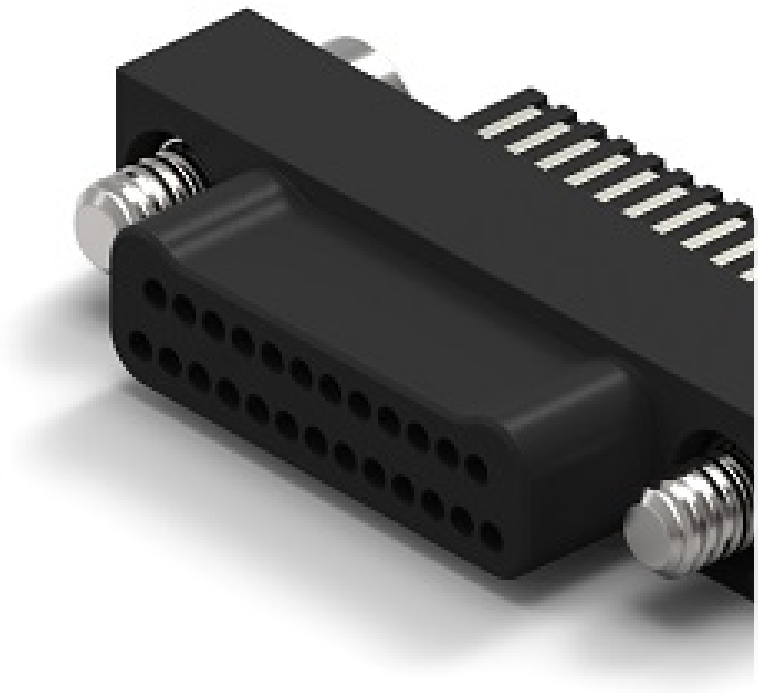
Ulti-Mate™ Connectors



Rectangular Nano-D Field Attachable

Winchester Interconnect is the leading manufacturer for high density, lightweight Nano Field Attachable connectors. Our Ulti-Mate™ Nano FA connectors are supplied in in both metal and plastic shells, with shell materials such as: aluminum, stainless steel, and titanium.

Additionally, we offer our full line of Nano connector's styles in fully molded liquid crystal polymer bodies.Below are our specific configurations for Nano FA connectors.

Winchester Interconnect

www.winconn.com

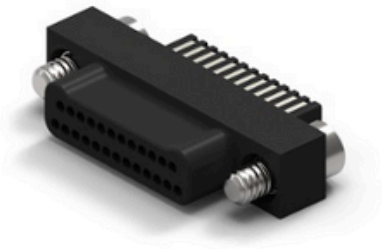
Table of Contents

3–15.....Nano-D Field Attachable

4....Dual Row Metal Shell
10...Dual Row Plastic Shell

Winchester Interconnect™





Nano-D Field Attachable

Winchester Interconnect™

Ulti-Mate Connectors

Ulti-Mate Nano Field Attachable

Dual Row Metal Shell Connectors

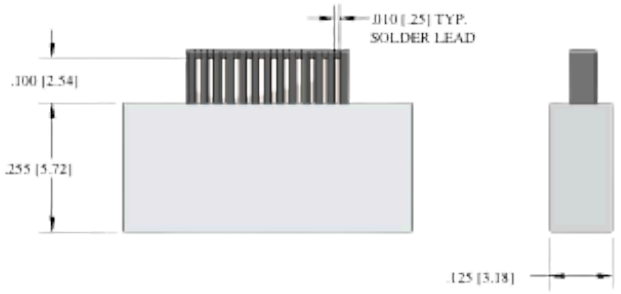
Winchester Interconnect Micro, formerly known as Ulti-Mate Connector, offers Nano Field Attachable Dual Row Metal Shell Connectors — a durable and compact solution for precision cable connections. These connectors feature a metal shell with flat leads, providing excellent shielding and mechanical protection. With an operating temperature range of −55°C to 125°C and high-temperature versions available up to 200°C (add HT), they are built to perform in harsh environments. Available in 9 to 65 contact configurations, these connectors are QPL qualified to MIL-DTL-32139, ensuring military-grade reliability and consistency.



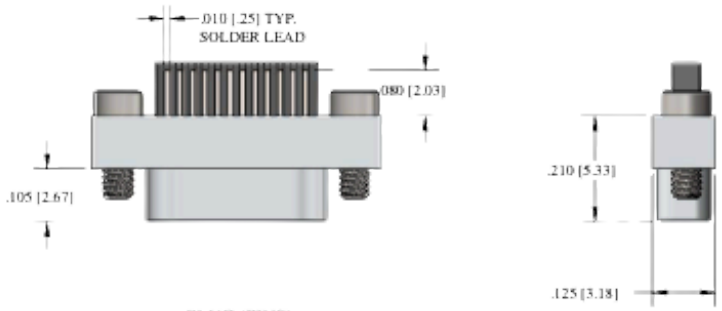
KEY FEATURES & BENEFITS

- Metal Shell Construction – Provides superior durability and EMI/RFI protection.
- Field-Attachable Design – Enables easy and secure assembly for on-site applications.
- Wide Operating Temperature Range – Performs reliably from −55°C to 125°C, extendable to 200°C (HT option).
- Flexible Contact Options – Available with 9 to 65 contacts to meet varied design needs.
- QPL Qualified to MIL-DTL-32139 – Ensures compliance with military and aerospace standards.
- Reliable Mechanical Performance – Engaging force of 5 oz max, separation force of 0.4 oz min, and mating/unmating force of 7 oz × number of contacts for secure connections.

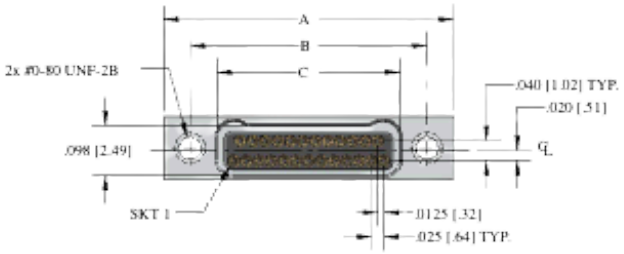
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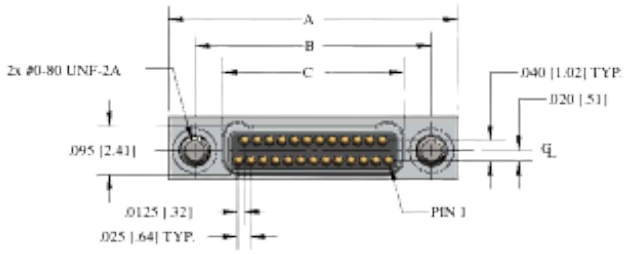


RECEPTACLE (SOCKETS)



PLUG (PINS)





Size	A	B	C	
			Plug	Receptacle
9	.500 [12.70]	.395 [10.03]	.284 [7.21]	.285 [7.24]
15	.650 [16.51]	.545 [13.84]	.434 [11.02]	.435 [11.05]
21	.800 [20.32]	.695 [17.65]	.584 [14.83]	.585 [14.86]
25	.900 [22.86]	.795 [20.19]	.684 [17.37]	.685 [17.40
31	1.050 [26.67]	.945 [24.00]	.834 [21.18]	.835 [21.21]
37	1.200 [30.48]	1.095 [27.81]	.984 [24.99]	.985 [25.02]
51	1.550 [39.37]	1.445 [36.70]	1.334 [33.88]	1.335 [33.91]

Winchester Interconnect.

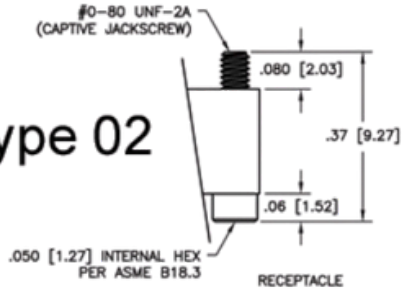
PERFORMANCE

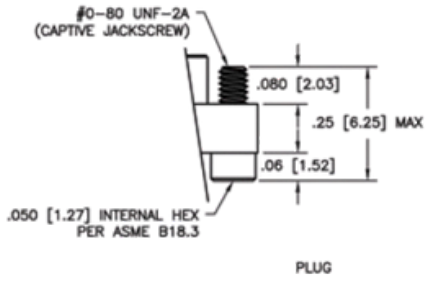
Electrical Properties	
Contact Resistance	33 milliohm max contact only and 87 milliohms max with 6" wire @ 1A
Current Rating	1A max.
Dielectric WithStanding Voltage	250 VAC at sea level, 100 VAC at 70,000 feet. 1mA leakage current max.
Insulation Resistance	100 VDC and 5000 Megohms min.

Mechanical	
Engaging Force	5 oz max.
Separation Force	.4 oz min.
Mating/Unmating Force	7 oz x # of contacts max.
Vibration	EIA-364-28 Condition IV, 1 microsecond max discontinuity
Shock	EIA-364-27 Condition G, 1 microsecond max discontinuity
Durability	EIA-364-09, 200 matings, passes Mating Force, CR, Eng and Sep Forces
Salt Spray	EIA 364-26 Condition B-48 hours

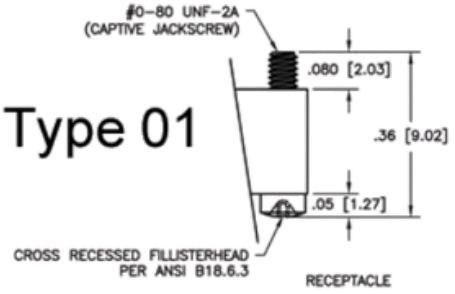
HARDWARE

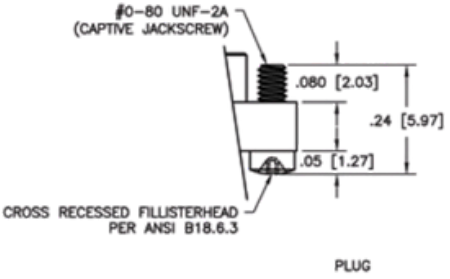
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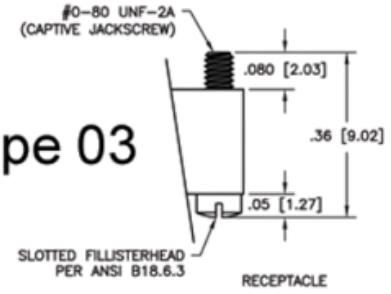


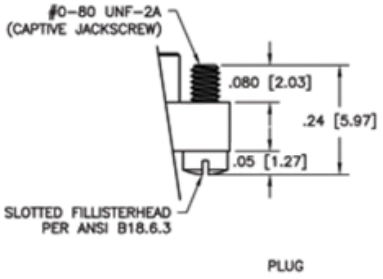
Type 01



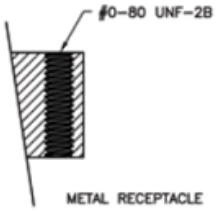


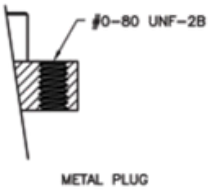
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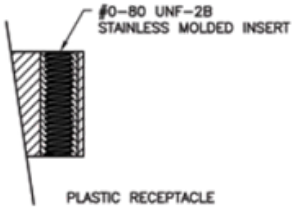


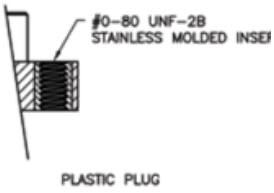
Type 07





Type 07





MATERIALS

Materials and Finishes	
Signal Pin Contacts	C17410 Beryllium Copper per ASTM B768
Signal Socket Contacts	C17410 Beryllium Copper per ASTM B768
Contact Plating	Gold Plating per ASTM B488
PC Tails	C17410 Beryllium Copper per ASTM B768
PC Tail Plating	60/40 Tin/Lead plating per SAE-AMS-P-81728, or Gold plating per ASTM B488
Shell	6061-T6 Aluminum per SAE-AMS-QQ-A200/8 or 300 Series Stainless Steel per ASTM A582
Shell Plating	Electroless Nickel per SAE-AMS2404, or Cadmium per SAE-AMS-QQ-P-416 or Black Anodize per MIL-A-8625 or Passivated per AMS2700
Insulator Material	LCP(Liquid Crystal Polymer) GLCP-30F or PPS per MIL-M-24519 GST-40F

HOW TO ORDER

N M L 09 2 N 02 2 - S01 - HT SPL

Nano Wired Series

Shell Material
M = Metal Shell
P = Plastic Shell

Insulator Material
L = LCP

Size (No. of Contacts)
09, 15, 21, 25, 31, 37, 51, 65, & 69

Insulator Type
2 = Dual Row

Contact Gender & Type
N = Pin, Field Attachable Flat Tail
T = Socket, Field Attachable Flat Tail

Hardware
0 = No Hardware
01 = Phillips Head Jackscrews
02 = Hex Head Jackscrews
05 = Slotted Head Jackscrews
06 = Floating Phillips Head Jackscrews (Female Only)
07 = Threaded Hole
08 = Floating Hex Head Jackscrews (Female Only)
09 = Floating Slotted Head Jackscrews (Female Only)

Lead Plating
1 = Tin/Lead (minimum 3% Lead) plated (Uninsulated Wire/Flat Tail) (Not RoHS Compliant) (Not Available with high temp (HT) connectors) *
2 = Gold Plated (Uninsulated Wire/Flat Tail) (RoHS Compliant) *

Shell Plating or Material (Omit for plastic shell or cadmium plating)
Blank = Cadmium
S01 = Electroless Nickel
S02 = Chem Film
S03 = Black Anodized
S04 = Gold
S05 = Titanium
S06 = Olive-Drab Cadmium
S07 = Black Nickel
S08 = Nickel-PTFE
S09 = Stainless Steel, Passivated
S10 = Zinc Nickel

Temperature Rating (Omit for standard Temp, 125°C)
Blank = 125°C
HT = 200°C
LO = 4 Kelvin (only available with flat tail leads)

Special designator - SPL is to be added to the end of the part number if the connector cannot be fully defined by the rest of the engineering number

Winchester Interconnect

Ulti-Mate Connectors

Ulti-Mate Nano Field Attachable

Dual Row Plastic Shell Connectors

Winchester Interconnect offers Nano Field Attachable Dual Row Plastic Shell Connectors, designed for precision and reliability in compact interconnect applications. These circular plastic, field-attachable inline connectors feature a field-solderable design with flat leads, ensuring ease of use and dependable performance. Operating within a temperature range of −55°C to 125°C, and available in high-temperature versions up to 200°C (add HT), they are built to perform in a variety of demanding environments. Equipped with 7 contacts, these connectors are QPL qualified to MIL-DTL-32139, meeting stringent military and aerospace standards.

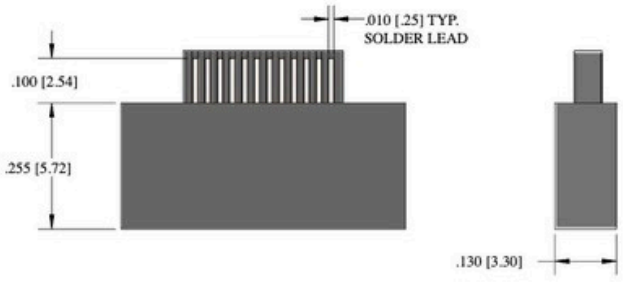


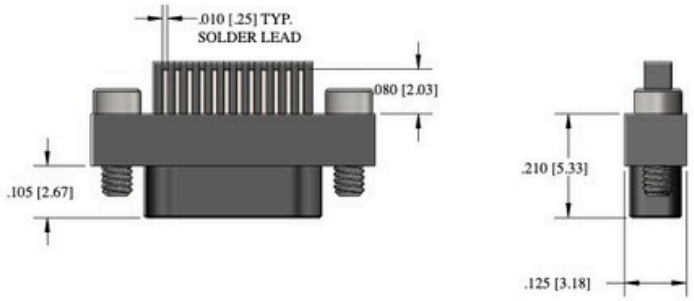
KEY FEATURES & BENEFITS

- Lightweight Plastic Shell Design – Offers durability with reduced weight for compact system integration.
- Field-Attachable and Solderable – Simplifies on-site assembly and repair. Wide Temperature Range –
- Operates from −55°C to 125°C, extendable to 200°C (HT option). High-Quality Materials – Signal pin and
- socket contacts made of C17410 Beryllium Copper per ASTM B768 for strength and conductivity. Reliable Plating Options – Gold plating per ASTM B488; PC tails
- plated with either 60/40 Tin/Lead or Gold for corrosion resistance. QPL Qualified to MIL-DTL-32139 – Ensures dependable performance in mission-critical
- applications.

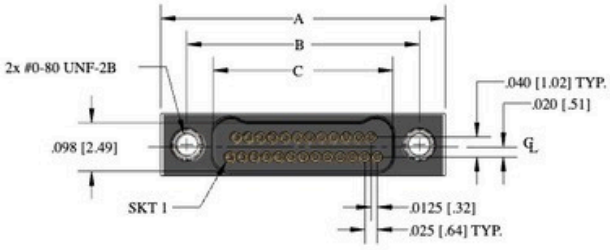
Winchester Interconnect

DIMENSIONAL

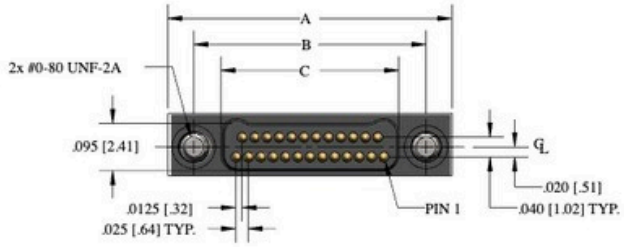




RECEPTACLE (SOCKETS)



PLUG (PINS)



Size	A	B	C	
			Plug	Receptacle
9	.500 [12.70]	.395 [10.03]	.284 [7.21]	.285 [7.24]
15	.650 [16.51]	.545 [13.84]	.434 [11.02]	.435 [11.05]
21	.800 [20.32]	.695 [17.65]	.584 [14.83]	.585 [14.86]
25	.900 [22.86]	.795 [20.19]	.684 [17.37]	.685 [17.40
31	1.050 [26.67]	.945 [24.00]	.834 [21.18]	.835 [21.21]
37	1.200 [30.48]	1.095 [27.81]	.984 [24.99]	.985 [25.02]
51	1.550 [39.37]	1.445 [36.70]	1.334 [33.88]	1.335 [33.91]

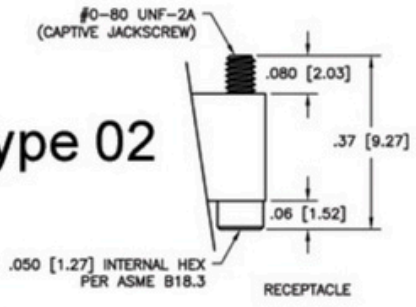
PERFORMANCE

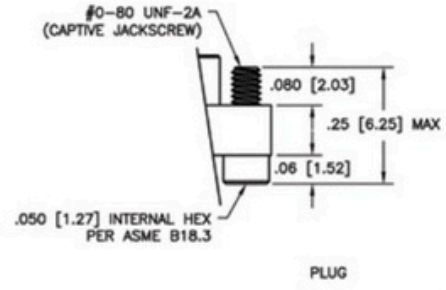
Electrical Properties	
Contact Resistance	33 milliohm max contact only and 87 milliohms max with 6" wire @ 1A
Current Rating	1A max.
Dielectric WithStanding Voltage	250 VAC at sea level, 100 VAC at 70,000 feet. 1mA leakage current max.
Insulation Resistance	100 VDC and 5000 Megohms min.

Mechanical	
Engaging Force	5 oz max.
Separation Force	.4 oz min.
Mating/Unmating Force	7 oz x # of contacts max.
Vibration	EIA-364-28 Condition IV, 1 microsecond max discontinuity
Shock	EIA-364-27 Condition G, 1 microsecond max discontinuity
Durability	EIA-364-09, 200 matings, passes Mating Force, CR, Eng and Sep Forces

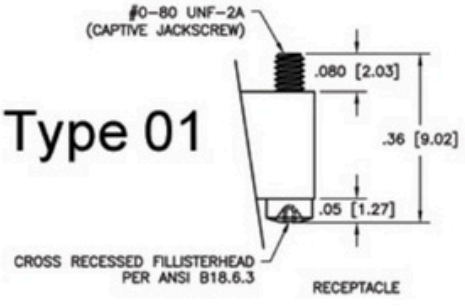
HARDWARE

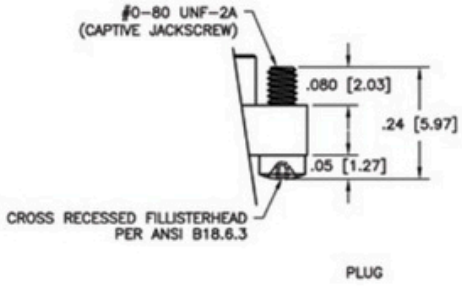
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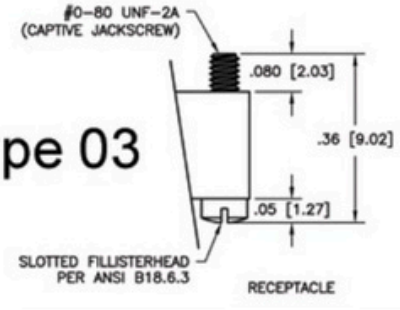


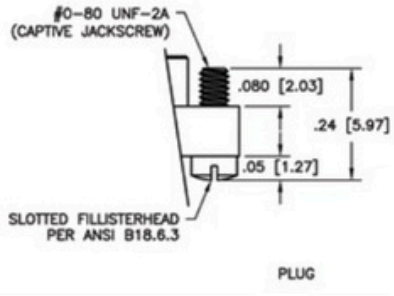
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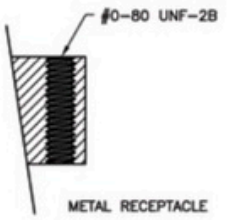


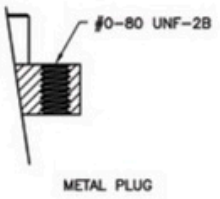
Type 03



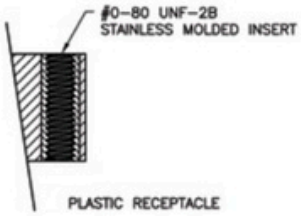


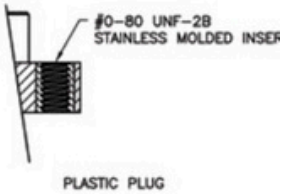
Type 07





Type 07

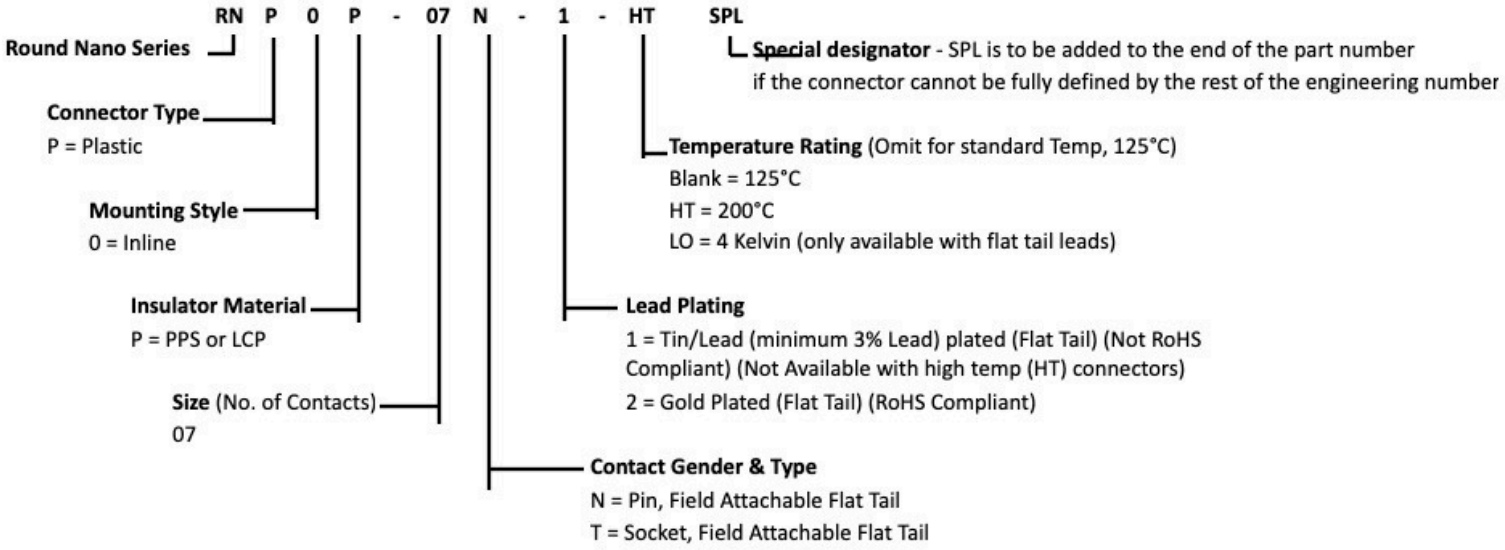




MATERIALS

Materials and Finishes	
Signal Pin Contacts	C17410 Beryllium Copper per ASTM B768
Signal Socket Contacts	C17410 Beryllium Copper per ASTM B768
Contact Plating	Gold Plating per ASTM B488
PC Tails	C17410 Beryllium Copper per ASTM B768
PC Tail Plating	60/40 Tin/Lead plating per SAE-AMS-P-81728, or Gold plating per ASTM B488
Shell	6061-T6 Aluminum per SAE-AMS-QQ-A200/8 or 300 Series Stainless Steel per ASTM A582
Shell Plating	Electroless Nickel per SAE-AMS2404, or Cadmium per SAE-AMS-QQ-P-416 or Black Anodize per MIL-A-8625 or Passivated per AMS2700
Insulator Material	LCP(Liquid Crystal Polymer) GLCP-30F or PPS per MIL-M-24519 GST-40F
Hardware	300 Series Stainless Steel per ASTM A 582/A582 or ASTM A 581/A581M, Passivated per SAE AMS-2700

HOW TO ORDER


RN P 0 P - 07 N - 1 - HT SPL
Round Nano Series
Connector Type
P = Plastic
Mounting Style
0 = Inline
Insulator Material
P = PPS or LCP
Size (No. of Contacts)
07
Contact Gender & Type
N = Pin, Field Attachable Flat Tail
T = Socket, Field Attachable Flat Tail
Lead Plating
1 = Tin/Lead (minimum 3% Lead) plated (Flat Tail) (Not RoHS Compliant) (Not Available with high temp (HT) connectors)
2 = Gold Plated (Flat Tail) (RoHS Compliant)
Temperature Rating (Omit for standard Temp, 125°C)
Blank = 125°C
HT = 200°C
LO = 4 Kelvin (only available with flat tail leads)
Special designator - SPL is to be added to the end of the part number if the connector cannot be fully defined by the rest of the engineering number



About Winchester Interconnect

Winchester Interconnect is a US-based manufacturer of high-precision connectors, cable assemblies, and cable. Our products are ideal for military and aerospace, industrial, medical, and space applications where expertise and reliability are critical to your success.

Our 30,000+ connectivity solutions include standard and custom RF and microwave interconnects, hermetic connectors and packaging, micro-miniature connectors and assemblies, fiber optic connectors, industrial cable, and undersea cable

We work in the toughest industries where failure is not an option.For connectivity applications requiring high performance in harsh environments, life-saving systems, and the latest connected technologies, our industry-leading knowledge and engineering capabilities will ensure reliable, cutting-edge interconnect solutions that won't fail when it matters most.

Our Industries & Market Solutions

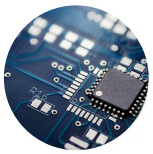

Industrial Automation

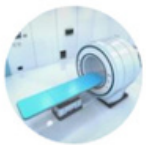

Space


Oil & Gas


Marine Subsea


Aerospace & Defense


Semiconductor


Medical


Custom

Winchester Interconnect

www.winconn.com