

SERIES 89 NANOMINIATURE Rectangular and Circular Connectors



Performance Summary, Materials and Finishes

INTRODUCTION Glenair's 0.025 Inch Contact Spacing Series 89 Nanominiature Connectors

The latest evolution in rectangular shaped connectors for board-level I/O applications. Featuring gold alloy TwistPin contacts and aluminum, titanium or stainless steel shells, the Nanominiature is the smallest, yet remarkably robust, connector we make. Glenair is one of the first interconnect manufacturers to qualify to the new MIL-DTL-32139 Nanominiature Mil-Spec for these precision-machined connectors that deliver both ultra high density and maximum weight and space savings. These high reliability ultra miniature interconnects are ideal for critical applications where size and weight restrictions preclude the use of larger connectors such as M24308 D-Sub-miniatures. Ideal for military applications of all types, the rugged contact system allows Glenair's Nano connectors to be used in the most demanding miniaturized applications. The Glenair Nano contact system consists of a TwistPin (a miniaturized version of the Glenair Micro-D TwistPin) and a tubular socket providing excellent durability and superior resistance to shock and vibration. Accommodating #30 or #32 AWG wire, Nano TwistPin contacts handle 1 AMP current rating.

SERIES 89 NANOMINIATURE CONNECTOR PERFORMANCE SUMMARY

Contact Spacing	.025" (0.64) Contact Centers
Wire Accommodation	#30-#32 AWG
Current Rating	1 AMP Maximum tested per EIA-364-70
Voltage Rating (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.
Optional High Operating Temperature	Mod Code 534 rated up to 200° 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

MATERIALS AND FINISHES

Connector Shell	Aluminum Alloy, Cadmium Plated per SAE-AMS-QQ-P-416 Type II Class 1. Aluminum Alloy, Electroless Nickel Plated Per SAE-AMS-2404, Class 3 or 4, Grade B Aluminum Alloy, Nickel Fluorocarbon Polymer Aluminum Alloy, Zinc Nickel (Black) Per ASTM B841 Titanium Alloy per MIL-T-81556, Unplated 300 Series Stainless Steel per ASTM A276, Passivated IAW SAE AMS 2700
Insulator	Liquid Crystal Polymer (LCP), per MIL-M-24519 GLCP-30F, 30% Glass-Filled or Polyphenylene Sulfide (PPS)
Pin Contact	Gold Alloy, Unplated
Socket Contact	Gold Alloy, Unplated
Hardware	Passivated, 300 Series Stainless Steel. Recommended Torque for Nano Jackscrews is 0.5 - 1.0 In/Lb for #0-80, 1.0 - 2.0 In/Lb for #2-56. Jackscrew hex drive for #0-80 is .050", #2-56 is 1/16". Ball end wrenches are not recommended.
PCB Trays	Liquid Crystal Polymer (LCP), per MIL-M-24519 GLP-30F, 30% Glass-Filled or Polyphenylene Sulfide (PPS)
Encapsulant	Epoxy