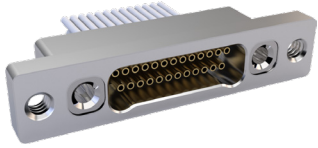


# SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



## 891-050 Front Panel Mount Receptacle with Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS



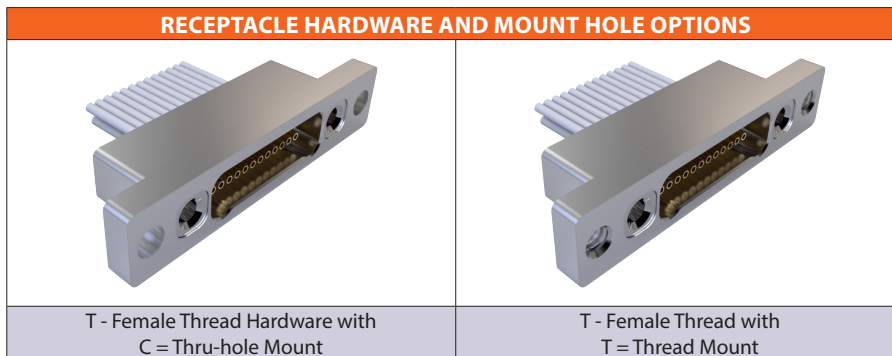
**Nano Front Panel Mount Receptacles with Insulated Wire** are precision-crimped to gold alloy socket contacts. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC.

**Typical Applications** include UAV's, satellites, missile systems and geophysical instruments.

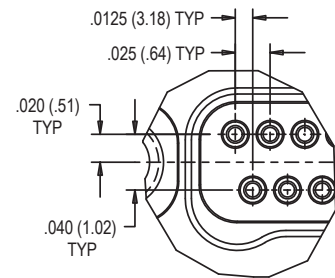
### HOW TO ORDER

Sample Part Number	891-050	-25S	A2	-0	B	7	-12	T	C
<b>Series</b>	891-050 = Receptacle								
<b>Insert Arrangement/ Contact Type</b>	9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S, 91S								
<b>Shell Material and Finish</b>	A1 = Al Shell, Cadmium Plating A31 = Al Shell, Zinc Nickel Plating, Black T = Titanium Shell, Unplated			A2 = Al Shell, Electroless Nickel Plating A33 = Al Shell, Nickel PTFE Plating S = Stainless Steel Shell, Passivated					
<b>Wire Gage</b>	0 = #30 AWG (Wire types A, B, C, E, and F)    2 = #32 AWG (Wire Type B Only)								
<b>Wire Type</b>	A = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. B = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) C = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. E = Cross Linked Modified ETFE Insulation, Low Fluoride, Lightweight, SC High Strength Copper. SAE AS22759/51 F = Cross Linked Modified ETFE Insulation, Low Fluoride, Lightweight, SC Copper, SAE AS22759/52								
<b>Wire Color Code</b>	1 = White    2 = Yellow    7 = 10 Color Repeating (Wire Type A is striped, Types B, C, D, E, F are solid colors)								
<b>Wire Length</b>	12 = 12.00 inches; as required in one inch increments.								
<b>Hardware Option</b>	T = Female Threads (#0-80 for size 9-69, #2-56 for size 85) Stainless steel inserts installed in aluminum shells, tapped directly into stainless steel and titanium.								
<b>Mounting Hole Option</b>	C = Thru-Hole    T = Female Thread								

### RECEPTACLE HARDWARE AND MOUNT HOLE OPTIONS



### 891-050 DETAIL A



### PERFORMANCE SPECIFICATIONS

**Contact Spacing:** .025" (0.64) contact centers  
**Wire Accommodation:** #30-#32 AWG  
**Current Rating:** 1 AMP maximum tested per EIA-364-70  
**DWV:** 250 VAC RMS sea level, 100 VAC RMS 70,000 feet per EIA-364 Procedure 20  
**Insulation Resistance:** 5000 Megohms minimum test voltage 100 VDC, per EIA-364 Procedure 21

**Operating Temperature:** -55° C. to +125° C.  
**Contact Resistance:** 71 millivolt drop maximum, 1 AMP current, any catalog supported wire type  
**Vibration:** 20 g's, IAW EIA-364-28, Condition IV  
**Shock:** 100 g's, IAW EIA-364-27, Condition G  
**Durability:** 200 mating cycles per test procedure EIA-364-09

**Corrosion Resistance:** 48 hours salt spray IAW EIA-364-26, Condition B  
**Humidity:** 240 hours, IAW EIA-364-31, Test Condition B  
**Contact Engaging/Separation Force:** 5 ounce maximum, 0.4 ounce minimum  
**Thermal Vacuum Outgassing:** Total mass loss (TML) 1.0% max., volatile condensable material (VCM) 0.1% max. IAW ASTM E595

# SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



## 891-050 Front Panel Mount Receptacle with Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS

DIMENSIONS

891-050 Receptacle (Socket) Connector

.062 (1.57)

D

.225 (5.72)

FRONT PANEL MOUNT  
CONNECTOR MOUNTING MATRIX

Connector Holes	Panel Holes	Mounting Location
Tapped	Clearance	Rear Panel Mount
Clearance	Tapped	Front Panel Mount
Clearance	Clearance	Front or Rear Panel Mount with screw and nut

SEE DETAIL A

B

SOCKET #1

2X K THD

A

C

J

WIRE LENGTH  
+1.00/-0.00 (+25.4/-0.00)

SHELL SIZE 9-69  
.0575 (1.46) BSC  
SHELL SIZE 85 & 91  
.0700 (1.78) BSC

SHELL SIZE 9-69  
.125 (3.18)  
SHELL SIZE 85 & 91  
.150 (3.81)

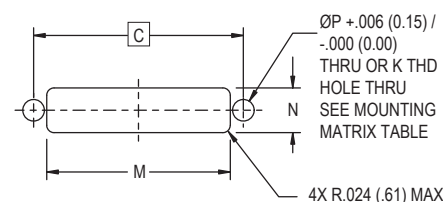
2X ØH +.006/-.000 (+.006/-.000)  
OR K THD THRU HOLE (SEE PART NUMBER BREAKDOWN)

SHELL SIZE 9-69  
.165 (4.19)  
SHELL SIZE 85 & 91  
.190 (4.83)

Layout	A BSC.	B BSC.	C BSC.	D	H	J	K
9S	.270 (6.86)	.163 (4.14)	.480 (12.19)	.375 (9.52)	.0635 (1.61)	.585 (14.86)	#0-80 UNF-2B
15S	.345 (8.76)	.238 (6.05)	.555 (14.10)	.450 (11.43)	.0635 (1.61)	.660 (16.76)	#0-80 UNF-2B
21S	.420 (10.67)	.313 (7.95)	.630 (16.00)	.525 (13.34)	.0635 (1.61)	.735 (18.67)	#0-80 UNF-2B
25S	.470 (11.94)	.363 (9.22)	.680 (17.27)	.575 (14.60)	.0635 (1.61)	.785 (19.94)	#0-80 UNF-2B
31S	.545 (13.84)	.438 (11.13)	.755 (19.18)	.650 (16.51)	.0635 (1.61)	.860 (21.84)	#0-80 UNF-2B
37S	.620 (15.75)	.513 (13.03)	.830 (21.08)	.725 (18.42)	.0635 (1.61)	.935 (23.75)	#0-80 UNF-2B
41S	.670 (17.02)	.563 (14.30)	.880 (22.35)	.775 (19.68)	.0635 (1.61)	.985 (25.02)	#0-80 UNF-2B
51S	.795 (20.19)	.688 (17.48)	1.005 (25.53)	.900 (22.86)	.0635 (1.61)	1.110 (28.19)	#0-80 UNF-2B
65S	.970 (24.64)	.863 (21.92)	1.180 (29.97)	1.075 (27.30)	.0635 (1.61)	1.285 (32.64)	#0-80 UNF-2B
69S	1.020 (25.91)	.913 (23.19)	1.230 (31.24)	1.125 (28.58)	.0635 (1.61)	1.335 (33.91)	#0-80 UNF-2B
85S	1.246 (31.65)	1.113 (28.27)	1.527 (38.79)	1.377 (34.98)	.0890 (2.26)	1.677 (42.60)	#2-56 UNC-2B
91S	1.321 (33.55)	1.188 (30.18)	1.602 (40.69)	1.452 (36.88)	.0890 (2.26)	1.752 (44.50)	#2-56 UNC-2B

### PANEL MOUNT DIMENSIONS

	SIZE-9	SIZE-15	SIZE-21	SIZE-25	SIZE-31	SIZE-37	SIZE-41	SIZE-51	SIZE-65	SIZE-69	SIZE-85	SIZE-91
C	.480 (12.19)	.555 (14.10)	.630 (16.00)	.680 (17.27)	.755 (19.18)	.830 (21.08)	.880 (22.35)	1.005 (25.53)	1.180 (29.97)	1.230 (31.24)	1.527 (38.79)	1.602 (40.69)
K	#0-80 UNF-2B						#2-56 UNC-2B					
M	.395 (10.03)	.470 (11.94)	.545 (13.84)	.595 (15.11)	.670 (17.02)	.745 (18.92)	.795 (20.19)	.920 (23.37)	1.095 (27.81)	1.145 (29.08)	1.397 (35.48)	1.472 (37.39)
N	.145 (3.68)											
P	.070 (1.78)											



### NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface receptacle dimensions per MIL-DTL-32139/4
3. Panel cutout sized to allow lobe up or lobe down mounting orientation
4. Connector may be mounted to front or back of panel depending on selected mounting hole option
5. Recommended panel thickness .100 (2.54) max
6. Material and Finish
  - Shell: see part number break down
  - Insulator: LCP/N/A
  - Contacts: gold alloy / unplated
  - Wire: See part number break down
  - Jacking hardware: See part number break down