

# M32139 Connectors

Winchester M32139 connectors are high-density rectangular (Nano series) connectors that conform to MIL-DTL-32139. They employ a bayonet coupling mechanism for rapid, secure mating and are known for their rugged performance in military, aerospace, and industrial applications. These compact and durable connectors are ideal for signal and low-power applications where space is at a premium, and quick, reliable connectivity is required.



## KEY FEATURES & BENEFITS

- 0.025" (0.635 mm) contact pitch – roughly half the size of Micro-D (0.050"), enabling extreme miniaturization.
- Contact counts from 9 to 85 positions (varies by layout and format: single, or dual row).
- Rectangular, circular, and hybrid – variants available for flexible integration in board-to-board, cable, or panel-mount configurations.
- Operating temperature:  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  standard (up to  $+200^{\circ}\text{C}$  for high-temp versions).
- Available in PCB, crimp, or pigtail terminations.
- Hermetic Sealing Options: Specialized versions for vacuum or pressure applications

### PRODUCT SPECIFICATIONS

| <b>Electrical Properties</b>    |  |
|---------------------------------|--|
| Contact Resistance              | 33 milliohm max contact only and 87 milliohms max with 6" wire @ 1A    |
| Current Rating                  | 1A max per contact.  |
| 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.  |

  

| <b>Mechanical Properties</b> |  |
|------------------------------|--|
| Engaging Force               | 5 oz max.  |
| Separation Force             | .4 oz min.   |
| 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                                  |
| Salt Spray                   | EIA 364-26 Condition B-48 hours                          |

### PRODUCT SPECIFICATIONS CONTD.

| <b>Material Specifications</b> |   |
|--------------------------------|---|
| 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 |
| Insulator Material             | LCP(Liquid Crystal Polymer) GLCP-30F or PPS per MIL-M-24519 GST-40F       |

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## M32139 Mil-Spec Part Number Definition

