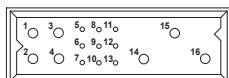


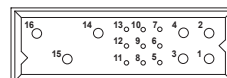
The PCIC Series encompasses all of the features of the PCIH Series in a **1U** package. Reliability, high current capacity and many system management connections make the PCIC Series ideal for use in telecom, computer, information systems and industrial applications.

PCIC SERIES CONTACT VARIANTS

FACE VIEW OF MALE AND REAR VIEW OF FEMALE

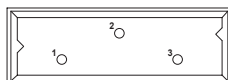


PCIC16W7 VARIANT



PCIC16W7R VARIANT (Inverted Termination)

7 Size 16 Power Contacts and 9 Size 22 Signal Contacts



PCIC3W3 VARIANT

CREEPAGE AND CLEARANCE FOR
HIGH VOLTAGE APPLICATIONS

3 Size 16 Power Contacts



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www.connectpositronic.com/pci/catalog



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TECHNICAL CHARACTERISTICS

Compact
Power
Connectors

MATERIALS AND FINISHES:

| | |
|-------------------------|---|
| Insulator: | Glass-filled polyester, UL 94V-0, blue color. |
| Contacts: | Size 16 contacts: High conductivity precision-machined copper alloy. Size 22 contacts: Precision-machined copper alloy. |
| Plating: | Gold flash over nickel. Other plating options available, refer to Step 7 on page 101. |
| Mounting Screws: | Steel, zinc plated. |
| Jackscrews: | Stainless steel, passivated. |

ELECTRICAL CHARACTERISTICS:

PCIC Contact Current Ratings, per UL 1977

See *Temperature Rise Curves* on page 6 for details.

| | |
|------------------------------------|--|
| PCIC3W3: | |
| Size 16 Power Contacts: | 32 amperes continuous, all contacts under load. |
| PCIC16W7: | |
| Size 16 Power Contacts: | |
| Positions 14, 15, and 16: | 40 amperes continuous, all contacts under load. |
| Positions 1 through 4: | 30 amperes continuous, all contacts under load. |
| Size 22 Signal Contacts: | 3 amperes nominal rating. |
| Initial Contact Resistance: | |
| Size 16 Contact: | 0.0007 ohms maximum. |
| Size 22 Contact: | 0.005 ohms maximum. Per IEC 60512-2, Test 2b. |
| Insulation Resistance: | 5 G ohms per IEC 60512-2, Test 3a. |
| Voltage Proof: | |
| PCIC3W3: | |
| 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: | |
| PCIC3W3: | |
| 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: | |
| PCIC3W3: | |
| 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. |

Removable Contacts:

Install contact from rear of insulator; release from front of insulator. Size 16 and 22 female contacts feature 0."Closed Entry" design for highest reliability.

Removable Contact Retention in Connector Body:

| | |
|-------------------|----------------|
| Size 16 Contacts: | 67 N [15 lbs.] |
| Size 22 Contacts: | 27 N [6 lbs.] |

Fixed Contacts:

Printed board terminations, both straight and right angle (90°). Size 16 female contacts feature "Closed Entry" design. Size 22 feature rugged "Open Entry" contact design. "Closed Entry" contacts available, consult Technical Sales.

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 60512-6, Test 12e, 25-watt soldering iron.

Sequential Contact Mating System:

| | |
|------------------|---|
| 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.
Contact positions 15 and 16.

PCIC16W7:

Compliant Terminations:

Size 16 and 22 contacts are available with compliant contact terminations. Average insertion and extraction forces of size 16 contacts are 22N (5 lbs.) per contact.

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. |
|-----------------------------|------------------|

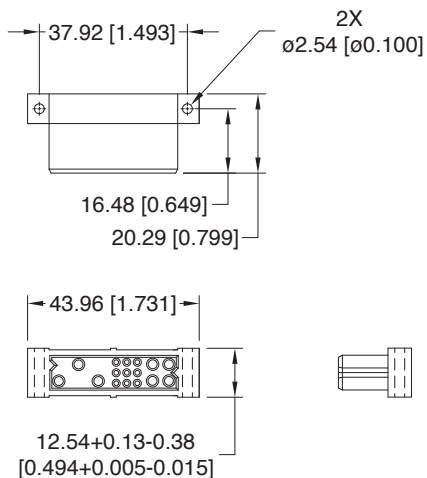
UL Recognized File #E49351^{*1}
CSA Recognized File #LR54219^{*1}

^{*1} UL and CSA recognition for PCIC3W3 is pending, consult Technical Sales.

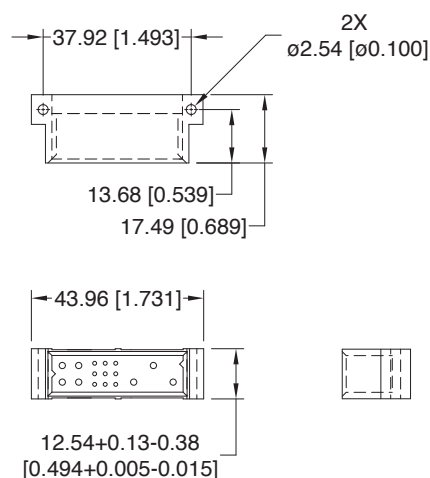
PCIC CONNECTOR OUTLINE DIMENSIONS

RIGHT ANGLE (90°) BOARD MOUNT CONNECTOR

FEMALE CONNECTOR

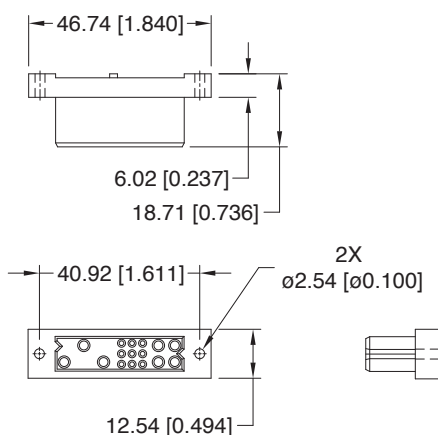


MALE CONNECTOR

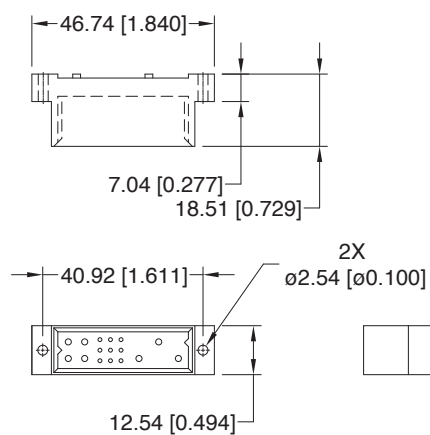


STRAIGHT BOARD MOUNT CONNECTOR

FEMALE CONNECTOR

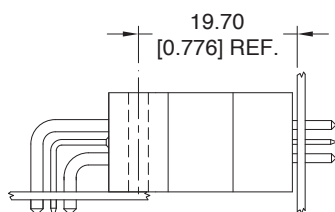


MALE CONNECTOR

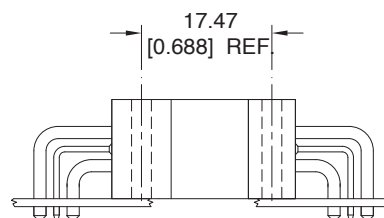


PCIC CONNECTOR MATING DIMENSIONS

(FULLY MATED)



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



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



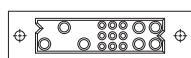
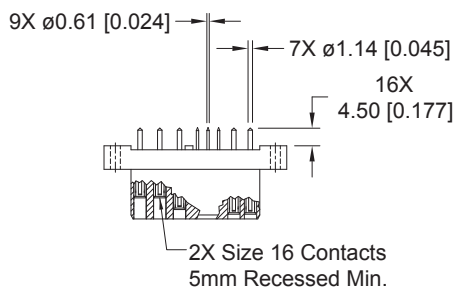
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STRAIGHT SOLDER CONNECTOR, FEMALE

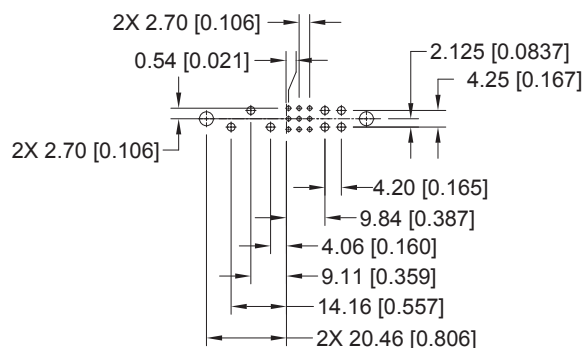
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Power
Connectors

FEMALE STRAIGHT SOLDER CONNECTOR CODE 3

STANDARD PART NUMBER
PCIC16W7F300A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

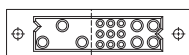
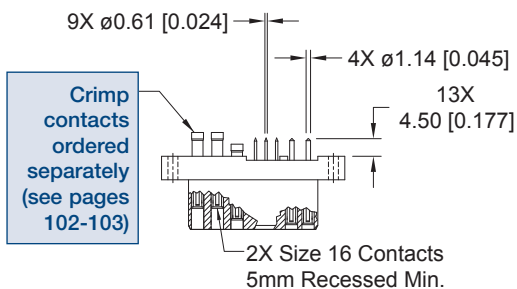
Note: See below for suggested printed board hole sizes.

FEMALE STRAIGHT SOLDER CONNECTOR WITH A.C. PASS-THROUGH CODE 3 WITH MOS*¹ -246.2

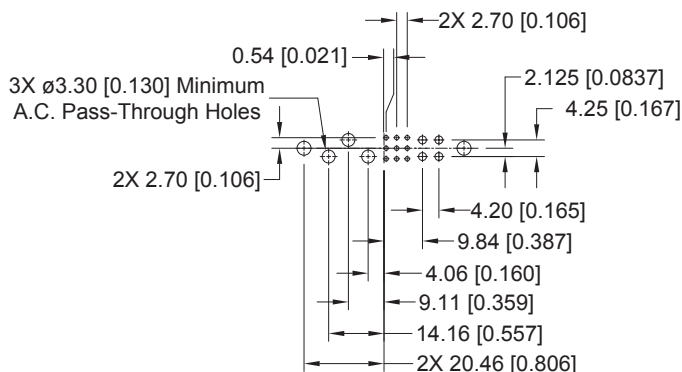
CRIMP CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

LOW PROFILE PART NUMBER
PCIC16W7F300A1-246.2

*¹ For MOS descriptions,
see chart on pages 107-108.



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

SUGGESTED PRINTED BOARD HOLE SIZES:

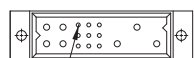
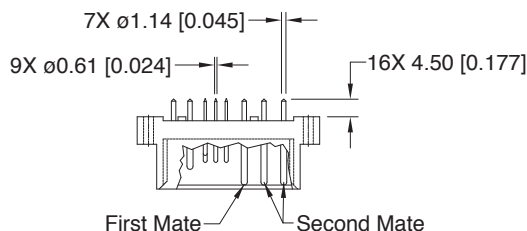
Suggest Ø1.00 [0.039] holes for size 22 contact holes.

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.

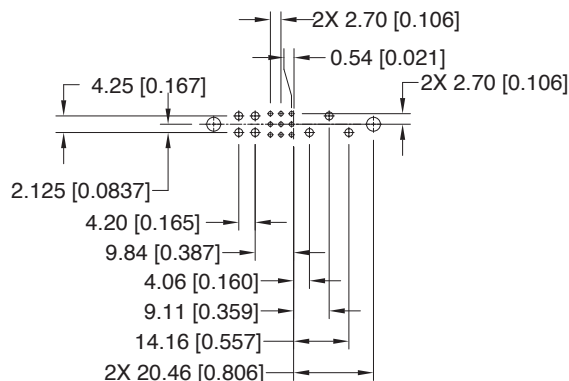
MALE STRAIGHT SOLDER CONNECTOR CODE 3

STANDARD PART NUMBER
PCIC16W7M300A1



Position 5
Last to
Mate Signal

CONNECTOR DIMENSIONS

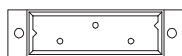
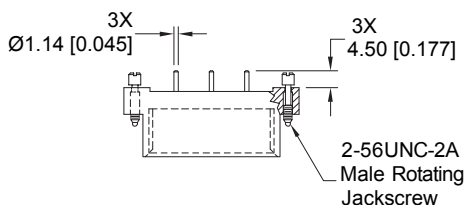


CONTACT HOLE PATTERN

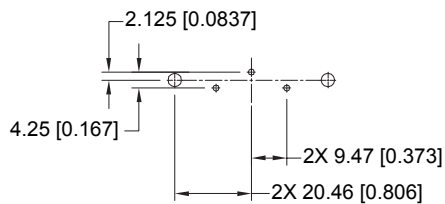
Note: See below for suggested printed board hole sizes.

MALE STRAIGHT SOLDER CONNECTOR WITH JACKSCREW SYSTEM CODE 3 WITH MOS*¹ -443.2

STANDARD PART NUMBER
PCIC3W3M300A1-443.2



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

*¹ For MOS descriptions,
see chart on pages 107-108.

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.



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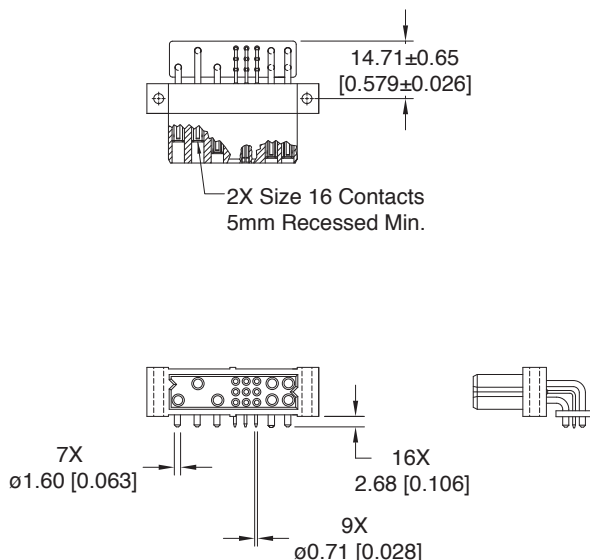
RIGHT ANGLE (90°) BOARD MOUNT CONNECTOR, FEMALE

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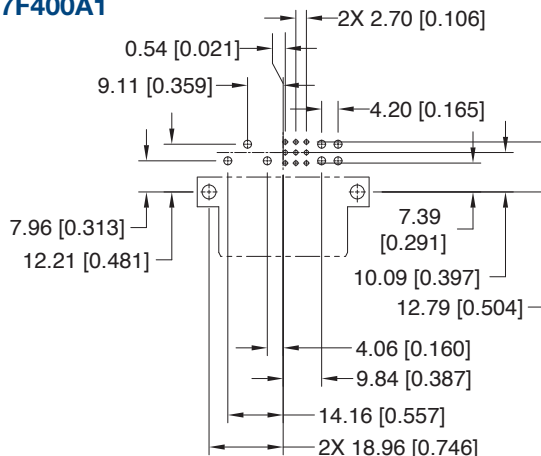
FEMALE RIGHT ANGLE (90°) BOARD MOUNT CONNECTOR CODE 4

STANDARD PART NUMBER

PCIC16W7F400A1



CONNECTOR DIMENSIONS



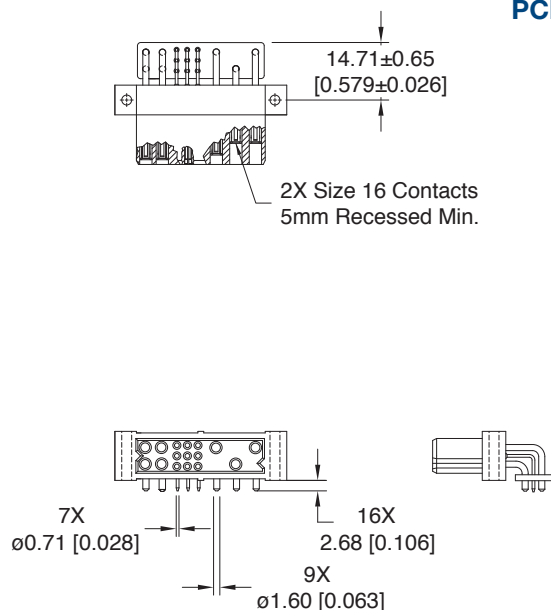
CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

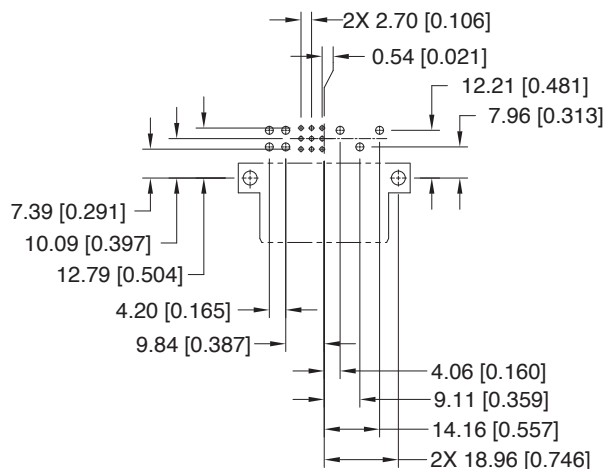
FEMALE RIGHT ANGLE (90°) BOARD MOUNT CONNECTOR CODE 4

PART NUMBER FOR INVERTED TERMINATION

PCIC16W7RF400A1



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

SUGGESTED PRINTED BOARD HOLE SIZES:

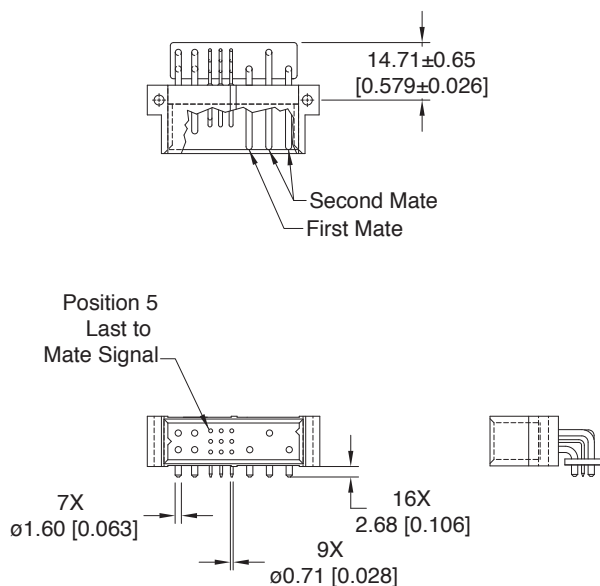
Suggest Ø1.14 [0.045] holes for size 22 contact holes.

Suggest Ø2.03 [0.080] holes for size 16 contact holes.

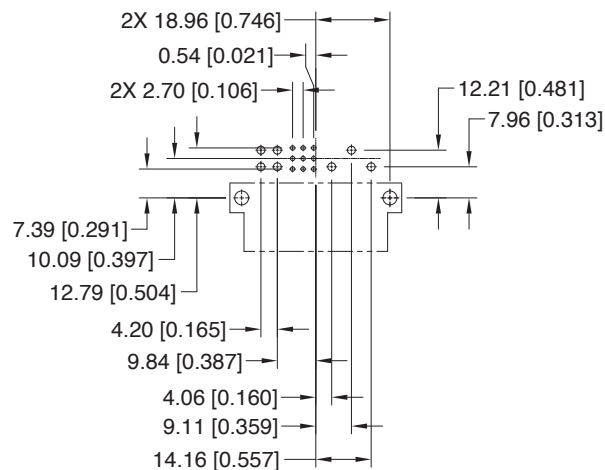
Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

MALE RIGHT ANGLE (90°) BOARD MOUNT CONNECTOR
CODE 4

STANDARD PART NUMBER
PCIC16W7M400A1



CONNECTOR DIMENSIONS

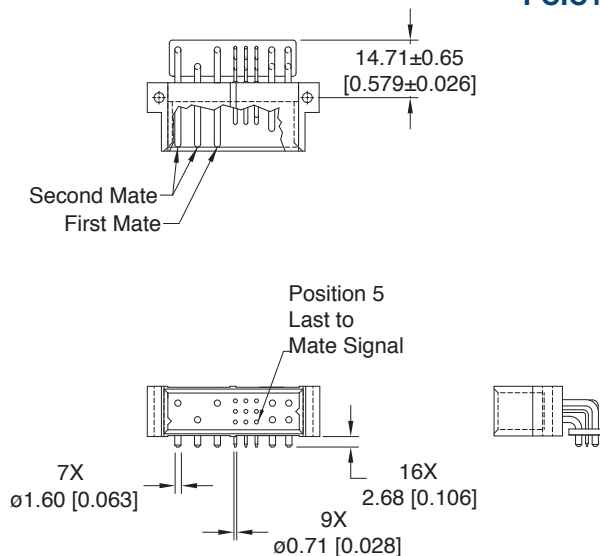


CONTACT HOLE PATTERN

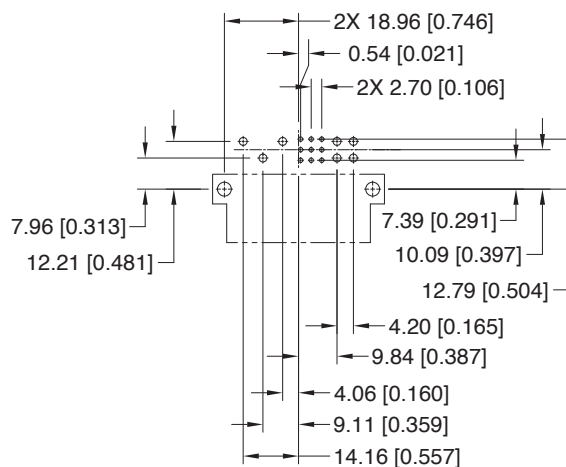
Note: See below for suggested printed board hole sizes.

MALE RIGHT ANGLE (90°) BOARD MOUNT CONNECTOR
CODE 4

PART NUMBER FOR INVERTED TERMINATION
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.



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PANEL MOUNT CONNECTOR, FEMALE

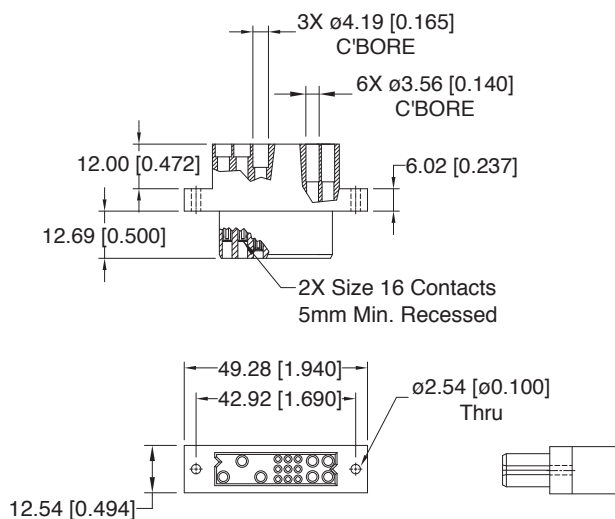
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FEMALE PANEL MOUNT CRIMP CONTACT CONNECTOR CODE 8

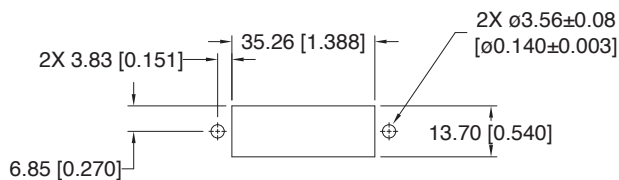
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

STANDARD PART NUMBER

PCIC16W7F8000



CONNECTOR DIMENSIONS



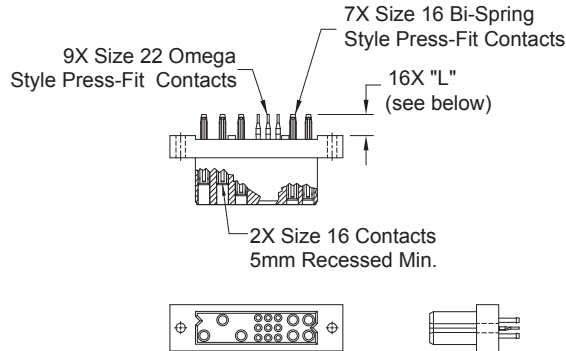
PANEL CUT OUT

For information regarding removable contacts, see Removable Contact section, pages 102-103.

FEMALE COMPLIANT PRESS-FIT CONNECTOR CODE 93 OR 94

STANDARD PART NUMBER
PCIC16W7F9300A1
PCIC16W7F9400A1

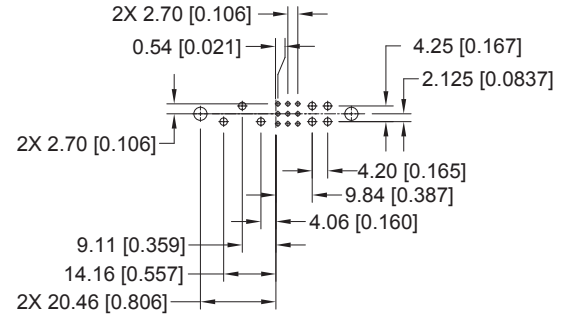
Positronic **recommends** the practice of using **mounting hardware** to secure connector to printed circuit board.



CONNECTOR DIMENSIONS

CONTACT TAIL LENGTH

| Code | "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.] |



CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes, press-fit connector installation tools, and mounting screw options.

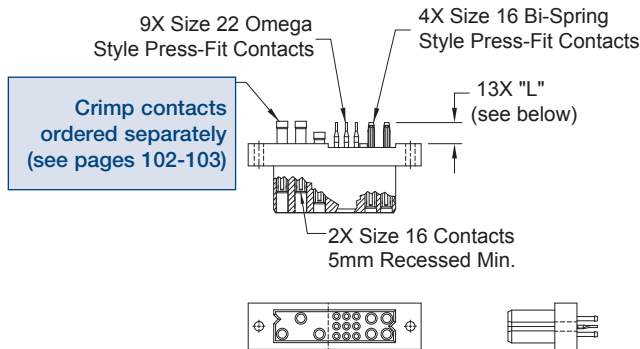
FEMALE COMPLIANT PRESS-FIT CONNECTOR WITH A.C. PASS-THROUGH CODE 93 OR 94 WITH MOS*¹ -246.2

CRIMP CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

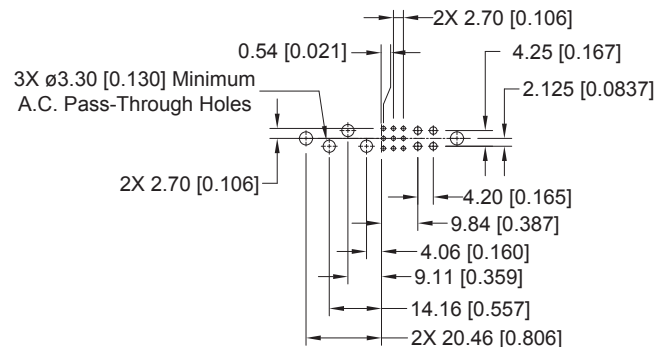
*¹ For MOS descriptions, see chart on pages 107-108.

LOW PROFILE PART NUMBER
PCIC16W7F9300A1-246.2
PCIC16W7F9400A1-246.2

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



CONNECTOR DIMENSIONS



CONTACT HOLE PATTERN

SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest Ø3.56±0.08 [0.140±0.003] holes for connector mounting holes.

NOTE: See page 105 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions. For press-fit connector installation tools, see pages 105-106. For mounting screw options, see page 105.

CONTACT TAIL LENGTH

| Code | "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.] |

**DIMENSIONS ARE IN MILLIMETERS [INCHES].
ALL DIMENSIONS ARE SUBJECT TO CHANGE. 98**



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COMPLIANT PRESS-FIT BOARD MOUNT CONNECTOR, FEMALE

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FEMALE COMPLIANT PRESS-FIT CONNECTOR WITH JACKSCREW SYSTEM CODE 93 OR 94 WITH MOS*¹ -444.2

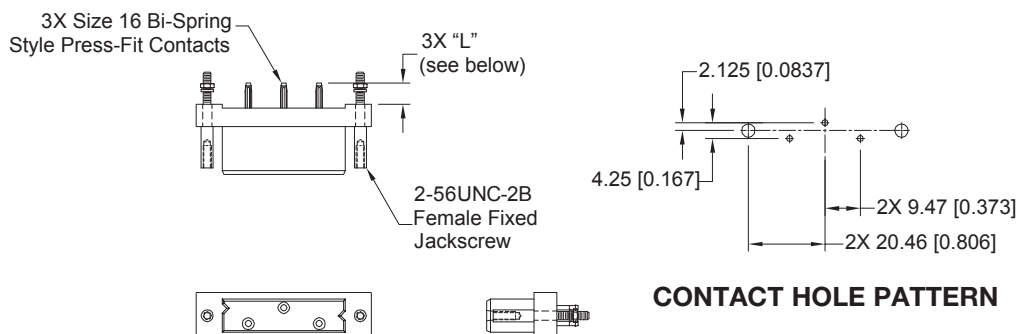
STANDARD PART NUMBER

PCIC3W3F9300A1-444.2

PCIC3W3F9400A1-444.2

*¹ For MOS descriptions,
see chart on pages 107-108.

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



CONNECTOR DIMENSIONS

CONTACT HOLE PATTERN

| CONTACT TAIL LENGTH | | |
|---------------------|--------------|----------------------------------|
| Code | "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.] |

SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest $\varnothing 2.67 \pm 0.08$ [0.105 \pm 0.003] holes for connector mounting holes.

NOTE: See page 105 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.

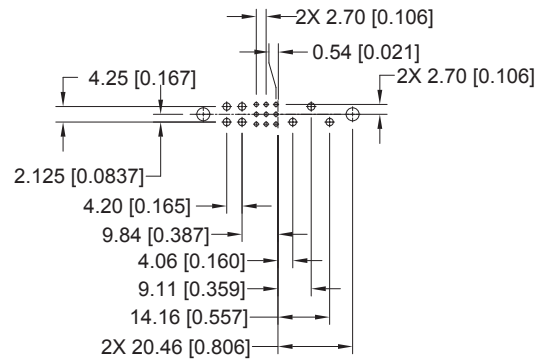
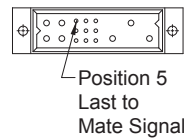
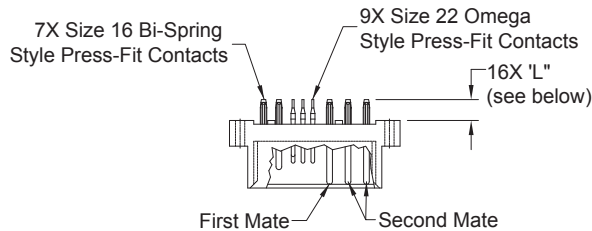
For press-fit connector installation tools, see pages 105-106.

For mounting screw options, see page 105.

MALE COMPLIANT PRESS-FIT CONNECTOR CODE 93 OR 94

STANDARD PART NUMBER
PCIC16W7M9300A1
PCIC16W7M9400A11

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



CONTACT HOLE PATTERN

CONNECTOR DIMENSIONS

| CONTACT TAIL LENGTH | | |
|---------------------|--------------|-------------------------------|
| Code | "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.] |

SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest $\varnothing 3.56 \pm 0.08$ [0.140 \pm 0.003] holes for connector mounting holes.

NOTE: See page 105 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.

For press-fit connector installation tools, see pages 105-106.

For mounting screw options, see page 105.



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PCIC ORDERING INFORMATION

Compact
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Connectors

ORDERING INFORMATION - CODE NUMBERING SYSTEM

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

| STEP | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---------|------|------|---|----|---|---|----|-----|---|
| EXAMPLE | PCIC | 16W7 | F | 93 | 0 | 0 | A1 | /AA | |

STEP 1 - BASIC SERIES

PCIC - PCIC Series

STEP 2 - CONNECTOR VARIANTS

16W7 - 7 size 16 contacts and 9 size 22 contacts

16W7R - 7 size 16 contacts and 9 size 22 contacts. Inverted termination style, use with contact type "4".

*13W3 - 3 size 16 contacts

STEP 3 - CONNECTOR GENDER

F - Female
M - Male

STEP 4 - CONTACT TERMINATION TYPE

- 3 - Solder, Straight Printed Board Mount with 4.50 [0.177] tail extension for connection systems 1 and 2.
- 4 - Solder, Right Angle (90°) Printed Board Mount with 2.68 [0.106] tail extension for connection systems 1 and 4.
- 8 - Contacts must be ordered separately for Panel Mount Cable Connectors, connection system 3, see pages 102-103. Female connector only.
- 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 system 1.
- 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

See page 105 for mounting screw options.

STEP 6 - HOODS

0 - Not applicable

*1 PCIC3W3 variant only available in these part numbers: PCIC3W3F9300A1-444.2 and PCIC3W3M300A1-443.2. Consult Technical Sales for other options to this variant.

STEP 9 - SPECIAL OPTIONS

FOR LISTING OF SPECIAL OPTIONS,
SEE SPECIAL OPTIONS APPENDIX ON
PAGES 107-108.

STEP 8 - ENVIRONMENTAL COMPLIANCE OPTIONS

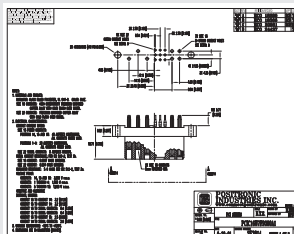
/AA - RoHS Compliant

NOTE: If compliance to environmental legislation is not required, this step will not be used.
Example: PCIC16W7F9300A1

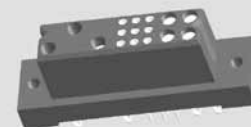
STEP 7 - CONTACT PLATING FOR PRINTED BOARD TYPE CONNECTORS

- 0 - Crimp contacts ordered separately
- A1 - Gold flash over nickel on mating end and termination end.
- A2 - Gold flash over nickel on mating end and 5.00μ [0.00020 inch] tin-lead solder coat on termination end. Not available with code 93 or code 94 in step 4.
- C1 - 0.76μ [0.000030 inch] gold over nickel on mating end and termination end.
- C2 - 0.76μ [0.000030 inch] gold over nickel on mating end and 5.00μ [0.00020 inch] tin-lead solder coat on termination end. Not available with code 93 or code 94 in step 4.
- D1 - 1.27μ [0.000050 inch] gold over nickel on mating end and termination end.
- D2 - 1.27μ [0.000050 inch] gold over nickel on mating end and 5.00μ [0.00020 inch] tin-lead solder coat on termination end. Not available with code 93 or code 94 in step 4.

NOTE: If you would like a 2D drawing or 3D model, once you've made your connector selection, please visit www.connectpositronic.com. If you can't find your specific part number on our web site, contact Technical Sales to have one created.



2D Drawing



3D Model