

Series 89 Nanominiature Connectors
The New Standard in .025 Inch (0.64 mm) TwistPin Connectors

Series 89 Master Product Selection

MIL-DTL-32139



MIL-DTL-32139 Metal Shell Connectors

- Aluminum, Titanium or Stainless Steel Shells
- 9, 15, 25, 31, 37 and 51 Contacts
- Prewired Plugs and Receptacles with #30 Awg Wire

Section A

Series 890



Series 890 Single Row Metal Shell

- Aluminum, Titanium or Stainless Steel Shells
- 9, 15, 25, 31, 37 and 51 Contacts
- Prewired Plugs and Receptacles with #30 or #32 Awg Wire
- Surface Mount or Thru-Hole Printed Circuit Board

Section B

Series 891



Series 891 Dual Row Metal Shell

- Aluminum, Titanium or Stainless Steel Shells
- 9, 15, 25, 31, 37 and 51 Contacts
- Prewired Plugs and Receptacles with #30 or #32 Awg Wire
- Surface Mount or Thru-Hole Printed Circuit Board

Section C

MIL-DTL-32139 Nanominiature Connectors Performance Summary, Materials and Finishes

Series 89 Connector Performance Summary

Contact Spacing	.025" (0.64) Contact Centers
Wire Accommodation	#30-#32 AWG
Current Rating	1 AMP Maximum
Voltage Rating (DWV)	300 VAC RMS Sea Level 100 VAC RMS 70,000 Feet
Insulation Resistance	5000 Megohms Minimum
Operating Temperature	-55° C. to +150° C.
Contact Resistance	71 Millivolt Drop Maximum, When Tested With 1 AMP Current, #30 AWG Wire
Vibration	20 g's, in Accordance with EIA-364-28, Condition IV
Shock	50 g's, in Accordance with EIA-364-27
Surability	500 Mating Cycles
Corrosion Resistance	48 Hours Salt Spray In Accordance With EIA-364-26, Condition B
Humidity	96 Hours, In Accordance with EIA-364-31 Condition A
Contact Engaging/Separation Force	2 Ounce (0.56 Newtons) Maximum, 0.5 Ounce (0.14) Minimum
Thermal Vacuum Outgassing	Total Mass Loss (TML) 1.0% Maximum, Volatile Condensable Material (VCM) 0.1% Maximum

Series 89 Materials and Finishes

Contact	Pin Contact: Spring Temper Gold Alloy, Unplated, Per ASTM B477 and ASTM B541. Socket Contact Gold Alloy, Unplated, Per ASTM B477 and ASTM B541.
Insulator	Liquid Crystal Polymer (LCP) per MIL-M-24519 GLP-30F, 30% Glass-Filled
Shell	Aluminum Alloy, Cadmium Plated per SAE-AMS-QQ-P-416 Type II Class 1. Aluminum Alloy, Electroless Nickel Plated Per SAE-AMS-C-26074, Class 3 or 4, Grade B Titanium Alloy per MIL-T-81556, Unplated 300 Series Stainless Steel per ASTM A582
Wire	See How to Order Information for Wire Types
Encapsulant	Hysol Epoxy #4215

MIL-DTL-32139 Nanominiature Connectors
Single Row Metal Shell Pigtails (M32139/01 & /02)
How to Order



How To Order M32139 Single Row Metal Shell Connectors

Basic Spec	Slash Number -	Hardware	Shell Material	Space Class	
<p>M32139/</p> <p>Note: order with "GS" prefix until QPL approval is issued.</p> <p>GS32139/</p>	<p>Plugs</p> <p>01-A – Pin Connector, 9 Contacts 01-B – Pin Connector, 15 Contacts 01-C – Pin Connector, 21 Contacts 01-D – Pin Connector, 25 Contacts 01-E – Pin Connector, 31 Contacts 01-F – Pin Connector, 37 Contacts 01-G – Pin Connector, 51 Contacts</p> <p>Receptacles</p> <p>02-A – Socket Connector, 9 Contacts 02-B – Socket Connector, 15 Contacts 02-C – Socket Connector, 21 Contacts 02-D – Socket Connector, 25 Contacts 02-E – Socket Connector, 31 Contacts 02-F – Socket Connector, 37 Contacts 02-G – Socket Connector, 51 Contacts</p>	<p>NEMA HP3-ETXBBB Wire (#30 AWG, 7 Strand Silver-Coated Copper, Extruded PTFE Insulation, 250 V rms, 200° C.)</p> <p>01 – 6 Inches White 02 – 18 Inches White 03 – 36 Inches White 04 – 6 Inches 10 Color Repeat 05 – 18 Inches 10 Color Repeat 06 – 36 Inches 10 Color Repeat</p> <p>M22759/33-30 Wire (#30 AWG, 7 Strand Silver-Coated High-Strength Copper, Extruded Cross-Linked Modified ETFE Insulation, 600 V rms, 200° C.)</p> <p>07 – 6 Inches White 08 – 18 Inches White 09 – 36 Inches White 10 – 6 Inches 10 Color Repeat 11 – 18 Inches 10 Color Repeat 12 – 36 Inches 10 Color Repeat</p> <p>Composite PTFE/Polyimide Wire (#30 AWG, 7 Strand Silver-Coated High-Strength Copper, Tape-Wrapped Dual-wall Modified ETFE/Polyimide Insulation, 600 V rms, 200° C.)</p> <p>13 – 6 Inches White 14 – 18 Inches White 15 – 36 Inches White 16 – 6 Inches 10 Color Repeat 17 – 18 Inches 10 Color Repeat 18 – 36 Inches 10 Color Repeat</p>	<p>S Jackscrew, #0-80, Hex Head (Slash 01 Pin Connectors Only)</p> <p>T Threaded Hole, #0-80 (Slash 02 Socket Connectors Only)</p>	<p>C Aluminum Shell, Cadmium Plated</p> <p>N Aluminum Shell, Electroless Nickel Plated</p> <p>S Stainless Steel Shell, Passivated</p> <p>T Titanium Shell, Unplated</p>	<p>S Space Class</p> <p>(Not For Use With Cadmium Plated Aluminum Shells)</p> <p>Omit for Non-Space Applications</p>

Part Number Example

M32139/	02-A	01	S	N	S
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MIL-DTL-32139 Nanominiature Connectors
Dual Row Metal Shell Pigtails (M32139/03 & /04)
How to Order



How To Order M32139 Dual Row Metal Shell Connectors

Basic Spec	Slash Number - Insert Arrangement	Wire Type	Hardware	Shell Material and Finish	Space Class
M32139/ Note: order with "GS" prefix until QPL approval is issued. GS32139/	<p align="center">Plugs</p> <p>03-A – Pin Connector, 9 Contacts 03-B – Pin Connector, 15 Contacts 03-C – Pin Connector, 21 Contacts 03-D – Pin Connector, 25 Contacts 03-E – Pin Connector, 31 Contacts 03-F – Pin Connector, 37 Contacts 03-G – Pin Connector, 51 Contacts</p> <p align="center">Receptacles</p> <p>04-A – Socket Connector, 9 Contacts 04-B – Socket Connector, 15 Contacts 04-C – Socket Connector, 21 Contacts 04-D – Socket Connector, 25 Contacts 04-E – Socket Connector, 31 Contacts 04-F – Socket Connector, 37 Contacts 04-G – Socket Connector, 51 Contacts</p>	<p>NEMA HP3-ETXBBB Wire (#30 AWG, 7 Strand Silver-Coated Copper, Extruded PTFE Insulation, 250 V rms, 200° C.)</p> <p>01 – 6 Inches White 02 – 18 Inches White 03 – 36 Inches White 04 – 6 Inches 10 Color Repeat 05 – 18 Inches 10 Color Repeat 06 – 36 Inches 10 Color Repeat</p> <p>M22759/33-30 Wire (#30 AWG, 7 Strand Silver-Coated High-Strength Copper, Extruded Cross-Linked Modified ETFE Insulation, 600 V rms, 200° C.)</p> <p>07 – 6 Inches White 08 – 18 Inches White 09 – 36 Inches White 10 – 6 Inches 10 Color Repeat 11 – 18 Inches 10 Color Repeat 12 – 36 Inches 10 Color Repeat</p> <p>Composite PTFE/ Polyimide Wire (#30 AWG, 7 Strand Silver-Coated High-Strength Copper, Tape-Wrapped Dual-wall Modified ETFE/Polyimide Insulation, 600 V rms, 200° C.)</p> <p>13 – 6 Inches White 14 – 18 Inches White 15 – 36 Inches White 16 – 6 Inches 10 Color Repeat 17 – 18 Inches 10 Color Repeat 18 – 36 Inches 10 Color Repeat</p>	<p align="center">S</p> <p>Jackscrew, #0-80, Hex Head (Slash 01 Pin Connectors Only)</p> <p align="center">T</p> <p>Threaded Hole, #0-80 (Slash 02 Socket Connectors Only)</p>	<p align="center">C</p> <p>Aluminum Shell, Cadmium Plated</p> <p align="center">N</p> <p>Aluminum Shell, Electroless Nickel Plated</p> <p align="center">S</p> <p>Stainless Steel Shell, Passivated</p> <p align="center">T</p> <p>Titanium Shell, Unplated</p>	<p align="center">S</p> <p>Space Class</p> <p align="center">(Not For Use With Cadmium Plated Aluminum Shells)</p> <p align="center">Omit for Non-Space Applications</p>

Part Number Example

M32139/

03-A

01

S

N

S