# OMNETICS 

 CONNECTOR CORPORATION

## MICRO \& NANO STRIP CONNECTORS



# OMNETICS CONNECTOR CORPORATION 

## ABOUT OMNETICS CONNECTOR CORPORATION

Omnetics Connector Corporation is a leading global provider of precision and high-reliability electronic connectors and interconnect systems. For more than 30 years, we have engineered an extensive portfolio of innovative products, with a special focus on micro-miniature and nano-miniature interconnects. With over 300 direct employees, all products are built in the Minnesota factory in compliance with ISO 9001 offering QPL products to MIL-DTL-83513 and MIL-DTL-32139 and are ITAR registered.

Our connectors are among the smallest on the market and deliver exceptional performance in challenging work environments. As interconnect technologies continue to evolve, we design next-generation products that help bring transformative ideas to life.

Our connectors are highly sought after by designers working in the military, aviation, aerospace, medical and other leading-edge industries. We are also leaders in high-mobility interconnects for applications in robotics, surveillance systems and orbital satellite technology.

Omnetics understands the rigorous operating conditions mission-critical applications endure and our solutions include EMI shielding, IP sealing, polarization, rugged materials, and other elements that ensure connectivity under pressure. We maintain a large inventory of COTs products.

Omnetics' range of nano, micro and hybrid connectors are ideal for defence programmes, where factors such as size, weight, signal integrity and reliability are thoroughly considered. We provide a variety of reduced size and weight interconnection systems:

- Micro and Nano strip connectors
- Micro and Nano circular connectors
- Bi-Lobe ${ }^{\circledR} /$ Nano-D
- Polarized Nano connectors
- Squeeze-latching Nano-D and Micro-D connectors
- MIL-DTL-32139 Nano-D connectors
- MIL-DTL-83513 Micro-D connectors
- Hybrid connector configurations
- Cable assemblies
- Wire harnesses


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## Flex Pin - Micro

## THE FLEX PIN DESIGN

Designed Simply for High Shock \& Vibration

Omnetics' Flex Pin contact design was designed and produced many years before the creation of MIL-DTL-83513. This simple one piece design is stamped from ASTM B194 BeCu. The spring characteristic of BeCu is ideal for withstanding high shock and vibration.

The Flex Pin contact is intermateable with all MIL- DTL-83513 sockets. Its rugged design easily passes the shock and vibration requirements of the military specification. In fact, independent tests have proven that the Flex Pin contact can even withstand the intense shock and vibration of the geophysical drilling market.

Flex Pin contacts are all plated with 50 micro inches $(1.27 \mu \mathrm{~m})$ of gold over 50 micro inches ( 1.27 $\mu \mathrm{m}$ ) of nickel. All pins are plated post forming to ensure a non-porous surface.

## FLEX PIN

The Omnetics Micro Flex Pin has been in successful production for 50 years. Omnetics looked at the old Twist Pin technology and found ways to improve and simplify the design.
Omnetics removed the extra crimps and welds and came up with an elegant one-piece design with the same performance as the overly complex twist pin. The elimination of extra joints removed resistance points as well as spots for potential fatigue and failure.

Micro Flex Pins are rated at 3 amps each and are the foundation of our Micro-D and MIL-DTL-83513 series of connectors.


## Single Row Micro Strip

HORIZONTAL SMT (TYPE AA)

Horizontal SMT Micro Strip connectors offer an extremely low profile package that is well suited to pick and place methods. These connectors feature Omnetics' highly reliable gold plated
 Flex Pin contact system conforming to the requirements of MIL-DTL-83513. These rugged light weight connectors are suitable for the most demanding applications. Available with mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 48 positions as well as custom configurations.


ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC 50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022 26 Milliohms ( 65 mV max @ 2.5 amp ) $3 \mathrm{oz}(85 \mathrm{~g})$ typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Solder per J-STD-006 (Non-RoHS)
Solder plate per AMS-P-81728 (Non-RoHS)
Hard gold plate per ASTM B488
Hard gold plate per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Micro Strip

PS1/PS2-AA LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length
Total Length (Dimension A)

Notes: Maximum length $2.42^{\prime \prime}$ (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ": Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ If hardware features are within the contact area: Add .050" (1 contact cavity) for each latch Add .050 " ( 1 contact cavity) for each guide post Add .150 " ( 3 contact cavities) for each mounting hole Total Length (Dimension B)

Notes: Maximum pad layout length 2.35 " (59.69). Add . 100 " from center of mounting hole to first pad (if the first contact cavity is for a guide post or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SSB-AA LAYOUT


DIMENSIONS FOR "A"
To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch |  |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ | - |
| Add .150 " ( 3 contact cavities) for each mounting hole | $-.070^{\prime \prime}$ |
| Add fixed end length |  |
| Total Length (Dimension A) |  |

Notes: Maximum length 2.42" (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by .050 " If hardware features are within the contact area: Add .050 " ( 1 contact cavity) for each latch Add .050 " ( 1 contact cavity) for each guide post Add .150" (3 contact cavities) for each mounting hole Total Length (Dimension B)

Notes: Maximum pad layout length $2.35^{\prime \prime}$ (59.69). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is for a guide post or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

HORIZONTAL SMT (TYPE AA) ORDERING GUIDE


## Single Row Micro Strip

STRAIGHT TAIL (TYPE DD)

The Single Row .050" Micro Strip connectors are configured with simple straight tails (Integral or Crimped). Suitable for vertical thru-hole mounting to fine pitched flex circuits. The straight solid tails are also commonly used in ultra fine wrap terminations, such as as electrophysiology. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL-83513. These connectors are available in standard sizes ranging from 2 through 48 positions as well as custom configurations.

Flex design and installation service is also available from Omnetics. Please contact us for more information.


## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
- Current rating: 3 AMPs max per contact
- Voltage Rating (DWV): 600 VAC RMS Sea Level
- Insulation Resistance: 5000 Megohms min @ 500 VDC
- Shock: 50 g's discontinuity < 1 microsecond
- Vibration: 20 g's discontinuity < 1 microsecond
- Thermal Vacuum Outgassing: NASA SP-R-0022
- Contact Resistance: 26 Milliohms ( 65 mV max @ 2.5 amp )
- Mating/Unmating Force: 3 oz ( 85 g ) typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plate per ASTM B488
Hard gold plate per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Micro Strip

## PS1/PS2-DD LAYOUT




SUGGESTED HOLE PATTERN FOR PS1
"B" $\qquad$
 CONNECTOR PROFILE


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length
Total Length (Dimension A)

Notes: Maximum length for PS1 @ .075" thick 2.42" (61.47) Maximum number of contact cavities is 48 . Maximum length for PS2 @ .100" thick $3.02^{\prime \prime}$ (76.71) Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by .050 "
If hardware features are within the contact area:
Add .050 " (1 contact cavity) for each latch
Add .050 " ( 1 contact cavity) for each guide post
Add .150" (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum hole pattern layout length for PS1 is $2.35^{\prime \prime}$ (59.69).
Maximum hole pattern layout length for PS2 is 2.95" (74.93)
Add .100" from center of mounting hole to first hole (if the first contact cavity is used for a guide post or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SSB-DD LAYOUT


CONNECTOR PROFILE
SUGGESTED HOLE LAYOUT


DIMENSIONS FOR "A"
To determine connector length "A":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch | - |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ | - |
| Add .150 " ( 3 contact cavities) for each mounting hole | $-.070^{\prime \prime}$ |
| Add fixed end length |  |
| Total Length (Dimension A) |  |

Notes: Maximum length 2.42" (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by .050 "
If hardware features are within the contact area:
Add .050 " ( 1 contact cavity) for each latch
Add .050 " ( 1 contact cavity) for each guide post
Add .150 " ( 3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum pad layout length $2.35^{\prime \prime}$ (59.69). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is for a guide post or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

STRAIGHT TAIL (TYPE DD) ORDERING GUIDE

## SERIES

\# OF CONTACTS
TERMINATION TYPE
COMMON OPTIONS

PS1 02-48 DD
PIN CONNECTOR
Standard: .075" thick
$\stackrel{\rightharpoonup}{\perp}$
PS2
PIN CONNECTOR
 . 100 " thick


SSB
SOCKET CONNECTOR


EXAMPLES:



SSB-24-DD-LE


SSB-25-DD


SSB-17-DD-M-GS

## Single Row Micro Strip

## SHORT THRU-HOLE TAIL (TYPE BB)

The Single Row .050" Micro Strip connectors are configured with three different thru-hole options depending on your board's configuration: BB-Short Thru Hole, H2-Short/Long Alt, and CC-Long Thru Hole. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL-83513. These connectors are available in standard sizes ranging from 2 through 48 positions as well as custom configurations.

Flex design and installation service is also available from Omnetics. Please contact us for more information.


ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond
20 g's discontinuity < 1 microsecond
NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp )
$3 \mathrm{oz}(85 \mathrm{~g})$ typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Micro Strip

## PS1/PS2-BB LAYOUT

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## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length
Total Length (Dimension A)

Notes: Maximum length for PS1 @ .075" thick 2.42" (61.47) Maximum number of contact cavities is 48 . Maximum length for PS2 @ .100" thick 3.02" (76.71) Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
If hardware features are within the contact area:
Add .050" (1 contact cavity) for each latch
Add .050 " ( 1 contact cavity) for each guide post
Add .150" (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum hole pattern layout length for PS1 is $2.35^{\prime \prime}(59.69)$.
Maximum hole pattern layout length for PS2 is $2.95^{\prime \prime}$ (74.93).
Add .100" from center of mounting hole to first hole (if the first contact cavity is used for a guide post or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SSB-BB LAYOUT


DIMENSIONS FOR "A"
To determine connector length "A":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch | - |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ | - |
| Add .150 " (3 contact cavities) for each mounting hole | $-.070^{\prime \prime}$ |
| Add fixed end length |  |
| Total Length (Dimension A) |  |

Notes: Maximum length $2.42^{\prime \prime}$ (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by .050 " If hardware features are within the contact area:

Add .050 " ( 1 contact cavity) for each latch
Add .050 " ( 1 contact cavity) for each guide post
Add .150" (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum hole layout length $2.35^{\prime \prime}$ (59.69).
Add $.100^{\prime \prime}$ from center of mounting hole to first hole (if the first contact cavity is for a guide post or latch, $.100^{\prime \prime}$ dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

## SHORT THRU HOLE TAIL (TYPE BB) ORDERING GUIDE



Minneapolis, MN, USA

## Single Row Micro Strip

## SHORT/LONG ALT. THRU-HOLE (TYPE H2)

The Single Row .050 " Micro Strip connectors are configured with three different thru-hole options depending on your board's configuration: BB-Short Thru Hole, H2-Short/Long Alt, and CCLong Thru Hole. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL-83513. These connectors are available in standard sizes ranging from 2 through 48 positions as well as custom configurations.

Flex design and installation service is also available from Omnetics. Please contact us for more information.


## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:

3 AMPs max per contact

- Shock:

600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC

- Vibration: 50 g's discontinuity < 1 microsecond
- Thermal Vacuum Outgassing: 20 g's discontinuity < 1 microsecond
- Contact Resistance: NASA SP-R-0022
- Mating/Unmating Force: $3 \mathrm{oz}(85 \mathrm{~g})$ typical per contact

26 Milliohms (65 mV max @ 2.5 amp )

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy Epoxy

## Single Row Micro Strip

PS1/PS2-H2 LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length
.070"
Total Length (Dimension A)

Notes: Maximum length for PS1 @ .075" thick 2.42" (61.47) Maximum number of contact cavities is 48 . Maximum length for PS2 @ .100" thick $3.02^{\prime \prime}$ (76.71) Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
If hardware features are within the contact area:
Add .050 " (1 contact cavity) for each latch
Add $.050^{\prime \prime}$ (1 contact cavity) for each guide post
Add .150" (3 contact cavities) for each mounting hole Total Length (Dimension B)

Notes: Maximum hole pattern layout length for PS1 is $2.35^{\prime \prime}$ (59.69). Maximum hole pattern layout length for PS2 is $2.95^{\prime \prime}$ (74.93).
Add $.100^{\prime \prime}$ from center of mounting hole to first hole (if the first contact cavity is used for a guide post or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SSB-H2 LAYOUT


DIMENSIONS FOR " ${ }^{\text {" }}$
To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch |  |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ | - |
| Add $.150 "$ (3 contact cavities) for each mounting hole | - |
| Add fixed end length | - |
| Total Length (Dimension A) |  |

Notes: Maximum length 2.42" (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by .050 "
If hardware features are within the contact area:
Add .050 " (1 contact cavity) for each latch
Add .050 " (1 contact cavity) for each guide post
Add .150" (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum hole layout length $2.35^{\prime \prime}$ (59.69).
Add .100" from center of mounting hole to first hole (if the first contact cavity is for a guide post or latch, $.100^{\prime \prime}$ dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

## SHORT/LONG ALT. THRU HOLE TAIL (TYPE H2) ORDERING GUIDE



## Single Row Micro Strip

## LONG THRU-HOLE (TYPE CC)

The Single Row .050" Micro Strip connectors are configured with three different thru-hole options depending on your board's configuration: BB-Short Thru Hole, H2-Short/Long Alt, and CC-Long Thru Hole. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming
 to the requirements of MIL-DTL-83513. These connectors are available in standard sizes ranging from 2 through 48 positions as well as custom configurations.

Flex design and installation service is also available from Omnetics. Please contact us for more information.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp ) 3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Micro Strip

## PS1/PS2-CC LAYOUT





## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length
Total Length (Dimension A)

Notes: Maximum length for PS1 @ .075"thick 2.42" (61.47) Maximum number of contact cavities is 48 . Maximum length for PS2 @ .100" thick $3.02^{\prime \prime}$ (76.71) Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by .050 "
If hardware features are within the contact area:
Add .050" (1 contact cavity) for each latch
Add .050 " ( 1 contact cavity) for each guide post
Add .150" (3 contact cavities) for each mounting hole Total Length (Dimension B)

Notes: Maximum hole pattern layout length for PS1 is $2.35^{\prime \prime}(59.69)$. Maximum hole pattern layout length for PS2 is $2.95^{\prime \prime}$ (74.93).
Add 100 " from center of mounting hole to first hole (if the first contact cavity is used for a guide post or latch, .100 " dimension must be adjusted)

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SSB-CC LAYOUT


DIMENSIONS FOR "A"
To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch | - |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ | - |
| Add .150 " ( 3 contact cavities) for each mounting hole | $-.070^{\prime \prime}$ |
| Add fixed end length |  |

Notes: Maximum length 2.42" (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
If hardware features are within the contact area:
Add .050 " (1 contact cavity) for each latch
Add .050" (1 contact cavity) for each guide post
Add .150" (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum hole layout length 2.35 " (59.69).
Add .100" from center of mounting hole to first hole (if the first contact cavity is for a guide post or latch, $.100^{\prime \prime}$ dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

LONG THRU HOLE TAIL (TYPE CC) ORDERING GUIDE


Minneapolis, MN, USA

## Single Row Micro Strip

## SOLDERCUP (TYPE SS)

Single Row Micro Strip connectors are available in soldercup configurations. The soldercup tails are commonly used within hand soldering applications, and/or specific wire based devices that require a small robust connector during one of the final phases of production. These connectors feature Omnetics' gold plated Flex Pin contact system that conforms to the requirements of MIL-DTL-83513.

Micro Strip connectors are available in standard sizes ranging from 2 through 48 positions as well as custom configurations and accept 26 AWG or smaller stranded wire.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond
20 g's discontinuity < 1 microsecond
NASA SP-R-0022
26 Milliohms ( 65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket Soldercup Termination:
- Standard Socket PCB Tail Termination:
- Standard Soldercup Termination:
- RoHS Pin Soldercup Termination:
- RoHS Socket Soldercup Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Hard Gold Plated per ASTM B488
Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488

Minneapolis, MN, USA
Phone: +1 763.572.0656 Fax: 763.572.3925
Email: sales@omnetics.com
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Micro Strip

PS1/PS2-SS LAYOUT


## DIMENSIONS FOR "A"

To determine connector length "A":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by .050 "
Add .150 " (3 contact cavities) for each mounting hole
Add fixed end length constant
Total Length (Dimension A )

Notes: Maximum length for PS1 @ .075" thick 2.42" (61.47) Maximum number of contact cavities is 48. Maximum length for PS2 @ .100"t thick 3.02" (76.71). Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SSB-SS LAYOUT



## DIMENSIONS FOR"A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by .050 " $\qquad$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length
.070"
Total Length (Dimension A)
Notes: Maximum length $2.42^{\prime \prime}$ (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SOLDER CUP (TYPE SS) ORDERING GUIDE
SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS
O2-48


LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)


LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)


## M

MOUNTING HOLE


## HT

HIGH TEMP



SSB-24-SS-LT


SSB-17-SS-M-GS

## Single Row Micro Strip

## PRE-WIRED/CABLE (TYPE WD/WC)

Pre-wired Single Row Micro Strip connectors are available with 26 AWG to 32 AWG stranded wire. These assemblies are crimped using proprietary semi-automated crimping systems. Due to their small size and precision required to make these quality crimps, hand crimping is not an option. Pre-crimped wires and contacts are potted in place, further protecting the integrity of the crimp joint. Building these parts to order allows for maximum flexibility in wire type, size and color coding.
 Commercial Off The Shelf (COTS) versions are also available with 18 " of color coded 26 AWG Teflon wire for quick turn around.

These connectors are available in standard sizes ranging from 2 through 48 positions as well as custom configurations, and accept 26 AWG or smaller stranded wire.

ELECTRO-MECHANICAL SPECS

- Durability:

2000 Cycles

- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating:

3 AMPs max per contact

- Voltage Rating (DWV):
- Insulation Resistance: 600 VAC RMS Sea Level
- Shock: 5000 Megohms min @ 500 VDC
- Vibration: 50 g's discontinuity < 1 microsecond
- Thermal Vacuum Outgassing: 20 g's discontinuity < 1 microsecond
- Contact Resistance: NASA SP-R-0022
- Mating/Unmating Force: 26 Milliohms ( 65 mV max @ 2.5 amp ) 3 oz (85 g) typical per contact


## MATERIAL SPECIFICATIONS

- Standard Wire:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

26 AWG, Teflon Insulated per NEMA-HP3 Polyphenylene Sulfide per MIL-M-24519 Gold Plated BeCu Gold Plated Copper Alloy Epoxy

## Single Row Micro Strip

## PS1/PS2-WD/WC LAYOUT




## minum mine

 OMNETICS YYWW

## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by .050 " $\qquad$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length for PS1 @ .075" thick 2.42" (61.47) Maximum number of contact cavities is 48. Maximum length for PS2 @ . $100^{\prime \prime}$ thick 3.02" (76.71). Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Micro Strip

SSB-WD/WC LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by $.050^{\prime \prime}$ $\qquad$
Add .150" (3 contact cavities) for each mounting hole
Add fixed end length
.070"
Total Length (Dimension A)

[^0]
## Single Row Micro Strip

PRE-WIRED/CABLE (TYPE WD/WC) ORDERING GUIDE


# Dual Row Micro Strip 

HORIZONTAL SMT (TYPE AA)

Horizontal SMT Micro Strip connectors offer an extremely low profile package that is well suited to pick and place methods. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL-83513. These rugged light weight connectors are suitable for the most demanding applications. Available with fixing/ retention jack screws as well as mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 64 positions as well as custom configurations.


ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating:

3 AMPs max per contact

- Voltage Rating (DWV):
- Insulation Resistance: 600 VAC RMS Sea Level
- Shock: 5000 Megohms min @ 500 VDC
- Vibration: 50 g's discontinuity < 1 microsecond
- Thermal Vacuum Outgassing: 20 g's discontinuity < 1 microsecond
- Contact Resistance: NASA SP-R-0022
- Mating/Unmating Force:

26 Milliohms (65 mV max @ 2.5 amp ) 3 oz ( 85 g ) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Micro Strip

## DRP-AA LAYOUT



CONNECTOR FACE
SUGGESTED PAD LAYOUT

## $9 \varepsilon$





## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by .050 "
Add . 150 " for each mounting hole
Add . 100 " for each screw receptacle
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer

## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$
If hardware features are within the contact area:
Add $.050^{\prime \prime}$ for each latch
Add .050 " for each guide post hole
Add .100 " for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length 1.55 " (39.37). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

# Dual Row Micro Strip 

DRS-AA LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts in one row |  |
| :--- | :--- |
| Add 1 contact cavity for each latch in the same row |  |
| Add 1 contact cavity for each guide post hole in the same row | - |
| Total contact cavities in a single row | - |
| Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ |  |
| Add .150 "for each mounting hole | - |
| Add $.100^{\prime \prime}$ for each screw receptacle | $-.062^{\prime \prime}$ |
| Add fixed end length constant |  |
| Total Length (Dimension A) |  |

Notes: Maximum length 1.85 " (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$ $\qquad$
If hardware features are within the contact area:
Add $.050^{\prime \prime}$ for each latch
Add .050 " for each guide post hole
Add . 100" for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add .100 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

HORIZONTAL SMT (TYPE AA) ORDERING GUIDE


## EXAMPLES:



DRP-44-AA


DRS-43-AA-LE


DRS-43-AA-LT


DRS-32-AA-M

## COMMON OPTIONS

G GUIDE POST/HOLE
GS MULTIPLE GUIDE POSTS/HOLES

LE LATCH (END MOUNT) LES MULTIPLE LATCHES
(END MOUNT)

(

LT LATCH (TOP MOUNT)
LTS MULTIPLE LATCHES (TOP MOUNT)


M
MOUNTING HOLE


CSR CENTER SCREW RECEPTACLE - PIN SIDE
ESR END SCREW RECEPTACLE - PIN SIDE


CRS CENTER RETAINING SCREW SOCKET SIDE
ERS END RETAINING SCREW - SOCKET SIDE


CJP CENTER JACK POST - PIN SIDE EJP END JACK POST - PIN SIDE


HT
HIGH TEMP

## RoHS

RoHS COMPLIANT


# Dual Row Micro Strip 

STRAIGHT TAIL (TYPE DD)

The Dual Row .050" Micro Strip connectors are configured with simple straight tails (Integral or Crimped). Suitable for vertical thru-hole mounting to fine pitched flex circuits. The straight solid tails are also commonly used in ultra fine wrap terminations, such as electrophysiology. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. Available with fixing/retention jack screws as well as mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 64 positions as well as custom configurations. Flex design and installation service is also available from Omnetics. Please contact us for more information.


ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp ) 3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Micro Strip

## DRP-DD LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by .050 "
Add .150 " for each mounting hole
Add .100 " for each screw receptacle
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length 1.85" (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer

## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$
If hardware features are within the contact area:
Add $.050^{\prime \prime}$ for each latch
Add .050 " for each guide post hole
Add . 100 " for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add .100 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## DRS-DD LAYOUT



## DIMENSIONS FOR " ${ }^{\text {" }}$

To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150 "for each mounting hole
Add $.100^{\prime \prime}$ for each screw receptacle
Add fixed end length constant
Total Length (Dimension A )

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$ $\qquad$
If hardware features are within the contact area:
Add $.050^{\prime \prime}$ for each latch
Add .050 " for each guide post hole
Add . 100" for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## STRAIGHT TAIL (TYPE DD) ORDERING GUIDE



## COMMON OPTIONS



DRS-43-DD-LT

G GUIDE POST/HOLE
GS MULTIPLE GUIDE POSTS/HOLES


LT LATCH (TOP MOUNT)
LTS MULTIPLE LATCHES (TOP MOUNT)


## M

MOUNTING HOLE


CSR CENTER SCREW RECEPTACLE - PIN SIDE
ESR END SCREW RECEPTACLE - PIN SIDE


CRS CENTER RETAINING SCREW SOCKET SIDE
ERS END RETAINING SCREW - SOCKET
SIDE


CJP CENTER JACK POST - PIN SIDE
EJP END JACK POST - PIN SIDE


HT
HIGH TEMP

## RoHS

RoHS COMPLIANT

# Dual Row Micro Strip 

## FLEX TAIL (TYPE FF)

Flex mount Micro Strip connectors are a low profile ruggedized connector on .050 " $(1.27 \mathrm{~mm})$ centerlines. The SMT tails are formed together in an hourglass shape, allowing a double sided flex circuit to slide between the 2 rows of leads. The spring tension holds the flex in place during the soldering process. These durable light weight connectors are suitable for the most demanding applications. Available with retaining pin screws as well as mounting holes suitable for PCB and flex mounting. They feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. These connectors are
 available in standard sizes ranging from 2 through 64 positions as well as custom configurations.

Flex design and installation service is also available from Omnetics. Please contact us for more information.

ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
- Current rating:
- Voltage Rating (DWV): 3 AMPs max per contact
- Insulation Resistance: 600 VAC RMS Sea Level
- Shock: 5000 Megohms min @ 500 VDC
- Vibration: 50 g's discontinuity < 1 microsecond
- Thermal Vacuum Outgassing: 20 g's discontinuity < 1 microsecond
- Contact Resistance: NASA SP-R-0022
- Mating/Unmating Force: 26 Milliohms ( 65 mV max @ 2.5 amp ) 3 oz (85 g) typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Micro Strip

## DRS-FF LAYOUT



## DATE CODE:

YY: YEAR WW: WEEK


## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" for each mounting hole
Add .100" for each screw receptacle
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$
If hardware features are within the contact area:
Add $.050^{\prime \prime}$ for each latch
Add .050 " for each guide post hole
Add .100 " for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add .100 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## FLEX TAIL (TYPE FF) ORDERING GUIDE



# Dual Row Micro Strip 

LONG/SHORT ALT. THRU-HOLE (TYPE H2)

The Dual Row Micro Strip connectors have contacts arranged on .050 " ( 1.27 mm ) centerlines. The thru-hole tails are arranged in a 050 " x $.100^{\prime \prime}$ grid, allowing for space for traces and annular rings. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. These durable light weight connectors are suitable for the most demanding applications. They are available with retaining screws as well as mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 64 positions as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC 50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms ( 65 mV max @ 2.5 amp )
$3 \mathrm{oz}(85 \mathrm{~g})$ typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Micro Strip

DRP-H2 LAYOUT


DIMENSIONS FOR "A"
To determine connector length " A ":

| Add the total number of contacts in one row |  |
| :--- | :--- |
| Add 1 contact cavity for each latch in the same row |  |
| Add 1 contact cavity for each guide post hole in the same row |  |
| Total contact cavities in a single row |  |
| Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$ |  |
| Add .150 "for each mounting hole |  |
| Add $.100^{\prime \prime}$ for each screw receptacle |  |
| Add fixed end length constant |  |
| Total Length (Dimension A) |  |

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$ If hardware features are within the contact area:
Add .050 " for each latch
Add .050 " for each guide post hole
Add . 100" for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add .100 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## DRS-H2 LAYOUT




## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" for each mounting hole
Add .100 " for each screw receptacle
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$ If hardware features are within the contact area:

Add .050 " for each latch
Add .050 " for each guide post hole
Add .100 "for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## SHORT/LONG ALT. THRU HOLE TAIL (TYPE H2) ORDERING GUIDE

## SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS

DRP 02-64
PIN CONNECTOR


DRS
SOCKET CONNECTOR


EXAMPLES:


DRP-52-H2-ESR


DRS-43-H2-LE


DRS-43-H2-LT


DRS-32-H2-M

H2


LT LATCH (TOP MOUNT)
LTS MULTIPLE LATCHES (TOP MOUNT)


## M

MOUNTING HOLE


CSR CENTER SCREW RECEPTACLE - PIN SIDE
ESR END SCREW RECEPTACLE - PIN SIDE


CRS CENTER RETAINING SCREW -
SOCKET SIDE
ERS END RETAINING SCREW - SOCKET
SIDE


CJP CENTER JACK POST - PIN SIDE EJP END JACK POST - PIN SIDE

HT


HIGH TEMP

## RoHS

RoHS COMPLIANT

## Dual Row Micro Strip

## SOLDER CUP (TYPE SS)

The solder cup tails are commonly used for hand soldering applications and for specific wire-based devices that require a small robust connector during one of the final phases of production. These connectors feature Omnetics' gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. Available with fixing/retention jack screws as well as mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 64 positions as well as custom configurations and accept 26 AWG or smaller stranded wire.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms ( 65 mV max @ 2.5 amp )
$3 \mathrm{oz}(85 \mathrm{~g})$ typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket Soldercup Termination:
- Standard Socket PCB Tail Termination:
- Standard Soldercup Termination:
- RoHS Pin Soldercup Termination:
- RoHS Socket Soldercup Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Hard Gold Plated per ASTM B488
Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Micro Strip

DRP-SS LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post in the same row
Total contact cavities in a single row
Subtract 1 from the total to get the number of cavity spaces and mulitply by .050" $\qquad$
Add .150 " for each mounting hole
Add .100 " for each screw receptacle
Add fixed end length constant .062"
Total Length (Dimension A):

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## DRS-SS LAYOUT




## DIMENSIONS FOR"A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Subtract 1 from the total to get the number of cavity spaces and mulitply by .050 " $\qquad$
Add 150 " for each mounting hole
Add 100 " for each screw receptacle
Add fixed end length constant
Total Length (Dimension A) $\qquad$
Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## SOLDERCUP (TYPE SS) ORDERING GUIDE

## SERIES

\# OF CONTACTS
TERMINATION TYPE
COMMON OPTIONS
DRP 02-64 SS PIN CONNECTOR


DRS
SOCKET CONNECTOR


EXAMPLES:


DRP-43-SS-LE


DRS-43-SS-LE


DRS-43-SS-LT


DRS-32-SS-M

G GUIDE POST/HOLE
GS MULTIPLE GUIDE POSTS/HOLES


LE LATCH (END MOUNT) LES MULTIPLE LATCHES
(END MOUNT)


LT LATCH (TOP MOUNT)
LTS MULTIPLE LATCHES (TOP MOUNT)

CSR CENTER SCREW RECEPTACLE - PIN SIDE
ESR END SCREW RECEPTACLE - PIN SIDE


CRS CENTER RETAINING SCREW -
SOCKET SIDE
ERS END RETAINING SCREW - SOCKET
SIDE


CJP CENTER JACK POST - PIN SIDE EJP END JACK POST - PIN SIDE

HT
HIGH TEMP

## RoHS

RoHS COMPLIANT


Minneapolis, MN, USA Phone: +1 763.572.0656 Fax: 763.572.3925 Email: sales@omnetics.com www.omnetics.com

## Dual Row Micro Strip

## VERTICAL SMT (TYPE VV)

Vertical SMT Micro Strip connectors require a minimal amount of board space on flex circuits and rigid circuit boards. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. These rugged light weight connectors are suitable for the most demanding applications. Available with retaining screws as well as mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through
These connectors are available in standard size
64 positions as well as custom configurations.



## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Micro Strip

DRP-VV LAYOUT


DIMENSIONS FOR "A"
To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150 "for each mounting hole
Add $.100^{\prime \prime}$ for each screw receptacle
Add fixed end length constant
Total Length (Dimension A )

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$ $\qquad$
If hardware features are within the contact area:
Add . 050 " for each latch
Add .050 " for each guide post hole
Add . 100" for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## DRS-VV LAYOUT



SUGGESTED PAD LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.050^{\prime \prime}$
Add .150" for each mounting hole
Add .100 " for each screw receptacle
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities in one row minus 1 by $.050^{\prime \prime}$
If hardware features are within the contact area:
Add $.050^{\prime \prime}$ for each latch
Add .050 " for each guide post hole
Add . 100" for each screw receptacle
Total Length (Dimension B)

Notes: Maximum length $1.55^{\prime \prime}$ (39.37). Add .100 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, $.100^{\prime \prime}$ dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

## VERTICAL SMT (TYPE VV) ORDERING GUIDE

## SERIES \# OF CONTACTS TERMINATION TYPE

## COMMON OPTIONS

## DRP

PIN CONNECTOR


DRS
SOCKET CONNECTOR


02-64



DRP-43-VV-LE

DRS-43-VV-LT



DRS-43-VV-LE

G GUIDE POST/HOLE
GS MULTIPLE GUIDE POSTS/HOLES


LT LATCH (TOP MOUNT)
LTS MULTIPLE LATCHES (TOP MOUNT)

CSR CENTER SCREW RECEPTACLE - PIN SIDE
ESR END SCREW RECEPTACLE - PIN SIDE


CRS CENTER RETAINING SCREW SOCKET SIDE
ERS END RETAINING SCREW - SOCKET SIDE


CJP CENTER JACK POST - PIN SIDE EJP END JACK POST - PIN SIDE

## HT

HIGH TEMP

## RoHS

RoHS COMPLIANT

# Dual Row Micro Strip 

## PRE-WIRED/CABLE (TYPE WD/WC)

Pre-wired Dual Row Micro Strip connectors are available with 26 AWG to 32 AWG stranded wire. These assemblies are crimped using proprietary semi-automated crimping systems. Due to the small size and precision required to make these quality crimps, hand crimping is not an option. Pre-crimped wires and contacts are potted in place, further protecting the integrity of the crimp joint. Building these parts to order allows for maximum flexibility in wire type, size and color coding. Commercial Off The Shelf (COTS) versions are also available with 18 " of color coded 26 AWG Teflon for quick turn around.

These connectors are available in standard sizes ranging from 2 through 64 positions as well as custom configurations.

## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE) 3 AMPs max per contact 600 VAC RMS Sea Level 5000 Megohms min @ 500 VDC 50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp ) 3 oz ( 85 g ) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Wire:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

26 AWG, Teflon Insulated per NEMA-HP3 Polyphenylene Sulfide per MIL-M-24519 Gold Plated BeCu Gold Plated Copper Alloy Epoxy

## Dual Row Micro Strip

DRP-WD/WC LAYOUT


## DIMENSIONS FOR"A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post in the same row
Total contact cavities in a single row
Subtract 1 from the total to get the number of cavity spaces and mulitply by $.050^{\prime \prime}$ $\qquad$
Add .150 " for each mounting hole
Add .100 " for each screw receptacle
Add fixed end length constant
Total Length (Dimension A):
Notes: Maximum length $1.85^{\prime \prime}$ (46.99). Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

DRS-WD/WC LAYOUT



## DIMENSIONS FOR"A"

To determine connector length "A":
Add the total number of contacts in one row
Add 1 contact cavity for each latch in the same row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Subtract 1 from the total to get the number of cavity spaces and mulitply by .050 "
Add .150 " for each mounting hole
Add .100 " for each screw receptacle
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $1.85^{\prime \prime}(46.99)$. Maximum number of contact cavities is 64 . Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Micro Strip

PRE-WIRED/CABLE (TYPE WD/WC) ORDERING GUIDE


EXAMPLES:


DRP-44-WD-18.00-C


DRS-44-WD-18.00-C

| COLOR COMMON |  |
| :--- | :--- |
| CODED | OPTIONS |

## C <br> 10 REPEATING

COLORS PER
MIL-STD 681


Y
ALL OTHER WIRE COLORS

G GUIDE POST/HOLE
GS MULTIPLE GUIDE POSTS/ HOLES


LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)


LT LATCH (TOP MOUNT)
LTS MULTIPLE LATCHES (TOP
MOUNT)


M MOUNTING HOLE


CSR CENTER SCREW
RECEPTACLE - PIN SIDE
ESR END SCREW
RECEPTACLE - PIN SIDE


CRS CENTER RETAINING SCREW - SOCKET SIDE ERS END RETAINING SCREW SOCKET SIDE


CJP CENTER JACK POST - PIN SIDE
EJP END JACK POST - PIN SIDE


HT HIGH TEMP
RoHS RoHS COMPLIANT CS CUSTOMER SUPPLIED MATERIAL

## Dual Row Offset Micro Strip

HORIZONTAL SMT (TYPE AA)

Horizontal SMT Micro Strip connectors offer an extremely low profile package that is well suited to pick and place methods. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. These rugged light weight connectors are suitable for the most demanding applications. Available with mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 97 positions as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms ( 65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

# Dual Row Offset Micro Strip 

PSM-AA LAYOUT


CONNECTOR FACE SUGGESTED PAD LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add . 150" for each mounting hole
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}$ (70.36) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add $.025^{\prime \prime}$ for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length $2.40^{\prime \prime}$ (60.96). Add .100" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

# Dual Row Offset Micro Strip 

SSO-AA LAYOUT



SUGGESTED PAD LAYOUT

## 




## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add .150 " for each mounting hole
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length 2.77 " ( 70.36 ) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095" when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add .025 " for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length 2.40 " (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

## HORIZONTAL SMT (TYPE AA) ORDERING GUIDE

## SERIES <br> \# OF CONTACTS <br> TERMINATION TYPE <br> COMMON OPTIONS

## PSM

PIN CONNECTOR


SSO
SOCKET CONNECTOR


02-97
$-\quad$ A


LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)


LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)

M MOUNTING HOLE


HT HIGH TEMP

RoHS RoHS COMPLIANT


## EXAMPLES:



PSM-42-AA-LE


SSO-35-AA-M-GS

# Dual Row Offset Micro Strip 

## STRAIGHT TAIL (TYPE DD)

The Dual Row .050" Offset Micro Strip connectors are configured with simple straight tails (Integral or Crimped). They are suitable for vertical thru-hole mounting, fine pitched, or rigid flex circuits. The straight solid tails are also commonly used in ultra fine wrap terminations, such as electro physiology. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. They are available with mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 97 positions as well as custom configurations. Flex design and installation service is also available from Omnetics. Please contact us for more information.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Offset Micro Strip

PSM-DD LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch |  |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | - |
| Add .150 " for each mounting hole | - |
| Add fixed end length constant |  |
| Total Length (Dimension A) |  |

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}$ (70.36) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add $.025^{\prime \prime}$ for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length 2.40 " (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip SSO-DD LAYOUT




## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add . 150 " for each mounting hole
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $2.47^{\prime \prime}$ ( 62.74 ) without mounting holes. Maximum length $2.77^{\prime \prime}(70.36)$ with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add $.025^{\prime \prime}$ for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length 2.40 " (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

# Dual Row Offset Micro Strip 

STRAIGHT TAIL (TYPE DD) ORDERING GUIDE

## SERIES <br> \# OF CONTACTS <br> TERMINATION TYPE <br> COMMON OPTIONS

PSM
PIN CONNECTOR


SSO
SOCKET CONNECTOR


02-97 DD


RoHS RoHS COMPLIANT


SSO-35-DD-M-GS

LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)

M MOUNTING HOLE


HT HIGH TEMP
G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES


LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)



# Dual Row Offset Micro Strip 

FLEX TAIL (TYPE FF)

Flex mount offset Micro Strip connectors are a low profile ruggedized connector on .050 " $(1.27 \mathrm{~mm})$ centerlines. The SMT tails are formed together in an hourglass shape, allowing a double sided flex circuit to slide between the 2 rows of leads. The spring tension holds the flex in place during the soldering process. These durable light weight connectors are suitable for the most demanding applications. They are available with mounting holes suitable for PCB and flex mounting, and feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513.

These connectors are available in standard sizes ranging from 2 through 97 positions as well as custom configurations. Flex design and installation service is also available from Omnetics. Please contact us for
 more information.

## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp )
$3 \mathrm{oz}(85 \mathrm{~g})$ typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Offset Micro Strip

## PSM-FF LAYOUT

 SUGGESTED PAD LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch | - |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | - |
| Add .150 "for each mounting hole | $-.070^{\prime \prime *}$ |
| Add fixed end length constant |  |

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}(70.36)$ with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add .025 "for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length $2.40^{\prime \prime}$ (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

# Dual Row Offset Micro Strip 

## SSO-FF LAYOUT




## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add . 150" for each mounting hole
Add fixed end length constant
Total Length (Dimension A)
Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}(70.36)$ with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add $.025^{\prime \prime}$ for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length $2.40^{\prime \prime}$ (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

## FLEX TAIL (TYPE FF) ORDERING GUIDE

## SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS

## PSM

PIN CONNECTOR

sso
SOCKET CONNECTOR


02-97
.


LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)

M MOUNTING HOLE


LE LATCH (END MOUNT)
LES MULTIPLE LATCHES (END MOUNT)


G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES


EXAMPLES:


PSM-47-FF


SSO-35-FF-M-GS

RoHS RoHS COMPLIANT


# Dual Row Offset Micro Strip 

## LONG/SHORT ALT. THRU HOLE (TYPE H2)

Dual Row Offset Micro Strip connectors have contacts arranged on .050 " ( 1.27 mm ) centerlines. The thru-hole tails are arranged in a .50 " x $.075^{\prime \prime}$ grid, allowing space for traces and annular rings. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. These durable light weight connectors are designed to withstand the most demanding applications.

Available with mounting holes suitable for PCB and flex mounting. These connectors are available in standard sizes ranging from 2 through 97 positions as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms ( 65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Offset Micro Strip

## PSM-H2 LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add . 150 " for each mounting hole
Add fixed end length constant
(24) SPACES @
$.050=1.200[30.48]$


1 TAIL DIMENSIONS APPLY AT PLANE A



## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add $.025^{\prime \prime}$ for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length $2.40^{\prime \prime}$ (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}$ (70.36) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


# Dual Row Offset Micro Strip 

## SSO-H2 LAYOUT






## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add . 150 " for each mounting hole
Add fixed end length constant
Total Length (Dimension A)
Notes: Maximum length 2.47 " (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}(70.36)$ with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add $0.095^{\prime \prime}$ when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add .025 " for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length $2.40^{\prime \prime}$ (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

## SHORT/LONG ALT. THRU HOLE TAIL (TYPE H2) ORDERING GUIDE

SERIES
\# OF CONTACTS

PIN CONNECTOR


SSO
SOCKET CONNECTOR


02-97
H2


## COMMON OPTIONS

G GUIDE POST/HOLE
GS MULTIPLE GUIDE POSTS/ HOLES


LE LATCH (END MOUNT)
LES MULTIPLE LATCHES
(END MOUNT)


LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)

M MOUNTING HOLE


HT HIGH TEMP


EXAMPLES:


SSO-35-H2-M-GS

RoHS RoHS COMPLIANT


# Dual Row Offset Micro Strip 

## SOLDER CUP (TYPE SS)

Solder Cup Tails are commonly used for hand soldering applications, and/or specific wire based devices that require a small robust connector during one of the final phases of production. These connectors feature Omnetics' gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. They are available with mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 97 positions as well as custom configurations and accept 26 AWG or smaller stranded wire.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature: $\qquad$
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond
20 g's discontinuity < 1 microsecond
NASA SP-R-0022
26 Milliohms (65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket Soldercup Termination:
- Standard Socket PCB Tail Termination:
- Standard Soldercup Termination:
- RoHS Pin Soldercup Termination:
- RoHS Socket Soldercup Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Hard Gold Plated per ASTM B488
Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Offset Micro Strip

PSM-SS LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by $.025^{\prime \prime}$ $\qquad$
Add .150 " for each mounting hole
Add fixed end length constant
$0.070^{\prime \prime *}$
Total Length (Dimension A):

Notes: Maximum length 2.47 " (62.74) without mounting holes. Maximum length 2.77 " (70.36) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes. * Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

## SSO-SS LAYOUT



DIMENSIONS FOR "A"
To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by $.025^{\prime \prime}$
Add 150 " for each mounting hole
Add fixed end length constant
Total Length (Dimension A ):

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}(70.36)$ with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes. * Add $0.095^{\prime \prime}$ when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

SOLDER CUP (TYPE SS) ORDERING GUIDE

## SERIES <br> \# OF CONTACTS <br> TERMINATION TYPE <br> COMMON OPTIONS

## PSM

PIN CONNECTOR

sso
SOCKET CONNECTOR


02-97
SS


## EXAMPLES:



PSM-50-SS-RoHS


SSO-50-SS

G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES


## LE LATCH (END MOUNT)

LES MULTIPLE LATCHES
(END MOUNT)


LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)

M MOUNTING HOLE


HT HIGH TEMP

RoHS RoHS COMPLIANT
RoHS

COMPLIANT

## Dual Row Offset Micro Strip

## VERTICAL SMT (TYPE VV)

Vertical SMT Micro Strip connectors require a minimal amount of board space on flex circuits and rigid circuit boards. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system which meets the performance specifications of MIL-DTL-83513. These rugged light weight connectors are suitable for the most demanding applications. Available with mounting holes and suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 through 97 positions as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact
600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC
50 g's discontinuity < 1 microsecond
20 g's discontinuity < 1 microsecond
NASA SP-R-0022
26 Milliohms ( 65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Offset Micro Strip

## PSM-VV LAYOUT




## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each latch |  |
| Add 1 contact cavity for each guide post | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | - |
| Add .150 "for each mounting hole | $-.070^{\prime \prime *}$ |
| Add fixed end length constant |  |

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}(70.36)$ with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer.


## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add .025 "for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length $2.40^{\prime \prime}$ (60.96). Add $.100^{\prime \prime}$ from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

## SSO-VV LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add .150 " for each mounting hole
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $2.47^{\prime \prime}$ (62.74) without mounting holes. Maximum length 2.77 " ( 70.36 ) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes.

* Add 0.095" when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer


## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each latch
Add .025 " for each guide post hole
Total Length (Dimension B)

Notes: Maximum pad layout length 2.40 " (60.96). Add .100 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only

## Dual Row Offset Micro Strip

## VERTICAL SMT (TYPE VV) ORDERING GUIDE

## SERIES

## \# OF CONTACTS

TERMINATION TYPE

## COMMON OPTIONS

## PSM

PIN CONNECTOR

sso
SOCKET CONNECTOR


02-97
vv


G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES


LE LATCH (END MOUNT)
LES MULTIPLE LATCHES
(END MOUNT)


LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)

M MOUNTING HOLE


HT HIGH TEMP


HOLE
 $\square$


PSM-49-VV-GS


SSO-35-VV-M-GS

RoHS RoHS COMPLIANT


## Dual Row Offset Micro Strip

## PRE-WIRED/CABLE (TYPE WD/WC)

Pre-wired offset Dual Row Micro Strip connectors are available with 26 AWG to 32 AWG stranded wire. These assemblies are crimped using proprietary semi-automated crimping systems. Due to the small size and precision required to make these quality crimps, hand crimping is not an option. Pre-crimped wires and contacts are potted in place,
 further protecting the integrity of the crimp joint. Building these parts to order allows for maximum flexibility in wire type, size and color coding. Commercial Off The Shelf (COTS) versions are also available with 18 " of color coded 26 AWG Teflon for quick turn around.

These connectors are available in standard sizes ranging from 2 through 97 positions as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability:
- Temperature:
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing:
- Contact Resistance:
- Mating/Unmating Force:

2000 Cycles
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
3 AMPs max per contact 600 VAC RMS Sea Level
5000 Megohms min @ 500 VDC 50 g's discontinuity < 1 microsecond 20 g's discontinuity < 1 microsecond NASA SP-R-0022
26 Milliohms ( 65 mV max @ 2.5 amp )
3 oz (85 g) typical per contact

## MATERIAL SPECIFICATIONS

- Standard Wire:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

26 AWG, Teflon Insulated per NEMA-HP3 Polyphenylene Sulfide per MIL-M-24519 Gold Plated BeCu Gold Plated Copper Alloy Epoxy

## Dual Row Offset Micro Strip

PSM-WD/WC LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by $.025^{\prime \prime}$ $\qquad$
Add . 150 " for each mounting hole
Add fixed end length constant $\quad \overline{0.070^{\prime *}}$
Total Length (Dimension A):

Notes: Maximum length 2.47 " (62.74) without mounting holes. Maximum length $2.77^{\prime \prime}$ (70.36) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes. * Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

SSO-WD/WC LAYOUT



## DIMENSIONS FOR"A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each latch
Add 1 contact cavity for each guide post hole
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and multiply by $.025^{\prime \prime}$
Add .150 " for each mounting hole
Add fixed end length constant $\quad \underline{0.070^{\prime \prime *}}$

Total Length (Dimension A):
Notes: Maximum length $2.47^{\prime \prime}(62.74)$ without mounting holes. Maximum length 2.77 " (70.36) with two end mounting holes. Maximum number of contact cavities is 97 . Number of contacts must be reduced to accommodate hardware and mounting holes. * Add 0.095 " when an even number of contact cavities is used and the connector has mounting holes. Default locations for guide post holes and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Offset Micro Strip

PRE-WIRED/CABLE (TYPE WD/WC) ORDERING GUIDE
$\left.\begin{array}{ccc}\begin{array}{c}\text { PSM } \\ \text { PIN }\end{array} & \mathbf{0 2 - 9 7} & \begin{array}{c}\text { WD } \\ \text { DISCRETE WIRES }\end{array} \\ \text { CONNECTOR }\end{array} \quad \begin{array}{c}\mathbf{1 8 . 0 0} \\ =18.00^{\prime \prime} \\ \text { STANDARD }\end{array}\right]$

| COLOR | COMMON |
| :--- | :--- |
| CODED | OPTIONS |

WIRE COLORS


M MOUNTING HOLE


HT HIGH TEMP
RoHS RoHS COMPLIANT

CS CUSTOMER SUPPLIED MATERIAL

EXAMPLES:



SS0-11-WD-18.00-C


SS0-11-WC-18.00-C

## Flex Pin - Nano

## THE FLEX PIN DESIGN

Designed Simply for High Shock \& Vibration
Omnetics' Flex Pin contact design was designed and produced many years before the creation of MIL-DTL-32139. This simple one piece design is stamped from ASTM B 194 BeCu . The spring characteristic of BeCu is ideal for withstanding high shock and vibration.


The Flex Pin contact is intermateable with all MIL- DTL-32139 sockets. Its rugged design easily passes the shock and vibration requirements of the military specification. In fact, independent tests have proven that the Flex Pin contact can even withstand the intense shock and vibration of the geophysical drilling market.

Flex Pin contacts are all plated with 50 micro inches ( $1.27 \mu \mathrm{~m}$ ) of gold over 50 micro inches ( $1.27 \mu \mathrm{~m}$ ) of nickel. All pins are plated post forming to ensure a non-porous surface.

## FLEX PIN

The Omnetics Nano Flex Pin has been in successful production for 50 years, while its young counterpart the Nano twist pin is relatively new. Nano twist pin manufacturers took an old standard and shrunk it down to Nano size. Omnetics, on the other hand, looked at the old technology and found ways to improve and simplify the design. Omnetics removed the extra crimps and welds and came up with an elegant one piece design with the same performance as the overly complex twist pin. The elimination of extra joints removed resistance points as well as spots for potential fatigue and failure.

Nano Flex Pins are rated at 1 AMP each and are the foundation of our Nano-D/Bi-Lobe ${ }^{\otimes}$ \& MIL-DTL-32139 series of connectors.


## Single Row Nano Strip

HORIZONTAL SMT (TYPE AA)

Single Row Horizontal Nano Strip connectors offer an extremely low profile package that is well suited for pick and place methods. They have a very tight pitch of $.025^{\prime \prime}(64 \mathrm{~mm})$ centerlines. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system, conforming to the requirements of MIL-DTL-32139. These durable lightweight connectors are perfect for the most demanding applications.

These connectors are available in standard sizes ranging from 2 to 60 positions, as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C} \mathrm{w/HTE}\right)$
- Current rating: 1 AMP per contact
- Voltage Rating (DWV): 250 VAC RMS Sea Level
- Insulation Resistance:

5,000 Megohms min @ 100 VDC

- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing: NASA SP-R-0022
- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force:
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Nano Strip

## NPS-AA LAYOUT


$.050[1.27]$ UP TO 40 CONTACTS
.060 [1.52] UP TO 60 CONTACTS




## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each guide post hole
Add 3 contact cavities for each mounting hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length @ .050"thick $=1.015^{\prime \prime}$ (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick = $1.515^{\prime \prime}$ (38.48). Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Add $.075^{\prime \prime}$ (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050" thick is $.975^{\prime \prime}$ (24.76).
Maximum pattern length @ .060" thick is $1.475^{\prime \prime}$ (37.46). Add .050 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole, .050 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

## NSS-AA LAYOUT



CONNECTOR FACE-
SUGGESTED PAD LAYOUT


DIMENSIONS FOR "A"
To determine connector length " $A$ ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each guide post hole | - |
| Add 3 contact cavities for each mounting hole | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | $-.040^{\prime \prime}$ |
| Add fixed end length constant |  |
| Total Length (Dimension A) |  |

Notes: Maximum length @ .050" thick=1.015" (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick $=1.515^{\prime \prime}$ (38.48). Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050" thick is $.975^{\prime \prime}(24.76)$.
Maximum pattern length @ .060" thick is $1.475^{\prime \prime}(37.46)$.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

## HORIZONTAL SMT (TYPE AA) ORDERING GUIDE



EXAMPLES:

NPS-18-AA



NSS-22-AA

## Single Row Nano Strip

## STRAIGHT TAIL (TYPE DD)

Single Row Nano Strip connectors can be loaded with simple straight tails (Integral or Crimped). Suitable for vertical thruhole mounting to fine pitched flex circuits, they are designed on $.025^{\prime \prime}(.64 \mathrm{~mm})$ centerlines. The straight solid tails are also commonly used in ultra fine wire wrap terminations, such as electrophysiology. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL-32139. These connectors are available in standard sizes ranging from 2 through 60 positions as well as custom configurations.


Flex design and installation service is also available from Omnetics. Please contact us for more information.

## ELECTRO-MECHANICAL SPECS

- Durability:_2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
- Current rating: 1 AMP per contact
- Voltage Rating (DWV): 250 VAC RMS Sea Level
- Insulation Resistance:

5,000 Megohms min @ 100 VDC

- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing: NASA SP-R-0022
- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force: $2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Nano Strip

NPS-DD LAYOUT


## 




## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each guide post hole
Add 3 contact cavities for each mounting hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length @ .050" thick = 1.015" (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick $=1.515^{\prime \prime}(38.48)$. Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Add . $075^{\prime \prime}$ (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050"thick is $.975^{\prime \prime}$ (24.76).
Maximum pattern length @ .060" thick is $1.475^{\prime \prime}$ (37.46). Add .050 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole, .050 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

NSS-DD LAYOUT


DIMENSIONS FOR "A"
To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each guide post hole | - |
| Add 3 contact cavities for each mounting hole |  |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | - |
| Add fixed end length constant |  |
| Total Length (Dimension A) |  |

Notes: Maximum length @ .050" thick = 1.015" (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick $=1.515^{\prime \prime}$ (38.48). Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.


## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050" thick is $.975^{\prime \prime}$ (24.76).
Maximum pattern length @ .060" thick is $1.475^{\prime \prime}(37.46)$.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

STRAIGHT TAIL (TYPE DD) ORDERING GUIDE


EXAMPLES:


NPS-22-DD-G


NSS-22-DD-RoHS

## Single Row Nano Strip

## LONG/SHORT ALT. THRU-HOLE (TYPE H2)

The Single Row Nano Strip connectors have contacts arranged on . 025 $(.64 \mathrm{~mm})$ centerlines. The thru-hole tails are arranged in a $.050^{\prime \prime} \times .0 .50^{\prime \prime}$ grid, allowing space for traces and annular rings. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system, conforming to the requirements of MIL-DTL-32139. These durable lightweight connectors are perfect for the most demanding applications. They are available with mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 to 60 positions, as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating: 1 AMP per contact
- Voltage Rating (DWV):
- Insulation Resistance:
- Shock:
- Vibration:
- Thermal Vacuum Outgassing: 250 VAC RMS Sea Level 5,000 Megohms min @ 100 VDC 100 G's discontinuity < 10 nanoseconds 20 G's discontinuity < 10 nanoseconds
- Contact Resistance: NASA SP-R-0022
- Mating/Unmating Force:

71 Milliohms max (71 mV max @ 1 AMP)
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Nano Strip

NPS-H2 LAYOUT

. 050 [1.27] UP TO 40 CONTACTS . 060 [1.52] UP TO 60 CONTACTS





TAIL DIMENSIONS APPLY AT PLANE A


## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each guide post hole
Add 3 contact cavities for each mounting hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length @ .050" thick = 1.015" (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick $=1.515^{\prime \prime}(38.48)$. Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Add . $075^{\prime \prime}$ (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050"thick is $.975^{\prime \prime}$ (24.76).
Maximum pattern length @ .060" thick is $1.475^{\prime \prime}$ (37.46). Add .050 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole, .050 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

NSS-H2 LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each guide post hole | - |
| Add 3 contact cavities for each mounting hole | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | $-.040^{\prime \prime}$ |
| Add fixed end length constant |  |
| Total Length (Dimension A) |  |

Notes: Maximum length @ .050" thick=1.015" (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick = 1.515" (38.48). Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050" thick is .975" (24.76).
Maximum pattern length @ $060^{\prime \prime}$ thick is $1.475^{\prime \prime}(37.46)$.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

## SHORT/LONG ALT. THRU HOLE TAIL (TYPE H2) ORDERING GUIDE



## EXAMPLES:



NPS-18-H2


NSS-24-H2-RoHS

## Single Row Nano Strip

## VERTICAL SMT (TYPE VV)

The Single Row VV Nano Strip connectors have contacts arranged on .025 (. 64 mm ) centerlines. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system, conforming to the requirements of MIL-DTL-32139. These durable lightweight connectors are perfect for the most demanding applications.

These connectors are available in standard sizes ranging from 2 to 60 positions, as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability:

2000 Cycles

- Temperature:
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating:

1 AMP per contact

- Voltage Rating (DWV):

250 VAC RMS Sea Level

- Insulation Resistance:

5,000 Megohms min @ 100 VDC

- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing: NASA SP-R-0022
- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force:
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Nano Strip

NPS-VV LAYOUT

.050 [1.27] UP TO 40 CONTACTS


SUGGESTED PAD LAYOUT


TAIL DIMENSIONS APPLY AT PLANE A


## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each guide post hole
Add 3 contact cavities for each mounting hole
Total contact cavities
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length @ .050" thick = 1.015" (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick $=1.515^{\prime \prime}(38.48)$. Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Add . $075^{\prime \prime}$ (3 contact cavities) for each mounting hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050"thick is $.975^{\prime \prime}$ (24.76).
Maximum pattern length @ .060" thick is $1.475^{\prime \prime}$ (37.46). Add .050 " from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole, .050 " dimension must be adjusted).

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

NSS-VV LAYOUT


DIMENSIONS FOR "A"
To determine connector length " A ":

| Add the total number of contacts |  |
| :--- | :--- |
| Add 1 contact cavity for each guide post hole | - |
| Add 3 contact cavities for each mounting hole | - |
| Total contact cavities | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | $-.040^{\prime \prime}$ |
| Add fixed end length constant |  |
| Total Length (Dimension A) |  |

Notes: Maximum length @ .050" thick = 1.015" (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060" thick $=1.515^{\prime \prime}$ (38.48). Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ (1 contact cavity) for each guide post hole
Total Length (Dimension B)

Notes: Maximum pattern length @ .050" thick is $.975^{\prime \prime}$ (24.76).
Maximum pattern length @ .060" thick is $1.475^{\prime \prime}(37.46)$.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

## VERTICAL SURFACE MOUNT TAIL (TYPE VV) ORDERING GUIDE

## SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS

NPS 02-60 VV
PIN CONNECTOR


NSS
SOCKET CONNECTOR


41 THRU 60
(.060"THICK BODY)


G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES


M MOUNTING HOLE


HT HIGH TEMP

RoHS RoHS COMPLIANT
RoHS

COMPLIANT

EXAMPLES:


NPS-22-VV-GS


NSS-23-VV

## Single Row Nano Strip

PRE-WIRED/CABLE (TYPE WD/WC)

Pre-wired Single Row Nano Strip connectors are available with 30 AWG or smaller stranded wire. These assemblies are crimped using proprietary semi-automated crimping systems. Due to their small size and precision required to make these quality crimps, hand crimping is not an option. Precrimped wires and contacts are potted in place further protecting the integrity of the crimp joint. Building these parts to order allows for maximum flexibility in wire type, size and color coding. Commercial Off The Shelf (COTS) versions are also available with 18 " of color coded 30 AWG Teflon ${ }^{\ominus}$
 wire for quick turn around.

These connectors are available in standard sizes ranging from 2 through 60 positions as well as custom configurations.

## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200{ }^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating: 1 AMP per contact
- Voltage Rating (DWV): 250 VAC RMS Sea Level
- Insulation Resistance:

5,000 Megohms min @ 100 VDC

- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing: NASA SP-R-0022
- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force:
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Wire:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

32 AWG, Teflon Insulated per NEMA-HP3
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Single Row Nano Strip

NPS-WD/WC LAYOUT

.050 [1.27] UP TO 40 CONTACTS


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts
Add 1 contact cavity for each guide post hole
Add 3 contact cavities for each mounting hole
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and mulitply by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A):

Notes: Maximum length @ .050" thick = 1.015" (25.78). Maximum number of contact cavities is 60. Maximum length @ .060" thick = 1.515" (38.48). Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

## NSS-WD/WC LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts
Add 1 contact cavity for each guide post
Total contact cavities
Subtract 1 from the total to get the number of cavity spaces and mulitply by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A): $\square$

Notes: Maximum length @ $050^{\prime \prime}$ thick = $1.015^{\prime \prime}$ (25.78). Maximum number of contact cavities is 60 . Maximum length @ .060 " thick $=1.515^{\prime \prime}(38.48)$. Number of contacts must be reduced to accommodate guide post holes and mounting holes. Default locations for guide post holes may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Single Row Nano Strip

PRE-WIRED/CABLE (TYPE WD/WC) ORDERING GUIDE


## EXAMPLES:

## Dual Row Nano Strip

## HORIZONTAL SMT (TYPE AA)

Dual Row Horizontal Nano Strip connectors offer an extremely low profile package that is well suited to pick and place methods. They have a very tight pitch of $.025^{\prime \prime}(.64 \mathrm{~mm})$ centerlines. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system, conforming to the requirements of MIL-DTL-32139. These durable lightweight connectors are perfect for the most demanding applications.

These connectors are available in standard sizes ranging from 2 to 80 positions, as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating:
- Voltage Rating (DWV): 1 AMP per contact
- Insulation Resistance: 250 VAC RMS Sea Level
- Shock:
- Vibration: 5,000 Megohms min @ 100 VDC 100 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing: 20 G's discontinuity < 10 nanoseconds
- Contact Resistance: NASA SP-R-0022
- Mating/Unmating Force: $2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact

71 Milliohms max (71 mV max @ 1 AMP)

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Nano Strip

## NPD-AA LAYOUT




## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $.615^{\prime \prime}$ (15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

NSD-AA LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts in one row |
| :--- |
| Add 1 contact cavity for each guide post hole in the same row |
| Total contact cavities in a single row |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ |
| Add fixed end length constant |
| Total Length (Dimension A) |

Notes: Maximum length .615"(15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the total number of contacts in one row minus 1 by $.025^{\prime \prime}$ If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

HORIZONTAL SMT (TYPE AA) ORDERING GUIDE



NPD-48-AA

## Dual Row Nano Strip

## STRAIGHT TAIL (TYPE DD)

Dual Row Nano Strip connectors are configured with simple straight tails (Integral and Crimped). Suitable for vertical thru-hole mounting to fine pitched flex circuits, these ruggedized Nano connectors are designed on $.025^{\prime \prime}(.64 \mathrm{~mm})$ centerlines. Straight tails are commonly used in a variety of wrap termination such as neuroscience related applications. These connectors feature Omnetics' gold plated Flex Pin contact system that conforms to the requirements of MIL-DTL-32139. These connectors are available in standard sizes ranging from 2 through 80 positions as well as custom configurations.

Flex design and installation service is also available from Omnetics. Please contact us for more information.


## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating:
- Voltage Rating (DWV):
- Insulation Resistance: $\qquad$ 1 AMP per contact
- Shock:
- Vibration: 250 VAC RMS Sea Level 5,000 Megohms min @ 100 VDC
- Thermal Vacuum Outgassing: 100 G's discontinuity < 10 nanoseconds 20 G's discontinuity < 10 nanoseconds
- Contact Resistance: NASA SP-R-0022
- Mating/Unmating Force: $\quad 2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact

71 Milliohms max (71 mV max @ 1 AMP)

## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Nano Strip

NPD-DD LAYOUT


SUGGESTED HOLE PATTERN



## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length .615"(15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

## NSD-DD LAYOUT



1 TAIL DIMENSIONS APPLY AT PLANE A


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length .615"(15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the total number of contacts in one row minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}(14.61)$. Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

## STRAIGHT TAIL (TYPE DD) ORDERING GUIDE

| SERIES | \#OF CONTACTS | TERMINATION TYPE | COMMON OPTIONS |
| :---: | :---: | :---: | :---: |
| NPD |  |  |  |
| PIN CONNECTOR |  |  |  |

## Dual Row Nano Strip

## FLEX TAIL (TYPE FF)

Flex Mount Nano Strip connectors are a low profile ruggedized connector spaced on $.025^{\prime \prime}(.64 \mathrm{~mm})$ centerlines. The flex tails are formed together in an hourglass shape, allowing a double sided flex circuit to slide between the 2 rows. The spring tension holds the flex in place during the soldering process. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL-32139. These durable lightweight connectors are suitable for the most demanding applications. These connectors are available in standard sizes ranging from 2 through 80 positions as well as custom configurations.

Flex design and installation service is also available from Omnetics.
 Please contact us for more information.

## ELECTRO-MECHANICAL SPECS

- Durability:_2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
- Current rating: 1 AMP per contact
- Voltage Rating (DWV): 250 VAC RMS Sea Level
- Insulation Resistance: 5,000 Megohms min @ 100 VDC
- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing: NASA SP-R-0022
- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force:
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS) Hard gold plated per ASTM B488 Hard gold plated per ASTM B488

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy Epoxy

## Dual Row Nano Strip

## NPD-FF LAYOUT






## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts in one row |  |
| :--- | :--- |
| Add 1 contact cavity for each guide post hole in the same row |  |
| Total contact cavities in a single row | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | - |
| Add fixed end length constant | $-.040^{\prime \prime}$ |
| Total Length (Dimension A) |  |

Notes: Maximum length $.615^{\prime \prime}$ (15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$ If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

NSD-FF LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts in one row |  |
| :--- | :--- |
| Add 1 contact cavity for each guide post hole in the same row |  |
| Total contact cavities in a single row |  |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | - |
| Add fixed end length constant | $-.040^{\prime \prime}$ |
| Total Length (Dimension A) |  |

Notes: Maximum length $.615^{\prime \prime}$ (15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the total number of contacts in one row minus 1 by $.025^{\prime \prime}$ If hardware features are within the contact area:
Add .025 "for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

## FLEX TAIL (TYPE FF) ORDERING GUIDE

## SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS

NPD 02-80
PIN CONNECTOR


NSD SOCKET CONNECTOR


FF


G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/HOLES

M MOUNTING HOLE


HT HIGH TEMP

RoHS RoHS COMPLIANT



NPD-48-FF

## Dual Row Nano Strip

## HORIZONTAL THRU-HOLE (TYPE H2)

The Dual Row horizontal Thru-Hole Nano Strip connectors have contacts arranged on .025 (. 64 mm ) centerlines. Thru-Hole tails are arranged in a $.025 \times .50^{\prime \prime}$ grid, allowing space for traces and annular rings. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system, conforming to requirements of MIL-DTL-32139. These durable lightweight connectors are perfect for the most demanding applications. They are available with mounting holes suitable for PCB and flex mounting.

These connectors are available in standard sizes ranging from 2 to 80 positions, as well as custom configurations.

## ELECTRO-MECHANICAL SPECS

- Durability:_ 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating: 1 AMP per contact
- Voltage Rating (DWV): 250 VAC RMS Sea Level
- Insulation Resistance: 5,000 Megohms min @ 100 VDC
- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing:

NASA SP-R-0022

- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force:_ $2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Soldered per J-STD-006 (Non-RoHS)
Solder plated per AMS-P-81728 (Non-RoHS)
Hard gold plated per ASTM B488
Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Nano Strip

## NPD－H2 LAYOUT



## DIMENSIONS FOR＂A＂

To determine connector length＂$A$＂：
Add the total number of contacts in one row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length（Dimension A）

Notes：Maximum length ．615＂（15．62）．Maximum number of contact cavities is 80 ．Number of contacts must be reduced to accommodate guide post holes．Default locations for guide post holes may be changed by customer．

## DIMENSIONS FOR＂B＂

To determine pad pattern layout length＂$B$＂：
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area：
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length（Dimension B）

Notes：Maximum length $.575^{\prime \prime}$（14．61）．Maximum number of contact cavities is 80 ．Number of contacts must be reduced to accommodate guide post holes．

Dimensions in［ ］are in Millimeters unless otherwise noted and are for reference only．

## Dual Row Nano Strip

## NSD-H2 LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":

| Add the total number of contacts in one row |  |
| :--- | :--- |
| Add 1 contact cavity for each guide post hole in the same row |  |
| Total contact cavities in a single row | - |
| Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ | - |
| Add fixed end length constant | - |
| Total Length (Dimension A) |  |

Notes: Maximum length .615" (15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the total number of contacts in one row minus 1 by $.025^{\prime \prime}$ If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

## SHORT/LONG ALT. THRU HOLE TAIL (TYPE H2) ORDERING GUIDE



EXAMPLE:

NPD-48-H2-RoHS


NSD-48-H2-RoHS


## Dual Row Nano Strip

## VERTICAL SMT (TYPE VV)

Vertical SMT Nano Strip connectors require a minimal amount of board space on flex circuits and rigid circuit boards. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL 32139. These rugged lightweight connectors are suitable for the most demanding applications.

These connectors are available in standard sizes ranging from 2 to 80 positions, as well as custom configurations.


## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature:
$-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE)
- Current rating:
: $\quad$
- Voltage Rating (DWV):

1 AMP per contact

- Insulation Resistance:

250 VAC RMS Sea Level
5,000 Megohms min @ 100 VDC

- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing: NASA SP-R-0022
- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force:
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Socket PCB Tail Termination:
- Standard Pin PCB Tail Termination:
- RoHS Pin PCB Tail Termination:
- RoHS Socket PCB Tail Termination: $\qquad$
- Insulator:
- Pin:
- Socket:
- Encapsulant:

Hard gold plated per ASTM B488
Soldered per J-STD-006 (Non-RoHS) Solder plated per AMS-P-81728 (Non-RoHS)

Hard gold plated per ASTM B488
Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu
Gold Plated Copper Alloy
Epoxy

## Dual Row Nano Strip

NPD-VV LAYOUT


SUGGESTED PAD LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row

Add 1 contact cavity for each guide post hole in the same row Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length $.615^{\prime \prime}$ (15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

NSD-VV LAYOUT


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A )

Notes: Maximum length $615^{\prime \prime}$ (15.62). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer.

## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the total number of contacts in one row minus 1 by $.025^{\prime \prime}$
If hardware features are within the contact area:
Add $.025^{\prime \prime}$ for each guide post hole in the same row
Total Length (Dimension B)

Notes: Maximum length $.575^{\prime \prime \prime}$ (14.61). Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes.

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

## VERTICAL SMT (TYPE VV) ORDERING GUIDE

## SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS

NPD 02-80 VV
PIN CONNECTOR


NSD
SOCKET CONNECTOR



RoHS RoHS COMPLIANT


G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/HOLES


M MOUNTING HOLE



NSD-34-VV-GS


## Dual Row Nano Strip

## PRE-WIRED/CABLE (TYPE WD/WC)

Pre-wired Dual Row Nano Strip connectors assemblies are crimped using proprietary semiautomated crimping systems. Due to their small size and precision required to make these quality crimps, hand crimping is not an option. Pre-crimped wires and contacts are potted in place further protecting the integrity of the crimp joint. Building these parts to order allows for maximum flexibility in wire type, size and color coding. Commercial Off The Shelf (COTS) versions are also available with 18 " of color coded 30 AWG Teflon wire for quick turn around.

These connectors are available in standard sizes ranging from 2
 through 48 positions as well as custom configurations, and accept wires 30 AWG to 36 AWG stranded wire.

## ELECTRO-MECHANICAL SPECS

- Durability: 2000 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
- Current rating: 1 AMP per contact
- Voltage Rating (DWV): 250 VAC RMS Sea Level
- Insulation Resistance:

5,000 Megohms min @ 100 VDC

- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing:

NASA SP-R-0022

- Contact Resistance:

71 Milliohms max (71 mV max @ 1 AMP)

- Mating/Unmating Force:
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Standard Wire:
- Insulator:
- Pin:
- Socket:
- Encapsulant:

32 AWG, Teflon Insulated per NEMA-HP3 Polyphenylene Sulfide per MIL-M-24519 Gold Plate BeCu Gold Plated Copper Alloy Epoxy

## Dual Row Nano Strip

NPD-WD/WC LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Subtract 1 from the total to get the number of cavity spaces and mulitply by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A ):

Notes: Maximum length $.615^{\prime \prime}(15.62)$. Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

## NSD-WD/WC LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row
Add 1 contact cavity for each guide post hole in the same row
Total contact cavities in a single row
Subtract 1 from the total to get the number of cavity spaces and mulitply by $.025^{\prime \prime}$
Add fixed end length constant $\qquad$
Total Length (Dimension A):

Notes: Maximum length $.615^{\prime \prime}(15.62)$. Maximum number of contact cavities is 80 . Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Dual Row Nano Strip

## PRE-WIRED/CABLE (TYPE WD/WC) ORDERING GUIDE



SOCKET CONNECTOR


## COMMON

 OPTIONSG GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/HOLES

M MOUNTING HOLE

HT HIGH TEMP

RoHS RoHS COMPLIANT


CS CUSTOMER SUPPLIED MATERIAL

## Polarized Nano

## HORIZONTAL SMT (TYPE AA)

The Polarized Nano (PZN) connectors are designed to hold one row of pins and one row of sockets; this configuration polarizes the connector without the extra space needed for guide pins. The Dual Row Horizontal SMT Polarized Nano (PZN) connectors offer an extremely low profile package that is well suited to pick and place methods. They have a very tight pitch of $.025^{\prime \prime}$ $(.64 \mathrm{~mm})$ centerlines. These PZN connectors feature Omnetics' highly reliable gold plated Flex Pin contact system, conforming to the requirements of MIL-DTL-32139. These durable lightweight connectors are perfect for the most demanding applications.

The PZN connectors are available in standard sizes ranging from 4 to 24 positions.


ELECTRO-MECHANICAL SPECS

- Durability:_200 Cycles
- Temperature: $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE $)$
- Current rating: 1 AMP per contact
- Voltage Rating (DWV): 250 VAC RMS Sea Level
- Insulation Resistance: 5,000 Megohms min @ 100 VDC
- Shock: 100 G's discontinuity < 10 nanoseconds
- Vibration: 20 G's discontinuity < 10 nanoseconds
- Thermal Vacuum Outgassing:

NASA SP-R-0022

- Contact Resistance: 71 Milliohms max (71 mV max @ 1 AMP)
- Mating/Unmating Force:
$2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact


## MATERIAL SPECIFICATIONS

- Insulator:
- Pin:
- Socket:
- Encapsulant:

Polyphenylene Sulfide per MIL-M-24519 Gold Plated BeCu Gold Plated Copper Alloy Epoxy

## Polarized Nano

## PZN-AA LAYOUT




## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
$.050^{\prime \prime}$
Total Length (Dimension A)

Notes: Maximum length $.325^{\prime \prime}$ [8.26].
Maximum number of contact cavities is 24


## DIMENSIONS FOR "B"

To determine pad pattern layout length " B ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$
Total Length (Dimension B)

Notes: Maximum length .275" [6.99].

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Polarized Nano

HORIZONTAL SMT (TYPE AA) ORDERING GUIDE
SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS
PZN 04-24 AA HT HIGH TEMP

Polarized Nano (EVEN NUMBERS

Connector ONLY)



RoHS RoHS COMPLIANT


## EXAMPLES:



PZN-08-AA

## Polarized Nano

## STRAIGHT THRU-HOLE (TYPE DD)

The Polarized Nano (PZN) connectors are designed to hold one row of pins and one row of sockets; this configuration polarizes the connector without the extra space needed for guide pins. The Straight Thru-Hole (type DD) Polarized Nano (PZN) connectors are configured with simple straight tails (Integral and Crimped). Suitable for vertical thru-hole mounting to fine pitched flex circuits. These ruggedized PZN Nano connectors are designed on $.025^{\prime \prime}$ ( .64 mm ) centerlines. These PZN connectors feature Omnetics' gold plated Flex Pin contact system that conforms to the requirements of MIL-DTL-32139.

The connectors are available in standard sizes ranging from 4 through 24 positions. Flex design and installation service is also available from Omnetics, please contact us for more information.


## ELECTRO-MECHANICAL SPECS

| Durability: | 200 Cycles |
| :--- | :--- |
| Temperature: | $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE) |
| Current rating: | 1 AMP per contact |
| Voltage Rating (DWV): | 250 VAC RMS Sea Level |
| Insulation Resistance: | 5,000 Megohms min @ 100 VDC |
| Shock: | 100 G's discontinuity $<10$ nanoseconds |
| Vibration: | 20 G 's discontinuity $<10$ nanoseconds |
| Thermal Vacuum Outgassing: | NASA SP-R-0022 |
| Contact Resistance: | 71 Milliohms max $(71 \mathrm{mV}$ max @ 1 AMP) |
| Mating/Unmating Force: | $2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact |

## MATERIAL SPECIFICATIONS

Insulator:
Pin:
Socket:
Encapsulant:

Polyphenylene Sulfide per MIL-M-24519
Gold Plated BeCu Gold Plated Copper Alloy Epoxy

## Polarized Nano

## PZN-DD LAYOUT



## DIMENSIONS FOR "A"

To determine connector length " A ": Add the total number of contacts in one row

Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ Add fixed end length constant .050"
$\square$

## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$ Total Length (Dimension B)

Notes: Maximum length .275" [6.99].

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Polarized Nano

## STRAIGHT THRU-HOLE (TYPE DD) ORDERING GUIDE

| SERIES | \# OF CONTACTS | TERMINATION TYPE | COMMON OPTIONS |
| :---: | :---: | :---: | :---: |
| PZN <br> Polarized Nano <br> Connector | 04-24 <br> (EVEN NUMBERS <br> ONLY) | DD | HT HIGH TEMP |

## EXAMPLES:



PZN-08-DD

## Polarized Nano

## SHORT/LONG ALT. THRU-HOLE (TYPE H2)

The Polarized Nano (PZN) connectors are designed to hold one row of pins and one row of sockets; this configuration polarizes the connector without the extra space needed for guide pins. The Horizontal Thru-Hole (type H2) PZN connectors have contacts arranged on $.025(.64 \mathrm{~mm})$ centerlines. The PZN H2 thru-hole tails are arranged in a $.025 \times .50$ " grid, allowing space for traces and annular rings. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system, conforming to requirements of MIL-DTL-32139. These durable lightweight connectors are perfect for the most demanding applications.

PZN connectors are available in standard sizes ranging from 4 to 24 positions.

ELECTRO-MECHANICAL SPECS

| Durability: | 200 Cycles |
| :--- | :--- |
| Temperature: | $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE) |
| Current rating: | 1 AMP per contact |
| Voltage Rating (DWV): | 250 VAC RMS Sea Level |
| Insulation Resistance: | 5,000 Megohms min @ 100 VDC |
| Shock: | 100 G discontinuity $<10$ nanoseconds |
| Vibration: | 20 G ds discontinuity $<10$ nanoseconds |
| Thermal Vacuum Outgassing: | NASA SP-R-0022 |
| Contact Resistance: | 71 Milliohms max $(71 \mathrm{mV}$ max @ 1 AMP $)$ |
| Mating/Unmating Force: | $2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact |

## MATERIAL SPECIFICATIONS

| Insulator: | Polyphenylene Sulfide per MIL-M-24519 |
| :--- | :--- |
| Pin: | Gold Plated BeCu |
| Socket: | Gold Plated Copper Alloy |
| Encapsulant: | Epoxy |

## Polarized Nano

## PZN－H2 LAYOUT


 ，

## てヤし




## DIMENSIONS FOR＂A＂

To determine connector length＂ A ＂：
Add the total number of contacts in one row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant ．050＂
Total Length（Dimension A） $\qquad$

## DIMENSIONS FOR＂B＂

To determine pad pattern layout length＂$B$＂：
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$ Total Length（Dimension B）

Notes：Maximum length ．275＂［6．99］．

Dimensions in［ ］are in Millimeters unless otherwise noted and are for reference only．

## Polarized Nano

## SHORT/LONG ALT. THRU-HOLE (TYPE H2) ORDERING GUIDE

SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS

| PZN | $\mathbf{0 4 - 2 4}$ |
| :--- | :---: |
| ized Nano | (EVEN NUMBERS |

Connector
ONLY)


## EXAMPLES:



PZN-08-H2

## Polarized Nano

## VERTICAL SMT (TYPE VV)

The Polarized Nano (PZN) connectors are designed to hold one row of pins and one row of sockets; this configuration polarizes the connector without the extra space needed for guide pins. The Vertical SMT PZN connectors require a minimal amount of board space on flex circuits and rigid circuit boards. These connectors feature Omnetics' highly reliable gold plated Flex Pin contact system conforming to the requirements of MIL-DTL 32139. These rugged lightweight connectors are suitable for the most demanding applications.

The PZN connectors are available in standard sizes ranging from 4 to 24 positions.


ELECTRO-MECHANICAL SPECS

| Durability: | 200 Cycles |
| :---: | :---: |
| Temperature: | $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200{ }^{\circ} \mathrm{C}\right.$ w/HTE) |
| Current rating: | 1 AMP per contact |
| Voltage Rating (DWV): | 250 VAC RMS Sea Level |
| Insulation Resistance: | 5,000 Megohms min @ 100 VDC |
| Shock: | 100 G's discontinuity < 10 nanoseconds |
| Vibration: | 20 G's discontinuity < 10 nanoseconds |
| Thermal Vacuum Outgassing: | NASA SP-R-0022 |
| Contact Resistance: | 71 Milliohms max (71 mV max @ 1 AMP) |
| Mating/Unmating Force: | $2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact |

## MATERIAL SPECIFICATIONS

Insulator:
Pin:
Socket:
Encapsulant:

Polyphenylene Sulfide per MIL-M-24519 Gold Plated BeCu Gold Plated Copper Alloy Epoxy

## Polarized Nano

## PZN-VV LAYOUT





## DIMENSIONS FOR "A"

To determine connector length " A ": Add the total number of contacts in one row

Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$ Add fixed end length constant
Total Length (Dimension A)

Notes: Maximum length .325" [8.26]
Maximum number of contact cavities is 24

## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$ Total Length (Dimension B)
.050"

Notes: Maximum length .275" [6.99].

## Polarized Nano

## VERTICAL SMT (TYPE VV) ORDERING GUIDE

SERIES \# OF CONTACTS TERMINATION TYPE COMMON OPTIONS
PZN 04-24 VV HT HIGH TEMP

Polarized Nano (EVEN NUMBERS
Connector ONLY)


RoHS RoHS COMPLIANT


## EXAMPLES:



PZN-08-VV

## Polarized Nano

## PRE-WIRED/CABLE (TYPE WD/WC)

The Polarized Nano (PZN) connectors are designed to hold one row of pins and one row of sockets; this configuration polarizes the connector without the extra space needed for guide pins. The pre-wired PZN connector assemblies are crimped using proprietary semi-automated crimping systems. Due to their small size and precision required to make these quality crimps, hand crimping is not an option. Pre-crimped wires and contacts are potted in place further protecting the integrity of the crimp joint. Commercial Off The Shelf (COTS) versions are also available with 18 " of color coded 30 AWG Teflon wire for quick turnaround.

The PZN connectors are available in standard sizes ranging from 4 through 24 positions and accept wires 30 AWG or smaller stranded wire.


ELECTRO-MECHANICAL SPECS

| Durability: | 200 Cycles |
| :--- | :--- |
| Temperature: | $-55^{\circ} \mathrm{C}$ to $+125^{\circ} \mathrm{C}\left(200^{\circ} \mathrm{C}\right.$ w/HTE) |
| Current rating: | 1 AMP per contact |
| Voltage Rating (DWV): | 250 VAC RMS Sea Level |
| Insulation Resistance: | 5,000 Megohms min @ 100 VDC |
| Shock: | 100 G discontinuity $<10$ nanoseconds |
| Vibration: | 20 G 's discontinuity $<10$ nanoseconds |
| Thermal Vacuum Outgassing: | NASA SP-R-0022 |
| Contact Resistance: | 71 Milliohms max $(71 \mathrm{mV}$ max @ 1 AMP) |
| Mating/Unmating Force: | $2.5 \mathrm{oz}(71 \mathrm{~g})$ typical per contact |

## MATERIAL SPECIFICATIONS

| Insulator: | Polyphenylene Sulfide per MIL-M-24519 |
| :--- | :--- |
| Pin: | Gold Plated BeCu |
| Socket: | Gold Plated Copper Alloy |
| Encapsulant: | Epoxy |

## Polarized Nano

## PZN-WD/WC LAYOUT




## DIMENSIONS FOR "A"

To determine connector length " A ":
Add the total number of contacts in one row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
.050"
Total Length (Dimension A)

Notes: Maximum length $.325^{\prime \prime}$ [8.26].
Maximum number of contact cavities is 24

## DIMENSIONS FOR"B"

To determine pad pattern layout length " $B$ ":
Multiply the number of contacts in one row minus 1 by $.025^{\prime \prime}$
Total Length (Dimension B)

Notes: Maximum length .275" [6.99].

Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

## Polarized Nano

PRE-WIRED/CABLE (TYPE WD/WC) ORDERING GUIDE


EXAMPLES:


PZN-08-WD-18.00-C

## Micro Strip - Headers

## AA TAILS



## DD TAILS

## 091



## DIMENSIONS FOR " ${ }^{\text {" }}$

To determine connector length " $A$ ":
Add the total number of contacts in one row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
.050"
Total Length (Dimension A)


## Micro Strip - Headers

## H2 TAILS



## VVTAILS



## DIMENSIONS FOR "A"

To determine connector length "A":
Add the total number of contacts in one row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
$.050^{\prime \prime}$
Total Length (Dimension A)

Notes: Maximum length $.325^{\text {" }}$ [8.26].
Maximum number of contact cavities is 24

## Nano Strip - Headers

## AH TAILS



DH TAILS


## DIMENSIONS FOR "A"

To determine connector length " $A$ ":
Add the total number of contacts in one row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
Total Length (Dimension A)

## Nano Strip - Headers

## HH TAILS



## VH TAILS



## DIMENSIONS FOR "A"

To determine connector length "A":
Add the total number of contacts in one row
Multiply the number of contact cavities minus 1 by $.025^{\prime \prime}$
Add fixed end length constant
$.050^{\prime \prime}$
Total Length (Dimension A)

Notes: Maximum length $.325^{\prime \prime}$ [8.26].
Maximum number of contact cavities is 24

Notes

## See our other miniature and ruggedized connector options at www.omnetics.com!



Micro-D Connectors


Micro 360® Circular Connectors


Bi-Lobe® / Nano-D Connectors


Nano 360® Circular Connectors


Hybrid Connectors


High Speed Connectors


Omnetics Connector Corporation is a worldwide designer and manufacturer of Micro and Nano miniature interconnect products, featuring COTS, Standards and Custom connectors for industries such as the Military, Aerospace, Defense, Medical and other Technology oriented OEMS.


[^0]:    Notes: Maximum length 2.42" (61.47). Maximum number of contact cavities is 48 . Number of contacts must be reduced to accommodate hardware and mounting holes.Default locations for guide posts and latches may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

