Power Connection Systems

VERSATILE, HIGH-CURRENT, MIXED DENSITY

Catalog C-014 Rev. G

www.connectpositronic.com
Experience

- Founded in 1966
- Involvement in the development of international connector specifications through EIA®, IEC and ISO as well as PICMG®.
- Introduction of new and unique connector products to the electronics industry.
- Patent holder for many unique connector features and manufacturing techniques.
- Vertically integrated manufacturing – raw materials to finished connectors.

Technology

- Expertise with solid machined contacts provides a variety of high reliability connectors including high current density power connectors.
- Quality Assurance lab is capable of testing to IEC, EIA, UL, CUL, military and customer-specified requirements.
- In-house design and development of connectors based on market need or individual customer requirements.
- Internal manufacturing capabilities include automatic precision contact machining, injection molding, stamping, plating operations and connector assembly.
- Manufacturing locations in southwest Missouri, U.S.A. (headquarters); Puerto Rico, France, China, Singapore, and India. Total square footage: 407,441.

Support

- Compliance to a variety of international and customer specific environmental requirements.
- Large in-house inventory of finished connectors. Customer specific stocking programs.
- Factory direct technical sales support in major cities worldwide.
- One-on-one customer support from worldwide factory locations.
- World class web site.
- Value-added solutions and willingness to develop custom products with reasonable price and delivery.

Regional Headquarters

- Springfield, MO
- Auch, France
- Singapore

Products described within this catalog may be protected by one or more of the following US patents:
#4,900,261†    #5,255,580    #5,329,697
#6,260,268    #6,835,079    #7,115,002
†Patented in Canada, 1992 Other Patents Pending

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Proven Performance

In 1989, Positronic introduced the Power Connection Systems series. Since that time PCS has been the power connector of choice in a wide variety of applications. The popularity of PCS is due to a growing list of features, they include:

- **Low Contact Resistance**
- **Sequential Mating Options**
- **Discriminating Locking System**
- **Board to Board / Board - Cable / Cable - Cable**
- **Size 12 Contacts with Screw Terminations**
- **Safety Shrouded Options**
- **Many Connector Variants Available From Stock**
- **Mixed Density Variants**
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*Dimensions are in inches [millimeters]. All dimensions are subject to change.*
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Dimensions are in inches (millimeters). All dimensions are subject to change.
SAVE TIME AND MONEY! Let Positronic support you by cablizing your PLA(H) / PLB(H) / PLC(H) / PLS(H) connector selection.

For more details contact Technical Sales or visit our web site at: http://www.connectpositronic.com/cable-assemblies

Support Capabilities:
• Design, development, engineering support, and documentation
• Build to customer print
• Assist in expansion of qualified suppliers on BOM
• Select facilities certified to ISO 9001 and AS9100
• Adherence to IPC-620 standards
• Product prototyping and first articles
• Electrical and mechanical testing

Many Industries Served including:
• Aerospace
• Datacom / Telecom
• Medical
• Industrial
• Military / Defense
• Transit / Rail

Products & Services
• Cable and harness assemblies
• Flex circuit assemblies
• Coaxial cable assemblies
• Kitting services
• EMI/RFI shielded assemblies
• Box builds
• Hermetic assemblies
GENERAL INFORMATION

SYSTEM 1
MOTHER BOARD-DAUGHTER BOARD

PLB06F300A1 Straight solder or PLB06F94ST40A1 Compliant termination press-in

SYSTEM 2
SIDE TO SIDE BOARD MOUNTING

PLB06F4BN0A1

SYSTEM 3
STACKABLE BOARD MOUNTING

PLB06M4BN0A2

SYSTEM 4
SANDWICH BOARD MOUNTING

PLB06F300A1 Straight solder or PLB06F94ST30A1 Compliant termination press-in

PLB06F32N0C1

PLB06F3N0C1

PLB06M300A1 Straight solder or PLB06M93ST30A1 Compliant termination press-in

PLB06M300A1

PLB06M4BN0C1

PLB06M300A1

PLB06F300A1
SYSTEM 5
CABLE TO RIGHT ANGLE (90°) BOARD MOUNTING

PLB06F4BN0A1
PLB06M0000
With contacts installed
Crimp or solder termination

PLB06M4BN0A2
Lock hole
Lock tab
Typical for connection systems 5, 6, 7 and 8

PLB06F0000
With contacts installed
Crimp or solder termination

SYSTEM 6
CABLE TO STRAIGHT BOARD MOUNTING

PLB06F300C1 Straight solder or PLB06F92ST20C1 Compliant termination press-in

PLB06M0000
With contacts installed
Crimp or solder termination

PLB06M300C1 Straight solder or PLB06M92ST20C1 Compliant termination press-in

SYSTEM 7
CABLE TO CABLE

PLB06M0000
With contacts installed
Crimp or solder termination
SYSTEM 8
PANEL MOUNTED TO CABLE

PLB06F206A1
Mounting clip

Non-removable fixed contacts with 18 AWG [1.0mm²] solder wire terminations or crimp contact terminations for wire sizes 12 AWG [4.0mm²] through 32 AWG [0.03mm²]

PLB06M0000
With contacts installed
Crimp or solder termination

SYSTEM 9
CABLE CONNECTOR WITH CABLE ADAPTER

PLB06F0050

INTEGRAL FEED THROUGH CONNECTION SYSTEM ALLOWS THREE WAY INTERFACE

- PCB FRONTSIDE TO A CONNECTOR
- PCB BACKSIDE TO A CONNECTOR
- PRESS-IN CONNECTIONS WITH PCB

CONTACT TECHNICAL SALES FOR MORE INFORMATION.
DEMystifying Current Ratings

Connector current ratings seem to be shrouded in mystery at times. The user wonders how a listed current rating is relevant to a particular application. Perhaps more mysterious is how similar connectors from various manufacturers list different current rating values. While it is true that material choices and design can enhance a connector's current rating, the test method by which the rating was developed must be understood when evaluations are made.

Users of connectors for power applications are entitled to current rating test details in order to make an informed choice. Ideally, a connector’s current rating should be developed within the application for which it is being considered. Although ideal, this approach is not always practical given the many differing applications. In order for connector manufacturers to give potential product users an idea of what can be expected, connectors are given current ratings based on a specific test method.

A wide variety of test methods are employed in order to develop current ratings for connectors. Some of these methods come from standards that are recognized industry-wide, while others are unique to the manufacturer or user. These various test methods can produce different results for the same product. It is no wonder confusion sometimes results.

There are key factors that, when understood, can help in choosing the right power connector. All test methods used to rate current have similarities; however, there are variables in applying the test methods which explain differing results.

Current ratings are usually established by first developing a temperature rise curve. This curve plots temperature rise against increasing current levels. The curve is a reliable tool in understanding heat generation of the connector at various currents. When a defined failure is reached, the test ends. The highest current level achieved is usually listed as the current rating.

The temperature rise curve, and therefore the current rating, will change when certain key factors are varied. These are:

- Where is the temperature sensing probe placed? If placed on the contact in the mating area (the hottest spot), the results will be quite different than if placed on the outside of the connector body.
- Are the contacts being tested and rated in free air or are they contained within the connector housing? Contacts will obviously be cooler in free air.
- Are all of the contacts in the connector under load? If only part of the contacts are under load, the temperature rise could be less.
- What is the defined failure? Does the test end when the temperature rise reaches 30°C, 40°C, or some other number? Does it end when the temperature rise plus ambient temperature equal the operating limit of the connector housing? The current rating will be fixed by the defined failure point.
- How were the test samples prepared? Were the samples energized through a printed circuit board? How many layers? How large were the traces? What was the weight of the copper? Were the samples energized through wire? What size was the wire? How long was the wire? Was the sample tested in static or forced air conditions? All of these factors can affect cooling characteristics.

Clearly, a current rating value alone is not enough, and must be viewed in the context of the test used to develop the rating. When the test method is understood, evaluating and comparing power connectors for specific applications becomes much less of a mystery.
WHY IS THE L.S.A. SYSTEM SUPERIOR?

The primary function of connector contact is electrical conductivity. Also, a mechanical function is required to provide normal force between male and female contacts.

In order to provide for proper mechanical characteristics, material that has good memory or "elasticity" must be chosen. This will ensure contact normal force in a coupled condition and allow for repeated coupling and uncoupling.

Unfortunately, many materials that have good memory characteristics have low electrical conductivity. For instance, beryllium copper is a good choice for mechanical function; however, some beryllium copper alloys are poor conductors and have relatively low conductivity rates.

The conductivity path of many contact designs goes directly through materials that have been chosen based on mechanical need. If these materials have a low conductivity rating, increased contact resistance will result.

Positronic Large Surface Area Contact System separates the mechanical and electrical functions. A spring retention member provides normal forces, while the electrical conductivity path is through highly conductive contact material. See above detail.
BI-SPRING POWER PRESS-IN TERMINATIONS

The Next Evolution In Compliant Technology. Fully Compliant, Fully Reliable.

Reliable, solderless connections from connectors to backplanes started with solid press-in technology. Although these are still used today, concerns about board damage led to the use of compliant press-in technology. This technology allows the connection to be made through compliance of the contact termination along with printed circuit board hole deformation. Although risk of damaged printed circuit boards and backplanes is lessened, damage can still occur due to relatively high insertion and extraction forces.

The next step in press-in technology is a highly reliable connection between the contact termination and backplane that is accomplished with reduced insertion and extraction forces. This eliminates risk of printed circuit board and backplane damage. This technology exists today with Positronic Bi-Spring Power Press-in termination.

- Average insertion and extraction forces of size 16 contacts are 22N [5 lbs.] per contact and do not produce stresses in printed circuit boards and backplanes that can occur with higher insertion forces. These stresses can cause board warpage and hole damage.

- Connector systems utilizing Bi-Spring terminations use mounting screws to secure the connector to the printed circuit board or backplane. Stresses that occur during coupling, uncoupling or shock and vibration of systems are not transferred to the printed circuit boards or backplanes through the press-in connection. The electrical integrity of the connector to board interface is maintained; this is particularly important in power applications. Bellcore GR1217 details a preference for mounting hardware when using press-in terminations.

- Size 16 Bi-Spring terminations are designed to meet the performance requirements and hole diameters as listed in the internationally recognized specification IEC 60352-5.

- Lower insertion and extraction forces eliminate the need for expensive pressing equipment.

**COMPLIANT TERMINATION PRESS-IN CONNECTOR**

- **Polarizing groove**
- **Fixed member or discriminating locking system**
- **#2 self tapping mounting screws**
  - Steel, zinc plate or stainless steel, passivated
- **Mounting hole**
  - 0.155 [3.94] dp. x ø0.076 [1.93] typ.
- **Contact lead-in diameter** 0.047 [1.19]
- **Contact termination diameter** 0.069 [1.76]
The design of Power Connection Systems Series connectors allows for the development of application specific contact arrangements in a timely manner and at a reasonable price. Thirteen connector housing sizes exist that may accommodate size 20, size 16, size 12, or size 8 contacts (see the Power Connection Systems catalog for connector housing dimensions). After reviewing the dimensions and the following basic information, contact Technical Sales with your current, voltage, and safety requirements. We look forward to working with you to develop a connector for your specific needs.

**BASIC CONNECTOR DIMENSIONS**

### Male Connector Dimensions

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
</table>
| PLA03**00A1 | 1.126 [
| PLAH03**00A1 | 28.60] |
| PLA04**00A1 | 1.324 [33.63] |
| PLAH04**00A1 | 1.324 [33.63] |
| PLA06**00A1 | 1.718 [43.64] |
| PLAH06**00A1 | 1.718 [43.64] |
| PLA08**00A1 | 2.112 [53.64] |
| PLAH08**00A1 | 2.112 [53.64] |

### Female Connector Dimensions

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLB06**00A1</td>
<td>1.126 [28.60]</td>
</tr>
<tr>
<td>PLBH06**00A1</td>
<td>1.126 [28.60]</td>
</tr>
<tr>
<td>PLB08**00A1</td>
<td>1.324 [33.63]</td>
</tr>
<tr>
<td>PLBH08**00A1</td>
<td>1.324 [33.63]</td>
</tr>
<tr>
<td>PLB12**00A1</td>
<td>1.718 [43.64]</td>
</tr>
<tr>
<td>PLBH12**00A1</td>
<td>1.718 [43.64]</td>
</tr>
<tr>
<td>PLB16**00A1</td>
<td>2.112 [53.64]</td>
</tr>
<tr>
<td>PLBH16**00A1</td>
<td>2.112 [53.64]</td>
</tr>
<tr>
<td>PLB20**00A1</td>
<td>2.506 [63.65]</td>
</tr>
<tr>
<td>PLBH20**00A1</td>
<td>2.506 [63.65]</td>
</tr>
</tbody>
</table>

### Four Contact Sizes to Choose From

- Size 8 contact: Ø0.142 [3.61]
- Size 12 contact: Ø0.094 [2.39]
- Size 16 contact: Ø0.0625 [1.588]
- Size 20 contact: Ø0.040 [1.00]

### Many Termination Types Can Be Supplied

- Straight Solder or Press-in
- Right Angle (90°) Solder
- Crimp Removable
- Removable Solder Cup

### Popular Options

- Sequential Mating
- Selective Loading

Contact sizes and termination types may be mixed within a single connector.
TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

- **Insulator:** Glass-filled polyester, UL 94V-0.
- **Contacts:** Precision machined copper alloy with gold flash over nickel, or 0.000030 [0.76µ] gold over nickel. Solder coated terminations optional.
- **Mounting Clip:** Beryllium copper with nickel plate.
- **Hood:** Glass filled polyester, UL 94V-0.
- **Mounting Bracket:** Brass with tin plate.
- **Push-on Fastener:** Spring tempered copper alloy, tin plate.

ELECTRICAL CHARACTERISTICS:

- **CONTACT CURRENT RATING:**
  - **Standard Contact Material:** See page 9 for detail information.
  - **High Conductivity Contact Material:** See page 9 for detail information.

INITIAL CONTACT RESISTANCE:

- **Standard Contact Material:** 0.0016 ohms max. per IEC 60512-2, test 2b.
- **High Conductivity Contact Material:** 0.0007 ohms max. per IEC 60512-2, test 2b.
- **Insulation Resistance:** 5 G ohms per IEC 60512-2, test 3a, method A.
- **Voltage Proof:** 2000 V rms per IEC 60512-2, test 4a, method C.
- **Creepage Distance:** 0.157 inch [4 mm] minimum.
- **Clearance Distance:** 0.125 inch [3.2 mm] minimum.
- **Working Voltage:** Designed to meet UL 600 VAC and CSA 600 VAC.
- **Working Temperature:** -55°C to +125°C

ELECTRICAL CHARACTERISTICS OF COMPLIANT PRESS-IN CONNECTION TO PLATED-THROUGH-HOLE OF PRINTED BOARD:

- **Initial Contact Resistance of Connection:**
  - Less than 1.0 milliohms per IEC 60512-2, test 2a.

MECHANICAL CHARACTERISTICS:

- **Removeable Contacts:** Insert contact to rear face of insulator, release from front face of insulator. Size 16, 0.0625 inch [1.588 mm] diameter male contact. Female contact “closed entry” design for highest reliability.
- **Removeable Contact Retention in Insulator:** 15 lbs. [67N] per IEC 60512-8, test 15a.
- **Fixed Contacts:** Solder cup and printed board terminations. Size 16, 0.0625 inch [1.588 mm] diameter male contact. Female contact has “closed entry” design for highest reliability.
- **Fixed Contact Retention in Insulator:** 6 lbs. [26N].
- **Resistance to Solder Iron Heat:** 500°F [260°C] for 10 seconds duration per IEC 60512-6, test 12e, 25 watt soldering iron.
- **Contact Terminations:** Crimp or solder removable contacts from wire size 12 AWG [4.0 mm²] through 24 AWG [0.25 mm²]. Straight and Right Angle (90°) solder printed board mount, 0.0625 inch [1.588 mm] tail diameter. Compliant termination press-in.
- **Fixed Contact Solder Cup Retention:** 18 AWG [1.0 mm²] maximum.
- **Contact Insertion and Withdrawal Forces:** 8 oz. [2.2N] nominal per contact.
- **Connection Systems:** Connector provides cable to cable, cable to printed board, cable to panel mount and printed board to printed board application.
- **Sequential Mating System:** Male contacts provide as many as three mating lengths.
- **Locking System:** Insulators provide locking between cable to cable, cable to printed board and cable to panel mount applications.
- **Polarizations:** Provided in insulator design. Further polar-ization in cable connectors can be provided by mixing male contacts in female insulators and female contacts in male insulators.
- **Mounting to Printed Board:** Pre-drilled holes for compliant connectors.
- **Mechanical Operations:** Self-tapping screws for compliant connectors. 500 operations per IEC 60512-5.

ELECTRICAL CHARACTERISTICS OF COMPLIANT PRESS-IN CONNECTORS:

- **Initial Contact Resistance of Connection:**
  - 0.0695 inch [1.77mm] diameter with 0.050 inch [1.27mm] lead-in diameter. Offered with two termination lengths.
- **Contact Retention in Insulator and 0.125 inch [3.2mm] thick printed board:** 5 lbs. [22N] minimum combined retention forces per MIL-STD-2166, Type III compliant contact classification, after third repair-replacement of contact in insulator and plated-through-hole, 0.064 inch [1.63mm] diameter in a 0.125 inch [3.2mm] thick printed board.
- **Vibration:** No electrical discontinuity of 1u second or greater when tested per MIL-STD-1344, Method 2005, Test conditioning.
- **Initial Press-In Force of Individual Contact into Plated-Through-Hole:** 10 lbs. [44N] average when pushed into a 0.064 inch [1.63mm] Ø hole in a 0.125 inch [3.2mm] thick printed board.
- **Initial Push-Out Force of Individual Contact into Plated-Through-Hole:** 8.5 lbs. [38N] average when pushed out of an 0.064 inch [1.63mm] Ø hole in a 0.125 inch [3.2mm] thick printed board.

*Note: CUL and TÜV recognizes all sizes, except PLB20, consult Technical Sales for status.
TEST DETAIL: Each curve was developed using individual connector bodies fully loaded with contacts. All power contacts energized through 12 awg wire. Temperature rise was measured in the contact mating area. Test was conducted with connectors in static air. Terminations of test connectors were straight compliant press-in to right angle (90°) solder. See page 4 for more information.

Temperature rise curves and contact current ratings were developed for the specific connector variants shown when tested in accordance with UL1977.

This information is provided so that the user can make comparisons between various connector sizes and contact materials.
MATING DIMENSIONS (FULLY MATED)

Straight Board Mount Male to Straight Board Mount Female

Straight Board Mount Male to Right Angle (90°) Board Mount Female

Right Angle (90°) Board Mount Male to Straight Board Mount Female

Right Angle (90°) Board Mount Male to Right Angle (90°) Board Mount Female

Straight Board Mount Male to Panel Mount Female

Panel Mount Male to Straight Board Mount Female

Right Angle (90°) Board Mount Male to Panel Board Mount Female

Panel Mount Male to Right Angle (90°) Board Mount Female

Panel Mount Male to Panel Mount Female

Cable Mount Male to Straight Board Mount Female

Straight Board Mount Male to Cable Mount Female

Cable Mount Male to Right Angle (90°) Board Mount Female

Right Angle (90°) Board Mount Male to Cable Mount Female

Cable Mount Male to Panel Mount Female

Panel Mount Male to Cable Mount Female

Cable Mount Male to Cable Mount Female
**PLA STRAIGHT PRINTED BOARD MOUNT CONNECTORS**

**CODE 3, 0.146 [3.71] CONTACT EXTENSION**

Positronic recommends the practice of using mounting hardware to secure connector to printed circuit board.

![Male Connector Diagram](image)

**PART NUMBER**

<table>
<thead>
<tr>
<th>MALE</th>
<th>PART NUMBER</th>
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<tbody>
<tr>
<td>PLA03*300A1</td>
<td>PLA06*300A1</td>
<td>PLA09*300A1</td>
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<td>PLAH03*300A1</td>
<td>PLAH06*300A1</td>
<td>PLAH09*300A1</td>
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**FEMALE**

![Female Connector Diagram](image)

**PART NUMBER**

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<tr>
<td>PLAH03*300A1</td>
<td>PLAH06*300A1</td>
<td>PLAH09*300A1</td>
</tr>
</tbody>
</table>

**Typical part number:**

- PLA03F300A1
- PLA06F300A1
- PLA09F300A1

**Typical part number:**

- PLAH03F300A1
- PLAH06F300A1
- PLAH09F300A1

**NOTE:**

- Mounting screws can be supplied with connectors using step 5 in ordering information on page 26. Mounting screws can also be ordered separately by part number. See page 59.
- *Asterisk determines gender of connector, M for male, F for female.

**PLB STRAIGHT PRINTED BOARD MOUNT CONNECTORS**

**CODE 3, 0.146 [3.71] CONTACT EXTENSION**

![Male Connector Diagram](image)

**PART NUMBER**

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<td>PLBH12*300A1</td>
<td>PLBH18*300A1</td>
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**FEMALE**

![Female Connector Diagram](image)

**PART NUMBER**

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<td>PLB12*300A1</td>
<td>PLB18*300A1</td>
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<tr>
<td>PLBH06*300A1</td>
<td>PLBH12*300A1</td>
<td>PLBH18*300A1</td>
</tr>
</tbody>
</table>

**Typical part number:**

- PLB06F300A1
- PLB12F300A1
- PLB18F300A1

**Typical part number:**

- PLBH06F300A1
- PLBH12F300A1
- PLBH18F300A1

**NOTE:**

- Mounting screws can be supplied with connectors using step 5 in ordering information on page 26. Mounting screws can also be ordered separately by part number. See page 59.
- *Asterisk determines gender of connector, M for male, F for female.

**PLC STRAIGHT PRINTED BOARD MOUNT CONNECTORS**

**CODE 3, 0.146 [3.71] CONTACT EXTENSION**

![Male Connector Diagram](image)

**PART NUMBER**

<table>
<thead>
<tr>
<th>MALE</th>
<th>PART NUMBER</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC09*300A1</td>
<td>PLC12*300A1</td>
<td>PLC18*300A1</td>
</tr>
<tr>
<td>PLCH09*300A1</td>
<td>PLCH12*300A1</td>
<td>PLCH18*300A1</td>
</tr>
</tbody>
</table>

**FEMALE**

![Female Connector Diagram](image)

**PART NUMBER**

<table>
<thead>
<tr>
<th>MALE</th>
<th>PART NUMBER</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC09*300A1</td>
<td>PLC12*300A1</td>
<td>PLC18*300A1</td>
</tr>
<tr>
<td>PLCH09*300A1</td>
<td>PLCH12*300A1</td>
<td>PLCH18*300A1</td>
</tr>
</tbody>
</table>

**Typical part number:**

- PLC09F300A1
- PLC12F300A1
- PLC18F300A1

**Typical part number:**

- PLCH09F300A1
- PLCH12F300A1
- PLCH18F300A1

**NOTE:**

- Mounting screws can be supplied with connectors using step 5 in ordering information on page 26. Mounting screws can also be ordered separately by part number. See page 59.
- *Asterisk determines gender of connector, M for male, F for female.

**Plating:** See ordering information for contact plating options.

For connection systems 1, 4 and 6.

---

**PCS SERIES**

*DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.*

11
### PLA Straight Printed Board Mount Connectors

**Code 32, 0.377 [9.58] Contact Extension**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA03*3200A1</td>
<td>1.126</td>
</tr>
<tr>
<td>PLAH03*3200A1</td>
<td>1.718</td>
</tr>
<tr>
<td>PLA04*3200A1</td>
<td>1.324</td>
</tr>
<tr>
<td>PLAH04*3200A1</td>
<td>2.112</td>
</tr>
</tbody>
</table>

*Plating—See ordering information for contact plating options.*

For connection systems 1, 3, 4 and 6.

### PLB Straight Printed Board Mount Connectors

**Code 32, 0.377 [9.58] Contact Extension**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLB06*3200A1</td>
<td>1.126</td>
</tr>
<tr>
<td>PLBH06*3200A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLB08*3200A1</td>
<td>1.324</td>
</tr>
<tr>
<td>PLBH08*3200A1</td>
<td>2.506</td>
</tr>
<tr>
<td>PLB12*3200A1</td>
<td>1.718</td>
</tr>
<tr>
<td>PLBH12*3200A1</td>
<td>4.364</td>
</tr>
</tbody>
</table>

*Plating—See ordering information for contact plating options.*

For connection systems 1, 3, 4 and 6.

### PLC Straight Printed Board Mount Connectors

**Code 32, 0.377 [9.58] Contact Extension**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC09*3200A1</td>
<td>1.126</td>
</tr>
<tr>
<td>PLCH09*3200A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLC12*3200A1</td>
<td>1.324</td>
</tr>
<tr>
<td>PLCH12*3200A1</td>
<td>2.506</td>
</tr>
<tr>
<td>PLC18*3200A1</td>
<td>1.718</td>
</tr>
<tr>
<td>PLCH18*3200A1</td>
<td>4.364</td>
</tr>
</tbody>
</table>

*Plating—See ordering information for contact plating options.*

For connection systems 1, 3, 4 and 6.

**NOTE:** MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 26. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.

* *Asterisk determines gender of connector, M for male, F for female.*

**DIMENSIONS ARE IN INCHES [MILLIMETERS].**

**ALL DIMENSIONS ARE SUBJECT TO CHANGE.**
### PLA COMPLIANT PRESS-IN CONNECTORS

**CODE 92 OR CODE 93**

See page 56 for Installation Tooling.

Plating - See ordering information for contact plating options.

For connection systems 1, 4 and 6.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA03**00A1</td>
<td>1.126</td>
</tr>
<tr>
<td>PLA04**00A1</td>
<td>1.324</td>
</tr>
<tr>
<td>PLA06**00A1</td>
<td>1.718</td>
</tr>
<tr>
<td>PLA08**00A1</td>
<td>2.112</td>
</tr>
</tbody>
</table>

**Asterisks determine gender of connector, M for male, F for female and contact code 92 or 93.

**NOTE:** Positronic recommends the practice of using mounting hardware to secure connector to printed circuit board. Mounting screws can be supplied with connectors using step 5 in ordering information on page 26. Mounting screws can also be ordered separately by part number. See page 59.

### PLB COMPLIANT PRESS-IN CONNECTORS

**CODE 92 OR CODE 93**

See page 56 for Installation Tooling.

Plating - See ordering information for contact plating options.

For connection systems 1, 4 and 6.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLB06**00A1</td>
<td>1.126</td>
</tr>
<tr>
<td>PLB08**00A1</td>
<td>1.718</td>
</tr>
<tr>
<td>PLB12**00A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLB20**00A1</td>
<td>2.506</td>
</tr>
</tbody>
</table>

**Asterisks determine gender of connector, M for male, F for female and contact code 92 or 93.

**NOTE:** Positronic recommends the practice of using mounting hardware to secure connector to printed circuit board. Mounting screws can be supplied with connectors using step 5 in ordering information on page 26. Mounting screws can also be ordered separately by part number. See page 59.

### PLC COMPLIANT PRESS-IN CONNECTORS

**CODE 92 OR CODE 93**

See page 56 for Installation Tooling.

Plating - See ordering information for contact plating options.

For connection systems 1, 4 and 6.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC09**00A1</td>
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</tr>
<tr>
<td>PLC12**00A1</td>
<td>1.324</td>
</tr>
<tr>
<td>PLC18**00A1</td>
<td>1.718</td>
</tr>
<tr>
<td>PLC24**00A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLC30**00A1</td>
<td>2.506</td>
</tr>
</tbody>
</table>

**Asterisks determine gender of connector, M for male, F for female and contact code 92 or 93.

**NOTE:** Positronic recommends the practice of using mounting hardware to secure connector to printed circuit board. Mounting screws can be supplied with connectors using step 5 in ordering information on page 26. Mounting screws can also be ordered separately by part number. See page 59.

### CONTACT CODE L PCB THICKNESS

<table>
<thead>
<tr>
<th>CONTACT CODE</th>
<th>L</th>
<th>PCB THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>92</td>
<td>0.183</td>
<td>0.093</td>
</tr>
<tr>
<td>93</td>
<td>0.216</td>
<td>0.125</td>
</tr>
</tbody>
</table>

**DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.**

POSITRONIC
connectpositronic.com
STRAIGHT SOLDER AND COMPLIANT CONTACT HOLE PATTERN

SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest 0.080 [2.03] Ø holes in printed board for solder contact termination positions.

Suggest 0.100 [2.54] Ø holes in printed board when mounting connectors with # 2 thread forming screws.

Suggest 0.123±0.003 [3.15±0.08] Ø holes in printed board when mounting connector with push-on fasteners.

NOTE: See page 57 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.
Connectors Designed To Customer Specifications

*Positronic’s PLA(H), PLB(H), PLC(H) and PLS(H) series connectors can be modified to customers specifications.*

**Examples:** select loading of contacts for cost savings or to gain creepage and clearance distances; longer printed circuit board terminations; customer specified hardware.

*Positronic can develop and tool new connector designs with reasonable price and delivery.*

**Contact Technical Sales with your particular requirements.**

---

**SUGGESTED PRINTED BOARD HOLE SIZES:**

Suggest 0.080 [2.03] Ø holes in printed board for solder contact termination positions.

Suggest 0.100 [2.54] Ø holes in printed board when mounting connectors with # 2 thread forming screws.

Suggest 0.123±0.003 [3.15±0.08] Ø holes in printed board when mounting connector with push-on fasteners.

**NOTE:** See page 57 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.

---

**DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.**
**PLA RIGHT ANGLE (90°) PRINTED BOARD MOUNT**

**CODE 4, 0.146 [3.71] CONTACT EXTENSION**

**PART NUMBER** | **A**
--- | ---
PLA03*400A1 | 1.126 [28.60]
PLAH03*400A1 | 1.718 [43.64]
PLA04*400A1 | 1.324 [33.63]
PLAH04*400A1 | 2.112 [53.64]

**PLB RIGHT ANGLE (90°) PRINTED BOARD MOUNT**

**CODE 4, 0.146 [3.71] CONTACT EXTENSION**

**PART NUMBER** | **A**
--- | ---
PLB06*400A1 | 1.126 [28.60]
PLBH06*400A1 | 2.112 [53.64]
PLB08*400A1 | 1.324 [33.63]
PLBH08*400A1 | 2.506 [63.65]
PLB12*400A1 | 1.718 [43.64]
PLBH12*400A1 | 3.506 [88.98]

**PLC RIGHT ANGLE (90°) PRINTED BOARD MOUNT**

**CODE 4, 0.146 [3.71] CONTACT EXTENSION**

**PART NUMBER** | **A**
--- | ---
PLC09*400A1 | 1.126 [28.60]
PLCH09*400A1 | 2.112 [53.64]
PLC12*400A1 | 1.324 [33.63]
PLCH12*400A1 | 2.506 [63.65]
PLC18*400A1 | 1.718 [43.64]
PLCH18*400A1 | 3.506 [88.98]

**NOTE:** Mounting screws can be ordered separately by part number when choosing B3 brackets. See page 59.

* Asterisk determines gender of connector, M for male, F for female.

**Plating:** See ordering information for contact plating options.

For connection systems 1, 2 and 5.

---

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
**PLA RIGHT ANGLE (90°) PRINTED BOARD MOUNT**

**CODE 42, 0.377 [9.58] CONTACT EXTENSION**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA03*4200A1</td>
<td>1.126</td>
<td>PLA06*4200A1</td>
<td>1.718</td>
</tr>
<tr>
<td>PLAH03*4200A1</td>
<td>28.60</td>
<td>PLAH06*4200A1</td>
<td>33.64</td>
</tr>
<tr>
<td>PLA04*4200A1</td>
<td>1.324</td>
<td>PLA08*4200A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLAH04*4200A1</td>
<td>33.63</td>
<td>PLAH08*4200A1</td>
<td>33.64</td>
</tr>
</tbody>
</table>

*Asterisk determines gender of connector, M for male, F for female.

**NOTE:** MOUNTING SCREWS CAN BE ORDERED SEPARATELY BY PART NUMBER WHEN CHOOSING B3 BRACKETS. SEE PAGE 59.

---

**PLB RIGHT ANGLE (90°) PRINTED BOARD MOUNT**

**CODE 42, 0.377 [9.58] CONTACT EXTENSION**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLB06*4200A1</td>
<td>1.126</td>
<td>PLB16*4200A1</td>
<td>2.112</td>
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<tr>
<td>PLBH06*4200A1</td>
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<td>PLBH16*4200A1</td>
<td>33.64</td>
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<tr>
<td>PLB08*4200A1</td>
<td>1.324</td>
<td>PLB20*4200A1</td>
<td>2.506</td>
</tr>
<tr>
<td>PLBH08*4200A1</td>
<td>33.63</td>
<td>PLBH20*4200A1</td>
<td>33.65</td>
</tr>
<tr>
<td>PLB12*4200A1</td>
<td>1.718</td>
<td>PLB30*4200A1</td>
<td>2.506</td>
</tr>
<tr>
<td>PLBH12*4200A1</td>
<td>33.64</td>
<td>PLBH30*4200A1</td>
<td>33.65</td>
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</tbody>
</table>

*Asterisk determines gender of connector, M for male, F for female.

**NOTE:** MOUNTING SCREWS CAN BE ORDERED SEPARATELY BY PART NUMBER WHEN CHOOSING B3 BRACKETS. SEE PAGE 59.

---

**PLC RIGHT ANGLE (90°) PRINTED BOARD MOUNT**

**CODE 42, 0.377 [9.58] CONTACT EXTENSION**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC09*4200A1</td>
<td>1.126</td>
<td>PLC24*4200A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLCH09*4200A1</td>
<td>28.60</td>
<td>PLCH24*4200A1</td>
<td>33.64</td>
</tr>
<tr>
<td>PLC12*4200A1</td>
<td>1.324</td>
<td>PLC30*4200A1</td>
<td>2.506</td>
</tr>
<tr>
<td>PLCH12*4200A1</td>
<td>33.63</td>
<td>PLCH30*4200A1</td>
<td>33.65</td>
</tr>
<tr>
<td>PLC18*4200A1</td>
<td>1.718</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLCH18*4200A1</td>
<td>33.64</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Asterisk determines gender of connector, M for male, F for female.

**NOTE:** MOUNTING SCREWS CAN BE ORDERED SEPARATELY BY PART NUMBER WHEN CHOOSING B3 BRACKETS. SEE PAGE 59.

---

**DIMENSIONS ARE IN INCHES [MILLIMETERS].**

**ALL DIMENSIONS ARE SUBJECT TO CHANGE.**

---

**Plating**

See ordering information for contact plating options.

For connection systems 1, 2, 3 and 5.

---

**Power Connection Systems**
PLA RIGHT ANGLE (90°) PRESS-IN CONNECTOR
CODE 62 OR CODE 63
For connection systems 1, 2 and 5.

**Asterisk determines gender of connector, M for male, F for female, and contact code 62 or 63.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA03**B30A1</td>
<td>1.126</td>
<td>PLA06**B30A1</td>
<td>1.713</td>
</tr>
<tr>
<td>PLA04**B30A1</td>
<td>1.324</td>
<td>PLA08**B30A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLA05**B30A1</td>
<td>1.521</td>
<td>PLA10**B30A1</td>
<td>2.506</td>
</tr>
</tbody>
</table>

NOTE: Positronic recommends the practice of using mounting hardware to secure connector to printed circuit board. Mounting screws are ordered separately by part number. See page 59.

Typical part number: PLA03M63B30A1 PLA03F63B30A1

PLB RIGHT ANGLE (90°) PRESS-IN CONNECTOR
CODE 62 OR CODE 63
For connection systems 1, 2 and 5.

**Asterisk determines gender of connector, M for male, F for female, and contact code 62 or 63.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>PART NUMBER</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLB06**B30A1</td>
<td>1.126</td>
<td>PLB12**B30A1</td>
<td>1.713</td>
</tr>
<tr>
<td>PLB08**B30A1</td>
<td>1.324</td>
<td>PLB16**B30A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLB10**B30A1</td>
<td>1.521</td>
<td>PLB20**B30A1</td>
<td>2.506</td>
</tr>
</tbody>
</table>

NOTE: Positronic recommends the practice of using mounting hardware to secure connector to printed circuit board. Mounting screws are ordered separately by part number. See page 59.

Typical part number: PLB06M63B30A1 PLB06F63B30A1

PLC RIGHT ANGLE (90°) PRESS-IN CONNECTOR
CODE 62 OR CODE 63
For connection systems 1, 2 and 5.

**Asterisk determines gender of connector, M for male, F for female, and contact code 62 or 63.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
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<th>A</th>
</tr>
</thead>
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<td>PLC09**B30A1</td>
<td>1.126</td>
<td>PLC12**B30A1</td>
<td>1.713</td>
</tr>
<tr>
<td>PLC10**B30A1</td>
<td>1.324</td>
<td>PLC15**B30A1</td>
<td>2.112</td>
</tr>
<tr>
<td>PLC18**B30A1</td>
<td>1.521</td>
<td>PLC20**B30A1</td>
<td>2.506</td>
</tr>
</tbody>
</table>

NOTE: Positronic recommends the practice of using mounting hardware to secure connector to printed circuit board. Mounting screws are ordered separately by part number. See page 59.

Typical part number: PLC09M63B30A1 PLC09F63B30A1

Plating—See ordering information for contact plating options.
**Power Connection Systems**

RIGHT ANGLE (90°) PRINTED BOARD CONTACT HOLE PATTERN

---

**PLA 03**

- 0.441±0.002 [11.20±0.05]
- 0.237±0.015 [6.02±0.38]
- 0.882±0.005 [22.40±0.13]

**PLA 04**

- 0.540±0.002 [13.72±0.05]
- 0.237±0.015 [6.02±0.38]
- 1.080±0.005 [27.43±0.13]

---

**PLA 06**

- 0.737±0.002 [18.72±0.05]
- 0.237±0.015 [6.02±0.38]
- 1.474±0.005 [37.44±0.13]

**PLA 08**

- 0.934±0.002 [23.72±0.05]
- 0.237±0.015 [6.02±0.38]
- 1.868±0.005 [47.45±0.13]

---

**PLB 06**

- 0.441±0.002 [11.20±0.05]
- 0.040±0.015 [1.02±0.38]
- 0.237±0.015 [6.02±0.38]

**PLB 08**

- 0.540±0.002 [13.72±0.05]
- 0.040±0.015 [1.02±0.38]
- 1.080±0.005 [27.43±0.13]

---

**PLB 12**

- 0.737±0.002 [18.72±0.05]
- 0.040±0.015 [1.02±0.38]
- 0.197±0.015 [5.00±0.38]

**PLB 16**

- 0.934±0.002 [23.72±0.05]
- 0.040±0.015 [1.02±0.38]
- 1.474±0.005 [37.44±0.13]

---

**PLB 20**

- 2.262±0.005 [57.45±0.13]
- 1.131±0.002 [28.73±0.05]
- 0.197±0.002 [5.00±0.05]

**PLC 09**

- 0.882±0.005 [22.40±0.13]
- 0.441±0.002 [11.20±0.05]
- 0.157±0.015 [3.99±0.38]

See page 20 for suggested printed board hole sizes.

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest 0.080 [2.03] Ø holes in printed board for solder contact termination positions.
Suggest 0.123±0.003 [3.15±0.08] Ø holes in printed board when mounting connector with push-on fasteners.

NOTE: See page 57 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.

PANEL MOUNT CONNECTORS WITH SOLDER CUP CONTACTS

CODE 2, 18 AWG [1.00mm²] MAX.

TYPICAL PART NUMBER: PLB06M200A1

TYPICAL PART NUMBER: PLB06F200A1

NOTE: MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 26. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.
MALE INSULATOR DIMENSIONS
FOR CABLE CONNECTORS WITH SIZE 16 REMOVABLE CONTACTS

CODE 0 OR CODE 7
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

For information regarding size 16 removable contacts, see Removable Contact section, pages 47-53.
FEMALE INSULATOR DIMENSIONS
FOR CABLE CONNECTORS WITH SIZE 16 REMOVABLE CONTACTS
CODE 0 OR CODE 7
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

For information regarding size 16 removable contacts, see Removable Contact section, pages 47-53.
## MALE INSULATOR DIMENSIONS FOR PANEL MOUNT CONNECTORS

### MALE INSULATOR DIMENSIONS FOR PANEL MOUNT CONNECTORS WITH SIZE 16 REMOVABLE CONTACTS

**CODE 1 OR CODE 8**

CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

### NOTE:

MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 26. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.

---

### MALE INSULATOR DIMENSIONS

<table>
<thead>
<tr>
<th>Code</th>
<th>Contact Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA 03</td>
<td>1.126±0.020 [28.60±0.51]</td>
</tr>
<tr>
<td>PLA 04</td>
<td>1.324±0.020 [33.63±0.51]</td>
</tr>
<tr>
<td>PLA 06</td>
<td>1.718±0.020 [43.64±0.51]</td>
</tr>
<tr>
<td>PLA 08</td>
<td>2.112±0.020 [53.64±0.51]</td>
</tr>
<tr>
<td>PLB 06</td>
<td>1.126±0.020 [28.60±0.51]</td>
</tr>
<tr>
<td>PLB 08</td>
<td>1.324±0.020 [33.63±0.51]</td>
</tr>
<tr>
<td>PLB 12</td>
<td>1.718±0.020 [43.64±0.51]</td>
</tr>
<tr>
<td>PLB 16</td>
<td>2.112±0.020 [53.64±0.51]</td>
</tr>
<tr>
<td>PLC 09</td>
<td>1.126±0.020 [28.60±0.51]</td>
</tr>
<tr>
<td>PLC 12</td>
<td>1.324±0.020 [33.63±0.51]</td>
</tr>
<tr>
<td>PLC 18</td>
<td>1.718±0.020 [43.64±0.51]</td>
</tr>
<tr>
<td>PLC 24</td>
<td>2.112±0.020 [53.64±0.51]</td>
</tr>
<tr>
<td>PLC 30</td>
<td>2.506±0.020 [63.65±0.51]</td>
</tr>
</tbody>
</table>

For information regarding panel cutouts, see page 63.

For information regarding size 16 removable contacts, see Removable Contact section, pages 47-53.
FEMALE INSULATOR DIMENSIONS
FOR PANEL MOUNT CONNECTORS WITH SIZE 16 REMOVABLE CONTACTS
CODE 1 OR CODE 8
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

NOTE: MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 26. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.

For information regarding panel cutouts, see page 63.

For information regarding size 16 removable contacts, see Removable Contact section, pages 47-53.
SEQUENTIAL MATING SYSTEM

*REMOVABLE CONTACTS FOR CABLE CONNECTORS MUST BE ORDERED SEPARATELY
FOR CONTACT SELECTION, SEE SIZE 16 CONTACTS ON PAGE 49

EXAMPLE 1

Typical Part Number: PLA06M300A1-E1B2B

EXAMPLE 2

Typical Part Number: PLA06M4B0C1-D8B

For information regarding size 16 removable contacts, see Removable Contact section, pages 47-53.

SEQUENTIAL MATING SYSTEM
CRIMP REMOVABLE CONTACT PART NUMBERS

<table>
<thead>
<tr>
<th>WIRE SIZE</th>
<th>LENGTH CODE “A”</th>
<th>LENGTH CODE “C”</th>
<th>LENGTH CODE “D”</th>
<th>LENGTH CODE “E”</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 - 14 [4.0 - 2.5]</td>
<td>MC112N-133.3</td>
<td>MC112N-133.2</td>
<td>MC112N-133.1</td>
<td>MC112N-133.0</td>
</tr>
<tr>
<td>16 - 18 - 20 [1.5 - 1.0 - 0.5]</td>
<td>MC116N-133.3</td>
<td>MC116N-133.2</td>
<td>MC116N-133.1</td>
<td>MC116N-133.0</td>
</tr>
</tbody>
</table>

For information regarding size 16 removable contacts, see Removable Contact section, pages 47-53.

SELECTION GUIDE FOR ORDERING DIFFERENT CONTACT LENGTHS

STEP 9 OF ORDERING INFORMATION
SELECT CONNECTOR USING ORDERING INFORMATION ON PAGE 26
THEN CHOOSE STEPS BELOW FOR SEQUENTIAL MATING SYSTEM CONTACTS

<table>
<thead>
<tr>
<th>STEP</th>
<th>EXAMPLE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP 1</td>
<td>EXAMPLE</td>
<td>E</td>
<td>1</td>
<td>B</td>
<td>2</td>
<td>B</td>
<td>3</td>
<td>D</td>
<td>4</td>
<td>D</td>
</tr>
<tr>
<td>STEP 2</td>
<td></td>
<td>Length of contact specified in step 2 (Choose from length code chart).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 3</td>
<td></td>
<td>Length of contact specified in step 2 (Choose from length code chart).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 4</td>
<td></td>
<td>Length of contact specified in step 4 (Choose from length code chart).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 5</td>
<td></td>
<td>Length of contact specified in step 5 (Choose from length code chart).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 6</td>
<td></td>
<td>Length of contact specified in step 6 (Choose from length code chart).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 7</td>
<td></td>
<td>Position number for fourth special length contact.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 8</td>
<td></td>
<td>Position number for third special length contact.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STEP 9</td>
<td></td>
<td>Position number for second special length contact.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
### ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 7

#### EXAMPLE

<table>
<thead>
<tr>
<th>STEP</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLB</strong></td>
<td>06</td>
<td>F</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>A1</td>
<td>/AA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### STEP 1 - BASIC SERIES

| PLA | - 1 Row |
| PLAH | - 1 Row High conductivity contacts |
| PLB | - 2 Row |
| PLBH | - 2 Row High conductivity contacts |
| PLC | - 3 Row |
| PLCH | - 3 Row High conductivity contacts |

### STEP 2 - CONNECTOR VARIANTS

1 Row:
- 03, 04, 06, 08
- 02 Row:
- 06, 08, 12, 16, *20
- 3 Row:
- 09, 12, 18, 24, 30

### STEP 3 - CONNECTOR GENDER

| M | Male |
| F | Female |

### STEP 4 - CONTACT TERMINATION TYPE

| *0 | Order contacts separately for cable connectors for connection systems 5, 6, 7, 8 and 9, see pages 47-53. |
| *1 | Removable contact, panel mounted connector for connection system 8. Order contacts separately, see pages 47-53. |
| 2 | Solder cup, 18 AWG [1.0mm²] max. for panel mount connector, for connection system 8. Not available as PLHA. |
| 3 | Solder, Straight Printed Board Mount with 0.146 [3.71] tail extension for connection systems 1, 4 and 6. |
| 32 | Solder, Straight Printed Board Mount with 0.377 [9.58] tail extension for connection system 3 and systems 1, 4 and 6. |
| 4 | Solder, Right Angle (90°) Printed Board Mount with 0.146 [3.71] tail extension for connection systems 1, 2 and 5. |
| 42 | Solder, Right Angle (90°) Printed Board Mount with 0.377 [9.58] tail extension for connection system 3 and systems 1, 2 and 5. |
| 63 | Press-in, compliant termination Right Angle (90°) Printed Board Mount, termination length 0.219 [5.60]. Must select “B3” in step 5. |

### STEP 5 - MOUNTING STYLE

| 0 | None, |
| B | Metal Right Angle (90°) Mounting Bracket. |
| BN | Metal Right Angle (90°) Mounting Bracket with Push-on Fastener. |
| B3 | Plastic Right Angle (90°) Mounting Bracket with Cross Bar. |
| B3N | Plastic Right Angle (90°) Mounting Bracket with Cross Bar and Push-on Fastener. |
| N | Push-On Fastener For Straight Printed Board Mount Connectors |

**ST2** - Self-tapping steel screws 2-28 x 0.250±0.030 [6.35±0.76] length for 0.093 inch [2.36] thick board.

**ST3** - Self-tapping steel screws 2-28 x 0.312±0.030 [7.92±0.76] length for 0.125 [3.18] thick board.

**ST4** - Self-tapping steel screws 2-28 x 0.375±0.030 [9.53±0.76] length for 0.175 [4.45] thick board.

**S32** - Self-tapping stainless steel screws 2-28 x 0.250±0.030 [6.35±0.76] length for 0.093 [2.36] thick board.

**S33** - Self-tapping stainless steel screws 2-28 x 0.312±0.030 [7.92±0.76] length for 0.125 [3.18] thick board.

**S34** - Self-tapping stainless steel screws 2-28 x 0.375±0.030 [9.53±0.76] length for 0.175 [4.45] thick board.

### STEP 6 - HOODS AND PANEL MOUNT

| 0 | None. |
| 5 | Top Opening Hood. |
| 6 | Panel Mount, quick release. |
| 81 | Panel Mount, fixed for 0.040 [1.02] thick panel. |
| 82 | Panel Mount, fixed for 0.060 [1.52] thick panel. |
| 83 | Panel Mount, fixed for 0.090 [2.29] thick panel. |
| 11 | Blind Mating System for 0.040 [1.02] thick panel. |
| 12 | Blind Mating System for 0.060 [1.52] thick panel. |
| 13 | Blind Mating System for 0.090 [2.29] thick panel. |
| 14 | Blind Mating System for 0.120 [3.05] thick panel. |

### STEP 7 - CONTACT PLATING FOR PRINTED BOARD CONNECTORS

| 0 | None, |
| 1 | Crimp Contacts ordered separately, see pages 47-53. |
| A1 | Gold flash over nickel on mating end and termination end. |
| A2 | Gold flash over nickel on mating end and 0.00020 inch [5.00µ] tin-lead solder coat on termination end. Not available with code 62, 63, 92 or 93 in step 4. |
| C1 | 0.000030 inch [0.76µ] gold over nickel on mating end and termination end. |
| C2 | 0.000030 inch [0.76µ] gold over nickel on mating end and 0.000020 inch [5.00µ] tin-lead solder coated termination end. Not available with code 62, 63, 92 or 93 in step 4. |
| D1 | 0.000050 inch [1.27µ] gold over nickel on mating end and termination end. |
| D2 | 0.000050 inch [1.27µ] gold over nickel on mating end and 0.000020 inch [5.00µ] tin-lead solder coated termination end. Not available with code 62, 63, 92 or 93 in step 4. |

### STEP 8 - ENVIRONMENTAL COMPLIANCE OPTIONS

- RoHS Compliant

### STEP 9 - SPECIAL OPTIONS

Sequential Mating Systems Refer to page 25.

### NOTE

- If compliance to environmental legislation is not required, this step will not be used.
- Example: PLB06F300A1

**Example:**

Example: PLB06F300A1

- Specify Complete Connector By Selecting An Option From Step 1 Through 7
- ALL DIMENSIONS ARE SUBJECT TO CHANGE.

**2-D Drawing**

**3-D Model**

**Technical Note:**
- RoHS Compliant

**For high conductivity removable contact connectors, order PLB, PLB, or PLC connectors (in Step 1) and "C112N(2)S" contacts found on pages 49-51.

**PLB20 variant available with code 2, 3, 32, 4, 42, 92, and 93 only in Step 4.

**Mounting screws are available with code 1, 2, 3, 32, 8, 92 and 93. To order mounting screws separately, see page 59 for part numbers.
### SAFETY SHROUD CONNECTOR

Safety Shrouded Connector to Prevent Unsafe Exposure to High Energy Circuits

* Size 12 Power Contacts
* Large Surface Area Mating System
* Discriminating Locking System
* Contact Current Rating to 40 Amperes
* Board - Cable / Cable - Cable

#### TECHNICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>MATERIALS AND FINISHES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulator: Glass-filled polyester, UL 94V-0. Contact technical sales for availability of high temperature insulator material.</td>
</tr>
<tr>
<td>Contacts: Precision machined copper alloy with gold flash over nickel, or 0.000030 inch [0.76µ] gold over nickel, or 0.000050 [1.27µ] gold over nickel. Solder coated terminations optional.</td>
</tr>
<tr>
<td>Push-on Fastener: Spring tempered copper alloy, tin plate.</td>
</tr>
</tbody>
</table>

**ELECTRICAL CHARACTERISTICS:**

| Contact Current Rating: 40 amperes continuous, derated per IEC 60512-3, test 5b. Higher currents available with high conductivity contacts, contact Technical Sales |
| Initial Contact Resistance: 0.001 ohms max. per IEC 60512-2, test 2b. |
| Insulation Resistance: 5 G ohms per IEC 60512-2, test 3a. |
| Voltage Proof: 3,000 minimum V r.m.s. per IEC 60512-2, test 4a, method A. |
| Clearance and Creepage Distance: 0.220 [5.60] minimum |
| Working Voltage: 600 minimum V. r.m.s. |
| Hot Pluggable [50 couplings per UL 1977 paragraph 15]: 250 VAC at 20 amperes |
| Working Temperature: -55°C to +125°C |

<table>
<thead>
<tr>
<th>MECHANICAL CHARACTERISTICS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removable Contacts: Rear insertion/ front release. Female contact features “Closed Entry” design for highest reliability. 0.094 [2.39] diameter male contact.</td>
</tr>
<tr>
<td>Removable Contact Retention in Insulator: 15 lbs. [67N] per IEC 60512-8, test 15a.</td>
</tr>
<tr>
<td>Fixed Contacts: Printed board terminations, both straight and 90°. Female contact features “Closed Entry” design for highest reliability. 0.094 [2.39] diameter male contact.</td>
</tr>
<tr>
<td>Fixed Contact Retention in Insulator: 15 lbs. [67N], minimum.</td>
</tr>
<tr>
<td>Contact Terminations: Crimp removable contacts for wire size 12 AWG [4.0 mm²]. Straight and right angle (90°) solder printed board mount, 0.090 [2.29] tail diameter.</td>
</tr>
<tr>
<td>Connection Systems: Cable to cable, cable to printed board and cable to panel mount.</td>
</tr>
<tr>
<td>Locking System: Insulators provide locking between cable to cable, cable to printed board and cable to panel mount applications.</td>
</tr>
<tr>
<td>Polarization: Provided in insulator design.</td>
</tr>
<tr>
<td>Mounting to P.C. Board: Rapid installation push-on fasteners.</td>
</tr>
<tr>
<td>Mechanical Operations: 500 operations</td>
</tr>
</tbody>
</table>
CONNECTION SYSTEMS

System 5
Cable to Right Angle (90°) Board Mount

System 6
Cable to Straight Board Mount

System 7
Cable to Cable

System 8
Panel Mounting to Cable

CONNECTOR VARIANTS
FACE VIEW OF MALE OR REAR VIEW OF FEMALE CONNECTOR

FEMALE CABLE CONNECTOR
FOR CABLE CONNECTORS WITH SIZE 12 REMOVABLE CONTACTS
CODE 0
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS5W5F0000</td>
<td>1.655</td>
<td>[42.04]</td>
</tr>
<tr>
<td>PLS7W7F0000</td>
<td>2.072</td>
<td>[52.64]</td>
</tr>
</tbody>
</table>

Typical part number:
PLS5W5F0000

For information regarding size 12 removable contacts, see Removable Contact section, pages 47-53.
MALE PANEL MOUNT CONNECTOR
FOR PANEL MOUNT CONNECTORS WITH SIZE 12 REMOVABLE CONTACTS
CODE 1
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

Typical part number:
PL55W5M10000

FEMALE PANEL MOUNT CONNECTOR
FOR PANEL MOUNT CONNECTORS WITH SIZE 12 REMOVABLE CONTACTS
CODE 1
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

Typical part number:
PL55W5F10000

*CONTACT TECHNICAL SALES
FOR AVAILABILITY OF 7W7 VARIANT.

For information regarding size 12 removable contacts, see Removable Contact section, pages 47-53.
SAFETY SHROUD

Power Connection Systems

STRAIGHT SOLDER AND RIGHT ANGLE (90°) SOLDER PRINTED BOARD CONNECTOR

MALE STRAIGHT PRINTED BOARD MOUNT CONNECTOR
CODE 3, 0.146 [3.71] CONTACT EXTENSION

Typical part number:
PLS5W5M300A1

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS5W5M300A1</td>
<td>1.795</td>
<td>1.295</td>
</tr>
<tr>
<td>PLS7W7M300A1</td>
<td>2.213</td>
<td>1.713</td>
</tr>
</tbody>
</table>

MALE RIGHT ANGLE (90°) PRINTED BOARD MOUNT CONNECTOR
CODE 4, 0.146 [3.71] CONTACT EXTENSION

Typical part number:
PLS5W5M400A1

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS5W5M400A1</td>
<td>1.795</td>
<td>1.295</td>
</tr>
<tr>
<td>PLS7W7M400A1</td>
<td>2.213</td>
<td>1.713</td>
</tr>
</tbody>
</table>

PRINTED BOARD CONTACT HOLE PATTERNS

STRAIGHT SOLDER

PLS5W5

- 2X 0.209 [5.30]
- 2X 0.417 [10.60]
- 2X 0.193 [4.90]
- 5X ø0.114 [2.90]

PLS7W7

- 2X 0.626 [15.90]
- 2X 0.209 [5.30]
- 3X 0.193 [4.90]
- 7X ø0.114 [2.90]
- 2X 0.856 [21.75]
- 2X ø0.417 [10.60]

RIGHT ANGLE (90°)

PLS5W5

- 2X 0.209 [5.30]
- 2X 0.417 [10.60]
- 3X ø0.114 [2.90]
- 5X ø0.123±0.003 [3.12±0.08]

PLS7W7

- 2X 0.575 [14.69]
- 7X ø0.114 [2.90]
- 2X ø0.123±0.003 [3.12±0.08]
- 2X 0.856 [21.75]
- 2X 0.417 [10.60]

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
### ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 7

<table>
<thead>
<tr>
<th>STEP</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PLS</td>
</tr>
<tr>
<td>2</td>
<td>5W5</td>
</tr>
<tr>
<td>3</td>
<td>M</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>A1</td>
</tr>
<tr>
<td>7</td>
<td>/AA</td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

#### STEP 1 - BASIC SERIES
- PLS - PLS Series
- PLSH - High conductivity contacts

#### STEP 2 - CONNECTOR VARIANTS
- 5W5 - Five size 12 contacts
- 7W7 - Seven size 12 contacts

#### STEP 3 - CONNECTOR GENDER
- M - Male
- F - Female

#### STEP 4 - CONTACT TERMINATION TYPE
- 0 - Order contacts separately for cable connectors for connection systems 5, 6, 7 and 8, see pages 47-53. Female connectors only. **
- 1 - Order contacts separately for Panel Mount connectors for connection system 7, see pages 47-53. For 7W7 female variant consult technical sales.
- 3 - Solder, Straight Printed Board Mount with 0.146 [3.71] tail extension for connection system 6. Male connectors only. ***
- 4 - Solder, Right Angle (90°) Printed Board Mount with 0.146 [3.71] tail extension for connection system 5. Male connectors only. ***

#### STEP 5 - MOUNTING STYLE
- 0 - None.
- N - Push-on Fastener for Straight Printed Board Mount Connectors

**NOTE:** Once you have made a connector selection, contact Technical Sales if you would like to receive a drawing in DXF, PDF format or a 3-D IGES, STEP, or SOLIDWORKS file.

** Consult technical sales for availability of male version of contact type 0.
*** Consult technical sales for availability of female version of contact type 3 and 4.
A.C. / D.C. INPUT CONNECTOR

* Hot Plug Capability
* Screw Termination Contacts
* Size 12 Power Contacts
* Large Surface Area Mating System
* Contact Current Rating to 40 Amperes
* Sequential Mating Options
* Discriminating Locking System

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

<table>
<thead>
<tr>
<th>Component</th>
<th>Material/Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulator</td>
<td>Glass-filled polyester, UL 94V-0.</td>
</tr>
<tr>
<td>Contact Material</td>
<td>Contact technical sales for availability of high temperature insulator material.</td>
</tr>
<tr>
<td>Contacts</td>
<td>Precision machined copper alloy with gold flash over nickel, or 0.000030 inch [0.76µ] gold over nickel, or 0.000050 [1.27µ] gold over nickel. Solder coated terminations optional.</td>
</tr>
<tr>
<td>Hood</td>
<td>Glass-filled polyester, UL 94V-0.</td>
</tr>
<tr>
<td>Mounting Bracket</td>
<td>Brass, tin plate.</td>
</tr>
<tr>
<td>Push-on Fastener</td>
<td>Spring tempered copper alloy, tin plate.</td>
</tr>
<tr>
<td>Mounting Screw</td>
<td>Steel, zinc plate, or stainless steel passivated.</td>
</tr>
</tbody>
</table>

CONTACT CURRENT RATING:

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Rating</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Contact Material</td>
<td>40 amperes</td>
<td>See page 33 for details.</td>
</tr>
<tr>
<td>High Conductivity Contact Material</td>
<td>55 amperes</td>
<td>See page 33 for details.</td>
</tr>
</tbody>
</table>

INITIAL CONTACT RESISTANCE:

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Contact Material</td>
<td>0.001 ohms max. per IEC 60512-2, test 2b.</td>
</tr>
<tr>
<td>High Conductivity Contact Material</td>
<td>0.00037 ohms max. per IEC 60512-2, test 2b.</td>
</tr>
</tbody>
</table>

INSULATION RESISTANCE:

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulation Resistance</td>
<td>5 G ohms per IEC 60512-2, test 3a.</td>
</tr>
<tr>
<td>Voltage Proof</td>
<td>3,750 V r.m.s. per IEC 60512-2, test 4a, method A.</td>
</tr>
</tbody>
</table>

CLEARANCE and CREEPAGE DISTANCE:

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearance</td>
<td>0.125 [3.18] minimum</td>
</tr>
<tr>
<td>Creepage Distance</td>
<td>0.125 [3.18] minimum</td>
</tr>
</tbody>
</table>

WORKING VOLTAGE:

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Voltage</td>
<td>1,250 V r.m.s.</td>
</tr>
</tbody>
</table>

CONTACT TERMINATIONS:

<table>
<thead>
<tr>
<th>Contact Type</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Terminations</td>
<td>Crimp removable contacts and solder cup removable contacts for wire size 12 AWG [4.0 mm²]. Straight and right angle (90°) solder printed board mount, 0.090 [2.29] tail diameter. Compliant termination press-in.</td>
</tr>
</tbody>
</table>

CONNECTION SYSTEMS:

<table>
<thead>
<tr>
<th>System Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection Systems</td>
<td>Cable to cable, cable to printed board, cable to panel mount, and printed board to printed board.</td>
</tr>
</tbody>
</table>

SEQUENTIAL MATING SYSTEMS:

<table>
<thead>
<tr>
<th>System Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequential Mating</td>
<td>Male contacts can provide two mating lengths.</td>
</tr>
</tbody>
</table>

LOCKING SYSTEM:

<table>
<thead>
<tr>
<th>System Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locking System</td>
<td>Insulators provide locking between cable to cable, cable to printed board, and cable to panel mount applications. Provided in insulator design.</td>
</tr>
</tbody>
</table>

POLARIZATION:

<table>
<thead>
<tr>
<th>System Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polarization</td>
<td>Rapid installation push-on fasteners.</td>
</tr>
</tbody>
</table>

MECHANICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removable Contacts</td>
<td>Rear insertion/ front release. Female contact features “Closed Entry” design for highest reliability. 0.094 [2.39]</td>
</tr>
<tr>
<td>Removable Contact Retention in Insulator</td>
<td>20 lbs. [89N] per IEC 60512-8, test 15a. Printed board terminations, both straight and right angle (90°). Female contact features “Closed Entry” design for highest reliability. 0.094 [2.39] diameter male contact.</td>
</tr>
<tr>
<td>Fixed Contacts</td>
<td>10 lbs. [44N], minimum.</td>
</tr>
<tr>
<td>Contact Terminations</td>
<td>260°C [500°F] for 10 seconds duration per IEC 60512-6, test 12e, 25 watt soldering iron.</td>
</tr>
<tr>
<td>Connection Systems</td>
<td>Cable to cable, cable to printed board, cable to panel mount, and printed board to printed board.</td>
</tr>
<tr>
<td>Sequential Mating</td>
<td>Male contacts can provide two mating lengths.</td>
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<td>Locking System</td>
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<tr>
<td>Polarization</td>
<td>Rapid installation push-on fasteners.</td>
</tr>
<tr>
<td>Mounting to P.C. Board</td>
<td>Male contacts can provide two mating lengths.</td>
</tr>
<tr>
<td>Mechanical Operations</td>
<td>500 operations</td>
</tr>
</tbody>
</table>

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
**Connection Systems**

System 1
Mother Board - Daughter Board

System 2
Side to Side Board Mounting

System 3
Cable to Right Angle (90°) Board Mount

System 4
Sandwich Board Mounting

System 5
Cable to Cable System 6
Panel Mounting to Cable

System 7
Cable Connector with Cable Adapter

**Temperature Rise Curve**

**Standard Contact Materials**

CONNECTORS WITH PLB PREFIX

![Graph showing temperature rise curve for standard contact materials.](image)

**High Conductivity Contact Materials**

CONNECTORS WITH PLBH PREFIX OR “S” SUFFIX ON CRIMP CONTACTS

![Graph showing temperature rise curve for high conductivity materials.](image)

Test conducted per IEC Publication 60512-3, Test 5a.

All power contacts under load.

**Standard Density:** Curve developed using PLB3W3M4BN0A1 and PLB3W3F300A1 mated connector terminated to 12 AWG wire.

**High Conductivity:** Curve developed using PLB3W3M9300A1 and PLB3W3F9300A1 mated connector terminated to 12 AWG wire.
CONNECTOR VARIANT
FACE VIEW OF MALE CONNECTOR

CABLE CONNECTOR FOR USE WITH SIZE 12 REMOVABLE CONTACTS
CODE 0
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

MALE

FEMALE

CABLE AND
PANEL MOUNT CONNECTOR

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

For information regarding size 12 removable contacts, see Removable Contact section, pages 47-53.
**STRAIGHT PRINTED BOARD MOUNT CONNECTOR**

**CODE 3, 0.146 [3.71] CONTACT EXTENSION**

**STRAIGHT PRINTED BOARD MOUNT CONNECTOR**

**CODE 3, 0.146 [3.71] CONTACT EXTENSION**

**COMPLIANT PRESS-IN CONNECTOR**

**CODE 93, 0.225 [5.72] CONTACT EXTENSION**

**CONTACT HOLE PATTERN**

**FOR STRAIGHT PRINTED BOARD MOUNT AND COMPLIANT PRESS-IN CONNECTORS**

**SUGGESTED PRINTED BOARD HOLE SIZES:**

Suggest Ø 0.114 [2.90] finished holes in printed board for straight solder printed board mount contacts.

Suggest Ø 0.123±0.003 [3.15±0.08] holes in printed board for mounting connector with push-on fasteners or 0.100 [2.54] for mounting connector with #2 screws.

**NOTE:** See page 57 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.
RIGHT ANGLE (90°) PRINTED BOARD MOUNT CONNECTOR
CODE 4, 0.146 [3.71] CONTACT EXTENSION

**MALE**

- Part Number: PLB3W3M4BN0A1

**FEMALE**

- Part Number: PLB3W3F4BN0A1

**CONTACT HOLE PATTERN**

**RIGHT ANGLE (90°) ANGLE PRINTED BOARD MOUNT CONNECTORS**

- 3X Contacts holes
- 2X Mounting holes
- Suggest Ø 0.114 [2.90] finished holes in printed board for right angle (90°) solder printed board mount contacts.
- Suggest Ø 0.123±0.003 [3.15±0.08] holes in printed board for mounting connector with push-on fasteners.

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
SCREW TERMINATION CONNECTOR
SCREW TERMINATIONS ALLOWS FOR CONVENIENT FIELD INSTALLATION WHEN REQUIRED

CODE 71
CONTACTS MAY BE SUPPLIED WITH CONNECTOR OR ORDERED SEPARATELY

SEQUENTIAL MATING CONTACTS

BOARD MOUNT CONNECTORS

CRIMP AND PANEL MOUNT CONNECTORS

Modification number -338.0 (see step 8 of the ordering information) allows for board mount connector to have position 3 loaded with a 0.330 [8.38] nominal mating length contact and positions 1 and 2 loaded with 0.250 [6.35] nominal mating length contacts. Contact technical sales for additional sequencing options.

MC610NS and MC612N crimp contacts and MC610NS and MC612N solder cup contacts to be used for 0.330 [8.38] nominal mating length. MC610NS-228.2 and MC612N-228.2 crimp contacts and MS610NS-228.2 and MS612N-228.2 solder cup contacts to be used for 0.250 [6.35] nominal mating length.
ORDERING INFORMATION - CODE NUMBERING SYSTEM
Specify Complete Connector By Selecting An Option From Step 1 Through 7

<table>
<thead>
<tr>
<th>STEP</th>
<th>EXAMPLE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>STEP 1 - BASIC SERIES</td>
<td>PLB - PLB Series</td>
<td>PLBH - High conductivity contacts.</td>
</tr>
<tr>
<td>STEP 2 - CONNECTOR VARIANTS</td>
<td>3W3 - Three size 12 contacts</td>
<td></td>
</tr>
<tr>
<td>STEP 3 - CONNECTOR GENDER</td>
<td>M - Male</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F - Female</td>
<td></td>
</tr>
<tr>
<td>STEP 4 - CONTACT TERMINATION TYPE</td>
<td>0 - Order contacts separately for cable connectors for connection systems 5, 6, 7, 8 and 9, see pages 47-53.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*1 - Removable contact, panel mount connector for connection system 8. Order contacts separately, see pages 47-53.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*3 - Solder, Straight Printed Board Mount with 0.146 [3.71] tail extension for connection systems 1, 4, and 6.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 - Solder, Right Angle (90°) Printed Board Mount with 0.146 [3.71] tail extension for connection systems 1, 2 and 5.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>71 - Screw termination cable connector. Supplied with 3 contacts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*93 - Press-in, Compliant Termination for 0.090 [2.29] to 0.175 [4.45] thick P.C. board, for connector systems 1, 4, and 6.</td>
<td></td>
</tr>
<tr>
<td>STEP 5 - MOUNTING STYLE</td>
<td>0 - None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B - Metal Right Angle (90°) Mounting Bracket.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BN - Metal Right Angle (90°) Mounting Bracket with Push-on Fastener.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N - Push-On Fastener For Straight Printed Board Mount Connectors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ST2 - Self-tapping steel screws 2-28 x 0.250±0.030 [6.35±0.76] length for 0.093 [2.36] thick board.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ST3 - Self-tapping steel screws 2-28 x 0.312±0.030 [7.92±0.76] length for 0.125 [3.18] thick board.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ST4 - Self-tapping steel screws 2-28 x 0.375±0.030 [9.53±0.76] length for 0.175 [4.45] thick board.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SS2 - Self-tapping stainless steel screws 2-28 x 0.250±0.030 [6.35±0.76] length for 0.093 [2.36] thick board.</td>
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<td></td>
</tr>
</tbody>
</table>

* Mounting screws are available with code 1, 3 and 93. To order mounting screws separately, see page 59 for part numbers.

STEP 6 - CABLE ADAPTER AND BLIND MATE SYSTEM
0 - None. |
5 - Top Opening Hood. |
11 - Blind Mating System for 0.040 [1.02] thick panel. |
12 - Blind Mating System for 0.060 [1.52] thick panel. |
13 - Blind Mating System for 0.090 [2.29] thick panel. |
14 - Blind Mating System for 0.120 [3.05] thick panel.

ORDERING INFORMATION - CODE NUMBERING SYSTEM
Specify Complete Connector By Selecting An Option From Step 1 Through 7

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<tr>
<th>STEP</th>
<th>EXAMPLE</th>
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<tr>
<td>STEP 1 - BASIC SERIES</td>
<td>PLB - PLB Series</td>
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</tr>
<tr>
<td>STEP 2 - CONNECTOR VARIANTS</td>
<td>3W3 - Three size 12 contacts</td>
<td></td>
</tr>
<tr>
<td>STEP 3 - CONNECTOR GENDER</td>
<td>M - Male</td>
<td></td>
</tr>
<tr>
<td></td>
<td>F - Female</td>
<td></td>
</tr>
<tr>
<td>STEP 4 - CONTACT TERMINATION TYPE</td>
<td>0 - Order contacts separately for cable connectors for connection systems 5, 6, 7, 8 and 9, see pages 47-53.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>*1 - Removable contact, panel mount connector for connection system 8. Order contacts separately, see pages 47-53.</td>
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<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>4 - Solder, Right Angle (90°) Printed Board Mount with 0.146 [3.71] tail extension for connection systems 1, 2 and 5.</td>
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<td></td>
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</tr>
<tr>
<td>STEP 5 - MOUNTING STYLE</td>
<td>0 - None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B - Metal Right Angle (90°) Mounting Bracket.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BN - Metal Right Angle (90°) Mounting Bracket with Push-on Fastener.</td>
<td></td>
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<tr>
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<td></td>
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0 - None. |
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11 - Blind Mating System for 0.040 [1.02] thick panel. |
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14 - Blind Mating System for 0.120 [3.05] thick panel.
**TECHNICAL CHARACTERISTICS**

**MATERIALS AND FINISHES:**

- **Insulator:** Glass-filled polyester, UL 94V-0. Contact technical sales for availability of high temperature insulator material.
- **Contacts:** Precision machined copper alloy with gold flash over nickel, or 0.000030 inch [0.76µ] gold over nickel, or 0.000050 [1.27µ] gold over nickel. Solder coated terminations optional.
- **Mounting Clip:** Beryllium copper with tin plate.
- **Hood:** Glass filled polyester, UL 94V-0.
- **Mounting Bracket:** Brass with tin plate.
- **Push-on Fastener:** Spring tempered copper alloy, tin plate.

**ELECTRICAL CHARACTERISTICS:**

**SIGNAL CONTACTS**

- **Contact Current Rating:** 7.5 amperes nominal.
- **Initial Contact Resistance:** 0.007 ohms max. per IEC 60512-2, test 2b.

**POWER CONTACTS**

- **Contact Current Rating:** See temperature rise curves on page 40. For additional information see pages 47-53.
- **Initial Contact Resistance:** 0.005 ohms max. per IEC 60512-2, test 2b.
- **Standard Conductivity:** 0.0003 ohms max. per IEC 60512-2, test 2b.
- **High Conductivity:**

**SHIELDED CONTACTS**

- **Initial Contact Resistance:** 0.008 ohms maximum.
- **Nominal Impedance:** 50 ohms.
- **Insertion Loss:**
  - -0.46 dB at 1 GHz
  - -1.5 dB at 2 GHz
- **VSWR:**
  - 1.15 average at 1 GHz
  - 1.56 average at 2 GHz
- **Above values measured using frequency domain techniques.**
- **Proof Voltage:** 1000 V r.m.s.

**ELECTRICAL CHARACTERISTICS, CONTINUED:**

**HIGH VOLTAGE CONTACTS**

- **Flash over Voltage:** 3600 V r.m.s.
- **Proof Voltage:** 2700 V r.m.s.
- **Initial Contact Resistance:** 0.008 ohms maximum.

**CONNECTOR**

- **Insulation Resistance:** 5 G ohms per IEC 60512-2, test 3a, method A.
- **Working Voltage:** 600 V rms.
- **Voltage Proof:** 2200 V rms per IEC 60512-2, test 4a, method C.
- **Clearance and Creepage Distance:** 0.080 inch [2.03 mm]
- **Working Temperature:** -55°C to +125°C.

**MECHANICAL CHARACTERISTICS:**

**SIGNAL CONTACTS**

- **Removable:** Insert contact to rear face of insulator, release from front face of insulator.
  - Size 20 contacts, 0.040 inch [1.02 mm] diameter male contacts, closed entry design female contacts.
- **Fixed:** Straight solder, right angle (90°) solder and straight compliant press-in printed board mount terminations. Size 20 contacts, 0.040 inch [1.02 mm] diameter male contacts, open entry design female contacts.

- **...continued on next page**

CUL Recognized
File # E49351
MECHANICAL CHARACTERISTICS, CONTINUED:

POWER CONTACTS:

Removable: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts, 0.142 inch [3.61 mm] diameter male contacts, closed entry design female contacts.

Printed Board Mount: Straight solder, right angle (90°) solder and straight compliant press-in printed board mount terminations. Size 8 contacts, 0.142 inch [3.61 mm] male contacts, closed entry design female contacts.

SHIELDED CONTACTS:

Removable: Insert contact to rear face of insulator, release from front face of insulator. See page 53 table of cable sizes for contact termination dimensions.

HIGH VOLTAGE CONTACTS:

Removable: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts. Straight and right angle (90°) terminations. 0.041 inch [1.04 mm] minimum hole diameter.

Contact Terminations: 20-24 AWG [0.5-0.25mm²] removable crimp signal, 0.028 inch [0.71 mm] diameter straight and right angle (90°) solder printed board mount, 8-16 AWG [10.0-1.0mm²] removable solder and crimp power, 0.125 inch [3.18 mm] diameter straight and right angle (90°) solder printed board mount, power, shielded, high voltage cable, and straight compliant press-in terminations.


Connection Systems: Connector provides cable to cable, cable to printed board, cable to panel mount and printed board to printed board application.

Locking System: Insulators provide locking between cable to cable, cable to printed board and cable to panel mount applications.

Polarizations: Provided in insulator design.

Mounting to Printed Board: Rapid installation push-on fasteners. Self-tapping screws for compliant connectors.

Mechanical Operations: 500 operations per IEC 60512-5.

TEMPERATURE RISE CURVES

STANDARD CONTACT MATERIAL

Test conducted in accordance with UL1977. All power contacts under load.

10W2: Curve developed using PLB10W2F9300A1 and PLB10W2M0000 connectors with MC4008D contacts terminated to 8 AWG wire.

16W4: Curve developed using PLC16W4F9300A1 and PLC16W4M0000 connectors with MC4008D contacts terminated to 8 AWG wire.

HIGH CONDUCTIVITY CONTACT MATERIAL

Test conducted in accordance with UL1977. All power contacts under load.

10W2: Curve developed using PLBH10W2F9300A1 and PLB10W2M0000 connectors with MC4008DS contacts terminated to 8 AWG wire.

16W4: Curve developed using PLCH16W4F9300A1 and PLC16W4M0000 connectors with MC4008DS contacts terminated to 8 AWG wire.
PLB10W2 CABLE CONNECTOR
FOR USE WITH SIZE 20 AND SIZE 8 REMOVABLE CONTACTS
CODE 0
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

MALE

FEMALE

Part Number: PLB10W2M0000

Part Number: PLB10W2F0000

PLC16W4 CABLE CONNECTOR
FOR USE WITH SIZE 20 AND SIZE 8 REMOVABLE CONTACTS
CODE 0
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

MALE

FEMALE

Part Number: PLC16W4M0000

Part Number: PLC16W4F0000

For information regarding size 20 and size 8 removable contacts, see Removable Contact section, pages 47-53.
PLB10W2 PANEL MOUNT CONNECTOR
FOR USE WITH SIZE 20 AND SIZE 8 REMOVABLE CONTACTS
CODE 1
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

**MALE**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male A</td>
<td>1.718±0.020 [43.64±0.51]</td>
</tr>
<tr>
<td>Male B</td>
<td>0.606±0.020 [15.39±0.51]</td>
</tr>
<tr>
<td>Male C</td>
<td>0.235±0.020 [5.97±0.51]</td>
</tr>
</tbody>
</table>

**FEMALE**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female A</td>
<td>1.718±0.020 [43.64±0.51]</td>
</tr>
<tr>
<td>Female B</td>
<td>0.606±0.020 [15.39±0.51]</td>
</tr>
<tr>
<td>Female C</td>
<td>0.190±0.020 [4.83±0.51]</td>
</tr>
</tbody>
</table>

Part Number:
- PLB10W2M1000
- PLB10W2F1000

For panel cutout, see chart on page 63.

NOTE: MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 46. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.

PLC16W4 PANEL MOUNT CONNECTOR
FOR USE WITH SIZE 20 AND SIZE 8 REMOVABLE CONTACTS
CODE 1
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

**MALE**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male A</td>
<td>1.718±0.020 [43.64±0.51]</td>
</tr>
<tr>
<td>Male B</td>
<td>0.606±0.020 [15.39±0.51]</td>
</tr>
<tr>
<td>Male C</td>
<td>0.235±0.020 [5.97±0.51]</td>
</tr>
</tbody>
</table>

**FEMALE**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Metric</th>
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<tbody>
<tr>
<td>Female A</td>
<td>1.718±0.020 [43.64±0.51]</td>
</tr>
<tr>
<td>Female B</td>
<td>0.606±0.020 [15.39±0.51]</td>
</tr>
<tr>
<td>Female C</td>
<td>0.190±0.020 [4.83±0.51]</td>
</tr>
</tbody>
</table>

Part Number:
- PLC16W4M1000
- PLC16W4F1000

For panel cutout, see chart on page 63.

NOTE: MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 46. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.

For information regarding size 20 and size 8 removable contacts, see Removable Contact section, pages 47-53.
SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest 0.145 [3.68] Ø hole in printed board for power contact termination positions.
Suggest 0.045 [1.14] Ø hole for signal solder contact termination positions.
Suggest 0.100 [2.54] Ø hole in printed board when mounting connectors with #2 thread forming screws.
Suggest 0.123±0.003 [3.12±0.08] Ø hole in printed board for mounting connector with push-on fasteners.

NOTE: See page 57 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.
PLB(H)10W3 RIGHT ANGLE (90°) PRINTED BOARD MOUNT CONNECTOR
CODE 4, 0.146 [3.71] CONTACT EXTENSION

MALE
Typical part numbers:
PLB10W2M400A1
PLBH10W2M400A1

FEMALE
Typical part numbers:
PLB10W2F400A1
PLBH10W2F400A1

PLC(H)16W4 RIGHT ANGLE (90°) PRINTED BOARD MOUNT CONNECTOR
CODE 4, 0.146 [3.71] CONTACT EXTENSION

MALE
Typical part numbers:
PLC16W4M400A1
PLCH16W4M400A1

FEMALE
Typical part numbers:
PLC16W4F400A1
PLCH16W4F400A1

RIGHT ANGLE (90°) PRINTED BOARD MOUNT CONTACT HOLE PATTERN

NOTE:
MOUNTING SCREWS CAN BE ORDERED SEPARATELY BY PART NUMBER WHEN CHOOSING B3 BRACKETS. SEE PAGE 59.
PLB(H)10W2 COMPLIANT PRESS-IN CONNECTOR

**CODE 93**

**MALE**

```
+-------+-------+-------+-------+
|       |       |       |       |
| 10X 0.218 | 0.608 | 0.645 | 0.800 |
| [5.54]   | [15.39]| [16.38]| [15.24]|
```

**FEMALE**

```
+-------+-------+-------+-------+
|       |       |       |       |
| 10X 0.218 | 0.802 | 0.645 | 0.230 |
| [5.54]   | [20.37]| [16.38]| [5.84]|
```

**Typical part numbers:**
- PLB10W2M9300A1
- PLB10W2F9300A1
- PLBH10W2M9300A1
- PLBH10W2F9300A1

**NOTE:** Connectors are designed to be mounted to the printed circuit board with screws, see page 59 for mounting screw information. See page 43 for contact hole pattern.

---

PLC(H)16W4 COMPLIANT PRESS-IN CONNECTOR

**CODE 93**

**MALE**

```
+-------+-------+-------+-------+
|       |       |       |       |
| 16X 0.218 | 0.802 | 0.645 | 0.900 |
| [5.54]   | [20.37]| [16.38]| [15.24]|
```

**FEMALE**

```
+-------+-------+-------+-------+
|       |       |       |       |
| 16X 0.218 | 0.802 | 0.645 | 0.230 |
| [5.54]   | [20.37]| [16.38]| [5.84]|
```

**Typical part numbers:**
- PLC16W4M9300A1
- PLC16W4F9300A1
- PLCH16W4M9300A1
- PLCH16W4F9300A1

**NOTE:** Connectors are designed to be mounted to the printed circuit board with screws, see page 59 for mounting screw information. See page 43 for contact hole pattern.
**ORDERING INFORMATION - CODE NUMBERING SYSTEM**

Specify Complete Connector By Selecting An Option From Step 1 Through 7

<table>
<thead>
<tr>
<th>STEP</th>
<th>EXAMPLE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td><strong>STEP 1 - BASIC SERIES</strong></td>
<td>PLC 16W4 F 4 B3N 0 A1 /AA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLB</td>
<td>2 Row</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLBH</td>
<td>2 Row High conductivity contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLC</td>
<td>3 Row</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLBH</td>
<td>3 Row High conductivity contacts</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STEP 2 - CONNECTOR VARIANTS**

- 2 Row - 10W2
- 3 Row - 16W4

**STEP 3 - CONNECTOR GENDER**

- M - Male
- F - Female

**STEP 4 - CONTACT TERMINATION TYPE**

- 0 - Removable contact, cable connector. Order contacts separately, see pages 47-53.
- *1 - Removable contact, panel mounted connector. Order contacts separately, see pages 47-53.
- *2 - Solder, Straight Printed Board Mount with 0.146 [3.71] tail extension.
- *3 - Solder, Right Angle (90°) Printed Board Mount with 0.146 [3.71] tail extension.
- *93 - Straight Printed Board Mount, Press-in, length 0.218 [5.54] for 0.125 inch [3.18] thick board.

**STEP 5 - MOUNTING STYLE**

- 0 - None.
- B - Metal Right Angle (90°) Mounting Bracket.
- B3 - Plastic Right Angle (90°) Mounting Bracket with Cross Bar.
- B3N - Plastic Right Angle (90°) Mounting Bracket with Cross Bar and Push-on Fastener.
- N - Push-On Fastener For Straight Printed Board Mount Connectors
- ST2 - Self-tapping steel screws 2-28 x 0.250+0.030 [6.35+0.76] length for 0.093 [2.36] thick board.
- ST3 - Self-tapping steel screws 2-28 x 0.312+0.030 [7.92+0.76] length for 0.125 [3.18] thick board.
- ST4 - Self-tapping steel screws 2-28 x 0.375+0.030 [9.53+0.76] length for 0.175 [4.45] thick board.
- SS2 - Self-tapping stainless steel screws 2-28 x 0.250+0.030 [6.35+0.76] length for 0.093 [2.36] thick board.
- SS3 - Self-tapping stainless steel screws 2-28 x 0.312+0.030 [7.92+0.76] length for 0.125 [3.18] thick board.
- SS4 - Self-tapping stainless steel screws 2-28 x 0.375+0.030 [9.53+0.76] length for 0.175 [4.45] thick board.

**NOTE:** Once you have made a connector selection, contact Technical Sales if you would like to receive a drawing in DXF, PDF format or a 3-D IGES, STEP, or SOLIDWORKS file.

**STEP 6 - HOODS AND PANEL MOUNT**

- 0 - None.
- 51 - Top Opening Hood.
- 6 - Panel Mount, quick release.
- 81 - Panel Mount, fixed for 0.040 [1.02] thick panel.
- 82 - Panel Mount, fixed for 0.060 [1.52] thick panel.
- 83 - Panel Mount, fixed for 0.090 [2.29] thick panel.
- 11 - Blind Mating System for 0.040 [1.02] thick panel.
- 12 - Blind Mating System for 0.060 [1.52] thick panel.
- 13 - Blind Mating System for 0.090 [2.29] thick panel.
- 14 - Blind Mating System for 0.120 [3.05] thick panel.

**STEP 7 - CONTACT PLATING FOR PRINTED BOARD CONNECTORS**

- 0 - Crimp Contacts ordered separately, see page 47-53.
- A1 - Gold flash over nickel on mating end and termination end.
- A2 - Gold flash over nickel on mating end and 0.00020 inch [5.00µ] tin-lead solder coat on termination end. Not available with code 93 in step 4.
- C1 - 0.000030 inch [0.76µ] gold over nickel on mating end and termination end.
- C2 - 0.000030 inch [0.76µ] gold over nickel on mating end and 0.00020 inch [5.00µ] tin-lead solder coated termination end. Not available with code 93 in step 4.
- D1 - 0.000050 inch [1.27µ] gold over nickel on mating end and termination end.
- D2 - 0.000050 inch [1.27µ] gold over nickel on mating end and 0.00020 inch [5.00µ] tin-lead solder coated termination end. Not available with code 93 in step 4.

**STEP 8 - ENVIRONMENTAL COMPLIANCE OPTIONS**

/AA - RoHS Compliant

**NOTE:** If compliance to environmental legislation is not required, this step will not be used. Example: PLC16W4F4B3N0A1

**STEP 9 - SPECIAL OPTIONS**

CONTACT TECHNICAL SALES FOR SPECIAL OPTIONS

- Mounting screws are available with code 1, 3 and 93. To order mounting screws separately, see page 59 for part numbers.
REMovable contact Technical Characteristics

**Size 20 Removable Contact**

**Materials and Finishes:**
- **Standard:** Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

**Mechanical Characteristics:**
- **Standard:** Insert contact to rear face of insulator, release from front face of insulator. Size 20 contacts, 0.040 inch [1.02 mm] diameter male contacts, closed entry design female contacts.

**Electrical Characteristics:**
- **Contact Current Rating:** 7.5 amperes nominal.
- **Initial Contact Resistance:** 0.007 ohms max. per IEC 60512-2, test 2b.

**Shielded:**
- **Dielectric Material:** PCTFE
- **Inner Contacts:** Phosphor bronze, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
- **Outer Contacts:** Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -15.

**Mechanical Characteristics:**
- **Standard and High Conductivity:** Insert contact to rear face of insulator, release from front face of insulator. Size 12 contacts, 0.094 inch [2.39 mm] diameter male contacts. Female contact closed entry for highest reliability.

**Electrical Characteristics:**
- **Contact Current Rating:** See page 9 for detail information.
- **Initial Contact Resistance:** 0.0016 ohms max. per IEC 60512-2, test 2b.

**High Conductivity:**
- **Dielectric Material:** PTFE teflon
- **Inner Contacts:** Male contacts, brass. Female contacts, phosphor bronze. Male and female contacts, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
- **Outer Contacts:** Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14.

**Shielded:**
- **Dielectric Strength**
  - At Sea Level: 600 V rms
  - Initial Contact Resistance: 0.012 ohms maximum
- **Insulation Resistance:** 5 G ohms
- **Insertion Loss:** 0.2 dB at 500 MHz for 12SN contacts
- **VSWR:** 1.0 dB at 500 MHz for 22SN contacts

**Size 12 Removable Contact**

**Materials and Finishes:**
- **Standard:** Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

**High Conductivity:**
- **Dielectric Strength**
  - At Sea Level: 600 V rms
  - Initial Contact Resistance: 0.012 ohms maximum
- **Insulation Resistance:** 5 G ohms
- **Insertion Loss:** 0.2 dB at 500 MHz for 12SN contacts
- **VSWR:** 1.0 dB at 500 MHz for 22SN contacts

**Mechanical Characteristics:**
- **Standard and High Conductivity:** Insert contact to rear face of insulator, release from front face of insulator. Size 12 contacts, 0.094 inch [2.39 mm] diameter male contacts. Female contact closed entry for highest reliability.

**Electrical Characteristics:**
- **Contact Current Rating:** 40 amperes continuous, derated per IEC 60512-3, test 5b.
- **Initial Contact Resistance:** 0.001 ohms max. per IEC 60512-2, test 2b.

**High Conductivity:**
- **Contact Current Rating:** See page 33 for detail information.
- **Initial Contact Resistance:** 0.0007 ohms max. per IEC 60512-2, test 2b.

**Size 16 Removable Contact**

**Materials and Finishes:**
- **Standard:** Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

**High Conductivity:**
- **Dielectric Strength**
  - At Sea Level: 600 V rms
  - Initial Contact Resistance: 0.012 ohms maximum
- **Insulation Resistance:** 5 G ohms
- **Insertion Loss:** 0.2 dB at 500 MHz for 12SN contacts
- **VSWR:** 1.0 dB at 500 MHz for 22SN contacts

**Mechanical Characteristics:**
- **Standard and High Conductivity:** Insert contact to rear face of insulator, release from front face of insulator. Size 16 contacts, 0.0625 inch [1.588 mm] diameter male contacts. Female contact closed entry for highest reliability.

**Electrical Characteristics:**
- **Contact Current Rating:** See page 9 for detail information.
- **Initial Contact Resistance:** 0.0016 ohms max. per IEC 60512-2, test 2b.

**High Conductivity:**
- **Dielectric Material:** PTFE teflon
- **Inner Contacts:** Phosphor bronze, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
- **Outer Contacts:** Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14.

**Shielded:**
- **Dielectric Material:** PCTFE
- **Inner Contacts:** Phosphor bronze, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
- **Outer Contacts:** Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -15.

**Size 8 Removable Contact**

**Materials and Finishes:**
- **Standard:** Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

**High Conductivity:**
- **Dielectric Strength**
  - At Sea Level: 600 V rms
  - Initial Contact Resistance: 0.012 ohms maximum
- **Insulation Resistance:** 5 G ohms
- **Insertion Loss:** 0.2 dB at 500 MHz for 12SN contacts
- **VSWR:** 1.0 dB at 500 MHz for 22SN contacts

**Mechanical Characteristics:**
- **Standard and High Conductivity:** Insert contact to rear face of insulator, release from front face of insulator. Size 12 contacts, 0.094 inch [2.39 mm] diameter male contacts. Female contact closed entry for highest reliability.

**Electrical Characteristics:**
- **Contact Current Rating:** See page 9 for detail information.
- **Initial Contact Resistance:** 0.0016 ohms max. per IEC 60512-2, test 2b.

**High Conductivity:**
- **Dielectric Material:** PTFE teflon
- **Inner Contacts:** Male contacts, brass. Female contacts, phosphor bronze. Male and female contacts, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
- **Outer Contacts:** Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14.

**Shielded:**
- **Dielectric Material:** PCTFE
- **Inner Contacts:** Phosphor bronze, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
- **Outer Contacts:** Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14.

... continued on next page
REMOVABLE CONTACT TECHNICAL CHARACTERISTICS

continued from previous page . . .

MECHANICAL CHARACTERISTICS:

STANDARD AND HIGH CONDUCTIVITY: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts, 0.142 inch [3.61 mm] diameter male contacts, closed entry design female contacts.

HIGH VOLTAGE: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts. Straight and right angle (90°) terminations. 0.041 inch [1.04 mm] minimum hole diameter. Durability: 500 cycles minimum. Vibration: 20g from 10 Hz to 500 Hz. Shock: 30g-11ms.

SHEILDDED: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts. See page 53 table of cable sizes for contact Termination dimensions.

ELECTRICAL CHARACTERISTICS:

STANDARD: Contact Current Rating: See temperature rise curves on page 40. For additional information see page 51-52. Initial Contact Resistance: 0.001 ohms max. per IEC 60512-2, test 2b.

HIGH CONDUCTIVITY: Contact Current Rating: See temperature rise curves on page 40. Initial Contact Resistance: 0.0003 ohms max. per IEC 60512-2, test 2b.

HIGH VOLTAGE: Flash over Voltage: 3600 V r.m.s. Proof Voltage: 2700 V r.m.s. Initial Contact Resistance: 0.008 ohms maximum.

SHEILDDED: Initial Contact Resistance: 0.008 ohms maximum. Nominal Impedance: 50 ohms. Insertion Loss: -0.46 dB at 1 GHz -1.5 dB at 2 GHz

REMOVABLE CRIMP SIGNAL CONTACT

FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS

CONTACTS MUST BE ORDERED SEPARATELY

SIZE 20

FEMALE CONTACT

MALE CONTACT

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>WIRE SIZE AWG [mm²]</th>
<th>ØA</th>
<th>ØB</th>
</tr>
</thead>
<tbody>
<tr>
<td>FC720N2</td>
<td>20 / 22 / 24 [0.57 / 0.37 / 0.25]</td>
<td>0.045</td>
<td>0.068</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>WIRE SIZE AWG [mm²]</th>
<th>ØA</th>
<th>ØB</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC720N3</td>
<td>20 / 22 / 24 [0.57 / 0.37 / 0.25]</td>
<td>0.045</td>
<td>0.068</td>
</tr>
</tbody>
</table>

VSWR: 1.15 average at 1 GHz 1.56 average at 2 GHz Above values measured using frequency domain techniques.

OPTIONAL PLATING FINISHES

-14 0.000030 [0.76 µ] gold over nickel by adding “-14" suffix onto part number. Example: FC720N2-14.

-15 0.000050 inch [1.27 µ] gold over nickel by adding “-15". Example: FC720N2-15.

RoHS OPTIONS:

/AA Environmental Compliance Option: RoHS compliant can be achieved by adding "/AA" suffix onto part number. Examples: FC720N2/AA or for optional plating finishes use FC720N2/AA-14.

REELED CONTACTS:

Contacts may be supplied in plastic carriers, packaged in reels holding 2,000 contacts for use with the automatic pneumatic crimp tools, catalog part numbers 9550-0 and 9550-1; packaged in reels holding 1,000 contacts for use with the automatic pneumatic crimp tools, catalog part number 9555-0-2. The same type carrier is used for both male and female contacts.

All male and female crimp contacts can be ordered in reels by adding letter “R” after the contact part number, such as MC6020DR for a male contact and FC6026DR for a female contact.

Note: Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

For information regarding CRIMP TOOLS & CRIMPING TOOL TECHNIQUES, see page 54.
REMOVABLE CRIMP CONTACT
FOR USE WITH PCS SERIES CONNECTORS
CONTACTS MUST BE ORDERED SEPARATELY
SIZE 16

FEMALE CONTACT
“CLOSED ENTRY” DESIGN

MALE CONTACT

PART NUMBERS
WIRE SIZE
AWG/㎟ [㎟/mm²]
ØA ØB OAL

FC112N2
12 [4.0] 0.098 [2.49] N/A 0.764 ±0.020 [19.41±0.51]

FC112N2S
12 [4.0] 0.098 [2.49] N/A 0.764 ±0.020 [19.41±0.51]

FC114N2
14-16 [2.5-1.5] 0.081 [2.06] 0.105 [2.67] 0.764 ±0.020 [19.41±0.51]

FC116N2
16-18 [1.5-1.0] 0.067 [1.70] 0.093 [2.36] 0.764 ±0.020 [19.41±0.51]

FC120N2
20-22-24 [0.5-0.3-0.25] 0.045 [1.14] 0.068 [1.73] 0.764 ±0.020 [19.41±0.51]

“S” in part number indicates high conductivity material.
Compatible with PL*H PCB mount connectors. See ordering information.

MC112N
12 [4.0] 0.098 [2.49] N/A 0.764 ±0.020 [19.41±0.51]

MC112NS
12 [4.0] 0.098 [2.49] N/A 0.764 ±0.020 [19.41±0.51]

*MC112N-133.0
12 [4.0] 0.098 [2.49] N/A 0.684 ±0.020 [17.37±0.51]

*MC112N-133.1
12 [4.0] 0.098 [2.49] N/A 0.724 ±0.020 [18.90±0.51]

*MC112N-133.2
12 [4.0] 0.098 [2.49] N/A 0.744 ±0.020 [18.90±0.51]

*MC112N-133.3
12 [4.0] 0.098 [2.49] N/A 0.804 ±0.020 [20.42±0.51]

MC114N
14-16 [2.5-1.5] 0.081 [2.06] 0.105 [2.67] 0.764 ±0.020 [19.41±0.51]

MC116N
16-18 [1.5-1.0] 0.067 [1.70] 0.093 [2.36] 0.764 ±0.020 [19.41±0.51]

*MC116N-133.0
16-18 [1.5-1.0] 0.067 [1.70] 0.093 [2.36] 0.684 ±0.020 [17.37±0.51]

*MC116N-133.1
16-18 [1.5-1.0] 0.067 [1.70] 0.093 [2.36] 0.724 ±0.020 [18.90±0.51]

*MC116N-133.2
16-18 [1.5-1.0] 0.067 [1.70] 0.093 [2.36] 0.744 ±0.020 [18.90±0.51]

*MC116N-133.3
16-18 [1.5-1.0] 0.067 [1.70] 0.093 [2.36] 0.804 ±0.020 [20.42±0.51]

MC112N
12 [4.0] 0.098 [2.49] N/A 0.764 ±0.020 [19.41±0.51]

MC112NS
12 [4.0] 0.098 [2.49] N/A 0.764 ±0.020 [19.41±0.51]

MC120N
20-22-24 [0.5-0.3-0.25] 0.045 [1.14] 0.068 [1.73] 0.764 ±0.020 [19.41±0.51]

“S” in part number indicates high conductivity material.
Compatible with PL*H PCB mount connectors. See ordering information.

* indicates Sequential mate contacts, see page 25 for more information regarding Sequential Mating System.

Note: Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.
**REMOVABLE CRIMP SHIELDED CONTACT**

FOR USE WITH PCS SERIES CONNECTORS

CONTACTS MUST BE ORDERED SEPARATELY

**SIZE 16**

### MALE CONTACT

- ØB: 0.094 [2.39]
- D: 0.786 [19.96]
- ØA: 0.121 [3.07]

### FEMALE CONTACT

- ØB: 0.094 [2.39]
- D: 0.786 [19.96]
- ØA: 0.121 [3.07]

### TABLE

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>CABLE SIZE</th>
<th>CHARACT. IMPED.</th>
<th>ØA</th>
<th>ØB</th>
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<tbody>
<tr>
<td>MCS126N</td>
<td>RG 178 B/U</td>
<td>50 ohms</td>
<td>0.993 [25.22]</td>
<td>0.045 [1.14]</td>
</tr>
<tr>
<td></td>
<td>RG 196 B/U</td>
<td>50 ohms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCS226N</td>
<td>RG 179 B/U</td>
<td>75 ohms</td>
<td>1.022 [25.96]</td>
<td>0.070 [1.78]</td>
</tr>
<tr>
<td></td>
<td>RG 316 /U</td>
<td>50 ohms</td>
<td></td>
<td></td>
</tr>
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</table>

**REMOVABLE CRIMP CONTACT**

FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS

CONTACTS MUST BE ORDERED SEPARATELY

**SIZE 12**

### MALE CONTACT

- ØB: 0.094 [2.39]
- D: 0.786 [19.96]
- ØA: 0.121 [3.07]

### FEMALE CONTACT

- ØB: 0.094 [2.39]
- D: 0.786 [19.96]
- ØA: 0.121 [3.07]

### TABLE

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>WIRE SIZE [AWG/mm²]</th>
<th>ØA</th>
<th>ØB</th>
<th>C</th>
<th>D</th>
<th>OAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>FC610N2S</td>
<td>10 [6.0]</td>
<td>0.147 [3.73]</td>
<td>N/A</td>
<td>N/A</td>
<td>0.254 [6.45]</td>
<td></td>
</tr>
<tr>
<td>FC612N2</td>
<td>12 [4.0]</td>
<td>0.100 [2.54]</td>
<td>0.165 [4.19]</td>
<td>0.042 [1.06]</td>
<td>0.309 [7.85]</td>
<td></td>
</tr>
</tbody>
</table>

**PART NUMBER**

- MC610NS
- MC610NS-228.2
- MC612N
- MC612N-228.2

**Note:** Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

**See page 33 for current ratings.**

Compatible with PLBH3W3 or PLSH PCB mount connectors. See ordering information.

**Note:** Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

For information regarding CRIMP TOOLS & CRIMPING TOOL TECHNIQUES, see page 54.
REMOVABLE SOLDER CUP AND CRIMP CONTACT
SIZE 12 AND SIZE 8

REMOVABLE SOLDER CUP CONTACT
FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS
CONTACTS MUST BE ORDERED SEPARATELY
SIZE 12

FEMALE CONTACT

MALE CONTACT

**NOTE:** Female contacts feature Large Surface Area (L.S.A.) closed entry contact design which provides maximum mating surfaces between male and female contact and reduced contact resistance during operation.

**PART NUMBER** | **WIRE SIZE** | **ØA** | **ØB** | **C** | **D** | **OAL**
--- | --- | --- | --- | --- | --- | ---
FS610N2S | 10 / [6.0] | 0.147 | N/A | N/A | 0.264 | [6.65]
FS612N2 | 12 / [4.0] | 0.100 | 0.165 | 0.042 | 0.309 | [7.85]

Compatible with PLB/HW3 or PLSH PCB mount connectors. See ordering information.

Note: Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

### For information regarding CRIMP TOOLS & CRIMPING TOOL TECHNIQUES, see page 54.

---

REMOVABLE CRIMP CONTACT
FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS
CONTACTS MUST BE ORDERED SEPARATELY
SIZE 8

**FEMALE CONTACT**
CLOSED ENTRY, L.S.A.

**MALE CONTACT**

**NOTE:** Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

**PART NUMBER** | **CURRENT RATING** | **WIRE SIZE** | **ØB**
--- | --- | --- | ---
FC4008D | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
FC4008DS | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
FC4010D | 30 amperes | 10 / [6.0] | 0.122 |
FC4012D | 20 amperes | 12 / [4.0] | 0.101 |
FC4016D | 10 amperes | 16 / [1.5] | 0.067 |

**PART NUMBER** | **WIRE SIZE** | **ØB**
--- | --- | ---
MC4008D | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
MC4008DS | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
MC4010D | 30 amperes | 10 / [6.0] | 0.122 |
MC4012D | 20 amperes | 12 / [4.0] | 0.101 |
MC4016D | 10 amperes | 16 / [1.5] | 0.067 |

**PART NUMBER** | **WIRE SIZE** | **ØB**
--- | --- | ---
MC4008D-228.2 | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
MC4008DS-228.2 | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
MC4010D-228.2 | 30 amperes | 10 / [6.0] | 0.122 |
MC4012D-228.2 | 20 amperes | 12 / [4.0] | 0.101 |
MC4016D-228.2 | 10 amperes | 16 / [1.5] | 0.067 |

**PART NUMBER** | **WIRE SIZE** | **ØB**
--- | --- | ---
MC4008D-228.2 | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
MC4008DS-228.2 | See Temp. Rise Curve, page 40. | 8 / [10.0] | 0.181 |
MC4010D-228.2 | 30 amperes | 10 / [6.0] | 0.122 |
MC4012D-228.2 | 20 amperes | 12 / [4.0] | 0.101 |
MC4016D-228.2 | 10 amperes | 16 / [1.5] | 0.067 |
### REMOVABLE SOLDER CUP CONTACT
**FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS**
**CONTACTS MUST BE ORDERED SEPARATELY**

**SIZE 8**

*NOTE:* Female contacts feature Large Surface Area (L.S.A.) closed entry contact design which provides maximum mating surfaces between male and female contact and reduced contact resistance during operation.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>CURRENT RATING</th>
<th>WIRE SIZE (AWG/mm²)</th>
<th>ØB</th>
<th>ØC</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS4008D</td>
<td>40 amperes</td>
<td>8 / [10.0]</td>
<td>0.219 [5.6]</td>
<td>0.188 [4.78]</td>
</tr>
<tr>
<td>FS4012D</td>
<td>20 amperes</td>
<td>12 / [4.0]</td>
<td>0.143 [3.63]</td>
<td>0.112 [2.84]</td>
</tr>
<tr>
<td>FS4016D</td>
<td>10 amperes</td>
<td>16 / [1.5]</td>
<td>0.100 [2.54]</td>
<td>0.069 [1.75]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>CURRENT RATING</th>
<th>WIRE SIZE (AWG/mm²)</th>
<th>ØB</th>
<th>ØC</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS4008D</td>
<td>40 amperes</td>
<td>8 / [10.0]</td>
<td>0.219 [5.6]</td>
<td>0.188 [4.78]</td>
</tr>
<tr>
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<td>MS4016D</td>
<td>10 amperes</td>
<td>16 / [1.5]</td>
<td>0.100 [2.54]</td>
<td>0.069 [1.75]</td>
</tr>
</tbody>
</table>

**REMOVABLE HIGH VOLTAGE CONTACT**
**FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS**
**CONTACTS MUST BE ORDERED SEPARATELY**

**SIZE 8**

**STRAIGHT SOLDER WIRE TERMINATION**

**MALE CONTACT**

<table>
<thead>
<tr>
<th>MS4820D</th>
<th>Ø0.142 [3.61]</th>
</tr>
</thead>
</table>

**FEMALE CONTACT**

<table>
<thead>
<tr>
<th>FS4820D</th>
<th>Ø0.040 [1.02]</th>
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</table>

**RIGHT ANGLE (90°) SOLDER WIRE TERMINATION**

**MALE CONTACT**

<table>
<thead>
<tr>
<th>MS4920D</th>
<th>Ø0.142 [3.61]</th>
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**FEMALE CONTACT**

<table>
<thead>
<tr>
<th>FS4920D</th>
<th>Ø0.040 [1.02]</th>
</tr>
</thead>
</table>

---

For information regarding **CRIMP TOOLS & CRIMPING TOOL TECHNIQUES**, see page 54.

**For more information regarding CRIMP TOOLS & CRIMPING TOOL TECHNIQUES**, see page 54.
REMOVABLE SHIELDED CONTACT

FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS
CONTACTS MUST BE ORDERED SEPARATELY

SIZE 8

**REMOVABLE SHIELDED CONTACT**

### STRAIGHT SOLDER/CRIMP CONTACTS

<table>
<thead>
<tr>
<th>TYPE OF CONTACT</th>
<th>PART NUMBER</th>
<th>A</th>
<th>ØB</th>
<th>RG CABLE NUMBER</th>
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<tbody>
<tr>
<td>SOLDER/CRIMP</td>
<td>MC4101D</td>
<td>0.929</td>
<td>0.040</td>
<td>178 B/U</td>
</tr>
<tr>
<td></td>
<td>FC4101D</td>
<td>23.60</td>
<td>1.02</td>
<td>196 B/U</td>
</tr>
<tr>
<td>SOLDER/CRIMP</td>
<td>MC4102D</td>
<td>0.929</td>
<td>0.067</td>
<td>179 B/U</td>
</tr>
<tr>
<td></td>
<td>FC4102D</td>
<td>23.60</td>
<td>1.70</td>
<td>316 B/U</td>
</tr>
<tr>
<td>SOLDER/CRIMP</td>
<td>MC4103D</td>
<td>1.037</td>
<td>0.108</td>
<td>180 B/U</td>
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<tr>
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<td>FC4103D</td>
<td>26.34</td>
<td>2.74</td>
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<tr>
<td>SOLDER/CRIMP</td>
<td>MC4104D</td>
<td>1.037</td>
<td>0.120</td>
<td>180 B/U</td>
</tr>
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<td>FC4104D</td>
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<td></td>
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<td>23.60</td>
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<td></td>
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<td>MCC4101D</td>
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<td></td>
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<td>MCC4102D</td>
<td>0.929</td>
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<td>179 B/U</td>
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<tr>
<td></td>
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<td>23.60</td>
<td>1.70</td>
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<td>MCC4104D</td>
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<td>0.120</td>
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<tr>
<td></td>
<td>FCC4104D</td>
<td>26.34</td>
<td>3.05</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Connectors can be kitted with all applicable crimp / solder contacts, contact Technical Sales for connector part number.

### STRAIGHT SOLDER/SOLDER CONTACTS

### STRAIGHT CRIMP/CRIMP CONTACTS

**SHIELDED CONTACTS**

Two-step crimping action for signal and shielding conductors.

For information regarding **CRIMP TOOLS & CRIMPING TOOL TECHNIQUES**, see page 54.
PLA (H), PLB (H), PLC (H) and PLS (H) connectors are offered with removable crimp contacts. Positronic recognizes the importance of supplying application tooling to support our customers’ use of our products.

Information on application tooling is available on our web site at http://www.connectpositronic.com/design-tools/tooling

There you will find downloadable PDF cross reference charts for removable and compliant press-in contacts. These charts will supply part numbers for insertion, removal and crimping tools, along with information regarding use of tools and techniques.

Connectors Designed To Customer Specifications

Positronic’s PLA(H), PLB(H), PLC(H) and PLS(H) series connectors can be modified to customers specifications.

Examples: select loading of contacts for cost savings or to gain creepage and clearance distances; longer printed circuit board terminations; customer specified hardware.

Positronic can develop and tool new connector designs with reasonable price and delivery.

Contact Technical Sales with your particular requirements.
<table>
<thead>
<tr>
<th>Contact P/N</th>
<th>Tool</th>
<th>Removable/Insertion</th>
<th>Mfg.</th>
<th>Handle &amp; Positioner</th>
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<tbody>
<tr>
<td>0-0-0-9506</td>
<td>Y/N</td>
<td>Hand Removal &amp; Positioner</td>
<td>Positronic Hand</td>
<td>9502-0-0-0</td>
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<tr>
<td>0-0-0-9506</td>
<td>Y/N</td>
<td>Automatic Removal</td>
<td>Positronic Automatic</td>
<td>9502-0-0-0</td>
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<tr>
<td>0-0-0-9506</td>
<td>Y/N</td>
<td>Manual Removal</td>
<td>Positronic Manual</td>
<td>9502-0-0-0</td>
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</table>

*Note: Crosspoint Equiv*
### POSITRONIC RECOMMENDED TOOLS

<table>
<thead>
<tr>
<th>CONNECTOR VARIANT</th>
<th>CONNECTOR SEATING TOOL WITH ARBOR PRESS SHAFT</th>
<th>CONNECTOR SEATING TOOL WITHOUT ARBOR PRESS SHAFT</th>
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<tr>
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<td>MALE</td>
<td>FEMALE</td>
</tr>
<tr>
<td>PLA03</td>
<td>9513-1-0-41</td>
<td>9513-13-0-41</td>
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<td>PLA04</td>
<td>9513-2-0-41</td>
<td>9513-14-0-41</td>
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<td>PLA06</td>
<td>9513-3-0-41</td>
<td>9513-15-0-41</td>
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<td>PLA08</td>
<td>9513-4-0-41</td>
<td>9513-16-0-41</td>
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<td>PLB06</td>
<td>9513-5-0-41</td>
<td>9513-17-0-41</td>
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<tr>
<td>PLB08</td>
<td>9513-6-0-41</td>
<td>9513-18-0-41</td>
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<td>PLB10W2</td>
<td>9513-7-0-41</td>
<td>9513-30-0-41</td>
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<td>PLB12</td>
<td>9513-7-0-41</td>
<td>9513-19-0-41</td>
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<td>PLB16</td>
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<td>PLB20</td>
<td>9513-33-0-41</td>
<td>9513-34-0-41</td>
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<tr>
<td>PLB3W3</td>
<td>9513-6-0-41</td>
<td>9513-18-1-41</td>
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<td>9513-9-0-41</td>
<td>9513-21-0-41</td>
</tr>
<tr>
<td>PLC12</td>
<td>9513-10-0-41</td>
<td>9513-22-0-41</td>
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<td>PLC16W4</td>
<td>9513-11-0-41</td>
<td>9513-31-0-41</td>
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<td>PLC18</td>
<td>9513-11-0-41</td>
<td>9513-23-0-41</td>
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<td>PLC24</td>
<td>9513-12-0-41</td>
<td>9513-24-0-41</td>
</tr>
<tr>
<td>PLC30</td>
<td>9513-25-0-41</td>
<td>9513-26-0-41</td>
</tr>
</tbody>
</table>

**Arbor press for connector seating tools:**
- 9530-1-0-0 1 ton capacity 4 inch throat

**Replacement pins for connector seating tool**
- PCS Mixed Density Series Size 20: 855-347-18-41
- PCS Series Size 16: 855-347-2-41 (female)
- PCS Mixed Density Series Size 8: 855-347-19-41

**Support tool for PLB3W3:**
- 9513-401-6-41

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Positronic offers expert assistance in adapting application tooling to your manufacturing environment. Contact our application tooling specialist for assistance.

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**APPLICATION TOOLS**

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
SUGGESTED PRINTED BOARD HOLE SIZES FOR COMPLIANT PRESS-IN CONNECTORS

Traditionally, tin-lead has been a popular plating for printed circuit boards (PCB) holes. However, many PCB hole platings must now be RoHS Compliant. Positronic is pleased to offer PCB HOLE SIZE FOR RoHS PCB plating as shown below.

### OMEGA & BI-SPRING COMPLIANT PRESS-IN CONTACT HOLE

<table>
<thead>
<tr>
<th>BOARD TYPE</th>
<th>CONTACT SIZE / TYPE</th>
<th>RECOMMENDED DRILL HOLE SIZE</th>
<th>RECOMMENDED PLATING</th>
<th>FINISHED HOLE SIZES</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>OMEGA</td>
<td>ø0.045±0.001 [ø1.15±0.25]</td>
<td>0.0006 [15µ] min. solder over 0.0010 [25µ] min. copper</td>
<td>ø0.039±0.0035-0.0024 [ø1.00±0.090-0.060]</td>
</tr>
<tr>
<td>16 BI-SPRING</td>
<td>ø0.069±0.001 [ø1.75±0.25]</td>
<td>0.0010 [25µ] min. copper</td>
<td>ø0.063±0.0035-0.0024 [ø1.60±0.090-0.060]</td>
<td></td>
</tr>
<tr>
<td>12 BI-SPRING</td>
<td>ø0.102±0.001 [ø2.59±0.25]</td>
<td></td>
<td>ø0.096±0.002 [ø2.44±0.05]</td>
<td></td>
</tr>
<tr>
<td>8 BI-SPRING</td>
<td>ø0.125±0.001 [ø3.18±0.25]</td>
<td></td>
<td>ø0.119±0.002 [ø3.02±0.05]</td>
<td></td>
</tr>
</tbody>
</table>

### RoHS PCB PLATING OPTIONS

<table>
<thead>
<tr>
<th>BOARD TYPE</th>
<th>CONTACT SIZE / TYPE</th>
<th>RECOMMENDED DRILL HOLE SIZE</th>
<th>RECOMMENDED PLATING</th>
<th>FINISHED HOLE SIZES</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>OMEGA</td>
<td>ø0.045±0.001 [ø1.15±0.25]</td>
<td>0.00033±0.000006 [0.85±0.15µ] immersion tin over 0.0010 [25µ] min. copper</td>
<td>ø0.039±0.0035-0.0024 [ø1.00±0.090-0.060]</td>
</tr>
<tr>
<td>16 BI-SPRING</td>
<td>ø0.069±0.001 [ø1.75±0.25]</td>
<td>0.000013±0.000007 [0.34±0.17µ] immersion silver over 0.0010 [25µ] min. copper</td>
<td>ø0.063±0.0035-0.0024 [ø1.60±0.090-0.060]</td>
<td></td>
</tr>
<tr>
<td>12 BI-SPRING</td>
<td>ø0.102±0.001 [ø2.59±0.25]</td>
<td></td>
<td>ø0.096±0.002 [ø2.44±0.05]</td>
<td></td>
</tr>
<tr>
<td>8 BI-SPRING</td>
<td>ø0.125±0.001 [ø3.18±0.25]</td>
<td></td>
<td>ø0.119±0.002 [ø3.02±0.05]</td>
<td></td>
</tr>
</tbody>
</table>

### COMPLIANT PRESS-IN TERMINATION CONTACT HOLE

**“Omega” Termination**
Utilized on signal contacts

**“Bi-Spring” Termination**

### APPLICATION TOOLS

When properly used, Positronic omega and bi-spring compliant press-in terminations provide reliable service even under severe conditions.

**Connectors utilizing this leading technology compliant press-in contact are easy to install:**

1. Inexpensive installation tooling is available from Positronic, to choose the proper installation tool refer to page 56 for part number ordering information.
2. Insert the connector into the P.C. board or backplane and seat connector fully.
3. Secure the connector to the P.C. board or backplane using two self-tapping screws. The screws should be #2 self-tapping screws for plastic.

**NOTE:** For PCB plating compositions not shown, consult Technical Sales.

**DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.**
RIGHT ANGLE (90°) METAL MOUNTING BRACKETS

CODE B ON STEP 5 OF ORDERING INFORMATION PAGE

<table>
<thead>
<tr>
<th>SERIES</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA</td>
<td>0.204 [5.16]</td>
<td>0.321 [8.16]</td>
<td>0.375 [9.53]</td>
<td>0.492 [12.50]</td>
</tr>
<tr>
<td>PLB</td>
<td>0.303 [7.70]</td>
<td>0.420 [10.67]</td>
<td>0.375 [9.53]</td>
<td>0.492 [12.50]</td>
</tr>
<tr>
<td>PLC</td>
<td>0.401 [10.19]</td>
<td>0.518 [13.16]</td>
<td>0.375 [9.53]</td>
<td>0.492 [12.50]</td>
</tr>
</tbody>
</table>

MATERIAL: Brass, tin plate.

RIGHT ANGLE (90°) PLASTIC MOUNTING BRACKET WITH CROSS BAR

CODE B3 OR CODE B3N ON STEP 5 OF ORDERING INFORMATION PAGE

<table>
<thead>
<tr>
<th>CONNECTOR VARIANT</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA03</td>
<td>1.126 [28.60]</td>
<td>0.882 [22.40]</td>
</tr>
<tr>
<td>PLA04</td>
<td>1.324 [33.63]</td>
<td>1.080 [27.43]</td>
</tr>
<tr>
<td>PLA06</td>
<td>1.718 [43.64]</td>
<td>1.474 [37.44]</td>
</tr>
<tr>
<td>PLA08</td>
<td>2.112 [53.64]</td>
<td>1.868 [47.45]</td>
</tr>
<tr>
<td>PLB06</td>
<td>1.126 [28.60]</td>
<td>0.882 [22.40]</td>
</tr>
<tr>
<td>PLB08</td>
<td>1.324 [33.63]</td>
<td>1.080 [27.43]</td>
</tr>
<tr>
<td>PLB12</td>
<td>1.718 [43.64]</td>
<td>1.474 [37.44]</td>
</tr>
<tr>
<td>PLB16</td>
<td>2.112 [53.64]</td>
<td>1.868 [47.45]</td>
</tr>
<tr>
<td>PLC09</td>
<td>1.126 [28.60]</td>
<td>0.882 [22.40]</td>
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<tr>
<td>PLC12</td>
<td>1.324 [33.63]</td>
<td>1.080 [27.43]</td>
</tr>
<tr>
<td>PLC18</td>
<td>1.718 [43.64]</td>
<td>1.474 [37.44]</td>
</tr>
<tr>
<td>PLC24</td>
<td>2.112 [53.64]</td>
<td>1.868 [47.45]</td>
</tr>
<tr>
<td>PLC30</td>
<td>2.506 [63.65]</td>
<td>2.262 [57.45]</td>
</tr>
</tbody>
</table>

MATERIAL:
- MOUNTING BRACKET/CROSS BAR: Glass filled polyester, UL 94V-0.
- PUSH-ON FASTENERS: Copper alloy, tin plated.

B3 style required for right angle (90°) press-in connectors.

“N” push-on fastener shown for reference.

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
PUSH-ON FASTENERS
CODE BN OR CODE N ON STEP 5 OF ORDERING INFORMATION PAGE

**CODE BN**
FOR USE WITH RIGHT ANGLE (90°) CONNECTOR

**CODE N**
FOR USE WITH STRAIGHT SOLDER CONNECTOR

**MATERIAL:** Spring tempered copper alloy, tin plated.

**SUGGESTED PRINTED BOARD HOLE SIZES:**
Suggest 0.123 ±0.002 [3.12] Ø hole in printed board for mounting connector with push-on fasteners.

---

MOUNTING SCREWS
CODE ST2, ST3, ST4, SS2, SS3, OR SS4 ON STEP 5 OF ORDERING INFORMATION PAGE

**NOTE:** MOUNTING SCREWS FOR RIGHT ANGLE CONNECTORS ARE ORDERED SEPARATELY USING PART NUMBERS SHOWN IN CHART BELOW.

Stresses that occur during coupling and uncoupling of connectors or through shock and vibration of systems can be transferred to backplanes or P.C. boards through press-in connector terminations. Avoid concern over electrical integrity of the connector to board interface by using mounting screws. Bellcore GR1217 details a preference for the use of mounting hardware and we recommend this practice.

**SCREWS ARE #2 SELF-TAPPING FOR PLASTIC.**

<table>
<thead>
<tr>
<th>MOUNTING STYLE OPTION</th>
<th>MATERIAL OPTIONS</th>
<th>PART NUMBER</th>
<th>THREAD LENGTH</th>
<th>P.C. BOARDED THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST2</td>
<td>STEEL</td>
<td>A4546-7-1-16</td>
<td>0.250±0.030</td>
<td>0.093 [2.36]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[6.35±0.76]</td>
<td></td>
</tr>
<tr>
<td>ST3</td>
<td>STEEL</td>
<td>A4546-7-2-16</td>
<td>0.312±0.030</td>
<td>0.125 [3.18]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[7.93±0.76]</td>
<td></td>
</tr>
<tr>
<td>ST4</td>
<td>STEEL</td>
<td>A4546-7-3-16</td>
<td>0.375±0.030</td>
<td>0.175 [4.45]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[9.53±0.76]</td>
<td></td>
</tr>
<tr>
<td>SS2</td>
<td>STAINLESS STEEL</td>
<td>A4546-7-6-4</td>
<td>0.250±0.030</td>
<td>0.093 [2.36]</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>[6.35±0.76]</td>
<td></td>
</tr>
<tr>
<td>SS3</td>
<td>STAINLESS STEEL</td>
<td>A4546-7-7-4</td>
<td>0.312±0.030</td>
<td>0.125 [3.18]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[7.93±0.76]</td>
<td></td>
</tr>
<tr>
<td>SS4</td>
<td>STAINLESS STEEL</td>
<td>A4546-7-8-4</td>
<td>0.375±0.030</td>
<td>0.175 [4.45]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[9.53±0.76]</td>
<td></td>
</tr>
</tbody>
</table>

CONSULT TECHNICAL SALES IF AN ALTERNATE SCREW IS REQUIRED.

DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.
POWER CONNECTION SYSTEMS HOOD
CODE 5 ON STEP 6 OF ORDERING INFORMATION PAGE

Features internal cable clamp.

HOOD FOR USE WITH PLS5W5 CONNECTOR
CODE 5 ON STEP 6 OF ORDERING INFORMATION PAGE

Features internal cable clamp.

CONTACT TECHNICAL SALES FOR AVAILABILITY OF 7W7 VARIANT.

DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.
**Panel Mount Connectors with Quick Release Mounting Clip**

**Connectors and Panel Cutout**

**For connection system 8**

- **Male**
  - Mounting Clip Factory Installed
  - A ±0.020 [0.51]

- **Female**
  - Mounting Clip Factory Installed
  - A ±0.020 [0.51]

**Quick Release Mounting Clip and Panel Cutout**

**Connector Variants**

<table>
<thead>
<tr>
<th>Connector Variants</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA03</td>
<td>1.126 [28.60]</td>
<td>0.408 [10.36]</td>
</tr>
<tr>
<td>PLA04</td>
<td>1.324 [33.63]</td>
<td>0.408 [10.36]</td>
</tr>
<tr>
<td>PLA06</td>
<td>1.718 [43.64]</td>
<td>0.408 [10.36]</td>
</tr>
<tr>
<td>PLA08</td>
<td>2.112 [53.64]</td>
<td>0.408 [10.36]</td>
</tr>
<tr>
<td>PLB06</td>
<td>1.126 [28.60]</td>
<td>0.606 [15.39]</td>
</tr>
<tr>
<td>PLB08</td>
<td>1.324 [33.63]</td>
<td>0.606 [15.39]</td>
</tr>
<tr>
<td>PLB12</td>
<td>1.718 [43.64]</td>
<td>0.606 [15.39]</td>
</tr>
<tr>
<td>PLB16</td>
<td>2.112 [53.64]</td>
<td>0.606 [15.39]</td>
</tr>
</tbody>
</table>

**Panel Mount Connectors with Quick Release Mounting Clip for Removable Contacts**

**Male**

- Mounting Clip Factory Installed
- A ±0.020 [0.51]

**Female**

- Mounting Clip Factory Installed
- A ±0.020 [0.51]

**Panel Cutout**

- For use with quick release mounting clips
- Maximum panel thickness: 0.063 [1.60] nominal

**Quick Release Mounting Clip**

- Code 6 in Step 6 of ordering information page

**Dimensions**

- Dimensions are in inches [millimeters]
- All dimensions are subject to change

**Quick Release Mounting Clips**

- Maximum panel thickness: 0.063 [1.60] nominal
PANEL MOUNT CONNECTORS WITH *FIXED STYLE MOUNTING CLIP
CODE 81, 82 AND 83 IN STEP 6 OF ORDERING INFORMATION PAGE

CLIP MATERIAL: Beryllium copper, nickel plated

* May be used with either fixed solder or removable contact connector insulators.

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>PANEL THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL***<em>81</em></td>
<td>0.040 [1.02]</td>
</tr>
<tr>
<td>PL***<em>82</em></td>
<td>0.060 [1.52]</td>
</tr>
<tr>
<td>PL***<em>83</em></td>
<td>0.090 [2.29]</td>
</tr>
</tbody>
</table>

PANEL CUTOUT
FOR USE WITH FIXED STYLE MOUNTING CLIPS

<table>
<thead>
<tr>
<th>CONNECTOR VARIANTS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLA03</td>
<td>1.380 [35.05]</td>
<td>1.150 [29.21]</td>
<td>0.445 [11.30]</td>
<td>0.193 [4.90]</td>
</tr>
<tr>
<td>PLA04</td>
<td>1.578 [40.08]</td>
<td>1.348 [34.24]</td>
<td>0.445 [11.30]</td>
<td>0.193 [4.90]</td>
</tr>
<tr>
<td>PLA06</td>
<td>1.752 [44.25]</td>
<td>1.372 [34.87]</td>
<td>0.445 [11.30]</td>
<td>0.193 [4.90]</td>
</tr>
<tr>
<td>PLB06</td>
<td>1.380 [35.05]</td>
<td>1.150 [29.21]</td>
<td>0.643 [16.33]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLB08</td>
<td>1.578 [40.08]</td>
<td>1.348 [34.24]</td>
<td>0.643 [16.33]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLB12</td>
<td>1.972 [50.09]</td>
<td>1.742 [44.25]</td>
<td>0.643 [16.33]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLB16</td>
<td>2.366 [60.10]</td>
<td>2.136 [54.25]</td>
<td>0.643 [16.33]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLB20</td>
<td>2.760 [70.10]</td>
<td>2.530 [64.26]</td>
<td>0.643 [16.33]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLC09</td>
<td>1.380 [35.05]</td>
<td>1.150 [29.21]</td>
<td>0.839 [21.31]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLC12</td>
<td>1.578 [40.08]</td>
<td>1.348 [34.24]</td>
<td>0.839 [21.31]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLC18</td>
<td>1.752 [44.25]</td>
<td>1.372 [34.87]</td>
<td>0.839 [21.31]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLC24</td>
<td>2.366 [60.10]</td>
<td>2.136 [54.25]</td>
<td>0.839 [21.31]</td>
<td>0.300 [7.62]</td>
</tr>
<tr>
<td>PLC30</td>
<td>2.760 [70.10]</td>
<td>2.530 [64.26]</td>
<td>0.839 [21.31]</td>
<td>0.300 [7.62]</td>
</tr>
</tbody>
</table>
PANEL MOUNT CUTOUT

CONNECTOR VARIANTS | A ±0.005 | B ±0.005 | C ±0.005
--- | --- | --- | ---
PLA03 | 0.682 [22.40] | 0.650 [16.51] | 0.420 [10.92]
PLA04 | 1.079 [27.41] | 0.847 [21.51] | 0.430 [10.92]
PLA06 | 1.473 [37.41] | 1.241 [31.52] | 0.430 [10.92]
PLA08 | 1.867 [47.42] | 1.635 [41.53] | 0.430 [10.92]
PLB06 | 0.882 [22.40] | 0.650 [16.51] | 0.627 [15.93]
PLB08 | 1.079 [27.41] | 0.847 [21.51] | 0.627 [15.93]
PLB12 | 1.473 [37.41] | 1.241 [31.52] | 0.627 [15.93]
PLB16 | 1.867 [47.42] | 1.635 [41.53] | 0.627 [15.93]
PLB20 | 2.262 [57.45] | 2.029 [51.54] | 0.627 [15.93]
PLB3W3 | 1.079 [27.41] | 0.847 [21.51] | 0.627 [15.93]
PLB10W2 | 1.473 [37.41] | 1.241 [31.52] | 0.627 [15.93]
PLC09 | 0.882 [22.40] | 0.650 [16.51] | 0.824 [20.93]
PLC12 | 1.079 [27.41] | 0.847 [21.51] | 0.824 [20.93]
PLC18 | 1.473 [37.41] | 1.241 [31.52] | 0.824 [20.93]
PLC24 | 1.867 [47.42] | 1.635 [41.53] | 0.824 [20.93]
PLC30 | 2.262 [57.45] | 2.029 [51.54] | 0.824 [20.93]
PLC16W4 | 1.473 [37.41] | 1.241 [31.52] | 0.824 [20.93]

DIMENSIONS ARE IN INCHES [MILLIMETERS]. ALL DIMENSIONS ARE SUBJECT TO CHANGE.
**ACCESSORIES**

**Contact technical sales for additional information.**

**MATERIALS AND FINISHES:**
- **BLIND MATING PLATE:** Stainless steel.
- **BLIND MATING GUIDE:** Stainless steel, passivated.
- **FLOAT SCREW:** Steel, zinc plate with chromate seal.

Blind mating system provides lead in for 0.100 [2.54] axial misalignment.

Blind mating system sold in a kit containing a connector - plate assembly, Blind mating guides, and float screws.

### PANEL CUTOUT

**FOR USE WITH FLOATING AND FIXED CONNECTOR BLIND MATING SYSTEMS**

**CONNECTOR VARIANTS**

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>A</th>
<th>±0.005</th>
<th>B</th>
<th>±0.005</th>
<th>C</th>
<th>±0.005</th>
<th>D</th>
<th>±0.005</th>
<th>D1</th>
<th>±0.005</th>
<th>E</th>
<th>±0.005</th>
<th>E1</th>
<th>±0.005</th>
<th>F</th>
<th>±0.005</th>
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<tbody>
<tr>
<td>PLA03</td>
<td>2.340</td>
<td>0.882</td>
<td>0.750</td>
<td>0.650</td>
<td>0.860</td>
<td>0.640</td>
<td>1.622</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>PLA04</td>
<td>2.537</td>
<td>1.079</td>
<td>0.750</td>
<td>0.847</td>
<td>1.057</td>
<td>0.640</td>
<td>1.719</td>
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<tr>
<td>PLA06</td>
<td>2.931</td>
<td>1.473</td>
<td>0.750</td>
<td>1.241</td>
<td>1.451</td>
<td>0.640</td>
<td>2.113</td>
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<tr>
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<td>3.325</td>
<td>1.867</td>
<td>0.750</td>
<td>1.633</td>
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<td>PLB08</td>
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<tr>
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<td>1.473</td>
<td>0.947</td>
<td>1.241</td>
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<tr>
<td>PLB16</td>
<td>3.325</td>
<td>1.867</td>
<td>0.947</td>
<td>1.633</td>
<td>1.845</td>
<td>0.627</td>
<td>2.507</td>
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<tr>
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**PART NUMBER**

- **PLB3W3**
- **PLB3W3**
- **PLB3W3**
- **PLB3W3**

**Panel or Printed Circuit Board**

**Typical Part Number: PLB08F10120**

**Dimensions**

- All dimensions are in inches [millimeters].
- All dimensions are subject to change.
**Positronic HIGH RELIABILITY Products**

### POWER
- **Contact Sizes:** 0, 8, 12, 16, 20, 22 and 24
- **Current Ratings:** To 200 amperes per contact
- **Terminations:** Crimp and fixed cable connector, straight solder, right angle (90°) compliant press-in and right angle (90°) compliant press-in
- **Configurations:** Multiple variants in a variety of package sizes
- **Compliance:** PICMG 2.11, PICMG 3.0, VITA 41, DSCC, GSFC S-311-P-4, GSFC S-311-P-10

**Features:**
- High current density
- Energy saving - low contact resistance
- AC/DC operation in a single connector
- Signal contacts for hardware management
- Blind mating
- Sequential mating
- Large surface area contact mating system
- Wide variety of accessories
- Customer-specified contact arrangements
- Modular tooling which produces a single piece connector insert

### D-SUBMINIATURE
- **Contact Sizes:** 8, 12, 16, 20 and 22
- **Current Ratings:** To 13 amperes nominal
- **Terminations:** Crimp, wire solder, straight solder, right angle (90°) solder, and straight compliant press-in
- **Configurations:** Multiple variants in both standard and high densities, thirty package sizes
- **Qualifications:** MIL-DTL-28748, SAE AS39029, CCITT V.35

**Features:**
- Two performance levels available: industrial quality and military quality
- A wide variety of accessories
- Broad selection of contact arrangement and package sizes
- Connector coding device (keying) options

### RECTANGULAR
- **Contact Sizes:** 8, 12, 16, 20 and 22
- **Current Ratings:** To 100 amperes
- **Terminations:** Crimp and fixed cable connector, straight solder, right angle (90°) compliant press-in and right angle (90°) compliant press-in
- **Configurations:** Multiple variants in both standard and high densities, seven connector housing sizes
- **Qualifications:** MIL-DTL-24308, GSFC S-311-P-4, GSFC S-311-P-10, SAE AS39029, DSCC

**Features:**
- Four performance levels available for best cost/performance ratio: professional, industrial, military and space-flight quality
- Options include high voltage, coax, thermocouple and air coupling contacts; environmentally sealed and dual port connector packages including mixed density
- Broad selection of accessories
- Size 20 and 22 contacts suitable for use in carrying power
- IP65, IP67

### CIRCULAR
- **Contact Sizes:** 8, 12, 16, 20 and 22
- **Current Ratings:** To 40 amperes nominal
- **Terminations:** Feedthrough is standard; flying leads and board mount available upon request
- **Configurations:** See D-subminiature and circular configurations above
- **Compliance:** Space-D32

**Features:**
- Intended for use as an electrical feedthrough in high vacuum applications
- Helium leakage rate at ambient temperature: < 5x10^-9 mbar.l/s under a vacuum 1.5x10^-2 mbar
- Signal, power, coax and high voltage versions available
- Connectors can be mounted on flange assembly per customer specification

### CABLE
- **Contact Sizes:** 12, 16, 20 and 22
- **Current Ratings:** To 25 amperes nominal
- **Terminations:** Crimp, wire solder, straight solder, and right angle (90°) solder
- **Configurations:** Multiple variants in four package sizes
- **Qualifications:** MIL-DTL-24308, GSFC S-311-P-4, GSFC S-311-P-10

**Features:**
- Shorten the supply chain and reduce additional costs and delays by “cablizing” your Positronic connector selection
- Overmolding available
- Shielded and environmentally sealed versions available
- Power cables and access boxes which meet the SAE J2496 specification

### HERMETIC
- **Contact Sizes:** 8, 12, 16, 20 and 22
- **Current Ratings:** To 40 amperes nominal
- **Terminations:** Feedthrough is standard; flying leads and board mount available upon request
- **Configurations:** See D-subminiature and circular configurations above
- **Compliance:** Space-D32

**Features:**
- Intended for use as an electrical feedthrough in high vacuum applications
- Helium leakage rate at ambient temperature: < 5x10^-10 mbar.l/s under a vacuum 1.5x10^-2 mbar
- Signal, power, coax and high voltage versions available
- Connectors can be mounted on flange assembly per customer specification

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For more information, visit [www.connectpositronic.com](http://www.connectpositronic.com) or call your nearest Positronic sales office listed on the back of this catalog.
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