# OMNETICS CONNECTOR CORPORATION









# MICRO & NANO STRIP CONNECTORS

Micro .050" (1.27mm) & Nano .025" (.64mm) Catalog







#### 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 ® / 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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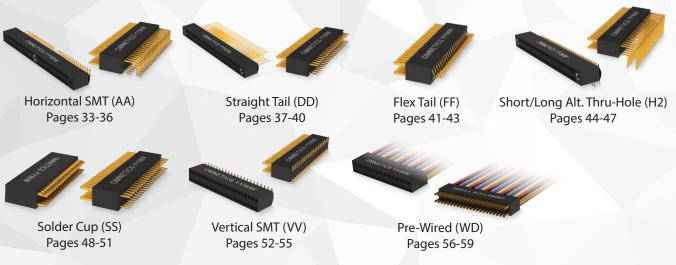


### Micro Strip Picture Index

### **SINGLE ROW MICRO STRIP (PS1/PS2/SSB) SERIES:**



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### **SINGLE ROW NANO STRIP (NPS/NSS) SERIES:**





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#### **DUAL ROW NANO STRIP (NPD/NSD) SERIES:**



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Short/Long Alt. Thru-Hole (H2) Pages 121-124



Straight Tail (DD) Pages 113-116



Vertical SMT (VV) Pages 125-128



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# Polarized Nano (PZN)



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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



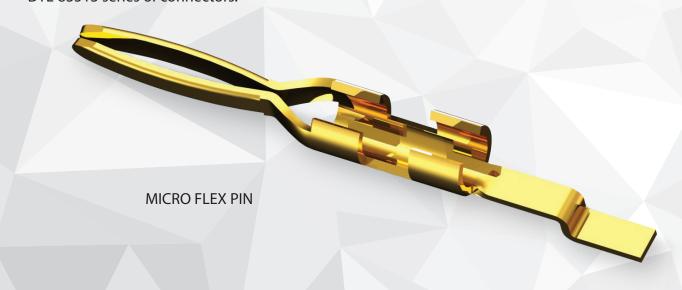
rugged design easily passes the shock and vibration requirements of the military specification. In fact, independent tests have proven that the Flex Pin contact can even withstand the intense shock and vibration of the geophysical drilling market.

Flex Pin contacts are all plated with 50 micro inches (1.27  $\mu$ m) of gold over 50 micro inches (1.27  $\mu$ 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.





### **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.





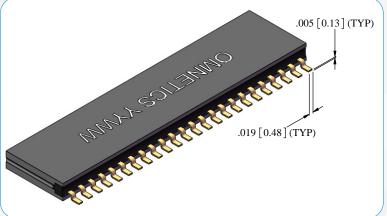
#### **ELECTRO-MECHANICAL SPECS**

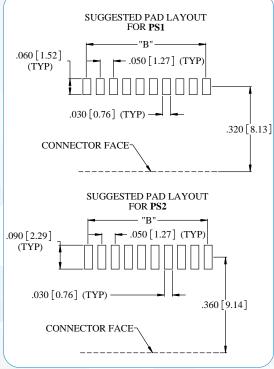
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	_600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

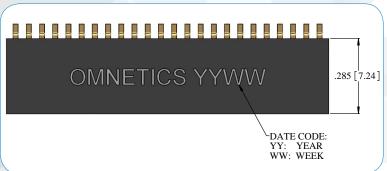
Standard Socket PCB Tail Termination:	Solder per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plate per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plate per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plate per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Epoxy

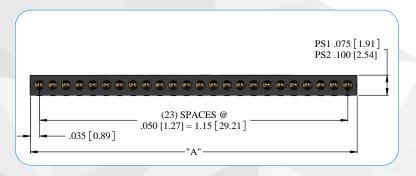


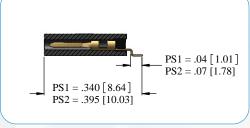
#### PS1/PS2-AA LAYOUT











#### **DIMENSIONS FOR "A"**

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)

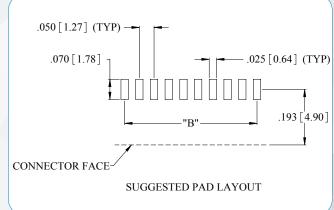
Notes: Maximum pad layout length 2.35" (59.69). Add .100" from center of mounting hole to first pad (if the first contact cavity is for a guide post or latch, .100" dimension must be adjusted).

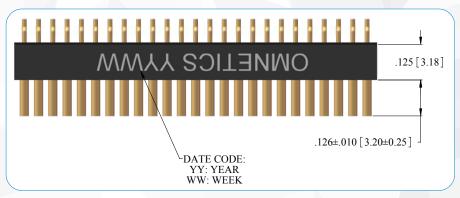
Dimensions in [] are in Millimeters unless otherwise noted and are for reference only.

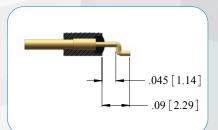


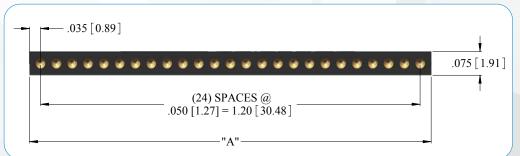
#### **SSB-AA LAYOUT**











#### **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"

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 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.



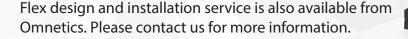
### **HORIZONTAL SMT (TYPE AA) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PS1 PIN CONNECTOR	02 - 48	AA	<b>G</b> GUIDE POST/HOLE <b>GS</b> MULTIPLE GUIDE POSTS/
Standard: .075" thick			HOLES HOLES
<b>PS2</b> PIN CONNECTOR		~	
.100" thick			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
Similar similar			
SSB SOCKET CONNECTOR			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
Mary SOLIAMO			
Mario			M MOUNTING HOLE
EXAMPLES:			<b>HT</b> HIGH TEMP
Charles of the State of the Sta	may soll		
n's	3213	and the same of th	RoHS ROHS COMPLIANT
PS1-06-AA-M	SSB-24	-AA-LT	
May Sollsky	Mar sol		
Ship		Sharo	
SSB-24-AA-LE	SSB-17-AA	A-M-GS	



### **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.







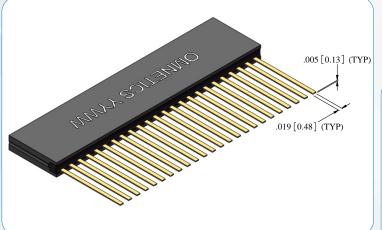
#### **ELECTRO-MECHANICAL SPECS**

Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C 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

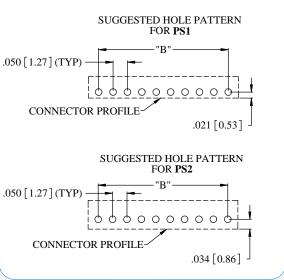
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plate per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plate per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

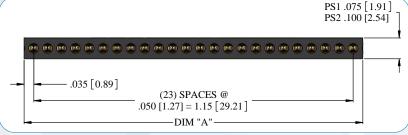


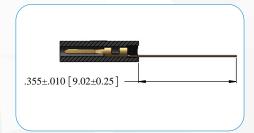
#### PS1/PS2-DD LAYOUT











#### **DIMENSIONS FOR "A"**

Total Length (Dimension 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"

Add .150" (3 contact cavities) for each mounting hole

Add fixed end length

.070"

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"

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" (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).

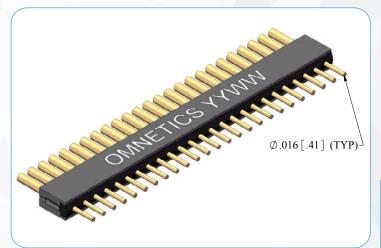
Dimensions in  $[\ ]$  are in Millimeters unless otherwise noted and are for reference only.

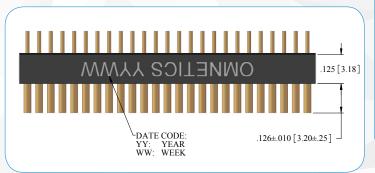


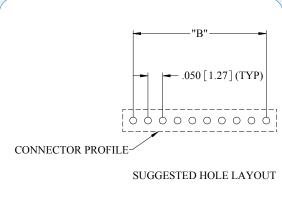
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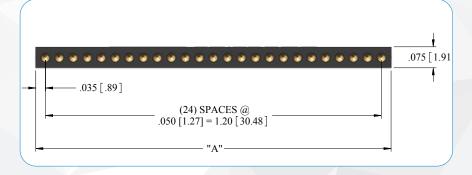
# Single Row Micro Strip

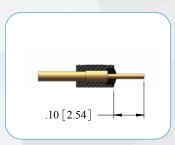
#### **SSB-DD LAYOUT**











#### **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 .050"

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 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.



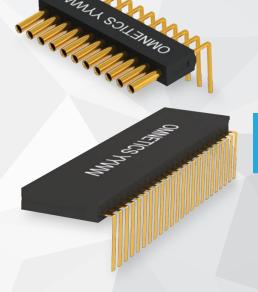
### STRAIGHT TAIL (TYPE DD) ORDERING GUIDE

	SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS	
	PS1 PIN CONNECTOR Standard: .075" thick  PS2	02 - 48	DD	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES	
14	PIN CONNECTOR .100" thick			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)	
	SSB SOCKET CONNECTOR			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)	
	Tunus SOLISTANO			M MOUNTING HOLE	
E	EXAMPLES:			HT	
		Mark Sollshing	See.	HIGH TEMP	
	PS1-11-DD-IT-PoHS	SSR-25-D		RoHS ROHS COMPLIANT	
	PS1-11-DD-LT-RoHS	SSB-25-D		CSIAI EIANI)	
	SSB-24-DD-LE	SSB-17-DD-	-M-GS		

### **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.



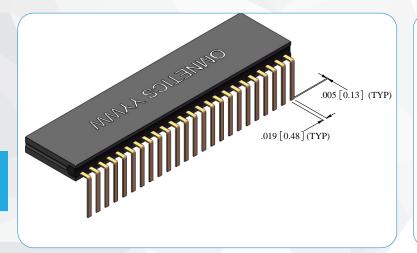
#### **ELECTRO-MECHANICAL SPECS**

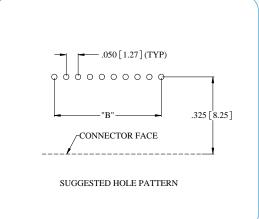
Durability:	2000 Cycles
Temperature:	55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

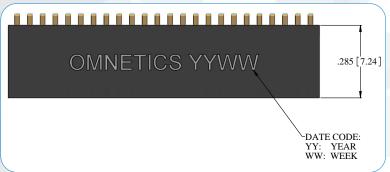
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
	2 1 1 2 5 15 1 2 11 14 2 15 12
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху
• Encapsulant:	ероху



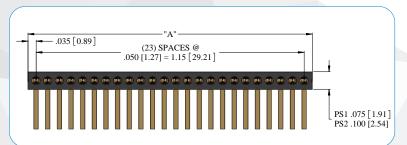
#### PS1/PS2-BB LAYOUT

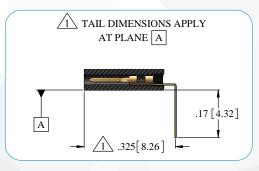












#### **DIMENSIONS FOR "A"**

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 hole

Total contact cavities

Multiply the number of contact cavities minus 1 by .050"

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"

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

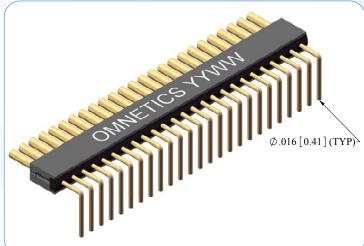
Total Length (Dimension B)

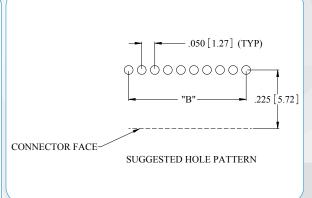
Notes: Maximum hole pattern layout length for PS1 is 2.35" (59.69). Maximum hole pattern layout length for PS2 is 2.95" (74.93). Add .100" from center of mounting hole to first hole (if the first contact cavity is used for a guide post or latch, .100" dimension must be adjusted).

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

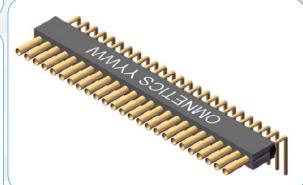


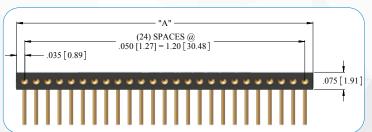
#### SSB-BB LAYOUT

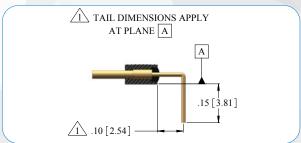












#### **DIMENSIONS FOR "A"**

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" Add .150" (3 contact cavities) for each mounting hole

Total Length (Dimension A)

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"

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)

.070"

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" dimension must be adjusted).

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



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

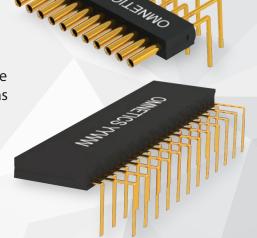
SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PS1 PIN CONNECTOR Standard: .075" thick	02 - 48	ВВ	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
PS2 PIN CONNECTOR .100" thick			LE LATCH (END MOUNT)
Charles States			LES MULTIPLE LATCHES (END MOUNT)
SSB SOCKET CONNECTOR			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
ANNEL SOLDING			M MOUNTING HOLE
EXAMPLES:			HT
Charles States	Tonas Se	the same of the sa	HIGH TEMP
		The state of the s	RoHS ROHS COMPLIANT
PS1/PS2-10-BB-LES	S SSB-2	4-BB-LT	
MANAS SILINAN	man se	A STATE OF THE STA	
SSB-24-BB-LE	SSB-17	7-BB-M-GS	



### **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 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.



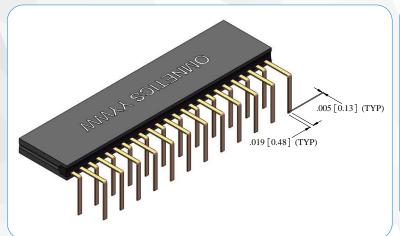
#### **ELECTRO-MECHANICAL SPECS**

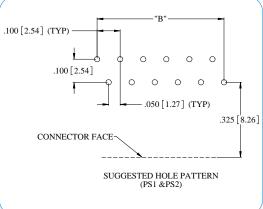
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

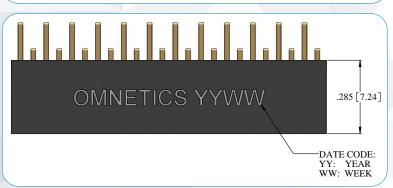
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Insulator: • Pin:	Polyphenylene Sulfide per MIL-M-24519 Gold Plated BeCu
• Pin:	Gold Plated BeCu

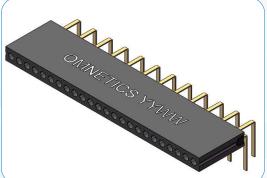


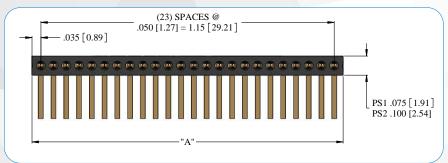
#### PS1/PS2-H2 LAYOUT

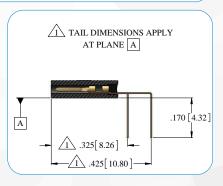












#### **DIMENSIONS FOR "A"**

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"

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" (59.69).

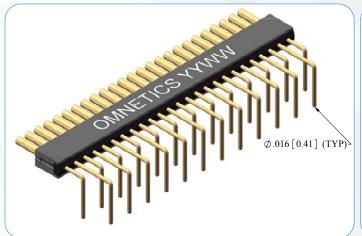
Maximum hole pattern layout length for PS2 is 2.95" (74.93).

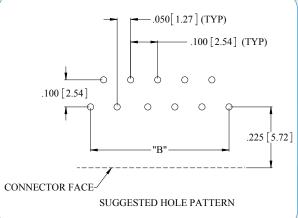
Add .100" from center of mounting hole to first hole (if the first contact cavity is used for a guide post or latch, .100" dimension must be adjusted).

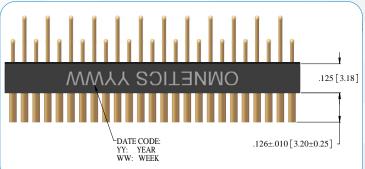
Dimensions in [] are in Millimeters unless otherwise noted and are for reference only.

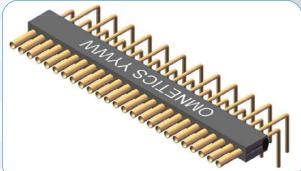


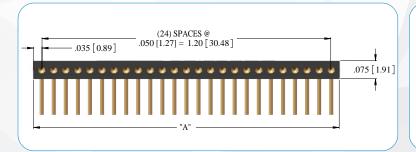
#### SSB-H2 LAYOUT

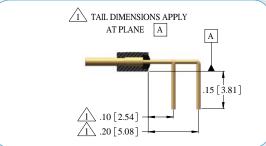












#### **DIMENSIONS FOR "A"**

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 .050"

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" (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" dimension must be adjusted).

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



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

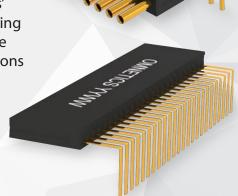
SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PS1 PIN CONNECTOR Standard: .075" thick	02 - 48	H2	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
<b>PS2</b> PIN CONNECTOR .100" thick			LE LATCH (END MOUNT)
Ctall John Strings			LES MULTIPLE LATCHES (END MOUNT)
SSB SOCKET CONNECTOR			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
MARK SOLINA			M MOUNTING HOLF
EXAMPLES:			MOUNTING HOLE  HT
Quality 1	Tine of		HIGH TEMP
nics			RoHS ROHS COMPLIANT
PS1/PS2-06-H2-M	SSB-24-l	H2-LT	
THE SOLUTION OF THE PARTY OF TH	Maria S		
SSB-24-H2-LE	SSB-17-	H2-M-GS	



### **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.



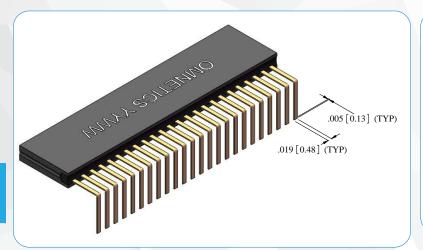
#### **ELECTRO-MECHANICAL SPECS**

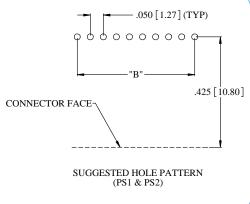
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

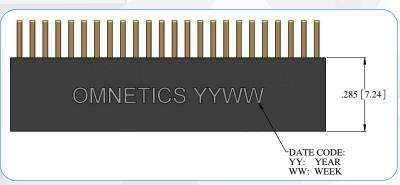
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

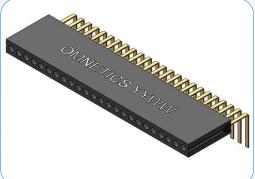


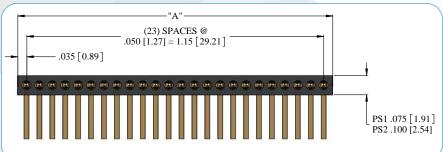
#### **PS1/PS2-CC LAYOUT**

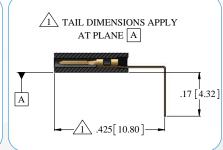












#### **DIMENSIONS FOR "A"**

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"

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" (59.69).

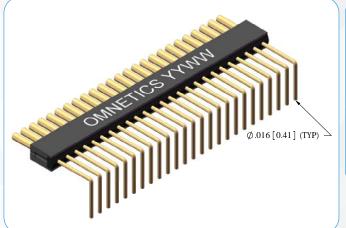
Maximum hole pattern layout length for PS2 is 2.95" (74.93).

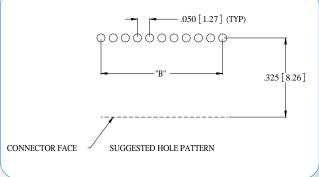
Add .100" from center of mounting hole to first hole (if the first contact cavity is used for a guide post or latch, .100" dimension must be adjusted).

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

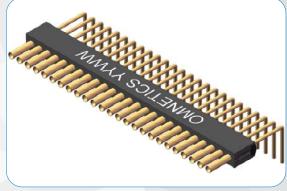


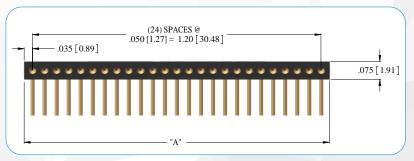
#### SSB-CC LAYOUT

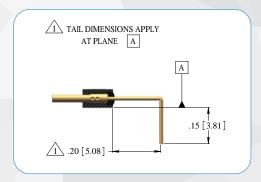












#### **DIMENSIONS FOR "A"**

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"

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" (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" dimension must be adjusted).

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

### LONG THRU HOLE TAIL (TYPE CC) ORDERING GUIDE

	SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS	
	PS1 PIN CONNECTOR Standard: .075" thick PS2	02 - 48	ССС	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES	
26	PIN CONNECTOR .100" thick			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)	
	State Ites			LT LATCH (TOP MOUNT)	
	SSB SOCKET CONNECTOR			LT LATCH (TOP MOUNT)  LTS MULTIPLE LATCHES  (TOP MOUNT)	
	Mar Solishing	1		M MOUNTING HOLE	
	EXAMPLES:			HT	
	Charles Mann	The SOLUTION		HIGH TEMP	
				RoHS ROHS COMPLIANT	
	PS1 -06-CC-M	SSB-24-0			
	nna sollando	The solution of the solution o			
	SSB-24-CC-LE	SSB-17-CC	C-M-GS		



### **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:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C 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

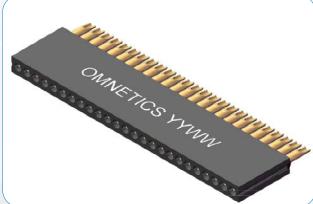
Standard Socket Soldercup Termination:	Hard Gold Plated per ASTM B488
Standard Socket PCB Tail Termination:	_Soldered per J-STD-006 (Non-RoHS)
Standard Soldercup Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin Soldercup Termination:	Hard gold plated per ASTM B488
RoHS Socket Soldercup Termination:	_Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

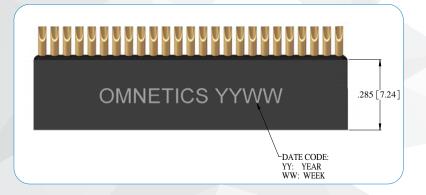




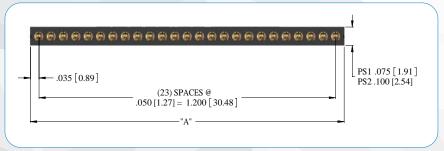
#### **PS1/PS2-SS LAYOUT**











#### **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

.070"

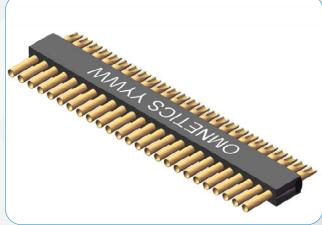
Total Length (Dimension A)

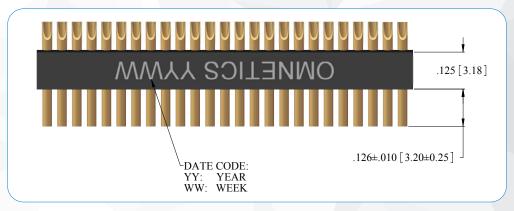
Notes: Maximum length for PS1 @ .075" thick 2.42" (61.47) Maximum number of contact cavities is 48. Maximum length for PS2 @ .100" thick 3.02" (76.71). Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.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

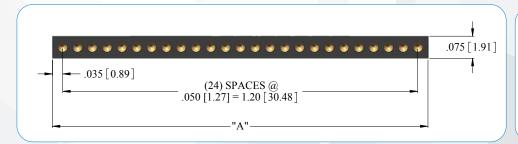


#### SSB-SS LAYOUT











#### **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" Add .150" (3 contact cavities) for each mounting hole Add fixed end length .070"

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

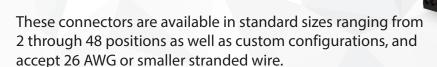


### **SOLDER CUP (TYPE SS) ORDERING GUIDE**

	SERIES	# OF CONTACTS	TERMINATION TY	PE COMMON OPTIONS
	PS1 PIN CONNECTOR Standard: .075" thick PS2	02 - 48	SS	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
30	PIN CONNECTOR .100" thick			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
	Service Contract of the Contra			
	SSB SOCKET CONNECTOR			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
	Mar Solishing			M MOUNTING HOLF
	EXAMPLES:			MOUNTING HOLE
	EXVIVIT EES.	in	Sollshan	HT HIGH TEMP
	PS1-10-SS-LT	SSB-	24-SS-LT	RoHS ROHS COMPLIANT
	uni soll	unc <sub>i</sub> s <sub>c</sub>	Plan in the second	
	Nano Nano		Another the second	
	SSB-24-SS-LE	SSB-	17-SS-M-GS	

### 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.







#### **ELECTRO-MECHANICAL SPECS**

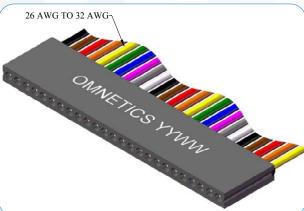
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

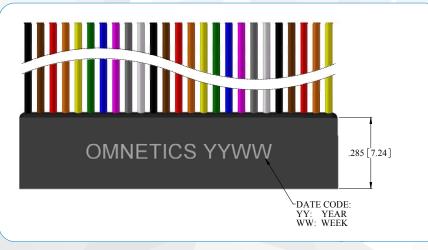
Standard Wire:	26 AWG, Teflon Insulated per NEMA-HP3
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

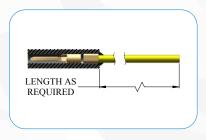


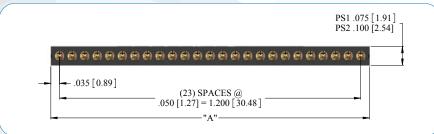
#### PS1/PS2-WD/WC LAYOUT











#### **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 .050"

Add .150" (3 contact cavities) for each mounting hole

Add fixed end length constant

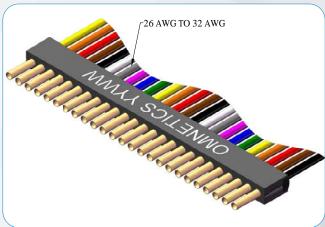
Total Length (Dimension A)

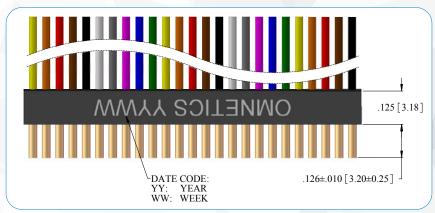
Notes: Maximum length for PS1 @ .075" thick 2.42" (61.47) Maximum number of contact cavities is 48. Maximum length for PS2 @ .100" thick 3.02" (76.71). Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide post holes and latches may be changed by customer.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

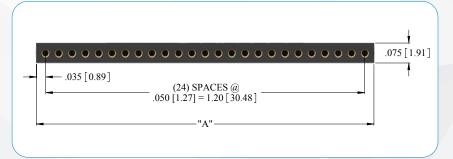


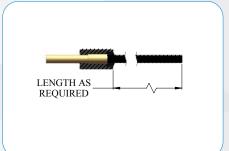
#### SSB-WD/WC LAYOUT











#### **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"

Add .150" (3 contact cavities) for each mounting hole

Add fixed end length

.070"

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



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

	SERIES	# OF CONTACTS	TERMINATION TYPE	WIRE LENGTH	COLOR CODED	COMMON OPTIONS	
	PS1 PIN CONNECTOR Standard: .075" thick	<b>02 - 48</b>	WD DISCRETE WIRES TW TWISTED WIRES	18.00 =18.00" STANDARD	C 10 REPEATING COLORS PER MIL-STD 681	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/HOLES	
34	PS2 PIN CONNECTOR .100" thick	2	WC CABLE WX	CUSTOM LENGTH i.e. 23.4"	Y ALL OTHER WIRE COLORS	LE LATCH (END MOUNT) LES MULTIPLE LATCHES	
	SSB		MULTIPLE WIRE TYPES	Standard/ MAX	WINE COLONS	(END MOUNT)	
	SOCKET CONNECT	OR	NSX -			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)	
	EXAMPLES:					M MOUNTING HOLE	
	camerics ma		Shad Solohio			HT HIGH TEMP	
	PS1/PS2-11-WD-	-18.00-C-M-G	S SSB-24-WD-1	8.0-C-LT		RoHS ROHS COMPLIANT	
	Anna sollando					COMPLIANT	

SSB-17-WD-18.0-C-M-GS

### **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**

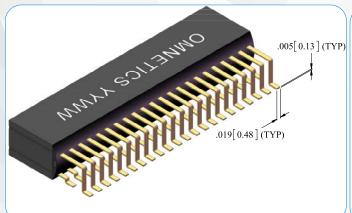
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200°C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

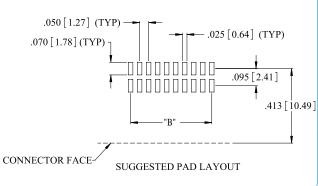
• S	Standard Socket PCB Tail Termination:	_Soldered per J-STD-006 (Non-RoHS)
• S	Standard Pin PCB Tail Termination:	_Solder plated per AMS-P-81728 (Non-RoHS)
• R	RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
• R	RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
•  r	nsulator:	Polyphenylene Sulfide per MIL-M-24519
• P	Pin:	Gold Plated BeCu
• S	Socket:	Gold Plated Copper Alloy
• E	Encapsulant:	Ероху

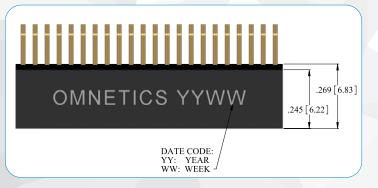


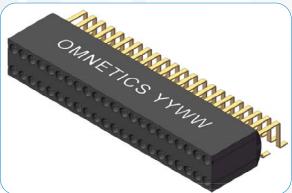
# **Dual Row Micro Strip**

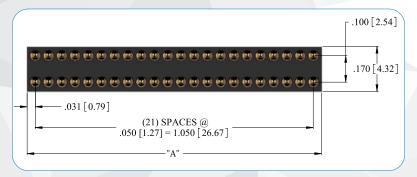
#### **DRP-AA LAYOUT**

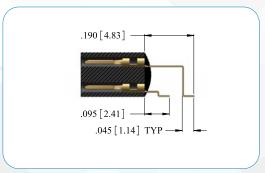












#### **DIMENSIONS FOR "A"**

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"

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"

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)

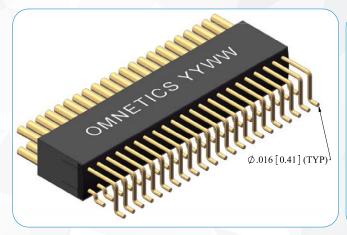
.062"

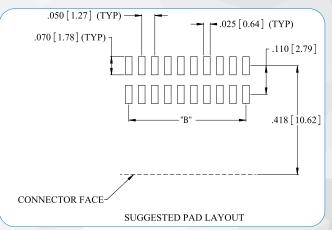
Notes: Maximum length 1.55" (39.37). Add .100" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100" dimension must be adjusted).

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



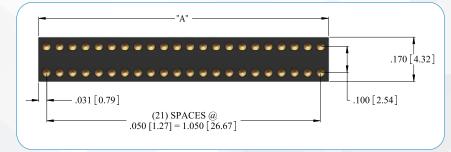
#### **DRS-AA LAYOUT**

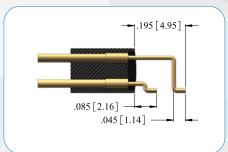












#### **DIMENSIONS FOR "A"**

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 sa	ame row
Total contact cavities in a single row	
Multiply the number of contact cavities minus 1 by .05	50"
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" (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"

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" (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.



### **HORIZONTAL SMT (TYPE AA) ORDERING GUIDE**

**# OF CONTACTS SERIES TERMINATION TYPE COMMON OPTIONS** 02 - 64 **G** GUIDE POST/HOLE DRP AA **GS** MULTIPLE GUIDE POSTS/HOLES PIN CONNECTOR **LE** LATCH (END MOUNT) **LES MULTIPLE LATCHES** (END MOUNT) **DRS SOCKET CONNECTOR LT** LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT) **MOUNTING HOLE CSR** CENTER SCREW RECEPTACLE - PIN **EXAMPLES: ESR** END SCREW RECEPTACLE - PIN SIDE **CRS** CENTER RETAINING SCREW -SOCKET SIDE **ERS** END RETAINING SCREW - SOCKET SIDE DRP-44-AA DRS-43-AA-LT **CJP** CENTER JACK POST - PIN SIDE **EJP** END JACK POST - PIN SIDE HT DRS-43-AA-LE DRS-32-AA-M **HIGH TEMP** RoHS



**RoHS** 

**RoHS COMPLIANT** 

### **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.



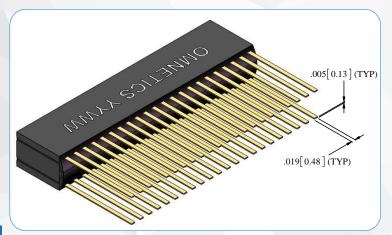
#### **ELECTRO-MECHANICAL SPECS**

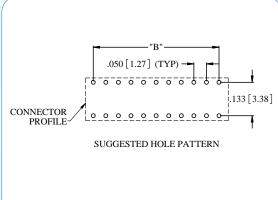
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

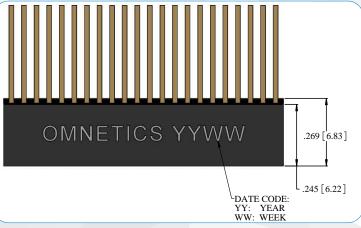
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

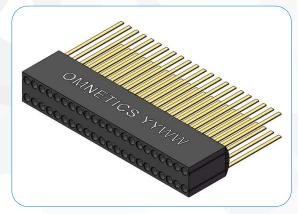


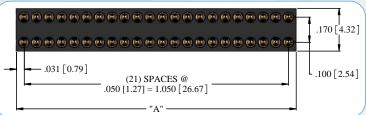
#### **DRP-DD LAYOUT**

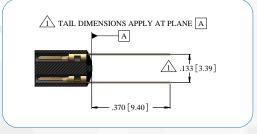












#### **DIMENSIONS FOR "A"**

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)

.062"

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"

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

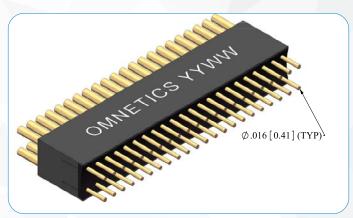
Total Length (Dimension B)

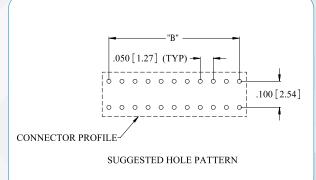
Notes: Maximum length 1.55" (39.37). Add .100" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100" dimension must be adjusted).

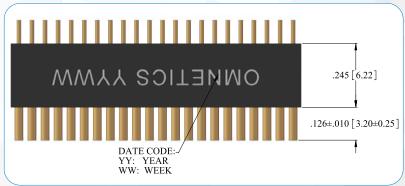
Dimensions in [] are in Millimeters unless otherwise noted and are for reference only.

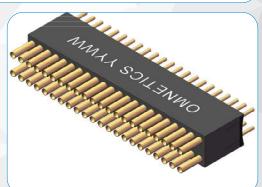


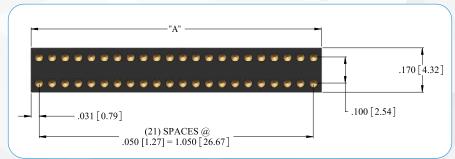
#### **DRS-DD LAYOUT**

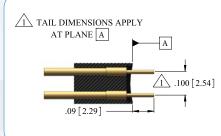












#### **DIMENSIONS FOR "A"**

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

.062"

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"

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" (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.



### STRAIGHT TAIL (TYPE DD) ORDERING GUIDE





#### **FLEX TAIL (TYPE FF)**

Flex mount Micro Strip connectors are a low profile ruggedized connector on .050" (1.27 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.

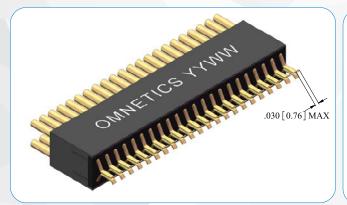
#### **ELECTRO-MECHANICAL SPECS**

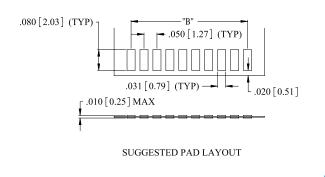
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

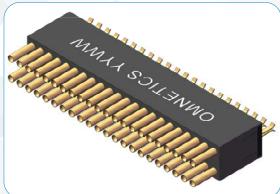


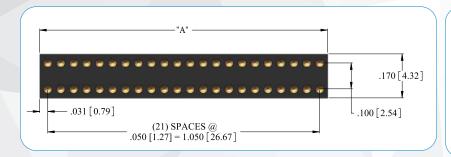
#### **DRS-FF LAYOUT**

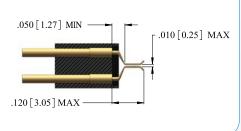












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts in one row

Add 1 contact cavity for each 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 .062"

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"

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" (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.



### FLEX TAIL (TYPE FF) ORDERING GUIDE

SERIES # OF CONTACTS TERMINATION TYPE COMMON OPTIONS  DRS SOCKET CONNECTOR  1					
GS MULTIPLE GUIDE POSTS/HOLES  LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT) LT S MULTIPLE LATCHES (END MOUNT) LT S MULTIPLE LATCHES (TOP MOUNT) LT S MULTIPLE LATCHES (END MOUNT) LT S MULTIPLE GUIDE (END MOUNT) LES MULTIPLE G	SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS	
LES MULTIPLE LATCHES (END MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)  ERS END RETAINING SCREW - SOCKET SIDE  ERS END RETAINING SCREW - SOCKET SIDE  HT HIGH TEMP		02 - 64	FF	<b>GS</b> MULTIPLE GUIDE	
EXAMPLES:  LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)  CRS CENTER RETAINING SCREW - SOCKET SIDE  ERS END RETAINING SCREW - SOCKET SIDE  HT HIGH TEMP  ROHS ROHS ROHS	South Market Control of the Control			LES MULTIPLE LATCHES	45
EXAMPLES:  EXAMPLES:  HT  HIGH TEMP  ROHS  ROHS  ROHS				LTS MULTIPLE LATCHES	
EXAMPLES:  HT  HIGH TEMP  ROHS  ROHS					
HIGH TEMP  RoHS RoHS					
RoHS RoHS COMPLIANT		Times of			
	THE WAY TO STATE OF THE PARTY O	William San	ino di la companya di	RoHS	

DRS-43-FF-LT



DRS-43-FF-LE



### **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" 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.

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

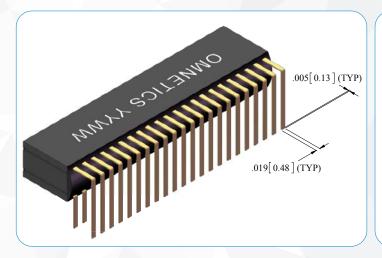
#### **ELECTRO-MECHANICAL SPECS**

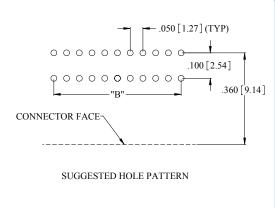
Durability:	2000 Cycles
• Temperature:	-55°C to +125 °C (200 °C w/HTE)
·	·
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
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

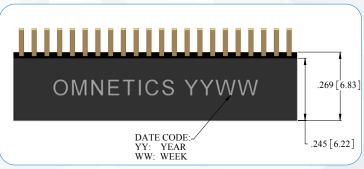
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

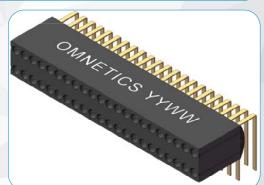


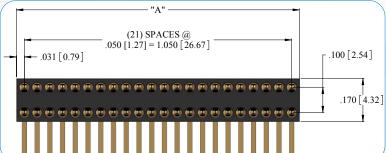
#### **DRP-H2 LAYOUT**

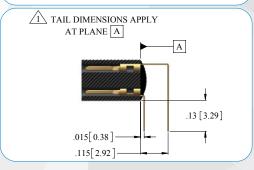












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

3	
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	.062"
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"

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

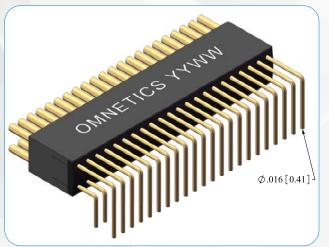
Total Length (Dimension B)

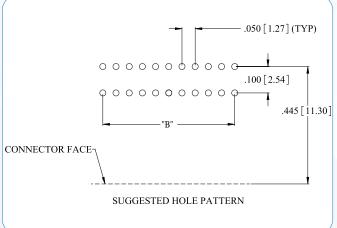
Notes: Maximum length 1.55" (39.37). Add .100" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100" dimension must be adjusted).

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

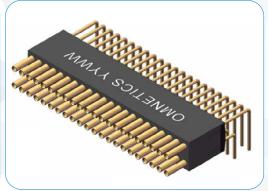


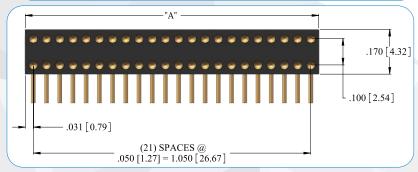
#### **DRS-H2 LAYOUT**

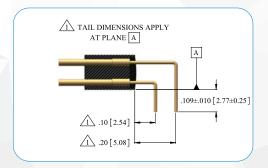












#### **DIMENSIONS FOR "A"**

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"

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"

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)

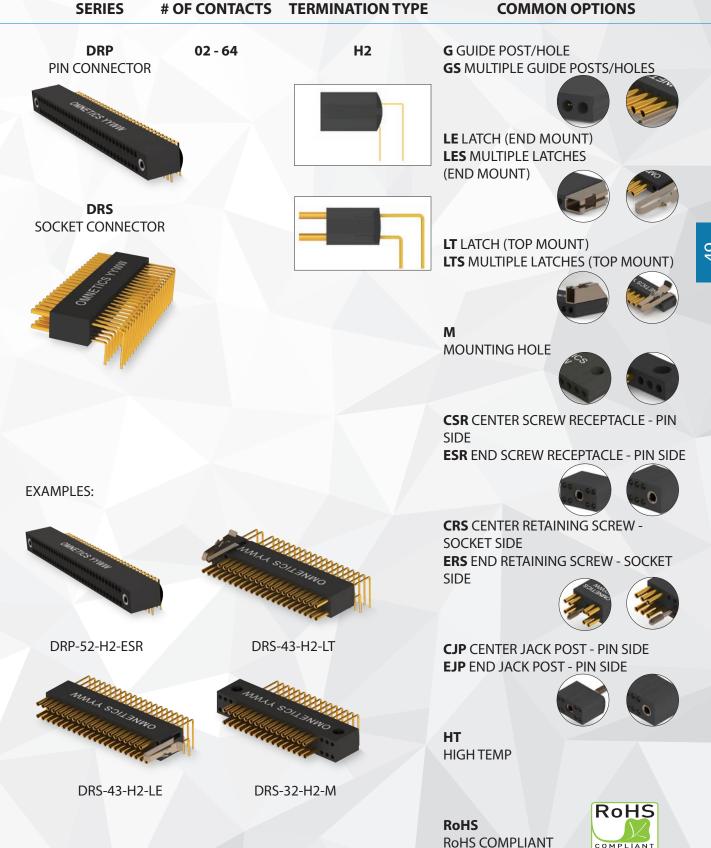
.062"

Notes: Maximum length 1.55" (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.



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







### **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**

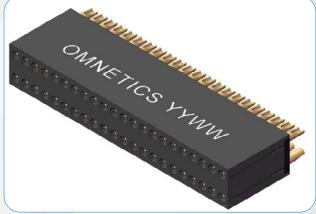
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

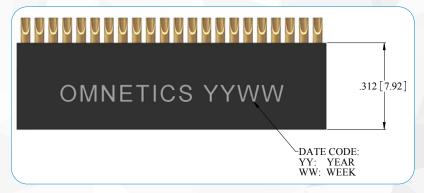
<ul> <li>Standard Socket Soldercup Termination:</li> </ul>	Hard Gold Plated per ASTM B488
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Soldercup Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin Soldercup Termination:	Hard gold plated per ASTM B488
RoHS Socket Soldercup Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

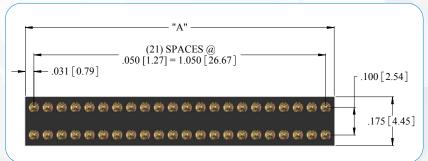


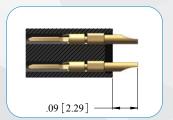
#### **DRP-SS LAYOUT**











#### **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"

Add .150" for each mounting hole

Add .100" for each screw receptacle

Add fixed end length constant

.062"

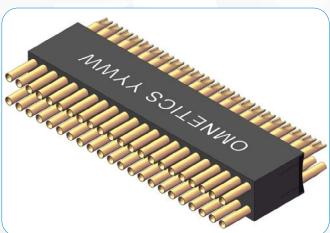
Total Length (Dimension A):

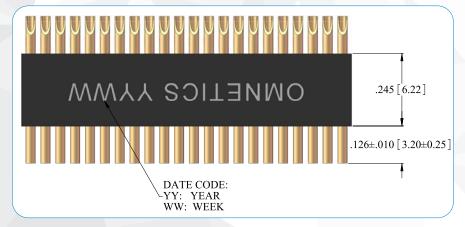
Notes: Maximum length 1.85" (46.99). Maximum number of contact cavities is 64. Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer. Dimensions in [] are in Millimeters unless otherwise noted and are for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

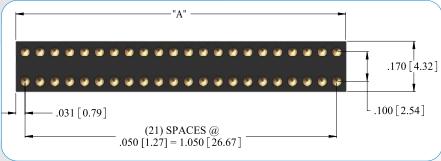


### **DRS-SS LAYOUT**









#### **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"

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



### **SOLDERCUP (TYPE SS) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
<b>DRP</b> PIN CONNECTOR	<b>02 - 64</b>	SS	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/HOLES
DDS.			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
DRS SOCKET CONNECT	OR		LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
			M MOUNTING HOLE
			CSR CENTER SCREW RECEPTACLE - PIN SIDE ESR END SCREW RECEPTACLE - PIN SIDE
EXAMPLES:			ESR END SCREW RECEPTACLE - PIN SIDE
OINETICS FY	mn Allender	CHANNO TO THE TOTAL THE TO	CRS CENTER RETAINING SCREW - SOCKET SIDE ERS END RETAINING SCREW - SOCKET SIDE
DRP-43-SS	-LE DRS-	43-SS-LT	CJP CENTER JACK POST - PIN SIDE EJP END JACK POST - PIN SIDE
MANAGER SOLLANDER	Maria Salahara	SOLINIO SOLINI	HT HIGH TEMP
DRS-43-SS-	-LE DRS-	32-SS-M	NIGH LEWIP
			RoHS RoHS COMPLIANT



### **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 64 positions as well as custom configurations.



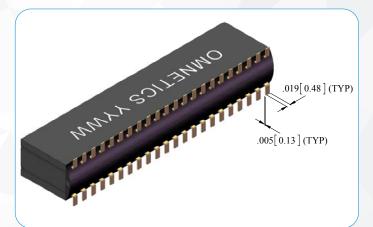
#### **ELECTRO-MECHANICAL SPECS**

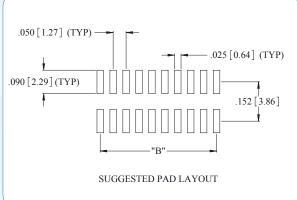
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

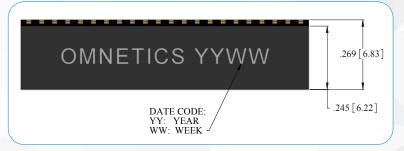
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

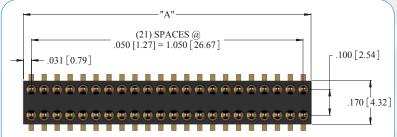


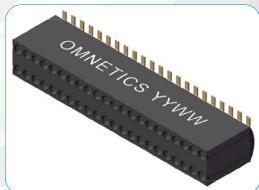
#### **DRP-VV LAYOUT**

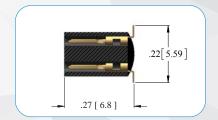












#### **DIMENSIONS FOR "A"**

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"	
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" (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"

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

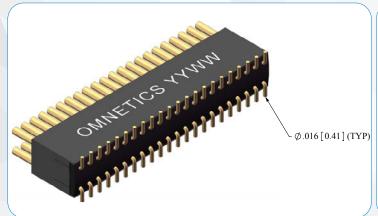
Total Length (Dimension B)

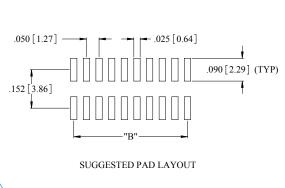
Notes: Maximum length 1.55" (39.37). Add .100" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100" dimension must be adjusted).

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

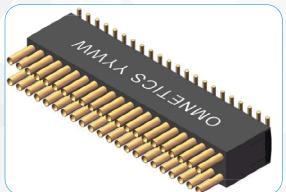


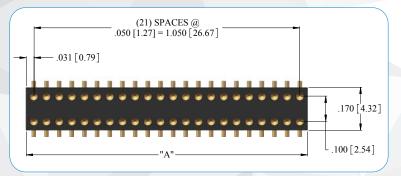
#### **DRS-VV LAYOUT**

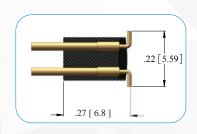












#### **DIMENSIONS FOR "A"**

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"

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"

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)

.062"

Notes: Maximum length 1.55" (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.



### **VERTICAL SMT (TYPE VV) ORDERING GUIDE**





COMPLIANT

### 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**

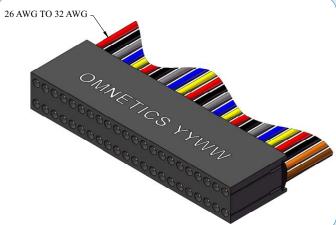
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

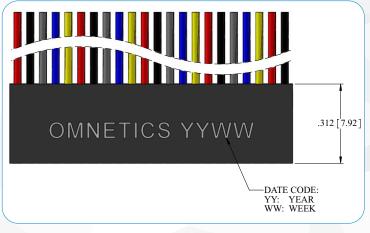
Standard Wire:	26 AWG, Teflon Insulated per NEMA-HP3
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

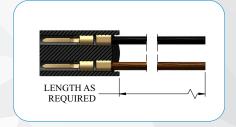


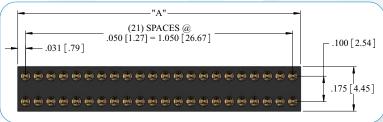
#### **DRP-WD/WC LAYOUT**











#### **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"

Add .150" for each mounting hole

Add .100" for each screw receptacle

Add fixed end length constant

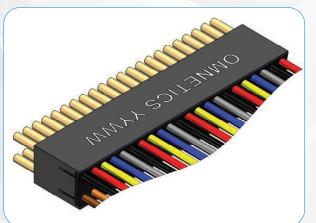
.062"

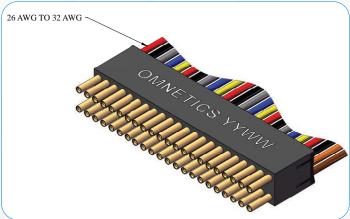
Total Length (Dimension A):

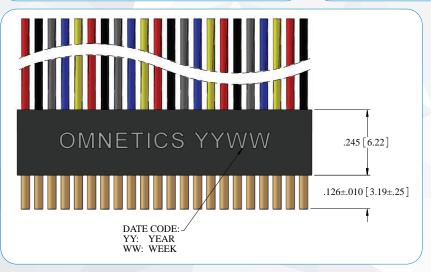
Notes: Maximum length 1.85" (46.99). Maximum number of contact cavities is 64. Number of contacts must be reduced to accommodate hardware and mounting holes. Default locations for guide posts and latches may be changed by customer. Dimensions in [] are in Millimeters unless otherwise noted and are for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

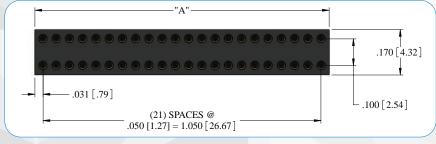


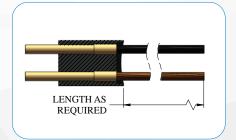
#### **DRS-WD/WC LAYOUT**











#### **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" (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.



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

SERIES	# OF CONTACTS	TERMINATION TYPE	WIRE LENGTH	COLOR CODED	COMMON OPTIONS	
<b>DRP</b> PIN CONNECTOR	02 - 64	<b>WD</b> DISCRETE WIRES	<b>18.00</b> =18.00" STANDARD	C 10 REPEATING COLORS PER	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES	
CHATTER THE		TW TWISTED WIRES WC	XX.XX CUSTOM LENGTH	MIL-STD 681	LE LATCH (END MOUNT)	
DRS		CABLE  WX  MULTIPLE WIRE	i.e. 23.40 =23.40" 26 AWG	Y ALL OTHER WIRE COLORS	MOUNT)	
SOCKET CONNECTOR		TYPES	Standard/MAX		LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)	61
And the second			# M		M MOUNTING HOLE	
			12 Me 20 Me			
EXAMPLES:					CSR CENTER SCREW RECEPTACLE - PIN SIDE ESR END SCREW RECEPTACLE - PIN SIDE	
CHARLES YOU					CRS CENTER RETAINING SCREW - SOCKET SIDE ERS END RETAINING SCREW -	
DRP-44-V	VD-18.00-C				SOCKET SIDE	
Maria Control of the	mono de la como de la				CJP CENTER JACK POST - PIN SIDE EJP END JACK POST - PIN SIDE	
DRS-44-W	D-18.00-C				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



**CS** CUSTOMER SUPPLIED

MATERIAL

#### **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**

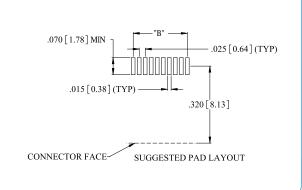
 Durability: 2000 Cycles Temperature: -55°C to +125 °C (200 °C w/HTE) Current rating: 3 AMPs max per contact Voltage Rating (DWV): 600 VAC RMS Sea Level Insulation Resistance: 5000 Megohms min @ 500 VDC Shock: 50 g's discontinuity < 1 microsecond Vibration: 20 g's discontinuity < 1 microsecond Thermal 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

Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

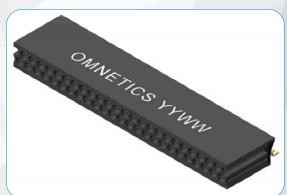


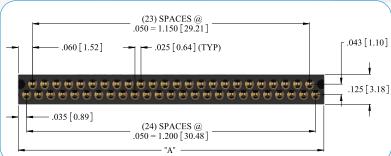
#### **PSM-AA LAYOUT**

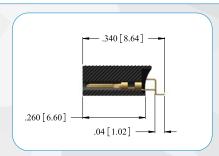












#### **DIMENSIONS FOR "A"**

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 .025"

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" (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"

If hardware features are within the contact area:

Add .025" for each latch

Add .025" for each guide post hole

Total Length (Dimension B)

.070"\*

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).

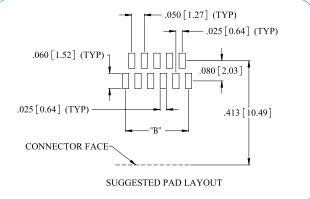
Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.



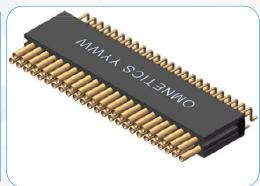


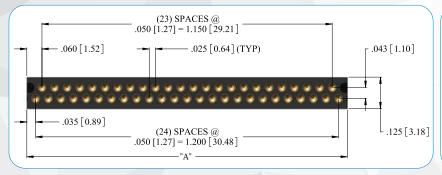
#### SSO-AA LAYOUT

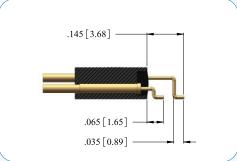












#### **DIMENSIONS FOR "A"**

Total Length (Dimension 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"

Add .150" for each mounting hole

Add fixed end length constant

.070"\*

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 FOR "B"**

To determine pad pattern layout length "B":

Multiply the number of contact cavities minus 1 by .025"

If hardware features are within the contact area:

Add .025" 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.



### **HORIZONTAL SMT (TYPE AA) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PSM PIN CONNECTOR	02 - 97	AA	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
STATES STATES		<del>_</del>	
SSO			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
SOCKET CONNECTOR			
SOLING THE SOLING			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
			M MOUNTING HOLE
			<b>HT</b> HIGH TEMP
EXAMPLES:			
IMPLACE SECTION	On Shifting	manumum manumu	ROHS ROHS COMPLIANT
- Aller - Alle			
PSM-42-AA-LE	SSO	)-35-AA-M-GS	

#### 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.



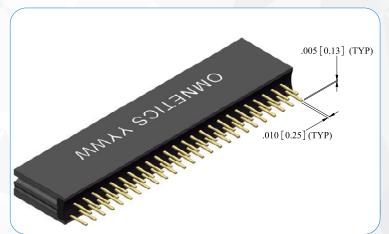
#### **ELECTRO-MECHANICAL SPECS**

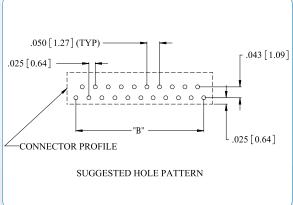
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

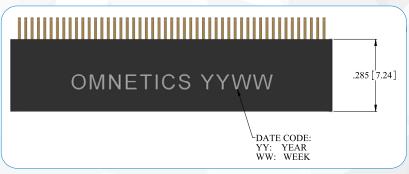
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху



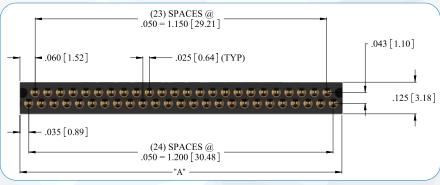
#### **PSM-DD LAYOUT**

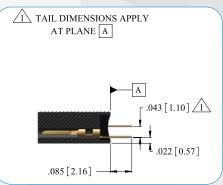












#### **DIMENSIONS FOR "A"**

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"

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" (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"

If hardware features are within the contact area:

Add .025" for each latch

.070"\*

Add .025" for each guide post hole

Total Length (Dimension B)

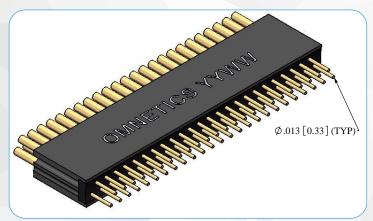
Notes: Maximum pad layout length 2.40" (60.96). Add .100" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100" dimension must be adjusted).

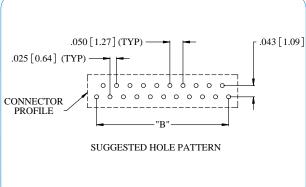
Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

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



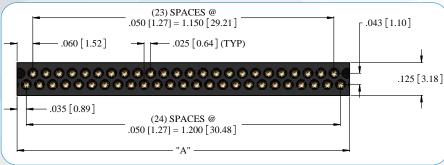
#### **SSO-DD LAYOUT**

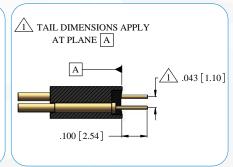












#### **DIMENSIONS FOR "A"**

Total Length (Dimension 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"

Add .150" for each mounting hole

Add fixed end length constant

.070"\*

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 FOR "B"**

To determine pad pattern layout length "B":

Multiply the number of contact cavities minus 1 by .025"

If hardware features are within the contact area:

Add .025" 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.

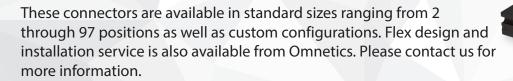


### STRAIGHT TAIL (TYPE DD) ORDERING GUIDE

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PSM PIN CONNECTOR	02 - 97	DD	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
HART EST THE STATE OF THE STATE			
sso			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
SOCKET CONNECTOR			
SO TUNES			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
			M MOUNTING HOLE
			<b>HT</b> HIGH TEMP
EXAMPLES:			
WHAT SO THE STATE OF THE STATE	Oung State of the	TICS YYUU	Rohs Rohs Compliant
			(0.1.2)
PSM-47-DD-LE	SSO-35	5-DD-M-GS	

#### **FLEX TAIL (TYPE FF)**

Flex mount offset Micro Strip connectors are a low profile ruggedized connector on .050" (1.27 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.







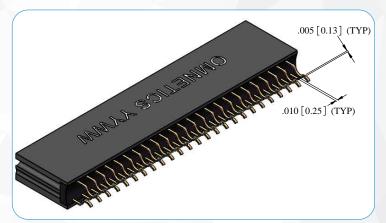
#### **ELECTRO-MECHANICAL SPECS**

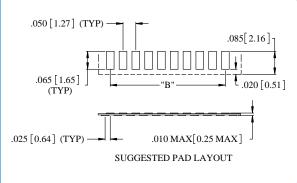
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

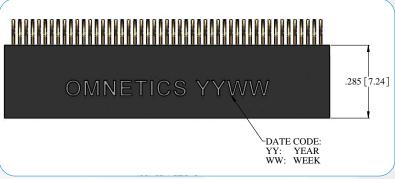
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

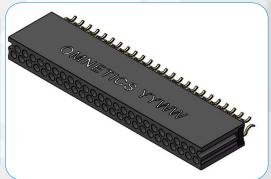


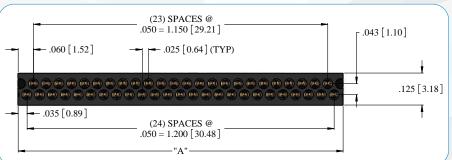
#### **PSM-FF LAYOUT**

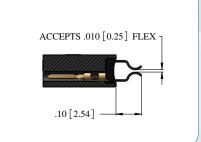












#### **DIMENSIONS FOR "A"**

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"

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" (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"

If hardware features are within the contact area:

Add .025" for each latch

.070"\*

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).

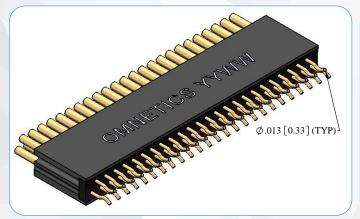
Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

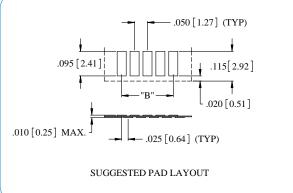
Minneapolis, MN, USA
Phone: +1 763.572.0656 Fax: 763.572.3925
Email: sales@omnetics.com

www.omnetics.com

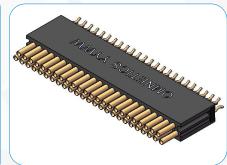


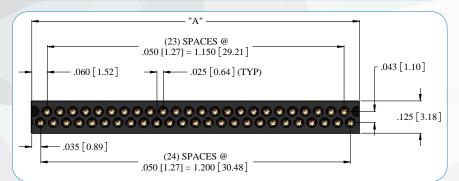
#### SSO-FF LAYOUT

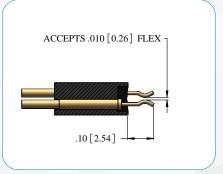












#### **DIMENSIONS FOR "A"**

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"

Add .150" for each mounting hole

Add fixed end length constant

.070"\*

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 FOR "B"**

To determine pad pattern layout length "B":

Multiply the number of contact cavities minus 1 by .025"

If hardware features are within the contact area:

Add .025" 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.



### FLEX TAIL (TYPE FF) ORDERING GUIDE

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PSM PIN CONNECTOR	02 - 97	FF	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
ARRIGHER REPRESENTATION OF THE PROPERTY OF THE			
sso			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
SOCKET CONNECTOR			
The state of the s			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
			M MOUNTING HOLE
			<b>HT</b> HIGH TEMP
EXAMPLES:			
J. J	MANNETIC STATE OF THE STATE OF	s rrun	RoHS ROHS COMPLIANT
PSM-47-FF		FF-M-GS	



### **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" 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.



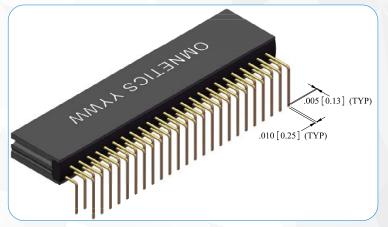
#### **ELECTRO-MECHANICAL SPECS**

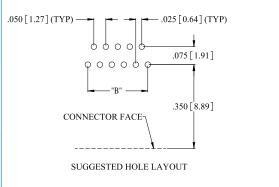
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

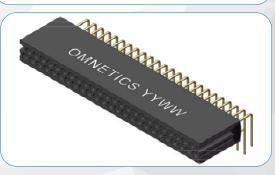


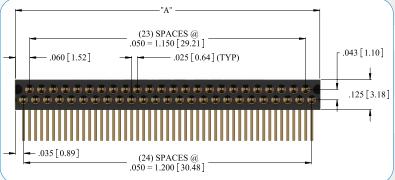
### **PSM-H2 LAYOUT**

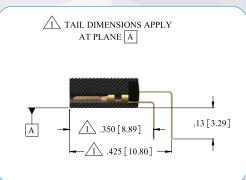












#### **DIMENSIONS FOR "A"**

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"

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" (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"

If hardware features are within the contact area:

Add .025" for each latch

Add .025" for each guide post hole

Total Length (Dimension B)

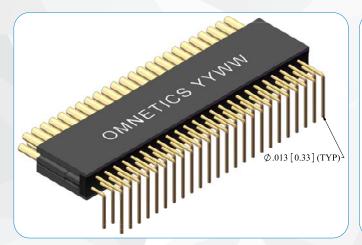
.070"\*

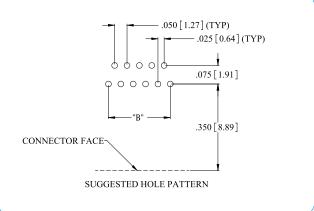
Notes: Maximum pad layout length 2.40" (60.96). Add .100" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole or latch, .100" dimension must be adjusted).



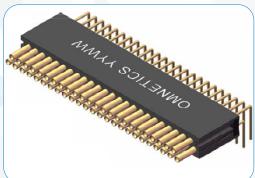


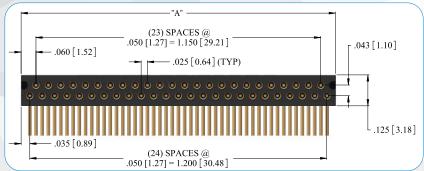
### SSO-H2 LAYOUT

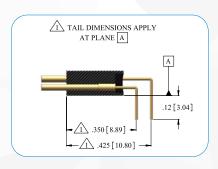












#### **DIMENSIONS FOR "A"**

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"

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" (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"

If hardware features are within the contact area:

Add .025" for each latch

Add .025" for each guide post hole

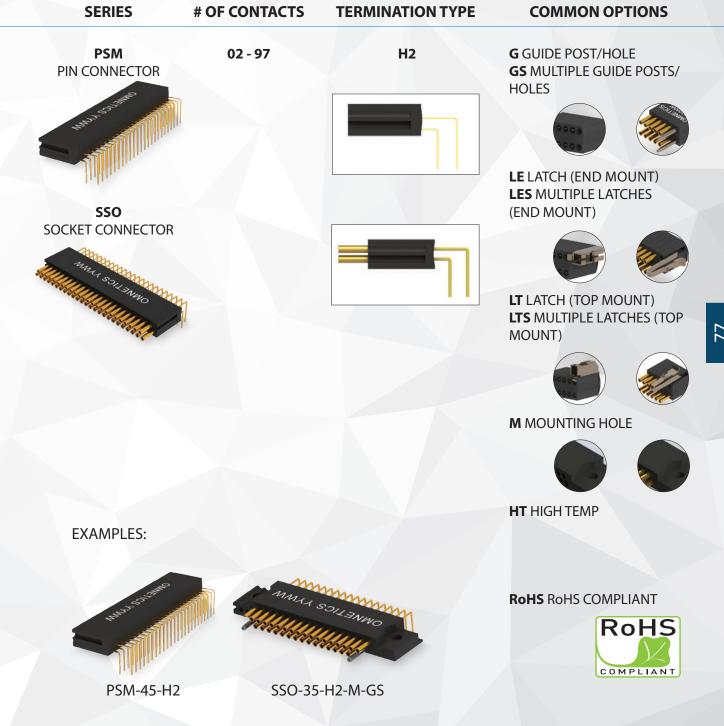
Total Length (Dimension B)

.070"\*

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).



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



### **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:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C 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

<ul> <li>Standard Socket Soldercup Termination:</li> </ul>	Hard Gold Plated per ASTM B488
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Soldercup Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin Soldercup Termination:	Hard gold plated per ASTM B488
RoHS Socket Soldercup Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху



### 9

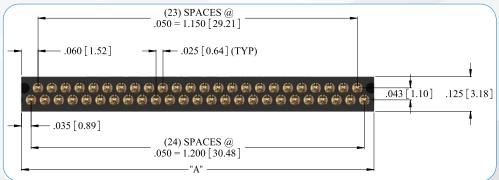
## **Dual Row Offset Micro Strip**

### **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"

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" (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.

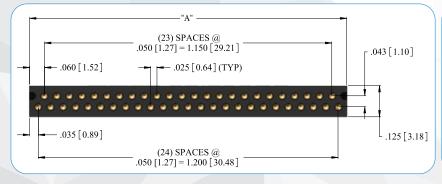


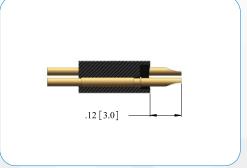
### SSO-SS LAYOUT











#### **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"

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" (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.



### **SOLDER CUP (TYPE SS) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PSM PIN CONNECTOR	02 - 97	SS	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
SSO SOCKET CONNECTOR			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
Solinas Solinas			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
			M MOUNTING HOLE
EXAMPLES:	Anna Sol	SPAINTER STATE OF THE STATE OF	<b>HT</b> HIGH TEMP
PSM-50-SS-RoHS	SSO-5		ROHS ROHS COMPLIANT



### **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.





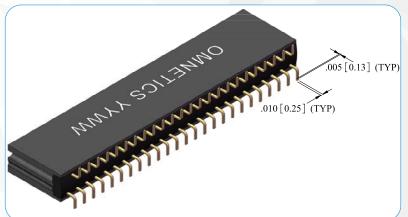
### **ELECTRO-MECHANICAL SPECS**

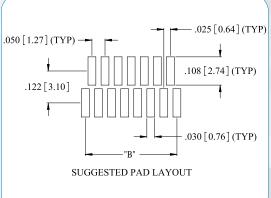
Durability:	2000 Cycles
Temperature:	_55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

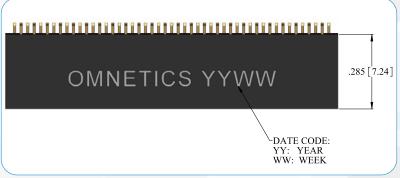
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

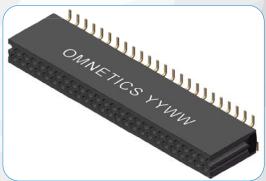


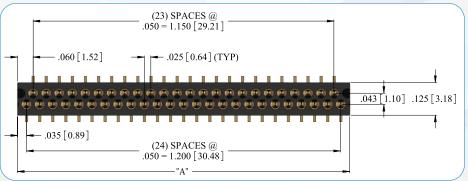
### **PSM-VV LAYOUT**

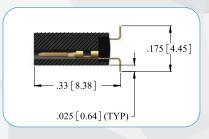












### **DIMENSIONS FOR "A"**

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"

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" (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"

If hardware features are within the contact area:

Add .025" for each latch

Add .025" for each guide post hole

Total Length (Dimension B)

.070"\*

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.

Minneapolis, MN, USA

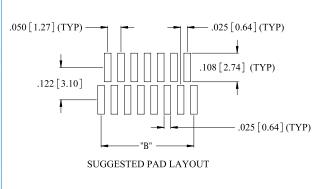
Phone: +1 763.572.0656 Fax: 763.572.3925 Email: sales@omnetics.com

www.omnetics.com



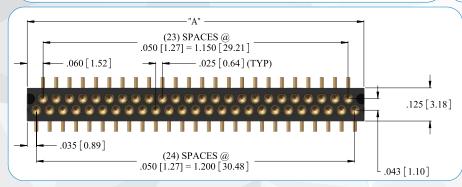
### **SSO-VV LAYOUT**

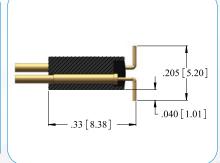












#### **DIMENSIONS FOR "A"**

Total Length (Dimension 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"

Add .150" for each mounting hole

Add fixed end length constant

.070"\*

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 FOR "B"**

To determine pad pattern layout length "B":

Multiply the number of contact cavities minus 1 by .025"

If hardware features are within the contact area:

Add .025" 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).



### **VERTICAL SMT (TYPE VV) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
PSM PIN CONNECTOR	02 - 97	vv	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
Hall Hall Hall Hall	h		
SSO SOCKET CONNECTOR			LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)
ALLE STATE OF THE			LT LATCH (TOP MOUNT)
S SOLINGO			LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)
			M MOUNTING HOLE
EVANADI ES			HT HIGH TEMP
EXAMPLES:			
July Hilli	The state of the s	erics rywn	Rohs Rohs Compliant
PSM-49-VV-	GS SSO-	35-VV-M-GS	

### 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**

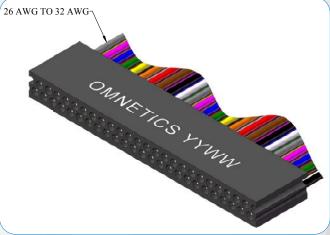
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	3 AMPs max per contact
Voltage Rating (DWV):	600 VAC RMS Sea Level
Insulation Resistance:	5000 Megohms min @ 500 VDC
Shock:	50 g's discontinuity < 1 microsecond
Vibration:	20 g's discontinuity < 1 microsecond
Thermal 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

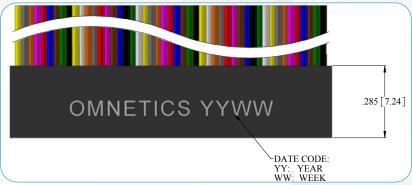
Standard Wire:	26 AWG, Teflon Insulated per NEMA-HP3
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

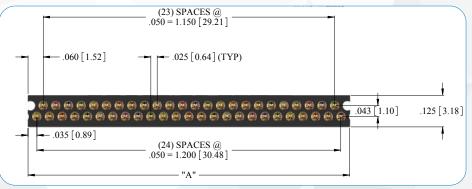


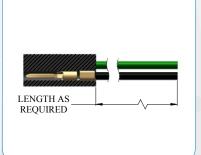
### **PSM-WD/WC LAYOUT**











#### **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"

Add .150" for each mounting hole

Add fixed end length constant

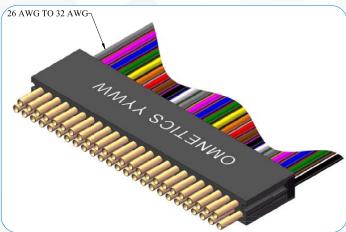
Total Length (Dimension A):

Notes: Maximum length 2.47" (62.74) without mounting holes. Maximum length 2.77" (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.

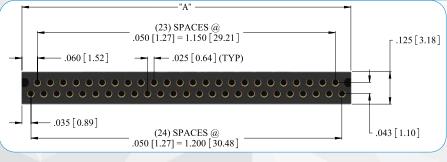


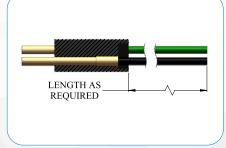
### SSO-WD/WC LAYOUT











#### **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"

Add .150" for each mounting hole

Add fixed end length constant

O.070"\*

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.



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

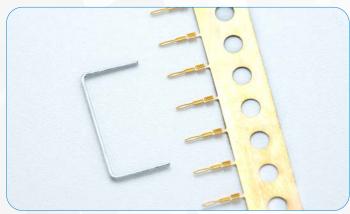
SERIES	# OF CONTACTS	TERMINATION TYPE	WIRE LENGTH	COLOR CODED	COMMON OPTIONS	
PSM PIN CONNECTOR	02 - 97	WD DISCRETE WIRES TW TWISTED WIRES	18.00 =18.00" STANDARD XX.XX	C 10 REPEATING COLORS PER MIL-STD 681	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES	
SSO SSO		WC CABLE  WX MULTIPLE WIRE	CUSTOM LENGTH i.e. 23.40 =23.40"	Y ALL OTHER WIRE COLORS	LE LATCH (END MOUNT) LES MULTIPLE LATCHES (END MOUNT)	
SOCKET CONNECTOR		TYPES	Standard/MAX		LT LATCH (TOP MOUNT) LTS MULTIPLE LATCHES (TOP MOUNT)	
					M MOUNTING HOLE	88
EXAMPLES:					ROHS ROHS COMPLIANT	
CHARLES ON THE					<b>CS</b> CUSTOMER SUPPLIED MATERIAL	
PSM-WD-18	.00-C-M-GS					
Solinas		Solver				
SS0-11-WD-	18.00-C	SS0-11-V	VC-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 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-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  $\mu$ m) of gold over 50 micro inches (1.27  $\mu$ 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® & MIL-DTL-32139 series of connectors.

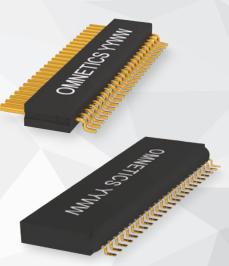




### **HORIZONTAL SMT (TYPE AA)**

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" (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**

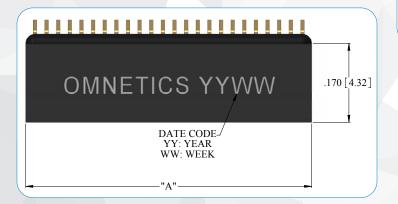
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
• Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

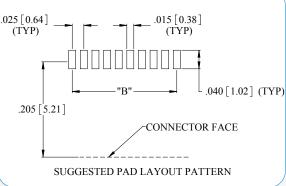
Standard Socket PCB Tail Termination:	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

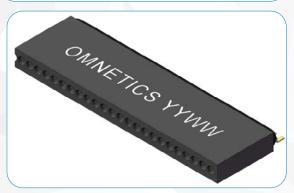


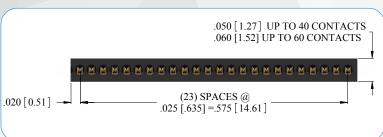
#### **NPS-AA LAYOUT**

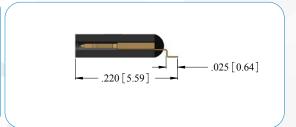












#### **DIMENSIONS FOR "A"**

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"

Add fixed end length constant

.040"

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"

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

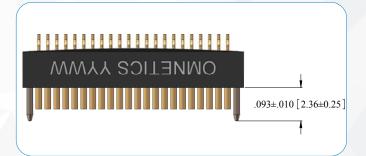
Add .075" (3 contact cavities) for each mounting hole

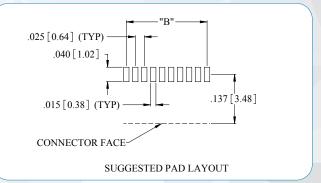
Total Length (Dimension B)

Notes: Maximum pattern length @ .050" thick is .975" (24.76). Maximum pattern length @ .060" thick is 1.475" (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).



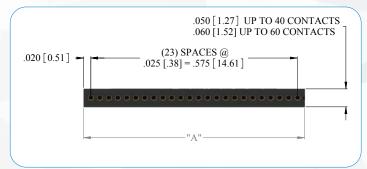
### **NSS-AA LAYOUT**

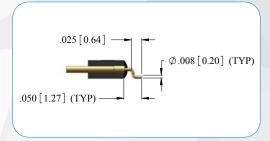












#### **DIMENSIONS FOR "A"**

Total Length (Dimension 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"

Add fixed end length constant

Maximum pattern length @ .060" thick is 1.475" (37.46).

**DIMENSIONS FOR "B"** 

Total Length (Dimension B)

To determine pad pattern layout length "B":

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

Multiply the number of contact cavities minus 1 by .025"

Notes: Maximum pattern length @ .050" thick is .975" (24.76).

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.



### **HORIZONTAL SMT (TYPE AA) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
NPS PIN CONNECTOR	02 - 60	AA	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
WARE STATE OF THE PARTY OF THE	02 THRU 40 (.050"THICK BODY)		M MOUNTING HOLE
<b>NSS</b> SOCKET CONNECTOR	41 THRU 60 (.060"THICK BODY)		HT HIGH TEMP
The state of the s			RoHS RoHS COMPLIANT
			ROHS

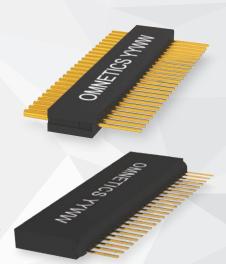
### **EXAMPLES:**





### **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" (.64 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.

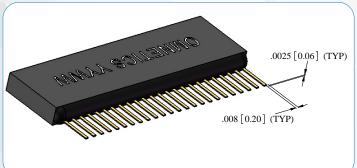
#### **ELECTRO-MECHANICAL SPECS**

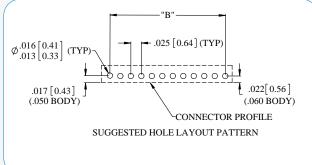
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

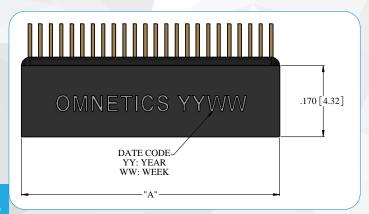
- /	<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
١,	Standard Pin PCB Tail Termination:	_Solder plated per AMS-P-81728 (Non-RoHS)
(	RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
	RoHS Socket PCB Tail Termination:	_Hard gold plated per ASTM B488
(	• Insulator:	_Polyphenylene Sulfide per MIL-M-24519
(	• Pin:	Gold Plated BeCu
	Socket:	Gold Plated Copper Alloy
	Encapsulant:	Epoxy

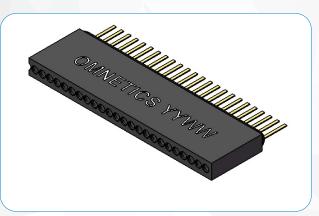


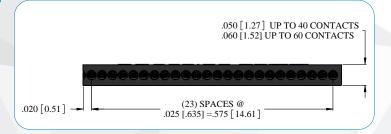
### **NPS-DD LAYOUT**

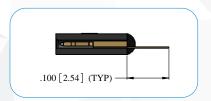












#### **DIMENSIONS FOR "A"**

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"

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

Add .075" (3 contact cavities) for each mounting hole

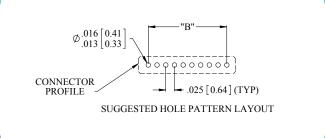
Total Length (Dimension B)

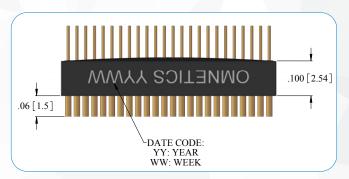
Notes: Maximum pattern length @ .050" thick is .975" (24.76). Maximum pattern length @ .060" thick is 1.475" (37.46). Add .050" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole, .050" dimension must be adjusted).

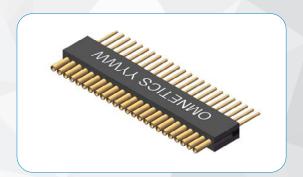


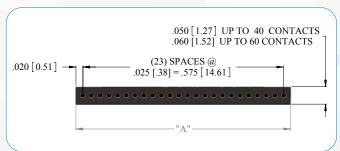
### **NSS-DD LAYOUT**

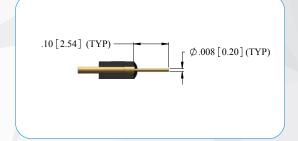












#### **DIMENSIONS FOR "A"**

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"

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"

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

Total Length (Dimension B)

.040"

Notes: Maximum pattern length @ .050" thick is .975" (24.76). Maximum pattern length @ .060" thick is 1.475" (37.46).



### STRAIGHT TAIL (TYPE DD) ORDERING GUIDE

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
NDC	02.60	22	C CLUDE DOCT/LIQUE
NPS PIN CONNECTOR	02 - 60	DD	<b>G</b> GUIDE POST/HOLE <b>GS</b> MULTIPLE GUIDE POSTS/
PIN CONNECTOR			HOLES —
			Hunc
The state of the s			
	02 THRU 40		
	(.050"THICK BODY)		M MOUNTING HOLE
	41 THRU 60		, cs
	(.060"THICK BODY)		
NSS			<b>HT</b> HIGH TEMP
SOCKET CONNECTOR			
OWET GRAM			
No.			<b>RoHS</b> RoHS COMPLIANT
			RoHS
			COMPLIANT



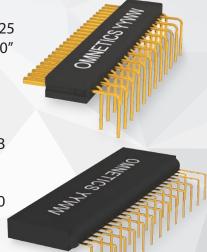




### **LONG/SHORT ALT. THRU-HOLE (TYPE H2)**

The Single Row Nano Strip connectors have contacts arranged on .025 (.64 mm) centerlines. The thru-hole tails are arranged in a .050" x .0.50" 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.



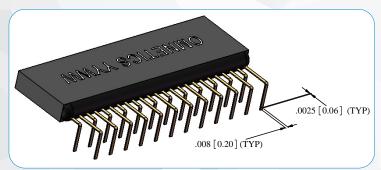
### **ELECTRO-MECHANICAL SPECS**

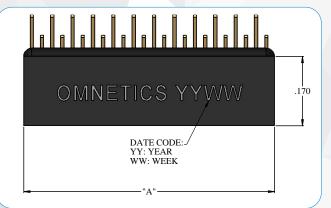
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

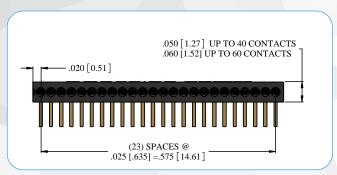
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

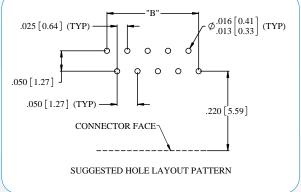


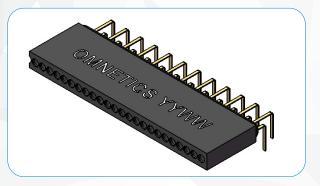
### **NPS-H2 LAYOUT**

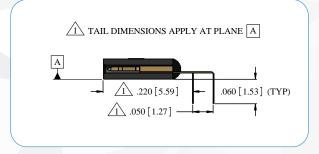












## **DIMENSIONS FOR "A"**To determine connector length "A":

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"

Add fixed end length constant .040"

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"

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

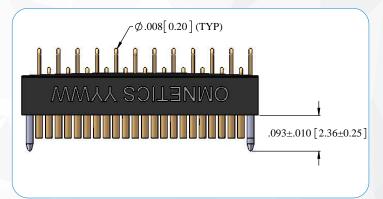
Add .075" (3 contact cavities) for each mounting hole

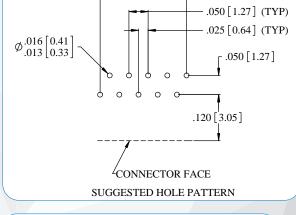
Total Length (Dimension B)

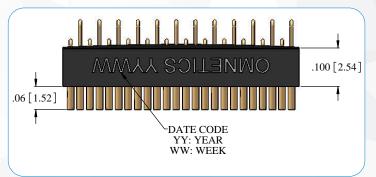
Notes: Maximum pattern length @ .050" thick is .975" (24.76). Maximum pattern length @ .060" thick is 1.475" (37.46). Add .050" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole, .050" dimension must be adjusted).

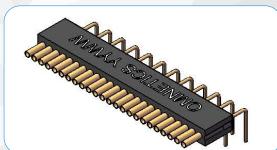


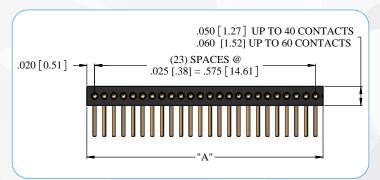
### **NSS-H2 LAYOUT**

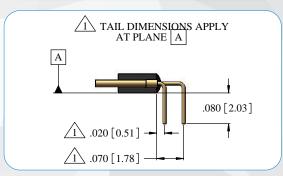












#### **DIMENSIONS FOR "A"**

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" 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"**

.040"

To determine pad pattern layout length "B":

Multiply the number of contact cavities minus 1 by .025"

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

Total Length (Dimension B)

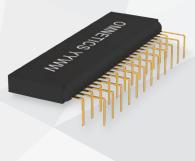
Notes: Maximum pattern length @ .050" thick is .975" (24.76). Maximum pattern length @ .060" thick is 1.475" (37.46).



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

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
NPS PIN CONNECTOR	02 - 60	H2	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/ HOLES
	02 THRU 40 (.050"THICK BODY)		M MOUNTING HOLE
NSS SOCKET CONNECTOR	41 THRU 60 (.060"THICK BODY)		HT HIGH TEMP
SOCIAL POOLING			RoHS RoHS COMPLIANT
			ROHS







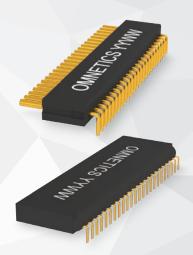


NSS-24-H2-RoHS

### **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.



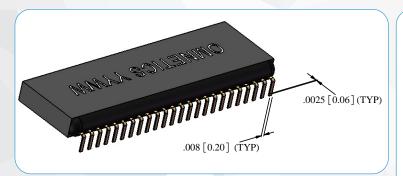
#### **ELECTRO-MECHANICAL SPECS**

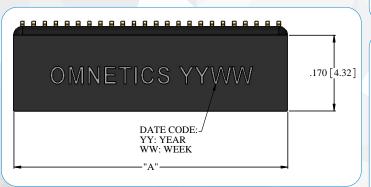
Durability:	2000 Cycles
• Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	_5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal Vacuum Outgassing:	NASA SP-R-0022
Contact Resistance:	71 Milliohms max (71 mV max @ 1 AMP)
Mating/Unmating Force:	2.5 oz (71 g) typical per contact

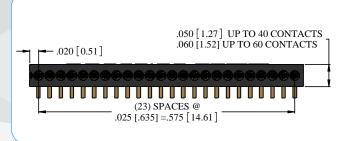
•	Standard Socket PCB Tail Termination:	_Soldered per J-STD-006 (Non-RoHS)
•	Standard Pin PCB Tail Termination:	_Solder plated per AMS-P-81728 (Non-RoHS)
•	RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
•	RoHS Socket PCB Tail Termination:	_Hard gold plated per ASTM B488
•	Insulator:	Polyphenylene Sulfide per MIL-M-24519
•	Pin:	Gold Plated BeCu
•	Socket:	Gold Plated Copper Alloy
•	Encapsulant:	Ероху

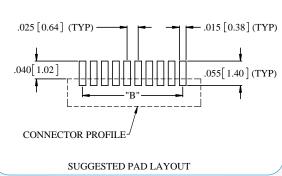


### **NPS-VV LAYOUT**

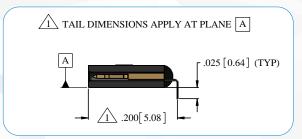












#### **DIMENSIONS FOR "A"**

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"

Add fixed end length constant

.040"

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"

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

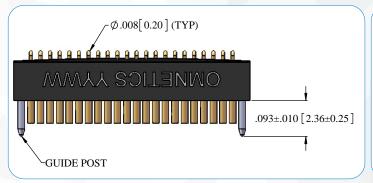
Add .075" (3 contact cavities) for each mounting hole

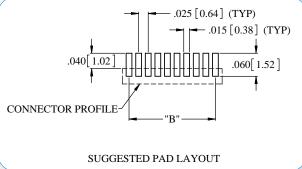
Total Length (Dimension B)

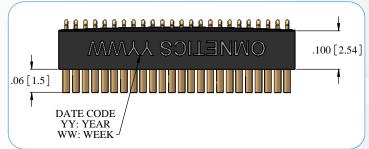
Notes: Maximum pattern length @ .050" thick is .975" (24.76). Maximum pattern length @ .060" thick is 1.475" (37.46). Add .050" from center of mounting hole to first pad (if the first contact cavity is used for a guide post hole, .050" dimension must be adjusted).

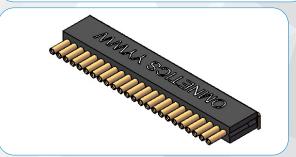


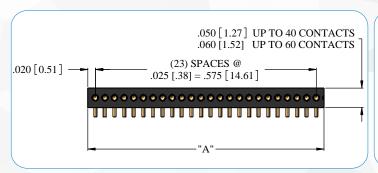
### **NSS-VV LAYOUT**

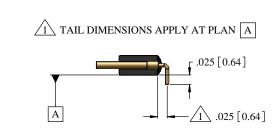












#### **DIMENSIONS FOR "A"**

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"

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"

If hardware features are within the contact area:

Add .025" (1 contact cavity) for each guide post hole

Total Length (Dimension B)

.040"

Notes: Maximum pattern length @ .050" thick is .975" (24.76). Maximum pattern length @ .060" thick is 1.475" (37.46).



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

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
		1.2	
NPS	02 - 60	VV	<b>G</b> GUIDE POST/HOLE
PIN CONNECTOR			<b>GS</b> MULTIPLE GUIDE POSTS/
2			HOLES
William Street, Street			
Same Marie	02 THRU 40		
	(.050"THICK BODY)		<b>M</b> MOUNTING HOLE
	(.030 THICK BODT)	1	M MOONTING HOLE
	41 THRU 60		98
	(.060"THICK BODY)		
NSS	(loco imendos)		LIT LUCLITEMD
SOCKET CONNECTOR			<b>HT</b> HIGH TEMP
		2	
E S			B HC D HC COMPLIANT
			Rohs Rohs Compliant
			RoHS
			COMPLIANT

### **EXAMPLES:**





### 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® 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**

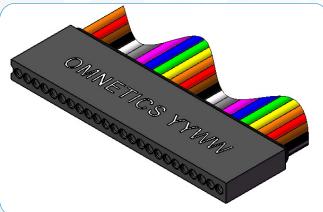
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

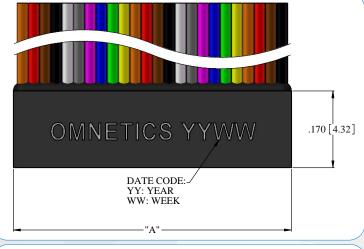
Standard Wire:	32 AWG, Teflon Insulated per NEMA-HP3
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

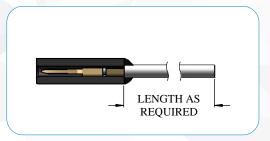


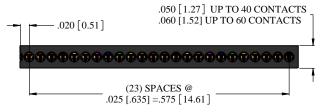
### **NPS-WD/WC LAYOUT**











#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts

Add 1 contact cavity for each guide post 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"

Add fixed end length constant .040

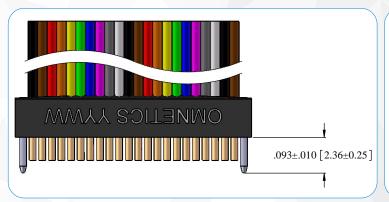
Total Length (Dimension A):

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.



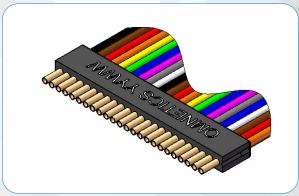
# Single Row Nano Strip

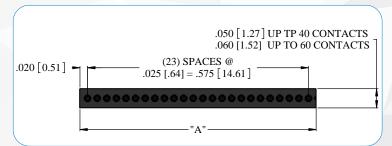
## **NSS-WD/WC LAYOUT**

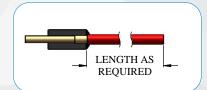












#### **DIMENSIONS FOR "A"**

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"

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.

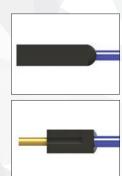


# Single Row Nano Strip

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

SERIES	# OF CONTACTS	TERMINATION TYPE	WIRE LENGTH	COLOR CODED	COMMON OPTIONS
NPS PIN CONNECTOR	02 - 60 02-40 (.050"THK BODY) 41-60	WD DISCRETE WIRES TW TWISTED WIRES WC CABLE	18.00 =18.00" STANDARD XX.XX CUSTOM LENGTH i.e. 23.40	COLORS PER MIL-STD 681	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/HOLES  M MOUNTING HOLE
NSS SOCKET CONNECTOR	(.060"THK BODY)	<b>WX</b> MULTIPLE WIRE TYPES	=23.40" 32 AWG Standard/MAX	ALL OTHER WIRE COLORS	<b>HT</b> HIGH TEMP





**RoHS** RoHS COMPLIANT



**CS** CUSTOMER SUPPLIED MATERIAL

### **EXAMPLES:**



NPS-24-WD-18.00-C



NSS-22-WD-18.0-C-GS



## **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" (.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 80 positions, as well as custom configurations.



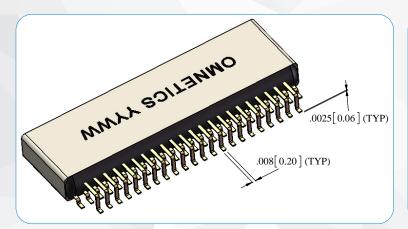
### **ELECTRO-MECHANICAL SPECS**

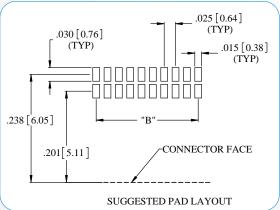
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

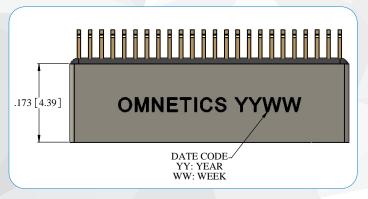
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

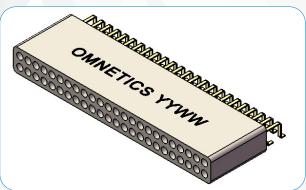


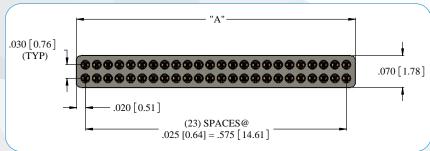
### **NPD-AA LAYOUT**

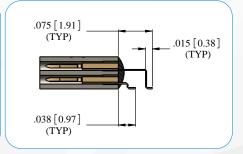












#### **DIMENSIONS FOR "A"**

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"

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'

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

Total Length (Dimension B)

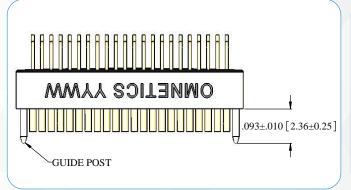
.040"

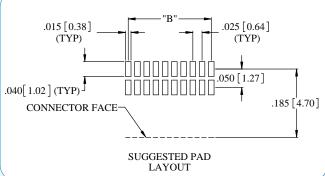
Notes: Maximum length .575" (14.61). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes

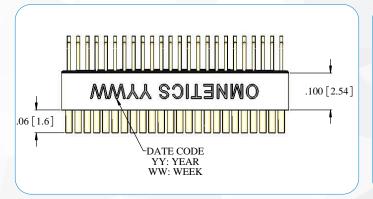
Dimensions in [] are in Millimeters unless otherwise noted and are for reference only.

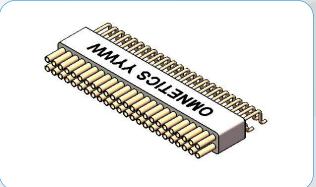


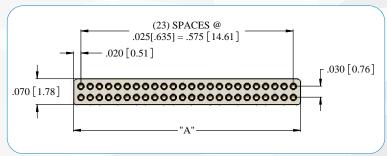
### **NSD-AA LAYOUT**

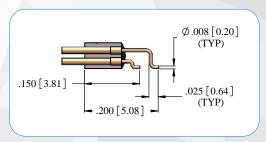












#### **DIMENSIONS FOR "A"**

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"

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" for each guide post hole in the same row

Total Length (Dimension B)

.040"

Notes: Maximum length .575" (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.



# **HORIZONTAL SMT (TYPE AA) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
NPD PIN CONNECTOR	02-80	AA	<b>G</b> GUIDE POST/HOLE <b>GS</b> MULTIPLE GUIDE  POSTS/HOLES
THE WAS STATED TO THE PARTY OF			M MOUNTING HOLE
NSD SOCKET CONNECTOR			THE
SOCKET CONNECTOR			<b>HT</b> HIGH TEMP
			<b>RoHS</b> RoHS COMPLIANT
			ROHS

### **EXAMPLES:**





## **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" (.64 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.

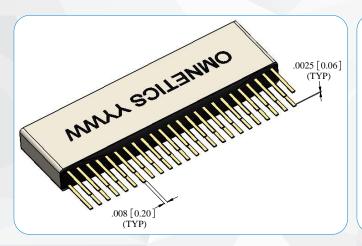
#### **ELECTRO-MECHANICAL SPECS**

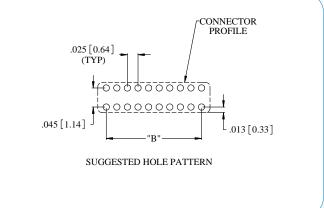
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
• Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

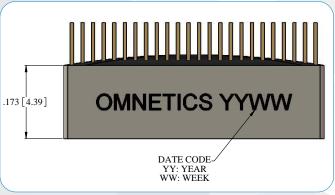
•	<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
•	<ul> <li>Standard Pin PCB Tail Termination:</li> </ul>	_Solder plated per AMS-P-81728 (Non-RoHS)
•	RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
•	RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
•	• Insulator:	Polyphenylene Sulfide per MIL-M-24519
•	• Pin:	_Gold Plated BeCu
•	Socket:	Gold Plated Copper Alloy
•	• Encapsulant:	Ероху

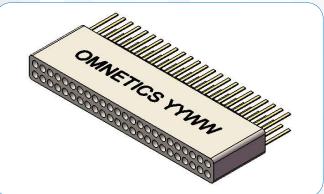


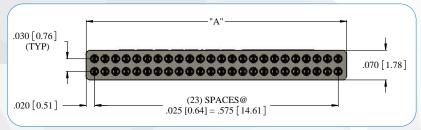
#### NPD-DD LAYOUT

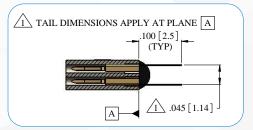












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts in one row

Add 1 contact cavity for each guide post hole in the same row

Total contact cavities in a single row

Multiply the number of contact cavities minus 1 by .025"

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"

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

Total Length (Dimension B)

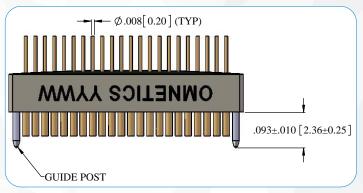
.040"

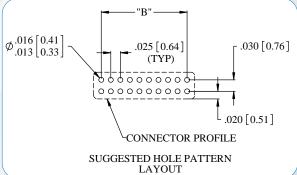
Notes: Maximum length .575" (14.61). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes.

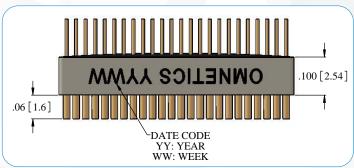
Dimensions in [] are in Millimeters unless otherwise noted and are for reference only.

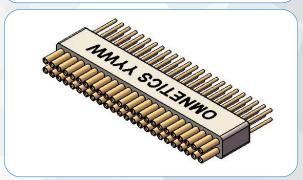


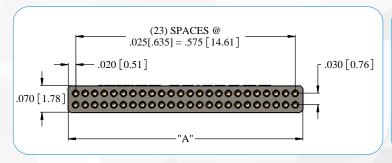
### **NSD-DD LAYOUT**

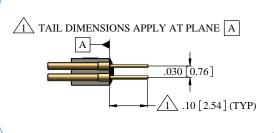












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts in one row

Add 1 contact cavity for each guide post hole in the same row

Total contact cavities in a single row

Multiply the number of contact cavities minus 1 by .025"

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"

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

Total Length (Dimension B)

.040"

Notes: Maximum length .575" (14.61). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes.

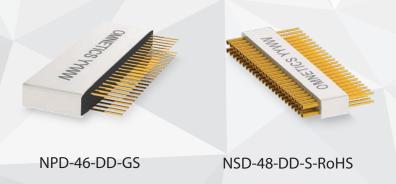
Dimensions in [] are in Millimeters unless otherwise noted and are for reference only.



# STRAIGHT TAIL (TYPE DD) ORDERING GUIDE

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
<b>NPD</b> PIN CONNECTOR	02 - 80	DD	<b>G</b> GUIDE POST/HOLE <b>GS</b> MULTIPLE GUIDE  POSTS/HOLES
Hart School Control of the Control o			M MOUNTING HOLE
NSD			m
SOCKET CONNECTOR			<b>HT</b> HIGH TEMP
A SOLITION OF THE PARTY OF THE			<b>RoHS</b> RoHS COMPLIANT
			RoHS

## **EXAMPLES:**





## **FLEX TAIL (TYPE FF)**

Flex Mount Nano Strip connectors are a low profile ruggedized connector spaced on .025" (.64 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**

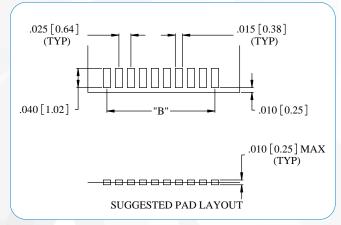
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	_5,000 Megohms min @ 100 VDC
Shock:	_100 G's discontinuity < 10 nanoseconds
Vibration:	_20 G's discontinuity < 10 nanoseconds
Thermal Vacuum Outgassing:	NASA SP-R-0022
Contact Resistance:	_71 Milliohms max (71 mV max @ 1 AMP)
Mating/Unmating Force:	_2.5 oz (71 g) typical per contact

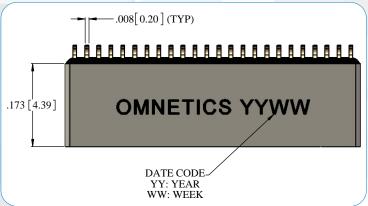
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

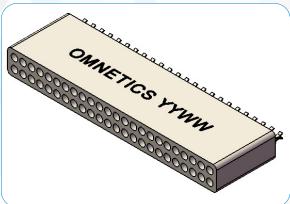


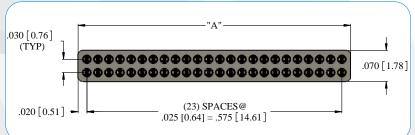
#### NPD-FF LAYOUT

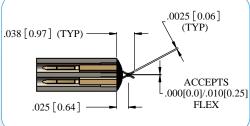












#### **DIMENSIONS FOR "A"**

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"

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"

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

Total Length (Dimension B)

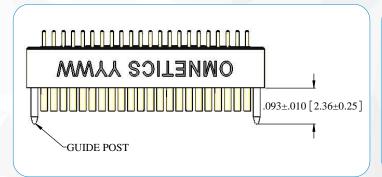
.040"

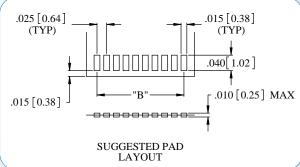
Notes: Maximum length .575" (14.61). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes.

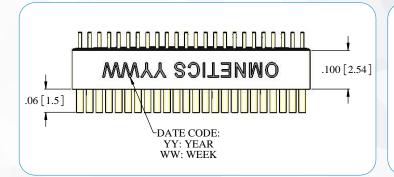
Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

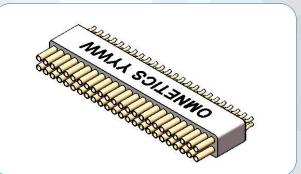


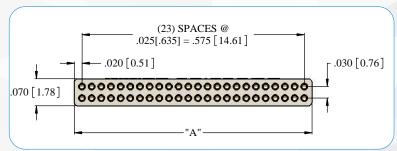
### **NSD-FF LAYOUT**

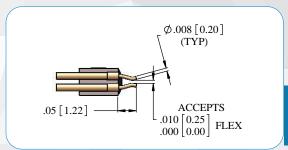












#### **DIMENSIONS FOR "A"**

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"

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"

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

Total Length (Dimension B)

.040"

Notes: Maximum length .575" (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.



# FLEX TAIL (TYPE FF) ORDERING GUIDE

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
NPD	02 - 80	FF	<b>G</b> GUIDE POST/HOLE
PIN CONNECTOR	02 00		GS MULTIPLE GUIDE
			POSTS/HOLES
Walter Saland Control of the Control		×	The state of the s
			M MOUNTING HOLE
NSD			nn
SOCKET CONNECTOR			<b>HT</b> HIGH TEMP
	Ŧ		
			<b>RoHS</b> RoHS COMPLIANT
			RoHS





NPD-48-FF

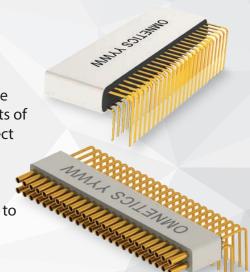
NSD-34-FF-GS-RoHS



## **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 x .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. 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**

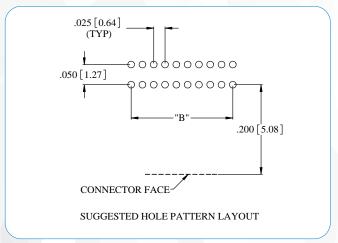
Durability:	2000 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

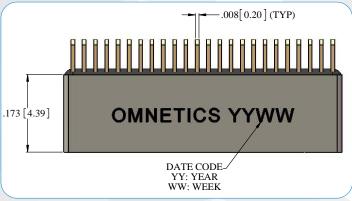
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

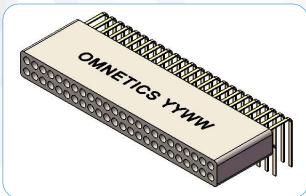


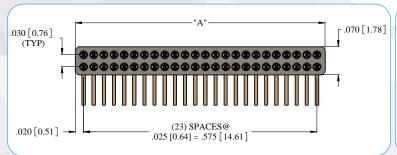
#### **NPD-H2 LAYOUT**

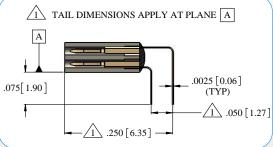












#### **DIMENSIONS FOR "A"**

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"

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"

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

Total Length (Dimension B)

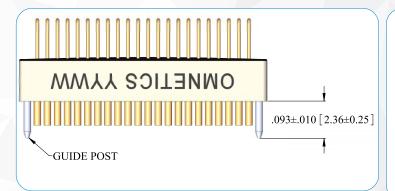
.040"

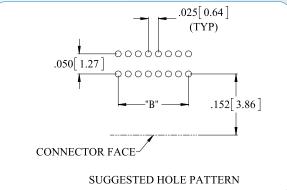
Notes: Maximum length .575" (14.61). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes.

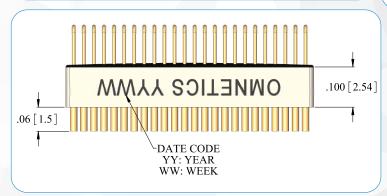
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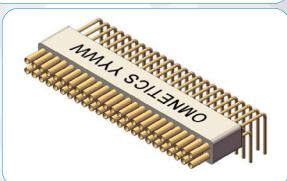


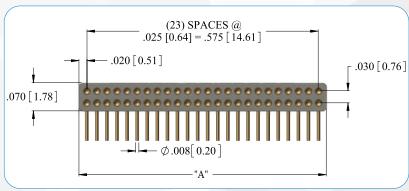
### **NSD-H2 LAYOUT**

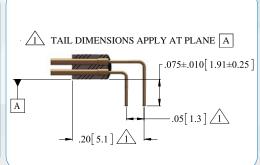












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts in

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"

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"

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" (14.61). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes.

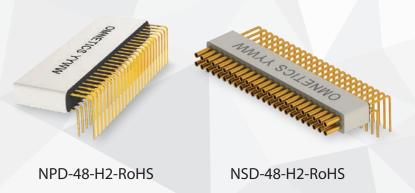
Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.



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

SERIE	ES # OF CON	TACTS TERMINATION T	YPE COMMON OPTIONS
PIN CONN	ECTOR	80 H2	G GUIDE POST/HOLE GS MULTIPLE GUIDE POSTS/HOLES
NSE SOCKET CON			M MOUNTING HOLE  HT HIGH TEMP
Anna So			RoHS RoHS COMPLIANT

### **EXAMPLE:**



## **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.





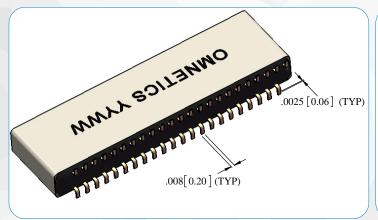
#### **ELECTRO-MECHANICAL SPECS**

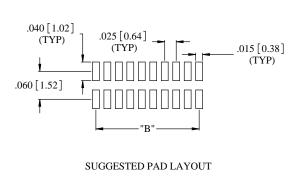
Durability:	2000 Cycles
Temperature:	55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal Vacuum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

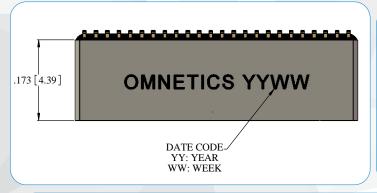
<ul> <li>Standard Socket PCB Tail Termination:</li> </ul>	Soldered per J-STD-006 (Non-RoHS)
Standard Pin PCB Tail Termination:	Solder plated per AMS-P-81728 (Non-RoHS)
RoHS Pin PCB Tail Termination:	Hard gold plated per ASTM B488
RoHS Socket PCB Tail Termination:	Hard gold plated per ASTM B488
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

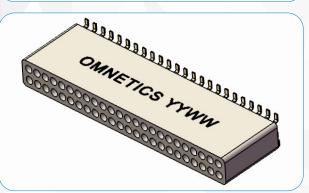


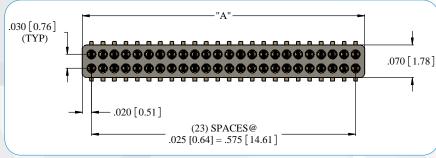
### **NPD-VV LAYOUT**

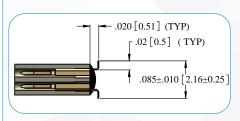












#### **DIMENSIONS FOR "A"**

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"

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"

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

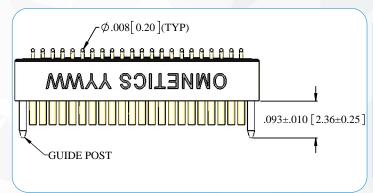
Total Length (Dimension B)

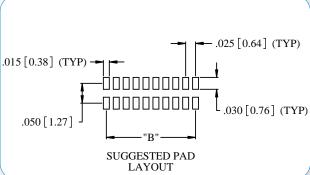
Notes: Maximum length .575" (14.61). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes.

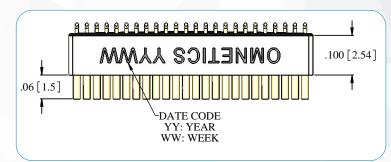
Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

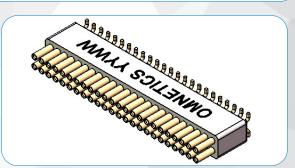


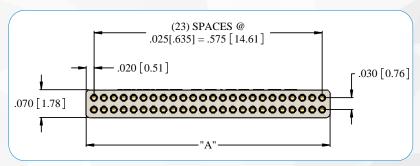
### **NSD-VV LAYOUT**

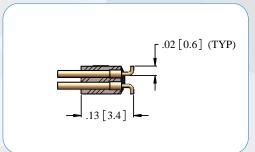












#### **DIMENSIONS FOR "A"**

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"

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"**

Total Length (Dimension B)

To determine pad pattern layout length "B":

Multiply the total number of contacts in one row minus 1 by .025"

If hardware features are within the contact area:

Add .025" for each guide post hole in the same row

Notes: Maximum length .575" (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.



## **VERTICAL SMT (TYPE VV) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
NPD PIN CONNECTOR	02 - 80	vv	<b>G</b> GUIDE POST/HOLE <b>GS</b> MULTIPLE GUIDE  POSTS/HOLES
THE RESERVE OF THE PROPERTY OF			M MOUNTING HOLE
<b>NSD</b> SOCKET CONNECTOR			HT HIGH TEMP
Marie Salita			<b>RoHS</b> RoHS COMPLIANT
			ROHS





NPD-48-VV



NSD-34-VV-GS

## 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**

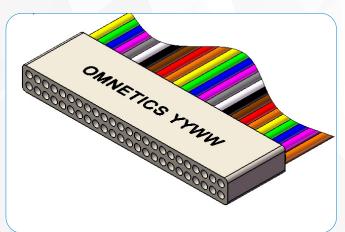
Durability:	2000 Cycles
•	
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
• Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal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

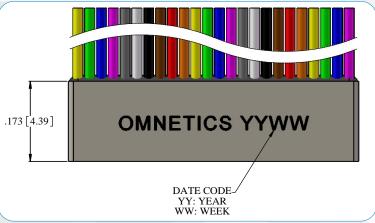
Standard Wire:	32 AWG, Teflon Insulated per NEMA-HP3
Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plate BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

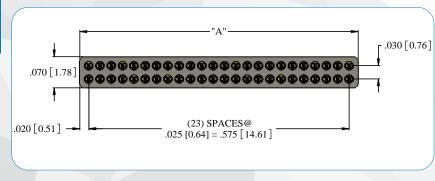


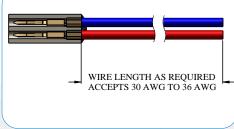
### NPD-WD/WC LAYOUT











#### **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"

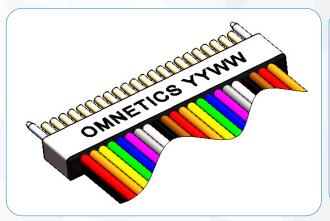
Add fixed end length constant

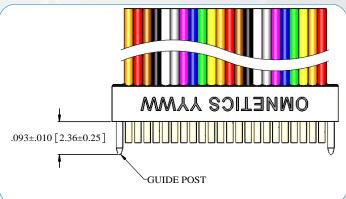
Total Length (Dimension A):

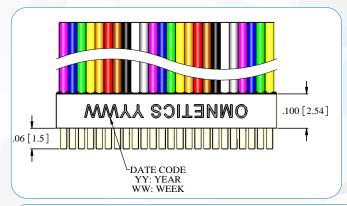
Notes: Maximum length .615" (15.62). Maximum number of contact cavities is 80. Number of contacts must be reduced to accommodate guide post holes. Default locations for guide post holes may be changed by customer. Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.

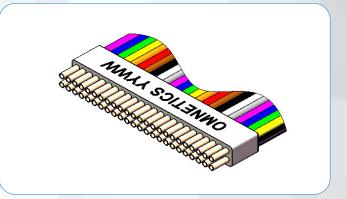


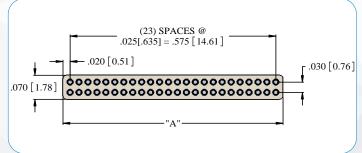
### **NSD-WD/WC LAYOUT**













#### **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"

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

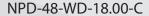


## PRE-WIRED/CABLE (TYPE WD/WC) ORDERING GUIDE

SERIES	# OF CONTACTS	TERMINATION TYPE	WIRE LENGTH	COLOR	COMMON OPTIONS
NPD	02 - 80	WD	18.00	C	<b>G</b> GUIDE POST/HOLE
PIN		DISCRETE WIRES	=18.00"	10 REPEATING	<b>GS</b> MULTIPLE GUIDE
CONNECTOR			STANDARD	COLORS PER	POSTS/HOLES
		TW		MIL-STD 681	nu 10
		TWISTED WIRES	XX.XX		
OMNETICS TYME			CUSTOM		
***************************************		WC	LENGTH		M MOUNTING HOLE
		CABLE	i.e. 23.40	Y	m
			=23.40"	ALL OTHER	
NSD		WX		WIRE COLORS	
SOCKET		MULTIPLE WIRE	32 AWG		<b>HT</b> HIGH TEMP
CONNECTOR		TYPES	Standard/MAX		
OMNETICS YEN					
	111				Rohs Rohs Compliant
					RoHS
					COMPLIANT
					<b>CS</b> CUSTOMER SUPPLIED
					MATERIAL









NSD-34-WD-18.00-C-GS



### **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" (.64 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.

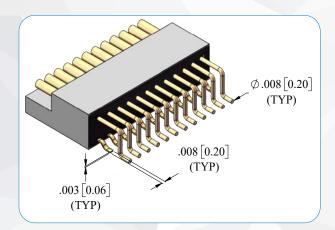
#### **ELECTRO-MECHANICAL SPECS**

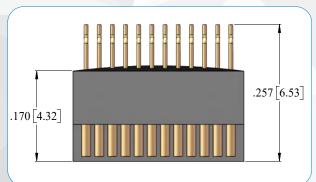
Durability:	200 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal Vacuum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

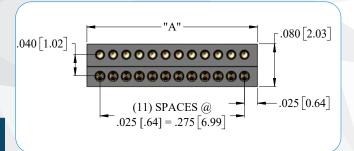
• Insulator:	Polyphenylene Sulfide per MIL-M-24519
• Pin:	Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

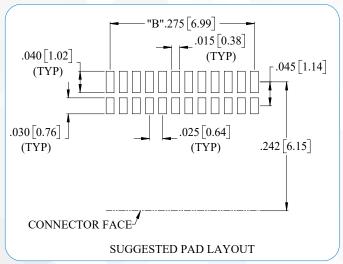


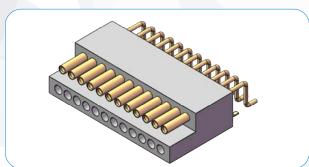
#### **PZN-AA LAYOUT**

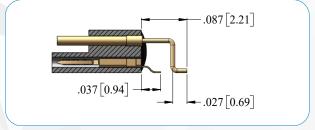












#### **DIMENSIONS FOR "A"**

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

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"

Total Length (Dimension B)

.050"

Notes: Maximum length .275" [6.99].

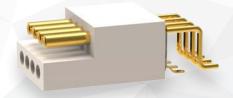
Dimensions in [ ] are in Millimeters unless otherwise noted and are for reference only.



## **HORIZONTAL SMT (TYPE AA) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
<b>PZN</b> Polarized Nano Connector	<b>04 - 24</b> (EVEN NUMBERS ONLY)	AA	<b>HT</b> HIGH TEMP
			Rohs Rohs Compliant

## **EXAMPLES:**

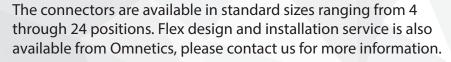


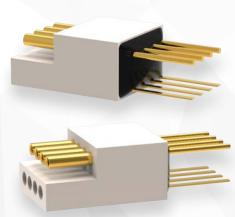
PZN-08-AA



## **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" (.64 mm) centerlines. These PZN connectors feature Omnetics' gold plated Flex Pin contact system that conforms to the requirements of MIL-DTL-32139.





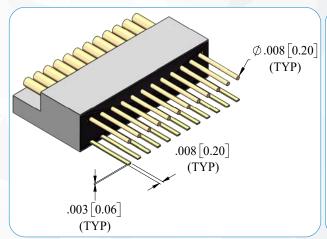
#### **ELECTRO-MECHANICAL SPECS**

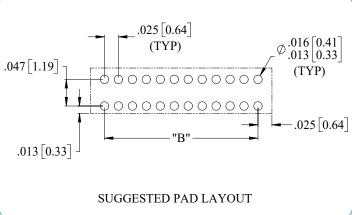
Durability:	200 Cycles
Temperature:	55°C to +125 °C (200 °C w/HTE)
Current rating:	_1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	_5,000 Megohms min @ 100 VDC
Shock:	_100 G's discontinuity < 10 nanoseconds
Vibration:	_20 G's discontinuity < 10 nanoseconds
Thermal Vacuum Outgassing:	NASA SP-R-0022
Contact Resistance:	_71 Milliohms max (71 mV max @ 1 AMP)
Mating/Unmating Force:	2.5 oz (71 g) typical per contact

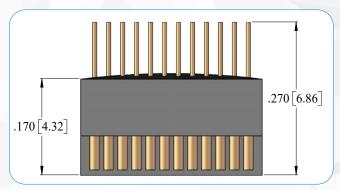
Insulator:	_Polyphenylene Sulfide per MIL-M-24519
Pin:	_Gold Plated BeCu
Socket:	_Gold Plated Copper Alloy
Encapsulant:	Ероху

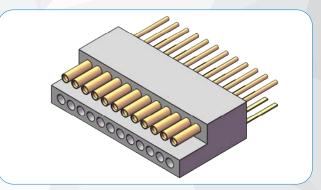


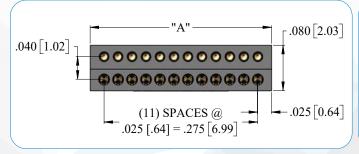
#### **PZN-DD LAYOUT**

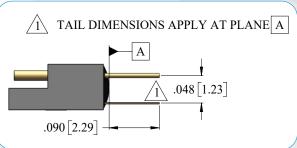












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts in one row

Multiply the number of contact cavities minus 1 by .025"

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"

Total Length (Dimension B)

.050"

Notes: Maximum length .275" [6.99].

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



# STRAIGHT THRU-HOLE (TYPE DD) ORDERING GUIDE

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS	
<b>PZN</b> Polarized Nano Connector	<b>04 - 24</b> (EVEN NUMBERS ONLY)	DD	<b>HT</b> HIGH TEMP	
			Rohs Rohs Compliant	

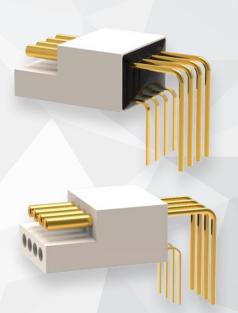


PZN-08-DD

### 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 mm) centerlines. The PZN H2 thru-hole tails are arranged in a .025 x .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.



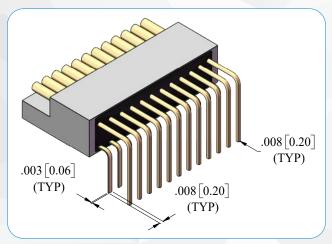
### **ELECTRO-MECHANICAL SPECS**

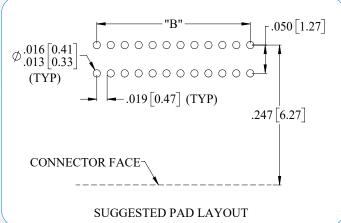
Durability:	200 Cycles
Temperature:	-55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal Vacuum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

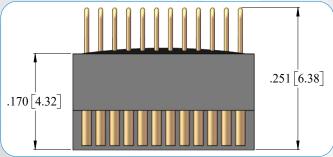
Insulator:	Polyphenylene Sulfide per MIL-M-24519
Pin:	_Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

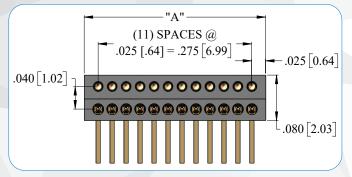


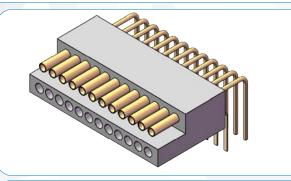
#### **PZN-H2 LAYOUT**

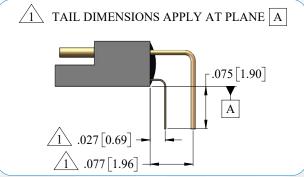












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts in one row

Multiply the number of contact cavities minus 1 by .025"

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"

Total Length (Dimension B)

Notes: Maximum length .275" [6.99].

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



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

V	SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
	<b>PZN</b> Polarized Nano Connector	<b>04 - 24</b> (EVEN NUMBERS ONLY)	H2	<b>HT</b> HIGH TEMP
				RoHS RoHS COMPLIANT
				COMPLIANT

## **EXAMPLES:**



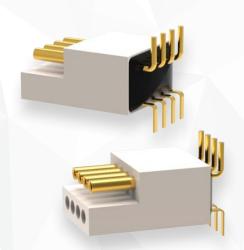




## **VERTICAL SMT (TYPE VV)**

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.



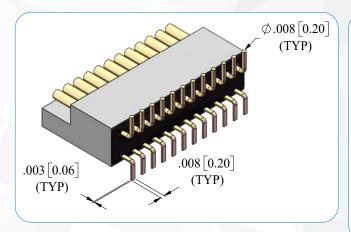
### **ELECTRO-MECHANICAL SPECS**

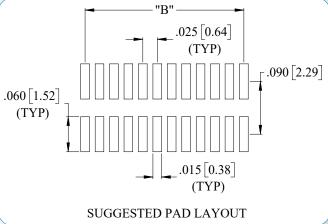
200 Cycles
55°C to +125 °C (200 °C w/HTE)
_1 AMP per contact
250 VAC RMS Sea Level
_5,000 Megohms min @ 100 VDC
_100 G's discontinuity < 10 nanoseconds
_20 G's discontinuity < 10 nanoseconds
NASA SP-R-0022
_71 Milliohms max (71 mV max @ 1 AMP)
2.5 oz (71 g) typical per contact

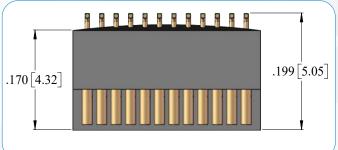
Insulator:	Polyphenylene Sulfide per MIL-M-24519
Pin:	_Gold Plated BeCu
Socket:	Gold Plated Copper Alloy
Encapsulant:	Ероху

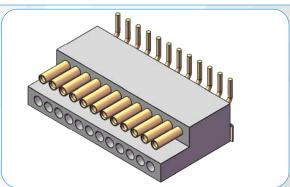


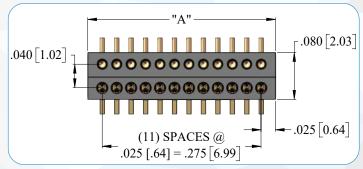
#### **PZN-VV LAYOUT**

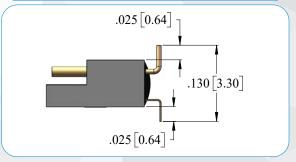












#### **DIMENSIONS FOR "A"**

To determine connector length "A":

Add the total number of contacts in one row

Multiply the number of contact cavities minus 1 by .025"

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"

Total Length (Dimension B)

.050"

Notes: Maximum length .275" [6.99].

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



## **VERTICAL SMT (TYPE VV) ORDERING GUIDE**

SERIES	# OF CONTACTS	TERMINATION TYPE	COMMON OPTIONS
<b>PZN</b> Polarized Nano Connector	<b>04 - 24</b> (EVEN NUMBERS ONLY)	vv	<b>HT</b> HIGH TEMP
			Rohs Rohs Compliant



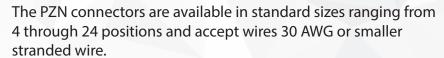


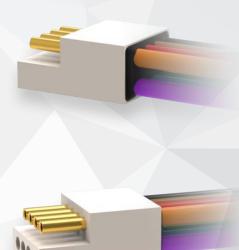
PZN-08-VV



#### 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.





#### **ELECTRO-MECHANICAL SPECS**

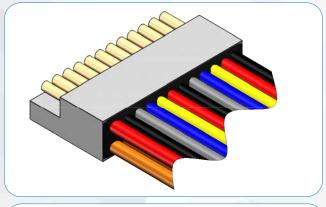
Durability:	200 Cycles
Temperature:	55°C to +125 °C (200 °C w/HTE)
Current rating:	1 AMP per contact
Voltage Rating (DWV):	250 VAC RMS Sea Level
Insulation Resistance:	5,000 Megohms min @ 100 VDC
Shock:	100 G's discontinuity < 10 nanoseconds
Vibration:	20 G's discontinuity < 10 nanoseconds
Thermal Vacuum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

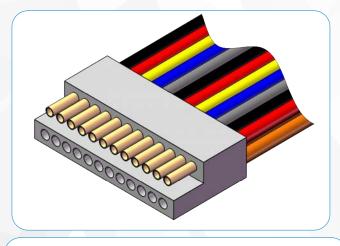
#### **MATERIAL SPECIFICATIONS**

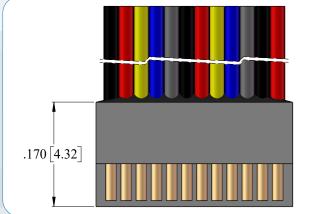
Insulator:	Polyphenylene Sulfide per MIL-M-24519
Pin:	_Gold Plated BeCu
Socket:	_Gold Plated Copper Alloy
Encapsulant:	Ероху

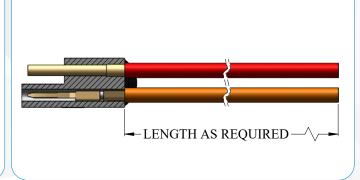


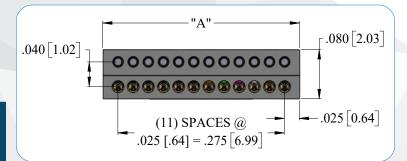
## PZN-WD/











#### **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"

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"

Total Length (Dimension B)

.050"

Notes: Maximum length .275" [6.99].

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



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

SERIES	# OF CONTACTS	TERMINATION TYPE	WIRE LENGTH	COLOR CODED	COMMON OPTIONS	
<b>PZN</b> POLARIZED NANC CONNECTOR	04 - 24 O (EVEN NUMBERS ONLY)	WD DISCRETE WIRES TW	<b>18.00</b> =18.00" STANDARD	C 10 REPEATING COLORS PER MIL-STD 681	<b>HT</b> HIGH TEMP	
	311217	TWISTED WIRES  WC	XX.XX CUSTOM LENGTH		RoHS ROHS COMPLIANT	
		CABLE	i.e. 23.40 =23.40"	Υ	CS CUSTOMER SUPPLIED	
		WX MULTIPLE WIRE TYPES	WIRE GAUGE 30, 32 (STANDARD), 34		MATERIAL	



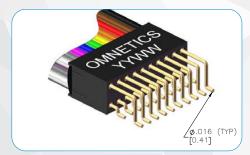


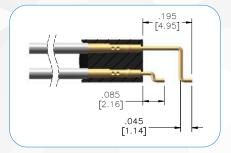
PZN-08-WD-18.00-C

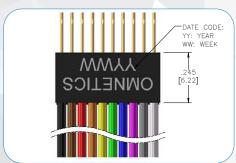


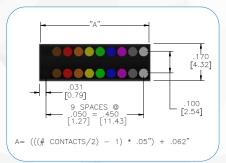
# Micro Strip - Headers

#### **AATAILS**

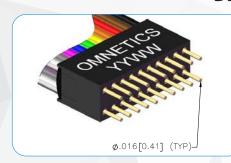


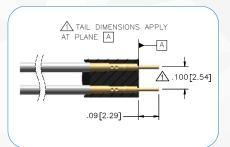


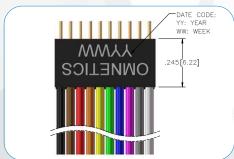


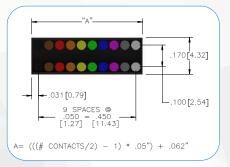


#### **DD TAILS**









#### **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"

Add fixed end length constant

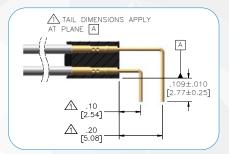
Total Length (Dimension A)

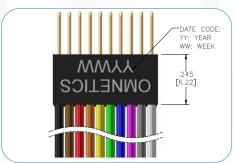


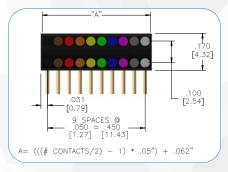
# Micro Strip - Headers

#### **H2 TAILS**

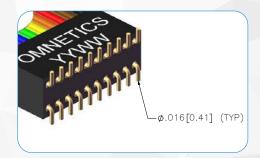




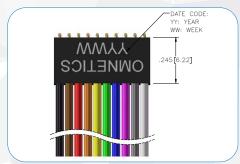


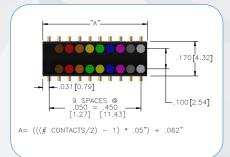


#### **VV TAILS**









#### **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"

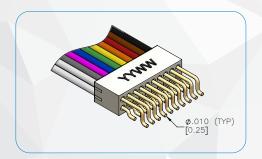
Add fixed end length constant

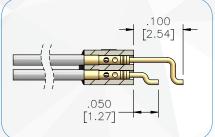
Total Length (Dimension A)

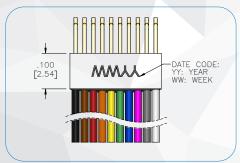


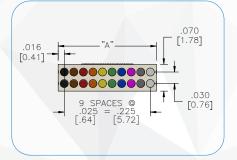
# Nano Strip - Headers

#### **AH TAILS**

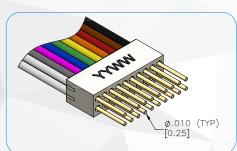


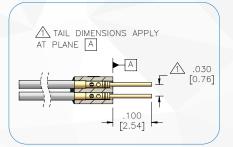


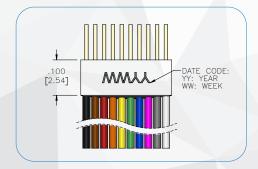


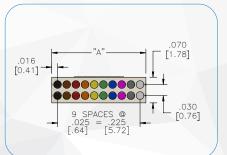


#### **DH TAILS**









#### **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"

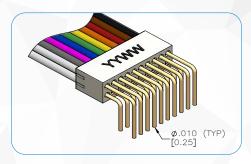
Add fixed end length constant

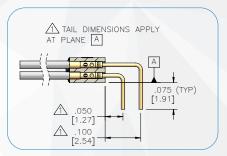
Total Length (Dimension A)

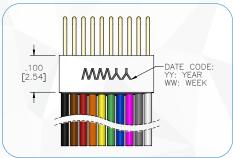


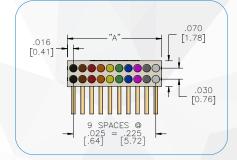
# Nano Strip - Headers

#### **HHTAILS**

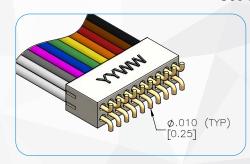


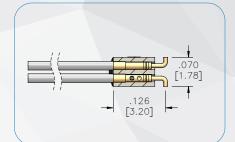


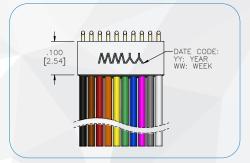


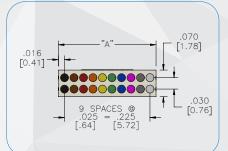


#### **VH TAILS**









#### **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"

Add fixed end length constant

Total Length (Dimension A)



**Notes** 

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



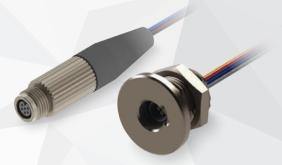
**Micro-D Connectors** 



**Bi-Lobe® / Nano-D Connectors** 



Micro 360® Circular Connectors



Nano 360® Circular Connectors



**Hybrid Connectors** 



**High Speed Connectors** 



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S5104 - Micro and Nano Strip

Specifications subject to change without notice



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