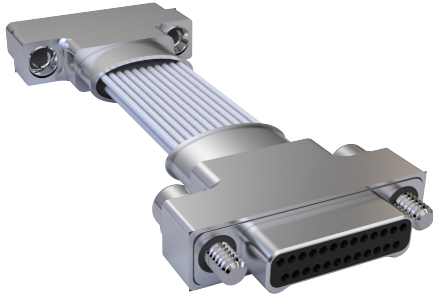


SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



891-032 Straight, 45°, or 90° Back-to-Back Cable with Backshell and Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS



Cable assemblies with Factory-Installed backshell and shield/jacket option feature nano connectors with gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. 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. Wire gages #30 and #32 AWG. Connectors are wired 1 to 1, 2 to 2, 3 to 3, etc.

Wire Type and shield/jacket options include ultra lightweight XLETFE insulation, Extruded PTFE insulation and cross linked modified ETFE insulation. Shield options include Amberstrand®, AmorLite™ and nickel plated copper with or without E-CTFE halar jacket. Typical Applications include UAV's, satellites, missile systems and geophysical instruments

HOW TO ORDER													
Sample Part Number	891-032	-25	CS	N	L	A2	-0	B	7	-12	T	J	-N
Series	891-032 = Plug or Receptacle												
Contact Arrangement	9, 15, 21, 25, 31, 37, 41, 51, 65, 69, 85, 91												
Connector Type	TYPE	SIDE 1	SIDE 2										
	GP	Plug	Plug										
	GS	Receptacle	Receptacle										
Backshell Accessory	N = Straight, No Orientation	H = 45°, Lobe Side Exit	L = 90°, Lobe Side Exit										
	K = 45°, Major Side Exit	M = 90°, Major Side Exit											
Backshell/Shell Material and Finish	A1 = Al Shell, Cadmium Plating	A2 = Al Shell, Electroless Nickel Plating											
	A31 = Al Shell, Zinc Nickel Plating, Black	A33 = Al Shell, Nickel PTFE Plating											
Wire Gage	0 = #30 AWG (Wire types A, B, C, E, and F)	2 = #32 AWG (Wire Type B only)											
	Wire Type 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. SAE AS22759/33-30 E = Cross Linked Modified ETFE Insulation, Low Fluoride, Lightweight, Silver Coated High Strength Copper Alloy. SAE AS22759/51-30 F = Cross Linked Modified ETFE Insulation, Low Fluoride, Lightweight, Silver- Coated Copper, SAE AS22759/52-30												
Wire Color	1 = White 2 = Yellow 7 = 10 Color Repeating (Wire Type A is Striped, Types B, C, E and F are Solid Colors)												
Length	Wire Length in Inches, i.e. 12 = 12 inches; 3 inches minimum												
Hardware	J = Jackscrew T = Female Thread												
Shield/Jacket Opt	N, A, C, D, S, T, V, W, X, Z; See Shield / Jacket Options table												

PLUG HARDWARE		RECEPTACLE HARDWARE	
J - Jackscrew	T - Female Thread	J - Jackscrew	T - Female Thread

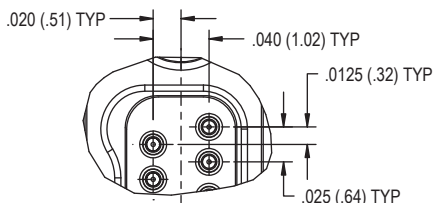
SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



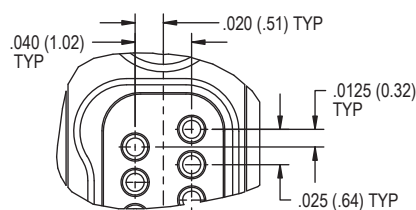
891-032 Straight, 45°, or 90° Back-to-Back Cable with Backshell and Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS

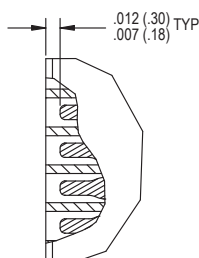
DETAIL A (PLUG)



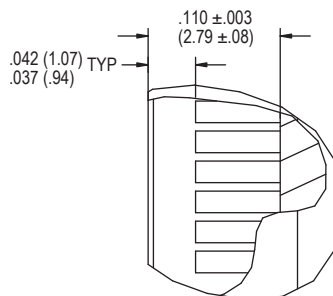
DETAIL B (RECEPTACLE)



DETAIL C (PLUG)



DETAIL D (RECEPTACLE)



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

SHIELD/JACKET OPTIONS TABLE	
Code	Description
N	No Shield, No Jacket
A	Braided Shield Installed (Nickel Plated Copper)
C	Braided Shield Installed (Nickel Plated Copper), with E-CTFE Halar "Expando" Jacket (+150° C)
D	No Shield, with E-CTFE Halar "Expando" Jacket (+150° C)
S	100% Braided Amberstrand Shield Installed
T	100% Braided Amberstrand Shield Installed, with E-CTFE Halar "Expando" Jacket (+150° C)
V	75% Braided Amberstrand Shield Installed
W	Aarmorlite Braided Microfilament Stainless Steel Shield Installed
X	Aarmorlite Braided Microfilament Stainless Steel Shield Installed with E-CTFE Halar "Expando" Jacket (+150°C)
Z	75% Braided Amberstrand Shield Installed, with E-CTFE Halar "Expando" Jacket (+150 C)

WIRE LENGTH TOLERANCE	
Length Range	Tolerance
3" - 48" (76.20 - 1219.20)	+0.50/-0.00 (+ 12.70/-0.00)
>48" - 72" (>1219.20 - 1828.80)	+1.00/-0.00 (+25.4/-0.00)
>72" - 120" (>1828.80 - 3048.00)	+2.00/-0.00 (+50.80/-0.00)

NOTES

- Material/Finishes:
 - Shell: see part number break down
 - Insulator: LCP/N/A
 - Contacts: gold alloy / unplated
 - Wire: see part number break down
 - Hardware: stainless steel, passivated
 - Band clamp: (Shield termination when applicable) stainless steel
- Inspected and tested IAW MIL-DTL-32139
- Interface dimensions per MIL-DTL-32139/3 and MIL-DTL-32139/4

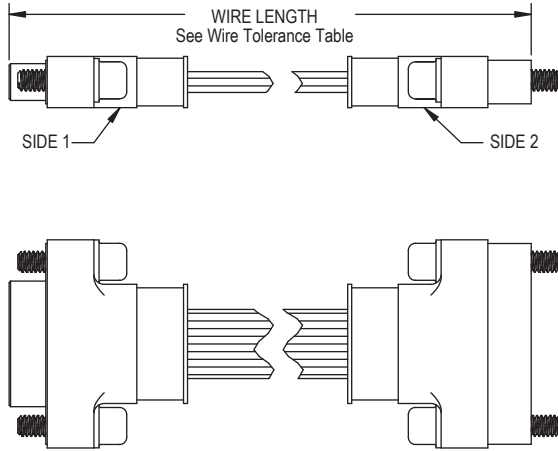
SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



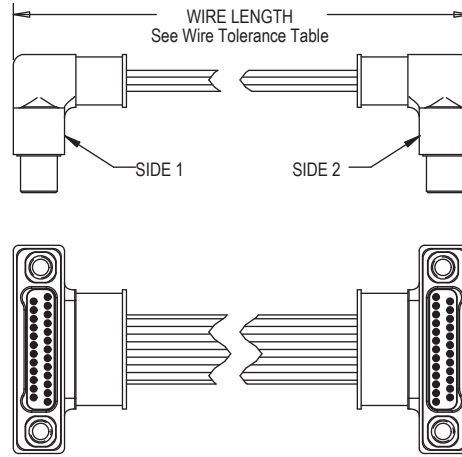
891-032 Straight, 45°, or 90° Back-to-Back Cable with Backshell and Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS

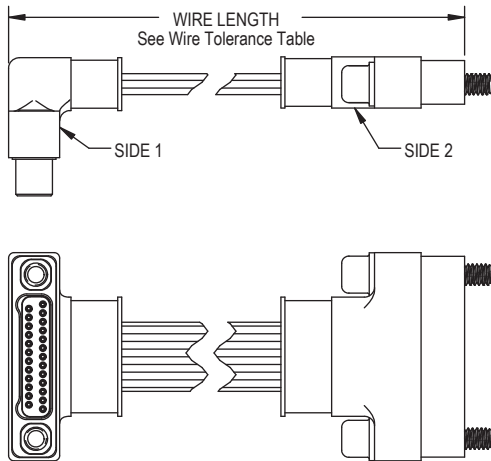
CS STRAIGHT CABLE ASSEMBLY



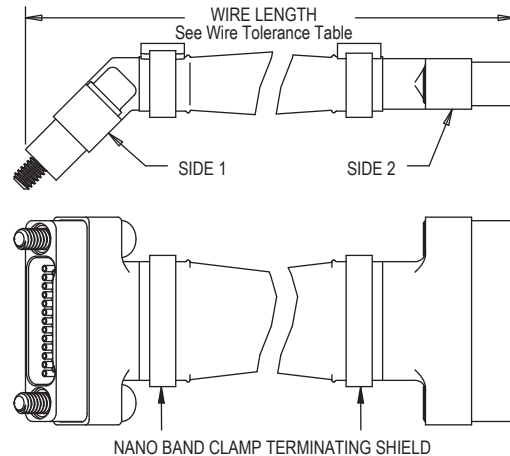
GP RIGHT ANGLE CABLE ASSEMBLY



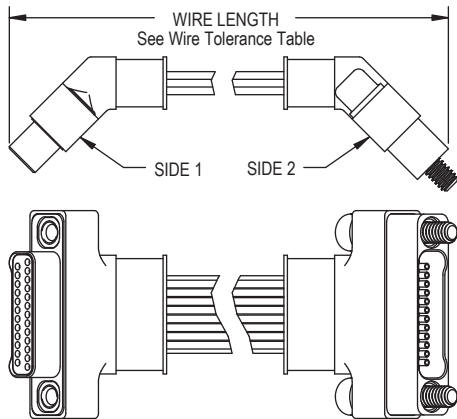
CS 90° TO STRAIGHT CABLE ASSEMBLY



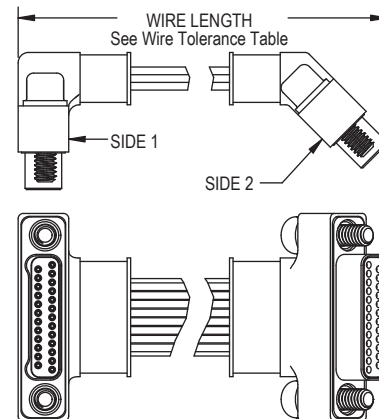
GS 45° TO STRAIGHT CABLE ASSEMBLY



CS 45° TO 45° CABLE ASSEMBLY



GP 90° TO 45° CABLE ASSEMBLY



SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



891-032 Straight, 45°, or 90° Back-to-Back Cable with Backshell and Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS

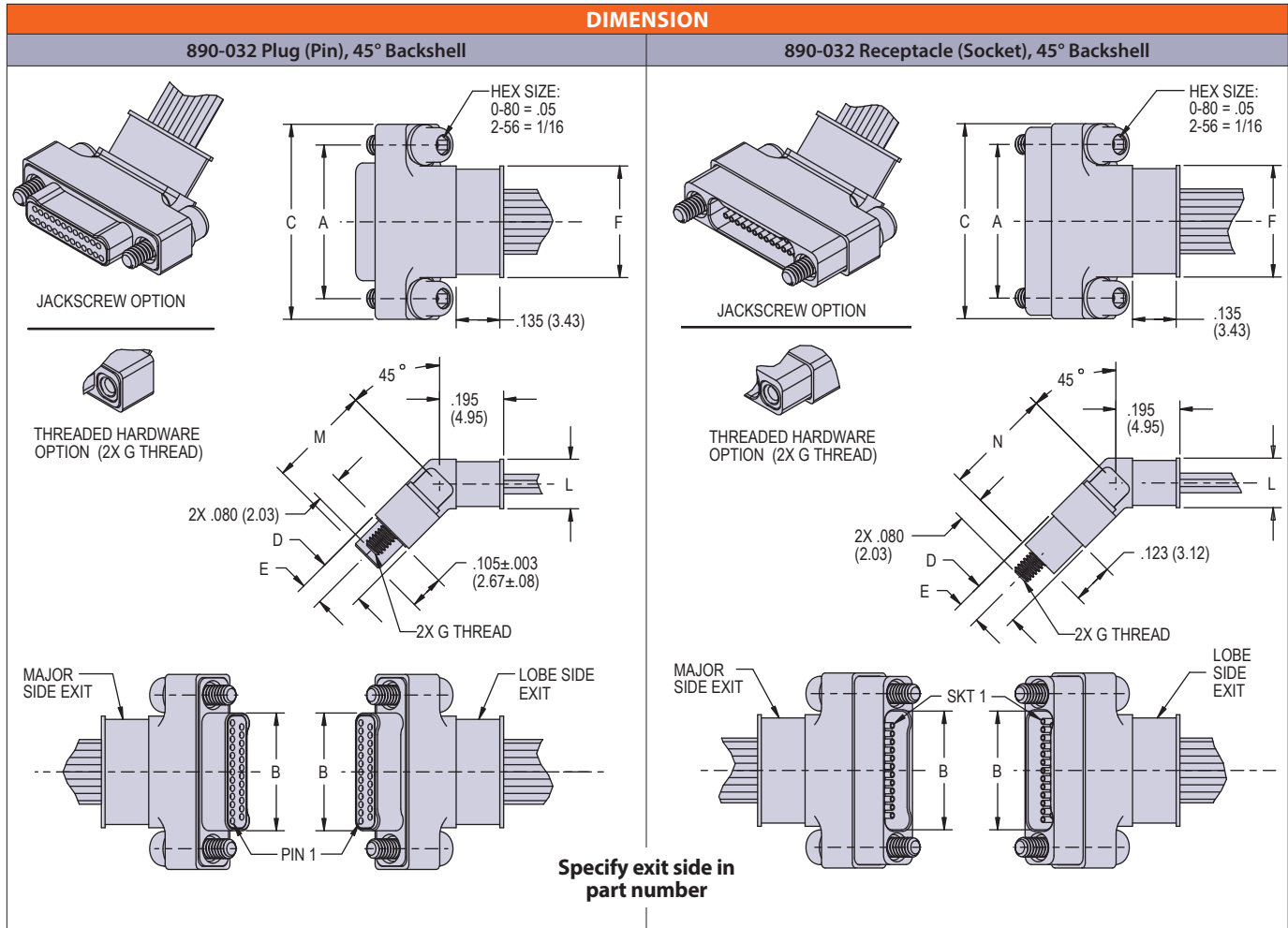
890-032 Plug (Pin), Straight Backshell								890-032 Receptacle (Socket), Straight Backshell							
<p>JACKSCREW OPTION</p>								<p>JACKSCREW OPTION</p>							
<p>THREADDED HARDWARE OPTION (2X G THREAD)</p>								<p>THREADDED HARDWARE OPTION (2X G THREAD)</p>							
<p>Specify exit side in part number</p>								<p>Specify exit side in part number</p>							
Layout	A BSC.	B BSC.	C	D	E	F	G	Layout	A BSC.	B BSC.	C	D	E	F	G
9	.270 (6.86)	.160 (4.06)	.395 (10.03)	.145 (3.68)	.068 (1.73)	.140 (3.56)	#0-80 UNF	9	.270 (6.86)	.163 (4.14)	.395 (10.03)	.145 (3.68)	.068 (1.73)	.140 (3.56)	#0-80 UNF
15	.345 (8.76)	.235 (5.97)	.470 (11.94)	.145 (3.68)	.068 (1.73)	.215 (5.46)	#0-80 UNF	15	.345 (8.76)	.238 (6.05)	.470 (11.94)	.145 (3.68)	.068 (1.73)	.215 (5.46)	#0-80 UNF
21	.420 (10.67)	.310 (7.87)	.545 (13.84)	.145 (3.68)	.068 (1.73)	.290 (7.37)	#0-80 UNF	21	.420 (10.67)	.313 (7.95)	.545 (13.84)	.145 (3.68)	.068 (1.73)	.290 (7.37)	#0-80 UNF
25	.470 (11.94)	.360 (9.14)	.595 (15.11)	.145 (3.68)	.068 (1.73)	.340 (8.64)	#0-80 UNF	25	.470 (11.94)	.363 (9.22)	.595 (15.11)	.145 (3.68)	.068 (1.73)	.340 (8.64)	#0-80 UNF
31	.545 (13.84)	.435 (11.05)	.670 (17.02)	.145 (3.68)	.068 (1.73)	.415 (10.54)	#0-80 UNF	31	.545 (13.84)	.438 (11.13)	.670 (17.02)	.145 (3.68)	.068 (1.73)	.415 (10.54)	#0-80 UNF
37	.620 (15.75)	.510 (12.95)	.745 (18.92)	.145 (3.68)	.068 (1.73)	.490 (12.45)	#0-80 UNF	37	.620 (15.75)	.513 (13.03)	.745 (18.92)	.145 (3.68)	.068 (1.73)	.490 (12.45)	#0-80 UNF
41	.670 (17.02)	.560 (14.22)	.795 (20.19)	.145 (3.68)	.068 (1.73)	.540 (13.72)	#0-80 UNF	41	.670 (17.02)	.563 (14.30)	.795 (20.19)	.145 (3.68)	.068 (1.73)	.540 (13.72)	#0-80 UNF
51	.795 (20.19)	.685 (17.40)	.920 (23.37)	.145 (3.68)	.068 (1.73)	.665 (16.89)	#0-80 UNF	51	.795 (20.19)	.688 (17.48)	.920 (23.37)	.145 (3.68)	.068 (1.73)	.665 (16.89)	#0-80 UNF
65	.970 (24.64)	.860 (21.84)	1.095 (27.81)	.145 (3.68)	.068 (1.73)	.840 (21.34)	#0-80 UNF	65	.970 (24.64)	.863 (21.92)	1.095 (27.81)	.145 (3.68)	.068 (1.73)	.840 (21.34)	#0-80 UNF
69	1.020 (25.91)	.910 (23.11)	1.145 (29.08)	.145 (3.68)	.068 (1.73)	.890 (22.61)	#0-80 UNF	69	1.020 (25.91)	.913 (23.19)	1.145 (29.08)	.145 (3.68)	.068 (1.73)	.890 (22.61)	#0-80 UNF
85	1.246 (31.65)	1.110 (28.19)	1.397 (35.48)	.170 (4.32)	.081 (2.06)	1.091 (27.71)	#2-56 UNC	85	1.246 (31.65)	1.113 (28.27)	1.397 (35.48)	.170 (4.32)	.081 (2.06)	1.091 (27.71)	#2-56 UNC
91	1.321 (33.55)	1.185 (30.10)	1.472 (37.39)	.170 (4.32)	.081 (2.06)	1.166 (29.62)	#2-56 UNC	91	1.321 (33.55)	1.188 (30.18)	1.472 (37.39)	.170 (4.32)	.081 (2.06)	1.166 (29.62)	#2-56 UNC

SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



891-032 Straight, 45°, or 90° Back-to-Back Cable with Backshell and Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS



Layout	A BSC.	B BSC.	C	D	E	F	G	L	M
9	.270 (6.86)	.160 (4.06)	.395 (10.03)	.145 (3.68)	.068 (1.73)	.140 (3.56)	#0-80 UNF	.150 (3.81)	.313 (7.94)
15	.345 (8.76)	.235 (5.97)	.470 (11.94)	.145 (3.68)	.068 (1.73)	.215 (5.46)	#0-80 UNF	.150 (3.81)	.313 (7.94)
21	.420 (10.67)	.310 (7.87)	.545 (13.84)	.145 (3.68)	.068 (1.73)	.290 (7.37)	#0-80 UNF	.150 (3.81)	.313 (7.94)
25	.470 (11.94)	.360 (9.14)	.595 (15.11)	.145 (3.68)	.068 (1.73)	.340 (8.64)	#0-80 UNF	.150 (3.81)	.313 (7.94)
31	.545 (13.84)	.435 (11.05)	.670 (17.02)	.145 (3.68)	.068 (1.73)	.415 (10.54)	#0-80 UNF	.150 (3.81)	.313 (7.94)
37	.620 (15.75)	.510 (12.95)	.745 (18.92)	.145 (3.68)	.068 (1.73)	.490 (12.45)	#0-80 UNF	.150 (3.81)	.313 (7.94)
41	.670 (17.02)	.560 (14.22)	.795 (20.19)	.145 (3.68)	.068 (1.73)	.540 (13.72)	#0-80 UNF	.150 (3.81)	.313 (7.94)
51	.795 (20.19)	.685 (17.40)	.920 (23.37)	.145 (3.68)	.068 (1.73)	.665 (16.89)	#0-80 UNF	.150 (3.81)	.313 (7.94)
65	.970 (24.64)	.860 (21.84)	1.095 (27.81)	.145 (3.68)	.068 (1.73)	.840 (21.34)	#0-80 UNF	.150 (3.81)	.313 (7.94)
69	1.020 (25.91)	.910 (23.11)	1.145 (29.08)	.145 (3.68)	.068 (1.73)	.890 (22.61)	#0-80 UNF	.150 (3.81)	.313 (7.94)
85	1.246 (31.65)	1.110 (28.19)	1.397 (35.48)	.170 (4.32)	.081 (2.06)	1.091 (27.71)	#2-56 UNC	.176 (4.47)	.318 (8.08)
91	1.321 (33.55)	1.185 (30.10)	1.472 (37.39)	.170 (4.32)	.081 (2.06)	1.166 (29.62)	#2-56 UNC	.176 (4.47)	.318 (8.08)

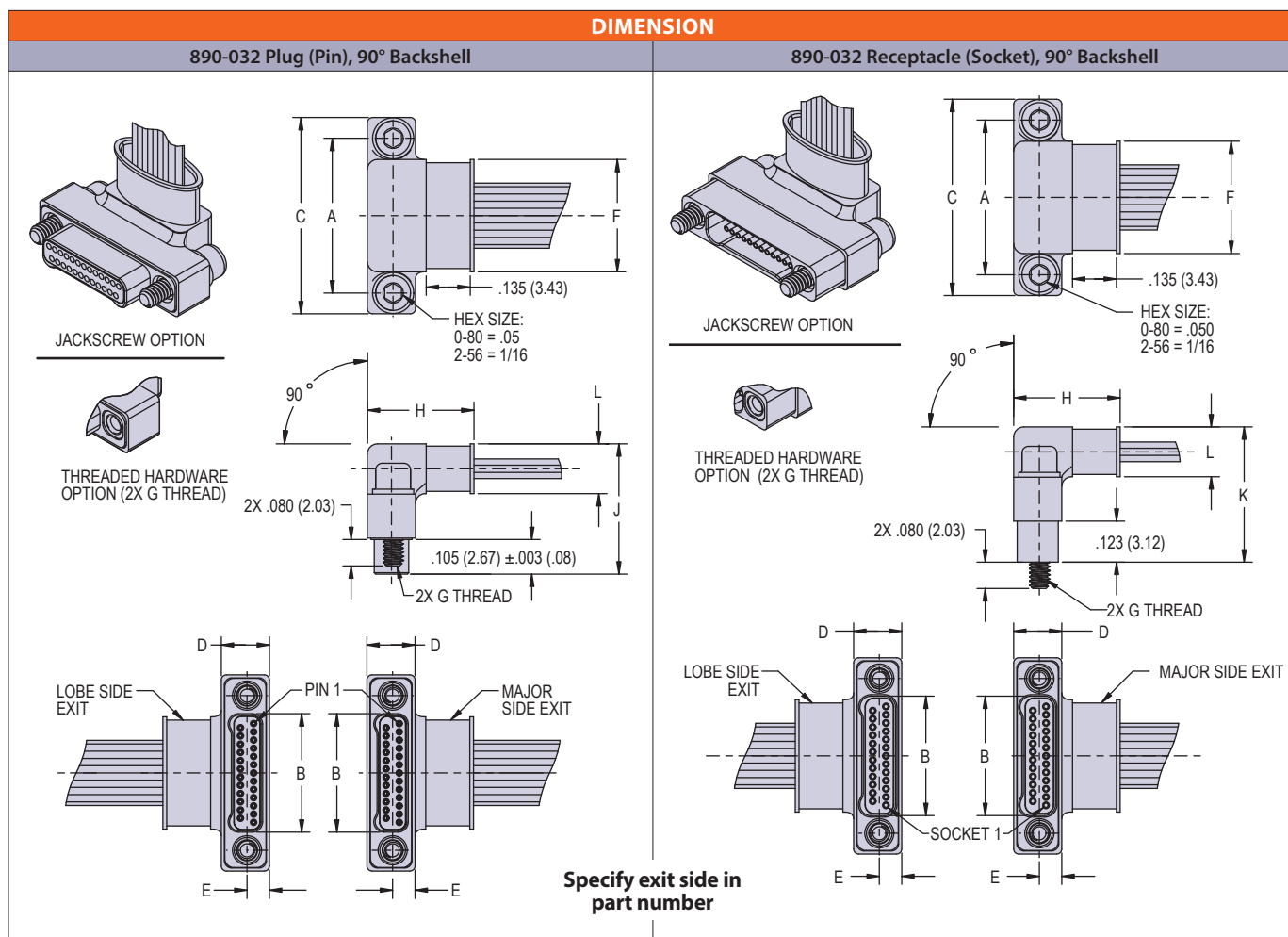
Layout	A BSC	B BSC	C	D	E	F	G	L	N
9	.270 (6.86)	.163 (4.14)	.395 (10.03)	.145 (3.68)	.068 (1.73)	.140 (3.56)	#0-80 UNF	.150 (3.81)	.328 (8.33)
15	.345 (8.76)	.238 (6.05)	.470 (11.94)	.145 (3.68)	.068 (1.73)	.215 (5.46)	#0-80 UNF	.150 (3.81)	.328 (8.33)
21	.420 (10.67)	.313 (7.95)	.545 (13.84)	.145 (3.68)	.068 (1.73)	.290 (7.37)	#0-80 UNF	.150 (3.81)	.328 (8.33)
25	.470 (11.94)	.363 (9.22)	.595 (15.11)	.145 (3.68)	.068 (1.73)	.340 (8.64)	#0-80 UNF	.150 (3.81)	.328 (8.33)
31	.545 (13.84)	.438 (11.13)	.670 (17.02)	.145 (3.68)	.068 (1.73)	.415 (10.54)	#0-80 UNF	.150 (3.81)	.328 (8.33)
37	.620 (15.75)	.513 (13.03)	.745 (18.92)	.145 (3.68)	.068 (1.73)	.490 (12.45)	#0-80 UNF	.150 (3.81)	.328 (8.33)
41	.670 (17.02)	.563 (14.30)	.795 (20.19)	.145 (3.68)	.068 (1.73)	.540 (13.72)	#0-80 UNF	.150 (3.81)	.328 (8.33)
51	.795 (20.19)	.688 (17.48)	.920 (23.37)	.145 (3.68)	.068 (1.73)	.665 (16.89)	#0-80 UNF	.150 (3.81)	.328 (8.33)
65	.970 (24.64)	.863 (21.92)	1.095 (27.81)	.145 (3.68)	.068 (1.73)	.840 (21.34)	#0-80 UNF	.150 (3.81)	.328 (8.33)
69	1.020 (25.91)	.913 (23.19)	1.145 (29.08)	.145 (3.68)	.068 (1.73)	.890 (22.61)	#0-80 UNF	.150 (3.81)	.328 (8.33)
85	1.246 (31.65)	1.113 (28.27)	1.397 (35.48)	.170 (4.32)	.081 (2.06)	1.091 (27.71)	#2-56 UNC	.176 (4.47)	.333 (8.46)
91	1.321 (33.55)	1.188 (30.18)	1.472 (37.39)	.170 (4.32)	.081 (2.06)	1.166 (29.62)	#2-56 UNC	.176 (4.47)	.333 (8.46)

SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



891-032 Straight, 45°, or 90° Back-to-Back Cable with Backshell and Insulated Wire

DUAL-ROW RECTANGULAR CONNECTORS



Layout	A BSC.	B BSC.	C	D	E	F	G	H	L	Layout	A BSC.	B BSC.	C	D	E	F	G	H	L
9	.270 (6.86)	.160 (4.06)	.395 (10.03)	.145 (3.68)	.068 (1.73)	.140 (3.56)	#0-80 UNF	.323 (8.20)	.150 (3.81)	9	.270 (6.86)	.163 (4.14)	.395 (10.03)	.145 (3.68)	.068 (1.73)	.140 (3.56)	#0-80 UNF	.323 (8.20)	.150 (3.81)
15	.345 (8.76)	.235 (5.97)	.470 (11.94)	.145 (3.68)	.068 (1.73)	.215 (5.46)	#0-80 UNF	.323 (8.20)	.150 (3.81)	15	.345 (8.76)	.238 (6.05)	.470 (11.94)	.145 (3.68)	.068 (1.73)	.215 (5.46)	#0-80 UNF	.323 (8.20)	.150 (3.81)
21	.420 (10.67)	.310 (7.87)	.545 (13.84)	.145 (3.68)	.068 (1.73)	.290 (7.37)	#0-80 UNF	.323 (8.20)	.150 (3.81)	21	.420 (10.67)	.313 (7.95)	.545 (13.84)	.145 (3.68)	.068 (1.73)	.290 (7.37)	#0-80 UNF	.323 (8.20)	.150 (3.81)
25	.470 (11.94)	.360 (9.14)	.595 (15.11)	.145 (3.68)	.068 (1.73)	.340 (8.64)	#0-80 UNF	.323 (8.20)	.150 (3.81)	25	.470 (11.94)	.363 (9.22)	.595 (15.11)	.145 (3.68)	.068 (1.73)	.340 (8.64)	#0-80 UNF	.323 (8.20)	.150 (3.81)
31	.545 (13.84)	.435 (11.05)	.670 (17.02)	.145 (3.68)	.068 (1.73)	.415 (10.54)	#0-80 UNF	.323 (8.20)	.150 (3.81)	31	.545 (13.84)	.438 (11.13)	.670 (17.02)	.145 (3.68)	.068 (1.73)	.415 (10.54)	#0-80 UNF	.323 (8.20)	.150 (3.81)
37	.620 (15.75)	.510 (12.95)	.745 (18.92)	.145 (3.68)	.068 (1.73)	.490 (12.45)	#0-80 UNF	.323 (8.20)	.150 (3.81)	37	.620 (15.75)	.513 (13.03)	.745 (18.92)	.145 (3.68)	.068 (1.73)	.490 (12.45)	#0-80 UNF	.323 (8.20)	.150 (3.81)
41	.670 (17.02)	.560 (14.22)	.795 (20.19)	.145 (3.68)	.068 (1.73)	.540 (13.72)	#0-80 UNF	.323 (8.20)	.150 (3.81)	41	.670 (17.02)	.563 (14.30)	.795 (20.19)	.145 (3.68)	.068 (1.73)	.540 (13.72)	#0-80 UNF	.323 (8.20)	.150 (3.81)
51	.795 (20.19)	.685 (17.40)	.920 (23.37)	.145 (3.68)	.068 (1.73)	.665 (16.89)	#0-80 UNF	.323 (8.20)	.150 (3.81)	51	.795 (20.19)	.688 (17.48)	.920 (23.37)	.145 (3.68)	.068 (1.73)	.665 (16.89)	#0-80 UNF	.323 (8.20)	.150 (3.81)
65	.970 (24.64)	.860 (21.84)	1.095 (27.81)	.145 (3.68)	.068 (1.73)	.840 (21.34)	#0-80 UNF	.323 (8.20)	.150 (3.81)	65	.970 (24.64)	.863 (21.92)	1.095 (27.81)	.145 (3.68)	.068 (1.73)	.840 (21.34)	#0-80 UNF	.323 (8.20)	.150 (3.81)
69	1.020 (25.91)	.910 (23.11)	1.145 (29.08)	.145 (3.68)	.068 (1.73)	.890 (22.61)	#0-80 UNF	.323 (8.20)	.150 (3.81)	69	1.020 (25.91)	.913 (23.19)	1.145 (29.08)	.145 (3.68)	.068 (1.73)	.890 (22.61)	#0-80 UNF	.323 (8.20)	.150 (3.81)
85	1.246 (31.65)	1.110 (28.19)	1.397 (35.48)	.170 (4.32)	.081 (2.06)	1.091 (27.71)	#2-56 UNC	.348 (8.84)	.176 (4.47)	85	1.246 (31.65)	1.113 (28.27)	1.397 (35.48)	.170 (4.32)	.081 (2.06)	1.091 (27.71)	#2-56 UNC	.348 (8.84)	.176 (4.47)
91	1.321 (33.55)	1.185 (30.10)	1.472 (37.39)	.170 (4.32)	.081 (2.06)	1.166 (29.62)	#2-56 UNC	.348 (8.84)	.176 (4.47)	91	1.321 (33.55)	1.188 (30.18)	1.472 (37.39)	.170 (4.32)	.081 (2.06)	1.166 (29.62)	#2-56 UNC	.348 (8.84)	.176 (4.47)