tr> <td>3mm</td> <td>23.4</td> </tr> <tr> <td>4mm</td> <td>24.4</td> </tr> <tr> <td>5mm</td> <td>25.4</td> </tr> <tr> <td>6mm</td> <td>26.4</td> </tr> </tbody> </table> | | Applicable Busbar Thickness | Dimension X | 3mm | 23.4 | 4mm | 24.4 | 5mm | 25.4 | 6mm | 26.4 |
| Applicable Busbar Thickness | Dimension X | | | | | | | | | | |
| 3mm | 23.4 | | | | | | | | | | |
| 4mm | 24.4 | | | | | | | | | | |
| 5mm | 25.4 | | | | | | | | | | |
| 6mm | 26.4 | | | | | | | | | | |
| <p>(Note) 上図は、対応ブスバー厚 3mm タイプで記載 Drawing shown above is applicable busbar thickness 3mm type.</p> | | | | | | | | | | | |
| 1 (Note 1) | | | | | | | | | | | |
| Straight | | | | | | | | | | | |
| — | | | | | | | | | | | |
| 適用ブスバー (Applicable Busbar) : JIS H 3140 Silver plating | | | | | | | | | | | |
| 130 ~ 685 Amps (Note 2) | | | | | | | | | | | |
| — | | | | | | | | | | | |
| — | | | | | | | | | | | |
| 0.13 milliohms max. | | | | | | | | | | | |
| - 25 °C to + 105 °C (温度上昇含む / Including temperature rise) | | | | | | | | | | | |
| Silver plating | | | | | | | | | | | |
| <ul style="list-style-type: none"> ● ブスバーの固定穴を利用したワンタッチ取付タイプ ● Connector attaches easily with one hand, clipping onto mating holes in the busbar. <p>Note 1 : 複数個を並列使用することで、対応電流容量の変更可能 The amount of current that can be conducted is easily adjusted by changing the number of connectors attached to one line</p> <p>Note 2 : 上記は参考値です。使用条件により異なります。 Discrised is a reference value. it depends on the use conditions</p> | | | | | | | | | | | |



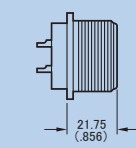
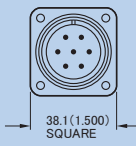
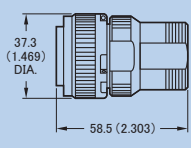
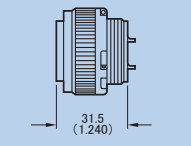
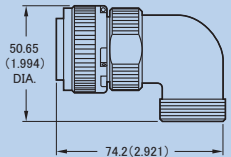
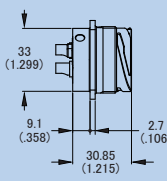
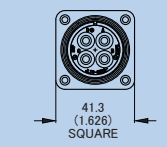
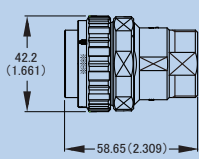
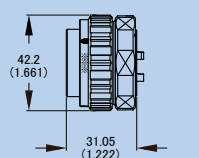
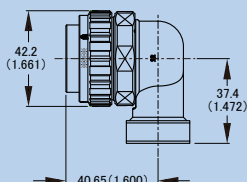
物理的に離れた機器間の接続

APPLICATION BETWEEN REMOTE UNITS

丸型コネクタ・CIRCULAR CONNECTORS

| シリーズ名 Series Prefix | N / MS - A / B | | JL05 |
|--|---|--|--|
| タイプ Type | MIL 規格品の MS コネクタと互換 Interchangeable with MIL SPEC. MS connector | | JIS B 9960 - 1 規格準拠・嵌合時防水型 Conformed to JIS B 9960 - 1 • Waterproof |
| 接続形態 Connection Styles | パネル対電線・電線中継 Panel to Cable • Cable connecting | | パネル対電線 Panel to Cable |
| 結合方式 Coupling Styles | ネジ Threaded | | バヨネットロック Bayonet Lock |
| 結線方法 Termination Styles | 半田 Solder | | 圧着 Crimp |
| 外 観 Appearance |  | |  |
| 外形寸法 (参考例) Outer Dimension of Connector (Example of Products) mm (inch) | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Receptacle</p>  </div> <div style="text-align: center;"> <p>Plug</p>  </div> </div> <p style="text-align: center;">※ For contact arrangement 18-1 Shell size : 18 No. of cont : 10</p> <p style="text-align: center;">※ For contact arrangement 18-1 Shell size : 18 No. of cont : 10</p> <p>(Note) 上図は、ケーブルクランプ等のアクセサリ類は省く Shown as above drawing excludes accessories as cable clamp, etc.</p> | | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Receptacle</p>  </div> <div style="text-align: center;"> <p>Plug</p>  </div> </div> <p style="text-align: center;">※ For contact arrangement 20-15 Shell size : 20 No. of cont : 7</p> |
| 極 数 No. of Contacts | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 16, 17, 19, 22, 24, 26, 35, 37, 48, 54 | | 4, 5, 7, 8, 9, 10, 17, 19, 24, 30, 36, 37, 52, 73 |
| コネクタ形状 Connector Styles | Plug | | Straight |
| | Receptacle | | Box mounting |
| 適用電線 Applicable Wire Size | # 0 AWG max. to # 16 AWG max. | | # 8 to # 26 AWG |
| 定格電流 Current Rating | # 16 Cont. / 13 Amps to # 0 Cont. / 150 Amps | | # 20 Cont. / 2 Amps to # 8 Cont. / 46 Amps |
| 耐 電 圧 D.W.Voltage | 1000 to 7000 VACrms (1 minute) | | 1000 to 2800 VACrms (1 minute) |
| 絶 縁 抵 抗 Insulation Resistance | 5000 megohms min. | | 5000 megohms min. |
| 接 触 抵 抗 Contact Resistance | 74 millivolt max. (Example # 16 Cont. / # 16 AWG) | | 27 milliohms max. / # 26 AWG. (Example) |
| 防 水 性 Waterproof | — | | IP67 |
| 使用温度 Operating Temperature | - 55 °C to + 125 °C | | - 55 °C to + 125 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Silver plating | | Silver plating |
| 特記事項 Remarks | | | <ul style="list-style-type: none"> ●保護回路接続構造 ● Connected to protection circuit |

丸型コネクタ・CIRCULAR CONNECTORS



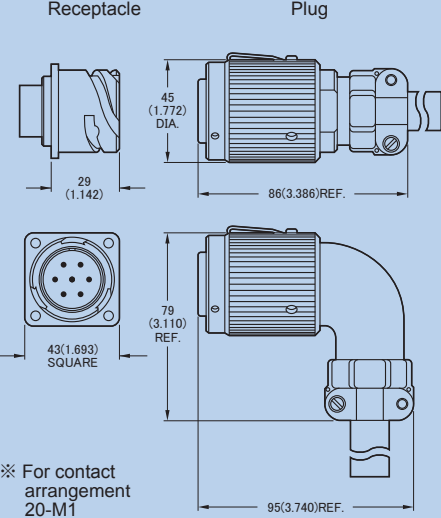
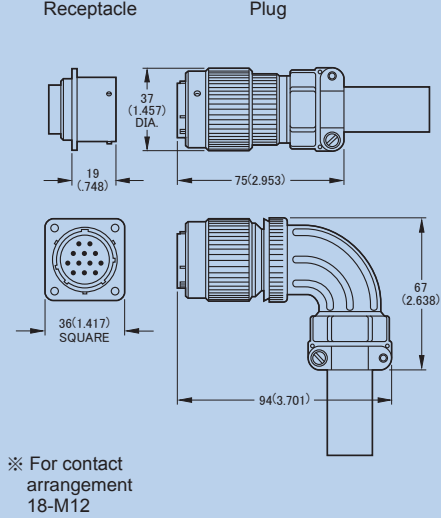
| <h3>JL04V</h3> | <h3>JL10</h3> |
|---|--|
| TUV 認定品・嵌合時防水型 TUV approved・Waterproof | UL / TUV 認定品・嵌合時防水型 UL / TUV approved・Waterproof |
| パネル対電線 Panel to Cable | パネル対電線 Panel to Cable |
| ネジ Threaded | ネジ/バヨネットロック兼用 Threaded and Bayonet Lock |
| 半田 Solder | 半田 Solder |
|  |  |
| <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Receptacle</p>  <p>21.75 (.856)</p>  <p>38.1 (1.500) SQUARE</p> </div> <div style="text-align: center;"> <p>Plug</p>  <p>37.3 (1.469) DIA.</p> <p>58.5 (2.303)</p>  <p>31.5 (1.240)</p> </div> </div> <p>※ For contact arrangement 20-15 Shell size : 20 No. of cont : 7</p>  <p>50.65 (1.994) DIA.</p> <p>74.2(2.921)</p> <p>(Note) 上図は、ケーブルクランプ等のアクセサリ類は省く Shown as above drawing excludes accessories as cable clamp, etc.</p> | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Receptacle</p>  <p>33 (1.299)</p> <p>9.1 (.358)</p> <p>2.7 (.106)</p> <p>30.85 (1.215)</p>  <p>41.3 (1.626) SQUARE</p> </div> <div style="text-align: center;"> <p>Plug</p>  <p>42.2 (1.661)</p> <p>58.65 (2.309)</p>  <p>42.2 (1.661)</p> <p>31.05 (1.222)</p> </div> </div> <p>※ For Contact arrangement 22-22 Shell size : 22</p>  <p>42.2 (1.661)</p> <p>37.4 (1.472)</p> <p>40.65 (1.600)</p> |
| 3, 4, 6, 7, 8, 9, 22 | 4, 9, 17, 19 |
| Straight・Right-angle Box mounting | Straight・Right-angle Box mounting |
| # 4 to # 24 AWG | #16 Cont. : 1.25mm ² max. (JIS Std. / IEC Std.) / #16 AWG max. #12 Cont. : 3.5mm ² max. (JIS Std.) / 4 mm ² max. (IEC Std.) / #12 AWG max. #8 Cont. : 8mm ² max. (JIS Std.) / 10 mm ² max. (IEC Std.) / #8 AWG max. (22-22) 5.5mm ² max. (JIS Std.) / 6 mm ² max. (IEC Std.) / #10 AWG max. (24-11) (Note) |
| # 16 Cont. / 13 Amps to # 4 Cont. / 80 Amps | #16 Cont. / 13 Amps, #12 Cont. / 23 Amps, #8 Cont. / 46 Amps, 57Amps (Using wire size 8 mm ² to 10 mm ²), #4 Cont. / 80 Amps |
| 2000 VACrms (1 minute) 1000 or 5000 megohms min. | 2000 VACrms (1 minute) / 1000 VACrms (1 minute)・Contact arrangement 20-29 and 22-14 1000 megohms min. |
| 4 milliohms max. / # 16 Cont. (Example) | #16 Cont. : 4 to 15 milliohms max. (#16 to #24 AWG), #12 Cont. : 2 to 4 milliohms max. (#12 to #16 AWG) # 8 Cont. : 2 milliohms max. (#8 to #12 AWG) (Note) |
| IP67 - 55 °C to + 125 °C | IP67 - 55 °C to + 125 °C |
| Silver plating | Silver plating |
| <ul style="list-style-type: none"> ● EN61984 規格に対応した TUV 認定品 ● 保護回路接続構造 ● TUV - approved product satisfying EN61984 ● Connected to protection circuit | (Note) #4 コンタクト使用時の仕様については、別途お問い合わせ下さい。 For the specifications of when using #4 contact, please consult us. |

 丸型
Circular


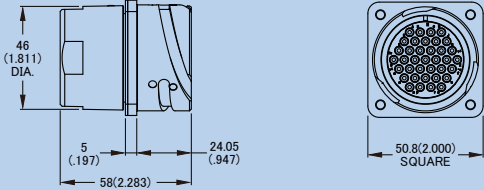
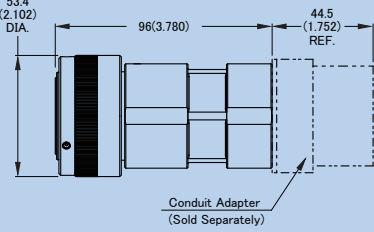
物理的に離れた機器間の接続

APPLICATION BETWEEN REMOTE UNITS

丸型コネクタ・CIRCULAR CONNECTORS

| シリーズ名 Series Prefix | GTC ※ A | | GT / D | |
|--|--|--|--|--|
| タイプ Type | 堅牢・多極型 Rugged・Multiple contacts | | 小型・堅牢型 Small size・Rugged | |
| 接続形態 Connection Styles | パネル対電線 Panel to Cable | | パネル対電線 Panel to Cable | |
| 結合方式 Coupling Styles | バヨネットロック Bayonet Lock | | バヨネットロック Bayonet Lock | |
| 結線方法 Termination Styles | 圧着 Crimp | | 圧着 Crimp | |
| 外 観 Appearance |  | |  | |
| 外形寸法 (参考例) Outer Dimension of Connector (Example of Products) mm (inch) | <p style="text-align: center;">Receptacle Plug</p>  <p>※ For contact arrangement 20-M1 Shell size : 20 No. of cont : 7</p> | | <p style="text-align: center;">Receptacle Plug</p>  <p>※ For contact arrangement 18-M12 Shell size : 18 No. of cont : 12</p> | |
| 極 数 No. of Contacts | 5, 7, 12, 15, 19, 27, 37, 48 | | 4, 8, 12, 31, 37, 55 | |
| コネクタ形状 Connector Styles | Plug Receptacle | | Straight・Right-angle Box mounting | |
| 適用電線 Applicable Wire Size | # 8 Cont. : 3.5 mm ² to 8 mm ² (Note 1) # 16 Cont. : 1.25 mm ² to 2 mm ² (Note 1) | | # 14 to # 24 AWG | |
| 定格電流 Current Rating | # 8 Cont. / 33 Amps max., # 16 Cont. / 13 Amps max. (Example) | | 13 Amps max. | |
| 耐電圧 D.W.Voltage | 2000 or 3000 VACrms (1 minute) | | 2000 VACrms (1 minute) | |
| 絶縁抵抗 Insulation Resistance | 5000 megohms min. | | 5000 megohms min. | |
| 接触抵抗 Contact Resistance | See below | | 5 millivolt max. (per DC 1 Amps) | |
| 防水性 Waterproof | — | | — | |
| 使用温度 Operating Temperature | - 55 °C to + 85 °C | | - 55 °C to + 85 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | Silver plating | | Gold plating | |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● (Note 1) 芯線断面積 Conductor cross section area ● (Note 2) 接触抵抗 Contact Resistance / # 8 Cont. : 28 millivolt max. (per DC 33 Amps) # 16 Cont. : 50 millivolt max. (per DC 13 Amps) (Example) | | | |



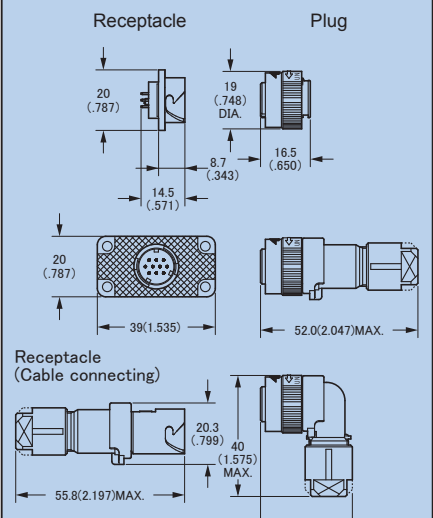
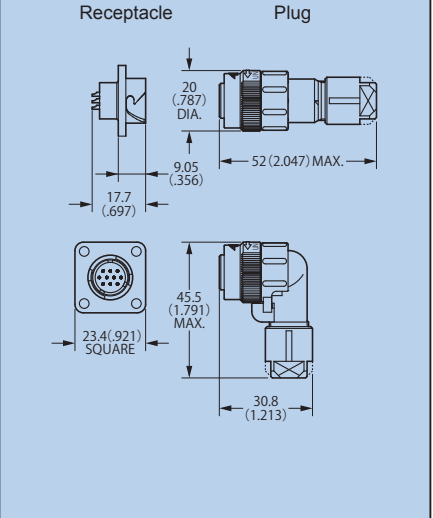
丸型コネクタ・CIRCULAR CONNECTORS

| JK06 | |
|--|--|
| VG95234 規格準拠・嵌合時防水型 Conformed to VG95234・Waterproof | |
| パネル対電線 Panel to Cable | |
| バヨネットロック Bayonet Lock | |
| 圧着 Crimp | |
|  | |
| <p>Receptacle</p>  | |
| <p>Plug</p>  <p>※ For contact arrangement 28-21 Shell size : 28 No. of cont. : 37</p> | |
| 10, 37, 48 | |
| Straight | |
| Box mounting | |
| 1.25mm ² to 2.5mm ² | |
| Contact / 13 Amps, Connector / 63.1 Amps (10 cont.), 96.2 Amps (37 cont.), 124.8 Amps (48 cont.) | |
| 2550 VACrms (1 minute) | |
| 5000 megohms min. | |
| 2.5 milliohms max. | |
| IP67 | |
| - 40 °C to + 100 °C | |
| Silver plating | |


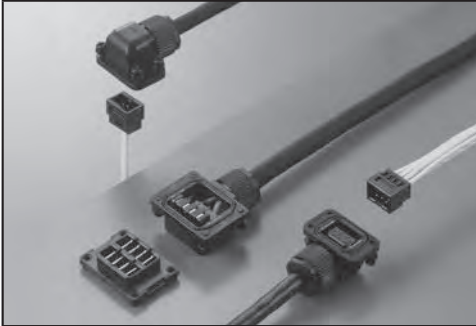
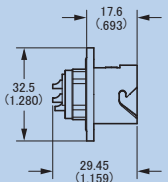
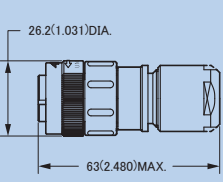
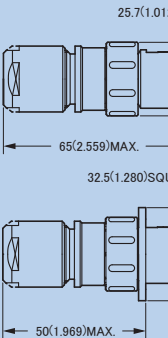
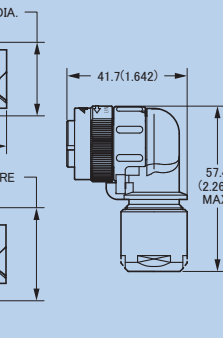
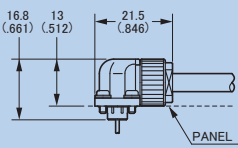
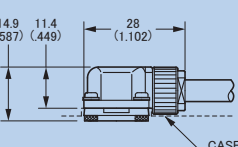
物理的に離れた機器間の接続

APPLICATION BETWEEN REMOTE UNITS

丸型コネクタ・CIRCULAR CONNECTORS

| シリーズ名 Series Prefix | JN1 | | JN2 | |
|--|--|--|---|--|
| タイプ Type | オールプラスチック・小型・嵌合時防水型 All-plastic・Small size・Waterproof | | 小型・堅牢・嵌合時防水型 Small size・Rugged・Waterproof | |
| 接続形態 Connection Styles | 基板対電線・パネル対電線・電線中継 PCB to Cable・Panel to Cable・Cable connecting | | パネル対電線 Panel to Cable | |
| 結合方式 Coupling Styles | プッシュツイストロック Push-twist Lock | | プッシュツイストロック Push-twist Lock | |
| 結線方法 Termination Styles | 半田・圧着 (Note 1) Solder・Crimp (Note 1) | | 半田・圧着 (Note 1) Solder・Crimp (Note 1) | |
| 外 観 Appearance |  | |  | |
| 外形寸法 (参考例) Outer Dimension of Connector (Example of Products) mm (inch) |  <p>※ The figure shows the version with 10 contacts. Other combinations are also available.</p> | |  <p>※ The figure shows the version with 10 contacts.</p> | |
| 極 数 No. of Contacts | 4, 10 | | 4, 10 | |
| コネクタ形状 Connector Styles | Plug | | Straight・Right-angle | |
| | Receptacle | | Straight (Box mounting) | |
| 適用電線 Applicable Wire Size | 4 Cont. (Solder) : Pin / # 18 AWG max. Socket / # 16 AWG max. 10 Cont. : Solder / # 22 AWG max. Crimp / # 20 to # 28 AWG | | 4 Cont. (Solder) : Pin / # 18 AWG max. Socket / # 16 AWG max. 10 Cont. : Solder / # 22 AWG max. Crimp / # 20 to # 28 AWG | |
| 定格電流 Current Rating | 4 Contacts / 5 Amps max. 10 contacts / 3 Amps max. | | 4 Contacts / 5 Amps max. 10 contacts / 3 Amps max. | |
| 耐 電 圧 D.W.Voltage | 900 VACrms (1 minute) / 10 contacts (Example) | | 900 VACrms (1 minute) / 10 contacts (Example) | |
| 絶縁抵抗 Insulation Resistance | 1000 megohms min. | | 1000 megohms min. | |
| 接触抵抗 Contact Resistance | 20 milliohms max. / 10 Contacts # 22 AWG (Example) | | 20 milliohms max. / 10 Contacts # 22 AWG (Example) | |
| 防 水 性 Waterproof | IP67 | | IP67 | |
| 使用温度 Operating Temperature | - 20 °C to + 125 °C | | - 20 °C to + 100 °C | |
| コンタクト接触部仕上 Finish of Connecting Area | 4 Contacts / Silver plating 10 contacts / Gold plating | | 4 Contacts / Silver plating 10 contacts / Gold plating | |
| 特記事項 Remarks | (Note 1) 圧着タイプは 10 極のプラグと中継レセプタクルのみ Crimp type is available only Plug and Cable to Cable Receptacle version with 10 contacts (Note 2) 基板対電線接続は 10 極のみ P.C.B. to Cable application is available only in 10 contact version | | (Note 1) 圧着タイプは 10 極のプラグのみ Crimp type is available only Plug version with 10 contacts | |



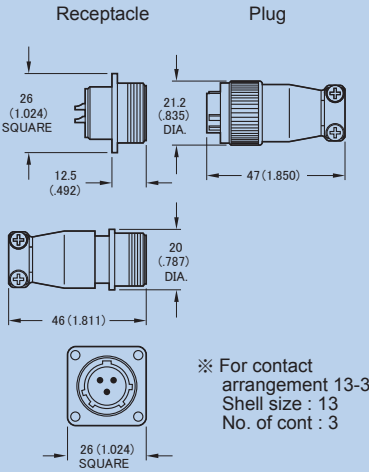
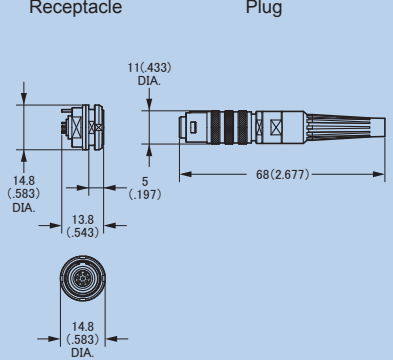
丸型コネクタ・CIRCULAR CONNECTORS

| JN1W / JN2W | JN6 |
|--|--|
| 小型・嵌合時防水型 Small size・Waterproof | オールプラスチック・小型・嵌合時防水型 All-plastic・Small size・Waterproof |
| パネル対電線・電線中継 Panel to Cable・Cable connecting | 基板対電線(4極)・電線対電線(2,7極) PCB to Cable(4 cont.)・Cable to Cable(2,7 cont.) |
| プッシュツイストロック Push-twist Lock | ネジ止め Screw fixing |
| 半田・圧着 (Note 1) Solder・Crimp (Note 1) | 圧着・半田 (スルーホール/4極・レセプタクル) Crimp・Solder (Through-hole/4 cont. Receptacle) |
|  |  |
| <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Receptacle</p>  </div> <div style="text-align: center;"> <p>Plug</p>  </div> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> | <div style="text-align: center;"> <p>2, 7 Contacts</p>  </div> <div style="text-align: center;"> <p>4 Contacts</p>  </div> |
| 5, 15 | 2, 4, 7 |
| Straight・Right-angle | Right-angle |
| Straight (Box mounting)・Cable mounting | Right-angle (4 Cont.)・Straight (2, 7 Cont.) |
| 5 Cont. (Solder) : # 14 AWG max. 15 Cont. (Crimp) : # 20 to # 28 AWG | 2 Cont. 7 Cont. : # 22 to # 30 AWG (Plug), # 22 to # 28 AWG (Receptacle), 4 Cont. : # 18 to # 20 AWG |
| 5 Cont. / 13 Amps max. 15 cont. / 3 Amps max. (# 22 Cont.) | 2 Cont. 7 Cont. / 1 Amps max. 4 Cont. / 7 Amps max. |
| 900 VACrms (1 minute) / 15 cont. (Example) | 2 Cont. 7 Cont. / 500 VAC 4 Cont. / 1500 VAC |
| 1000 megohms min. | 2 Cont. 7 Cont. / 100 megohms min. 4 Cont. / 1000 megohms min. |
| 4 milliohms max. / 5 Cont. # 16 AWG (Example) | 30 milliohms max. / 4 Cont. # 18 AWG (Example) |
| IP67 | IP67 |
| JN1W : -20 °C to +125 °C JN2W : -20 °C to +100 °C | -40 °C to +125 °C |
| 5 contacts / Silver plating 15 contacts / Gold plating | Gold plating |
| <ul style="list-style-type: none"> ● JN1W : 外殻がオールプラスチックの軽量タイプ ● JN2W : 外殻の一部に金属を使用した堅牢タイプ ● JN1W : All plastic lightweight connector ● JN2W : Rugged type with partially metallic shell (Note 1) 5極は半田タイプ、15極は圧着タイプ | <ul style="list-style-type: none"> ● プラグ側ケーブル引き出し方向は2方向(180°)選択可能 ● Plug side cable pulling out direction is selectable from two directions (180 degrees) <p>(Note) レセプタクルの筐体への固定 4極 : モールドイン 2,7極 : 圧入 Fix to case of receptacle 4 cont. : Molded 2, 7cont. : Press-fit</p> |



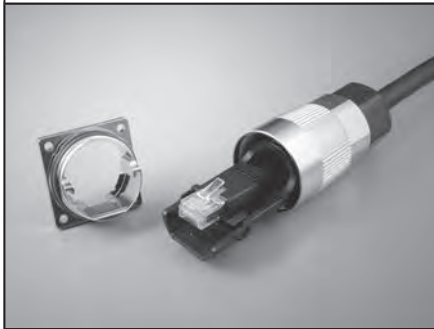
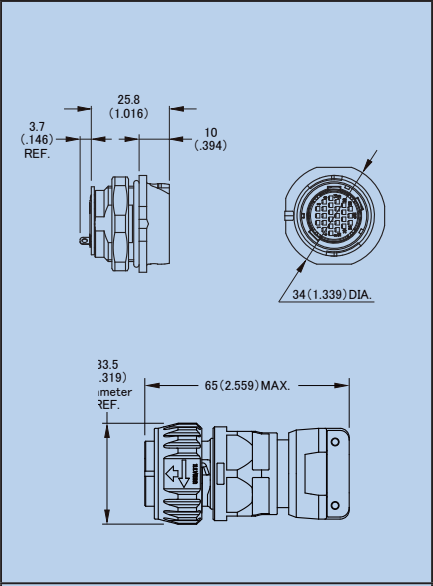
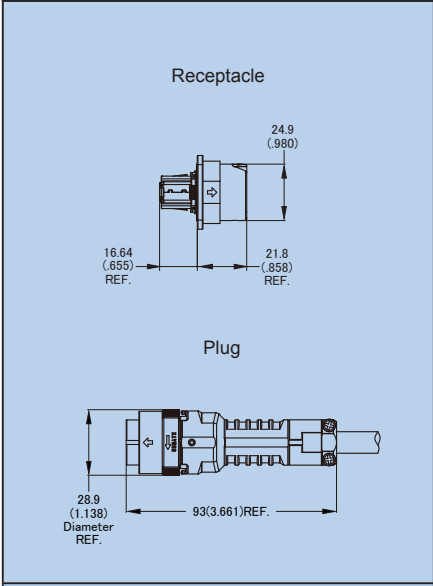
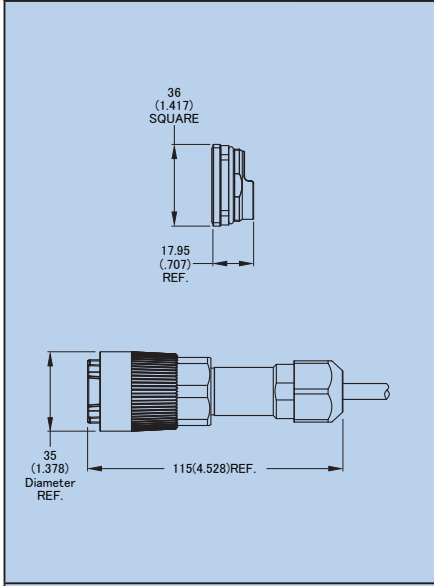
物理的に離れた機器間の接続

APPLICATION BETWEEN REMOTE UNITS

丸型コネクタ・CIRCULAR CONNECTORS

| シリーズ名 Series Prefix | SRCN | | JB5 |
|--|---|--|---|
| タイプ Type | JIS 規格準拠 Conformed to JIS | | 小型・堅牢・嵌合時防水型 Small size・Rugged・Waterproof |
| 接続形態 Connection Styles | パネル対電線・電線中継 Panel to Cable・Cable connecting | | 基板対電線・パネル対電線 PCB to Cable・Panel to Cable |
| 結合方式 Coupling Styles | ネジ Threaded | | プッシュプルロック Push-pull Lock |
| 結線方法 Termination Styles | 半田 Solder | | 半田 Solder |
| 外 観 Appearance |  | |  |
| 外形寸法 (参考例) Outer Dimension of Connector (Example of Products) mm (inch) |  | |  |
| 極 数 No. of Contacts | Contact Size # 16 : 3, 7, 10, 16 Contact Size # 20 : 5, 10, 16, 24 | | 3, 4, 5, 6, 8 |
| コネクタ形状 Connector Styles | Straight Box mounting・Cable mounting | | Straight Straight (Jam nut) |
| 適用電線 Applicable Wire Size | # 16 Cont. : # 16 AWG max. # 20 Cont. : # 20 AWG max. | | 3 Cont. : # 22 AWG max., 4, 5 Cont. : # 24 AWG max. 6, 8 Cont. : # 28 AWG max. |
| 定格電流 Current Rating | # 16 Cont. / 10 Amps max. # 20 Cont. / 5 Amps max. | | 3, 4, 5 Cont. / 3 Amps 6, 8 Cont. / 2 Amps |
| 耐電圧 D.W.Voltage | 1000 VACrms (1 minute) | | 3, 4 Cont. / 1500 VACrms (1 minute) 5, 6, 8 Cont. / 750 VACrms (1 minute) |
| 絶縁抵抗 Insulation Resistance | 1000 megohms min. | | 1000 megohms min. |
| 接触抵抗 Contact Resistance | 5 milliohms max. (per 1 Amps) | | 50 milliohms max. |
| 防水性 Waterproof | — | | IP68 |
| 使用温度 Operating Temperature | - 25 °C to + 85 °C | | - 55 °C to + 85 °C |
| コンタクト接触部仕上 Finish of Connecting Area | Silver plating | | Gold plating |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● JIS C 5432 に準拠 ● 圧着結線タイプ有り ● 詳細は別途お問い合わせ下さい。 ● Conformed to JIS C 5432 ● Crimp type is available ● Please consult us for details | | |




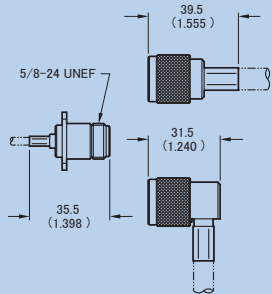
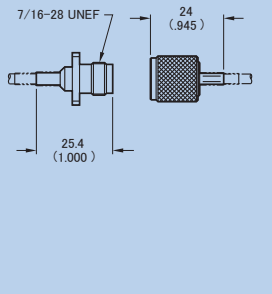
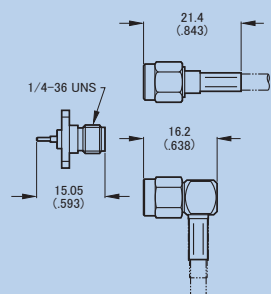
丸型コネクタ・CIRCULAR CONNECTORS

| JB10 | NT5 | FO-BD2 (for Modular Connector) |
|---|---|--|
| オールプラスチック・小型・嵌合時防水型 All-plastic・Small size・Waterproof | 小型・堅牢・嵌合時防水型 Small size・Rugged・Waterproof | 小型・堅牢・嵌合時防水型 Small size・Rugged・Waterproof |
| パネル対電線 Panel to Cable | パネル対電線 Panel to Cable | パネル対電線 Panel to Cable |
| プッシュツイストロック Push - twist Lock | プッシュツイストロック Push - twist Lock | ネジロック Screw Lock |
| 圧着 Crimp | 圧接 IDC | — |
|  |  |  |
|  <p>Receptacle dimensions: 25.8 (1.016) total width, 3.7 (.146) REF. mounting hole offset, 10 (.394) contact offset, 34 (1.339) DIA. outer diameter.</p> <p>Plug dimensions: 33.5 (.319) diameter REF., 65 (2.559) MAX. length.</p> |  <p>Receptacle dimensions: 24.9 (.980) total width, 16.64 (.655) REF. mounting hole offset, 21.8 (.858) REF. contact offset.</p> <p>Plug dimensions: 28.9 (1.138) diameter REF., 93 (3.661) REF. length.</p> |  <p>Receptacle dimensions: 36 (1.417) SQUARE mounting hole, 17.95 (.707) REF. contact offset.</p> <p>Plug dimensions: 35 (1.378) diameter REF., 115 (4.528) REF. length.</p> |
| 26 | 8 | — |
| Straight | Straight | Straight |
| BOX mounting | Box mounting | Box mounting |
| # 20 to # 28 AWG | # 24 AWG (単線 / Single wire) | φ 7.0mm (Standard diameter) |
| 1 Amps | DC 0.4 Amps | — |
| 900 VACrms (1 minute) | 1000 VACrms (1 minute) Contact - Contact, 1500 VACrms (1 minute) Contact - Shell | — |
| 1000 megohms min. | 100 megohms min. | — |
| 28 milliohms max. (#20, #22 AWG), 33 milliohms max. (#24 AWG) 40 milliohms max. (#26 AWG), 50 milliohms max. (#28 AWG) | 200 milliohms max. (Note) | — |
| IP67 | IP67 | IP67 |
| - 20 °C to + 125 °C | - 40 °C to + 85 °C | - 40 °C to + 85 °C |
| Gold plating | Gold plating | — |
| <ul style="list-style-type: none"> ● 内部シールド構造 ● Internal shielding structure | <ul style="list-style-type: none"> ● モジュラーコネクタ (IEC60603 - 7 互換) ● 屋外用インターフェースに最適 ● Modular connector (IEC 60603 - 7 compatible) ● Suitable for outdoor use ● (Note) 導体抵抗含む With bulk resistance | <ul style="list-style-type: none"> ● 機器内基板上のモジュラージャックへダイレクト 接続可能 ● SFP トランシーバ接続の光コネクタにも対応可能 (80 頁参照) ● Direct connection with the on-board modular jack inside devices are possible ● Can also be used in optical connector for SFP transceivers (See page 80) |

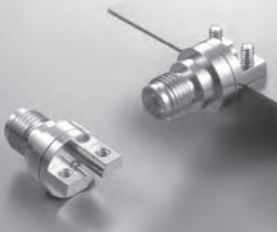



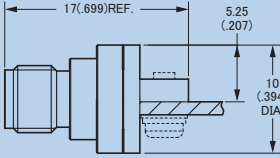
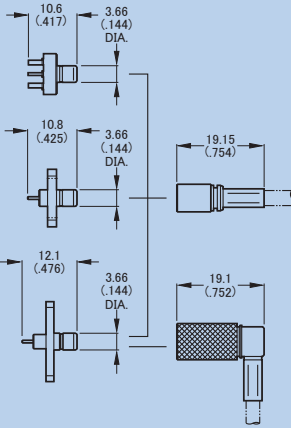
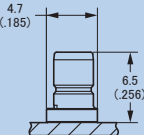
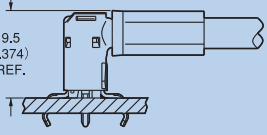
機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

同軸コネクタ・COAXIAL CONNECTORS

| シリーズ名 Series Prefix | N | TNC | SMA |
|---|---|---|---|
| 特性インピーダンス Impedance | 50 ohms | 50 ohms | 50 ohms |
| 適用周波数 Applicable Frequency Range | DC to 3 GHz | DC to 3 GHz | DC to 18 GHz (Straight adapter) |
| 嵌合方式 Coupling Style | ネジカップリング Threaded | ネジカップリング Threaded | ネジカップリング Threaded |
| 適用電線 Applicable Coaxial Cable | 1.5 D - V, 1.5 D - W, 2.5 D - V, 5 D - V, UT141, UT85 | 1.5 D - V, 1.5 D - W, 2.5 D - V, UT85 | 1.5 D - V, 1.5 D - W, 2.5 D - V, UT141, UT85 |
| 外 観 Appearance |  |  |  |
| コネクタ組合せ例 Connector Combinations mm (inch) | <p>[For example]</p> <p>Panel Jack Plug</p>  <p>OTHER CONNECTOR TYPE : Bulkhead Jack (Straight and Right angle)</p> | <p>[For example]</p> <p>Panel Jack Plug</p>  <p>OTHER CONNECTOR TYPE : Bulkhead Jack (Straight) Cable Jack</p> | <p>[For example]</p> <p>Receptacle Plug</p>  <p>OTHER CONNECTOR TYPE : Right angle Receptacle P.C. Board mount Receptacle Cable Jack Panel mount Plug</p> |
| 耐 電 圧 D.W.Voltage | 500 VACrms (1 minute) | 500 VACrms (1 minute) | 500 VACrms (1 minute) |
| 絶 縁 抵 抗 Insulation Resistance | 500 megohms min. | 500 megohms min. | 500 megohms min. |
| 接 触 抵 抗 Contact Resistance | Center Contact 10 milliohms max. Outer Conductor 10 milliohms max. | 10 milliohms max. 10 milliohms max. | 4 milliohms max. 4 milliohms max. |
| 電圧定在波比 Voltage Standing Wave Ratio | 1.2 max. (DC to 3GHz) | 1.2 max. (DC to 3GHz) | 1.2 max. (DC to 3GHz) |
| 準拠規格 Conformable Spec. | IEC60169 - 16 | IEC60169 - 17 | IEC60169 - 15 |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 電線側は、ハーネス品にて販売 ● Cable-harnessed connectors are standard | <ul style="list-style-type: none"> ● 電線側は、ハーネス品にて販売 ● Cable-harnessed connectors are standard | <ul style="list-style-type: none"> ● 電線側は、ハーネス品にて販売 ● Cable-harnessed connectors are standard |

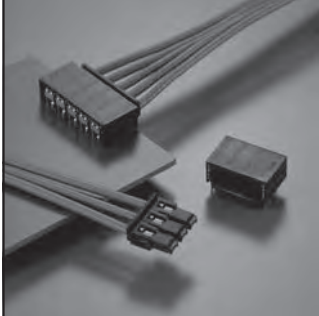


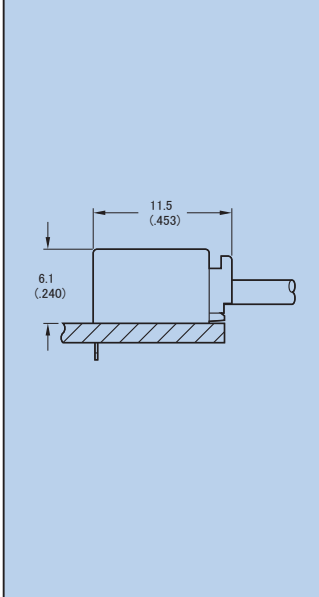
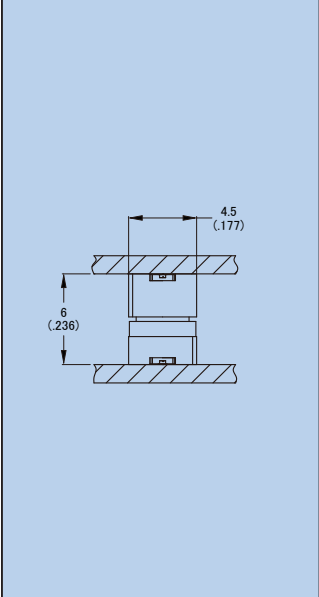
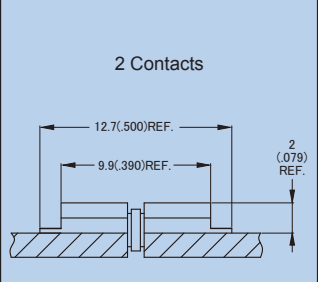
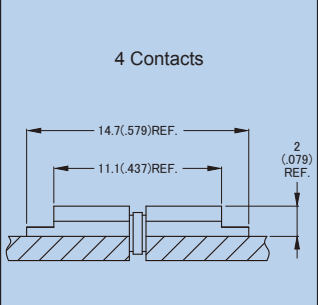
■同軸コネクタ・COAXIAL CONNECTORS

| SMA (End - launch Type Receptacle) | SMB | SMB (SMT Type Receptacle) | CN50 |
|--|---|---|---|
| 50 ohms | 50 ohms | 50 ohms | 50 ohms |
| DC to 20 GHz DC to 6 GHz | DC to 3 GHz | DC to 3 GHz | DC to 3 GHz |
| ネジカップリング Threaded | プッシュオン Push - On | プッシュオン Push - On | プッシュオン Push - On |
| — | 1.5 D - V, 1.5 D - W, UT85 | — | 1.5 D - V, 1.5 D - W |
|  |  |  |  |
|  | <p>Receptacle Plug</p>  |  |  |
| 500 VACrms (1 minute) | 500 VACrms (1 minute) | 500 VACrms (1 minute) | 500 VACrms (1 minute) |
| 500 megohms min. | 500 megohms min. | 500 megohms min. | 500 megohms min. |
| 4 milliohms max. | 5 milliohms or 8 milliohms max. | 8 milliohms max. | 15 milliohms max. |
| 4 milliohms max. | 2.5 milliohms or 12 milliohms max. | 8 milliohms max. | 8 milliohms max. |
| 1.05 + 0.015 × f (GHz) max. (DC to 20GHz) 1.2 max. (DC to 6 GHz) | 1.2 max. (DC to 3GHz) | 1.2 max. (DC to 3GHz) | 1.2 max. (DC to 3GHz) |
| IEC60169 - 15 | IEC60169 - 10 | IEC60169 - 10 | IEC60169 - 10(Type SMB)compatible |
| <ul style="list-style-type: none"> ● 基板側レセプタクルコネクタ ● 20 GHz タイプと 6 GHz タイプの 2 種類有り ● 嵌合相手側は SMA シリーズプラグを使用 ● Board side receptacle connector ● Two types are available , DC to 20 GHz type and DC to 6GHz type ● SMA Series connector is used for the plug | <ul style="list-style-type: none"> ● 電線側は、ハーネス品にて販売 ● Cable-harnessed connectors are standard | <ul style="list-style-type: none"> ● 基板側レセプタクルコネクタ ● 嵌合相手側は SMB シリーズ又は CN50 シリーズプラグを使用 ● Board side receptacle connector ● SMB Series or CN50 Series connector is used for the plug | <ul style="list-style-type: none"> ● 電線側は、ハーネス品にて販売 ● Cable-harnessed connectors are standard |

機器内サブアッセンブリ間及び機器間の接続

APPLICATION BETWEEN SUBASSEMBLIES INSIDE EQUIPMENT,
AND BETWEEN UNITS

同軸コネクタ・COAXIAL CONNECTORS

| シリーズ名 Series Prefix | KD10 / KD20 | CP2 | CP03 |
|---|--|---|--|
| 特性インピーダンス Impedance | 50 ohms / 75 ohms | 50 ohms | 50 ohms |
| 適用周波数 Applicable Frequency Range | DC to 300 MHz | DC to 5 GHz | DC to 65 GHz |
| 嵌合方式 Coupling Style | プッシュオン Push-On | プッシュオン Push-On | プッシュオン Push-On |
| 適用電線 Applicable Coaxial Cable | 50 ohms : 0.8D - IEV (LF) or CO - 6F - SB - CX 50 75 ohms : 0.8CV - E41447 (LF) | — | — |
| 外 観 Appearance |  |  |  |
| コネクタ組合せ例 Connector Combinations mm (inch) |  |  | <p>2 Contacts</p>  <p>4 Contacts</p>  |
| 耐 電 圧 D.W.Voltage | 250 VACrms (1 minute) | 500 VACrms (1 minute) | 500 VACrms (1 minute) |
| 絶縁抵抗 Insulation Resistance | 100 megohms min. | 500 megohms min. | 5000 megohms min. |
| 接触抵抗 Contact Resistance | Center Contact 80 milliohms max. Outer Conductor 30 milliohms max. | 10 milliohms max. 3 milliohms max. | 6 milliohms max. 2 milliohms max. |
| 電圧定在波比 Voltage Standing Wave Ratio | 1.3 max. (DC to 300 MHz) | 1.2 max. (DC to 5 GHz) | 1.5 max. (DC to 65GHz) |
| 準拠規格 Conformable Spec. | — | — | MIL - STD - 348 A |
| 特記事項 Remarks | <ul style="list-style-type: none"> ● 極数 : 1, 3, 5, 8 極 ● 電線側は、ハーネス品にて販売 ● No. of contacts : 1, 3, 5, 8 ● Cable - harnessed connectors are standard | — | <ul style="list-style-type: none"> ● プラグレセプタクルは、2 連タイプと 4 連タイプの 2 種有り ● 2 types plug receptacles are available, 2 row type and 4 row type |

光ファイバケーブルによる光伝送路の接続

APPLICATION FOR OPTIC TRANSMISSION THROUGH OPTIC FIBER

光コネクタ・FIBER OPTIC CONNECTORS

FO-SC Series

光単心 / 2心型・Simplex / Duplex Fiber



FO-SC シリーズは、プラグの押し引きのみでコネクタの着脱ができるプッシュプルロック式で、小スペースでも迅速で容易に取り扱いができます。

外殻はプラスチック製、光コネクタフェルールはφ2.5mmの高性能ジルコニアセラミックを採用し軽量でローコスト化を図った光コネクタです。単心と2心(F形/H形)があります。

- SC形 (JIS C 5973 に対応)
 - シングルモード光ファイバとマルチモード光ファイバ対応
- (注) プラグハウジングと光コネクタフェルールは別売です。

The push-pull lock achieves mating / unmating of the connector by pushing or pulling the plug. Easy to operate even in a small space.

These are lightweight, low cost optic connectors provided with plastic shell and high performance zirconia ceramic ferrule of 2.5 mm in diameter.

Simplex fiber version and duplex fiber version (F type / H type) are available.

- Type SC (Conformed to JIS C 5973)
- For single mode fiber and multimode fiber

(Note) The plug housing and ferrule are sold separately.

FO-FC Series

光単心型・Simplex Fiber



FO-FC シリーズは、外殻は金属製で、ネジ結合式の光コネクタです。

光コネクタフェルールはφ2.5mmの高性能ジルコニアセラミックを採用、スプリングによる押圧で常に安定した光伝送を実現します。

- FC形 (JIS C 5970 に対応)
 - シングルモード光ファイバとマルチモード光ファイバ対応
- (注) プラグハウジングと光コネクタフェルールは別売です。

Screw coupling optical connector, with metallic shell.

Ferrule of high performance zirconia ceramics, 2.5 mm diameter.

Sprung ferrule end offers stable connection, ensuring correct optical transmission.

- Type FC (Conformed to JIS C 5970)
- For single mode fiber and multimode fiber

(Note) The plug housing and ferrule are sold separately.

FO-LC Series

光単心 / 2心型・Simplex / Duplex Fiber



FO-LC シリーズは、LC 形光コネクタの互換型光コネクタです。

ワンタッチ操作のレバーロック構造で、光コネクタの着脱が容易に行えます。

外殻はプラスチック製、光コネクタフェルールはφ1.25mmの高性能ジルコニアセラミックを採用した、小型・軽量の高密度実装タイプです。

- シングルモード光ファイバとマルチモード光ファイバ対応

Compatible with LC connector, which is a small, lightweight and high-density connector with a plastic

outer-shell and a high performance zirconia ceramic ferrule of 1.25 mm in diameter.

One touch lever lock achieves easy mating and unmating operation.

- For single mode fiber and multimode fiber

清掃可能アダプタ Cleanable Adapter



清掃可能アダプタは、フロントシェルとリアシェルで構成されており、フロント

シェルのロックレバーによりワンタッチでフロントシェルを取り外すことができます。

シェルの分割により、光コネクタのフェルール先端が露出し、フェルール端面等の清掃が機器の外側から容易に行えます。

リアシェルは、FC 形光コネクタ接続タイプと SC 形光コネクタ接続タイプ有り。

- リアシェル FC 形のフロントシェル：FC 形、SC 形、ST 形、DIN 形、DIA 形の 5 種類の光コネクタに対応
- リアシェル SC 形のフロントシェル：FC 形、SC 形の 2 種類の光コネクタに対応

The cleanable adapter is composed of a front shell and a rear shell. The front shell can be detached in a single operation with its lock lever.

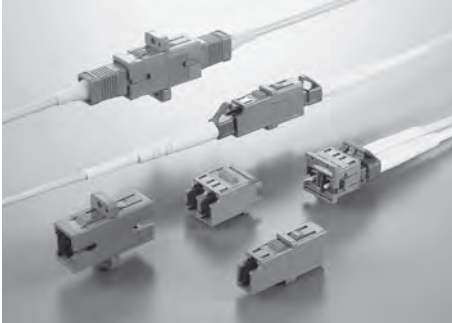
The division of shells allows the ferrule tip of the optical connector to be exposed and the end of the ferrule to be easily cleaned from outside the device.

Two types of rear shells are available, for connection with FC and SC type optical connectors

- Front shells for FC type rear shells : applicable to five types of optical connectors, FC, SC, ST, DIN and DIA
- Front shells for SC type rear shells : applicable to two types of optical connectors, FC and SC

光コネクタ・FIBER OPTIC CONNECTORS

FO-EX Series 分割型アダプタ・Separable Adapter



FO-EX シリーズは、ハウジング中央部からフロントハウジング、リアハウジングの 2 つに分割できる SC 形 / LC 形光コネクタ用アダプタです。ハウジングの分割により、光コネクタのフェルル端面が露出し、機器の外側からフェルル端面等の清掃が容易に行えます。

- LC 形：単心用、2 心用、SC 形：単心用の 3 タイプ有り。
- 分割型ながら、各規格品アダプタと同等の光学的、環境的性能を保有。
- フロントハウジングとリアハウジングの着脱は、片手で容易に操作できるレバーロック式。

The FO-EX series optical connector adapters come in two types, SC and LC. Both types are partitioned into two sections at the housing center : front housing and rear housing.

- Three types are available; Simplex LC type, duplex LC type and simplex SC type.
- Both LC types and SC types have an optical, environmental performance equal with each standard product adapter.
- Easy lever lock mechanism to separate the front housing by one hand.

FO-BN Series 防水 / 多心型・Water Proof / Multiple Fibers



FO-BN シリーズは、屋外配線用の小型・防水型光多心丸型コネクタです。嵌合は、確実なクリック感で容易に行えるバヨネットロック式です。光コネクタフェルルはφ2.5mmの高性能ジルコニアセラミックを採用し、高精度で安定した接続ができます。

- 心数：2, 4, 6, 8
- シングルモード光ファイバとマルチモード光ファイバ対応

Small, waterproof multiple - fiber circular connector for outdoor cabling. Bayonet lock ensures correct mating, with sure click feeling. Ferrule of high performance zirconia ceramics, 2.5mm diameter, ensuring precision stable connection.

- No. of Fibers : 2, 4, 6, 8
- For single mode fiber and multimode fiber

FO-BC Series 防水 / 多心型・Water Proof / Multiple Fibers



FO-BC シリーズは、LC 形コネクタを内蔵した屋外用機器に最適な防水型光多心丸型コネクタです。

プッシュツイスト式のワンタッチロック機構で、容易かつ確実な嵌合が可能です。金属製の外殻による高い堅牢性と優れた耐環境性能を備えた光コネクタです。

- 心数：2
- レセプタクルに LC 形アダプタ、プラグ側に LC 形プラグを内蔵
- 内部の LC 型コネクタと外殻シェルとのダブルロックで高い接続信頼性を確保

FO-BC Series is waterproof optical circular connector suitable for outdoor use. Easy and secure mating is possible with the one-touch lock, push-to-mate and twist-to-release structure. High robustness with metallic outer shell and environmental resistance.

- No. of Fibers : 2
- LC adapter incorporated into receptacle, LC plug incorporated into plug
- Double lock of LC connector and outer shell ensures highly reliable connection

FO-BH Series 防水 / 多心型・Water Proof / Multiple Fibers



FO-BH シリーズは、プラグ外径 20mm の小型で屋外用機器に最適な防水型光多心丸型コネクタです。

確実で容易な操作のプッシュツイスト式のワンタッチロック機構で、金属製の外殻による高い堅牢性と優れた耐環境性能を備えたコネクタです。

- 心数：1, 2
- プラグ外径 20mm の小型タイプ
- レセプタクル後面から LC 形プラグ接続可能
- プラグ側は、アダプタの使用で LC 形プラグ挿入可能 (非防水)

FO-BH Series is compact waterproof optical circular connector suitable for outdoor use. Easy and secure mating is possible with the one-touch lock, push-to-mate and twist-to-release structure. High robustness with metallic outer shell and environmental resistance.

- No. of Fibers : 1, 2
- Small size 20mm plug diameter
- Receptacle back side : connection for LC plug
- Plug mating side : connection for LC plug also possible using LC conversion adapter (not waterproof)

光ファイバケーブルによる光伝送路の接続

APPLICATION FOR OPTIC TRANSMISSION THROUGH OPTIC FIBER

光コネクタ・FIBER OPTIC CONNECTORS

FO-BD2 Series

防水型インターフェースコネクタ・Water Proof I/O Connector



FO-BD2 シリーズは、機器内基板上的 SFP トランシーバー等にダイレクトに接続可能な防水型インターフェースコネクタです。

耐環境性に優れ、携帯電話基地局や通信機器等、屋外用途に幅広くご使用頂けます。

- 二重ロック方式プラグにより、離脱操作時の接続部への負荷を防止
- 既存ハーネスに後付組込が可能（現場での組み立てに対応）
- モジュージャックへの接続にも対応できます。

The FO-BD2 Series connector is a waterproof I/O connector that can mate directly with the on - board SFP transceiver inside the devices.

The FO-BD2 Series connector has a superior environmental resistance performance and is ideal for use in a wide range of outdoor applications such as base stations of mobile phones and communication devices.

- Dual lock method plug prevents excessive load to the connection area caused by disengagement.
- Can be built-in to the existing harness afterwards. (On-site assembly is possible.)
- Direct connection with modular jack is also available.

ご注文に際してのお願い

- ①本カタログに記載の仕様は、参考値です。製品及び仕様については、予告無く変更する場合があります。記載製品のご採用のご検討やご注文に際しては、予め弊社販売窓口までお問い合わせのうえ、「納入仕様書」の取交わりをお願いします。
- ②お客様におかれましては、保護回路や冗長回路等を設けて機器の安全を図られると共に、弊社製品の適合性について十分なご確認をお願いします。
- ③本カタログ記載の製品は、下記の推奨用途に使用されることを意図しております。従いまして、推奨用途以外へのご使用又は極めて高い信頼性が要求される特定用途へのご使用をお考えの場合は、必ず事前に弊社販売窓口までご相談下さいますようお願い申し上げます。

(1) ご相談いただく用途例：

(イ)下記用途でお客様指定又は産業分野固有の品質保証プログラムが有る場合は、ご相談下さい。

***用途例：**自動車電装、列車制御、通信機器(幹線)、交通信号制御、電力、燃焼制御、防火・防犯装置、防災機器、等。

(ロ)下記特定用途へのご使用をお考えの場合は、お客様指定の品質保証プログラムにて別途承る場合があります。

***特定用途例：**航空宇宙機器、海底中継機器、原子力制御システム、生命維持のための医療機器、等。

(2) 推奨用途例：電算機、事務機、通信機器(端末、移動体)、計測機器、AV 機器、家電、FA 機器、等。

- ④本カタログ記載の製品は、外国為替及び外国貿易法による輸出令別表第一の1項から15項に該当する製品(又は部品)が含まれておりますので、本製品を輸出するとき、又は国外に持ち出すときは、日本政府の輸出許可が必要となります。ご商談の際には、弊社販売窓口までご確認をお願い致します。

Before placing an order

- ① The values specified in this catalogue are only for reference. The products and 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 catalogue 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.

- ④ The products presented in this catalogue include products (or components) listed in Article 1 through Article 15 in the Attached Table 1 of the Export Order according to the Foreign Exchange and Foreign Trade Law. Export permission by the Japanese government is required for exporting or taking any of these products out of Japan. Please contact our sales staff for these items.



Japan Aviation Electronics Industry, Limited

〒153-8539 東京都目黒区青葉台 3-1-19 (青葉台石橋ビル)

<http://www.jae.com>

お問い合わせは「カスタマサポートグループ」へ

TEL (03) 3780-2717 FAX (03) 3770-3869

大阪支店・大阪市 TEL (06) 6447-5255 FAX (06) 6447-5276
中部支店・豊田市 TEL (0565) 34-0600 FAX (0565) 34-0840
仙台営業所・仙台市 TEL (022) 225-8151 FAX (022) 225-8059
宇都宮営業所・宇都宮市 TEL (028) 637-8545 FAX (028) 637-8546
静岡営業所・静岡市 TEL (054) 283-0664 FAX (054) 283-1993
福岡営業所・福岡市 TEL (092) 262-1888 FAX (092) 262-1750

Japan Aviation Electronics Industry, Limited

1-19, Aobadai 3-chome, Meguro-ku, Tokyo 153-8539, Japan

Telephone : (03) 3780-2768 Facsimile : (03) 3780-2883

JAE Electronics, Inc.

142 Technology Drive, Suite 100 Irvine, California 92618-2430, U.S.A.

Telephone : (1) 949-753-2600 Facsimile : (1) 949-753-2699

(800)JAE-PART(523-7278) Toll free in U.S.A. except in California and Alaska

JAE Europe, Ltd.

200 Fowler Avenue, Farnborough Business Park, Farnborough, Hampshire

GU14 7JP U.K.

Telephone : (44) 1252-551100 Facsimile : (44) 1252-55-1110

JAE Taiwan, Ltd. <Taipei Branch Office>

3F., No.57, Lane.10, Jihu Rd., Neihu Dist., Taipei City 11492, Taiwan

Telephone : (886) 2-2799-6777 Facsimile : (886) 2-2799-0996

JAE Hong Kong, Ltd.

Suite 1407-11, 14/F., Tower2, The Gateway, 25 Canton Road,

Tsimshatsui, Kowloon, Hong Kong

Telephone : (852) 2723-7782 Facsimile : (852) 2723-9028

JAE Shanghai Co., Ltd.

RM1407, Shanghai Mart 2299 Yanan Road (West), Shanghai, 200336 P.R.C.

Telephone : (86) 21-6236-0322 Facsimile : (86) 21-6236-1292

JAE Singapore Pte Ltd.

33, Tannery Lane, #02-01 Hoesteel Industrial Building, Singapore 347789

Telephone : (65) 6748-1332 Facsimile : (65) 6748-2920

JAE Korea, Inc.

13F, Namgang B/D, 291, Gangnamde-ro, Seocho-gu, Seoul, 137-861, Korea

Telephone : (82) 2-6230-1100 Facsimile : (82) 2-6230-1190



■ご注意

電気用品安全法の適合品をお求めの場合は、電気用品安全法で定める基準を満たした認証品をお選び下さい。認証品については弊社販売窓口までお問い合わせ下さい。

本カタログ記載内容の無断転載を禁じます。

No part of this catalogue may be reproduced or distributed in any means, or stored in a data based or retrieval system, without the prior written permission of Japan Aviation Electronics Industry, Ltd.