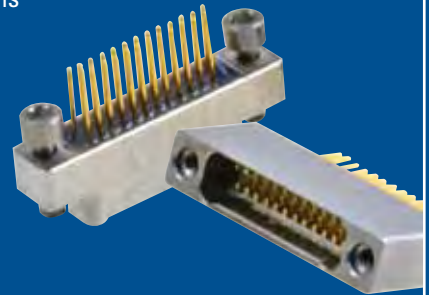


NANO CONNECTORS

Nano-miniature, Dual row, 180 degree Connector, with Polarised shell providing optimum miniaturisation.

FEATURES

- Both plug and socket available in 9,15,21,25,31,37 and 51 positions
- Dual Row 180 ° Pig Tail / Solder Cup
- 0.762 mm Pitch (0.030")
- Z Axis compression mating (Patent Pending)
- MIL-DTL-83513 Rated
- MIL-DTL-32139 Style
- Jackscrews 0.80 UNF
- Low mating Force
- Mechanical wipe contact action
- Non magnetic shell



MATERIALS

Insulator:	Poyeltherimide (PEI)
Socket Contact:	Brass
Socket Contact Plating:	Gold Plated 1.25 microns (50 microins) min
Plug Contact:	Brass, Molybdenum
Plug Contact Plating:	Gold Plated 1.25 microns (50 microins) min Gold plated 0.5 microns (20 microins) min.
Shell:	303 Stainless Steel
Shell Plating:	Passivated to FED Spec QQ-P-35C type II (Def Stan 03-2 Method M)
Sealing:	Epoxy Compound

ENVIRONMENTAL

Operating Temperature:	-55°C to +125°C
Shock:	50G's in accordance with MIL DTL 83513
Vibration:	20G's in accordance with MIL DTL 83513
Contact does not relax under the effects of time, temperature, thermal cycling and humidity	
Salt Spray:	48 hours in accordance with EIA-364-26 Condition B
Humidity:	96 hours in accordance with EIA-364-31 Condition B (except steps 7a and 7b)

ELECTRICAL

Current Rating:	3 Amps max in Isolation, 1.8 Amps fully loaded @ 30 AWG wire
Withstanding Voltage:	600VAC @ Sea level
Low level signal level Contact Resistance:	36 milliohms typical mated pair
Insulation Resistance:	500V and 5000 Megohms (MIL DTL 83513, EIA-364-21)
Contact Resistance:	34 Millivolt when tested with 1 Amp current, 30 AWG wire (EIA-364-27)

MECHANICAL

Mating Force:	Min 0.56 N per contact for connector mating force (nominal performance)
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CONTACT ARRANGEMENTS (Mating view of pin insert)



9 Cavity



15 Cavity



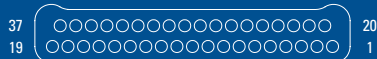
21 Cavity



25 Cavity



31 Cavity



37 Cavity



51 Cavity

Plug Connector

Notes:
Engaging face of insert shown.
Cavity identification numbers are for reference only and do not appear on the part.



9 Cavity



15 Cavity



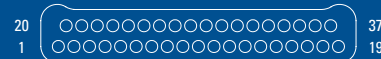
21 Cavity



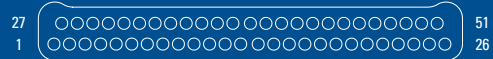
25 Cavity



31 Cavity



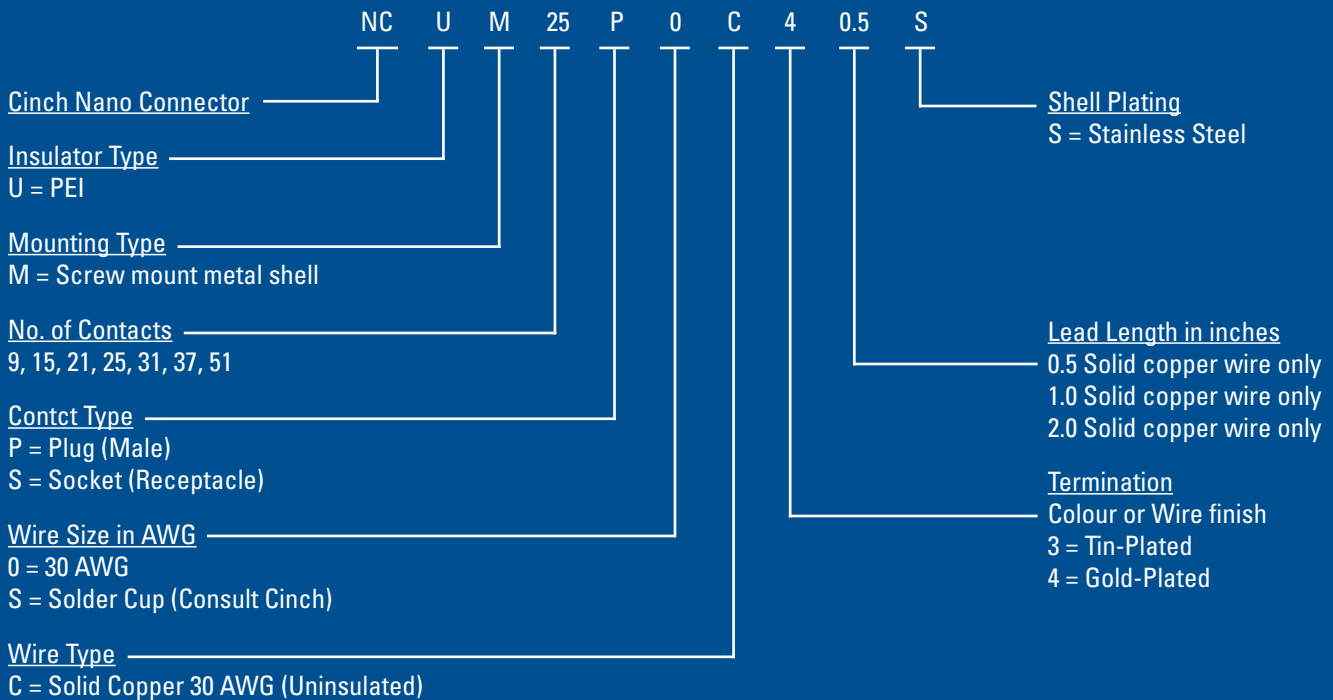
37 Cavity



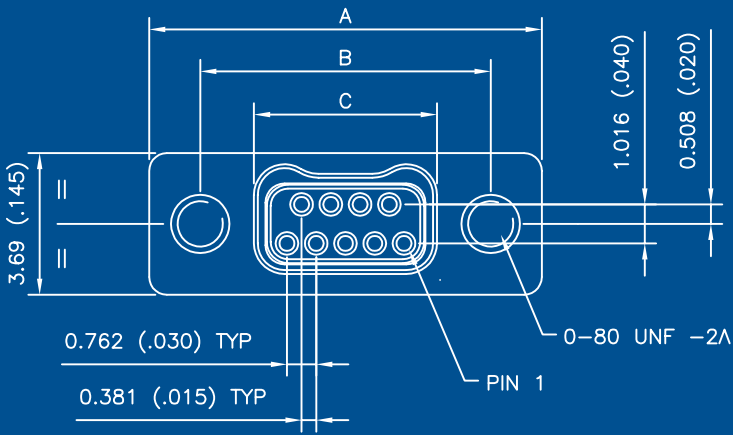
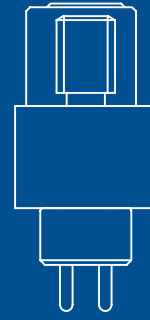
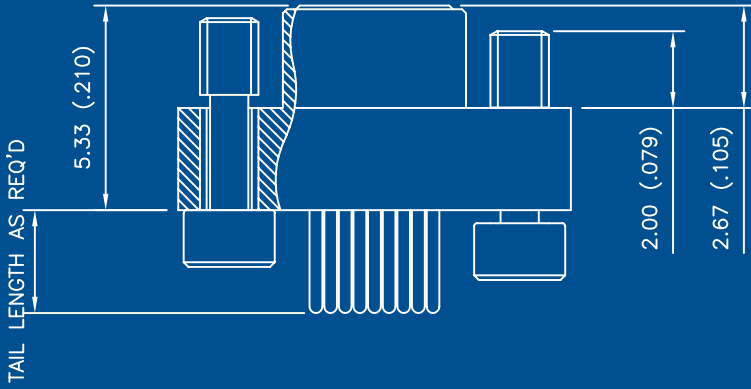
51 Cavity

Socket Connector

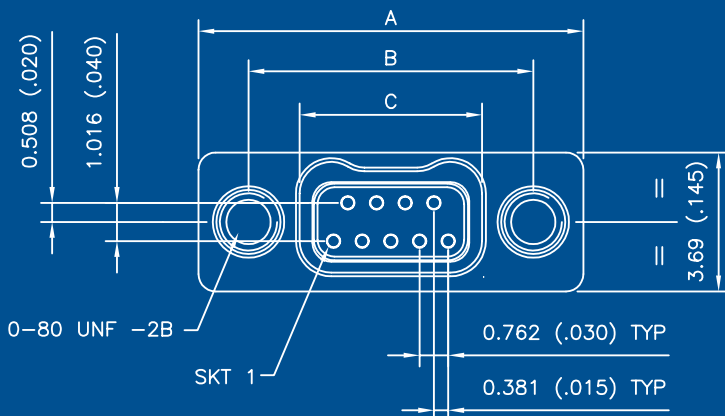
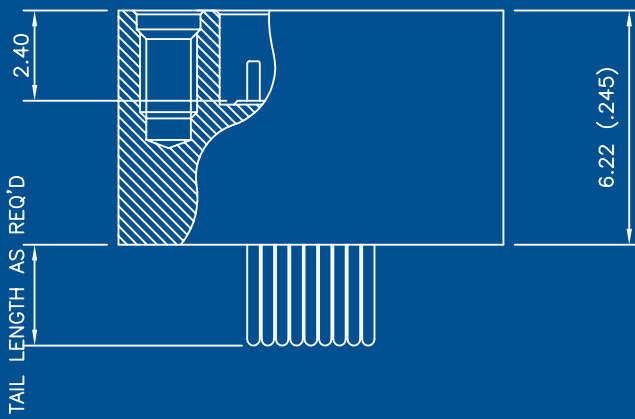
Ordering Information



Connector Dimensions



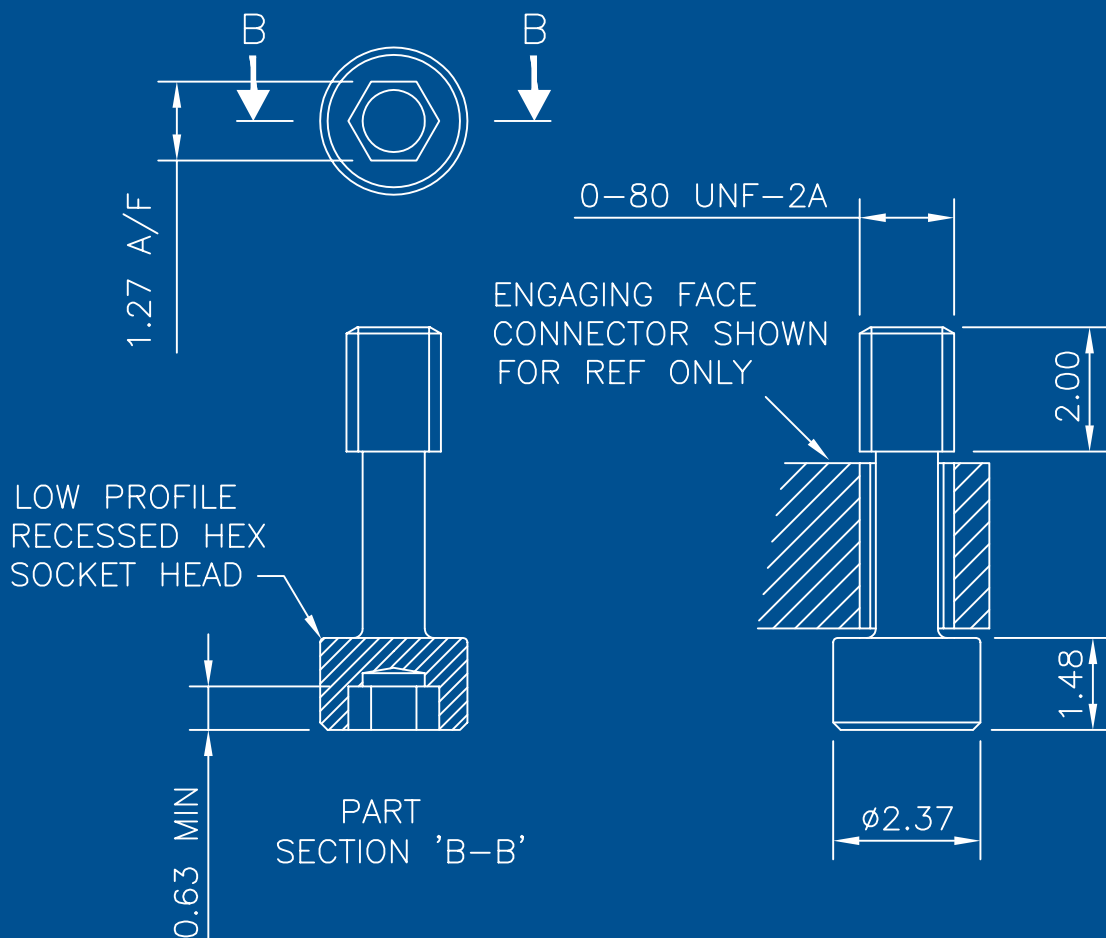
CINCH NANO-MINIATURE
MIL-DTL-32139 STYLE
.030 PITCH CRS,
180 DEGREE PIGTAIL
'PLUG' CONNECTOR SHOWN



CINCH NANO-MINIATURE
MIL-DTL-32139 STYLE
.030 PITCH CRS,
180 DEGREE PIGTAIL
'SOCKET' CONNECTOR SHOWN

LAYOUT	A basic		B centres		C basic	
	mm.	(in.)	mm.	(in.)	mm.	(in.)
9 Plug	10.23	.403	7.56	.298	4.76	.188
9 Socket	10.23	.403	7.56	.298	4.84	.191
15 Plug	12.51	.493	9.85	.388	7.05	.278
15 Socket	12.51	.493	9.85	.388	7.13	.281
21 Plug	14.80	.583	12.14	.478	9.34	.368
21 Socket	14.80	.583	12.14	.478	9.42	.371
25 Plug	16.32	.643	13.66	.538	10.86	.428
25 Socket	16.32	.643	13.66	.538	10.94	.431
31 Plug	18.61	.733	15.95	.628	13.15	.518
31 Socket	18.61	.733	15.95	.628	13.23	.521
37 Plug	20.89	.823	18.23	.718	15.43	.608
37 Socket	20.89	.823	18.23	.718	15.51	.611
51 Plug	26.23	1.033	23.57	.928	20.77	.818
51 Socket	26.23	1.033	23.57	.928	20.85	.821

Hardware Detail





Connector Performance Specifications

Property	Requirement	Test Method
Current Rating	1.8 amp (Fully loaded) 3 amp (contact pairs in isolation)	
Dielectric Withstanding Voltage	600VAC @ Sea level	MIL-STD-1344, Method 3001
Contact Resistance	Typically 34 Millivolts @ 1 Amp	EIA-364-06
Low Level Contact Resistance	Typically <36 Milliohms	EIA-364-23
Insulation Resistance	5000 megohms	MIL DTL 83513, EIA-364-21
Magnetic Permeability	Consult Cinch	
Mating Force	Typically 0.5 Newtons per contact	
Contact Retention	Consult Cinch	
Operating Temperature	-55°C to +125°C	MIL-DTL-83513, MIL-DTL-32139
Durability	>200 mated connector cycles	EIA-364-06
Salt spray (Corrosion)	48 Hours	EIA-364-26 Condition B
Shock	50 G's	MIL-DTL-83513, MIL-STD-1344A Method 20004.1 Condition E (EIA-364-26 Condition B)
Vibration	20 G's	MIL-DTL-83513, MIL-STD-202G Method 204 Condition D (EIA-364-28)

Engineers Check List

SECTOR

- Sea
- Aerospace
- Sub-Terrain
- Ground Support
- Armoured Vehicle
- Rail
- Space
- Radar
- Avionics
- Munitions / Missile

CONNECTOR STYLE

- Rectangular
- Circular
- Z Axis Compression
- Power & Signal
- Hermetic
- IP Rated
- Filtered
- Edge Connector
- Multipole
- High Speed
- Rugged Enclosure

WIRE TYPE

- Stranded
- Solid
- Twisted pairs
- Co-Axial
- Colour Code (Single / multi)
- Multi core
- Shielded
- Wire AWG _____
- Custom cable

ENVIRONMENT

- Dust
- Moisture Resistant
- Full Water Immersion
- Chemical Compatibility
- RoHS
- Low Smoke / Zero Halogen
- Extreme Temperature Tolerance
- Flame Retardant

MARKET SEGMENT

- Oil Petroleum Gas (OPG)
- Renewable Energy
- Military & Defence
- Commercial
- Computer
- Industrial
- Telecommunications
- Medical

CONSTRUCTION

- Male Female
- Crimp
- Solder
- PC Tail 90° 180°
- RF Signals
- Number Contact points _____
- Contact Pitch _____
- Housing Material
- Plastic Metal

CUSTOM INTERCONNECT

- Single Ended
- Double Ended
- Multi Limb Cable Assembly
- Strain Relief Backshell
- Environmental Backshell / Boot
- 360° Screened Backshell
- Moulded Strain Relief
- Woven
- Flexible Circuit

SPECIFICATION

- Operating Temperature Range _____
- Mating Cycles _____
- Voltage Rating _____
- Current Rating _____
- Filtration Rating _____
- Materials / Finish _____
- Contact Plating _____
- Housing Plating _____



Proven Excellence

For over 70 years, Cinch has been a reliable supplier of a variety of quality connector products to various industries. We are a multi-national manufacturer with manufacturing facilities in the U.S, U.K and Mexico.

Cinch has applied its extensive expertise in interconnection technology to engineer and manufacture connectors of various complexities using state-of-the-art technology and tooling. Mechanical design is accomplished using Pro/E® 3D solid modelling and AutoCAD® Supported by nonlinear and linear Finite Element Analysis, and Mold Flow software.

Our engineers utilize in-house capabilities in high frequency interconnect simulation, SPICE model generation and high frequency testing to develop the optimum product.

All products are validated in Cinch's First Article, mechanical, electrical, and environmental test facilities ensuring the finished products meet our customers' most stringent specifications.

Simply, your connectors are manufactured in state-of-the-art facilities AS9100 approved that are committed to customer satisfaction and continuous improvement.



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