



Circular Nano-D Connectors

Winchester Interconnect provides Military-grade Nanominiature circular and rectangular connectors: The ultimate size and weight reduction solution. These MIL-DTL-32139 qualified connectors for mission-critical board-to-wire applications, offer superior mating and unmating performance and environmental resistance.

The contact center-to-center pitch for Nano Circular Connectors is .025".

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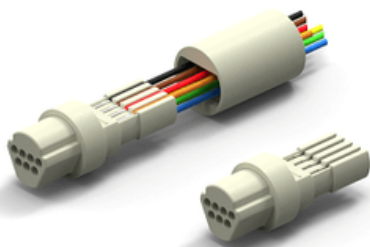
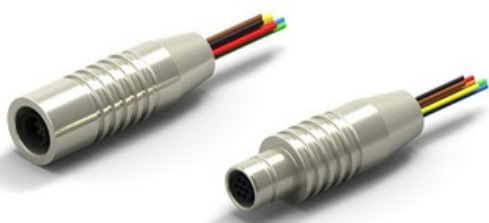
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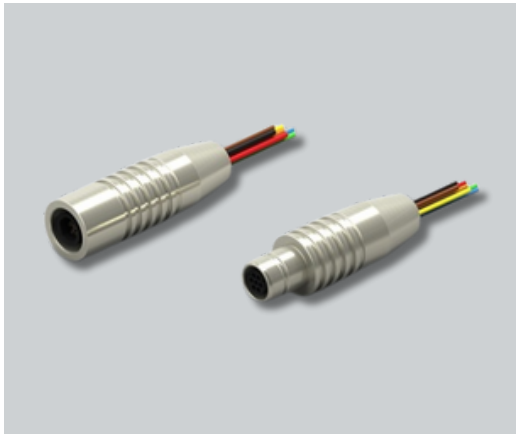


Circular Nano-D Connectors



Breakaway Metal Shell Connectors

Winchester Interconnect Micro, formerly known as Ulti-Mate Connector, offers Nano Circular Breakaway Metal Shell Connectors – compact, durable connectors engineered for high-performance interconnects in demanding environments. Featuring a circular metal shell with an inline breakaway design, these wired connectors provide reliable connections with easy disengagement under stress. Operating across a wide temperature range of -55°C to 125°C , and up to 200°C for high-temperature versions, they ensure dependable performance in extreme conditions.

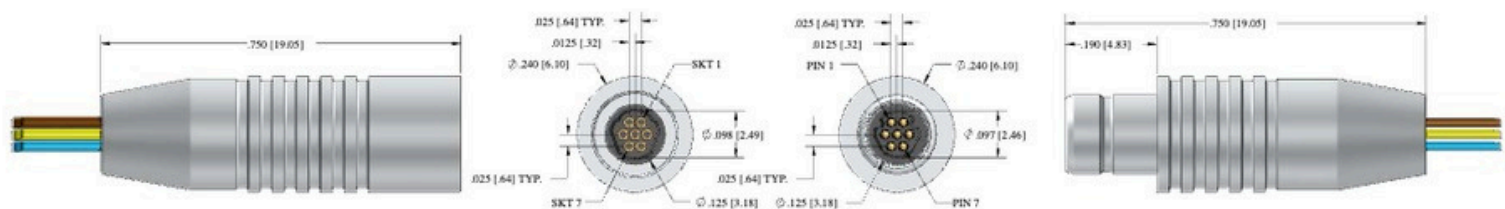


KEY FEATURES & BENEFITS

- **Rugged Construction** – Circular metal shell design ensures mechanical strength and long-lasting durability.
- **Versatile Configurations** – Available in 7, 12, and 19 contact options for a range of applications.
- **Wide Temperature Range** – Operates from -55°C to 125°C , with high-temperature versions up to 200°C .
- **Excellent Electrical Performance** – Contact resistance of 33 milliohms max (contact only) and 87 milliohms max (with 6" wire at 1A).
- **Reliable Power Handling** – Current rating of 1A max and dielectric strength of 250 VAC at sea level / 100 VAC at 70,000 feet.
- **Superior Insulation** – 5000 Megohms minimum at 100 VDC ensures high signal integrity.
- **Environmental Protection** – Optional IP67 rating provides enhanced resistance to moisture and contaminants.
- **Quick Disconnect Capability** – Inline breakaway feature allows for rapid separation in critical applications.

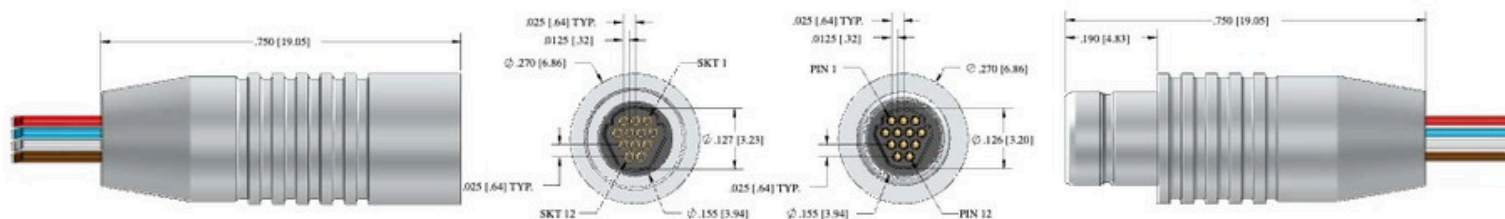
Nano Circular Breakaway Metal Shell

DIMENSIONAL



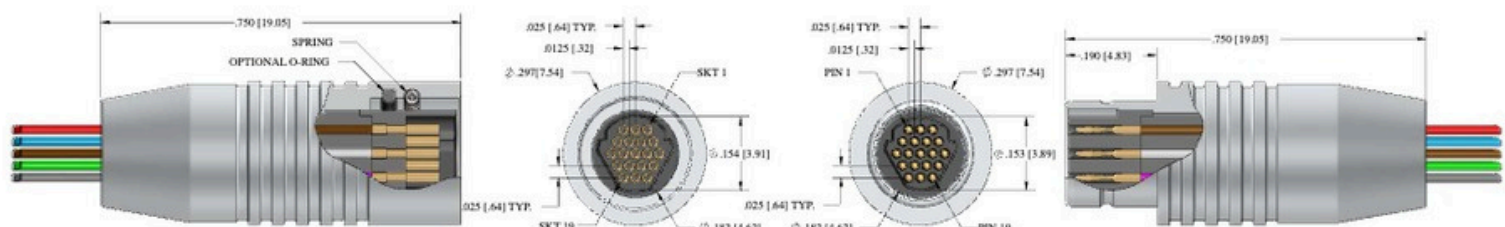
7 POSITION RECEPTACLE

7 POSITION PLUG



12 POSITION RECEPTACLE

12 POSITION PLUG



19 POSITION RECEPTACLE

19 POSITION PLUG

Nano Circular Breakaway Metal Shell

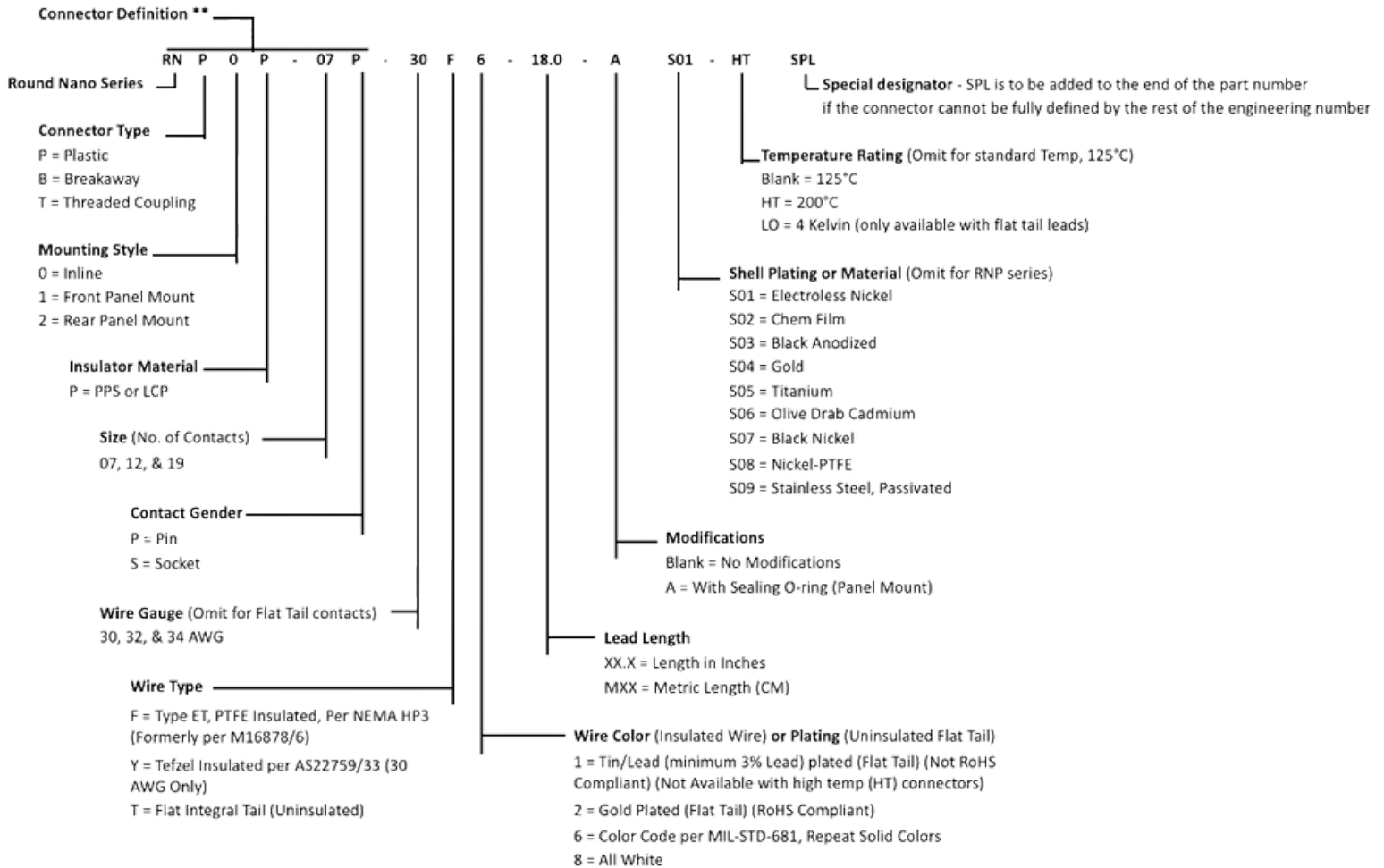
PERFORMANCE

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

Nano Circular Breakaway Metal Shell

HOW TO ORDER



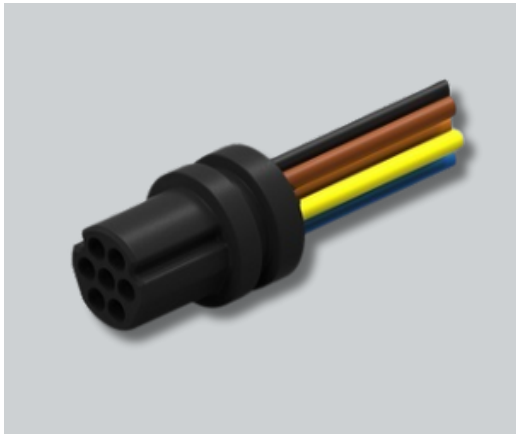
** For double ended assemblies, include connector definition for both ends separated by a forward slash (/)

Ulti-Mate Connectors

Ulti-Mate Nano Circular

Plastic Connectors

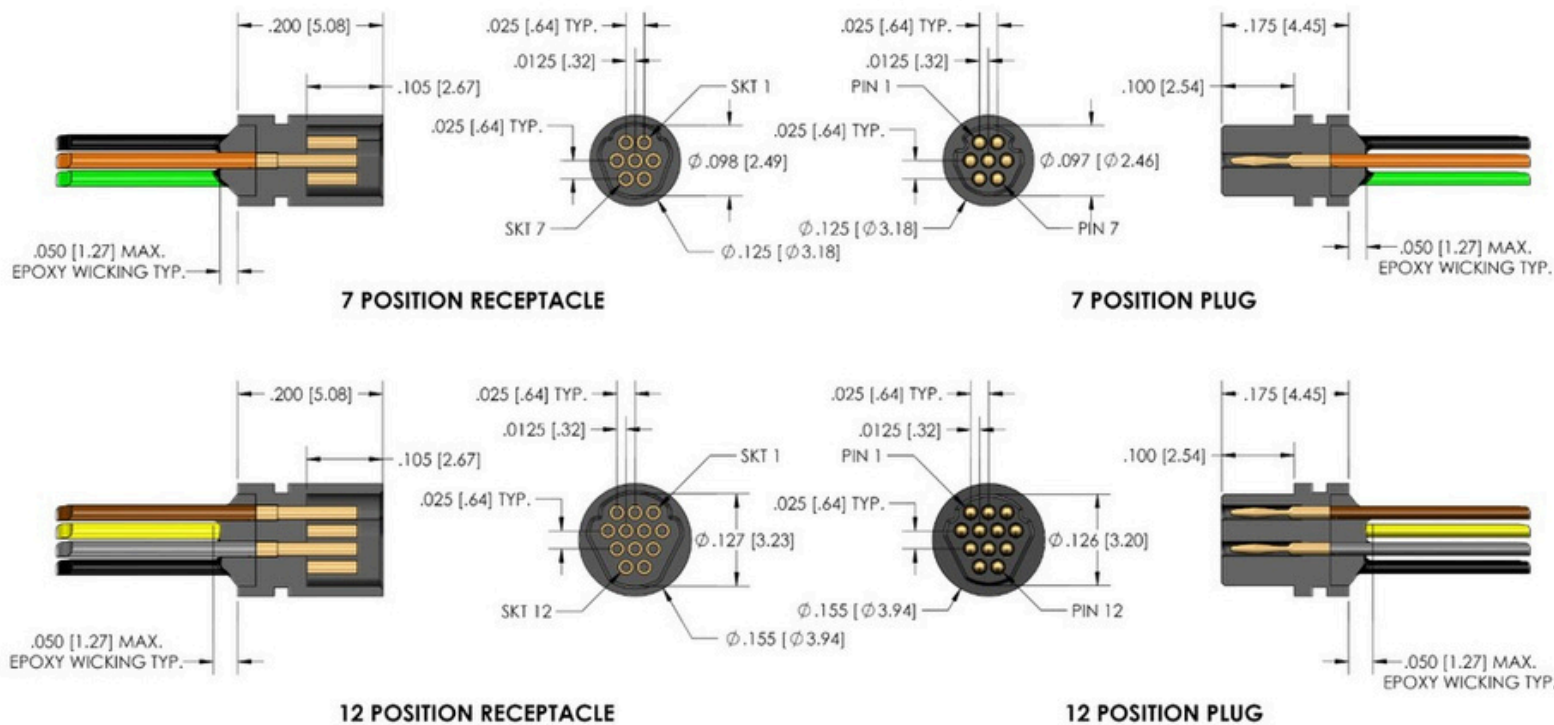
Winchester Interconnect Micro, formerly known as Ulti-Mate Connector, offers Nano Circular Plastic Connectors – dependable and lightweight interconnect solutions designed for performance and versatility. Available in both Nano Circular and Circular Plastic Inline Polarized types, these connectors deliver reliable electrical connections across a wide range of applications. With an operating temperature range of -55°C to 125°C and optional high-temperature versions up to 200°C (add HT), they ensure consistent operation in challenging environments.



KEY FEATURES & BENEFITS

- Durable Plastic Construction – Lightweight yet robust design ensures long-term reliability.
- Versatile Options – Offered in Nano Circular and Inline Polarized configurations to fit various needs.
- Wide Temperature Range – Operates from -55°C to 125°C , with high-temp versions available up to 200°C .
- High-Quality Materials – Signal Pin Contacts made of C17200 Beryllium Copper and Socket Contacts of C26000 Brass Alloy for superior conductivity.
- Gold-Plated Contacts – Gold plating per ASTM B488 provides excellent corrosion resistance and low contact resistance.
- Reliable Insulation – Insulator options include LCP (GLCP-30F) or PPS per MIL-M-24519 GST-40F for strength and stability.
- Application Flexibility – Ideal for compact, high-performance electronic systems requiring precision and reliability.

DIMENSIONAL



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

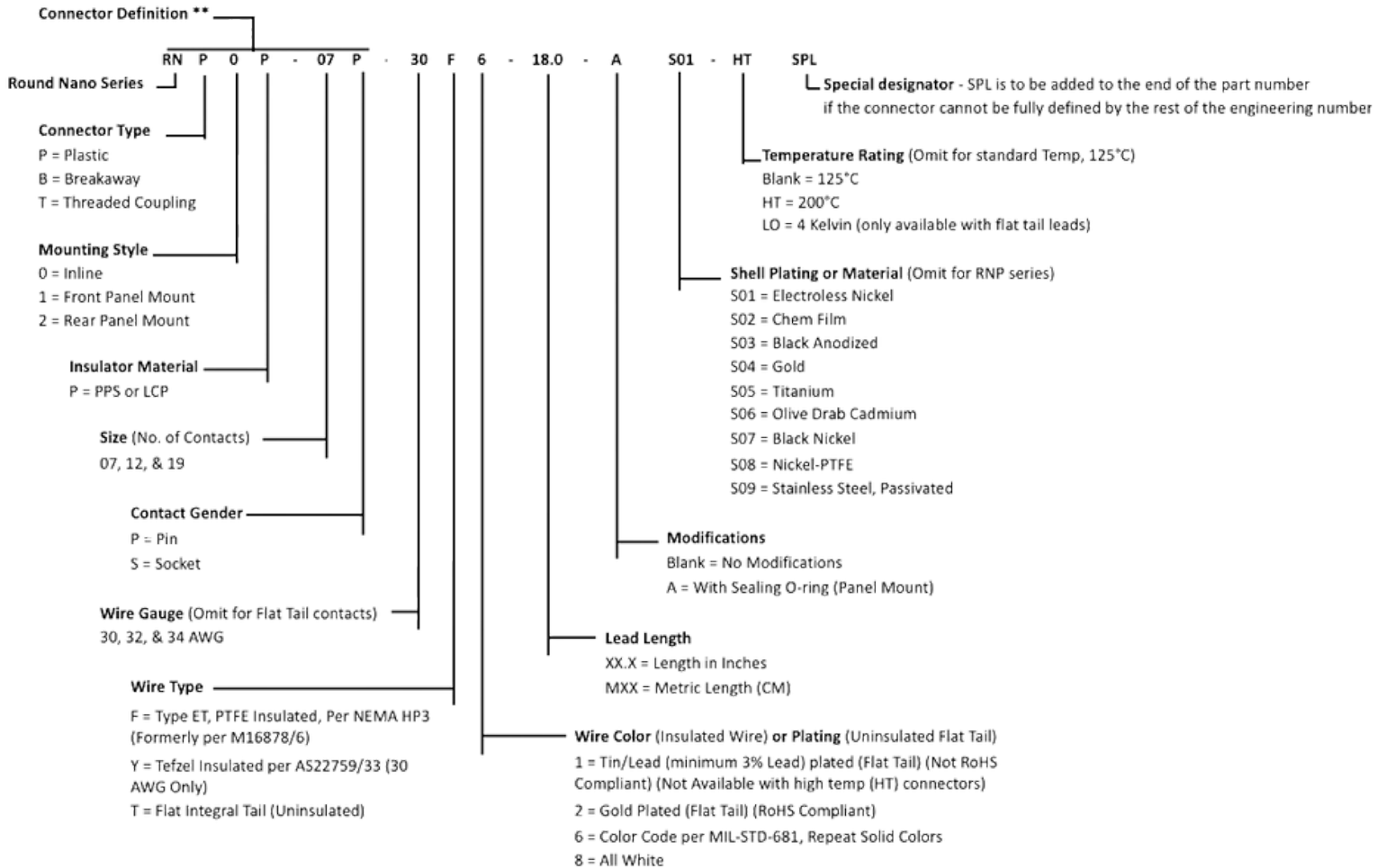
MATERIALS

Materials and Finishes	
Signal Pin Contacts	C17200 Beryllium Copper per ASTM B194
Signal Socket Contacts	C26000 Brass Alloy per ASTM B135
Contact Plating	Gold Plating per ASTM B488
Insulator Material	LCP(Liquid Crystal Polymer) GLCP-30F or PPS per MIL-M-24519 GST-40F

Nano Circular Plastic

HOW TO ORDER

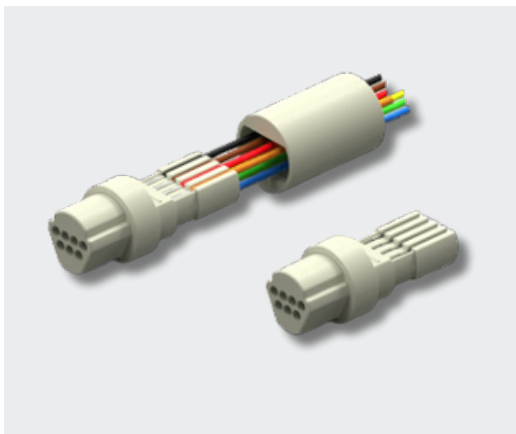
Round Nano Series Engineering Number Definitions



** For double ended assemblies, include connector definition for both ends separated by a forward slash (/)

Ulti-Mate Nano Field Attachable **Plastic Connectors**

Winchester Interconnect's Ulti-Mate Nano-D Field Attachable Plastic Connectors deliver reliable, space-efficient performance in demanding environments. These nano circular connectors feature a field-solderable, inline design with flat leads, enabling easy installation and repair in the field. With a standard operating range of -55°C to $+125^{\circ}\text{C}$ —and optional HT versions rated to 200°C —they provide dependable connectivity across a wide range of applications. Built with high-quality materials and gold-plated contacts, these connectors ensure long-lasting signal integrity in harsh conditions.

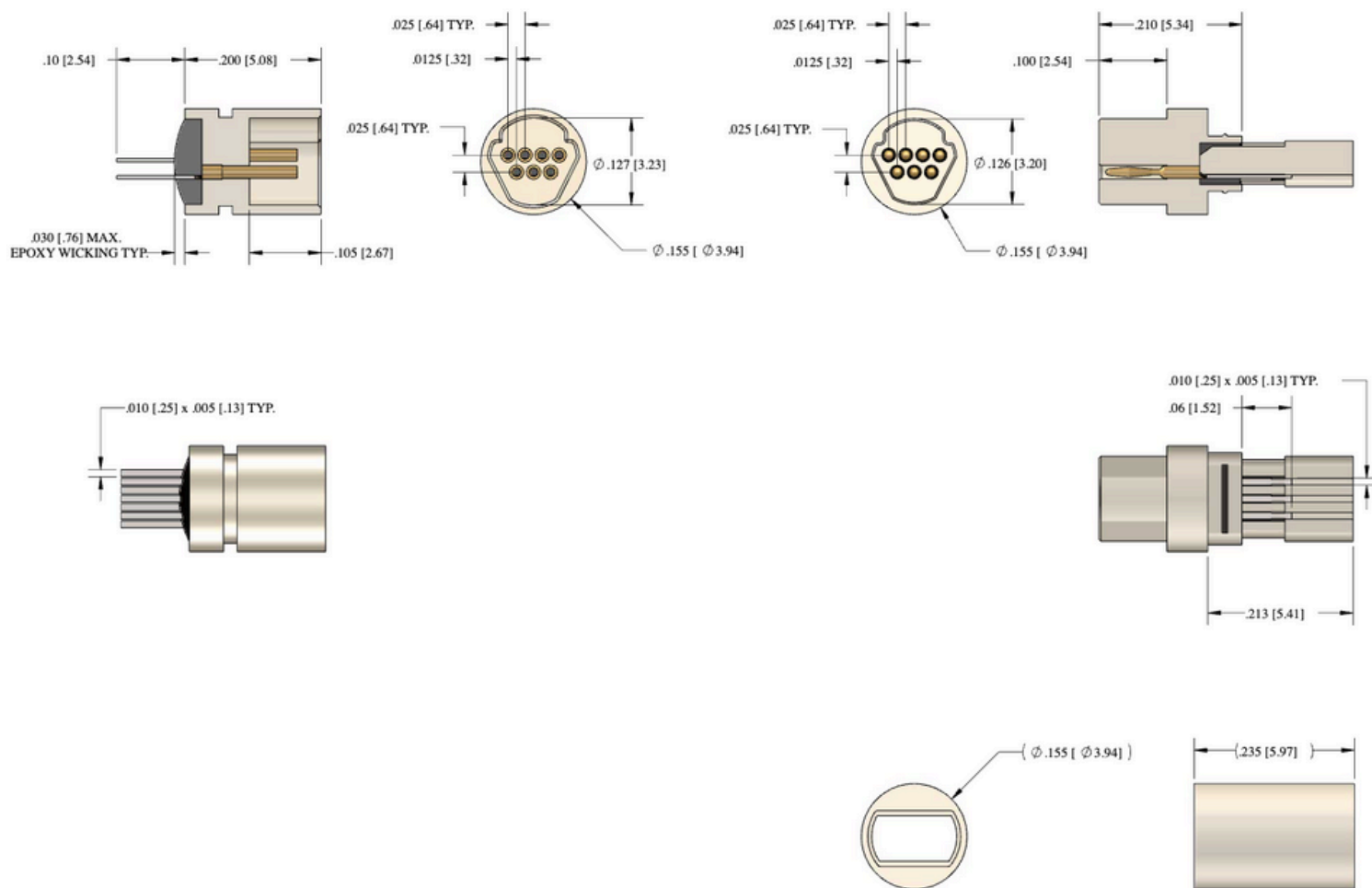


KEY FEATURES & BENEFITS

- Field-attachable, inline design – Simplifies installation and repairs without requiring factory assembly.
- Nano circular form factor – Compact, lightweight solution ideal for tight-space and portable systems.
- Wide temperature range (-55°C to $+125^{\circ}\text{C}$) – Ensures reliable performance across diverse environments.
- High-temperature (HT) version up to 200°C – Supports extreme thermal applications.
- Gold-plated contacts – Delivers excellent conductivity and long-term corrosion resistance.
- Durable materials (BeCu, Brass) – Provides robust mechanical and electrical performance.
- High-performance insulators (LCP or PPS) – Rated to MIL-M-24519 for superior heat and chemical resistance.
- 7-contact configuration – Supports multi-signal connectivity in a compact package.

Nano Field Attachable Plastic Connectors

DIMENSIONAL



BACKSHELL SHOWN UNASSEMBLED FOR
PART CLARIFICATION ONLY

Nano Field Attachable Plastic Connectors

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

Nano Field Attachable Plastic Connectors

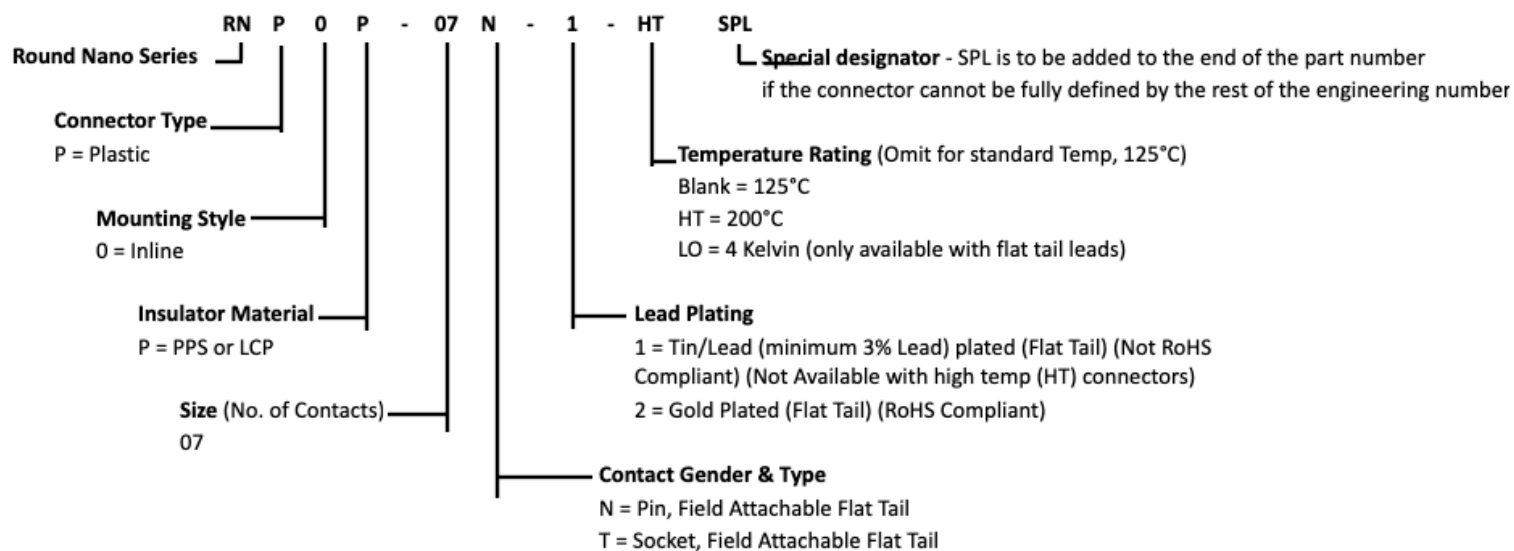
MATERIALS

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	LCP(Liquid Crystal Polymer) GLCP-30F or PPS per MIL-M-24519 GST-40F
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

Nano Field Attachable Plastic Connectors

HOW TO ORDER

Round Nano Field Attachable Series Engineering Number Definitions



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



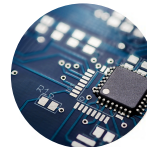
Oil & Gas



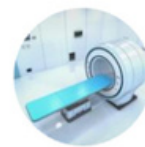
Marine
Subsea



Aerospace
& Defense



Semiconductor



Medical



Custom