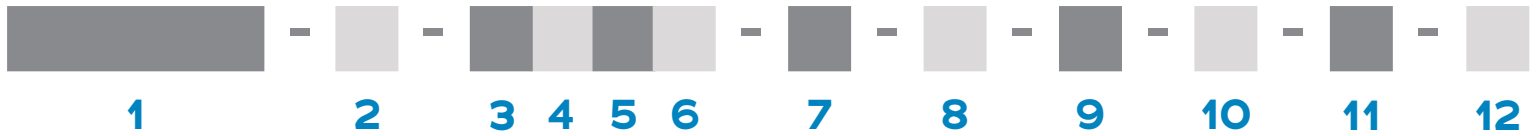


ORDERING GUIDE



1 Series	MNSOP Metal Nano Socket Offset Panel											
2 Number Of Contacts	09	15	21	25	31	37	51	65	69	85	91	
3 Termination Type	A Horizontal Surface Mount						DD Thru-Hole Straight					
	FF Flex Mount						WD Discrete Wires					
4 Wire Gage*	0 30 AWG (STD)					2 32 AWG						
5 Wire Type*	Q NEMA HP3 (formerly M16878/4 and /6)							XX.X M22759/33 (30 AWG only)				
6 Wire Length*	18.0 18.00" (STD)							XX.X Custom Length				
7 Color Scheme*	C 10 repeating colors per MIL STD 681							Y All other wire colors				
8 Shell Material & Finish	N Aluminum Shell, Electroless Nickel Plated						CD Aluminium shell, Cadmium Plated					
	B Aluminium Shell, Black Anodized						S Stainless steel Shell, Passivated					
	T Titanium Shell, Unplated											
9 Common Options	ETH End Threaded Hole, #0-80						EJS End Jack Screw					
	NTH Non-Threaded Holes for mounting to the board											
	YY Non Standard Hardware (threaded holes, thumb screws, #2-56 screw)											
	HT High Temp. Epoxy						RH RoHS Compliant					
	CS Customer Supplied Material											
10 Shield / Jacket*	D Slip-on Braid	E Machine Braid	F Flexo Braid	J Nomex Braid	ST Shrink Tube							
11 Mod Codes	M10 Keyed					M30 Ground Spring						
	M50 Space Grade Nano-D, SPT1					M53 Space Grade Nano-D, SPT2						
12 Special Instructions	YYY Describe anything that is not covered in standard options											

* WD only

DUAL ROW PANEL MOUNT

Omnetics' **Dual Row Bi-Lobe[®]** nanos are available with panel mount housings, which enables designers to use minimal real estate to create a streamlined I/O arrangement. Their low mass and .025" (.64 mm) centerlines make them an excellent choice for applications that endure high degrees of shock and vibration. Retention screws ensure a positive lock and termination options include pre-wired, SMT, flex mount, and straight tails. These durable, lightweight connectors feature Omnetics' gold-plated Flex Pin contact system and can intermate with all MIL-DTL-32139 plugs. Shell material options include aluminum and stainless steel, with custom plating options available upon request. These connectors are available in standard sizes ranging from 9 to 85 positions, as well as custom configurations.



Electro-Mechanical Specifications

TYPE	PERFORMANCE
Durability	> 2000 Mating Cycles min
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 @ 100 VDC
Shock	100 g's discontinuity < 10 nanoseconds
Vibration	20 g's discontinuity < 10 nanoseconds
Thermal Vacuum Outgassing	1.0% max TML, 0.1% VCM
Contact Resistance	71 milliohms (71 mV) max @ 1 Amp
Mating/Unmating Force	2.5 oz. (.71g) typical per contact

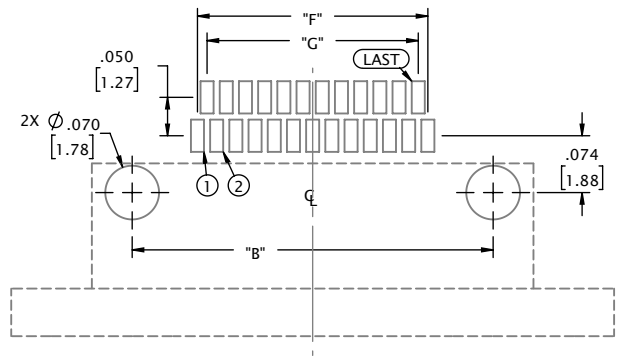
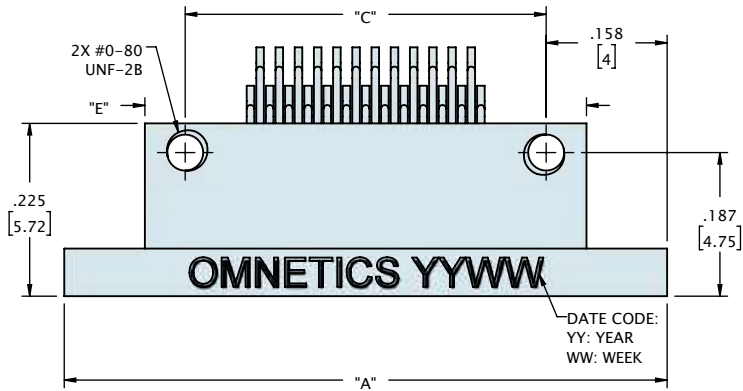
Material Specifications

TYPE	PERFORMANCE
Contact	Copper Alloy Per MIL-DTL-32139
Contact Finish	Gold per ASTM B488, Type II, Class 1.27, Code C Over Nickel Underplate
Insulator	Thermoplastic per MIL-M-24519
Encapsulant	Epoxy

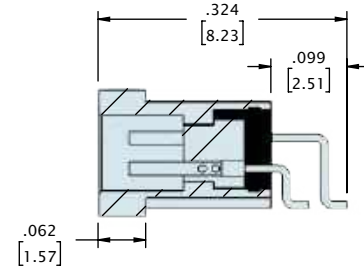
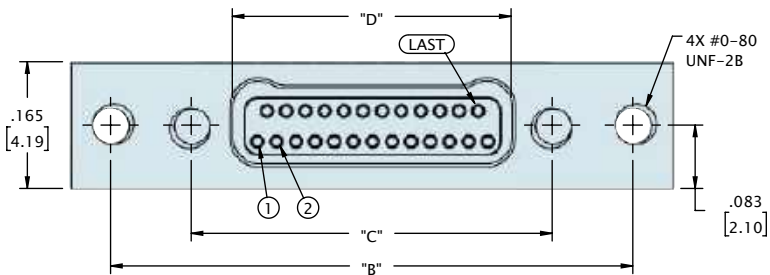
Shell Options

TYPE	PERFORMANCE
Aluminum 6061	Electroless Nickel per SAE-AMS-2404
Stainless Steel, 300 Series	Passivated per SAE-AMS-2700

DUAL RAW PANEL MOUNT (TYPE AA)



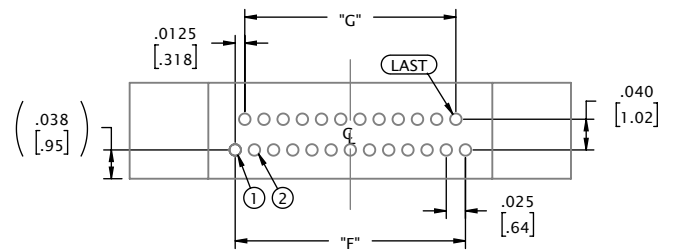
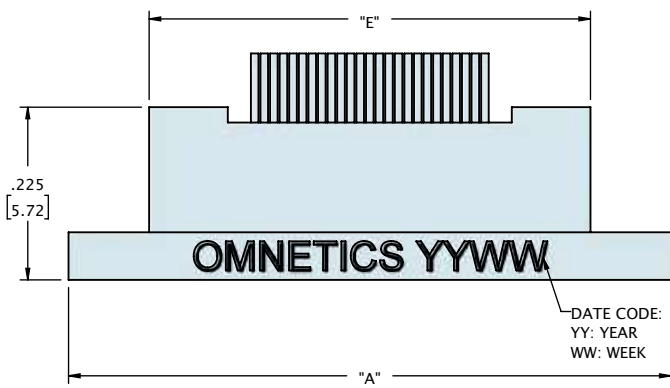
SUGGESTED PAD LAYOUT
(VIEW FROM MOUNTING SIDE OF BOARD)



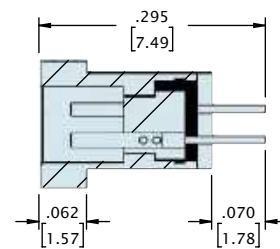
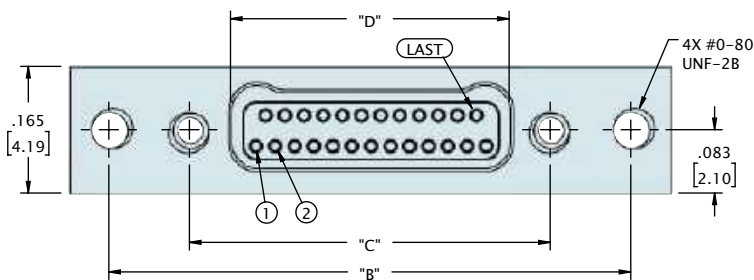
CONTACTS	"A"	"B"	"C"	"D"	"E"	"F"	"G"
09	.585 [14.86]	.480 [12.19]	.270 [6.86]	.163 [4.14]	.375 [9.53]	.100 [2.54]	.075 [1.91]
15	.660 [16.76]	.555 [14.10]	.345 [8.76]	.238 [6.05]	.450 [11.43]	.175 [4.45]	.150 [3.81]
21	.735 [18.67]	.630 [16.00]	.420 [10.67]	.313 [7.95]	.525 [13.34]	.250 [6.35]	.225 [5.72]
25	.785 [19.94]	.680 [17.27]	.470 [11.94]	.363 [9.22]	.575 [14.61]	.300 [7.62]	.275 [6.99]
31	.860 [21.84]	.755 [19.18]	.545 [13.84]	.438 [11.13]	.650 [16.51]	.375 [9.53]	.350 [8.89]
37	.935 [23.75]	.830 [21.08]	.620 [15.75]	.513 [13.03]	.725 [18.42]	.450 [11.43]	.425 [10.80]
51	1.110 [28.19]	1.005 [25.53]	.795 [20.19]	.688 [17.48]	.900 [22.86]	.625 [15.88]	.600 [15.24]
65	1.285 [32.64]	1.180 [29.97]	.970 [24.64]	.863 [21.92]	1.075 [27.31]	.800 [20.32]	.775 [19.69]
85	1.535 [38.99]	1.430 [36.32]	1.220 [30.99]	1.113 [28.27]	1.325 [33.66]	1.050 [26.67]	1.025 [26.04]

DIMENSIONS IN [] ARE IN MILLIMETERS AND ARE FOR REFERENCE ONLY

DUAL ROW PANEL MOUNT (TYPE DD)



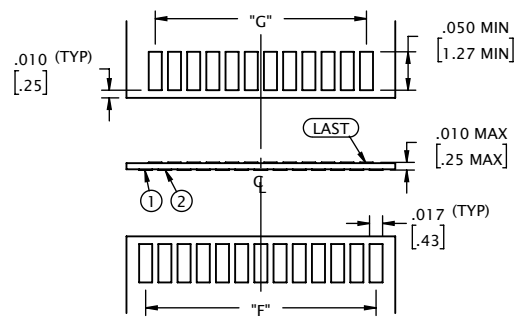
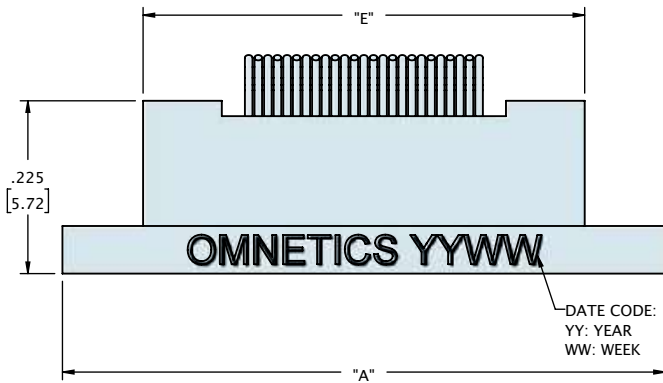
SUGGESTED PAD LAYOUT
(VIEW FROM MOUNTING SIDE OF BOARD)



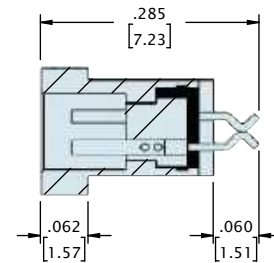
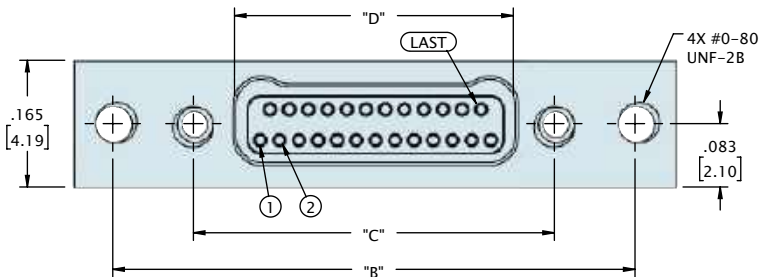
CONTACTS	"A"	"B"	"C"	"D"	"E"	"F"	"G"
9	.585 [14.86]	.480 [12.19]	.270 [6.86]	.163 [4.14]	.375 [9.53]	.100 [2.54]	.075 [1.91]
15	.660 [16.76]	.555 [14.10]	.345 [8.76]	.238 [6.05]	.450 [11.43]	.175 [4.45]	.150 [3.81]
21	.735 [18.67]	.630 [16.00]	.420 [10.67]	.313 [7.95]	.525 [13.34]	.250 [6.35]	.225 [5.72]
25	.785 [19.94]	.680 [17.27]	.470 [11.94]	.363 [9.22]	.575 [14.61]	.300 [7.62]	.275 [6.99]
31	.860 [21.84]	.755 [19.18]	.545 [13.84]	.438 [11.13]	.650 [16.51]	.375 [9.53]	.350 [8.89]
37	.935 [23.75]	.830 [21.08]	.620 [15.75]	.513 [13.03]	.725 [18.42]	.450 [11.43]	.425 [10.80]
51	1.110 [28.19]	1.005 [25.53]	.795 [20.19]	.688 [17.48]	.900 [22.86]	.625 [15.88]	.600 [15.24]
65	1.285 [32.64]	1.180 [29.97]	.970 [24.64]	.863 [21.92]	1.075 [27.31]	.800 [20.32]	.775 [19.69]
69	1.335 [33.91]	1.230 [31.24]	1.020 [25.91]	.913 [23.19]	1.125 [28.58]	.850 [21.59]	.825 [20.96]
85	1.535 [38.99]	1.430 [36.32]	1.220 [30.99]	1.113 [28.27]	1.325 [33.66]	1.050 [26.67]	1.025 [26.04]
91	1.636 [41.55]	1.531 [38.89]	1.321 [33.55]	1.188 [30.16]	1.400 [35.56]	1.125 [28.58]	1.100 [27.94]

DIMENSIONS IN [] ARE IN MILLIMETERS AND ARE FOR REFERENCE ONLY

DUAL ROW PANEL MOUNT (TYPE FF)



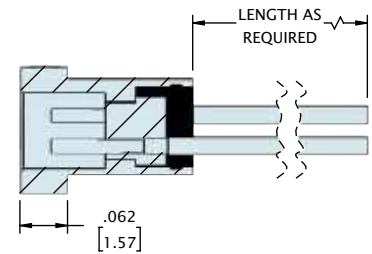
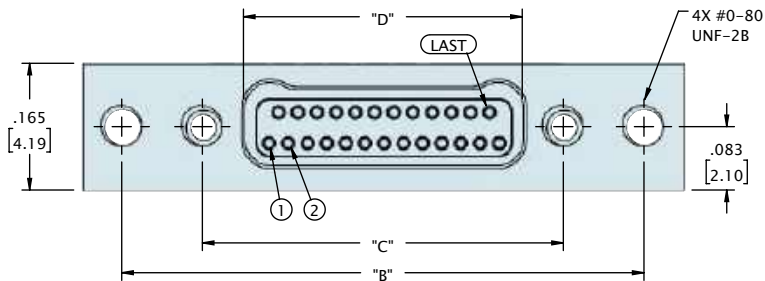
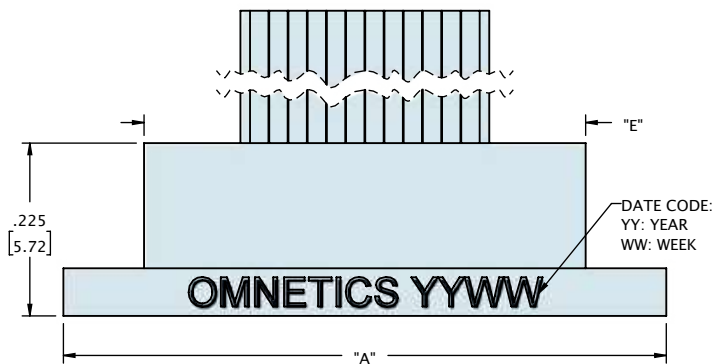
SUGGESTED PAD LAYOUT
(VIEW FROM MOUNTING SIDE OF BOARD)



CONTACTS	"A"	"B"	"C"	"D"	"E"	"F"	"G"
9	.585 [14.86]	.480 [12.19]	.270 [6.86]	.163 [4.14]	.375 [9.53]	.100 [2.54]	.075 [1.91]
15	.660 [16.76]	.555 [14.10]	.345 [8.76]	.238 [6.05]	.450 [11.43]	.175 [4.45]	.150 [3.81]
21	.735 [18.67]	.630 [16.00]	.420 [10.67]	.313 [7.95]	.525 [13.34]	.250 [6.35]	.225 [5.72]
25	.785 [19.94]	.680 [17.27]	.470 [11.94]	.363 [9.22]	.575 [14.61]	.300 [7.62]	.275 [6.99]
31	.860 [21.84]	.755 [19.18]	.545 [13.84]	.438 [11.13]	.650 [16.51]	.375 [9.53]	.350 [8.89]
37	.935 [23.75]	.830 [21.08]	.620 [15.75]	.513 [13.03]	.725 [18.42]	.450 [11.43]	.425 [10.80]
51	1.110 [28.19]	1.005 [25.53]	.795 [20.19]	.688 [17.48]	.900 [22.86]	.625 [15.88]	.600 [15.24]
65	1.285 [32.64]	1.180 [29.97]	.970 [24.64]	.863 [21.92]	1.075 [27.31]	.800 [20.32]	.775 [19.69]
85	1.535 [38.99]	1.430 [36.32]	1.220 [30.99]	1.113 [28.27]	1.325 [33.66]	1.050 [26.67]	1.025 [26.04]

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DUAL ROW PANEL MOUNT (TYPE WD)



CONTACTS	"A"	"B"	"C"	"D"	"E"
9	.585 [14.86]	.480 [12.19]	.270 [6.86]	.163 [4.14]	.375 [9.53]
15	.660 [16.76]	.555 [14.10]	.345 [8.76]	.238 [6.05]	.450 [11.43]
21	.735 [18.67]	.630 [16.00]	.420 [10.67]	.313 [7.95]	.525 [13.34]
25	.785 [19.94]	.680 [17.27]	.470 [11.94]	.363 [9.22]	.575 [14.61]
31	.860 [21.84]	.755 [19.18]	.545 [13.84]	.438 [11.13]	.650 [16.51]
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65	1.285 [32.64]	1.180 [29.97]	.970 [24.64]	.863 [21.92]	1.075 [27.31]
85	1.535 [38.99]	1.430 [36.32]	1.220 [30.99]	1.113 [28.27]	1.325 [33.66]

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