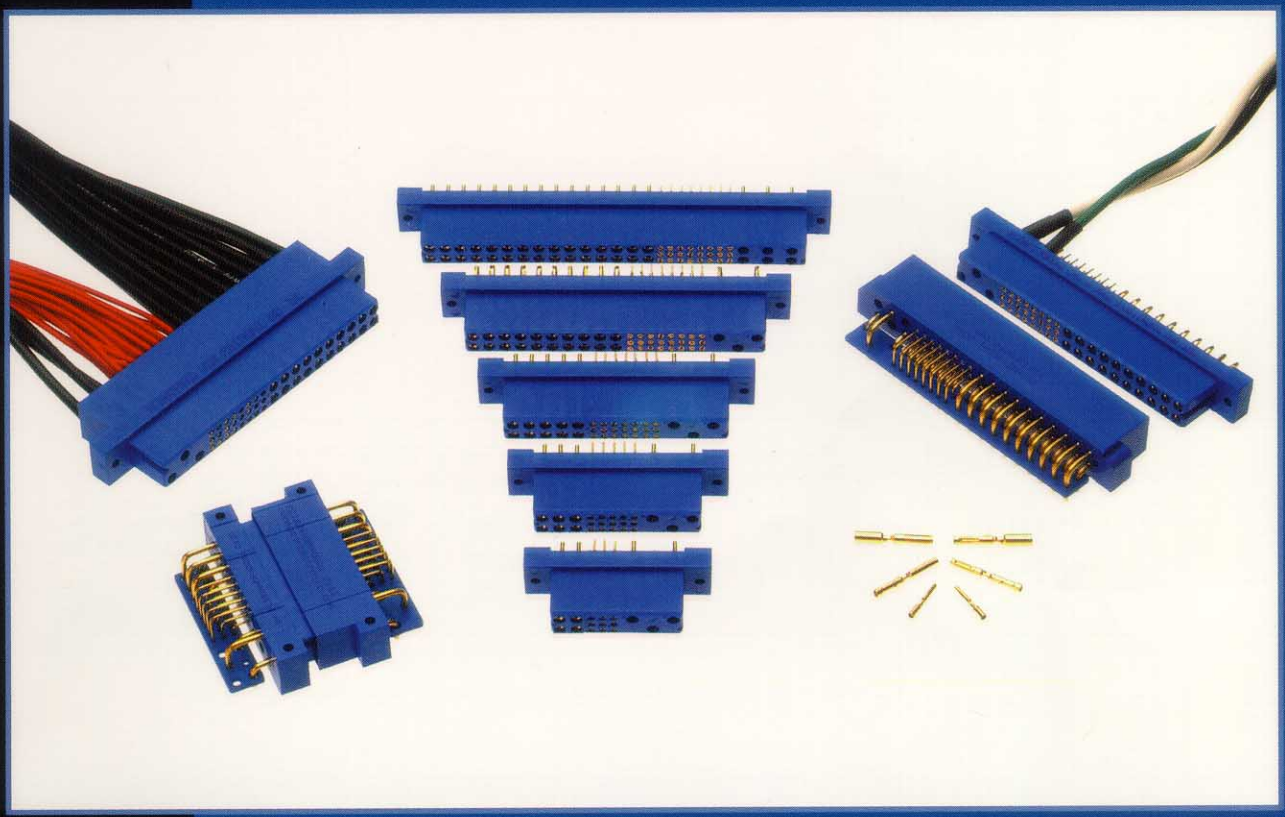
Positronic Industries

Compact Power Connector Catalog



The power interface for platforms that utilize Eurocard Form Factors

High Energy Innovation

Products described within this catalog may be protected by one or more of the following U.S. patents:

5,255,580
5,329,697
6,260,268

Other Patents Pending

Unless otherwise specified, dimensional tolerances are:

1) **±0.03 mm (0.001 inches) for male contact mating diameters.**
2) **±0.08 mm (0.003 inches) for contact termination diameters.**
3) **±0.13 mm (0.005 inches) for all other diameters.**
4) **±0.38 mm (0.015 inches) for all other dimensions.**

CATALOG NUMBER:
C–017 REV. B
PRINTED DATE:
August, 2001
PUBLISHED IN THE UNITED STATES OF AMERICA

Positronic Industries is proud to participate in the important work of the following organizations....

PICMG® and PICMG® logo are registered trademarks of the PCI Industrial Computers Manufacturers Group.

www.picmg.com

Power Sources Manufacturer's Association

The Multinational Power Electronics Association

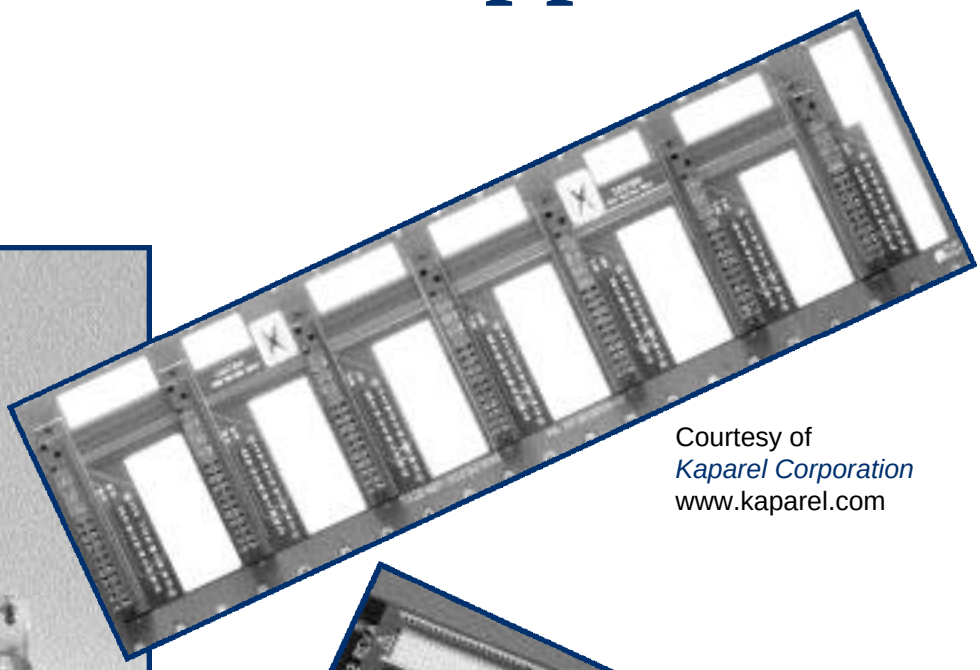
www.psma.com

VMEbus International Trade Association

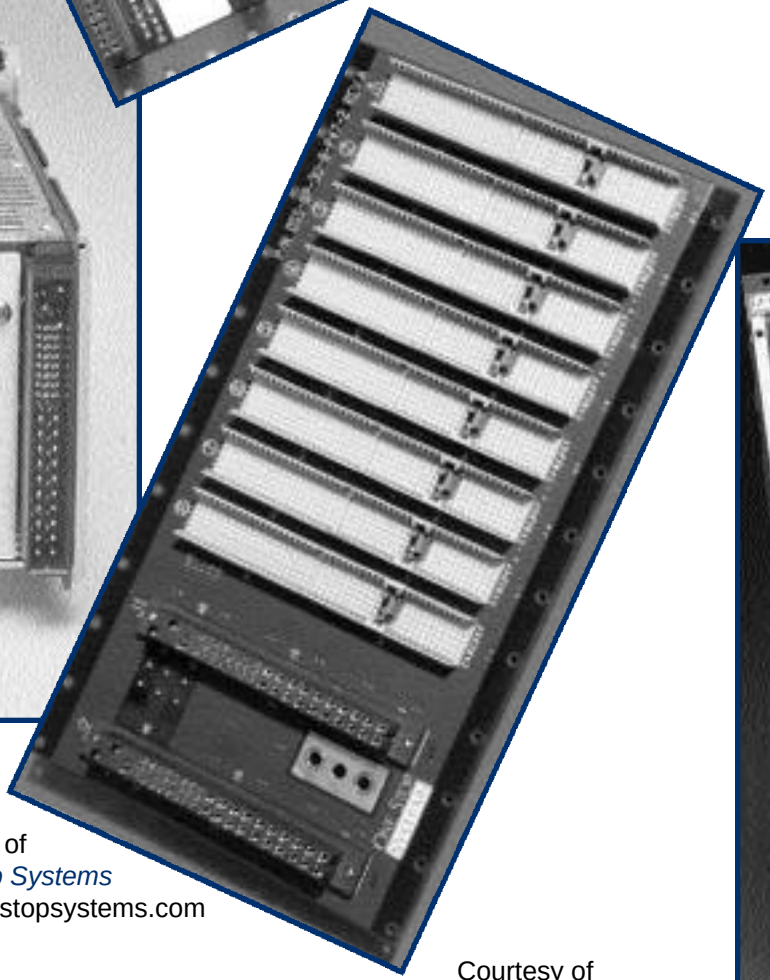
www.vita.com

Compact Power Connector Applications

Courtesy of
Condor D.C Power Supplies, Inc.
www.condorpower.com



Courtesy of
Kaparel Corporation
www.kaparel.com



Courtesy of
One Stop Systems
www.onestopsystems.com

Courtesy of
Hybricon Corporation
www.hybricon.com

Please visit the website of the companies listed to view a wide variety of product offerings.

COMPACT POWER CONNECTORS

For use in platforms which utilize Eurocard form factors

- High current through a small package
- Three level sequential mating;
  First mate ground, Last mate enable
- Meets safety agency requirements
- A.C. or D.C. Input
- Multiple power contacts provide efficient current distribution of multi–voltage outputs
- Multiple output contacts can be paralleled for the increased current requirements of distributed power applications
- Right angle contacts are open to the air to aid in convection or forced air cooling
- Superior blind mating
- Power management connections
- Wide variety of options and termination styles
- Many options are available from stock

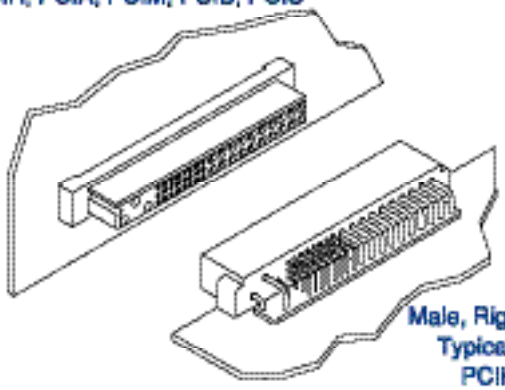
Courtesy of
Tracewell Power, Inc.
www.tracewell.com

TABLE OF CONTENTS

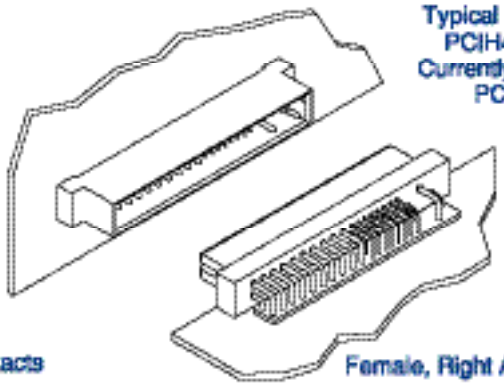
COMPACT POWER CONNECTOR — PCI CONNECTION SYSTEMS — COMPACT POWER CONNECTOR

SYSTEM 1
MOTHER BOARD TO DAUGHTER BOARD

Female, Straight Solder or Press-fit Contacts
Typical part number:
PCIH47F300A1
Currently available in:
PCIH, PCIA, PCIM, PCIB, PCIC



Male, Straight Solder or Press-fit Contacts
Typical Part Number:
PCIH47M300A1
Currently available in PCIH only.

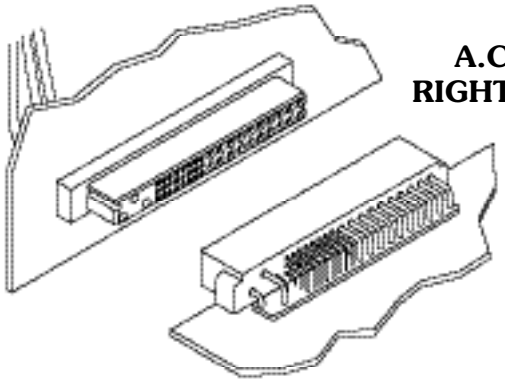


Male, Right Angle Contacts
Typical Part Number:
PCIH47M400A1
Currently available in:
PCIH, PCIA, PCIM, PCIB, PCIC

Female, Right Angle Contacts
Typical Part Number:
PCIH47F400A1
Currently available in:
PCIH, PCIA, PCIM, PCIB, PCIC

SYSTEM 2
A.C. PASS-THROUGH TO RIGHT ANGLE BOARD MOUNT

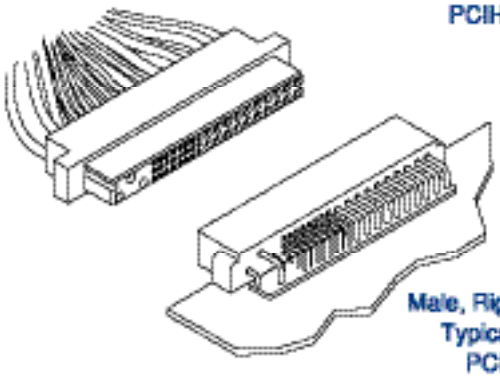
Female, Straight Solder or Press-fit with AC Pass-Through Contacts Installed
Typical Part Number:
PCIH47F300A1-246.0 with FC112N2S-1565.0
(Ordered Separately)
Currently available in
PCIH only.



Male, Right Angle Contacts
Typical Part Number:
PCIH47M400A1
Currently available in:
PCIH, PCIA, PCIM, PCIB, PCIC

SYSTEM 3
CABLE TO RIGHT ANGLE BOARD MOUNT

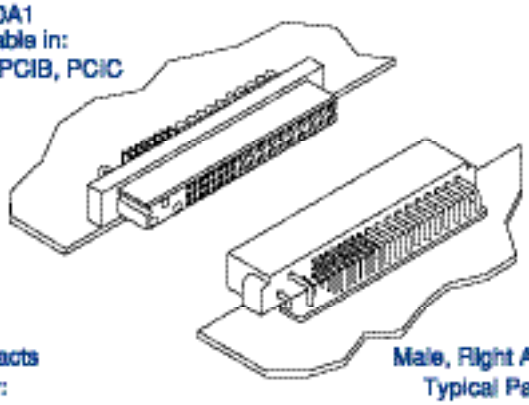
Female, Crimp Contacts Installed
Typical Part Number:
PCIH47F8000 with FC112N2S-1565.0
(Order Separately)
Currently available in
PCIH only.



Male, Right Angle Contacts
Typical Part Number:
PCIH47M400A1
Currently available in:
PCIH, PCIA, PCIM, PCIB, PCIC

SYSTEM 4
RIGHT ANGLE BOARD MOUNT TO RIGHT ANGLE BOARD MOUNT

Female, Right Angle Contacts
Typical part number:
PCIH47F400A1
Currently available in:
PCIH, PCIA,PCIM, PCIB, PCIC



Male, Right Angle Contacts
Typical Part Number:
PCIH47M400A1
Currently available in:
PCIH, PCIA, PCIM, PCIB, PCIC

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 P.C. 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.

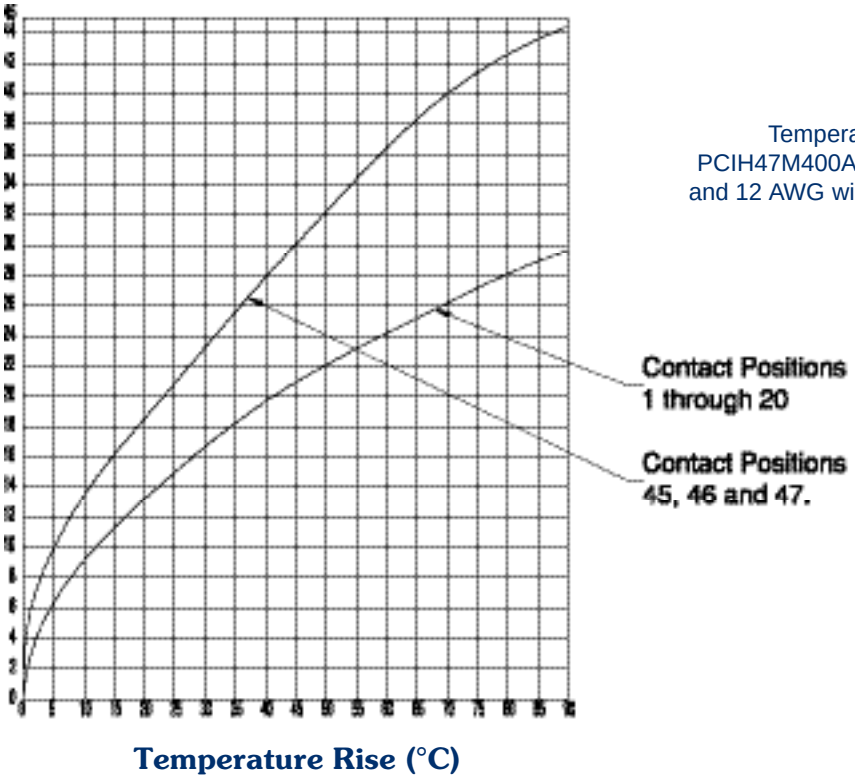
Clearly, a current rating value alone is not enough, and must be viewed in the context of the test used to develop the rating. When the test method is understood, evaluating and comparing power connectors for specific applications becomes much less of a mystery.

TEMPERATURE RISE CURVES

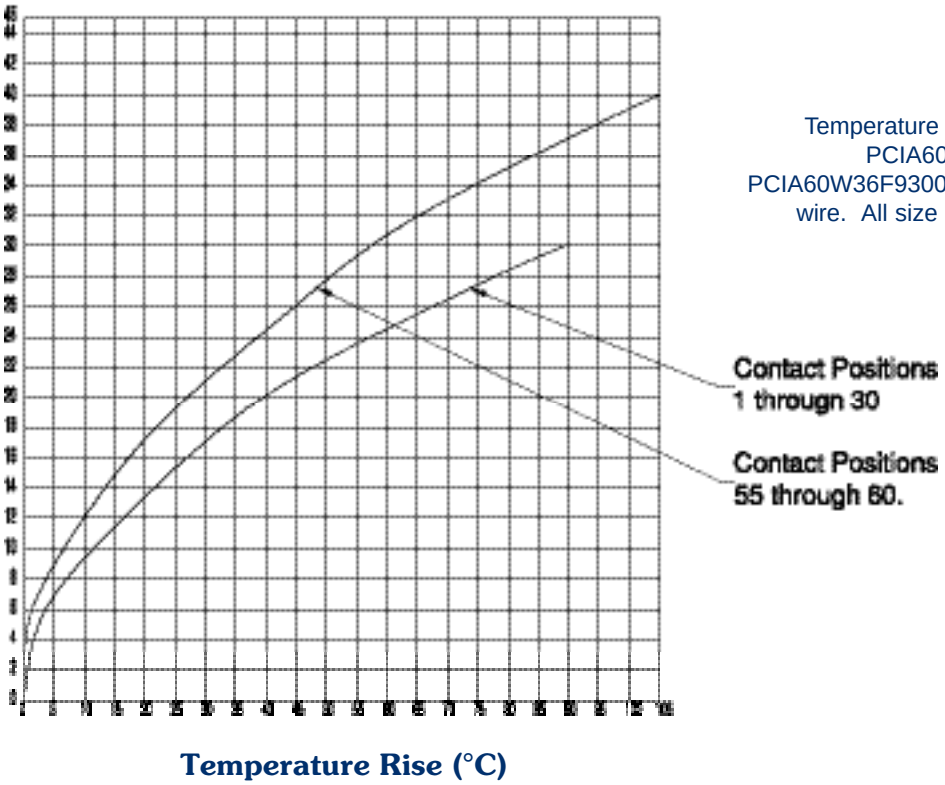
COMPACT POWER CONNECTOR

Tested per IEC Publication 60512–3, Test 5a

Test Detail: Curves were developed with all power contacts energized through 12 awg wire. Temperature rise was measured in the contact mating area. Test was conducted in static air.



Temperature curve developed using PCIH47M400A1 and PCIH47F9300A1 connectors and 12 AWG wire. All size 16 contacts under load.

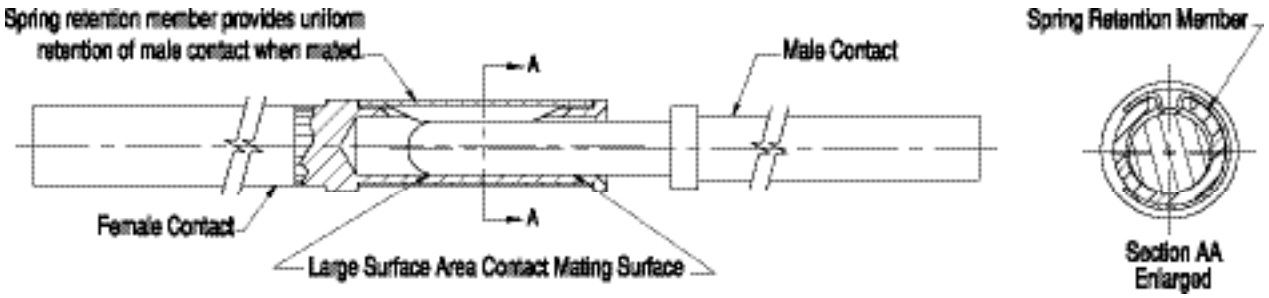


Temperature curve developed using PCIA60W36M400A1 and PCIA60W36F9300A1 connectors and 12 AWG wire. All size 16 contacts under load.

ALL PCI SERIES utilize Positronic Industries

"Large Surface Area Contact Mating System"

- Separates mechanical and electrical functions for superior performance
- Low contact resistance provides minimized voltage drop across the contact
- "Closed Entry" design prevents damage to female contacts and will not allow misaligned or bent contacts to enter
- Precision machined from solid, high conductivity copper alloy
- Uniform insertion/withdrawal forces through repeated mating cycles



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 "springiness" 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.

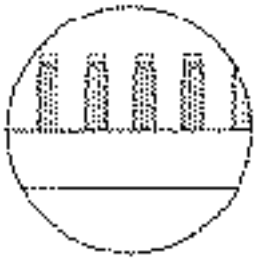
Positronic Industries Large Surface Area Contact System separates the mechanical and electrical functions. A spring retention member provides normal forces, while the electrical conductivity path is through highly conductive contact material. See above detail.

POSITRONIC INDUSTRIES BI–SPRING POWER COMPLIANT TERMINATIONS

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

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

The next step in press–fit 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 P.C. board and backplane damage. This technology exists today with Positronic Industries Bi–Spring Power Press–Fit termination.



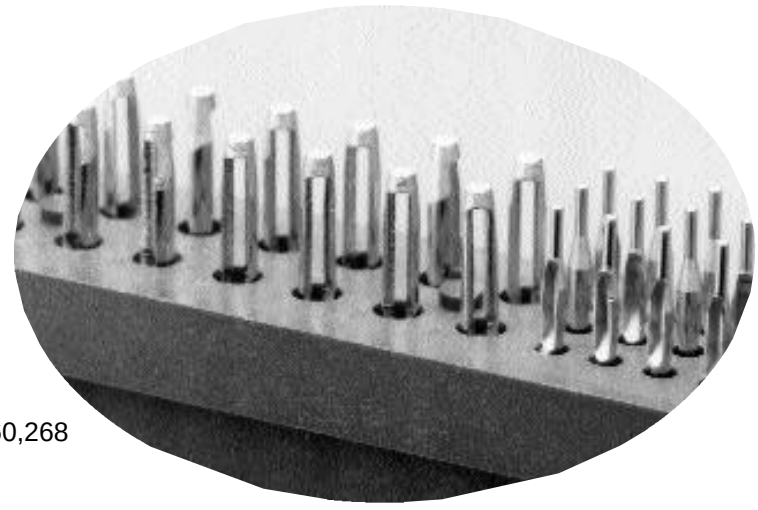
Bi–Spring Power Press–Fit Compliant Terminations

- Average insertion and extraction forces of size 16 contacts are 22N (5 lbs.) per contact and do not produce stresses in P.C. 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 P.C. board or backplane. Stresses that occur during coupling, uncoupling or shock and vibration of systems are not transferred to the P.C. boards or backplanes through the press–fit 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–fit terminations.
- Size 16 Bi–Spring terminations are designed to meet the performance requirements and hole diameters as listed in the internationally recognized specification IEC60352–5.
- If a contact is damaged in manufacturing, testing or field use, the contact can be easily pushed out with the recommended tool and replaced with a new contact.
- Lower insertion and extraction forces eliminate the need for expensive pressing equipment.

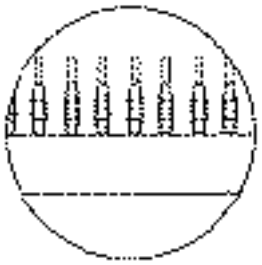
OMEGA SIGNAL LEVEL COMPLIANT TERMINATIONS

Today's power supplies feature communication options with the host system. The power interface must have reliable signal level connections.

Positronic Industries Omega Press–Fit terminations are the perfect solderless connection companion to the Bi–Spring Power Press–Fit terminations.



Patent No. 6,260,268



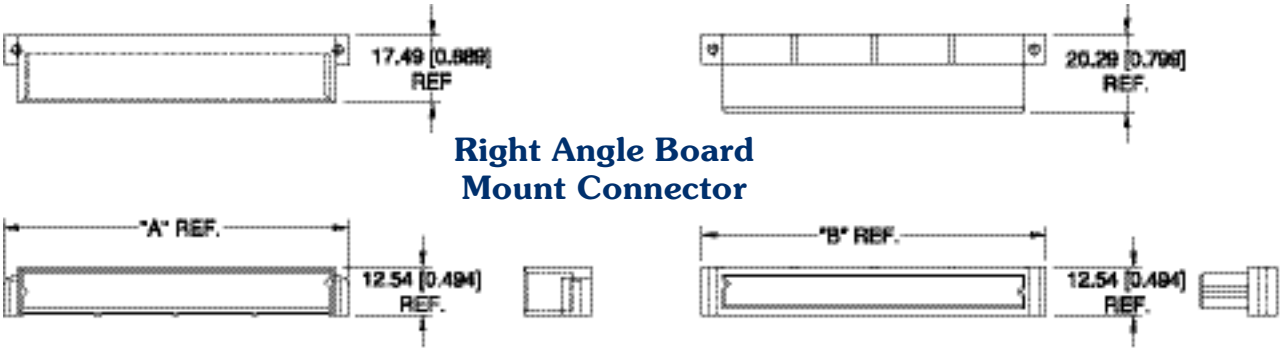
Omega Signal Level Press–Fit Compliant Terminations

APPLICATION SPECIFIC ARRANGEMENTS

COMPACT POWER CONNECTOR

The Compact Power Connector Series design allows for the development of application specific contact arrangements in a timely manner and at a reasonable price. After reviewing 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.

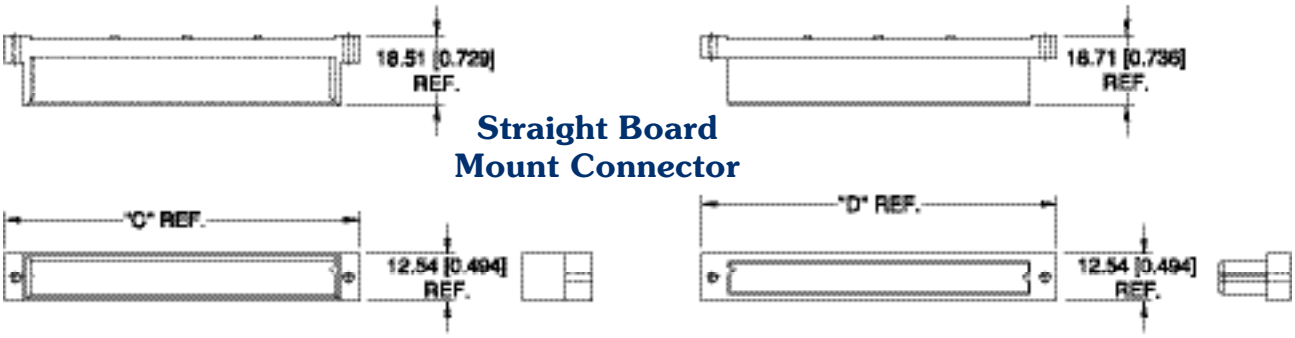
Basic Connector Dimensions



Right Angle Board Mount Connector

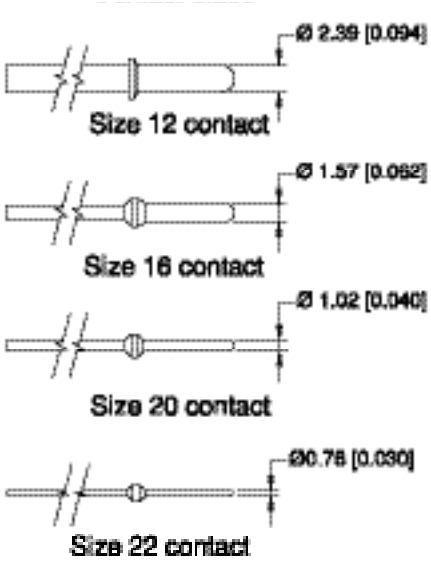
Male Connector Dimensions

Female Connector Dimensions



Straight Board Mount Connector

Four Contact Sizes To Choose From



BASIC SERIES	"A"	"B"	"C"	"D"
PCIH	91.03 [3.584]	91.04 [3.584]	93.62 [3.684]	93.82 [3.694]
PCIA	116.53 [4.588]	120.90 [4.760]	N/A	119.32 [4.698]
PCIB	53.54 [2.108]	53.54 [2.108]	N/A	56.32 [2.217]
PCIC	43.96 [1.731]	43.96 [1.731]	N/A	46.74 [1.840]
PCIM	69.66 [2.743]	69.66 [2.743]	N/A	72.44 [2.852]

Many Termination Types Can Be Supplied

Straight Solder or Compliant
Right Angle Solder
Crimp Removable
Different Termination Types can be mixed within a single connector

Popular Options

Sequential Mating
Recessed Female Contacts
Selective Loading

Contact sizes may be mixed within a single connector.

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

Why Pay For More Than You Need?

The current carrying capability of the Compact Power Connector is considerable. In many applications a customer may be paying for unused capacity if a fully loaded connector is used. Connectors are available with fewer power contacts loaded to allow for a cost savings.

The **PICMG® 2.11 Power Interface Specification** allows for three loading options of male contact, right angle, free board connectors. Female contact fixed board connectors may not be selectively loaded. Consult PICMG 2.11 for details.

	Output Contact Position Loaded *	Total Output Contacts*	Positronic Part Number
Option 1	1,3,4,5,6,7,8,9,11,12,13,15,16,17,19,20	16	PCIH47M400A1-259.2
Option 2	1,4,5,8,9,12,13,16,19,20	10	PCIH47M400A1-259.0
Option 3	1,5,9,13,19,20	6	PCIH47M400A1-259.1

* All input and signal contact positions are loaded.

Additional savings can be gained when female contact connectors are supplied selectively loaded for applications not specific to PICMG® 2.11.

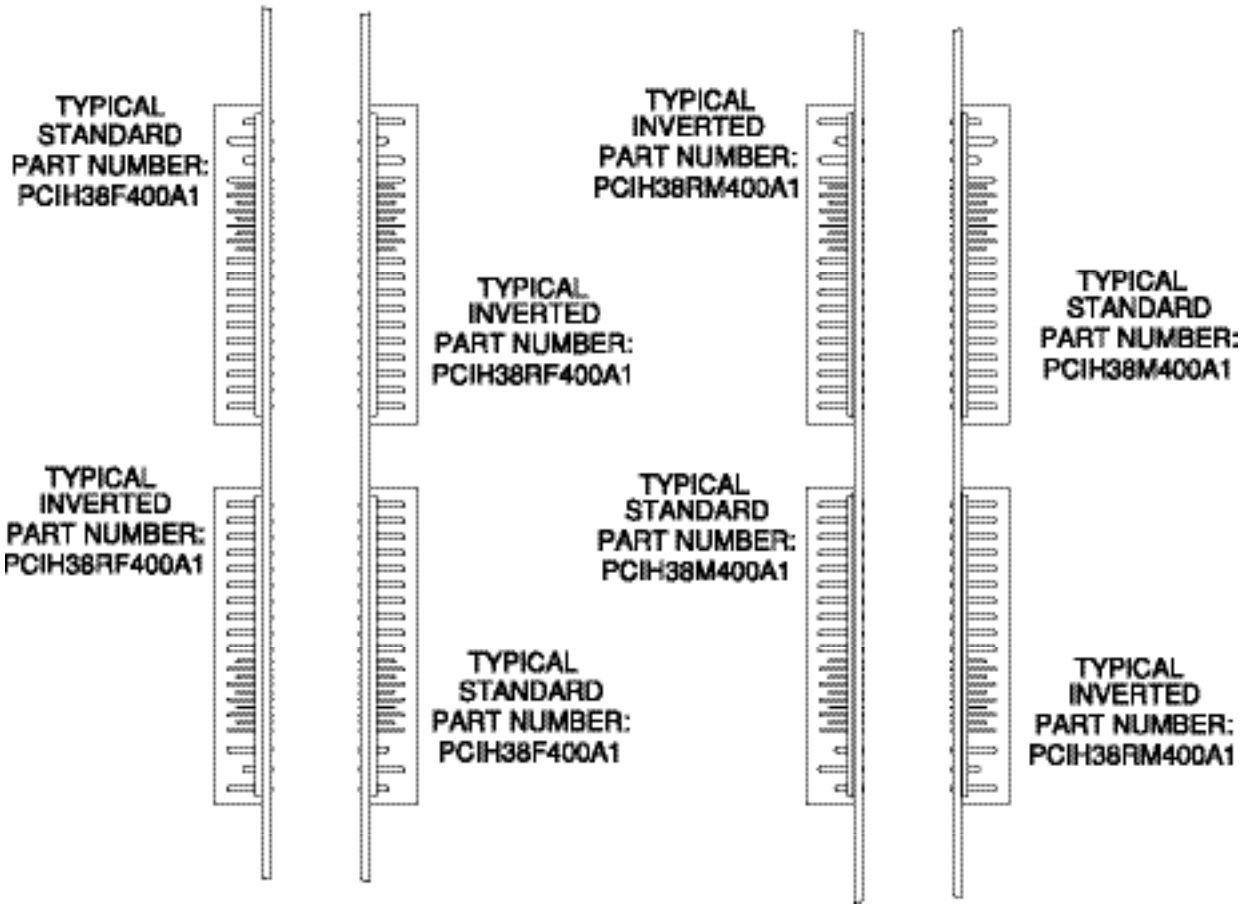
PCI Inverted Options

Female Connectors

[Available in PCIH, PCIA, PCIM, PCIB, PCIC]

Male Connectors

[Available in PCIH, PCIM, PCIB, PCIC]



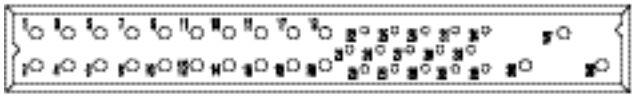
Inverted options allow flexibility in positioning the connector as best suited for specific applications.

The **PCIH** series was developed specifically for use with **CompactPCI®** in–rack modular power supplies. The package size is ideal for use in all 3U and 6U based platforms. The PCIH series is an excellent choice in **IEEE 1101.1**, **IEEE 1101.10**, and **VITA 30** applications where system power requirements have exceeded the capabilities of commonly used power connectors.

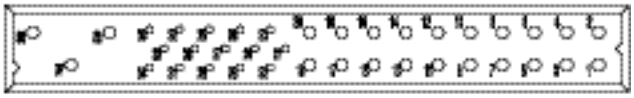
The **PCIH47** variant is fully compliant to the **PICMG® 2.11 Power Interface Specification**. This Specification details standardized power for use with **CompactPCI®** systems. Visit www.picmg.com for details.

PCIH SERIES CONTACT VARIANTS

FACE VIEW OF MALE AND REAR VIEW OF FEMALE

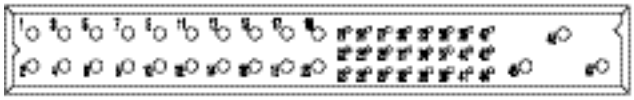


PCIH38 VARIANT

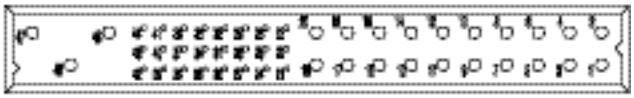


PCIH38R VARIANT (Inverted)

23 Size 16 Power Contacts and 15 Size 20 Signal Contacts

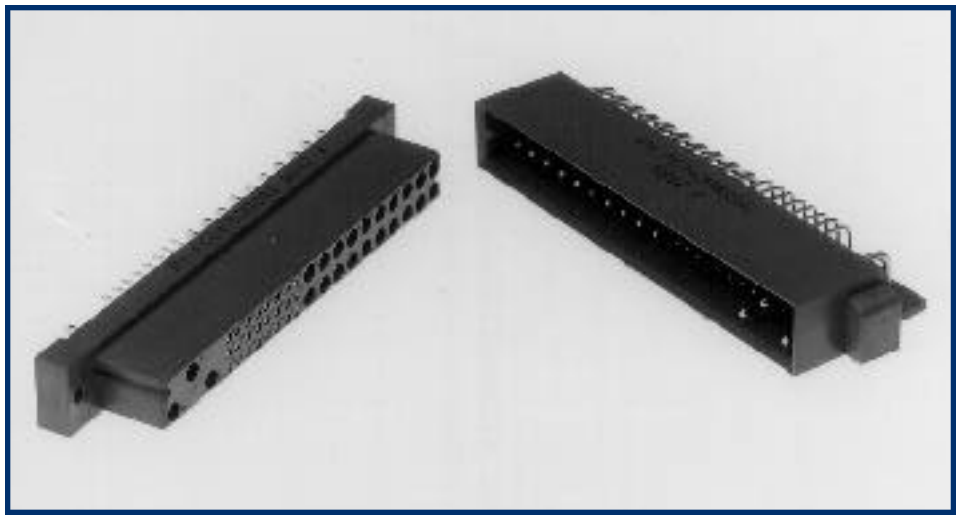


PCIH47 VARIANT



PCIH47R VARIANT (Inverted)

23 Size 16 Power Contacts and 24 Size 22 Signal Contacts



MATERIALS AND FINISHES:

Insulator:	Glass-filled polyester, UL 94V-0, blue color.
Contacts:	High conductivity precision-machined copper alloy with gold flash over nickel plate. Other finishes available upon request.
Mounting Screws:	Steel, zinc plated.

ELECTRICAL CHARACTERISTICS:

PCIH Contact Current Ratings
See Temperature Rise Curves on page 3 for details.

PCIH38:	
Size 16 Power Contacts:	
Positions 36, 37, and 38:	40 amperes continuous, all contacts under load.
Positions 1 – 20:	28 amperes continuous, all contacts under load.
Size 20 Signal Contacts:	5 amperes nominal rating.
PCIH47:	
Size 16 Power Contacts:	
Positions 45, 46, and 47:	40 amperes continuous, all contacts under load.
Positions 1 – 20:	28 amperes continuous, all contacts under load.
Size 22 Signal Contacts:	3 amperes nominal rating.

Initial Contact Resistance; maximum:	
Size 16 Contact:	0.0007 ohms maximum.
Size 20 Contact:	0.004 ohms maximum.
Size 22 Contact:	0.004 ohms maximum. Per IEC 512-2, Test 2b.
Insulator Resistance:	5 G ohms per IEC 512-2, Test 3a.
Voltage Proof:	
PCIH38:	
Contacts 36, 37 and 38:	3,000 V r.m.s.
Contacts 1 through 20:	1,500 V r.m.s.
Contacts 21 through 35:	1,000 V r.m.s.
PCIH47:	
Contacts 45, 46, and 47:	3,000 V r.m.s.
Contacts 1 through 20:	1,500 V r.m.s.
Contacts 21 through 44:	1,000 V r.m.s.
Creepage and Clearance Distance; minimum:	
PCIH38:	
Contact 38 to Contact 36:	3.2mm [0.126 inch]
Contact 37 to Contact 36:	3.2mm [0.126 inch]
Contact 38 to Signal Contacts:	6.4mm [0.252 inch]
Contact 37 to Signal Contacts:	6.4mm [0.252 inch]
Contact 38 to Contact 37:	2.5mm [0.098 inch]
Contact 36 to Signal Contacts:	2.0mm [0.079 inch]
PCIH47:	
Contact 47 to Contact 45:	3.2mm [0.126 inch]
Contact 46 to Contact 45:	3.2mm [0.126 inch]
Contact 47 to Signal Contacts:	6.4mm [0.252 inch]
Contact 46 to Signal Contacts:	6.4mm [0.252 inch]
Contact 47 to Contact 46:	2.5mm [0.098 inch]
Contact 45 to Signal Contacts:	2.0mm [0.079 inch]
Working Voltage:	
PCIH38:	
Contacts 36, 37 and 38:	1,000 V r.m.s.
Contacts 1 through 20:	500 V r.m.s.
Contacts 21 through 35:	333 V r.m.s.
PCIH47:	
Contacts 45, 46, and 47:	1,000 V r.m.s.
Contacts 1 through 20:	500 V r.m.s.
Contacts 21 through 44:	333 V r.m.s.

MECHANICAL CHARACTERISTICS:

Blind Mating System:	Male and female connector bodies provide “lead-in” for 1.3 mm [0.050 inch] diametral misalignment.
Polarization:	Provided by connector body design.
Removable Contacts:	Install contact from rear of insulator; release from front of insulator. Size 16 and size 20 female contacts feature “Closed Entry” design. Size 22 female contacts feature “Robi–D” open entry design.
Removable Contact Retention in Connector Body:	
Size 16 Contacts:	67 N [15 lbs.]
Size 20 Contacts:	45 N [10 lbs.]
Size 22 Contacts:	27 N [6 lbs.]
Fixed Contacts:	Printed board terminations, both straight and right angle. Size 16 female contacts feature “Closed Entry” design. Size 20 and 22 feature rugged “Robi-D” design.
Fixed Contact Retention in Connector Body:	
Size 16 Contacts:	45 N [10 lbs.]
Size 20 and 22 Contacts:	27 N [6 lbs.]
Resistance to Solder Heat:	260˚C [500˚F] for 10 seconds duration per IEC 512-6, Test 12e, 25-watt soldering iron.
Sequential Contact Mating System:	
PCIH38:	First mate contact 36 and last mate contact positions 22, 25 and 28.
PCIH47:	First mate contact 45 and last mate contact position 27.
Consult Technical Sales for customer specified sequential mating.	
Safety “Recessed in Insulator”Contacts:	The following size 16 contacts are recessed 5mm [0.197 inch] below the face of the female connector insulator per safety requirements.
PCIH38:	Contact positions 37 and 38.
PCIH47:	Contact positions 46 and 47.
Compliant Terminations:	Size 16, 20 and 22 contacts are available with Compliant Contact Terminations.
Printed Board and Panel Mounting:	Mounting holes provided in connector body for both printed board and panel mounting. Self-tapping screws are available.
Mechanical Operations:	250 couplings, minimum.

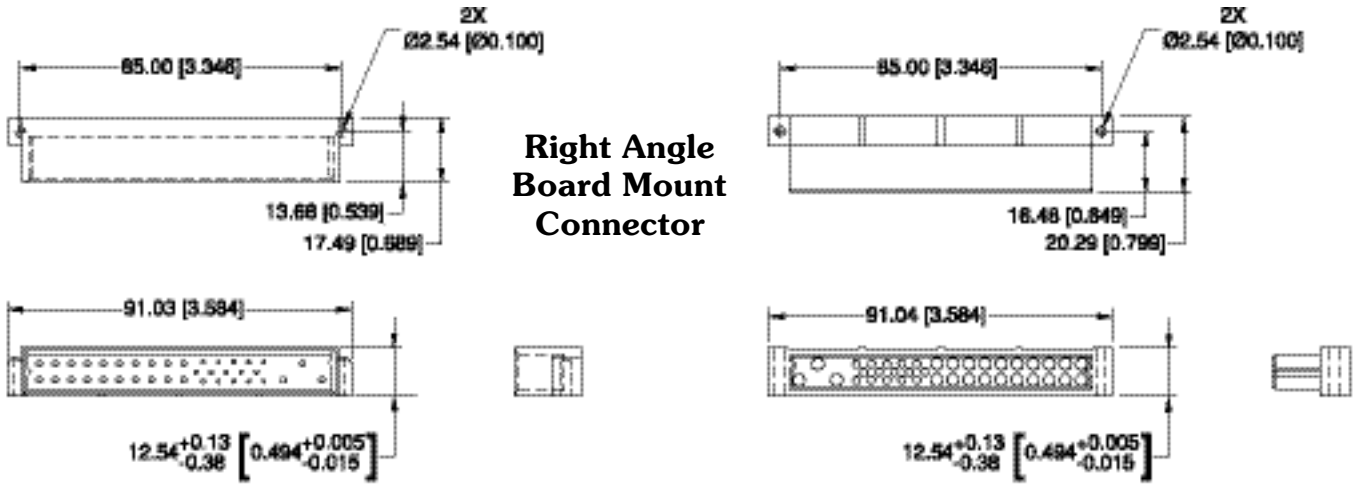
CLIMATIC CHARACTERISTICS:

Working Temperature:	-55˚C to +125˚C.

U.L. Recognized File #E49351
CSA Recognized File #LR54219
TUV Recognized File #215/99

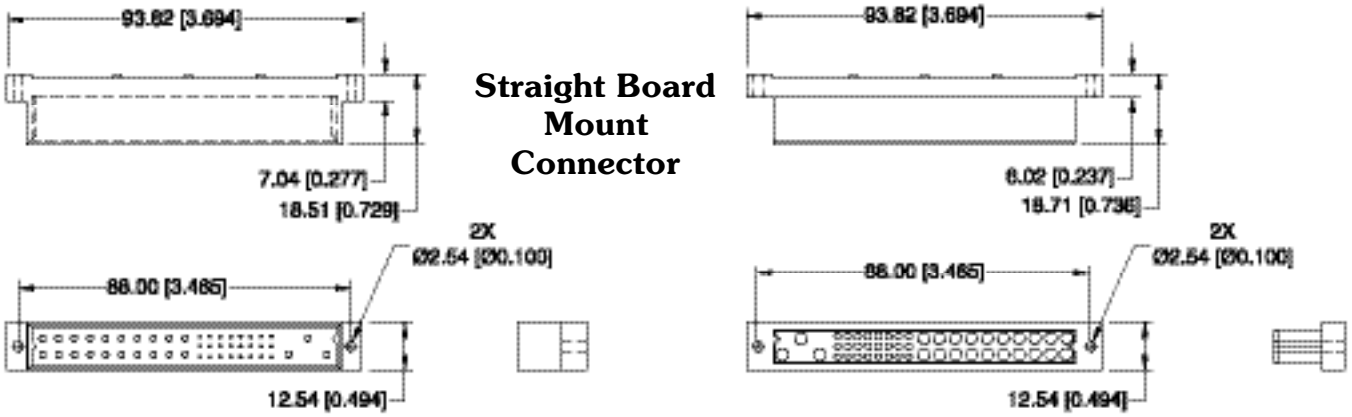
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

PCIH CONNECTOR OUTLINE DIMENSIONS



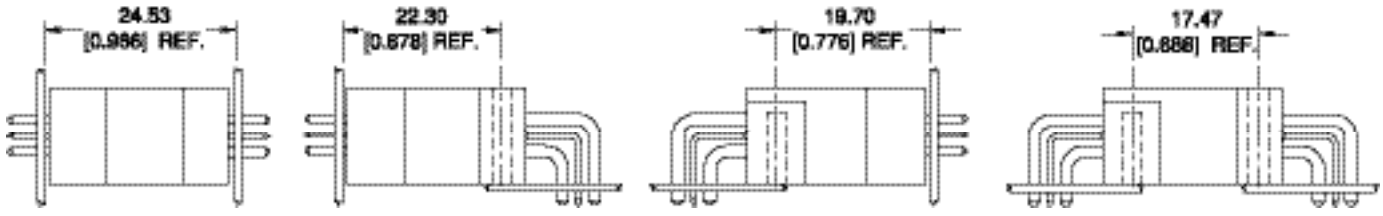
Right Angle Board Mount Connector

Male Connector Dimensions | **Female Connector Dimensions**



Straight Board Mount Connector

PCIH CONNECTOR MATING DIMENSIONS (FULLY MATED)



Straight Board Mount or Panel Mount Female to Straight Board Mount Male.

Right Angle Board Mount Female to Straight Board Mount Male.

Straight Board Mount or Panel Mount Female to Right Angle Board Mount Male.

Right Angle Board Mount Female to Right Angle Board Mount Male.

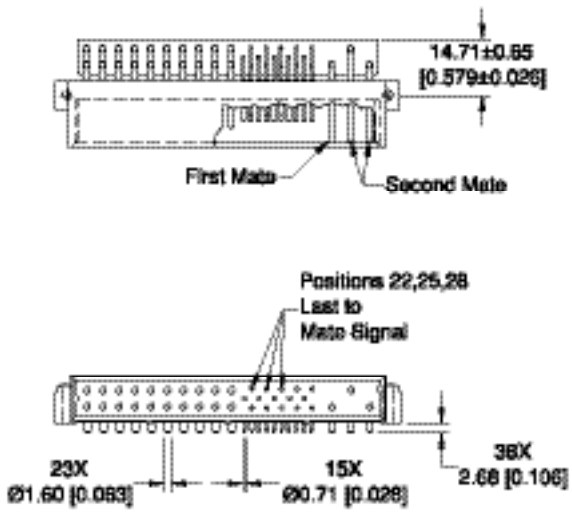
See page 23 for panel mount connector dimensions.

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

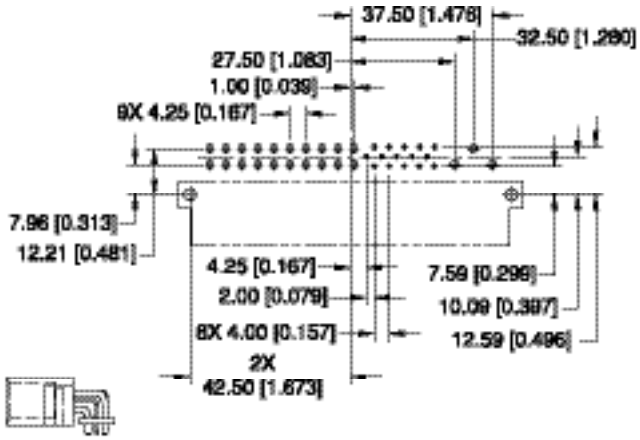
PCIH RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER
PCIH38M400A1



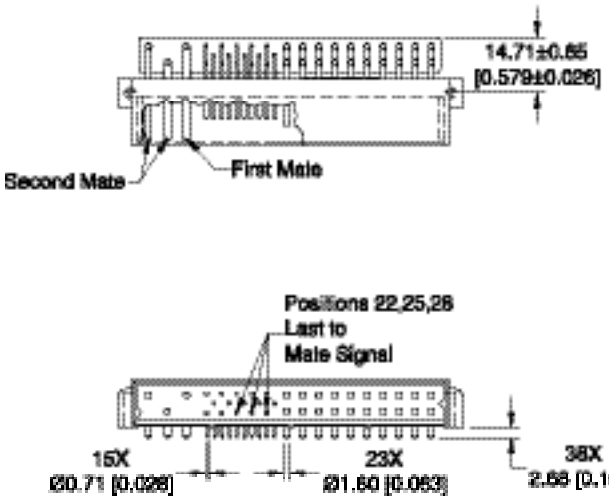
CONNECTOR DIMENSIONS



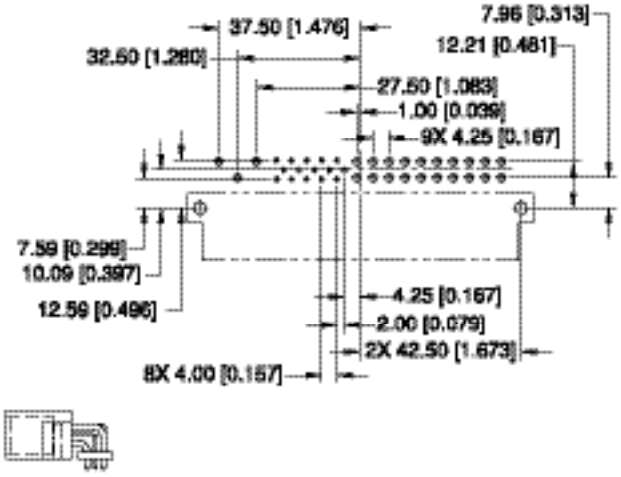
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER
PCIH38RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

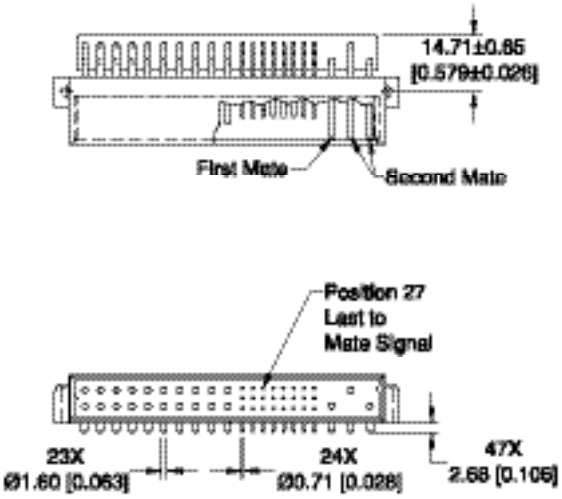
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 20 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

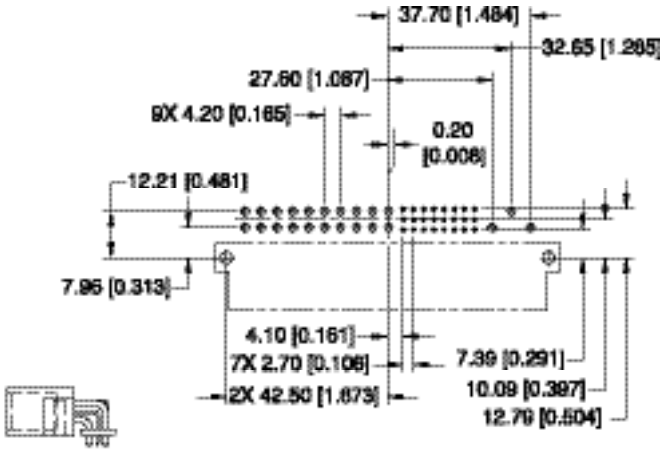
PCIH RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER
PCIH47M400A1



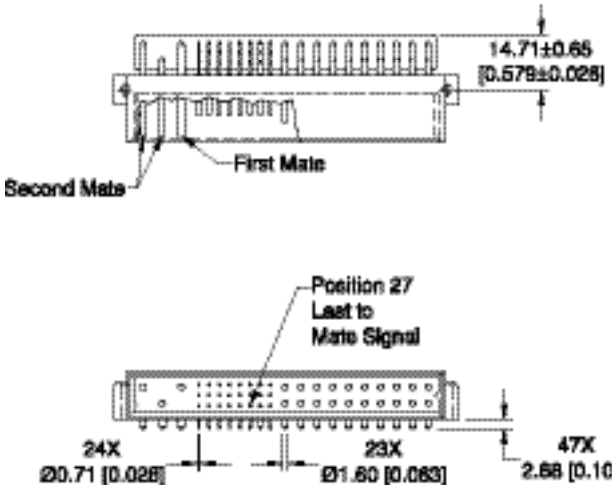
CONNECTOR DIMENSIONS



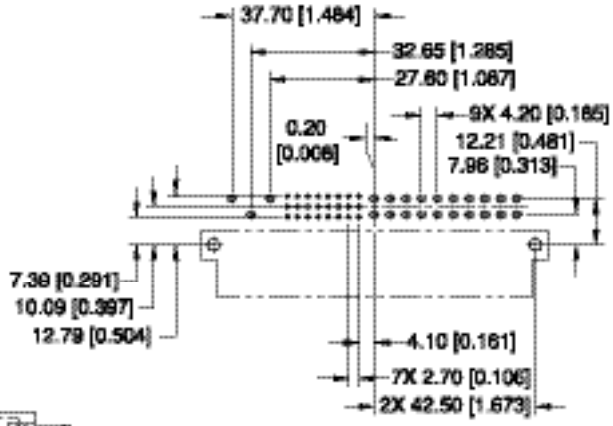
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER
PCIH47RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

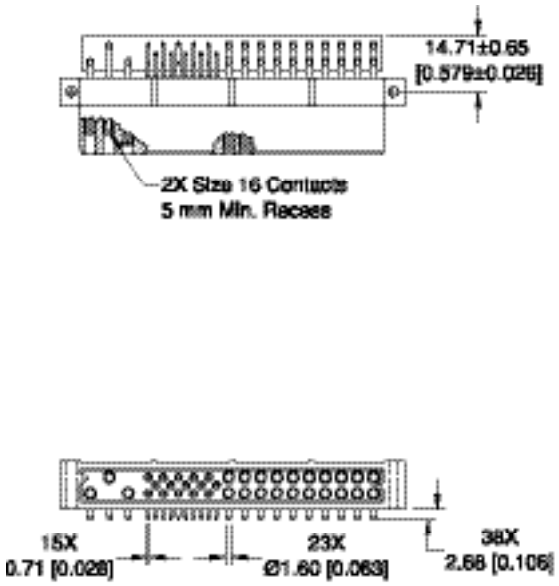
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø 2.03 [0.080] holes for size 16 contact holes.
Suggest Ø 3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

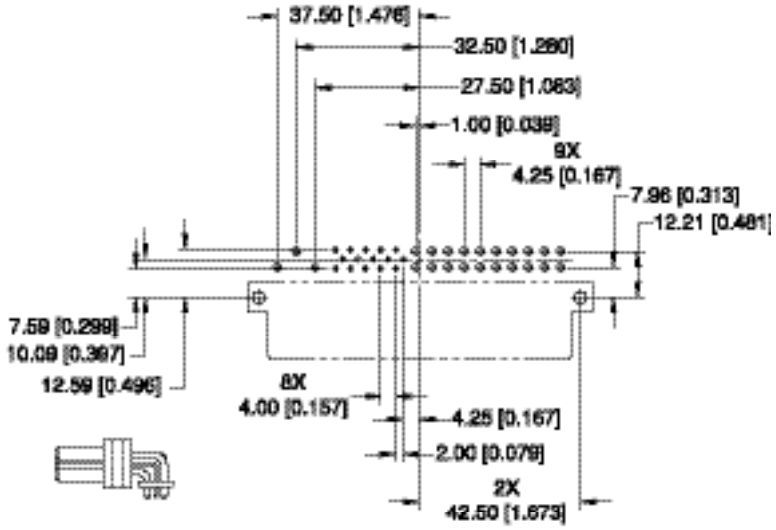
PCIH RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER
PCIH38F400A1



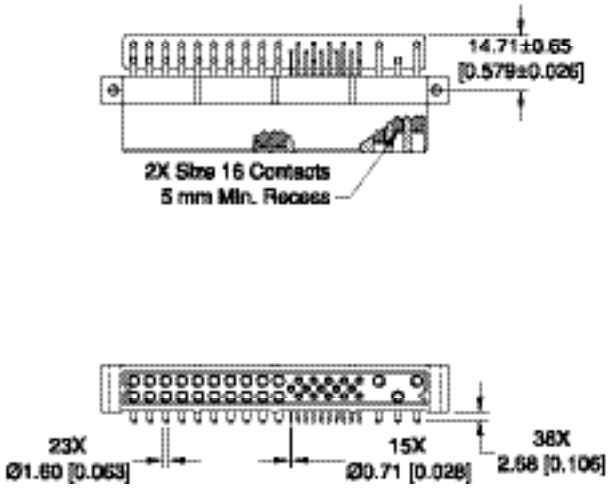
CONNECTOR DIMENSIONS



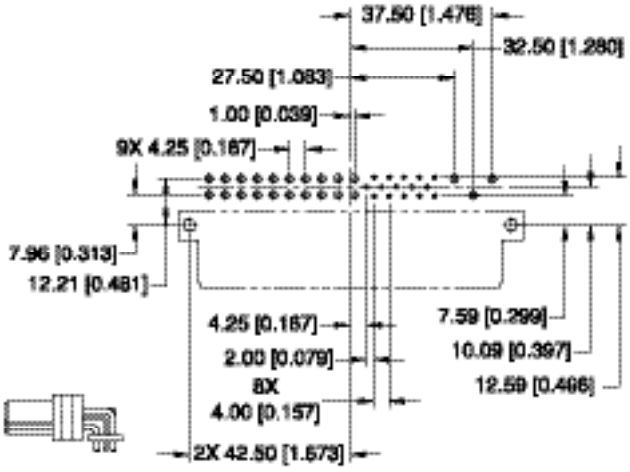
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER
PCIH38RF400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

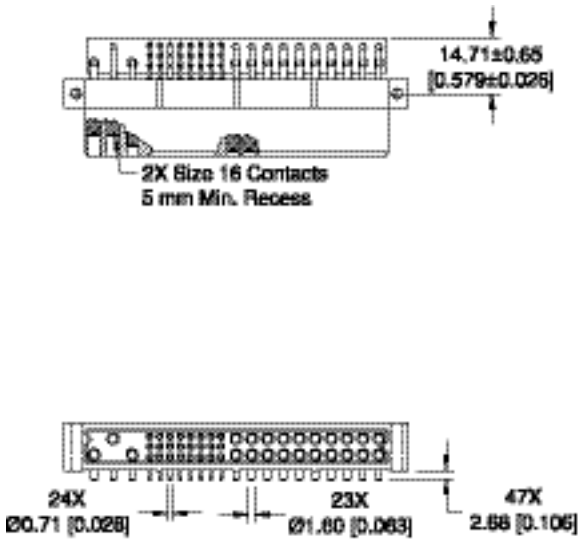
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 20 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

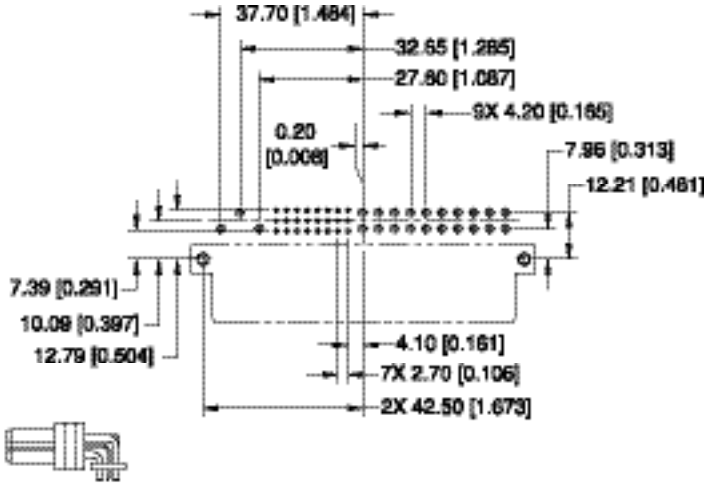
PCIH RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER
PCIH47F400A1



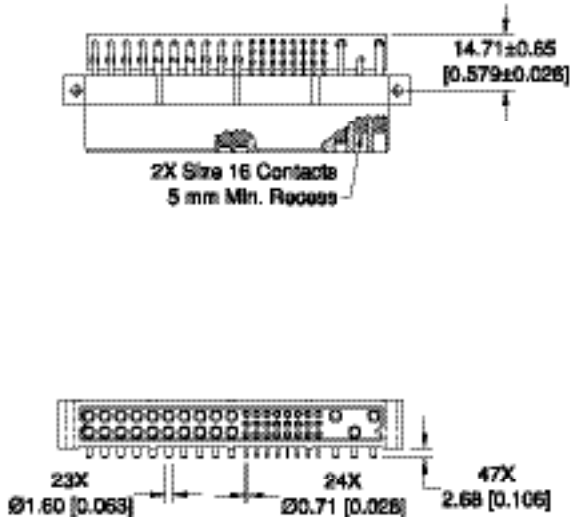
CONNECTOR DIMENSIONS



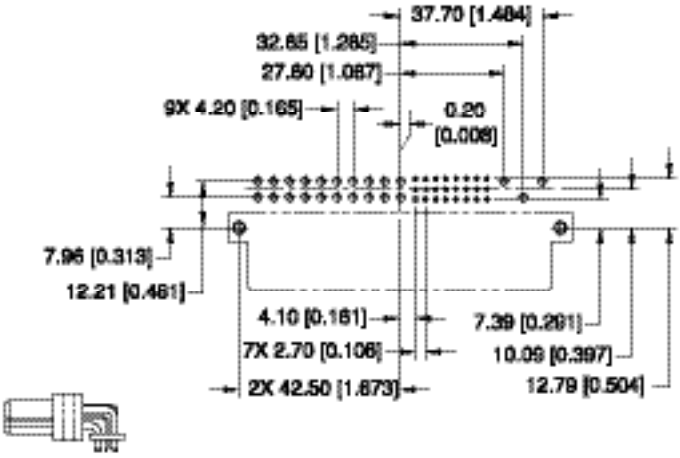
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER
PCIH47RF400A1



CONNECTOR DIMENSIONS

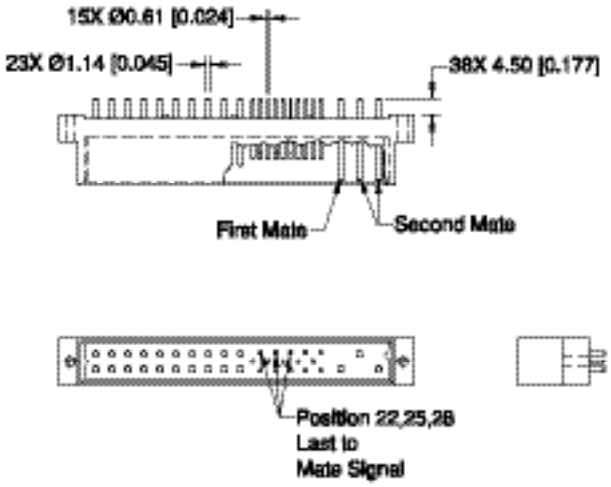


CONTACT HOLE PATTERN

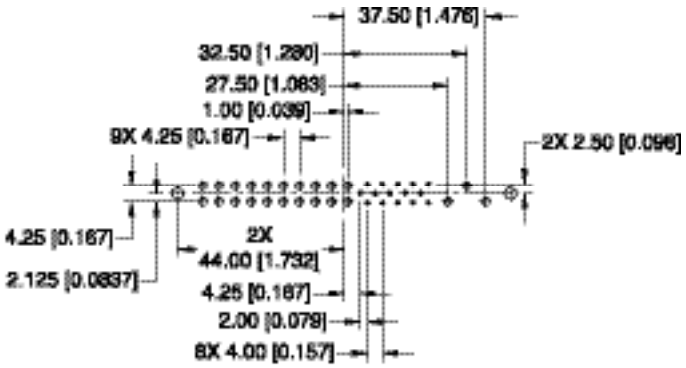
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

STANDARD PART NUMBER
PCIH38M300A1



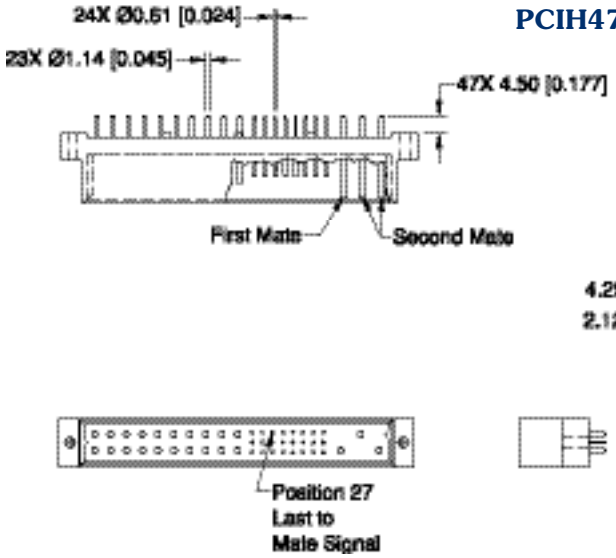
CONNECTOR DIMENSIONS



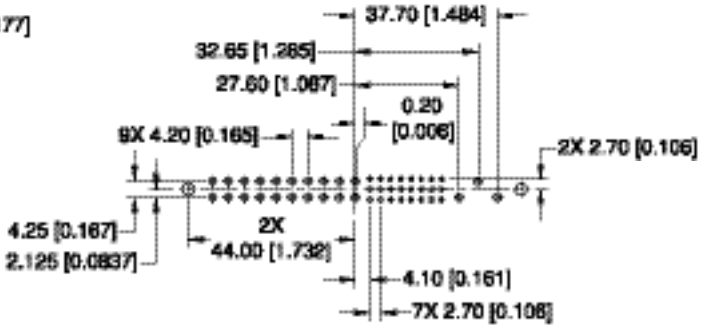
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER
PCIH47M300A1



CONNECTOR DIMENSIONS

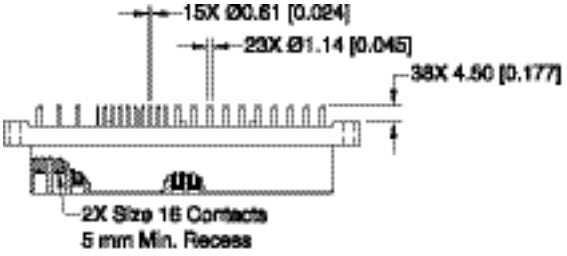


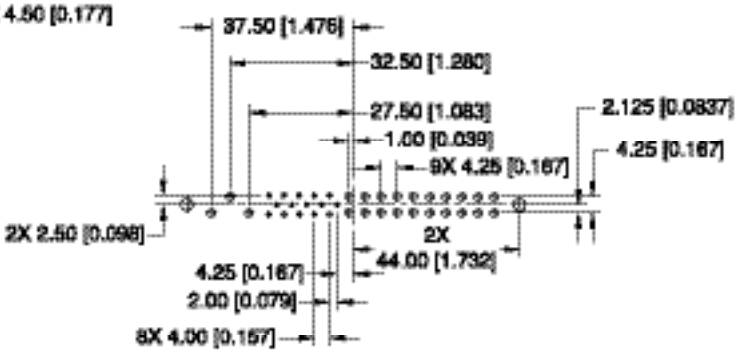
CONTACT HOLE PATTERN

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

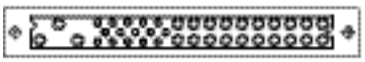
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00 [0.039] holes for size 20 and size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

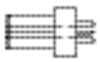
STANDARD PART NUMBER
PCIH38F300A1





CONTACT HOLE PATTERN

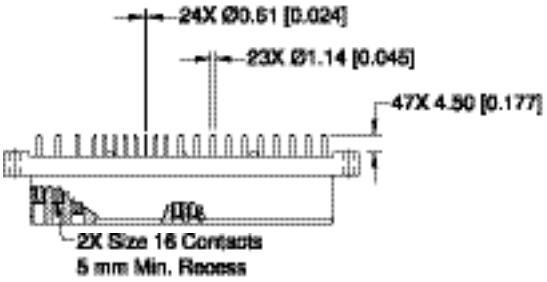


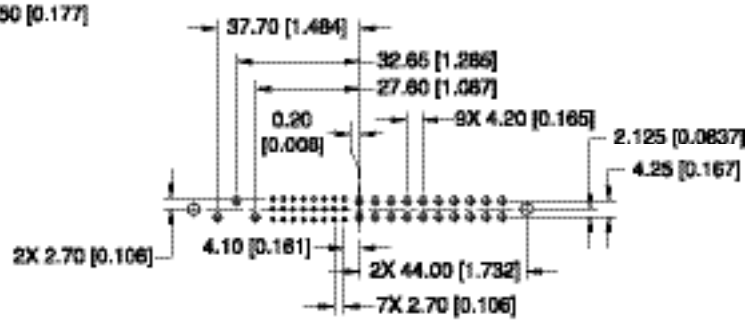


CONNECTOR DIMENSIONS

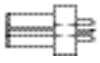
Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER
PCIH47F300A1





CONTACT HOLE PATTERN



CONNECTOR DIMENSIONS

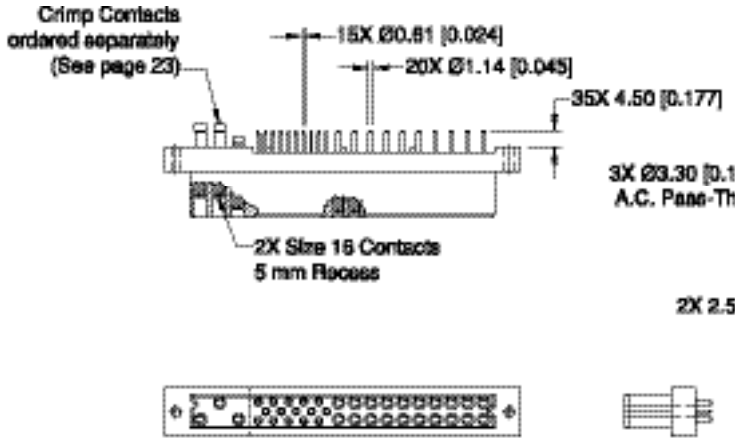
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00 [0.039] holes for size 20 and size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

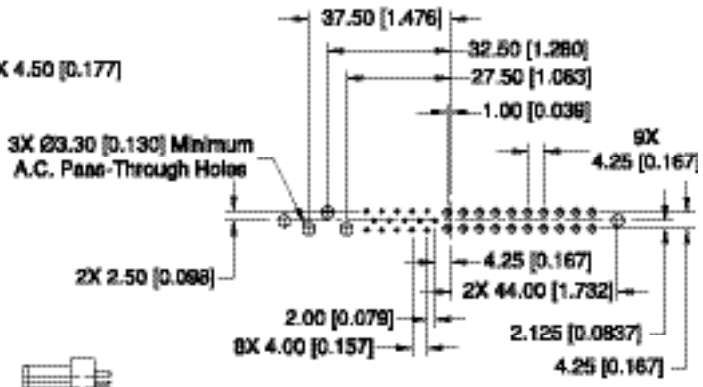
PCIH STRAIGHT SOLDER CONNECTORS WITH A.C. PASS–THROUGH, FEMALE

COMPACT POWER CONNECTOR

LOW PROFILE PART NUMBER
PCIH38F300A1-246.1



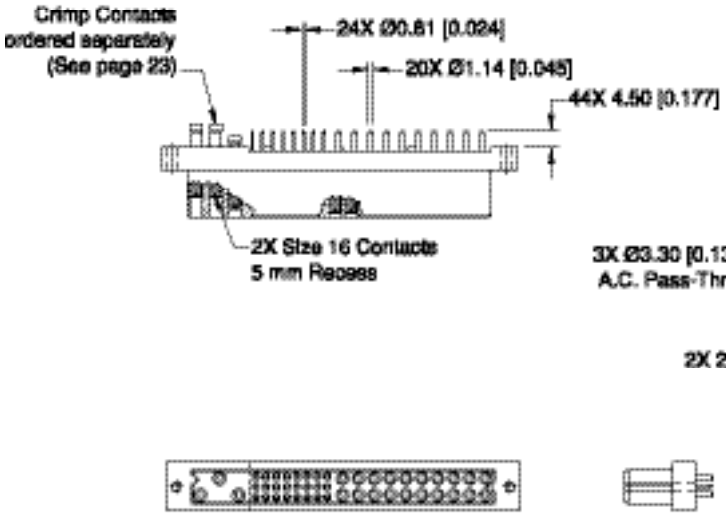
CONNECTOR DIMENSIONS



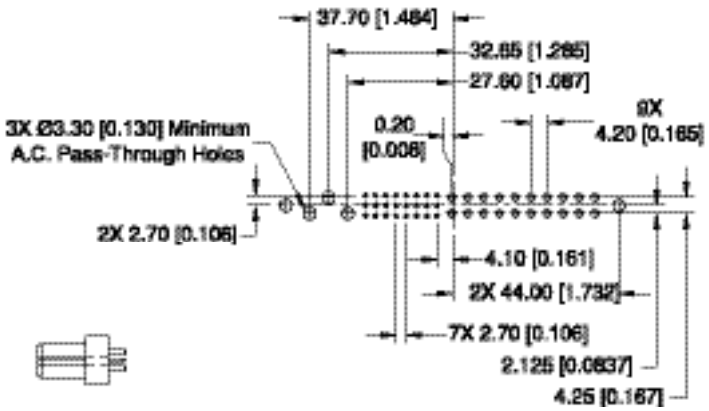
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

LOW PROFILE PART NUMBER
PCIH47F300A1-246.0



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

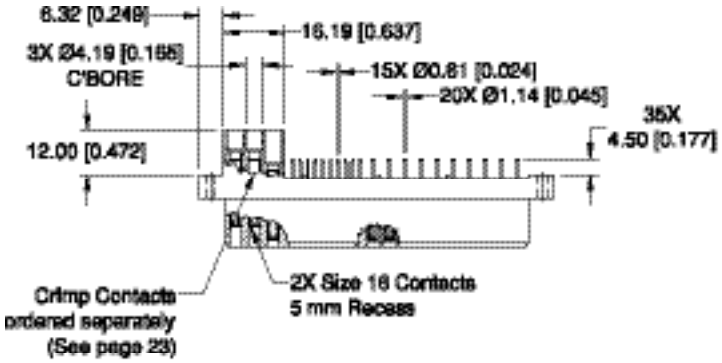
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00 [0.039] holes for size 20 and size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

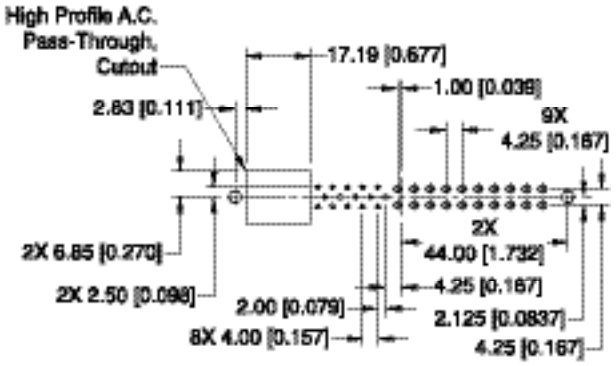
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

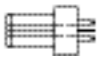
PCIH STRAIGHT SOLDER CONNECTOR WITH A.C. PASS-THROUGH, FEMALE

COMPACT POWER CONNECTOR

HIGH PROFILE PART NUMBER
PCIH38F300A1-245.0



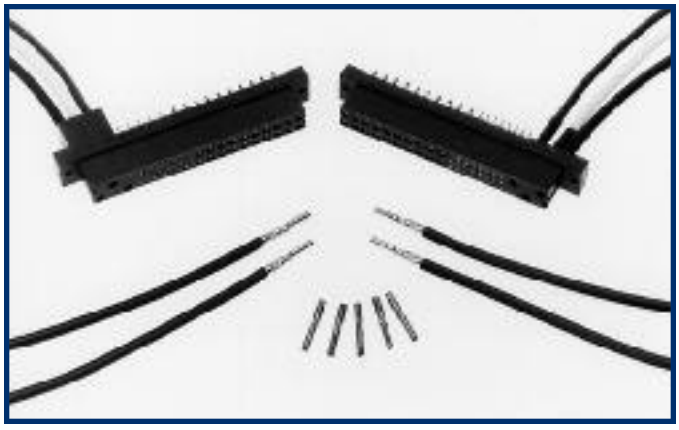




CONNECTOR DIMENSIONS

CONTACT HOLE PATTERN

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00 [0.039] holes for size 20 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.



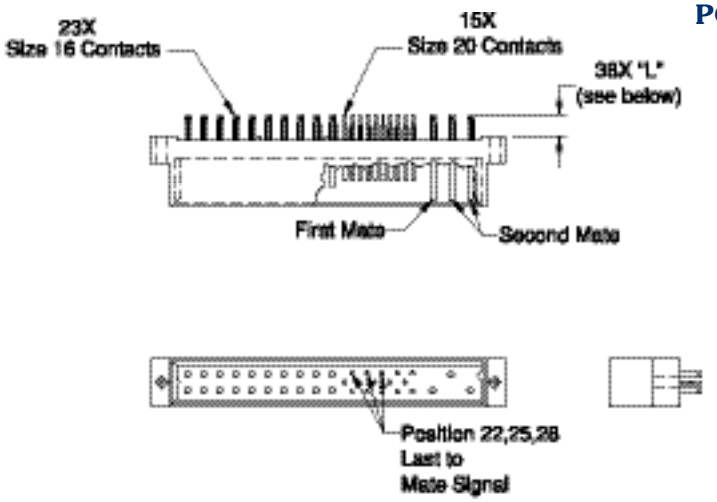
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

PCIH COMPLIANT TERMINATION CONNECTORS, MALE

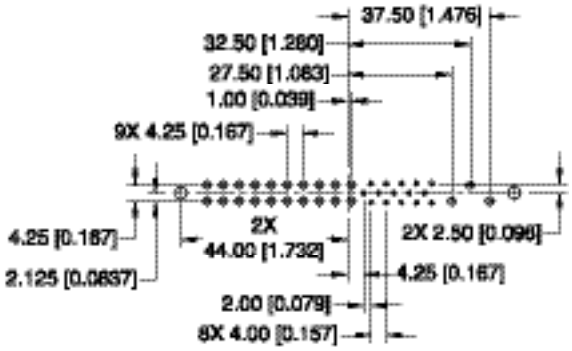
COMPACT POWER CONNECTOR

STANDARD PART NUMBER

PCIH38M9300A1
PCIH38M9400A1



CONNECTOR DIMENSIONS

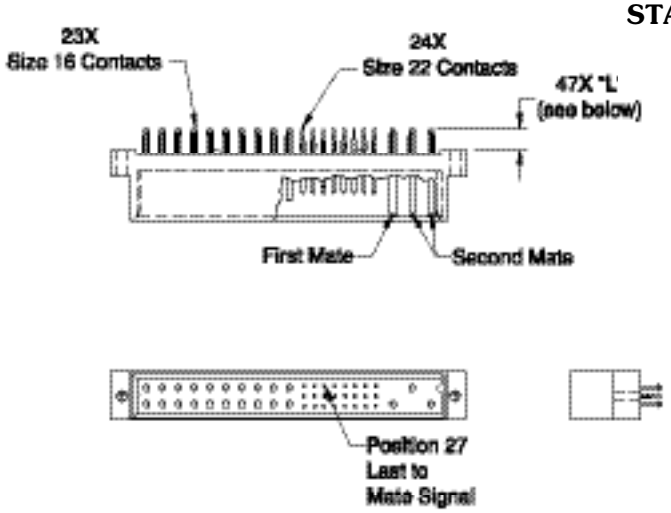


CONTACT HOLE PATTERN

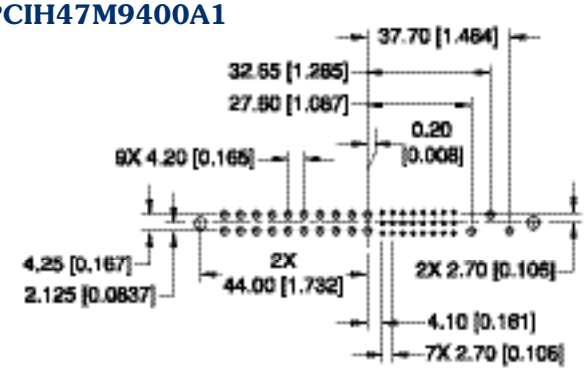
Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER

PCIH47M9300A1
PCIH47M9400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

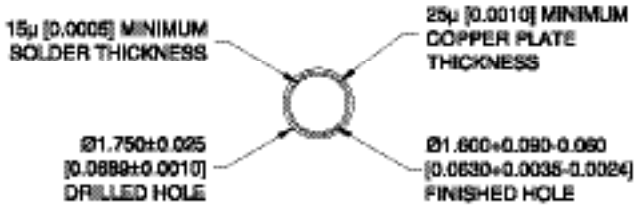
Note: See below for suggested printed board hole sizes.

CONTACT TAIL LENGTH

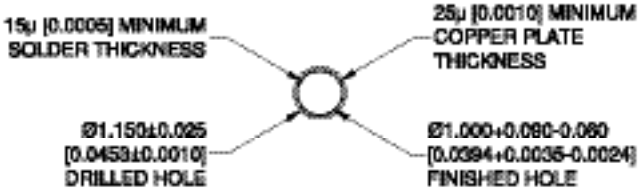
CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES



SIZE 16 PRESS-FIT CONTACT HOLE



SIZE 20 AND 22 PRESS-FIT CONTACT HOLE

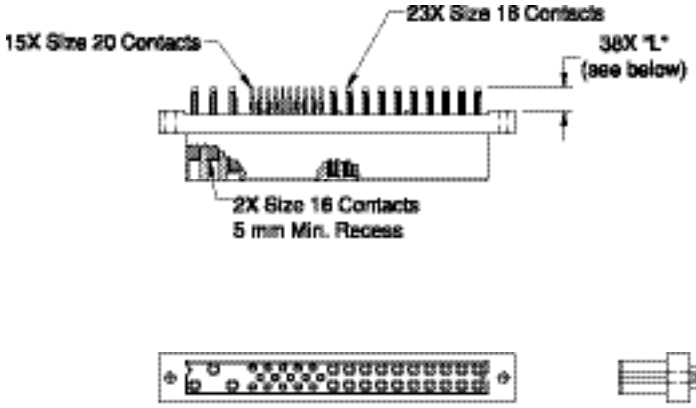
SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

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

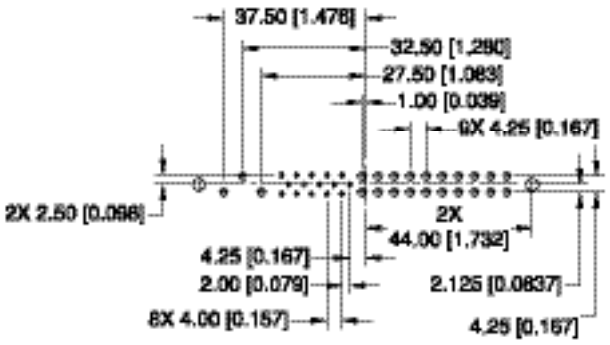
PCIH COMPLIANT TERMINATION CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER
PCIH38F9300A1
PCIH38F9400A1



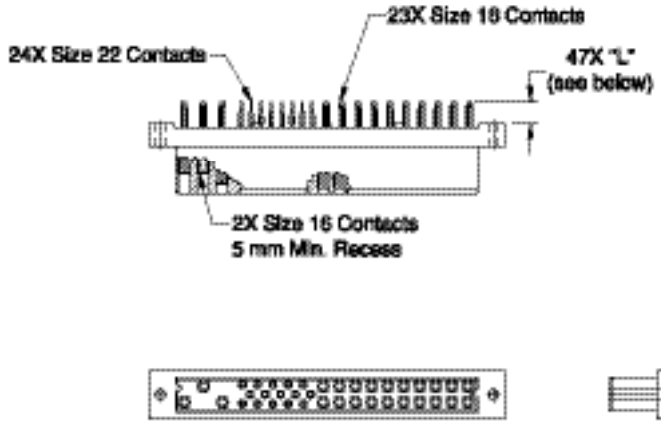
CONNECTOR DIMENSIONS



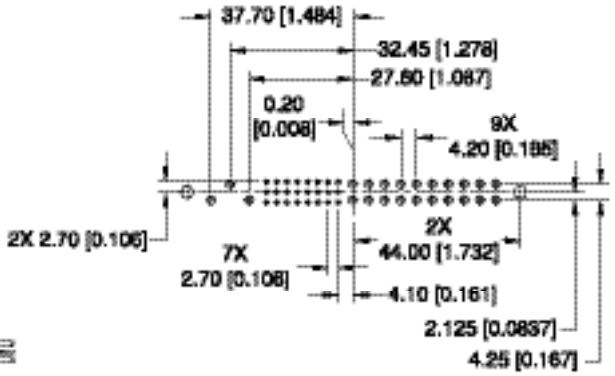
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER
PCIH47F9300A1
PCIH47F9400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

CONTACT TAIL LENGTH

CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES

SIZE 18 PRESS-FIT CONTACT HOLE

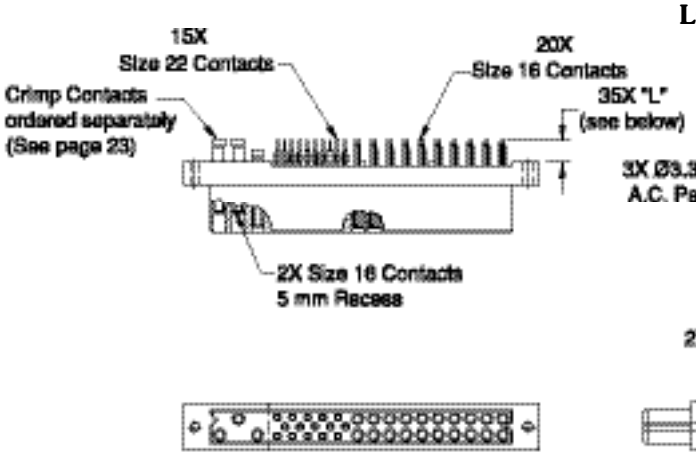
SIZE 20 AND 22 PRESS-FIT CONTACT HOLE

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

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

PCIH COMPLIANT TERMINATION CONNECTORS WITH A.C. PASS–THROUGH, FEMALE

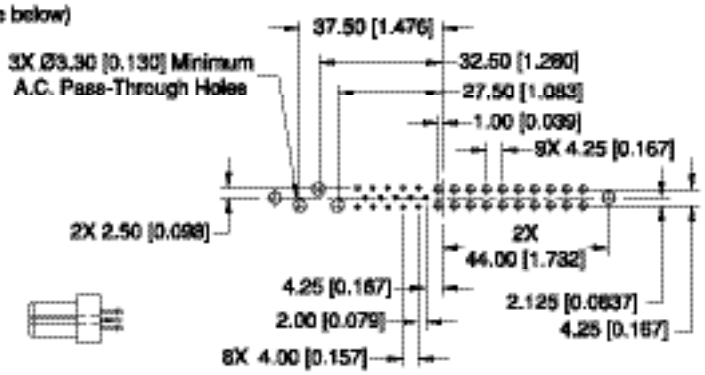
COMPACT POWER CONNECTOR



CONNECTOR DIMENSIONS

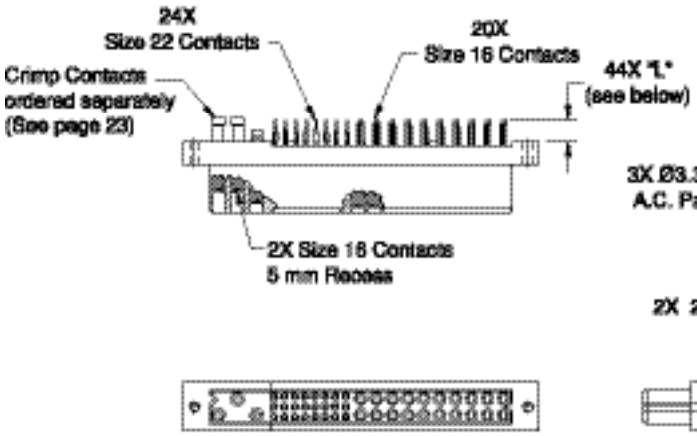
LOW PROFILE PART NUMBER

PCIH38F9300A1-246.1
PCIH38F9400A1-246.1



CONTACT HOLE PATTERN

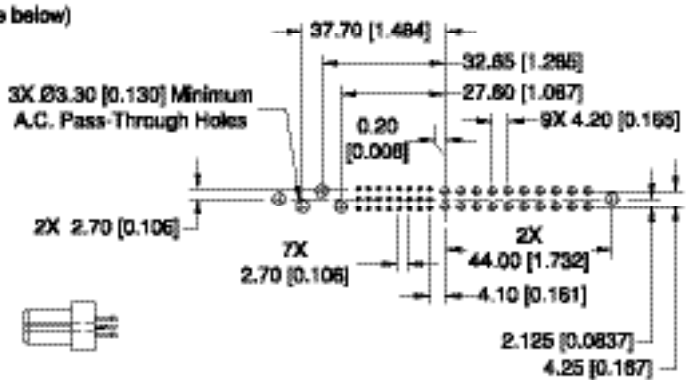
Note: See below for suggested printed board hole sizes.



CONNECTOR DIMENSIONS

LOW PROFILE PART NUMBER

PCIH47F9300A1-246.0
PCIH47F9400A1-246.0



CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

CONTACT TAIL LENGTH

CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES

SIZE 18 PRESS-FIT CONTACT HOLE

SIZE 20 AND 22 PRESS-FIT CONTACT HOLE

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

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

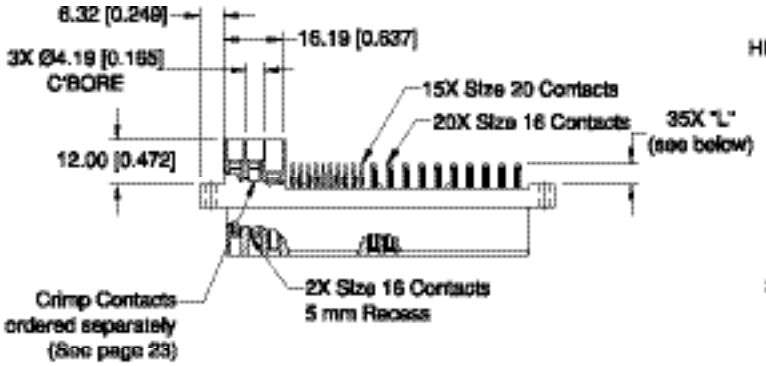
PCIH COMPLIANT TERMINATION CONNECTORS WITH A.C. PASS-THROUGH, FEMALE

COMPACT POWER CONNECTOR

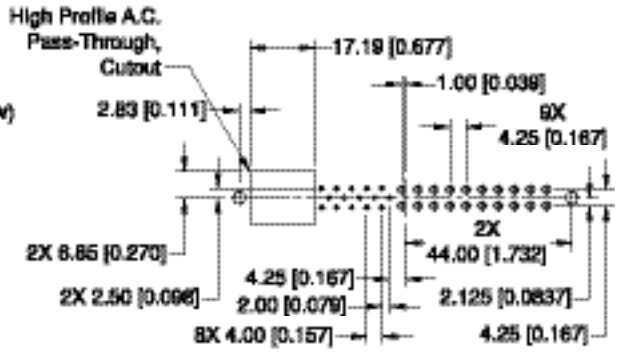
HIGH PROFILE PART NUMBER

PCIH38F9300A1-246.0

PCIH38F9400A1-246.0



CONNECTOR DIMENSION



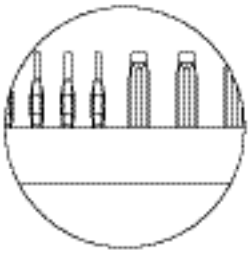
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

CONTACT TAIL LENGTH

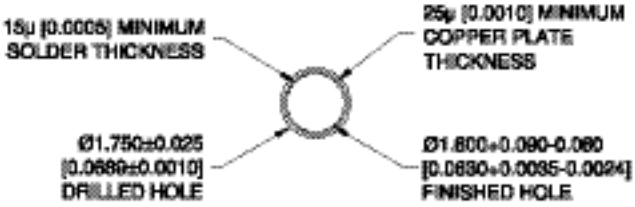
CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.



ENLARGED DETAIL OF COMPLIANT CONTACT TERMINATIONS

SUGGESTED PRINTED BOARD HOLE SIZES



SIZE 16 PRESS-FIT CONTACT HOLE

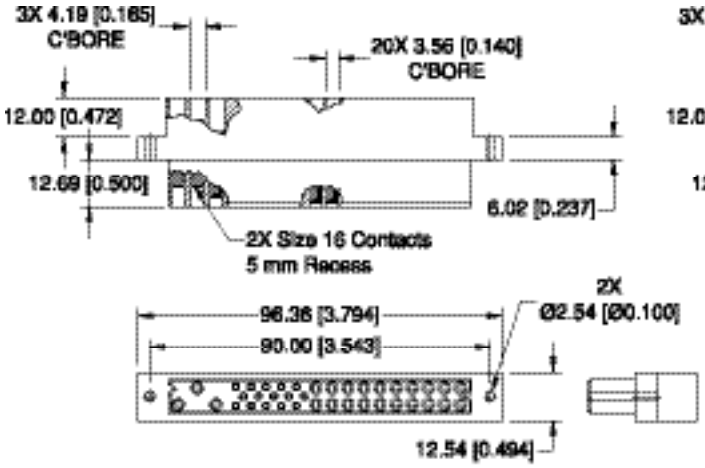
SIZE 20 PRESS-FIT CONTACT HOLE

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

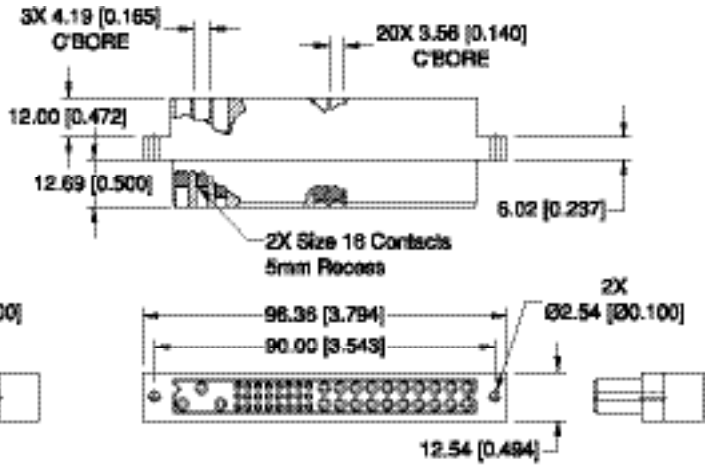
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

FEMALE PANEL MOUNT CRIMP CONTACT CONNECTOR DIMENSIONS

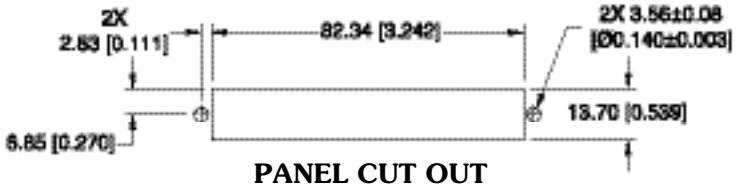
Removable Crimp Contacts Must Be Ordered Separately.



STANDARD PART NUMBER
PCIH38F8000



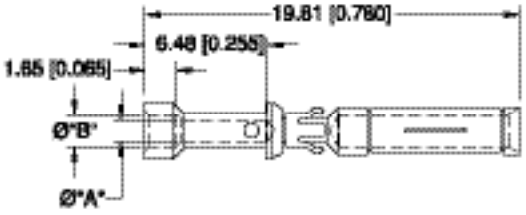
STANDARD PART NUMBER
PCIH47F8000



PANEL CUT OUT

REMOVABLE FEMALE CRIMP CONTACTS FOR USE WITH A.C. PASS–THROUGH AND PANEL MOUNT VERSIONS

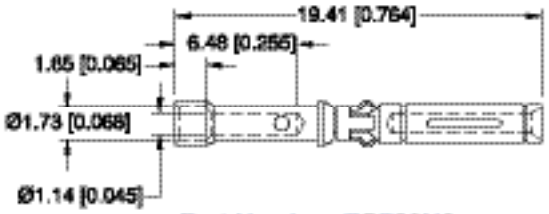
SIZE 16 CONTACT



PART NUMBER	WIRE SIZE mm²[AWG]	Ø "A"	Ø "B"
FC112N2-1565.0	4.0 [12]	2.49 [0.098]	n/a
FC114N2-1565.0	2.5-1.5[14-16]	2.06 [0.081]	2.67 [0.105]
FC116N2-1565.0	1.5-1.0[16-18]	1.70 [0.067]	2.36 [0.093]
FC120N2-1565.0	0.5-0.3-0.25[20-22-24]	1.14 [0.045]	1.65 [0.065]

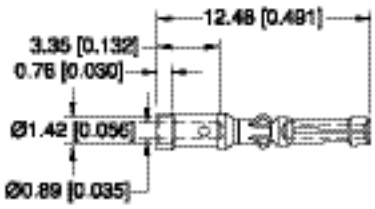
Material: Copper alloy.
Finish: Gold flash over nickel.
0.75µ [0.000030 inch] gold over nickel available by adding "-14" suffix onto the part number.
Example: FC116N2-14-1565.0 or FC720N2-14.

SIZE 20 CONTACT



Part Number: FC720N2
Wire size 0.5-0.3-0.25 mm² [20-22-24 AWG]

SIZE 22 CONTACT



Part Number: FC422N7
Wire size 0.3 mm² [22 AWG]

 Crimp contact tooling is available from Positronic Industries. See page 70 for details.

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

ORDERING INFORMATION – CODE NUMBERING SYSTEM

Specify Complete Connector By Following Steps 1 Through 8
Insert "0" When Step Is Not Used

STEP	1	2	3	4	5	6	7		8
	PCIH	47	F	93	0	0	A1		

STEP 1 - Basic Series
PCIH – PCIH Series

STEP 2 - Connector Variants
38 – 23 Size 16 Contacts and 15 Size 20 Contacts

38R – 23 Size 16 Contacts and 15 Size 20 Contacts Inverted style, use with Contact Type "4"

47 – 23 Size 16 Contacts and 24 Size 22 Contacts

47R – 23 Size 16 Contacts and 24 Size 22 Contacts Inverted style, use with Contact Type "4"

STEP 3 - Connector Gender
M - Male

F - Female

STEP 4 - Type of Contact
3 – Solder, Straight Printed Board Mount with 4.50 [0.177] tail extension for connection systems 1 and 2.

4 – Solder, Right Angle Printed Board Mount with 2.68 [0.106] tail extension for connection systems 1, 2, 3 and 4.

8 – Contacts must be ordered separately for Panel Mount Cable Connectors, connection system 3. Female connector only.

93 –Press–Fit, Compliant Termination size 16 and size 20 or size 22 Straight Printed Board Mount for use with board thicknesses of 2.29 to 4.45 [0.090 to 0.175]. Connection systems 1 and 2.

94 –Press–Fit, Compliant Termination size 16 and size 20 or size 22 Straight Printed Board Mount for use with board thickness of 4.45 minimum [0.175 minimum].Connection systems 1 and 2.

STEP 5 - Mounting Style
0 – Not Applicable

STEP 6 - Hoods
0 – Not applicable

STEP 7 - Contact Plating for Printed Board Type Connectors
0 – Crimp Contacts Ordered Separately

A1 – Gold flash over nickel on mating end and gold over nickel on termination end.

A2 – Gold flash over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

C1 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 0.80 microns [0.000030 inch] gold over nickel on termination end.

C2 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

STEP 8 - Special Options
MOS 245.0: System 2, Straight Printed Board Mount Connector with 3 high profile A.C. Pass–Through contact positions. Use with Connector Variant 38 female only.

MOS 246.0: System 2,Straight Printed Board Mount Connector with 3 low profile A.C. Pass–Through contact positions. Use with Connector Variant 47 female only.

MOS 246.1: System 2,Straight Printed Board Mount Connector with 3 low profile A.C. Pass–Through contact positions. Use with Connector Variant 38 female only.

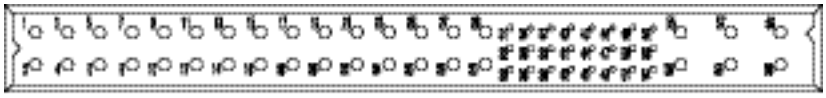
Consult Technical Sales for other special options.

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

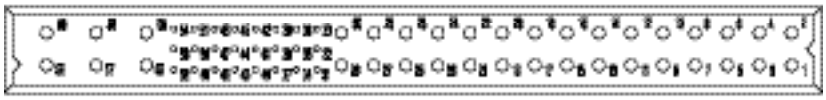
The PCIA Series encompasses all of the features of the PCIH Series and provides greater input and output current capacity in a slightly larger package. The package size is suitable for 6U and larger based systems or in systems which do not conform to a particular standard. Reliability, high current capacity and many system management connections make the PCIA Series ideal for higher wattage power supplies which are used in telecom, computer, information systems and industrial applications.

PCIA SERIES CONTACT VARIANTS

FACE VIEW OF MALE AND REAR VIEW OF FEMALE

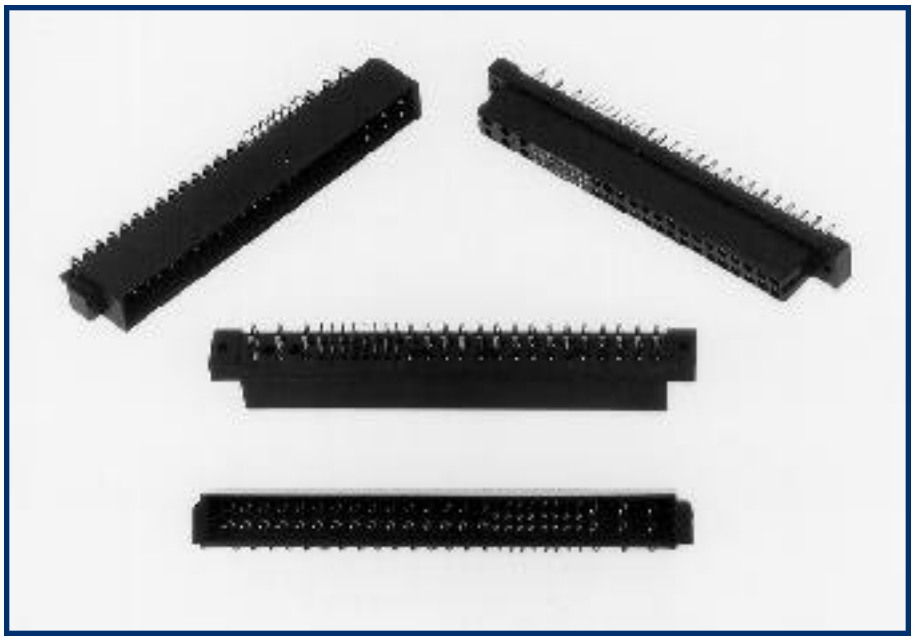


PCIA60W36 VARIANT



PCIA60W36R VARIANT (inverted)
Currently available in female only, use with contact type 4.

36 Size 16 Power Contacts and 24 Size 22 Signal Contacts



PCIA TECHNICAL CHARACTERISTICS

COMPACT POWER CONNECTOR

MATERIALS AND FINISHES:

Insulator:	Glass-filled polyester, UL 94V-0, blue color.
Contacts:	High conductivity precision-machined copper alloy with gold flash over nickel plate. Other finishes available upon request.
Mounting Screws:	Steel, zinc plated.

ELECTRICAL CHARACTERISTICS:

PCIAContact Current Ratings

See Temperature Rise Curves on page 3 for details.

Size 16 Power Contacts:	
Positions 55 through 60:	38 amperes continuous, all contacts under load.
Positions 1 through 30:	28 amperes continuous, all contacts under load.
Size 22 Signal Contacts:	3 amperes nominal rating.
Initial Contact Resistance; maximum:	
Size 16 Contact:	0.0007 ohms maximum.
Size 22 Contact:	0.004 ohms maximum. Per IEC 512-2, Test 2b.
Insulator Resistance:	5 G ohms per IEC 512-2, Test 3a.
Voltage Proof:	
PCIA60W36:	
Contacts 55 through 60:	3,000 V r.m.s.
Contacts 1 through 30:	1,500 V r.m.s.
Contacts 31 through 54:	1,000 V r.m.s.
Creepage and Clearance Distance; minimum:	
PCIA60W36:	
Contacts 59 and 60 to Contacts 55 and 56:	3.2mm [0.126 inch]
Contacts 57 and 58 to Contacts 55 and 56:	3.2mm [0.126 inch]
Contacts 59 and 60 to Signal Contacts:	6.4mm [0.252 inch]
Contacts 57 and 58 to Signal Contacts:	6.4mm [0.252 inch]
Contacts 59 and 60 to Contacts 57 and 58:	2.5mm [0.098 inch]
Contacts 55 and 56 to Signal Contacts:	2.0mm [0.079 inch]
Working Voltage:	
PCIA60W36:	
Contacts 55 through 60:	1,000 V r.m.s.
Contacts 1 through 30:	500 V r.m.s.
Contacts 31 through 54:	333 V r.m.s.

U.L. Recognized File #E49351
CSA Recognized File #LR54219
TUV recognitions are in process. Consult Technical Sales for updated information.

MECHANICAL CHARACTERISTICS:

Blind Mating System:	Male and female connector bodies provide “lead-in” for 1.3mm [0.050 inch] diametral misalignment.
Polarization:	Provided by connector body design.
Fixed Contacts:	Printed board terminations, both straight and right angle. Size 16 female contacts feature “Closed Entry” design. Size 22 feature rugged “Robi-D” design.
Fixed Contact Retention in Connector Body:	
Size 16 Contacts:	45 N [10 lbs.]
Size 22 Contacts:	27 N [6 lbs.]
Resistance to Solder Heat:	260˚C [500˚F] for 10 seconds duration per IEC 512-6, Test 12e, 25-watt soldering iron.
Sequential Contact Mating System:	
PCIA60W36:	First mate contacts 55 and 56 and last mate contact position 37.

Consult Technical Sales for customer specified sequential mating.

Safety “Recessed in Insulator” Contacts:	The following size 16 contacts are recessed 5mm [0.197 inch] below the face of the female connector insulator per safety requirements.
PCIA60W36:	Contact positions 57 through 60.
Compliant Terminations:	Size 16 and 22 contacts are available with Compliant Contact Terminations.
Printed Board Mounting:	Mounting holes provided in connector body for printed board mounting. Self-tapping screws are available.
Mechanical Operations:	250 couplings, minimum.

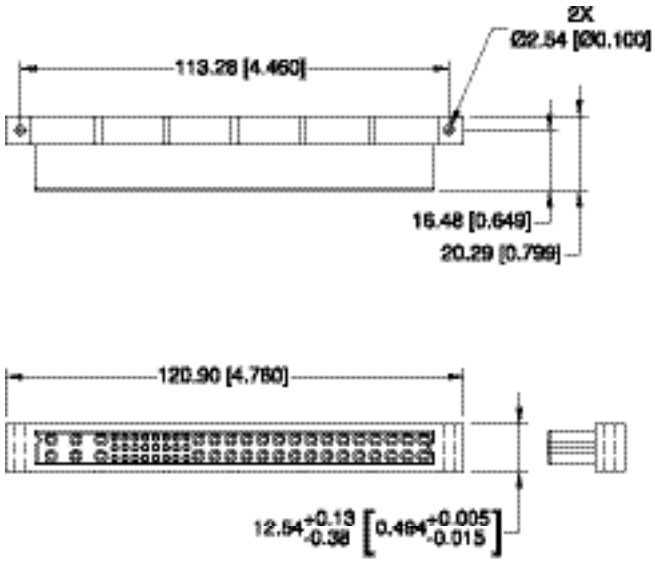
CLIMATIC CHARACTERISTICS:

Working Temperature:	-55˚C to +125˚C.

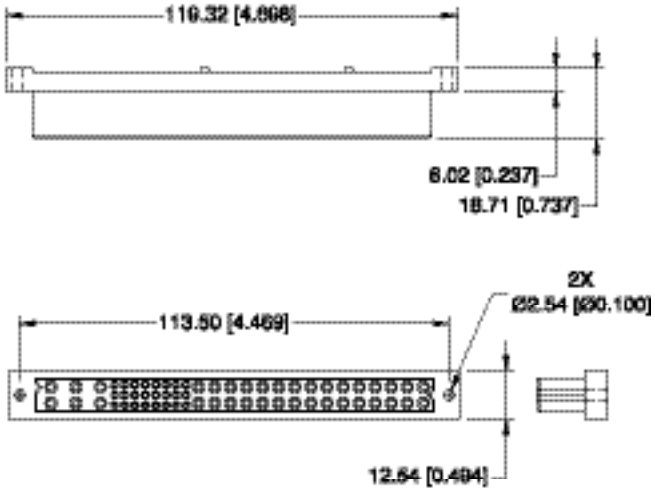
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

PCIA CONNECTOR OUTLINE DIMENSIONS

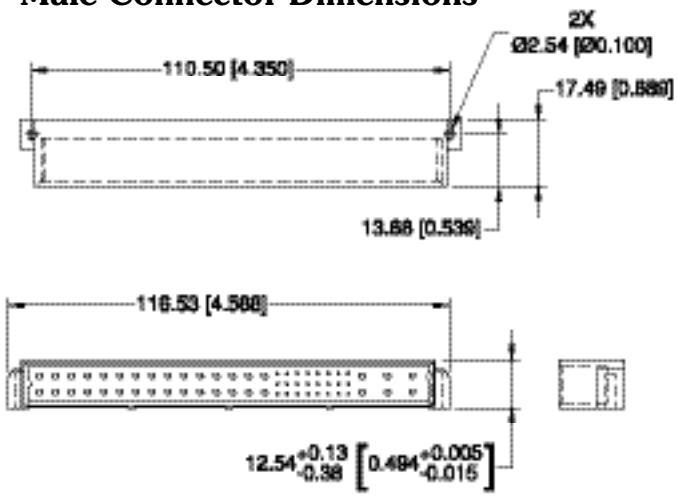
Right Angle Board Mount Connector Female Connector Dimensions



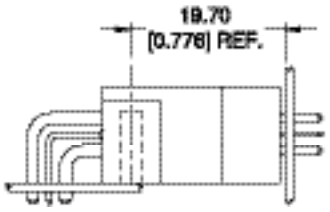
Straight Board Mount Connector Female Connector Dimensions



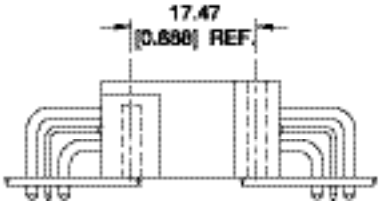
Right Angle Board Mount Connector Male Connector Dimensions



PCIA CONNECTOR MATING DIMENSIONS (FULLY MATED)



Straight Board Mount Female to Right Angle Board Mount Male.



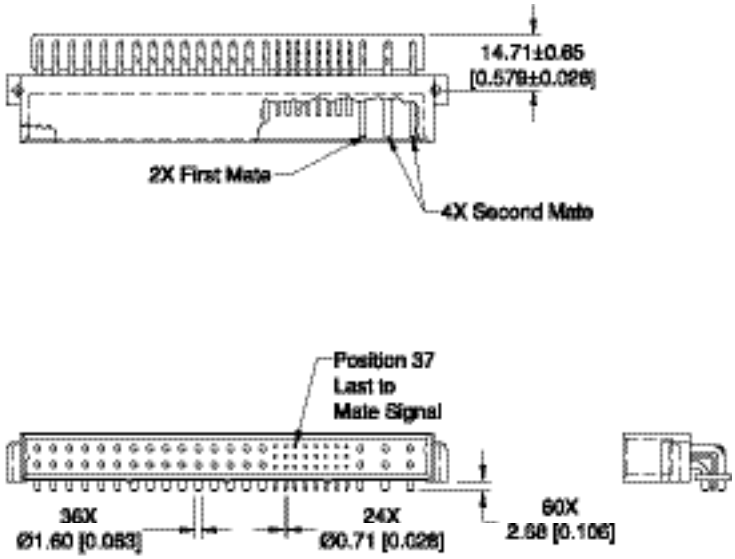
Right Angle Board Mount Female to Right Angle Board Mount Male.

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

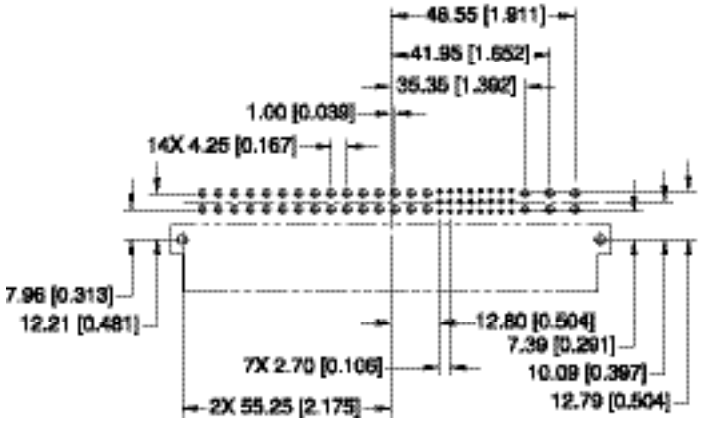
PCIA RIGHT ANGLE BOARD MOUNT CONNECTOR, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIA60W36M400A1



CONNECTOR DIMENSION



CONTACT HOLE PATTERN

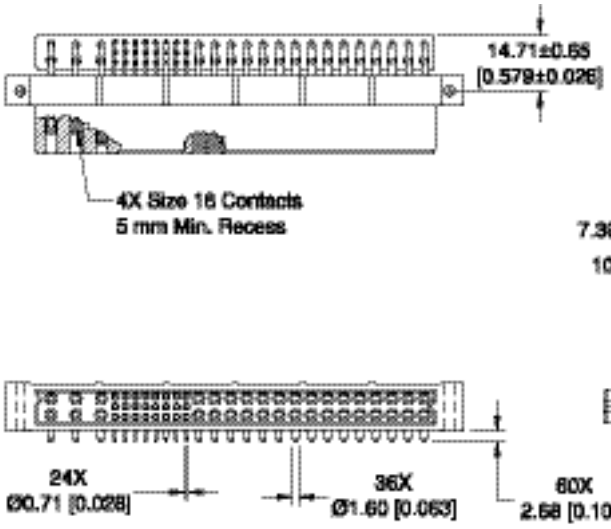
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

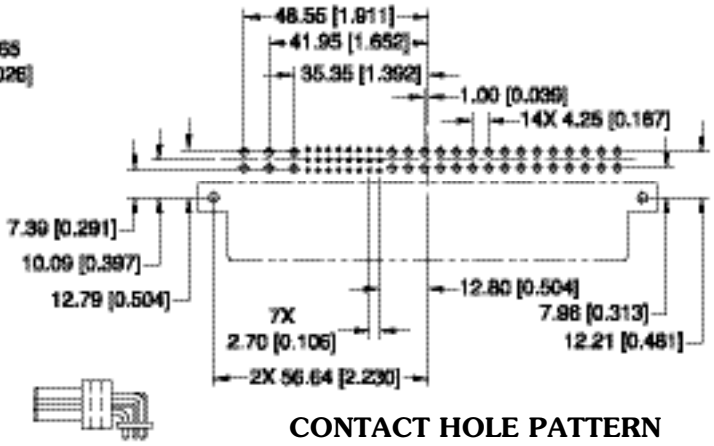
PCIA RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIA60W36F400A1



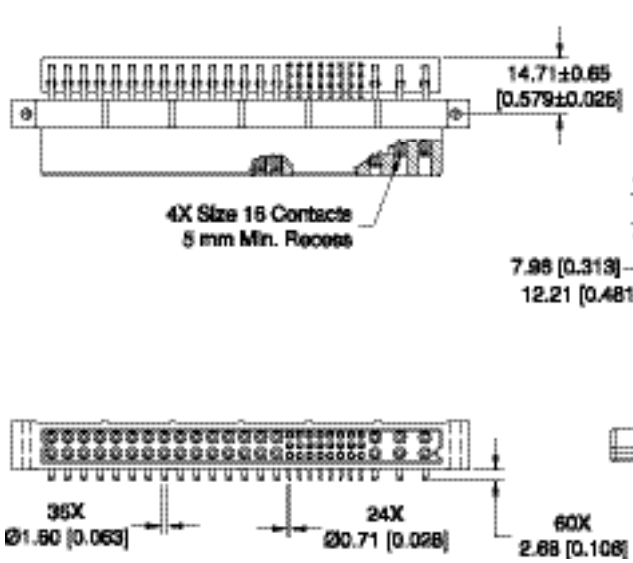
CONNECTOR DIMENSIONS



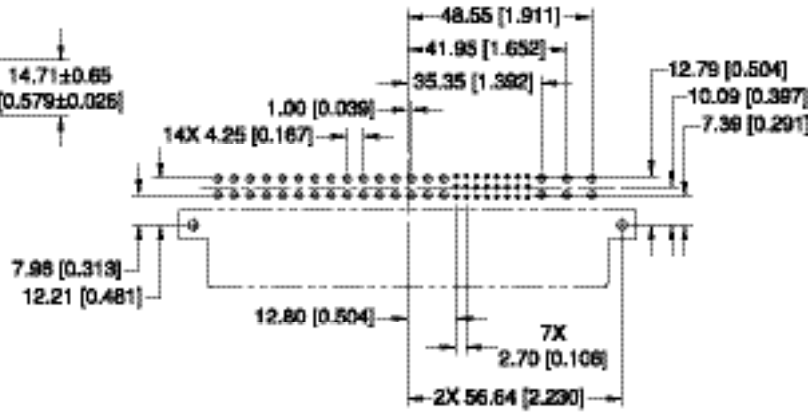
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIA60W36RF400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

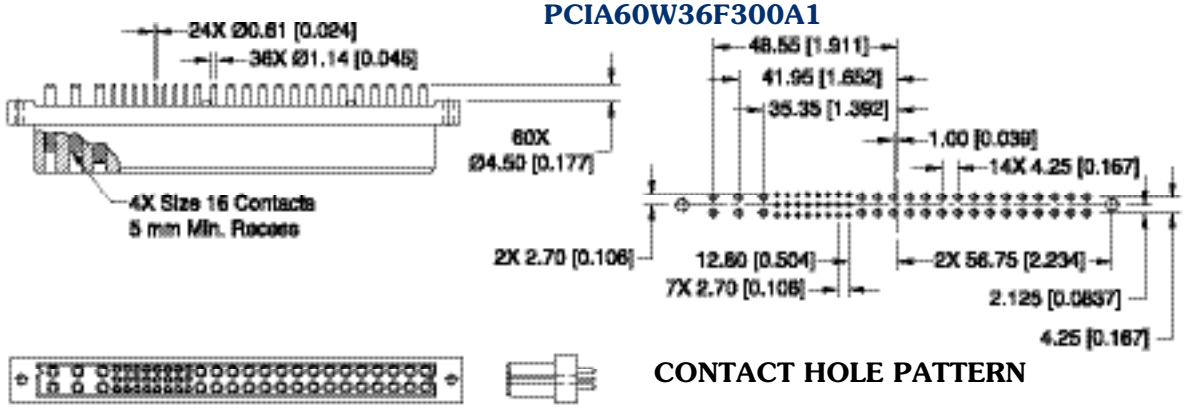
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

STRAIGHT SOLDER CONNECTOR DIMENSIONS, FEMALE

STANDARD PART NUMBER:

PCIA60W36F300A1



CONNECTOR DIMENSIONS

CONTACT HOLE PATTERN

SUGGESTED PRINTED BOARD HOLE SIZES:

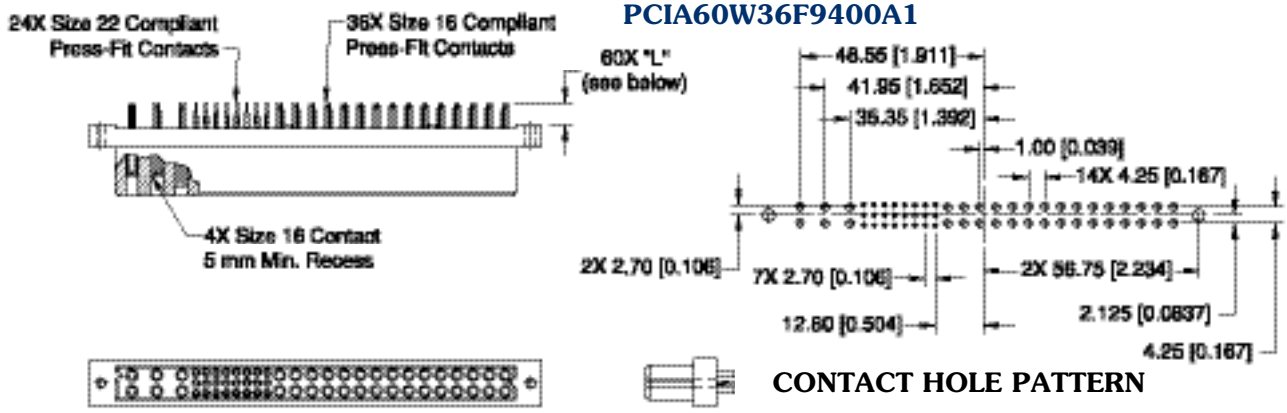
Suggest Ø1.00 [0.039] holes for size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

COMPLIANT TERMINATION CONNECTOR DIMENSIONS, FEMALE

STANDARD PART NUMBER:

PCIA60W36F9300A1

PCIA60W36F9400A1



CONNECTOR DIMENSIONS

CONTACT HOLE PATTERN

CONTACT TAIL LENGTH

CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES

SIZE 16 PRESS-FIT CONTACT HOLE

SIZE 22 PRESS-FIT CONTACT HOLE

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

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

ORDERING INFORMATION – CODE NUMBERING SYSTEM

Specify Complete Connector By Following Steps 1 Through 8
Insert "0" When Step Is Not Used

STEP	1	2	3	4	5	6	7	8
	PCIA	60W36	F	93	0	0	A1	

STEP 1 - Basic Series
PCIA– PCIASeries

STEP 2 - Connector Variants
60W36 – 36 Size 16 Contacts and 24 Size 22 Contacts

60W36R – 36 Size 16 Contacts and 24 Size 22 Contacts Inverted style, use with Contact Type "4". Currently available in female only.

STEP 3 - Connector Gender
M - Male

F - Female

STEP 4 - Type of Contact
*3 – Solder, Straight Printed Board Mount with 4.50 [0.177] tail extension for connection systems 1.

4 – Solder, Right Angle Printed Board Mount with 2.68 [0.106] tail extension for connection systems 1 and 4.

*93 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thicknesses of 2.29 to 4.45 [0.090 to 0.175]. Connection systems 1 and 2.

*94 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thickness of 4.45 minimum [0.175 minimum].Connection systems 1 and 2.

STEP 5 - Mounting Style
0 – Not Applicable

STEP 6 - Hoods
0 – Not applicable

STEP 7 - Contact Plating for Printed Board Type Connectors
A1 – Gold flash over nickel on mating end and gold over nickel on termination end.

A2 – Gold flash over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

C1 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 0.80 microns [0.000030 inch] gold over nickel on termination end.

C2 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

STEP 8 - Special Options
Consult Technical Sales for special options.

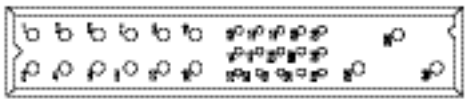
* Female contact variants are readily available. Consult Technical Sales for availability of male contact variants.

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

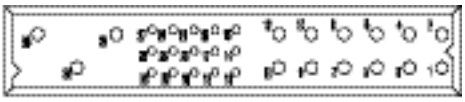
The PCIM Series encompasses all of the features of the PCIH Series in a smaller package. Reliability, high current capacity and many system management connections make the PCIM Series ideal for use in telecom, computer, information systems and industrial applications.

PCIM SERIES CONTACT VARIANTS

FACE VIEW OF MALE AND REAR VIEW OF FEMALE

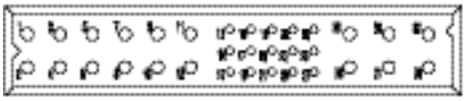


PCIM30W15 VARIANT

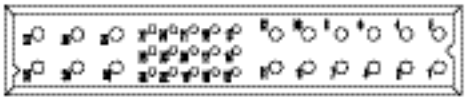


PCIM30W15R VARIANT (inverted)

15 Size 16 Power Contacts and 15 Size 22 Signal Contacts

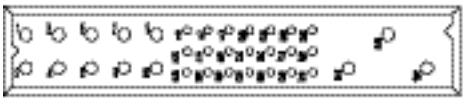


PCIM33W18 VARIANT

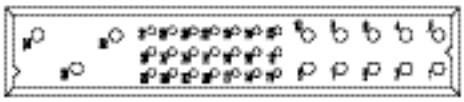


PCIM33W18R VARIANT (inverted)

18 Size 16 Power Contacts and 15 Size 22 Signal Contacts

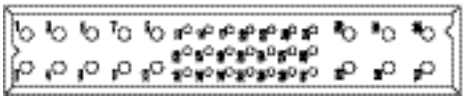


PCIM34W13 VARIANT

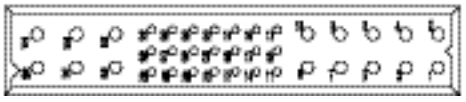


PCIM34W13R VARIANT (inverted)

13 Size 16 Power Contacts and 21 Size 22 Signal Contacts



PCIM37W16 VARIANT



PCIM37W16R VARIANT (inverted)

16 Size 16 Power Contacts and 21 Size 22 Signal Contacts

PCIM TECHNICAL CHARACTERISTICS

COMPACT POWER CONNECTOR

MATERIALS AND FINISHES:

Insulator: Glass-filled polyester, UL 94V-0, blue color.

Contacts: High conductivity precision-machined copper alloy with gold flash over nickel plate. Other finishes available upon request;

Mounting Screws: Steel, zinc plated.

ELECTRICAL CHARACTERISTICS:

PCIM Contact Current Ratings

Consult Technical Sales for Temperature Rise Curve details.

- PCIM30W15:
  - Size 16 Power Contacts:
    - Positions 28, 29, and 30: 40 amperes continuous, all contacts under load.
    - Positions 1 through 12: 28 amperes continuous, all contacts under load.
  - Size 22 Signal Contacts: 3 amperes nominal rating.
- PCIM33W18:
  - Size 16 Power Contacts: 28 amperes continuous, all contacts under load.
  - Size 22 Signal Contacts: 3 amperes nominal rating.
- PCIM34W13:
  - Size 16 Power Contacts:
    - Positions 32, 33, and 34: 40 amperes continuous, all contacts under load.
    - Positions 1 through 10: 28 amperes continuous, all contacts under load.
  - Size 22 Signal Contacts: 3 amperes nominal rating.
- PCIM37W16:
  - Size 16 Power Contacts: 28 amperes continuous, all contacts under load.
  - Size 22 Signal Contacts: 3 amperes nominal rating.

Initial Contact Resistance; maximum:

- Size 16 Contact: 0.0007 ohms maximum.
- Size 22 Contact: 0.004 ohms maximum. Per IEC 512-2, Test 2b.

Insulator Resistance: 5 G ohms per IEC 512-2, Test 3a.

Voltage Proof:

- PCIM30W15:
  - Contacts 28, 29, and 30: 3,000 V r.m.s.
  - Contacts 1 through 12: 1,500 V r.m.s.
  - Contacts 13 through 27: 1,000 V r.m.s.
- PCIM33W18:
  - Contacts 1 through 12 and 28 through 33: 1,500 V r.m.s.
  - Contacts 13 through 27: 1,000 V r.m.s.
- PCIM34W13:
  - Contacts 32, 33, and 34: 3,000 V r.m.s.
  - Contacts 1 through 10: 1,500 V r.m.s.
  - Contacts 11 through 31: 1,000 V r.m.s.
- PCIM37W16:
  - Contacts 1 through 10 and 32 through 37: 1,500 V r.m.s.
  - Contacts 11 through 31: 1,000 V r.m.s.

U.L., C.S.A., and TUV recognitions are in process. Consult Technical Sales for updated information.

Creepage and Clearance Distance; minimum:

- PCIM30W15:
  - Contact 30 to Contact 28: 3.2mm [0.126 inch]
  - Contact 29 to Contact 28: 3.2mm [0.126 inch]
  - Contact 30 to Signal Contacts: 6.4mm [0.252 inch]
  - Contact 29 to Signal Contacts: 6.4mm [0.252 inch]
  - Contact 30 to Contact 29: 2.5mm [0.098 inch]
  - Contact 28 to Signal Contacts: 2.0mm [0.079 inch]
- PCIM33W18:
  - Contact 28 to Signal Contacts: 2.0mm [0.079 inch]
- PCIM34W13:
  - Contact 34 to Contact 32: 3.2mm [0.126 inch]
  - Contact 33 to Contact 32: 3.2mm [0.126 inch]
  - Contact 34 to Signal Contacts: 6.4mm [0.252 inch]
  - Contact 33 to Signal Contacts: 6.4mm [0.252 inch]
  - Contact 34 to Contact 33: 2.5mm [0.098 inch]
  - Contact 32 to Signal Contacts: 2.0mm [0.079 inch]
- PCIM37W16:
  - Contact 32 to Signal Contacts: 2.0mm [0.079 inch]

Working Voltage:

- PCIM30W15:
  - Contacts 28 through 30: 1,000 V r.m.s.
  - Contacts 1 through 12: 500 V r.m.s.
  - Contacts 13 through 27: 333 V r.m.s.
- PCIM33W18:
  - Contacts 1 through 12 and 28 through 33: 500 V r.m.s.
  - Contacts 13 through 27: 333 V r.m.s.
- PCIM34W13:
  - Contacts 32 through 34: 1,000 V r.m.s.
  - Contacts 1 through 10: 500 V r.m.s.
  - Contacts 11 through 31: 333 V r.m.s.
- PCIM37W16:
  - Contacts 1 through 12 and 32 through 37: 500 V r.m.s.
  - Contacts 13 through 31: 333 V r.m.s.

MECHANICAL CHARACTERISTICS:

Blind Mating System: Male and female connector bodies provide “lead-in” for 1.3mm [0.050 inch] diametral misalignment.

Polarization: Provided by connector body design.

Fixed Contacts: Printed board terminations, both straight and right angle. Size 16 female contacts feature “Closed Entry” design. Size 22 feature rugged “Robi-D” design.

Fixed Contact Retention in Connector Body:

- Size 16 Contacts: 45 N [10 lbs.]
- Size 22 Contacts: 27 N [6 lbs.]

Resistance to Solder Heat: 260˚C [500˚F] for 10 seconds duration per IEC 512-6, Test 12e, 25-watt soldering iron.

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

PCIM TECHNICAL CHARACTERISTICS

COMPACT POWER CONNECTOR

Sequential Contact MatingSystem:

PCIM30W15:	First mate contact 28 and last mate contact position 13.
PCIM33W18:	Last mate contact position 13.
PCIM34W13:	First mate contact 32 and last mate contact position 11.
PCIM37W16:	Last mate contact position 11.

Consult Technical Sales for customer specified sequential mating.

Safety “Recessed in Insulator” Contacts: The following size 16 contacts are recessed 5mm [0.197 inch] below the face of the female connector insulator per safety requirements.

PCIM30W15:	Contact positions 29 and 30.
PCIM33W18:	None
PCIM34W13:	Contact positions 33 and 34.
PCIM37W16:	None

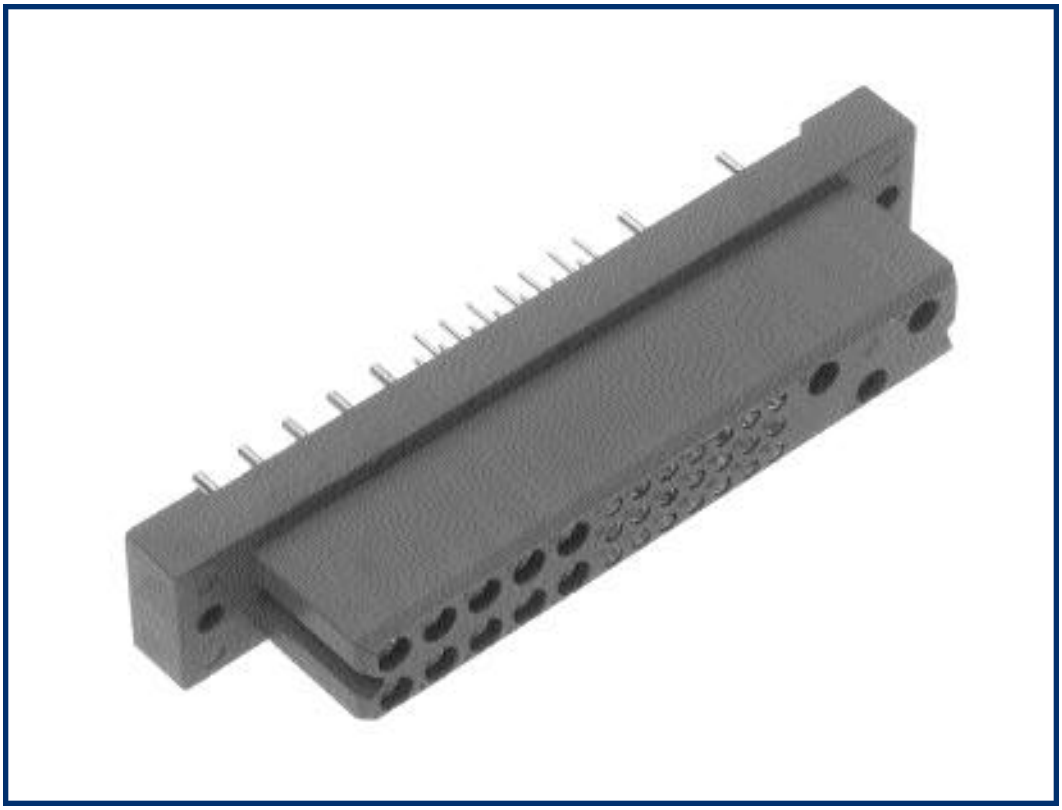
Compliant Terminations: Size 16 and 22 contacts are available with Compliant Contact Terminations.

Printed Board Mounting: Mounting holes provided in connector body for printed board mounting. Self-tapping screws are available.

Mechanical Operations: 250 couplings, minimum.

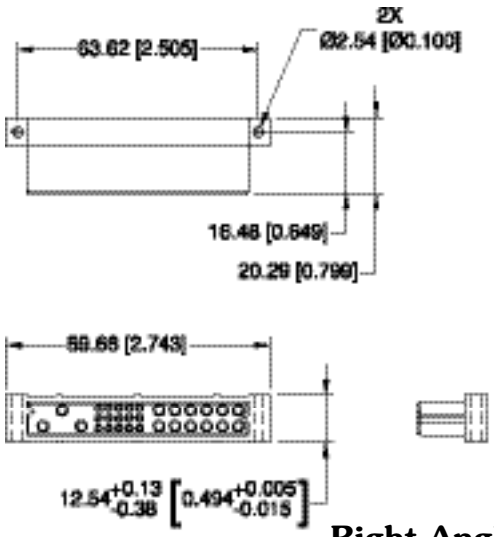
CLIMATIC CHARACTERISTICS:

Working Temperature: -55˚C to +125˚C.

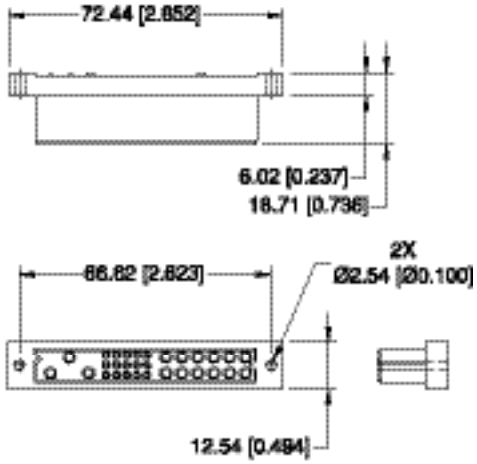


PCIM CONNECTOR OUTLINE DIMENSIONS

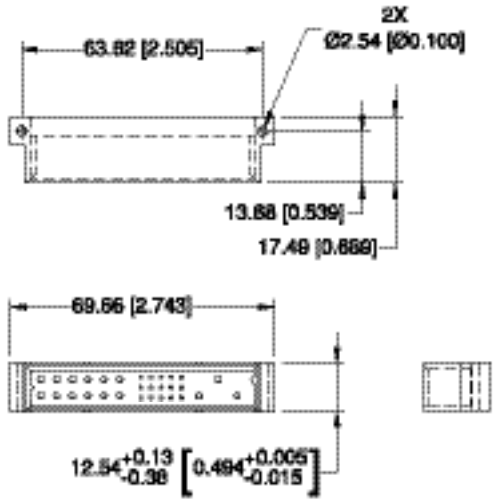
Right Angle Board Mount Connector Female Connector Dimensions



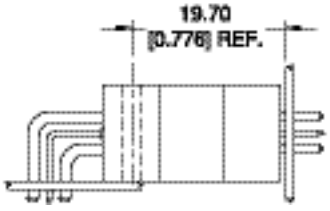
Straight Board Mount Connector Female Connector Dimensions



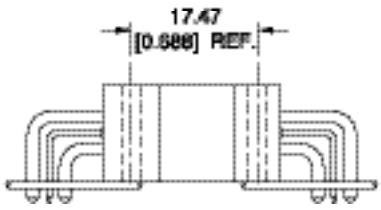
Right Angle Board Mount Connector Male Connector Dimensions



PCIM CONNECTOR MATING DIMENSIONS (FULLY MATED)



Straight Board Mount Female to Right Angle Board Mount Male.



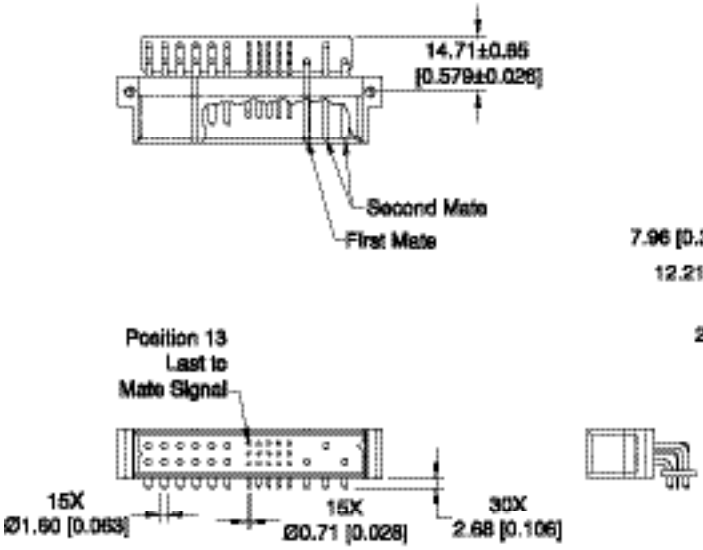
Right Angle Board Mount Female to Right Angle Board Mount Male.

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

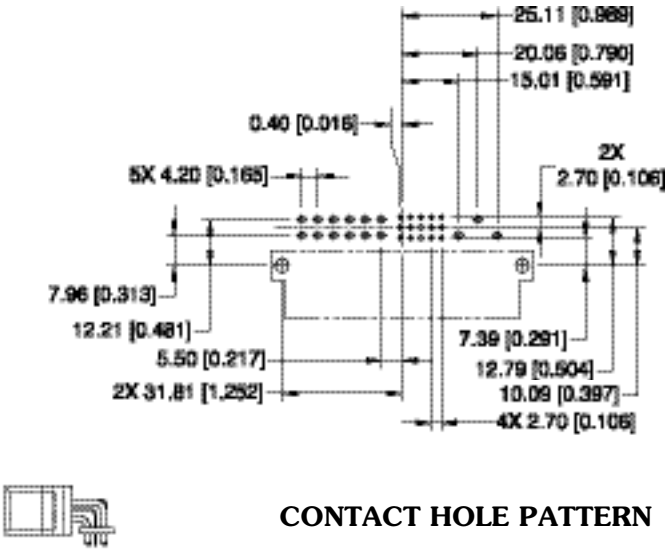
PCIM RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM30W15M400A1



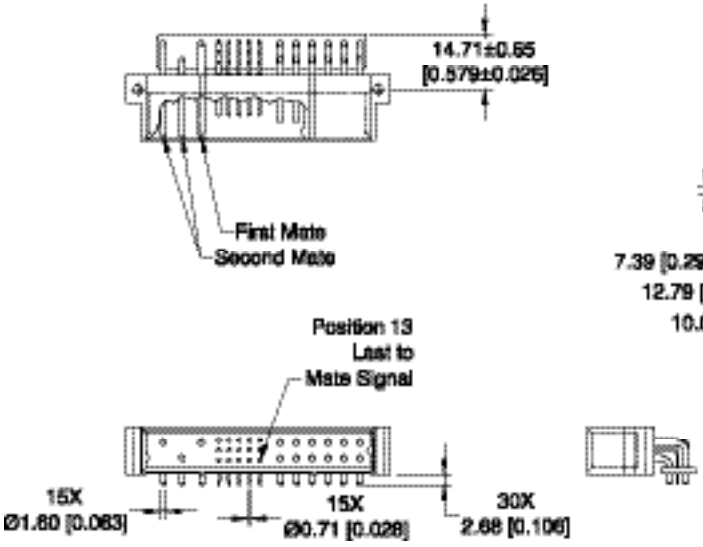
CONNECTOR DIMENSIONS



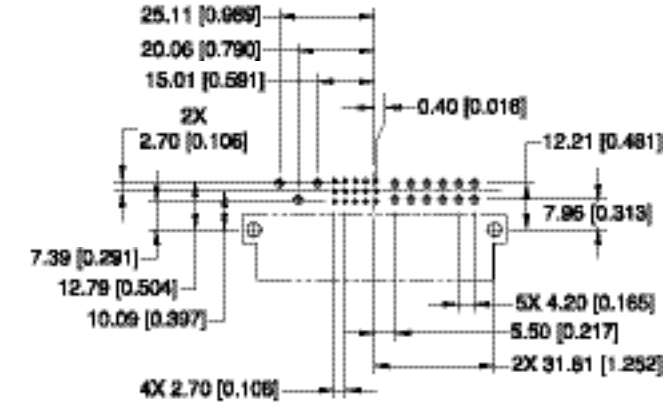
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM30W15RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

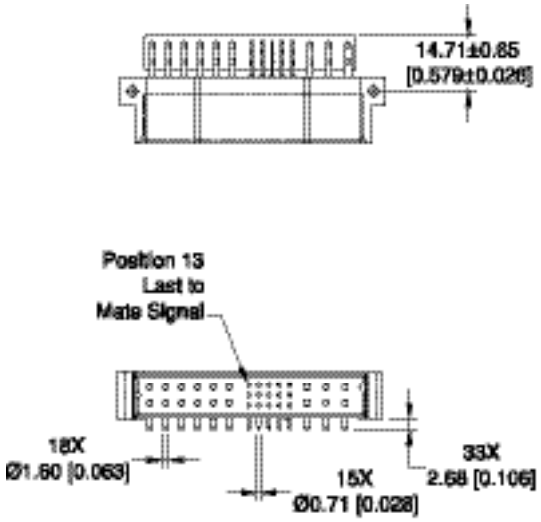
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

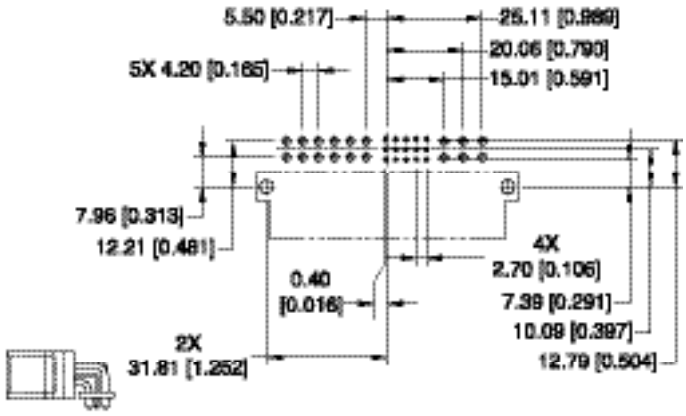
PCIM RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM33W18M400A1



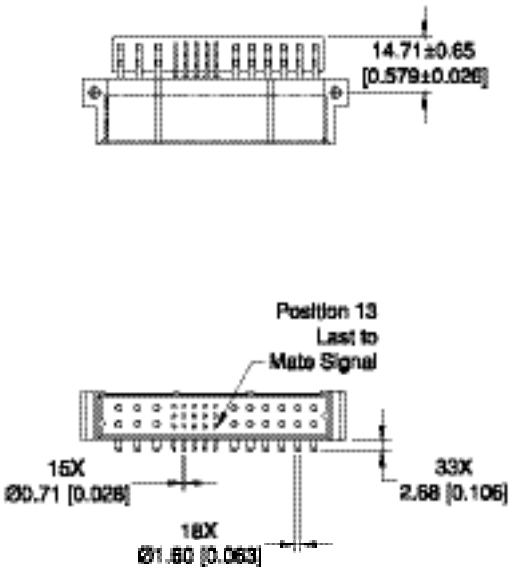
CONNECTOR DIMENSIONS



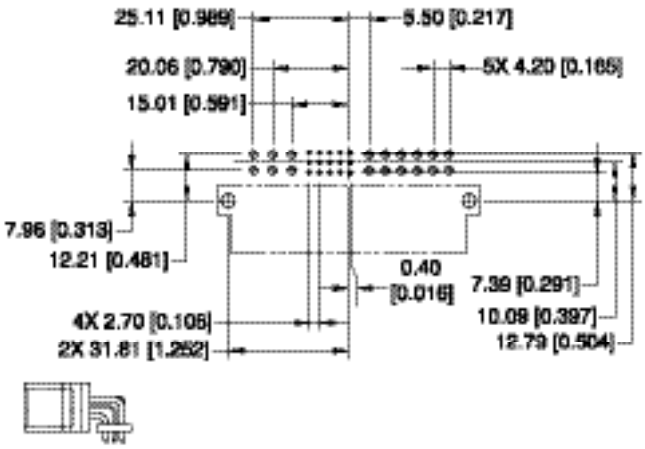
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM33W18RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

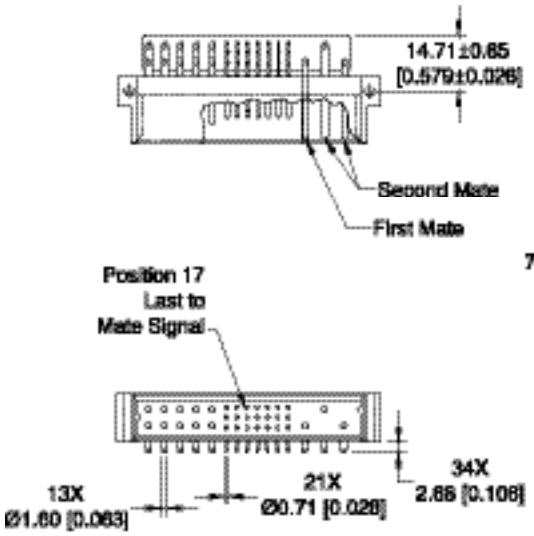
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

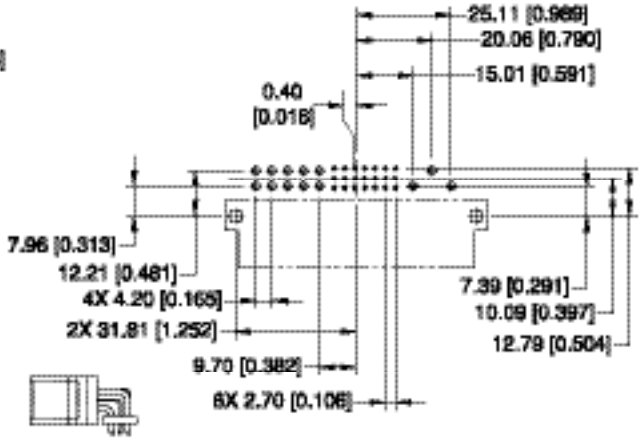
PCIM RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM34W13M400A1



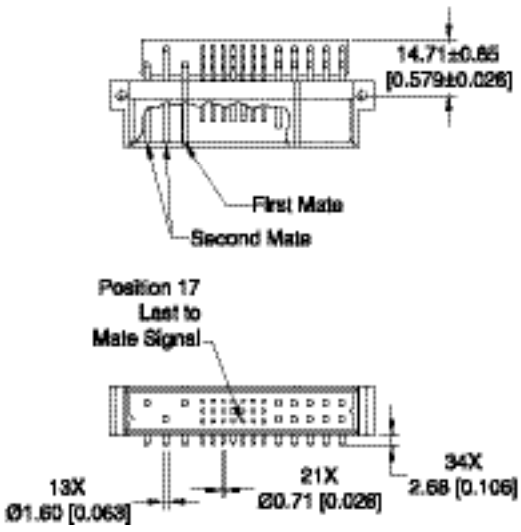
CONNECTOR DIMENSIONS



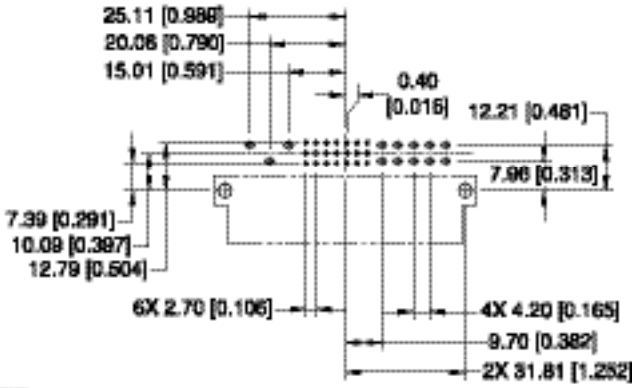
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM34W13RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

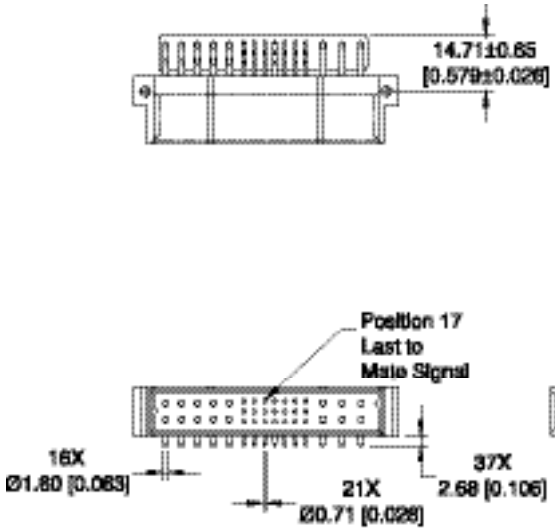
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

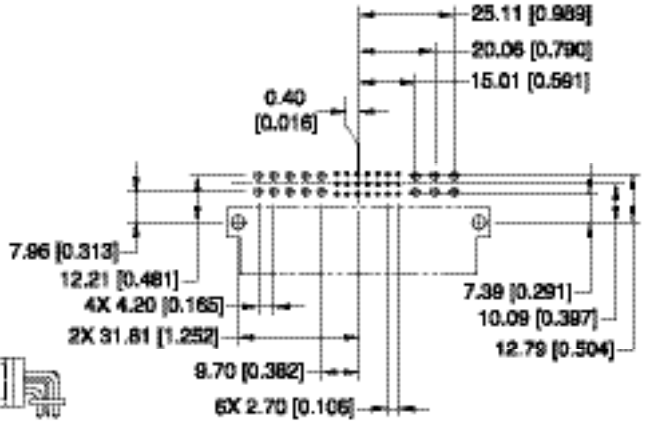
PCIM RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM37W16M400A1



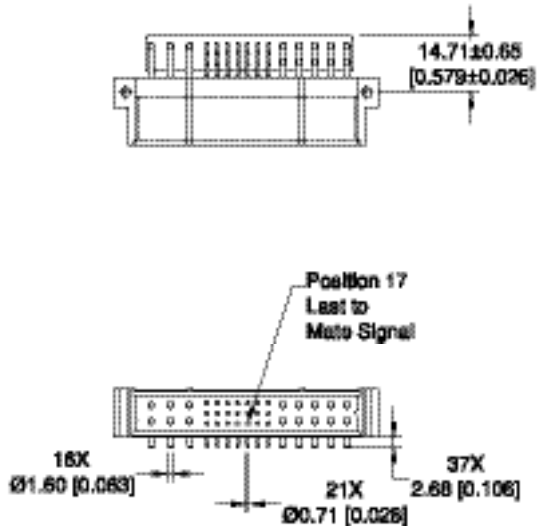
CONNECTOR DIMENSIONS



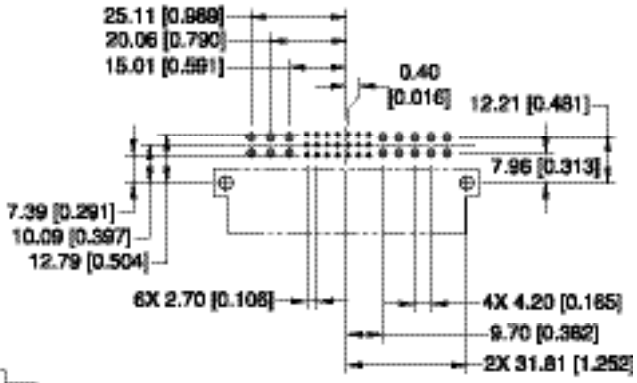
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM37W16RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

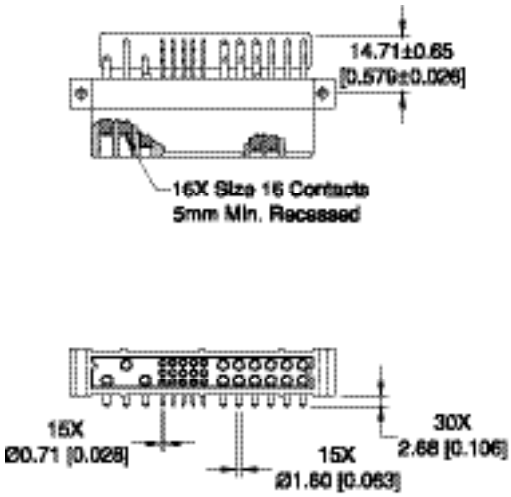
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

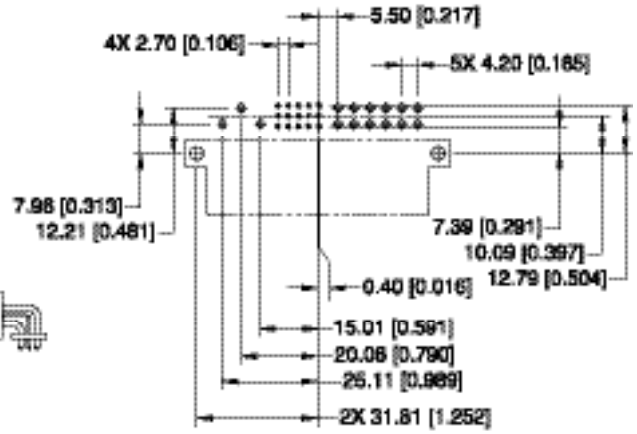
PCIM RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM30W15F400A1



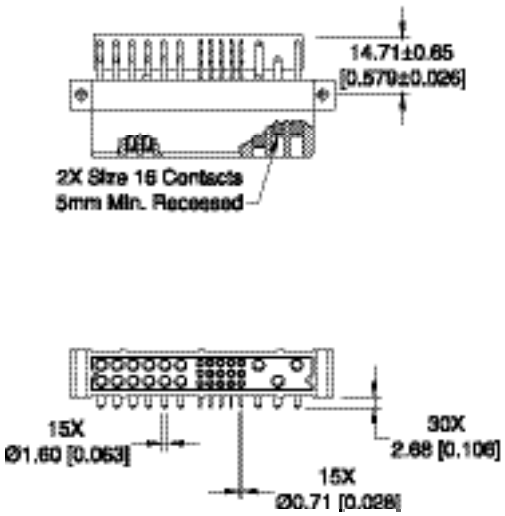
CONNECTOR DIMENSIONS



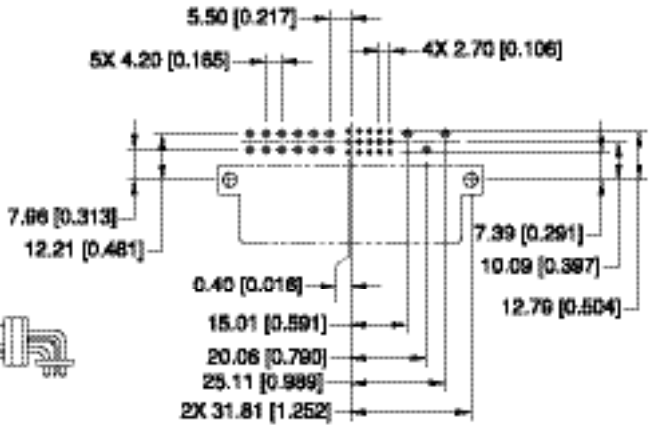
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM30W15RF400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

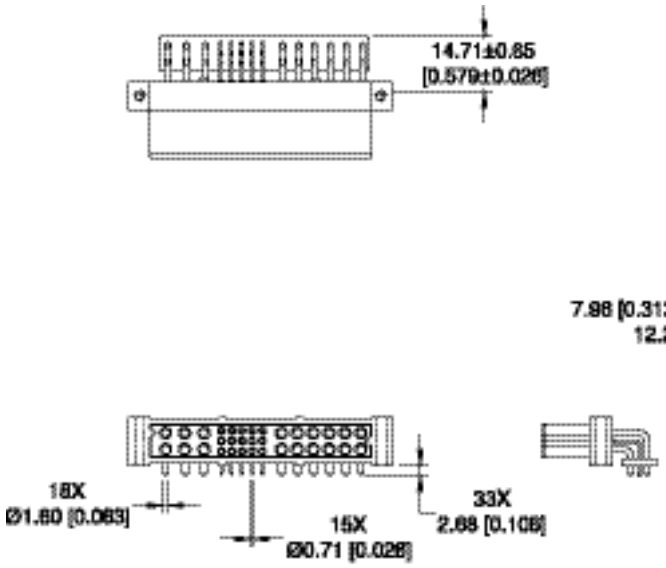
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

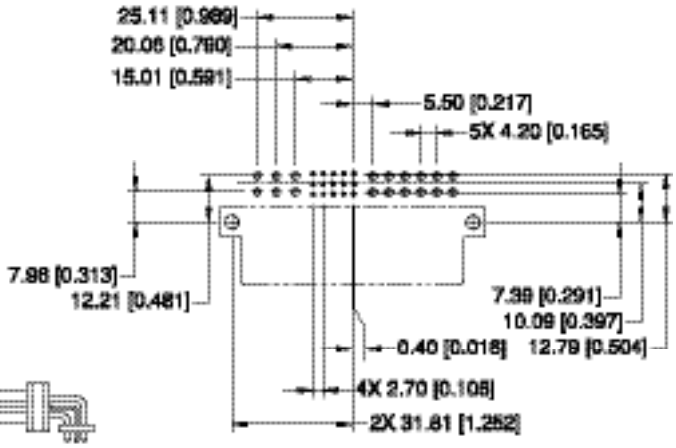
PCIM RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM33W18F400A1



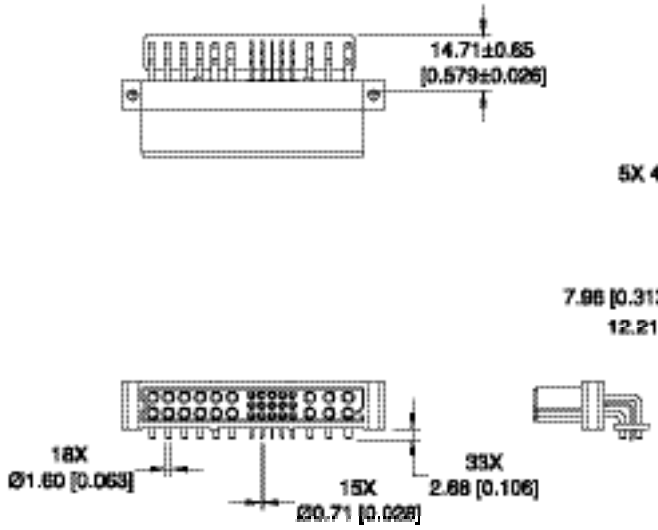
CONNECTOR DIMENSIONS



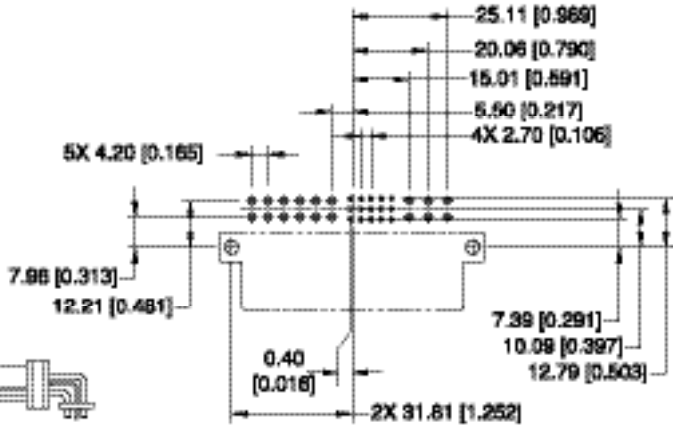
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM33W18RF400A1



CONNECTOR DIMENSIONS

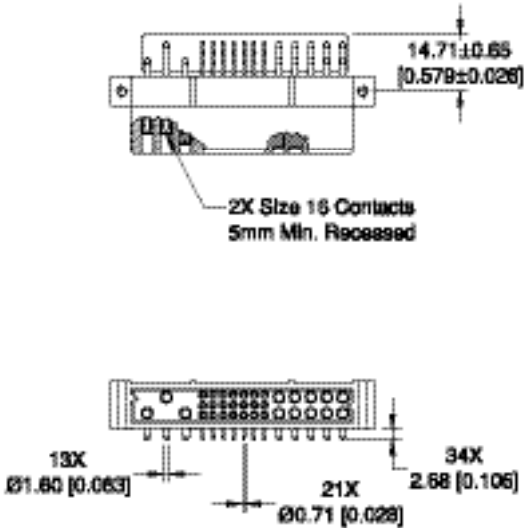


CONTACT HOLE PATTERN

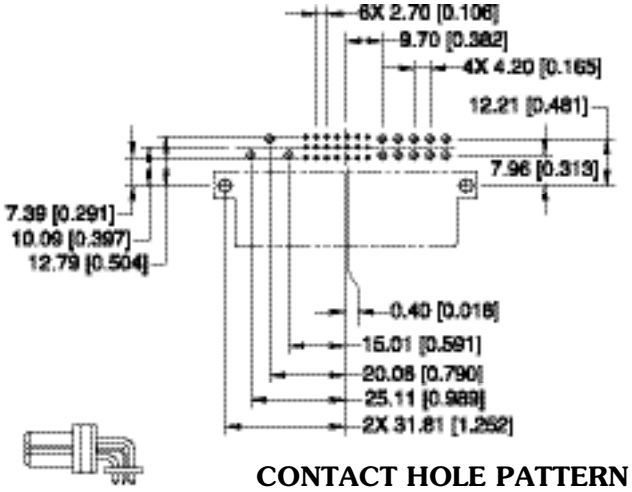
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

STANDARD PART NUMBER:
PCIM34W13F400A1



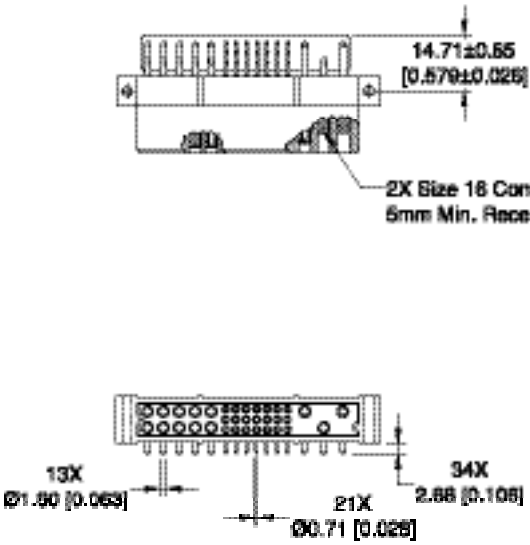
CONNECTOR DIMENSIONS



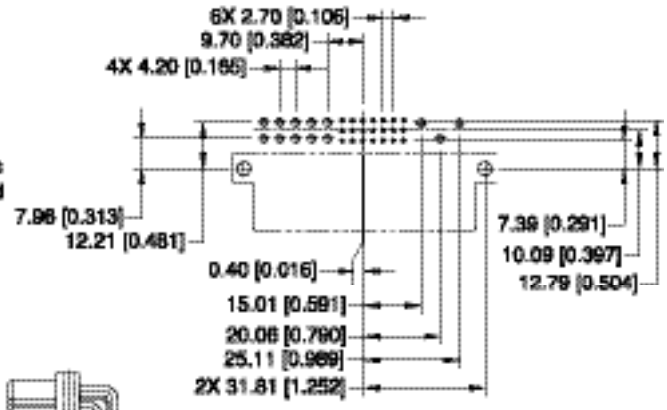
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM34W13RF400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

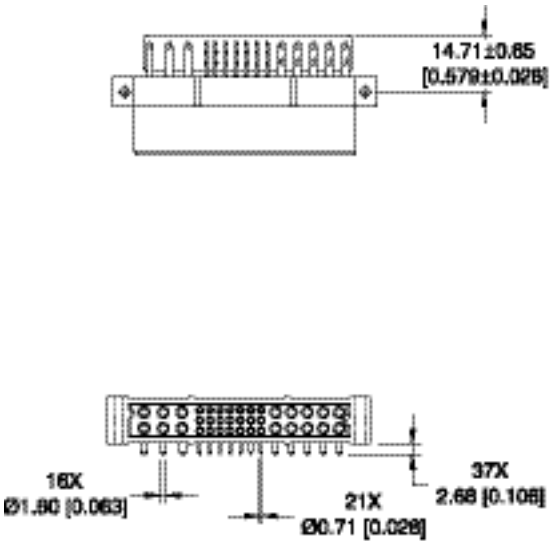
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

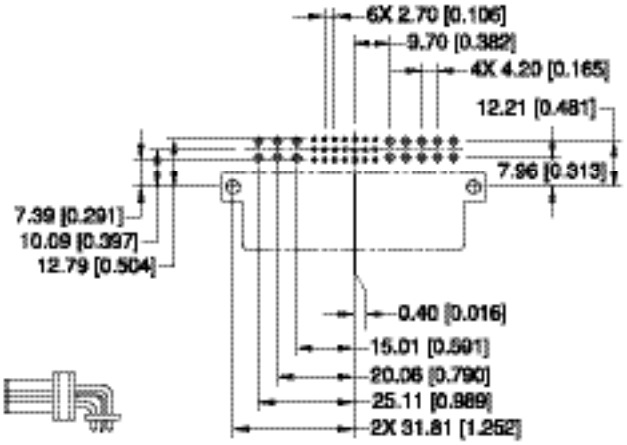
PCIM RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM37W16F400A1



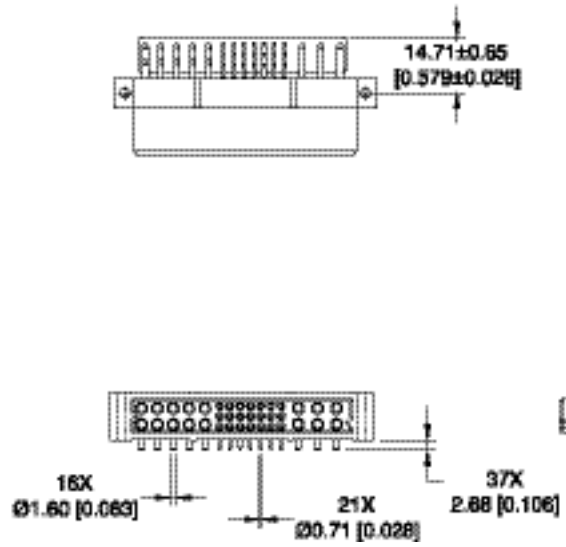
CONNECTOR DIMENSIONS



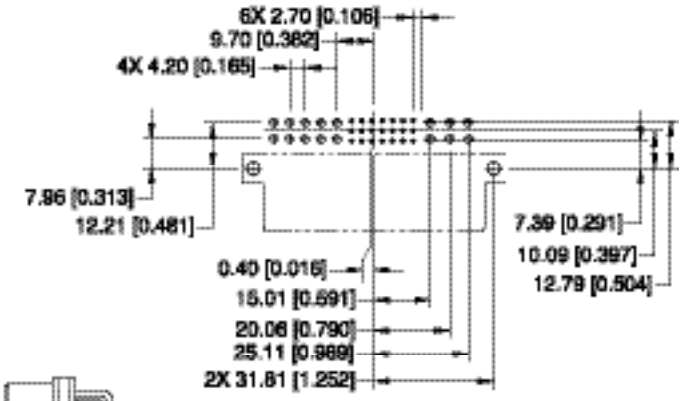
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIM37W16RF400A1



CONNECTOR DIMENSIONS

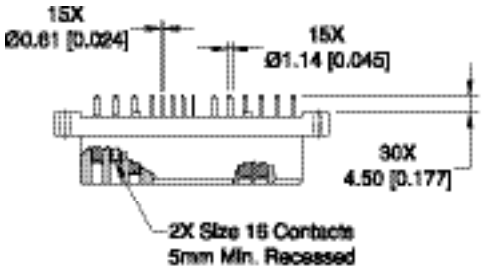


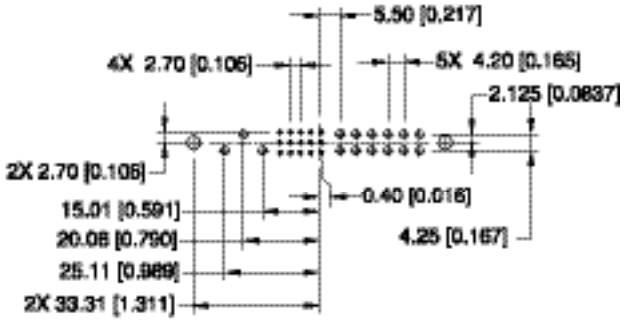
CONTACT HOLE PATTERN

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

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

STANDARD PART NUMBER:
PCIM30W15F300A1



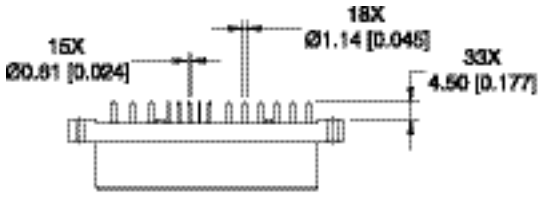


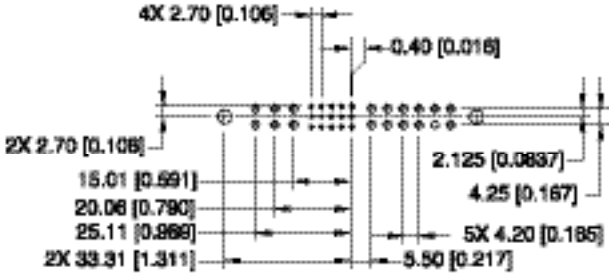
CONTACT HOLE PATTERN

CONNECTOR DIMENSIONS

Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER:
PCIM33W18F300A1





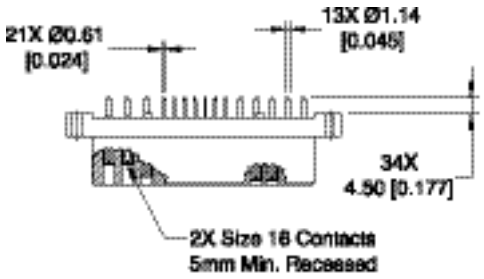
CONTACT HOLE PATTERN

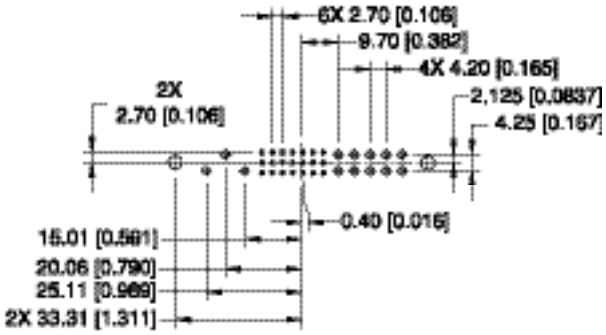
CONNECTOR DIMENSIONS

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

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00 [0.039] holes for size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

STANDARD PART NUMBER:
PCIM34W13F300A1



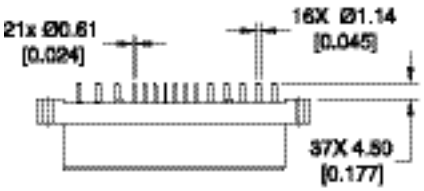


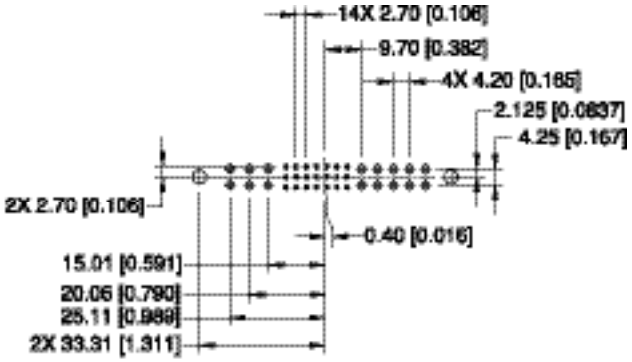
CONTACT HOLE PATTERN

CONNECTOR DIMENSIONS

Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER:
PCIM37W16F300A1





CONTACT HOLE PATTERN

CONNECTOR DIMENSIONS

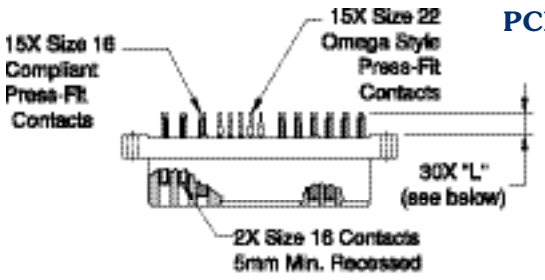
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

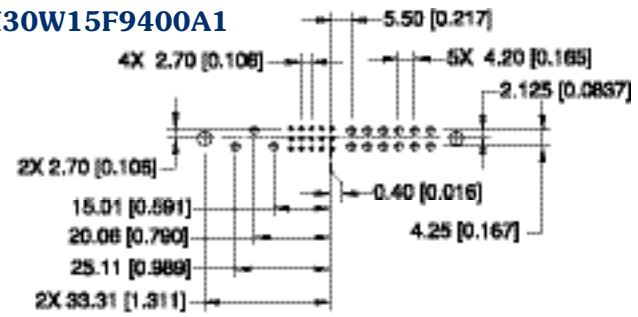
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00[0.039] holes for size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

PCIM COMPLIANT TERMINATION CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIM30W15F9300A1
PCIM30W15F9400A1



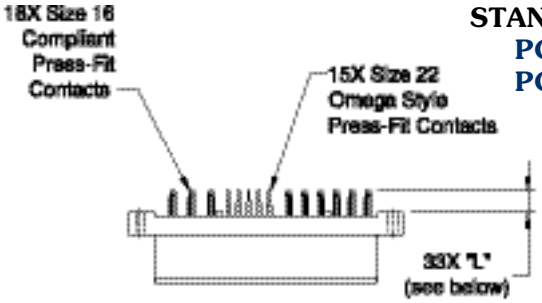


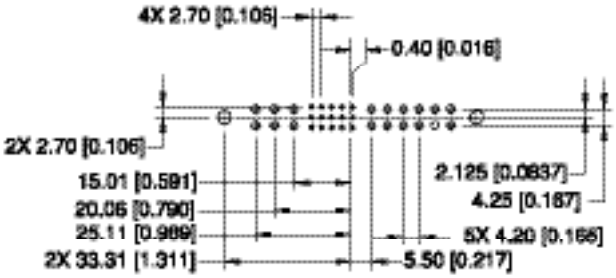
CONTACT HOLE PATTERN

CONNECTOR DIMENSIONS

Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER:
PCIM33W18F9300A1
PCIM33W18F9400A1





CONTACT HOLE PATTERN

CONNECTOR DIMENSIONS

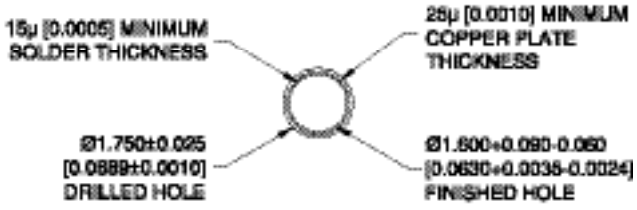
Note: See below for suggested printed board hole sizes.

CONTACT TAIL LENGTH

CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES



SIZE 16 PRESS-FIT CONTACT HOLE

SIZE 22 PRESS-FIT CONTACT HOLE

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

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

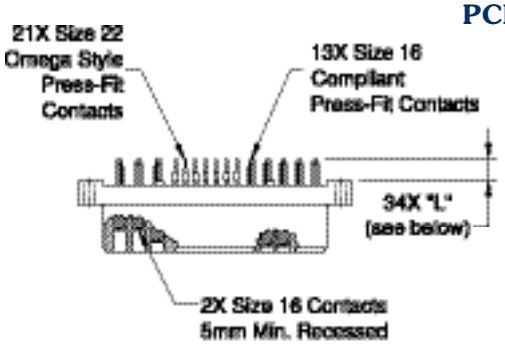
PCIM COMPLIANT TERMINATION CONNECTORS, FEMALE

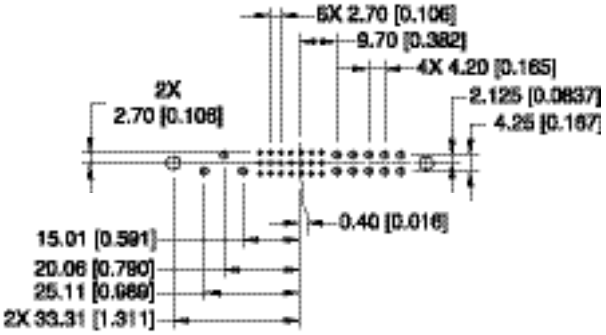
COMPACT POWER CONNECTOR

STANDARD PART NUMBER:

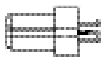
PCIM34W13F9300A1

PCIM34W13F9400A1





CONNECTOR DIMENSIONS



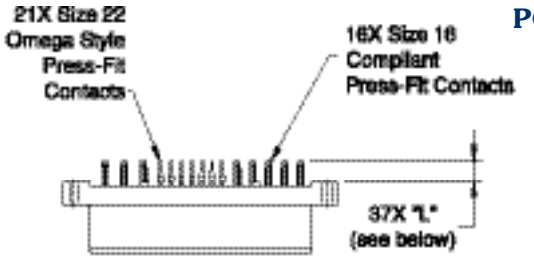
CONTACT HOLE PATTERN

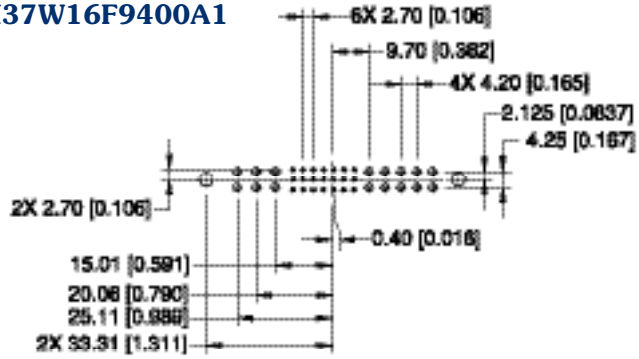
Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER:

PCIM37W16F9300A1

PCIM37W16F9400A1





CONNECTOR DIMENSIONS

CONTACT HOLE PATTERN

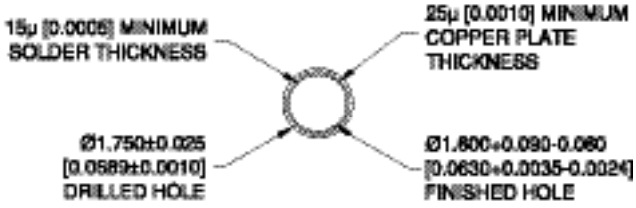
Note: See below for suggested printed board hole sizes.

CONTACT TAIL LENGTH

CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES



SIZE 16 PRESS-FIT CONTACT HOLE

SIZE 22 PRESS-FIT CONTACT HOLE

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

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

ORDERING INFORMATION – CODE NUMBERING SYSTEM

Specify Complete Connector By Following Steps 1 Through 8
Insert "0" When Step Is Not Used

STEP	1	2	3	4	5	6	7	8
	PCIM	30W15	F	93	0	0	A1	

STEP 1 - Basic Series
PCIM – PCIM Series

STEP 2 - Connector Variants
30W15 – 15 Size 16 Contacts and 15 Size 22 Contacts

30W15R – 15 Size 16 Contacts and 15 Size 22 Contacts Inverted style, use with Contact Type "4"

33W18 – 18 Size 16 Contacts and 15 Size 22 Contacts

33W18R – 18 Size 16 Contacts and 15 Size 22 Contacts Inverted style, use with Contact Type "4"

34W13 – 13 Size 16 Contacts and 21 Size 22 Contacts

34W13R – 13 Size 16 Contacts and 21 Size 22 Contacts Inverted style, use with Contact Type "4"

37W16 – 16 Size 16 Contacts and 21 Size 22 Contacts

37W16R – 16 Size 16 Contacts and 21 Size 22 Contacts Inverted style, use with Contact Type "4"

STEP 3 - Connector Gender
M – Male

F – Female

STEP 4 - Type of Contact
*3 – Solder, Straight Printed Board Mount with 4.50 [0.177] tail extension for connection systems 1.

4 – Solder, Right Angle Printed Board Mount with 2.68 [0.106] tail extension for connection systems 1 and 4.

*93 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thicknesses of 2.29 to 4.45 [0.090 to 0.175]. Connection systems 1 and 2.

*94 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thickness of 4.45 minimum [0.175 minimum].Connection systems 1 and 2.

STEP 5 - Mounting Style
0 – Standard Option

STEP 6 - Hoods
0 – Not applicable

STEP 7 - Contact Plating for Printed Board Type Connectors
A1 – Gold flash over nickel on mating end and gold over nickel on termination end.

A2 – Gold flash over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

C1 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 0.80 microns (0.000030 inch) gold over nickel on termination end.

C2 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

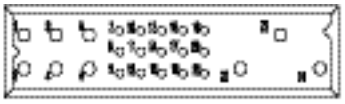
STEP 8 - Special Options
Consult technical sales for special options.

* Female contact variants are readily available. Consult Technical Sales for availability of male contact variants.

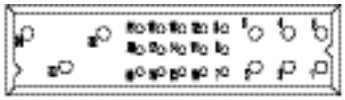
The PCIB Series encompasses all of the features of the PCIH Series in a smaller package. Reliability, high current capacity and many system management connections make the PCIB Series ideal for use in telecom, computer, information systems and industrial applications.

PCIB SERIES CONTACT VARIANTS

FACE VIEW OF MALE AND REAR VIEW OF FEMALE

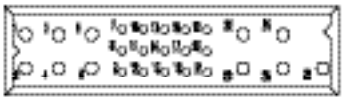


PCIB24W9 VARIANT

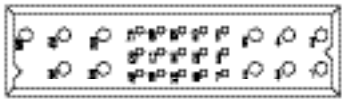


PCIB24W9R VARIANT (inverted)

9 Size 16 Power Contacts and 15 Size 22 Signal Contacts

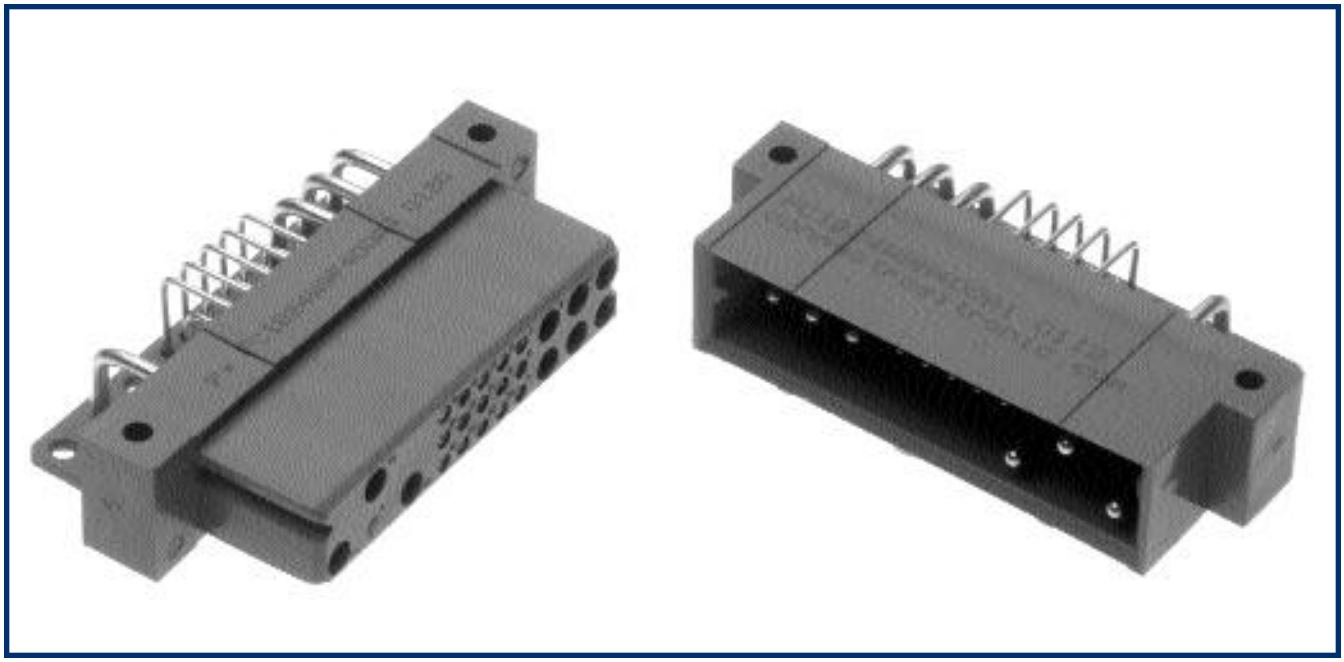


PCIB26W11 VARIANT



PCIB26W11R VARIANT (inverted)

11 Size 16 Power Contacts and 15 Size 22 Signal Contacts



PCIB TECHNICAL CHARACTERISTICS

COMPACT POWER CONNECTOR

MATERIALS AND FINISHES:

Insulator:	Glass-filled polyester, UL 94V-0, blue color.
Contacts:	High conductivity precision-machined copper alloy with gold flash over nickel plate. Other finishes available upon request
Mounting Screws:	Steel, zinc plated.

ELECTRICAL CHARACTERISTICS:

PCIB Contact Current Ratings
Consult Technical Sales for Temperature Rise Curve details.

PCIB24W9:	
Size 16 Power Contacts:	
Positions 22, 23, and 24:	40 amperes continuous, all contacts under load.
Positions 1through 6:	28 amperes continuous, all contacts under load.
Size 22 Signal Contacts:	3 amperes nominal rating.
PCIB26W11:	
Size 16 Power Contacts:	28 amperes continuous, all contacts under load.
Size 22 Signal Contacts:	3 amperes nominal rating.

Initial Contact Resistance; maximum:	
Size 16 Contact:	0.0007 ohms maximum.
Size 22 Contact:	0.004 ohms maximum. Per IEC 512-2, Test 2b.
Insulator Resistance:	5 G ohms per IEC 512-2, Test 3a.
Voltage Proof:	
PCIB24W9:	
Contacts 22, 23 and 24:	3,000 V r.m.s.
Contacts 1 through 6:	1,500 V r.m.s.
Contacts 7 through 21:	1,000 V r.m.s.
PCIB26W11:	
Contacts 1 through 6 and 22 through 26:	1,500 V r.m.s.
Contacts 7 through 21:	1,000 V r.m.s.
Creepage and Clearance Distance; minimum:	
PCIB24W9:	
Contact 24 to Contact 22:	3.2mm [0.126 inch]
Contact 23 to Contact 22:	3.2mm [0.126 inch]
Contact 24 to Signal Contacts:	6.4mm [0.252 inch]
Contact 23 to Signal Contacts:	6.4mm [0.252 inch]
Contact 24 to Contact 23:	2.5mm [0.098 inch]
Contact 22 to Signal Contacts:	2.0mm [0.079 inch]
PCIB26W11:	
Contact 22 to Signal Contacts:	2.0mm [0.079 inch]
Working Voltage:	
PCIB24W9:	
Contacts 22, 23 and 24:	1,000 V r.m.s.
Contacts 1 through 6:	500 V r.m.s.
Contacts 7 through 22:	333 V r.m.s.
PCIB26W11:	
Contacts 1 through 6 and 22 through 26:	500 V r.m.s.
Contacts 7 through 21:	333 V r.m.s.

MECHANICAL CHARACTERISTICS:

Blind Mating System:	Male and female connector bodies provide “lead-in” for 1.3 mm [0.050 inch] diametral misalignment.
Polarization:	Provided by connector body design.
Fixed Contacts:	Printed board terminations, both straight and right angle. Size 16 female contacts feature “Closed Entry” design. Size 22 feature rugged “Robi-D” design.
Fixed Contact Retention in Connector Body:	
Size 16 Contacts:	45 N [10 lbs.]
Size 22 Contacts:	27 N [6 lbs.]
Resistance to Solder Heat:	260˚C [500˚F] for 10 seconds duration per IEC 512-6, Test 12e, 25-watt soldering iron.
Sequential Contact Mating System:	
PCIB24W9:	First mate contact 22 and last mate contact position 7.
PCIB26W11:	Last mate contact position 7.
Consult Technical Sales for customer specified sequential mating.	
Safety “Recessed in Insulator” Contacts:	The following size 16 contacts are recessed 5.00 mm [0.197 inch] below the face of the female connector insulator per safety requirements.
PCIB24W9:	Contact positions 23 and 24.
PCIB26W11:	None
Compliant Terminations:	Size 16 and 22 contacts are available with Compliant Contact Terminations.
Printed Board Mounting:	Mounting holes provided in connector body for printed board mounting. Self-tapping screws are available.
Mechanical Operations:	250 couplings, minimum.

CLIMATIC CHARACTERISTICS:

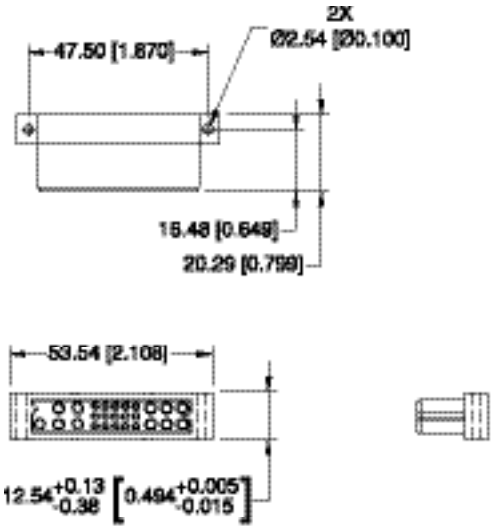
Working Temperature:	-55˚C to +125˚C.

U.L., C.S.A., and TUV recognitions are in process.
Consult Technical Sales for updated information.

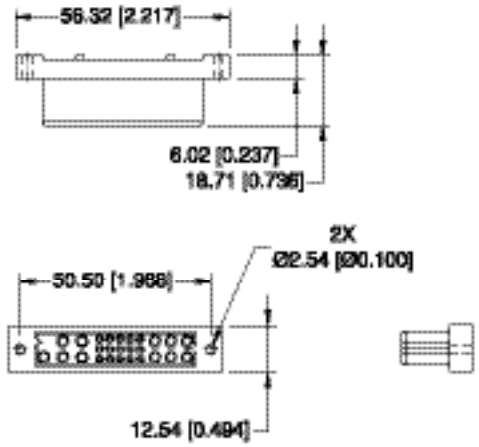
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

PCIB CONNECTOR OUTLINE DIMENSIONS

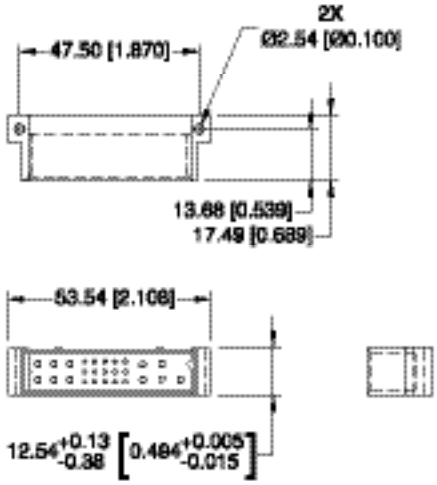
Right Angle Board Mount Connector Female Connector Dimensions



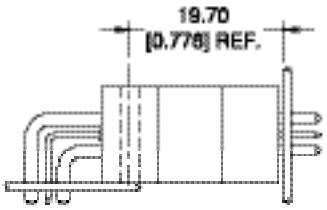
Straight Board Mount Connector Female Connector Dimensions



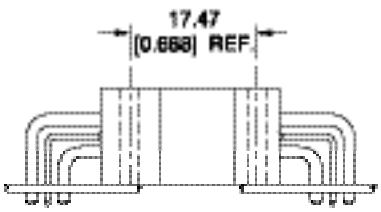
Right Angle Board Mount Connector Male Connector Dimensions



PCIB CONNECTOR MATING DIMENSIONS (FULLY MATED)



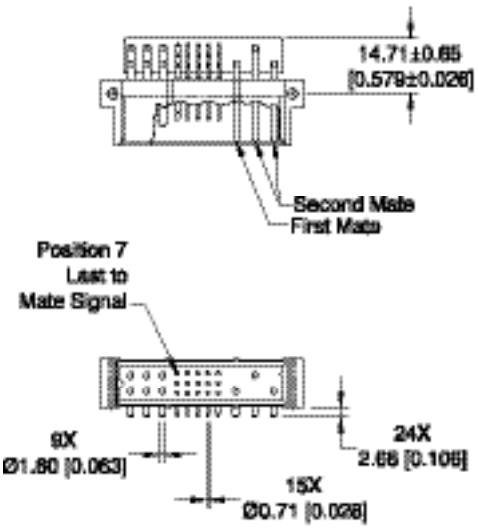
Straight Board Mount Female to Right Angle Board Mount Male.



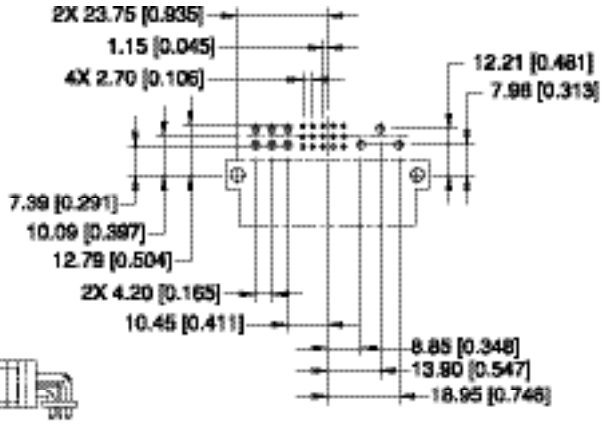
Right Angle Board Mount Female to Right Angle Board Mount Male.

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

STANDARD PART NUMBER:
PCIB24W9M400A1



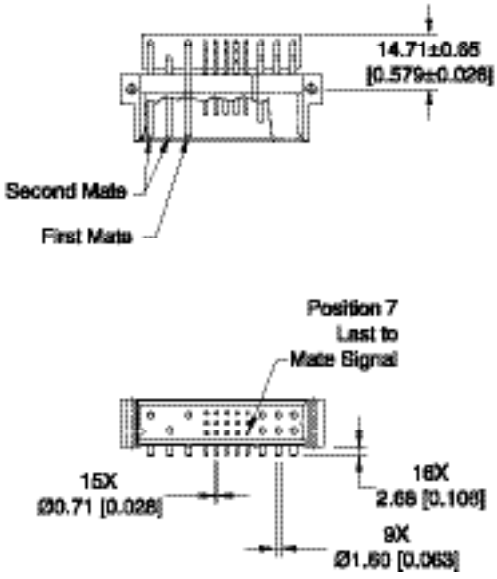
CONNECTOR DIMENSIONS



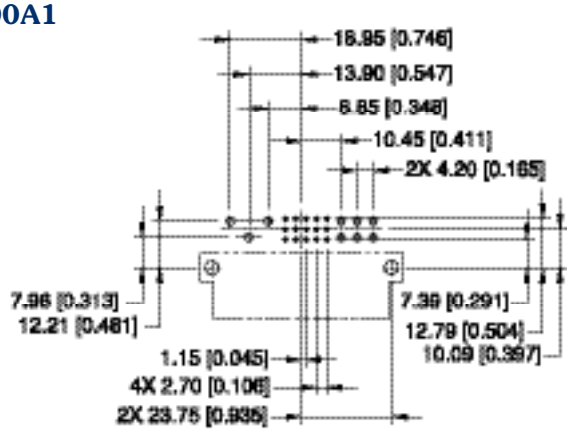
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIB24W9RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

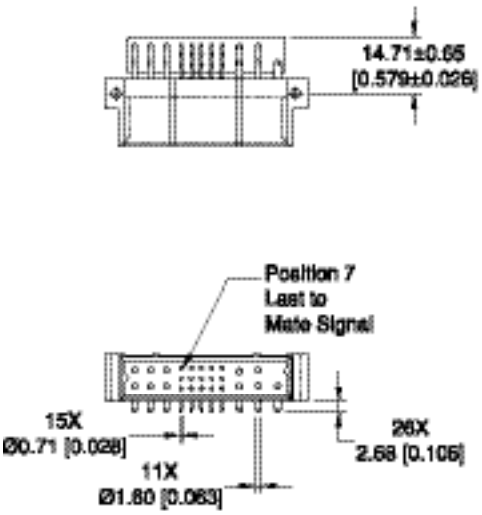
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

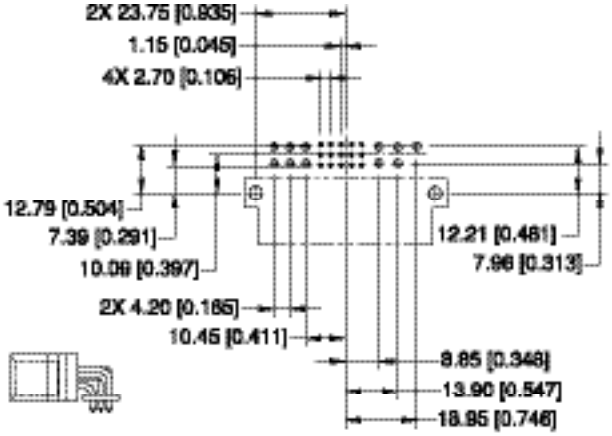
PCIB RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIB26W11M400A1



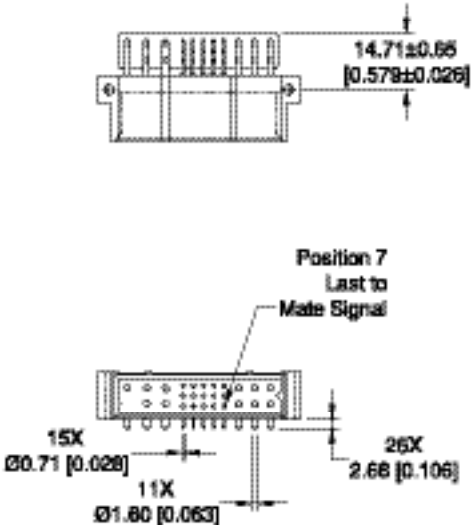
CONNECTOR DIMENSIONS



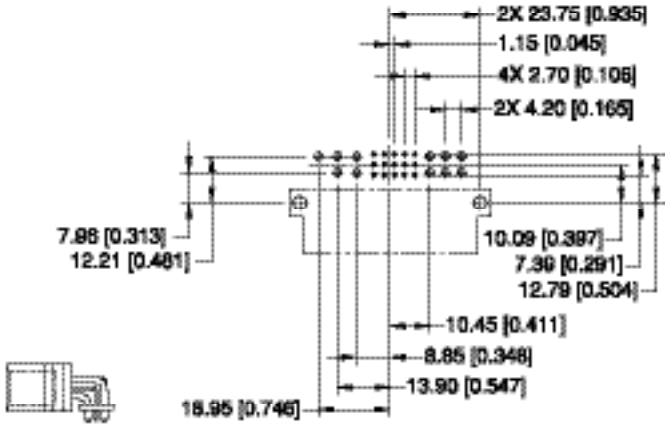
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIB26W11RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

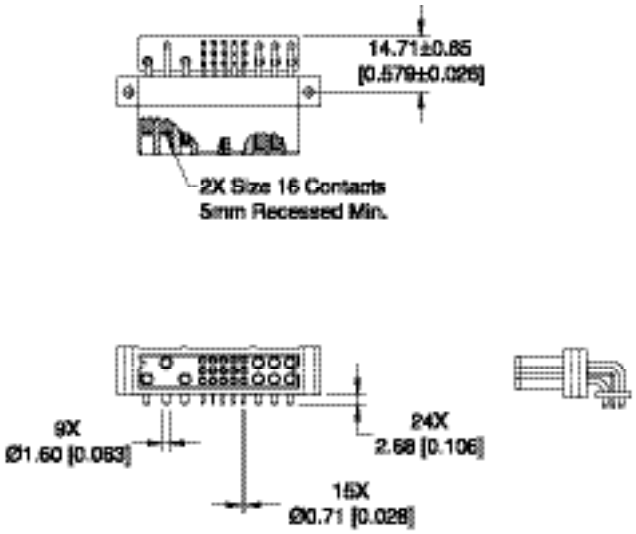
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

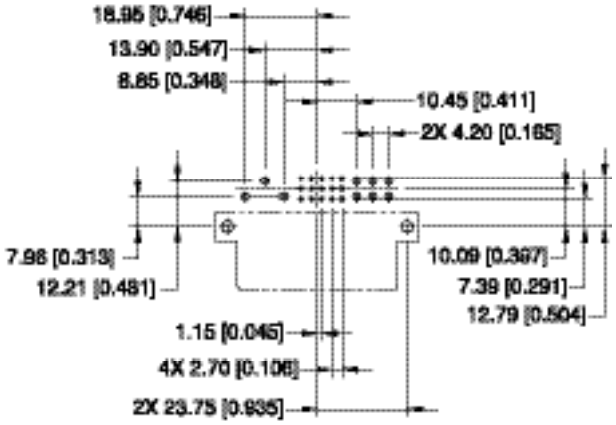
PCIB RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIB24W9F400A1



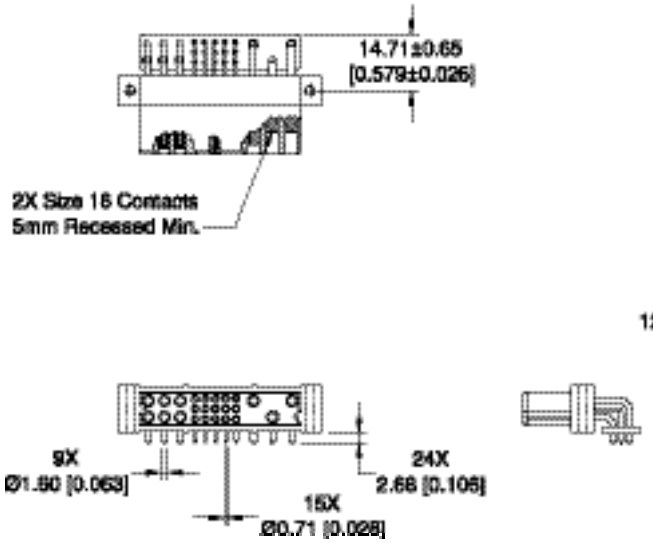
CONNECTOR DIMENSIONS



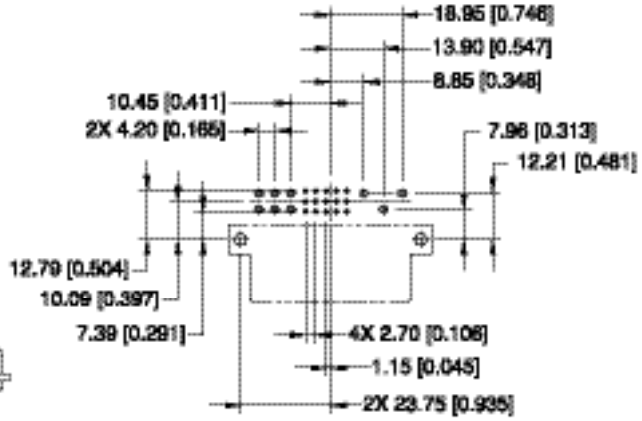
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIB24W9RF400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

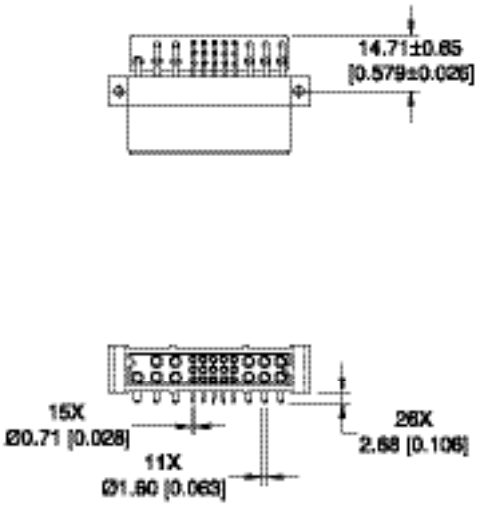
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

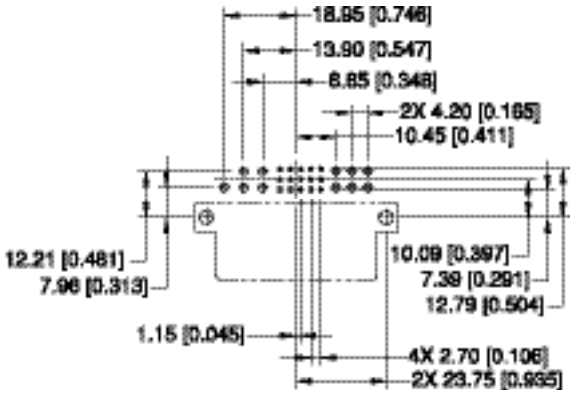
PCIB RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIB26W11F400A1



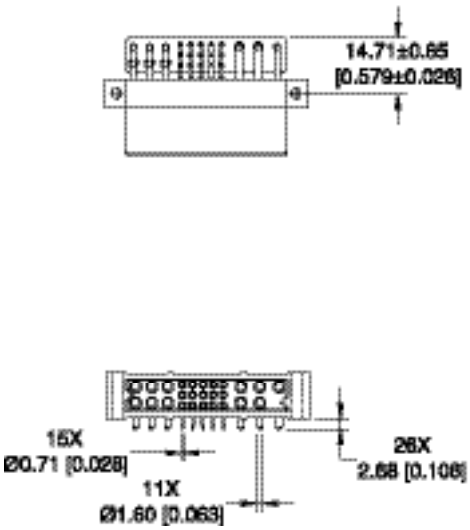
CONNECTOR DIMENSIONS



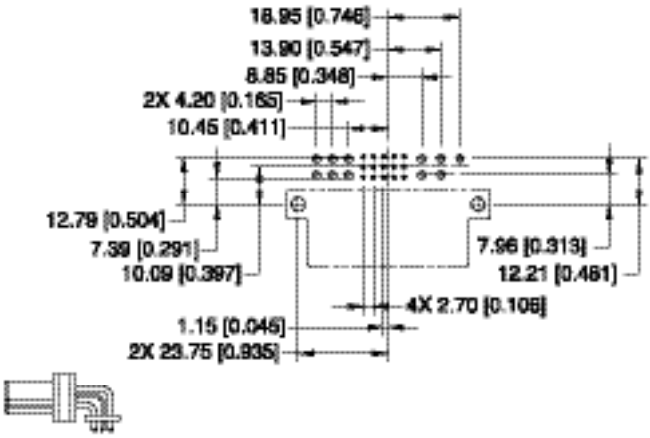
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIB26W11RF400A1



CONNECTOR DIMENSIONS

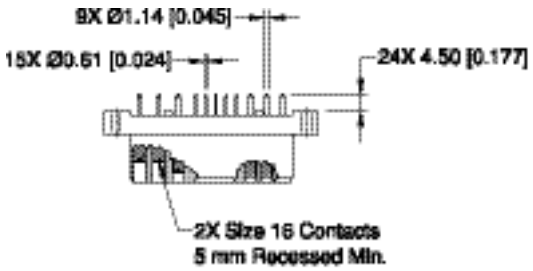


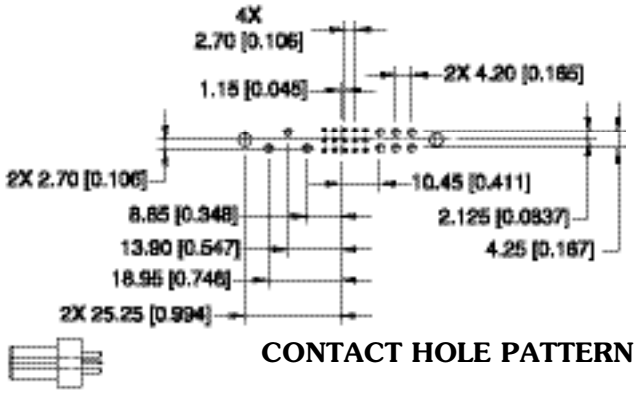
CONTACT HOLE PATTERN

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

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

STANDARD PART NUMBER:
PCIB24W9F300A1



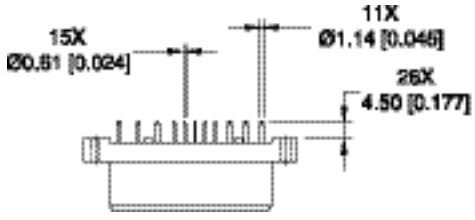


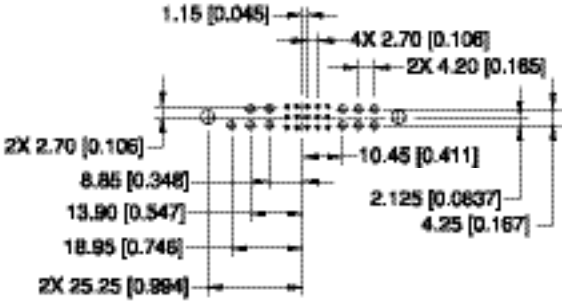
CONTACT HOLE PATTERN

CONNECTOR DIMENSIONS

Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER:
PCIB26W11F300A1





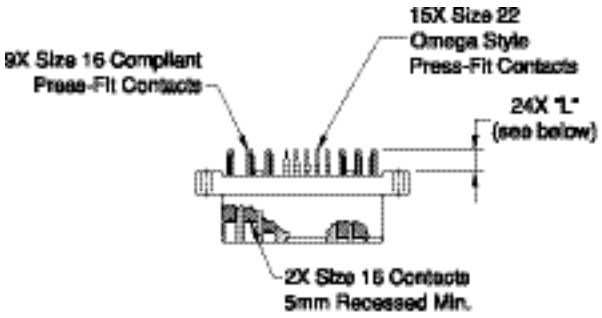
CONTACT HOLE PATTERN

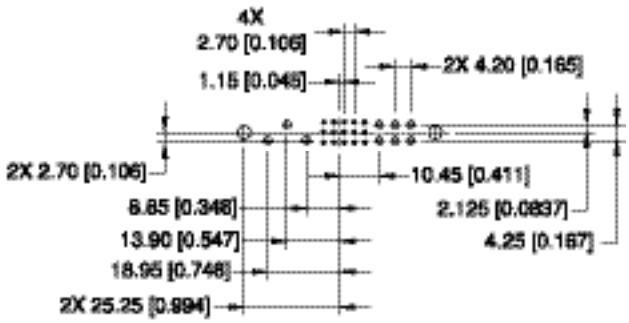
CONNECTOR DIMENSIONS

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

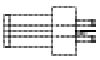
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00 [0.039] holes for size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

STANDARD PART NUMBER:
PCIB24W9F9300A1
PCIB24W9F9400A1





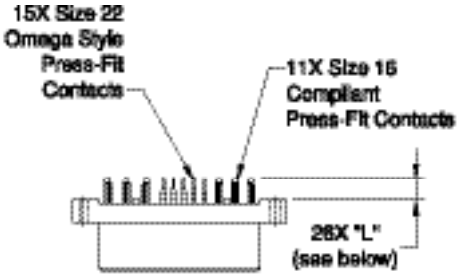
CONNECTOR DIMENSIONS

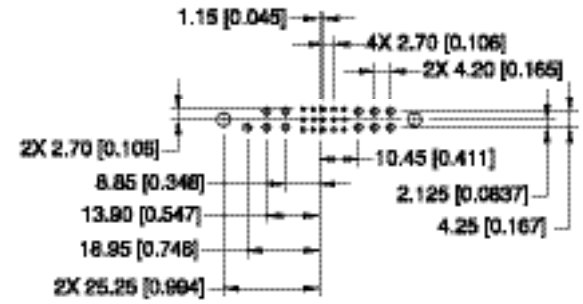


CONTACT HOLE PATTERN

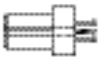
Note: See below for suggested printed board hole sizes.

STANDARD PART NUMBER:
PCIB26W11F9300A1
PCIB26W11F9400A1





CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

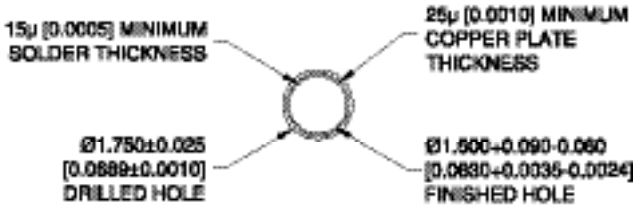
Note: See below for suggested printed board hole sizes.

CONTACT TAIL LENGTH

CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES



SIZE 16 PRESS-FIT CONTACT HOLE

SIZE 22 PRESS-FIT CONTACT HOLE

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

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

ORDERING INFORMATION – CODE NUMBERING SYSTEM

Specify Complete Connector By Following Steps 1 Through 8
Insert "0" When Step Is Not Used

STEP	1	2	3	4	5	6	7	8
	PCIB	26W11	F	93	0	0	A1	

STEP 1 - Basic Series
PCIB - PCIB SERIES

STEP 2 - Connector Variants

24W9 – 9 Size 16 Contacts and 15 Size 22 Contacts

24W9R – 9 Size 16 Contacts and 15 Size 22 Contacts Inverted style, use with Contact Type "4"

26W11 – 11 Size 16 Contacts and 15 Size 22 Contacts

26W11R – 11 Size 16 Contacts and 15 Size 22 Contacts Inverted style, use with Contact Type "4"

STEP 3 - Connector Gender
M – Male

F – Female

STEP 4 - Type of Contact

*3 – Solder, Straight Printed Board Mount with 4.50 [0.177] tail extension for connection systems 1.

4 – Solder, Right Angle Printed Board Mount with 2.68 [0.106] tail extension for connection systems 1 and 4.

*93 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thicknesses of 2.29 to 4.45 [0.090 to 0.175]. Connection systems 1 and 2.

*94 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thickness of 4.45 minimum [0.175 minimum].Connection systems 1 and 2.

STEP 5 - Mounting Style
0 – Standard Option

STEP 6 - Hoods
0 – Not applicable

STEP 7 - Contact Plating for Printed Board Type Connectors

A1 – Gold flash over nickel on mating end and gold over nickel on termination end.

A2 – Gold flash over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

C1 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 0.80 microns [0.000030 inch] gold over nickel on termination end.

C2 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

STEP 8 - Special Options
Consult technical sales for special options.

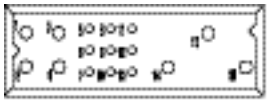
* Female contact variants are readily available. Consult Technical Sales for availability of male contact variants.

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

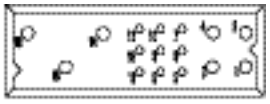
The PCIC Series encompasses all of the features of the PCIH Series in a **1U** package. Reliability, high current capacity and many system management connections make the PCIC Series ideal for use in telecom, computer, information systems and industrial applications.

PCIC SERIES CONTACT VARIANTS

FACE VIEW OF MALE AND REAR VIEW OF FEMALE

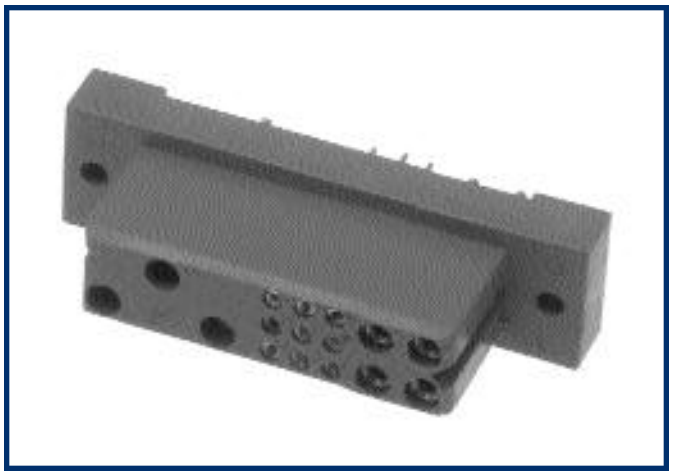


PCIC16W7 VARIANT



PCIC16W7R VARIANT (inverted)

7 Size 16 Power Contacts and 9 Size 22 Signal Contacts



PCIC TECHNICAL CHARACTERISTICS

COMPACT POWER CONNECTOR

MATERIALS AND FINISHES:

Insulator:	Glass-filled polyester, UL 94V-0, blue color.
Contacts:	High conductivity precision-machined copper alloy with gold flash over nickel plate. Other finishes available upon request.
Mounting Screws:	Steel, zinc plated.

ELECTRICAL CHARACTERISTICS:

PCIC Contact Current Ratings

Consult Technical Sales for Temperature Rise Curve details.

Size 16 Power Contacts:	
Positions 14, 15, and 16:	40 amperes continuous, all contacts under load.
Positions 1 through 4:	28 amperes continuous, all contacts under load.
Size 22 Signal Contacts:	3 amperes nominal rating.
Initial Contact Resistance; maximum:	
Size 16 Contact:	0.0007 ohms maximum.
Size 22 Contact:	0.004 ohms maximum. Per IEC 512-2, Test 2b.
Insulator Resistance:	5 G ohms per IEC 512-2, Test 3a.
Voltage Proof:	
PCIC16W7:	
Contacts 14, 15, and 16:	3,000 V r.m.s.
Contacts 1 through 4:	1,500 V r.m.s.
Contacts 5 through 13:	1,000 V r.m.s.
Creepage and Clearance Distance; minimum:	
PCIC16W7:	
Contact 16 to Contact 14:	3.2mm [0.126 inch]
Contact 15 to Contact 14:	3.2mm [0.126 inch]
Contact 16 to Signal Contacts:	6.4mm [0.252 inch]
Contact 15 to Signal Contacts:	6.4mm [0.252 inch]
Contact 16 to Contact 15:	2.5mm [0.098 inch]
Contact 14 to Signal Contacts:	2.0mm [0.079 inch]
Working Voltage:	
PCIC16W7:	
Contacts 14, 15 and 16:	1,000 V r.m.s.
Contacts 1 through 4:	500 V r.m.s.
Contacts 5 through 13:	333 V r.m.s.

MECHANICAL CHARACTERISTICS:

Blind Mating System:	Male and female connector bodies provide “lead-in” for 1.3mm [0.050 inch] diametral misalignment.
Polarization:	Provided by connector body design.
Fixed Contacts:	Printed board terminations, both straight and right angle. Size 16 female contacts feature “Closed Entry” design. Size 22 feature rugged “Robi-D” design.
Fixed Contact Retention in Connector Body:	
Size 16 Contacts:	45 N [10 lbs.]
Size 22 Contacts:	27 N [6 lbs.]
Resistance to Solder Heat:	260˚C [500˚F] for 10 seconds duration per IEC 512-6, Test 12e, 25-watt soldering iron.
Sequential Contact MatingSystem:	
PCIC16W7:	First mate contact 14 and last mate contact position 5.

Consult Technical Sales for customer specified sequential mating.

Safety “Recessed in Insulator” Contacts:	The following size 16 contacts are recessed 5mm [0.197 inch] below the face of the female connector insulator per safety requirements.
PCIC16W7:	Contact positions 15 and 16.
Compliant Terminations:	Size 16 and 22 contacts are available with Compliant Contact Terminations.
Printed Board Mounting:	Mounting holes provided in connector body for printed board mounting. Self-tapping screws are available.
Mechanical Operations:	250 couplings, minimum.

CLIMATIC CHARACTERISTICS:

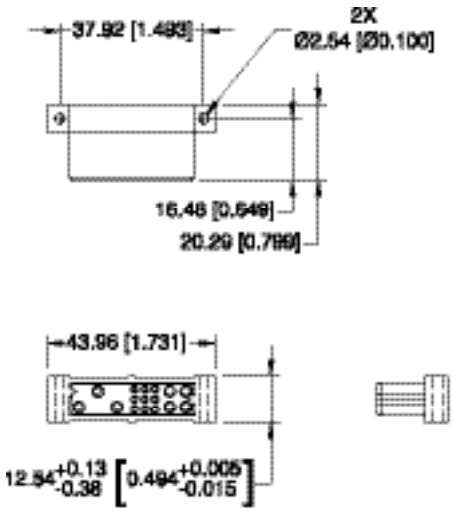
Working Temperature:	-55˚C to +125˚C.

U.L., C.S.A., and TUV recognitions are in process.
Consult Technical Sales for updated information.

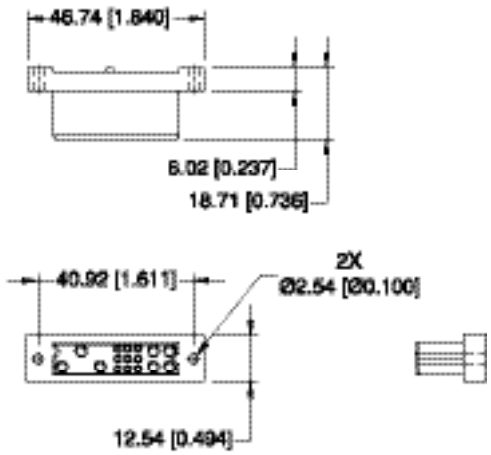
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

PCIC CONNECTOR OUTLINE DIMENSIONS

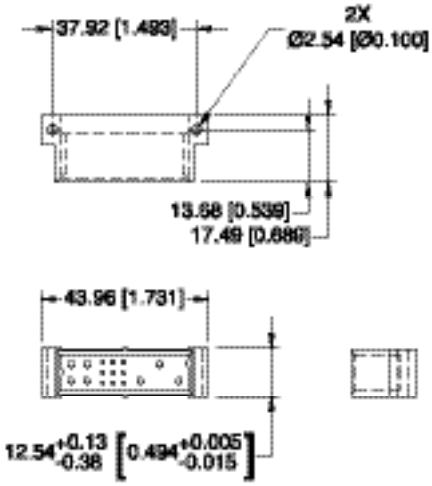
Right Angle Board Mount Connector Female Connector Dimensions



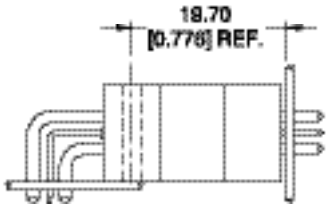
Straight Board Mount Connector Female Connector Dimensions



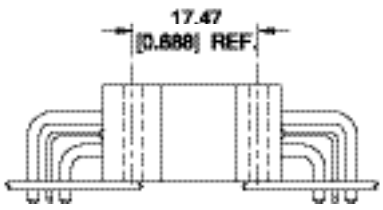
Right Angle Board Mount Connector Male Connector Dimensions



PCIC CONNECTOR MATING DIMENSIONS (FULLY MATED)



Straight Board Mount Female to Right Angle Board Mount Male.



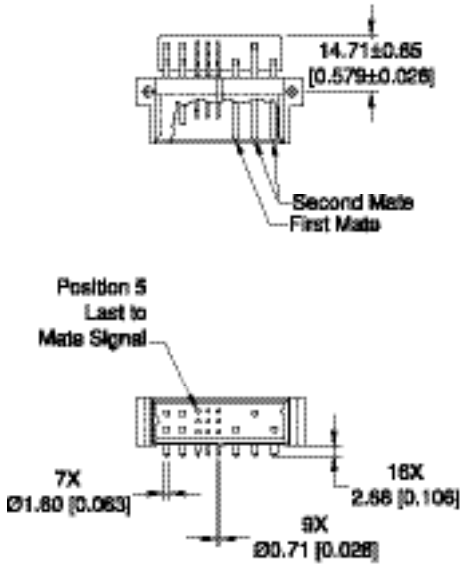
Right Angle Board Mount Female to Right Angle Board Mount Male.

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

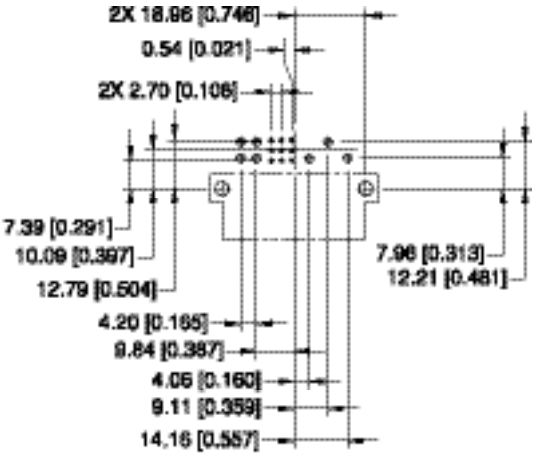
PCIC RIGHT ANGLE BOARD MOUNT CONNECTORS, MALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIC16W7M400A1



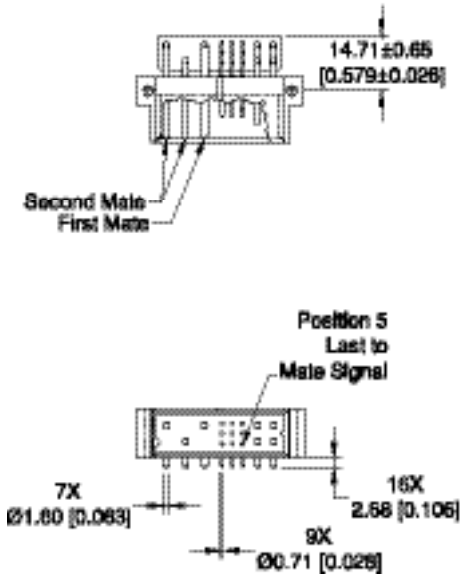
CONNECTOR DIMENSIONS



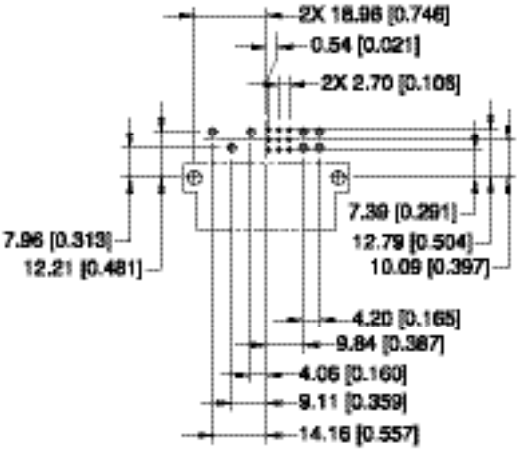
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIC16W7RM400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

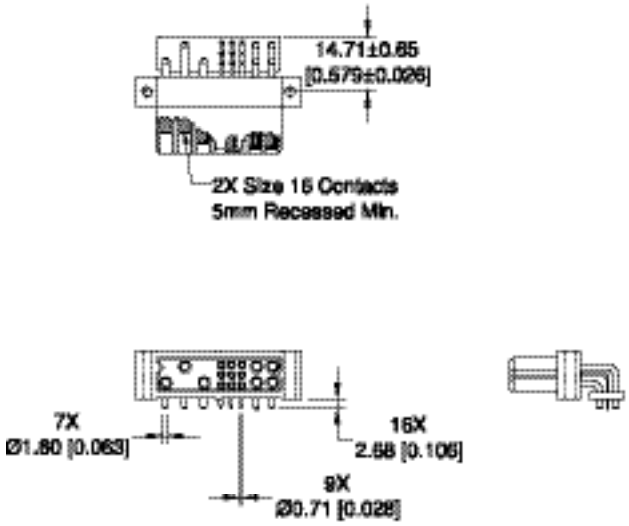
SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

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

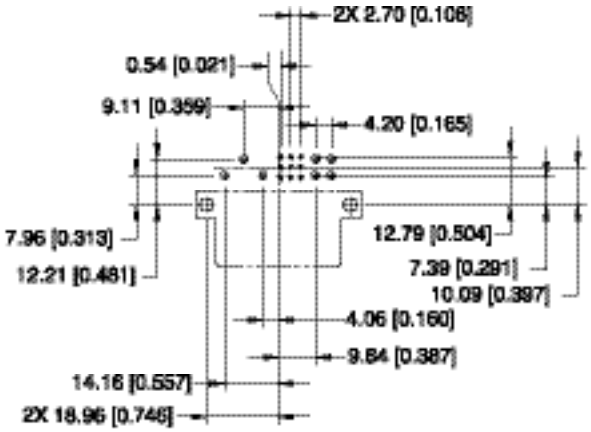
PCIC RIGHT ANGLE BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIC16W7F400A1



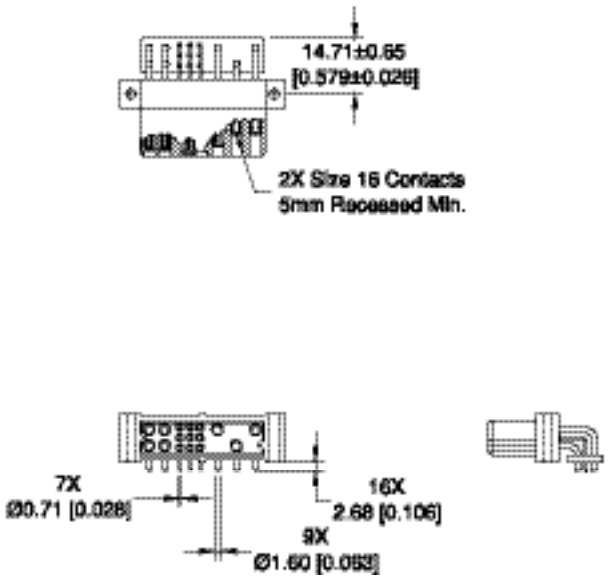
CONNECTOR DIMENSIONS



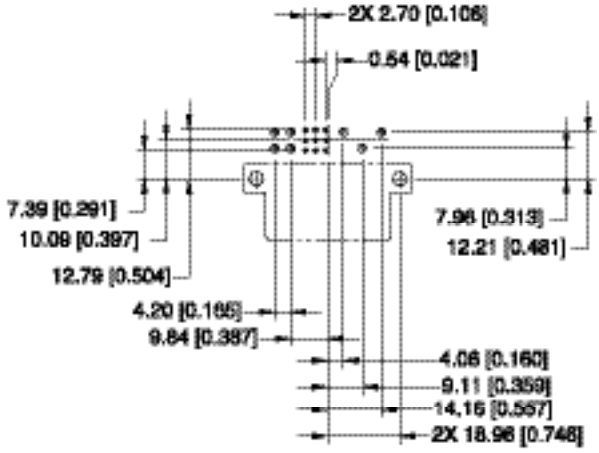
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

INVERTED PART NUMBER:
PCIC16W7RF400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

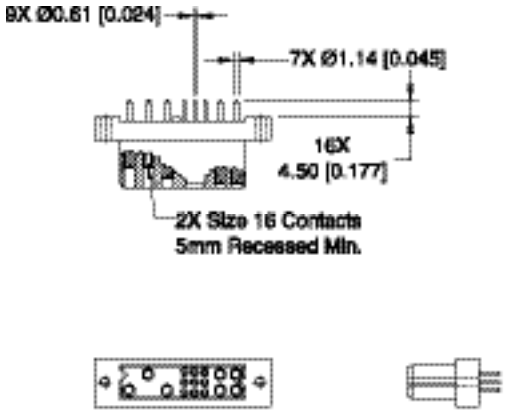
DIMENSIONS ARE IN MILLIMETERS [INCHES]
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.14 [0.045] holes for size 22 contact holes.
Suggest Ø2.03 [0.080] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

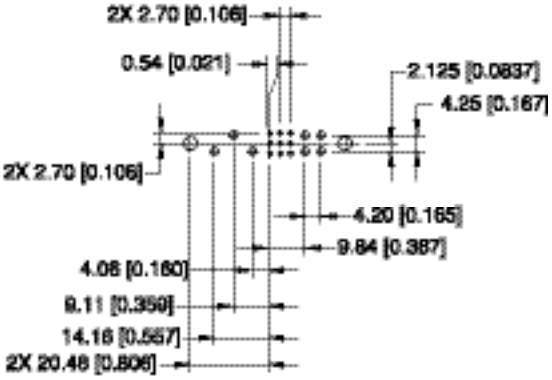
PCIC STRAIGHT SOLDER AND COMPLIANT BOARD MOUNT CONNECTORS, FEMALE

COMPACT POWER CONNECTOR

STANDARD PART NUMBER:
PCIC16W7F300A1



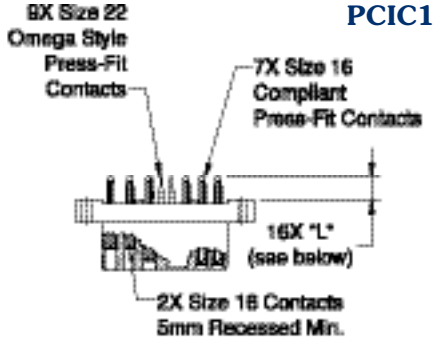
CONNECTOR DIMENSIONS



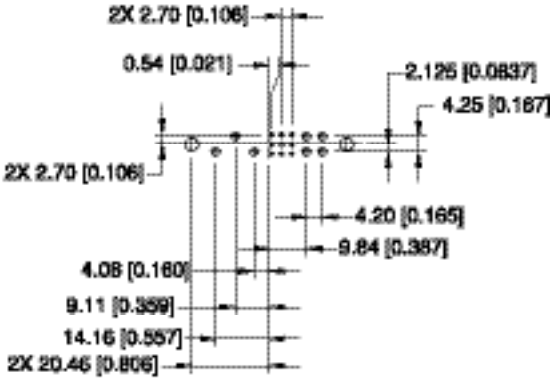
CONTACT HOLE PATTERN

SUGGESTED PRINTED BOARD HOLE SIZES:
Suggest Ø1.00 [0.039] holes for size 22 contact holes.
Suggest Ø1.60 [0.063] holes for size 16 contact holes.
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

STANDARD PART NUMBER:
PCIC16W7F9300A1
PCIC16W7F9400A1



CONNECTOR DIMENSIONS



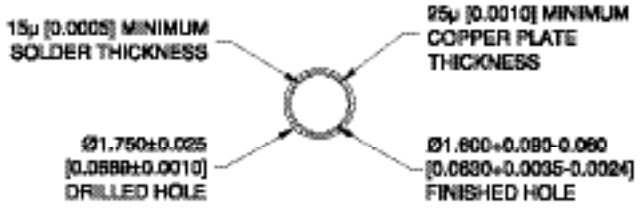
CONTACT HOLE PATTERN

CONTACT TAIL LENGTH

CODE NUMBER	"L" LENGTH	BOARD THICKNESS
93	5.72 [0.225]	2.29 to 4.45 [0.090 to 0.175]
94	7.04 [0.277]	4.45 min. [0.175 min.]

FOR COMPLIANT TERMINATION PRESS-FIT CONTACTS SPECIFY CODE NUMBER IN STEP 4 OF ORDERING INFORMATION.

SUGGESTED PRINTED BOARD HOLE SIZES



SIZE 16 PRESS-FIT CONTACT HOLE

SIZE 22 PRESS-FIT CONTACT HOLE

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

SUGGEST Ø 3.56±0.08[0.140±0.003] HOLES FOR CONNECTOR MOUNTING POSITIONS.

PCIC ORDERING INFORMATION

COMPACT POWER CONNECTOR

ORDERING INFORMATION – CODE NUMBERING SYSTEM

Specify Complete Connector By Following Steps 1 Through 8
Insert "0" When Step Is Not Used

STEP	1	2	3	4	5	6	7	8
	PCIC	16W7	F	93	0	0	A1	

STEP 1 - Basic Series
PCIC - PCIC SERIES

STEP 2 - Connector Variants
16W7 – 7 Size 16 Contacts and 9 Size 22

16W7R – 7 Size 16 Contacts and 9 Size 22
Inverted style, use with Contact Type "4"

STEP 3 - Connector Gender
M – Male

F – Female

STEP 4 - Type of Contact

*3 – Solder, Straight Printed Board Mount with 4.50 [0.177] tail extension for connection systems 1.

4 – Solder, Right Angle Printed Board Mount with 2.68 [0.106] tail extension for connection systems 1 and 4.

*93 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thicknesses of 2.29 to 4.45 [0.090 to 0.175]. Connection systems 1 and 2.

*94 – Press–Fit, Compliant Termination size 16 and size 22 Straight Printed Board Mount for use with board thickness of 4.45 minimum [0.175 minimum].Connection systems 1 and 2.

STEP 5 - Mounting Style
0 – Standard Option

STEP 6 - Hoods
0 – Not applicable

STEP 7 - Contact Plating for Printed Board Type Connectors

A1 – Gold flash over nickel on mating end and gold over nickel on termination end.

A2 – Gold flash over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

C1 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 0.80 microns [0.000030 inch] gold over nickel on termination end.

C2 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with code 93 or code 94 in step 4.

STEP 8 - Special Options
Consult technical sales for special options.

* Female contact variants are readily available. Consult Technical Sales for availability of male contact variants.

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

PRESS–FIT USER INFORMATION

When properly used, Positronic Industries Bi–Spring Power Press–Fit Terminations provide reliable service even under severe conditions.

Connectors utilizing this leading technology press–fit contact are easy to install:

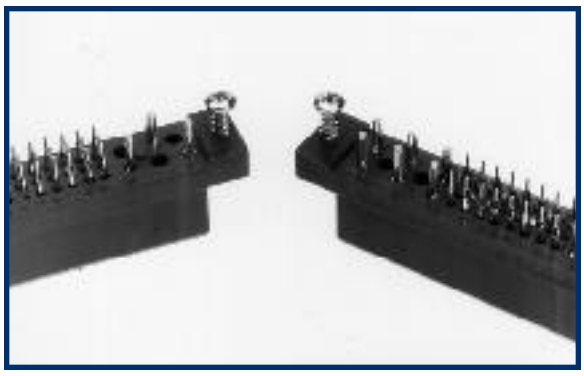
1. Choose the proper tooling. Inexpensive insertion tooling and single contact repair tooling are available from Positronic. See page 67 - 68 for ordering information.
2. Insert the connector into the P.C. board or backplane and seat connector fully.
3. Secure the connector to the P.C. board or backplane using two self–tapping screws. The screws should be number 4 self–tapping screws for plastic. Screws can be ordered separately; see below.

Need to repair a single contact because of damage in manufacturing, testing, or field use?

1. Choose the proper contact extraction tool. See page 67 - 68 for ordering information.
2. Push the contact out with a firm, steady force. Remember, excessive force is not required.
3. Install a new contact with the proper contact insertion tool. You are finished. Replacing a single contact instead of an entire connector can allow considerable cost savings. This is particularly true when considering the risk of damage to P.C. boards and backplanes that can occur if the entire connector must be replaced.

MOUNTING SCREWS

Stresses that occur during coupling and uncoupling of power supplies or through shock and vibration of systems can be transferred to backplanes or P.C. boards through press–fit 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.



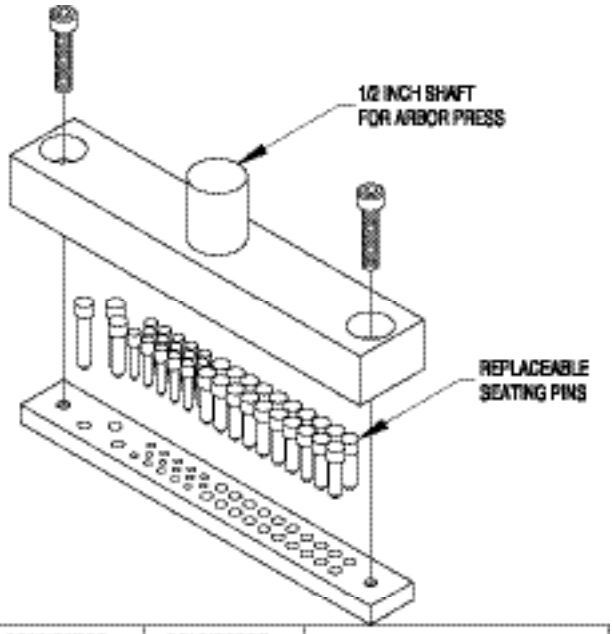
Mounting Screw Ordering Information

Part Number	Thread Length
2076-16-1-16	7.92+0.00-0.76 mm [0.312+0.000-0.030 inch]
2076-16-2-16	9.53+0.00-0.76 mm [0.375+0.000-0.030 inch]
2076-16-3-16	11.10+0.00-0.76 mm [0.437+0.000-0.030 inch]
2076-16-4-16	12.70+0.00-0.76 mm [0.500+0.000-0.030 inch]

Screws are number 4 self tapping for plastic.

PRESS–FIT TERMINATION CONNECTOR INSTALLATION TOOLS

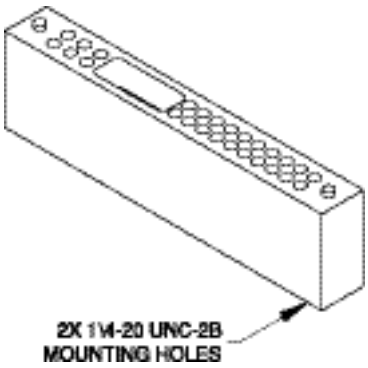
SEATING TOOL



CONNECTOR VARIANT	CONNECTOR SEATING TOOL WITH ARBOR PRESS SHAFT	CONNECTOR SEATING TOOL WITHOUT ARBOR PRESS SHAFT	REPLACEMENT PINS
PCIH39F	9513-300-0-41	9513-300-20-41	Positions 1 through 20: 855-347-2-0 Positions 21 through 35: 855-916-26-0 Position 36: 855-916-12-0 Positions 37 and 38: 855-916-11-0
PCIH39M	9513-300-13-41	9513-300-33-41	NONE
PCIH47F	9513-300-3-41	9513-300-23-41	Positions 1 through 20: 855-347-2-0 Positions 21 through 44: 855-916-19-0 Position 45: 855-916-12-0 Positions 46 and 47: 855-916-11-0
PCIH47M	9513-300-12-41	9513-300-32-41	NONE
PCIA60W39F	9513-300-9-41	9513-300-29-41	Positions 1 through 30: 855-347-2-0 Positions 31 through 54: 855-916-19-0 Position 55 and 56: 855-916-12-0 Positions 57 through 60: 855-916-11-0
PCIM30W15F	9513-300-17-41	9513-300-37-41	Positions 1 through 12: 855-347-2-0 Positions 13 through 27: 855-916-19-0 Position 28: 855-916-12-0 Positions 29 and 30: 855-916-11-0
PCIM33W18F	9513-300-40-41	9513-300-60-41	Positions 1 through 12 and Positions 28 through 33: 855-347-2-0 Positions 13 through 27: 855-916-19-0
PCIM34W13F	9513-300-14-41	9513-300-34-41	Positions 1 through 10: 855-347-2-0 Positions 11 through 31: 855-916-19-0 Position 32: 855-916-12-0 Positions 33 and 34: 855-916-11-0
PCIM37W16F	9513-300-41-41	9513-300-61-41	Positions 1 through 10 and Positions 32 through 37: 855-347-2-0 Positions 11 through 31: 855-916-19-0
PCIB24W9F	9513-300-19-41	9513-300-39-41	Positions 1 through 6: 855-347-2-0 Positions 7 through 21: 855-916-19-0 Position 22: 855-916-12-0 Position 23 and 24: 855-916-11-0
PCIB26W11F	9513-300-42-41	9513-300-62-41	Positions 1 through 6 and Positions 22 through 26: 855-347-2-0 Positions 7 through 21: 855-916-19-0
PCIC16W7F	9513-300-43-41	9513-300-63-41	Positions 1 through 4: 855-347-2-0 Positions 5 through 13: 855-916-19-0 Position 14: 855-916-12-0 Positions 15 and 16: 855-916-11-0

PRESS–FIT TERMINATION CONNECTOR INSTALLATION TOOLS

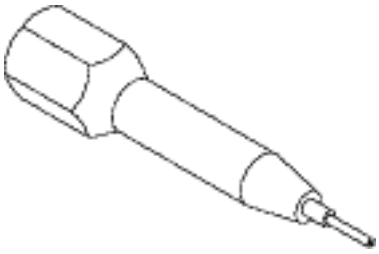
SUPPORT TOOL



CONNECTOR VARIANT	CONNECTOR SUPPORT TOOL
PCIH38F, PCIH47F PCIH38M and PCIH47M	9513-400-0-41
PCIA50W36F	9513-400-2-41
PCIM30W15F, PCIM33W18F PCIM34W13F and PCIM37W16F	9513-400-3-41
PCIB24W9F and PCIB26W11F	9513-400-4-41
PCIC16W7F	9513-400-5-41

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

SINGLE CONTACT INSERTION OR EXTRACTION TOOL



CONTACT SIZE	SINGLE CONTACT INSERTION TOOL		SINGLE CONTACT EXTRACTION TOOL
SIZE 16 CONTACT	MALE	9513-100-0-0	9513-102-0-0
	FEMALE	9513-101-0-0	
SIZE 20 CONTACT	MALE	9512-100-0-0	9512-102-0-0
	FEMALE	9512-101-0-0	
SIZE 22 CONTACT	MALE	9512-103-0-0	9512-105-0-0
	FEMALE	9512-104-0-0	

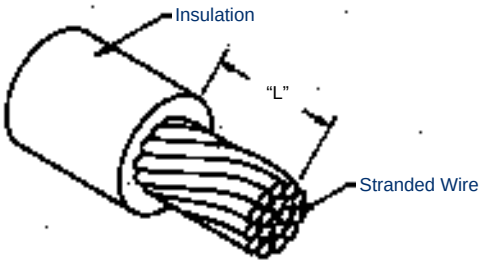
CRIMPING INFORMATION FOR COMPACT POWER CONNECTOR CRIMP CONTACTS

Step 1: Strip wire to indicated length.

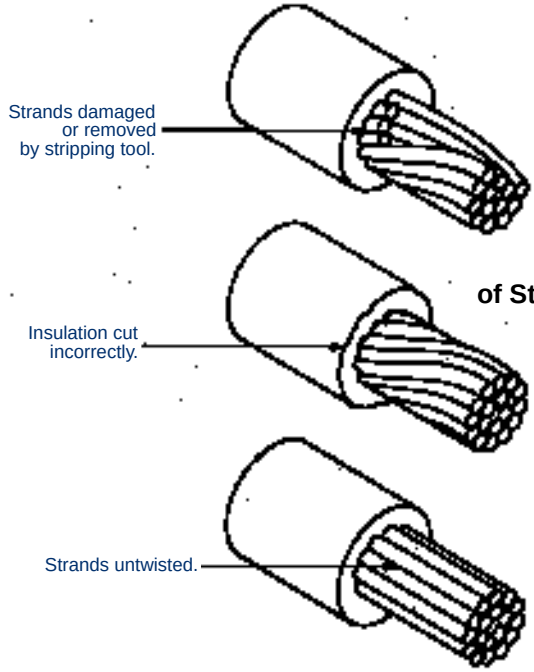
Take care not to:
- Damage or remove strands.
- Untwist or overtwist strands.
- Leave insulation particles on strands.
- Damage insulation.

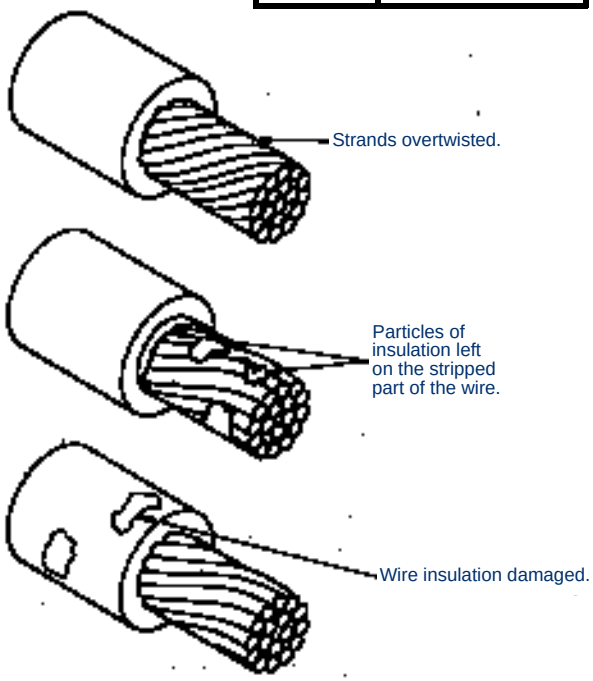
CONTACT SIZE	"L" ±0.51[0.020]
16	5.84 [0.230]
20	5.84 [0.230]
22	3.18 [0.125]

Correctly Stripped Wire:



Examples of Stripping Faults





Step 2: Crimp wire to contact.

For Hand Crimp Tool:
- Place contact into crimping tool.
- Insert wire into contact.
- Center contact by slowly closing crimping tool until crimp indenters make contact with crimp barrel.
- Complete the cycle of the crimping tool in one smooth motion.
- Remove the crimped contact.

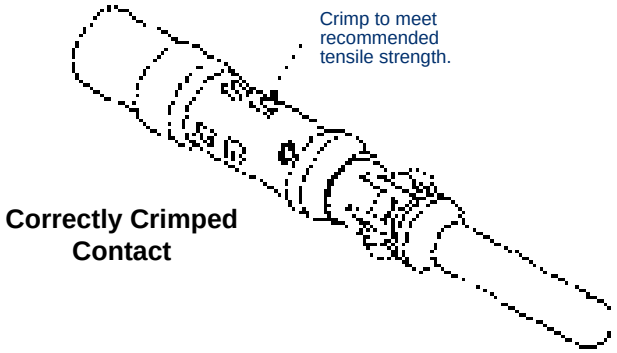
For Automatic Feed Pneumatic Crimp Tool:
- Insert wire into the contact, positioned in the crimp tool by the plastic carrier.
- Depress the activating device of the crimping tool to start crimping cycle.
- Remove the crimped contact.

DIMENSIONS ARE IN MILLIMETERS (INCHES).
ALLDIMENSIONS ARE SUBJECT TO CHANGE.

CRIMPING INFORMATION FOR COMPACT POWER CONNECTOR CRIMP CONTACTS

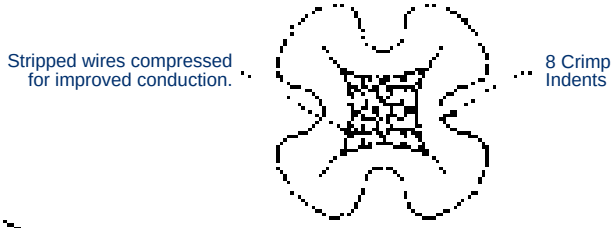
Step 3: Inspect crimp.

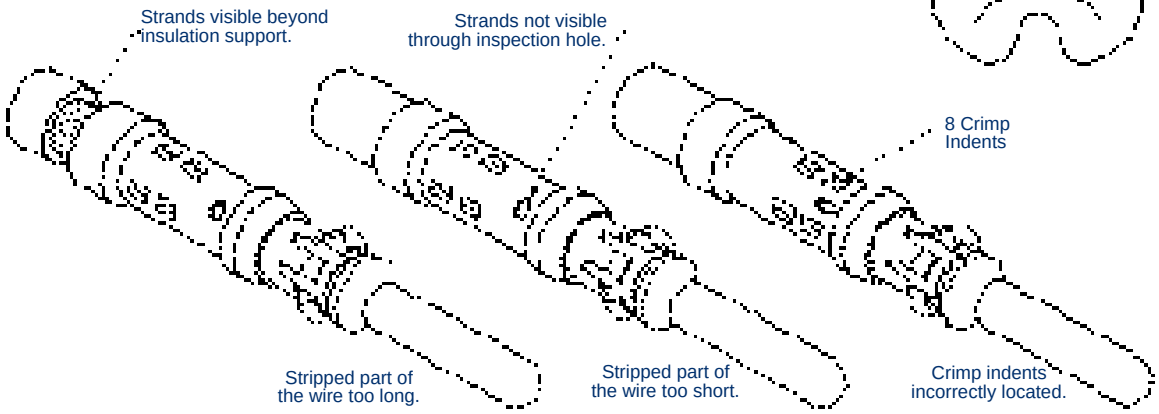
For All Tools:
- Strands to be visible through the inspection hole.
- Strands not to be visible beyond the insulation support.
- Crimped contact to meet recommended conductor tensile force shown in chart (below, left).
- Check for peeled gold and bent contact.



Correctly Crimped Contact

Cross-section of Correctly Crimped Contact





Examples of Crimping Faults

Positronic Recommended Conductor Tensile Strength

WIRE SIZE	AXIALLOAD
4.0 mm²(12 AWG)	489N(110 lbs.)
2.5 mm²(14 AWG)	311N(70 lbs.)
1.5 mm²(16 AWG)	222N(50 lbs.)
1.0 mm²(18 AWG)	125N(28 lbs.)
0.5 mm²(20 AWG)	89N(20 lbs.)
0.3 mm²(22 AWG)	53N(12 lbs.)
0.25 mm²(24 AWG)	36N(8 lbs.)
0.12 mm²(26 AWG)	22N(5 lbs.)

POSITRONIC RECOMMENDED TOOLS			
TOOL DESCRIPTION	SIZE 16 CONTACT	SIZE 20 CONTACT	SIZE 22 CONTACT
Hand crimp tool	**See Below	9507 with 9502–22 positioner for female contact	9507 with 9502–23 positioner for female contact
Pneumatically actuated automatic feed crimp tool	9550–0	9550–1	9550–1
Crimp contact insertion tool	9099	9099–4	9099–1
Crimp contact extraction tool	9081–4	9081–2	9081–3

**For FC114N2-1565.0 and FC116N2-1565.0 contacts use part number 9501 crimp tool and 9502-1 positioner. For FC112N2S-1565.0 contacts use part number 9509-3-0 crimp tool

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

NORTH AMERICAN HEADQUARTERS

UNITED STATES, Springfield, Missouri

Factory Sales and Engineering Offices	(800)641-4054

PUERTO RICO, Ponce Factory

Factory Sales and Engineering Offices	(787)841-0920

MEXICO

Factory Sales and Engineering Offices	(800)872-7674

CANADA

Factory Sales and Engineering Offices	(800)327-8272

PACIFIC BASIN HEADQUARTERS

SINGAPORE, Asian Factory

Factory Sales and Engineering Offices	65-6842-1419
Malaysia Sales Office	65-6842-1419
Taiwan Sales Office	8862-2937-8775
China (Shanghai) Sales Office	8621-6308-3640
Japan Sales Office	8135-661-3047

*Additional Technical Agents in Australia, New Zealand, India South Korea,Thailand, Philippines, Hong Kong and Indonesia.

EUROPEAN HEADQUARTERS

FRANCE, Auch Factory

Factory Sales and Engineering Offices	33 5 62 63 44 91

EUROPE, Direct Sales Offices

Northern France Sales Office	33 1 45 88 13 88
Southern France Sales Office	33 4 67 72 80 28
Italy Sales Office	39 2 54 116 106
Germany Sales Office	49 2351 63 47 39

EUROPE, Technical Agents

Technical Agents in Austria, Benelux, Denmark, Finland, Greece, Ireland, Scotland, Slovenia, Spain, Sweden, Switzerland and the United Kingdom

MIDEAST, Technical Agents

Technical Agents in Israel and Turkey

POSITRONIC INDUSTRIES, INC.
423 N Campbell Ave • PO Box 8247 • Springfield, MO 65801
Tel (417) 866-2322 • Fax (417) 866-4115 • Toll Free (800) 641-4054
info@connectpositronic.com

POSITRONIC INDUSTRIES, S.A.S.
Zone Industrielle d'Engachies • 46 Route d'Engachies • F-32020
Auch Cedex 9 • France
Telephone 05 62 63 44 91 • Telecopieur 05 62 63 51 17
contact@connectpositronic.com

POSITRONIC ASIA PTE LTD.
3014A Ubi Road 1 #06-07 • Singapore 408703
Telephone (65) 6842-1419 • Fax (65) 6842-1421
singapore@connectpositronic.com

www.connectpositronic.com