NANO-D CONNECTORS

ELEVATING SIGNAL INTEGRITY IN AEROSPACE AND MILITARY APPLICATIONS



Amphenol CANADA
MILITARY & AEROSPACE



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For more than 50 years, Amphenol Canada Corp. a subsidiary of Amphenol Corporation has been an international leader in the manufacture of Rectangular I/O and EMI Filtered Connectors.

We design, manufacture and test EMI / EMP filter and non-filter connectors, which are used worldwide in military, aerospace, and commercial applications. As part of Amphenol Corporation, we have the advantage of access to technologies and processes of Amphenol's worldwide facilities. Our expertise in understanding and supporting our customers' interconnect needs has earned us a reputation of excellence among the world's leading users of electronic components.

CUSTOMER SERVICE

At Amphenol Canada, customer service is a solid commitment from all our employees. Our product managers, application engineers, product specialists, and sales representatives are able to answer your questions and assist you in choosing the right connectors for your applications.

Whether you need standard or custom designed connectors, our marketing department is your liaison with Amphenol Canada's engineering, quality and manufacturing experts.

QUALITY AND RELIABILITY

Certified to ISO 9001 and AS9100D, Amphenol Canada's broad base of customers and the high levels of technology in which they are involved make it essential that Amphenol's own products are of the highest quality and reliability.

Please contact us for RoHS requirements.

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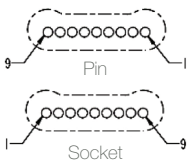
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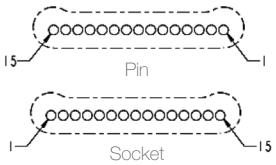
Circular Nano **25**

SINGLE ROW

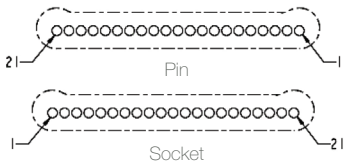
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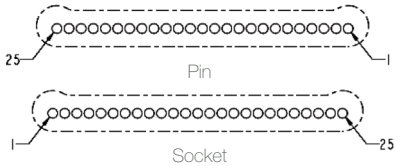
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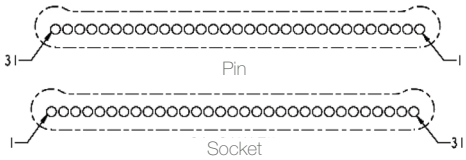
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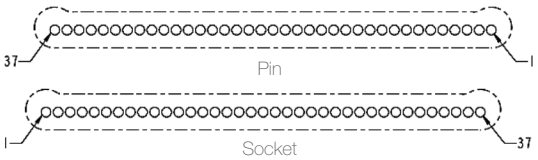
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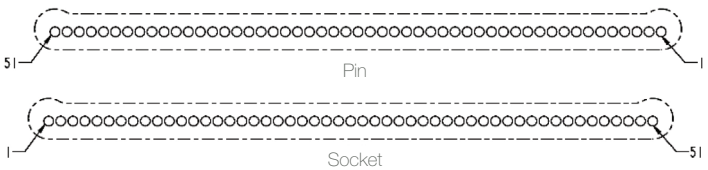
31 Contacts



37 Contacts

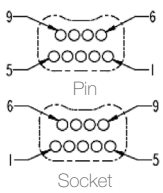


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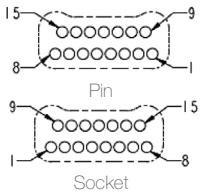


DUAL ROW

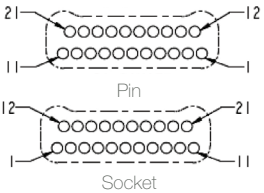
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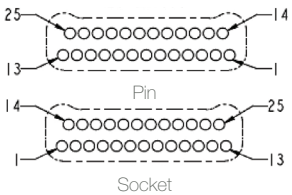
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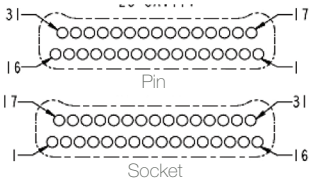
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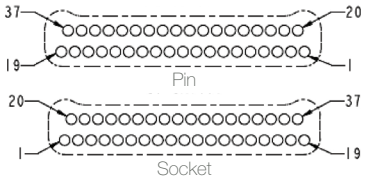
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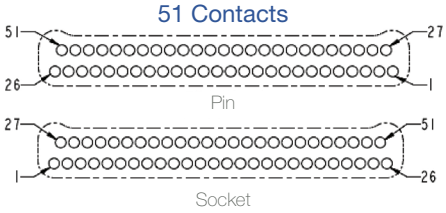
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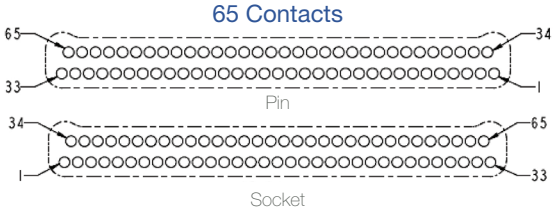
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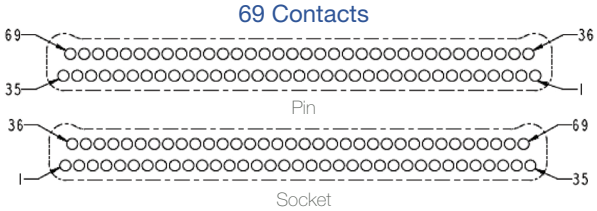
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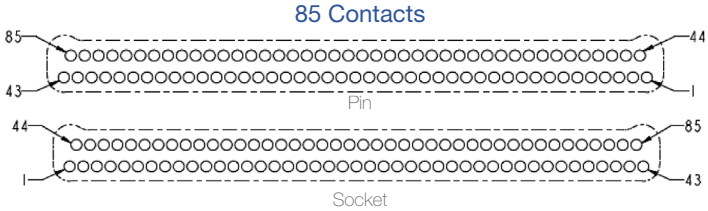
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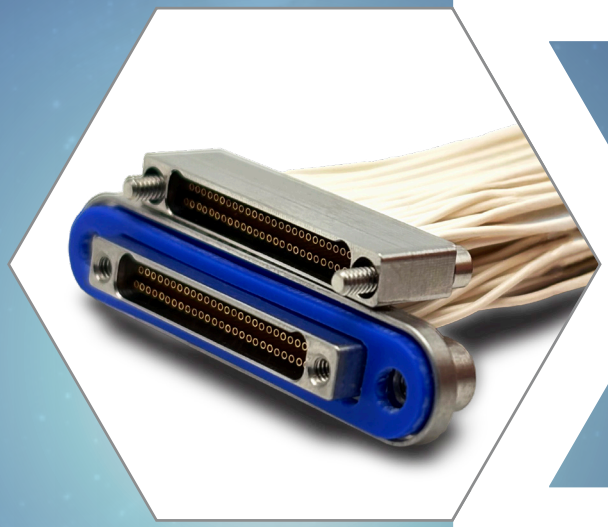
69 Contacts



85 Contacts



Amphenol CANADA
MILITARY & AEROSPACE



NANO-D
STANDARD
N9A SERIES

Engineered for maximum density in aerospace and C4I systems, these connectors provide a 50% footprint reduction over standard Micro-D interfaces.

The N9A series deliver high-reliability performance where space and weight are at a premium.

FEATURES

- 0.025 (0.635mm) ultra-compact contact pitch
- MIL-DTL-32139 compliant stamped pin technology
- Lightweight aluminum or titanium shell options
- High-density board-level I/O optimization
- Configurable latching and polarization hardware
- Rugged construction for extreme avionics environments

SPECIFICATIONS

Shell	Material	Metal	Aluminum alloy Stainless Steel (Passivated)	
	Finish	Metal	Anodized (Black) Zinc Nickel (Black Chromate) Cadmium (Yellow Chromate) Olive Drab Cadmium Chem Film	» Gold » Zinc Nickel - 48 hrs » Pure Electro-Deposited Al » Nickel fluorocarbon polymer » Electroless Nickel
Insulator / PCB Backshell			Liquid Crystal Polymer (LCP)	
Contacts	Material		Copper alloy, 50 micro-inches gold plate over nickel	
	Spacing		0.050 (1.27mm) centers	
	Quantity		9 | 15 | 21 | 25 | 31 | 37 | 51 | 65 | 69 | 85	
Hardware			Stainless steel, passivated	
Potting Material	Standard		EP1730-1 or equivalent	
	High Temp		EP173859 or equivalent	
Wire	Insulated		NEMA-HP3 (MIL-W-16878) SAE AS22759 DSCC 04047	
Coupling			Friction or Jackscrews into jackposts/threaded Inserts	





Size 25 Nano-D
0.575 x 0.125
(14.7 x 3.25mm)

X

Size 25 Micro-D
1.185 x 0.310
(30.1 x 7.87mm)

HARNESSED CONNECTORS
HOW TO ORDER

PART NUMBER KEY

RoHS Compliance	Nano Series		Shell Finish	Size	Gender		Wired Series	Wire Type	Wire Finish	Wire Length	Hardware		Non-Std. Length Code
1	2		3	4	5		6	7	8	9	10		11
E	N9A	–	N	109	P	–	C	A	4	F	S	–	48

RoHS Compliance (1)

E	RoHS Compliant
	Blank for Non-RoHS

Series (2)

N9A	Nano-D — M32139 STD
N99	Integrated Shell Nano-D
N9H	Harnessed Nano-D

Shell Finish (3)

A	Pure Electro-Deposited Aluminum
B	Zinc Nickel (Black Chromate)
C	Cadmium (Yellow Chromate)
D	Olive Drab Cadmium
F	Nickel fluorocarbon polymer
G	Gold
K	Zinc Nickel - 48 Hrs
L	Anodized (Black)
N	Electroless Nickel
P	Plastic Shell
S	Stainless Steel, Passivated
T	Titanium
V	Chem Film
Z	Zinc Nickel

Connector Size (Number of rows + Number of contacts) (4)

SINGLE ROW			
109	121	131	151
115	125	137	
DUAL ROW			
209	225	251	285
215	231	265	
221	237	269	

Gender (5)

P	Plug
S	Receptacle
	CONNECTOR SAVER
PS	Pin to Socket
	GENDER CHANGERS
PP	Pin to Pin
SS	Socket to Socket

Wired Series* (6)

C	Custom Wire
D	Custom Wire + Separate Backshell
	WIRED PANEL MOUNT
P	Standard Panel Mount (Gasket not supplied)
F	Custom Wire + Fluorosilicone Gasket
S	Custom Wire + Passivated Silver Plated Aluminum Filled Fluorosilicone Gasket
N	Custom Wire + Nickel Plated Aluminum Filled Fluorosilicone Gasket
R	Custom Wire + Panel O-Ring

** Omit for Connector Saver & Gender Changer*

Wire Type* (7)

	GENERAL APPLICATIONS
A	7 Strand per NEMA-HP3 (MIL-W-16878/4)
C	19 Strand Per NEMA-HP3 (MIL-W-16878/4)
	MILITARY APPLICATIONS
F	SAE AS22759/33 (AWG 30 only)
H	SAE AS22759/47 (AWG 30 only) (alternate space)
Q	SAE AS22759/51 (AWG 30 only) (alternate space low FI)
T	SAE AS22759/52 (AWG 30 only) (alternate low FI)

Wire Type* (7) *Continued*

	MILITARY APPLICATIONS
0	NEMA HP3 (AWG 30) NEMA HP3-ETXBBB ()
7	04047-30A-()

** Omit for Connector Saver & Gender Changer*

Wire Finish (Color)*† (8)

1	All White – M32139 STD
2	All Yellow
3	Solid Wire Uninsulated, Tin Plated
4	Solid Wire Uninsulated, Gold Plated
6	1st 10 Colors black thru white, repeated – M32139 STD
7	1st 15 colors black thru white/Yellow Repeated (Size 21+ Only)
8▲	Twisted Pairs, White/Blue
9▲	Twisted Pairs, White/Blue, Marked

** Omit for Connector Saver & Gender Changer*
† Only available for Custom Wire Types
▲ Consult factory for details

Wire Length*† – Dimensions in inches (9)

H	6.00 (+1.00/-0.00) – M32139 STD
A	18.00 (+1.00/-0.00) – M32139 STD
B	36.00 (+1.00/-0.00) – M32139 STD
C	72.00 (+1.00/-0.00)
F	Non-Standard Length

** Omit for Connector Saver & Gender Changers*
† Only available for Custom Wire Types

Hardware — Pre-installed by factory 10
Metric Codes Available

	JACKSCREWS
S	Captive, Allen head – **M32139 STD**
Y	Captive, Allen head (metric)
	SCREWLOCK
K	Captive Screwlock (short)
L	Captive Screwlock (long)
	MOUNTING HOLE
B	Mounting Holes – **M32139 STD**
N	2 Holes (#2-56 UNC-2B) + Inner #0-80 UNF-2B – **M32139 STD**
M	2 Threaded M2x0.4 6H Holes + Inner #0-80 UNF-2B – **M32139 STD**
T	Standard Threaded Mount (#0-80 UNF-2B) – **M32139 STD**
W*	2 Holes (#2-56 UNC-2B) + Inner #2-56 UNC-2B
V*	2 Threaded M2x0.4 6H Holes + Inner #2-56 UNC-2B

** Only available for 285 size*

Non-Standard Length Code 11
Dimensions in inches

Stranded Wire	1 = 1.00 100 = 100.00
Solid Wire (0.109 < Length < 1.00)	110=.110 999=.999

HARNESSED CONNECTORS

M32139 REFERENCE

M32139 part number references are for illustrative purposes only.

CRIMP TERMINATION

PART NUMBER KEY

1 Connector Series		2 Specification Sheet		3 Insert Arrangement	4 Wire Type/ Length	5 Hardware	6 Shell Finish	7 Space Class	8 Gasket Material	9 Mounting Thread
M32139	/	01	-	F	01	S	A	S	01	M

1 Connector Series

M32139	Nano-D MIL-DTL-32139 spec.

2 Specification Sheet

SINGLE ROW	
01	Plug (pin)
02	Receptacle (socket)
DUAL ROW	
03	Plug (pin)
04	Receptacle (socket)
09	Plug (Pin) - Rear Panel Mount
10	Receptacle (Socket) - Rear Panel Mount

3 Insert Arrangement*

A	9	E	31	J	69
B	15	F	37	K	85
C	21	G	51		
D	25	H	65		

** Single Row available only from A (9) to G (51)*

4 Wire Type/Length

6 (152MM)	
01	NEMA HP3-ETXBBB9
04	NEMA HP3-ETXBBB( )
07	M22759/33-30-9
10	M22759/33-30-( )
13	04047-30A-9
16	04047-30A-( )
19	M22759/47-30-9
22	M22759/47-30-( )
25	M22759/51-30-9
28	M22759/51-30-( )
31	M22759/52-30-9
34	M22759/52-30-( )

4 Wire Type/ Length *Continued*

18 (457MM)	
02	NEMA HP3-ETXBBB9
05	NEMA HP3-ETXBBB( )
08	M22759/33-30-9
11	M22759/33-30-( )
14	04047-30A-9
17	04047-30A-( )
20	M22759/47-30-9
23	M22759/47-30-( )
26	M22759/51-30-9
29	M22759/51-30-( )
32	M22759/52-30-9
35	M22759/52-30-( )
36 (914MM)	
03	NEMA HP3-ETXBBB9
06	NEMA HP3-ETXBBB( )
09	M22759/33-30-9
12	M22759/33-30-( )
15	04047-30A-9
18	04047-30A-( )
21	M22759/47-30-9
24	M22759/47-30-( )
27	M22759/51-30-9
30	M22759/51-30-( )
33	M22759/52-30-9
36	M22759/52-30-( )

5 Hardware — Pre-installed by factory

S	Jackscrew Captivated
T	Thread hole

6 Shell Finish

A	Pure Electro-Deposited Aluminum
C	Cadmium (Yellow Chromate)
F	Nickel fluorocarbon polymer
N	Electroless Nickel
S	Stainless Steel, Passivated
T	Titanium
Z	Zinc Nickel

7 Space Class

	Omit for non-space applications
S	Space Class

8 Gasket Material

	Omit for no gasket
01	Fluorosilicone IAW MIL-DTL-25988, Type II, Class I, Grade 70
02	Passivated Silver Plated Aluminum Filled Fluorosilicone IAW MIL-DTL-83528, Type D (CHO-Seal 1298 or Equivalent)
03	Nickel Plated Aluminum Filled Fluorosilicone, (CHO-Seal 6503 or Equivalent)

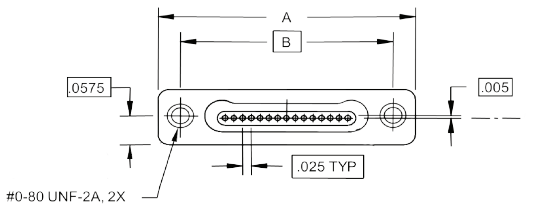
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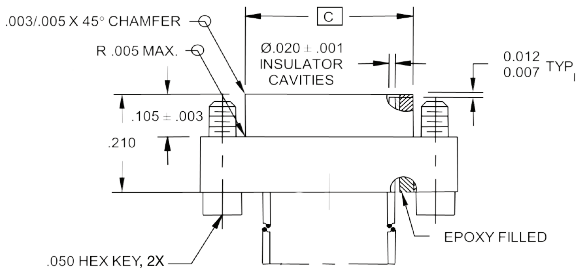
	Omit for #2-56 UNC-2B
M	M2X0.4 6H

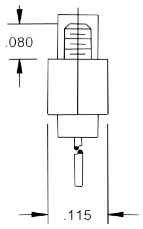
** Only available for Specification Sheet 09 & 10*

SINGLE ROW

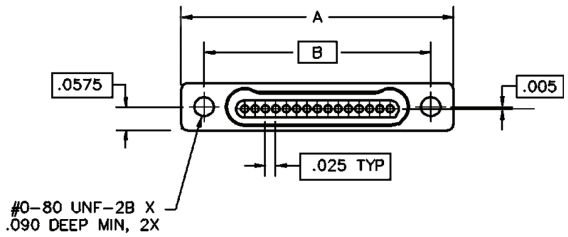
PLUG

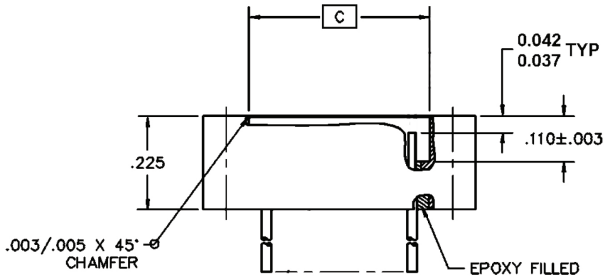


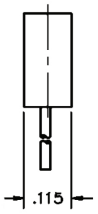




RECEPTACLE





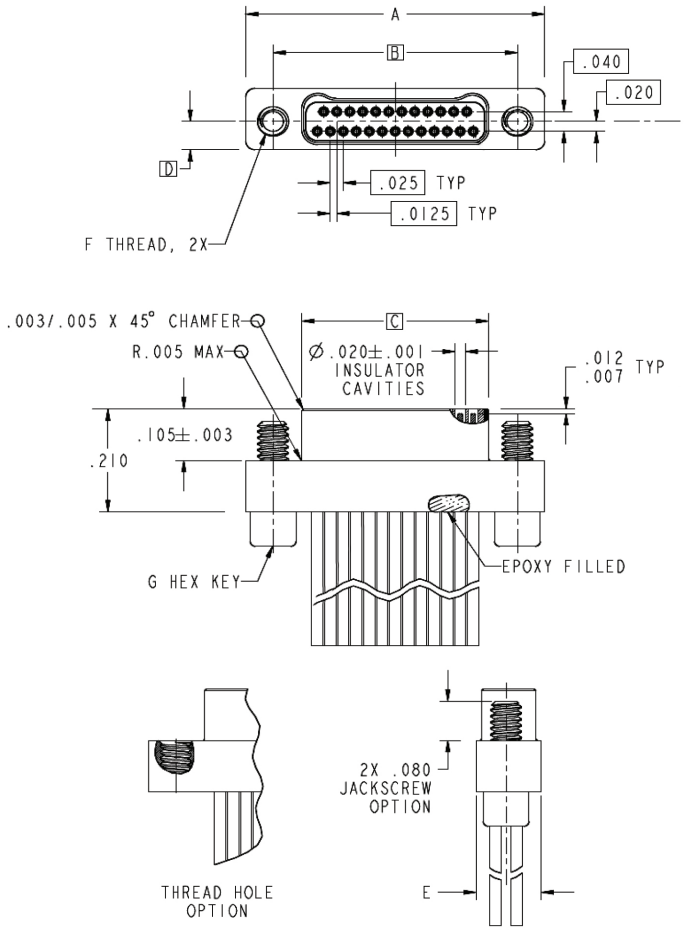


Dimensions are in inch (mm)

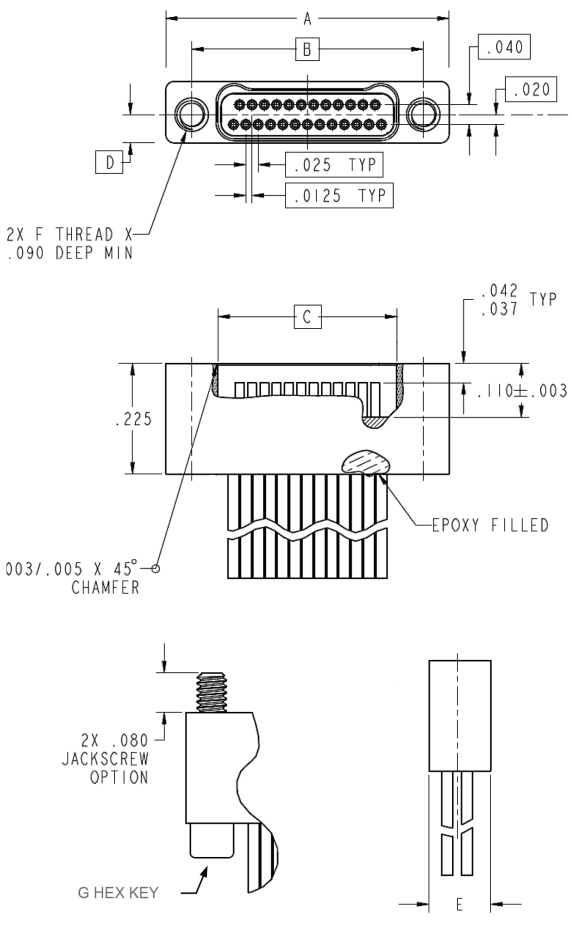
SIZE	A	B	C	
			PLUG	RECEPTACLE
09	.500 (12.70)	.395 (10.03)	.284 (7.21)	.285 (7.24)
15	.650 (16.51)	.545 (13.84)	.434 (11.02)	.435 (11.05)
21	.800 (20.32)	.695 (17.65)	.584 (14.83)	.585 (14.86)
25	.900 (22.86)	.795 (20.19)	.684 (17.37)	.685 (17.40)
31	1.050 (26.67)	.945 (24.00)	.834 (21.18)	.835 (21.21)
37	1.200 (30.48)	1.095 (27.81)	.984 (24.99)	.985 (25.02)
51	1.550 (39.37)	1.445 (36.70)	1.334 (33.88)	1.335 (33.91)

DUAL ROW

PLUG



RECEPTACLE

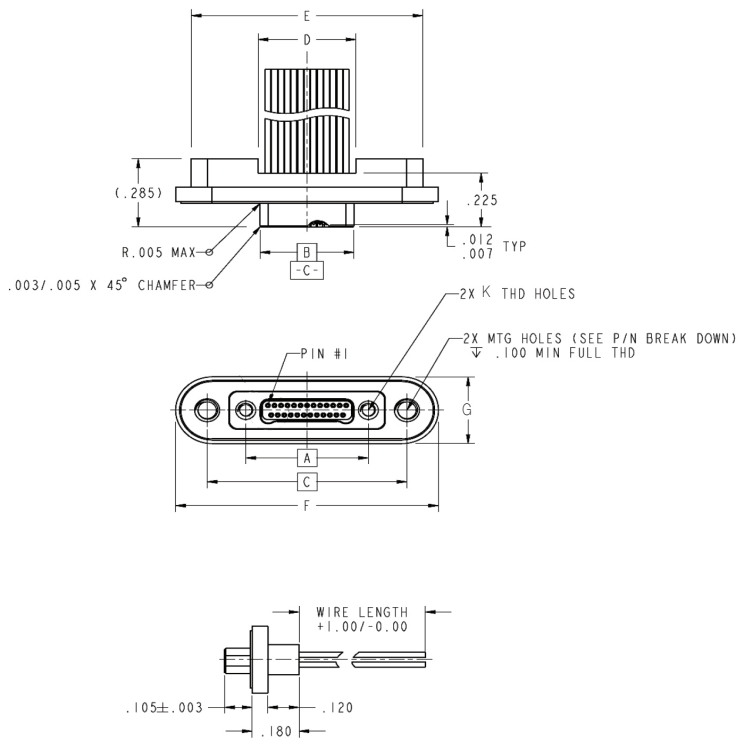


Dimensions are in inch (mm)

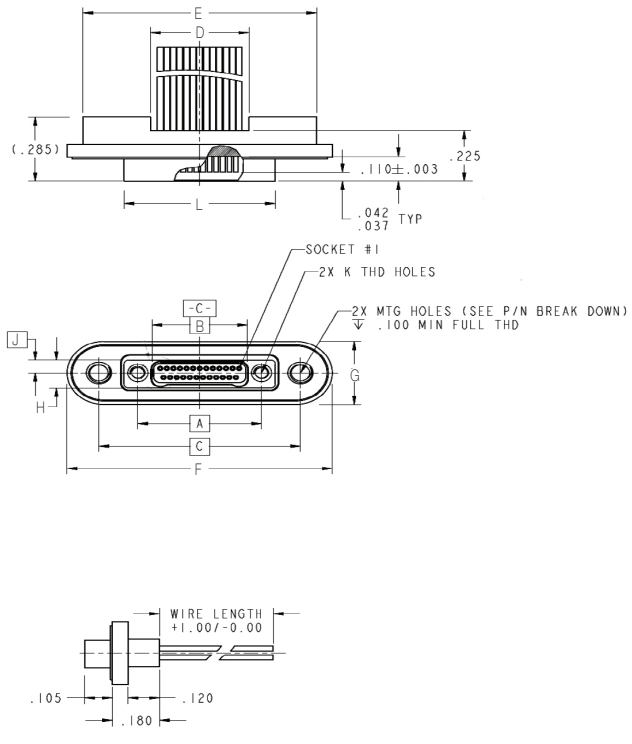
SIZE	A	B	C		D	E	F Thread	G Hex Key
			PLUG	RECEPTACLE				
09	.375 (9.53)	.270 (6.86)	.160 (4.06)	.163 (4.14)	.0575 (1.46)	.125 (3.18)	#0-80 UNF	0.050
15	.450 (11.43)	.345 (8.76)	.235 (5.97)	.238 (6.05)				
21	.525 (13.34)	.420 (10.67)	.310 (7.87)	.313 (7.95)				
25	.575 (14.61)	.470 (11.94)	.360 (9.14)	.363 (9.22)				
31	.650 (16.51)	.545 (13.84)	.435 (11.05)	.438 (11.13)				
37	.725 (18.42)	.620 (15.75)	.510 (12.95)	.513 (13.03)				
51	.900 (22.86)	.795 (20.19)	.685 (17.40)	.688 (17.48)				
65	1.075 (27.31)	.970 (24.64)	.860 (21.84)	.863 (21.92)				
69	1.125 (28.58)	1.020 (25.91)	.910 (23.11)	.913 (23.19)				
85	1.377 (34.98)	1.246 (31.65)	1.110 (28.19)	1.113 (28.27)	.0700 (1.78)	.150 (3.81)	#2-56 UNC	1/16

DUAL ROW — REAR PANEL MOUNT

PLUG



RECEPTACLE



Dimensions are in inch (mm)

SIZE	A	B		C	D	E	F	G	J	L
		PLUG	RECEPTACLE							
09	.270 (6.86)	.160 (4.06)	.163 (4.14)	.566 (14.38)	.175 (4.45)	.688 (17.48)	.808 (20.52)	.280 (7.11)	.0575 (1.46)	.375 (9.53)
15	.345 (8.76)	.235 (5.97)	.238 (6.05)	.641 (16.28)	.250 (6.35)	.763 (19.38)	.883 (22.43)			.450 (11.43)
21	.420 (10.67)	.310 (7.87)	.313 (7.95)	.716 (18.19)	.325 (8.26)	.838 (21.29)	.958 (24.33)			.525 (13.34)
25	.470 (11.94)	.360 (9.14)	.363 (9.22)	.766 (19.46)	.375 (9.53)	.888 (22.56)	1.008 (25.60)			.575 (14.61)
31	.545 (13.84)	.435 (11.05)	.438 (11.13)	.841 (21.36)	.450 (11.43)	.963 (24.46)	1.083 (27.51)			.650 (16.51)
37	.620 (15.75)	.510 (12.95)	.513 (13.03)	.916 (23.27)	.525 (13.34)	1.038 (26.37)	1.158 (29.41)			.725 (18.42)
51	.795 (20.19)	.685 (17.40)	.688 (17.48)	1.091 (27.71)	.700 (17.78)	1.213 (30.81)	1.333 (33.86)			.900 (22.86)
65	.970 (24.64)	.860 (21.84)	.863 (21.92)	1.266 (32.16)	.875 (22.23)	1.388 (35.26)	1.508 (38.30)			1.075 (27.31)
69	1.020 (25.91)	.910 (23.11)	.913 (23.19)	1.316 (33.43)	.925 (23.50)	1.438 (36.53)	1.558 (39.57)			1.125 (28.58)
85	1.246 (31.65)	1.110 (28.19)	1.113 (28.27)	1.568 (39.83)	1.125 (28.58)	1.690 (42.93)	1.810 (45.97)	.305 (7.75)	.0700 (1.78)	1.377 (34.98)

HOW TO ORDER

PART NUMBER KEY

RoHS Compliance	Nano Series		Shell Finish	Size	Type		Termination Type/ Connector Series	Hardware	Threaded Insert	Lead Length		Non-Standard Length Code
1	2		3	4	5		6	7	8	9		10
E	N9A	–	N	109	P	–	VM	S	F	G	–	48

RoHS Compliance (1)

E	RoHS Compliant
	Blank for Non-RoHS

Nano Series (2)

N9A	Nano-D — M32139 STD

Shell Finish (3)

F	Nickel fluorocarbon polymer
A	Pure Electro-Deposited Aluminum
B	Zinc Nickel (Black Chromate)
C	Cadmium (Yellow Chromate)
D	Olive Drab Cadmium
G	Gold
K	Zinc Nickel - 48 Hrs
L	Anodized (Black)
N	Electroless Nickel
P	Plastic Shell
S	Stainless Steel, Passivated
T	Titanium
V	Chem Film
Z	Zinc Nickel

Connector Size (4)
(Number of rows + Number of contacts)

SINGLE ROW			
109	121	131	151
115	125	137	
DUAL ROW			
209	225	251	285
215	231	265	
221	237	269	

Connector Type (5)

P	Plug
S	Receptacle
	CONNECTOR SAVER
PS	Pin to Socket
	CONNECTOR CHANGERS
PP	Pin to Pin
SS	Socket to Socket

Termination Type/Connector Series* (6)

CE	Card Edge (Straddle Mount)
HM	Horizontal Surface Mount
VM	Vertical Surface Mount
HP	Horizontal Panel Mount
VP	Vertical Panel Mount
HT	Horizontal Through Hole
VT	Vertical Through Hole
HE	Horizontal Panel Mount (EMI O-Ring) + Fluorosilicone Gasket
VE	Vertical Panel Mount (EMI O-Ring) + Fluorosilicone Gasket
HG	Horizontal Panel Mount + Passivated Silver Plated Aluminum Filled Fluorosilicone Gasket
VG	Vertical Panel Mount + Passivated Silver Plated Aluminum Filled Fluorosilicone Gasket
HMXX	Horizontal Surface Mount + Mil Spec Gasket
VMXX	Vertical Surface Mount + Mil Spec Gasket

** Omit for Connector Saver (PS)*

Hardware — Pre-installed by factory (7)
Metric Codes Available

	JACKSCREWS
S	Captive, Allen head – M32139 STD
Y	Captive, Allen head (metric)
	SCREWLOCK
K	Captive Screwlock (short)
L	Captive Screwlock (long)
	JACKPOST
C†	Captive Jackpost
	MOUNTING HOLE
B	Mounting Holes – M32139 STD
N	2 Holes (#2-56 UNC-2B) + Inner #0-80 UNF-2B Jackpost – M32139 STD
M	2 Threaded M2x0.4 6H Holes + Inner #0-80 UNF-2B – M32139 STD
T	Standard Threaded Mount (#0-80 UNF-2B) – M32139 STD
W*	2 Holes (#2-56 UNC-2B) + Inner #2-56 UNC-2B
V*	2 Threaded M2x0.4 6H Holes + Inner #2-56 UNC-2B

† Only available for Connector Saver (PS)
** Only available for 285 size*

Threaded Insert (Board Mounting) (8)

	Omit for None – M32139 STD
H	Bare Hole
M	#0-80 Threaded Insert – M32139 STD
R	#2-56 Threaded Insert
V	M2 Threaded Insert

Lead Length – Dimensions in inches		9	
Omit for Connector Savers & Surface Mount			
1	.110 ± .010 M32139 STD	4	.250 ± .010
2	.140 ± .010	F	Non Standard Length
3	.172 ± .010		
GOLD			
5	.110 ± .010 M32139 STD	8	.250 ± .010
6	.140 ± .010	G	Non Standard Length
7	.172 ± .010		

Non-Standard Length Code Dimensions in inches	10
Omit for Standard	
100 to 999	110 = .110 999 = .999

PCB CONNECTORS
M32139 REFERENCE

M32139 part number references are for illustrative purposes only.

PCB TERMINATION

PART NUMBER KEY

1 Connector Series		2 Specification Sheet		3 Insert Arrangement	4 Tail Finish	5 Hardware	6 Shell Finish	7 Space Class
M32139	/	05	-	A	01	S	S	S

1 Connector Series

M32139	Nano-D MIL-DTL-32139 spec.

2 Specification Sheet

	SINGLE ROW
05	Plug Vertical Through-Hole
06	Receptacle Vertical Through-Hole
07	Plug Horizontal Through-Hole
08	Receptacle Horizontal Through-Hole
	DUAL ROW
11	Plug Vertical Through-Hole
12	Receptacle Vertical Through-Hole
13	Plug Horizontal Through-Hole
14	Receptacle Horizontal Through-Hole
15	Plug Vertical Surface Mount
16	Receptacle Vertical Surface Mount
17	Plug Horizontal Surface Mount
18	Receptacle Horizontal Surface Mount

3 Insert Arrangement *

A	9	E	31	J	69
B	15	F	37	K	85
C	21	G	51		
D	25	H	65		

* *Single Row available only from A (9) to G (51)*

4 Tail Finish

01	Tin/Lead
02	Gold

5 Hardware — Pre-installed by factory

S	Jackscrew Captivated
T	Thread hole

6 Shell Finish

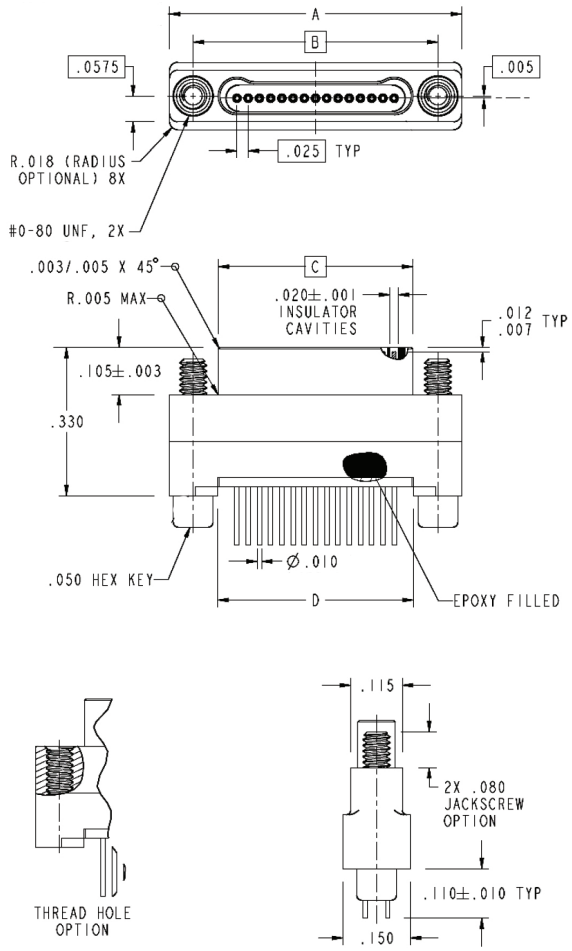
N	Electroless Nickel
S	Stainless Steel, Passivated
A	Pure Electro-Deposited Aluminum
C	Cadmium (Yellow Chromate)
F	Nickel fluorocarbon polymer
T	Titanium
Z	Zinc Nickel

7 Space Class

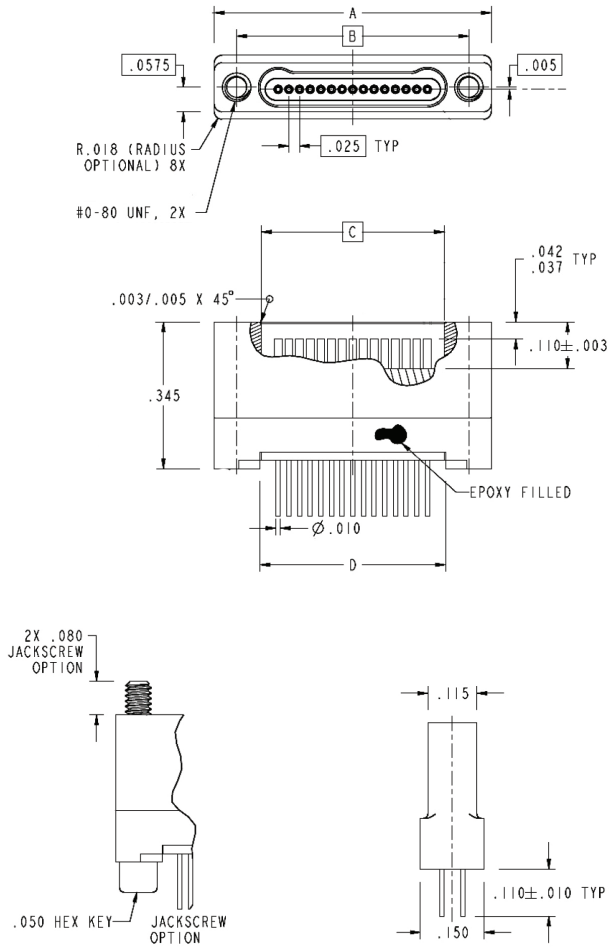
	Blank for non-space applications
S	Space Class

SINGLE ROW

PLUG



RECEPTACLE

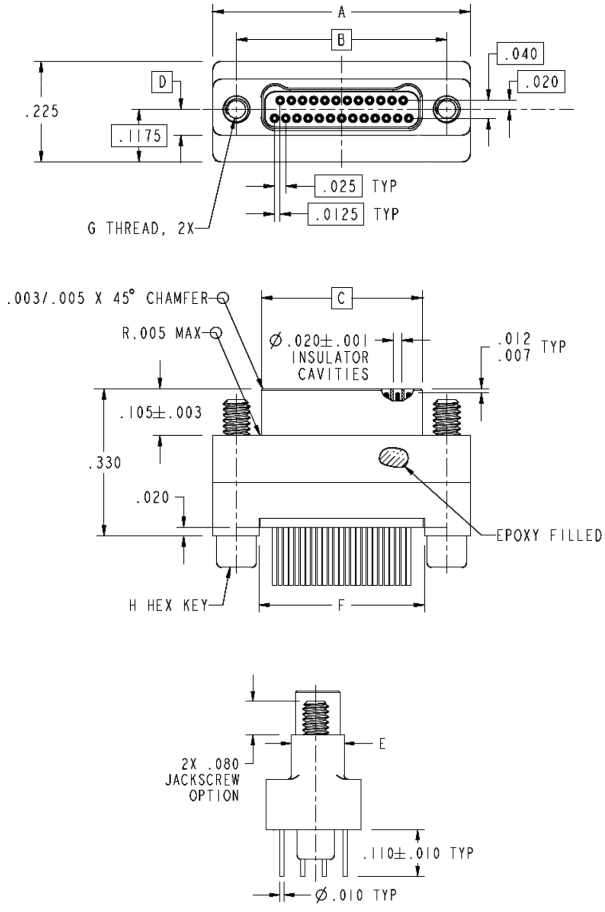


Dimensions are in inch (mm)

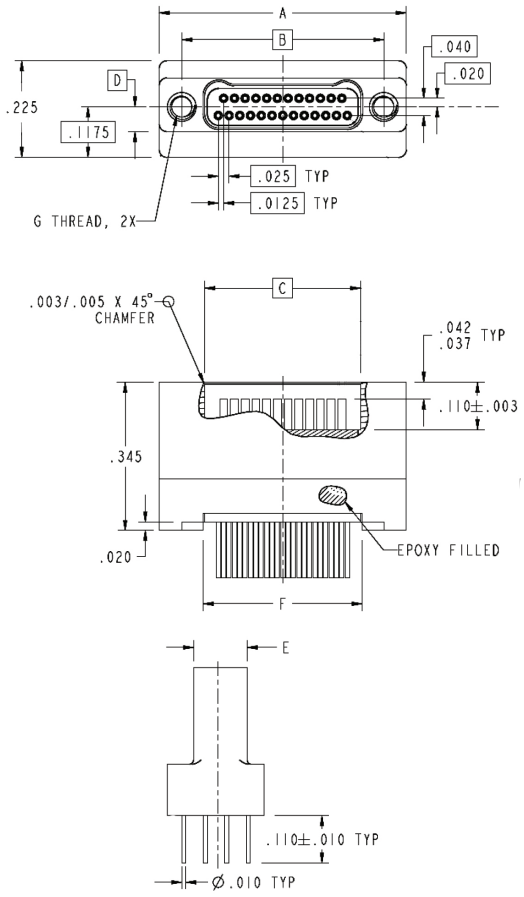
SIZE	A	B	C		D
			PLUG	RECEPTACLE	
09	.500 (12.70)	.395 (10.03)	.284 (7.21)	.285 (7.24)	.295 (7.49)
15	.650 (16.51)	.545 (13.84)	.434 (11.02)	.435 (11.05)	.445 (11.30)
21	.800 (20.32)	.695 (17.65)	.584 (14.83)	.585 (14.86)	.595 (15.11)
25	.900 (22.86)	.795 (20.19)	.684 (17.37)	.685 (17.40)	.695 (17.65)
31	1.050 (26.67)	.945 (24.00)	.834 (21.18)	.835 (21.21)	.845 (21.46)
37	1.200 (30.48)	1.095 (27.81)	.984 (24.99)	.985 (25.02)	.995 (25.27)
51	1.550 (39.37)	1.445 (36.70)	1.334 (33.88)	1.335 (33.91)	1.345 (34.16)

DUAL ROW

PLUG



RECEPTACLE

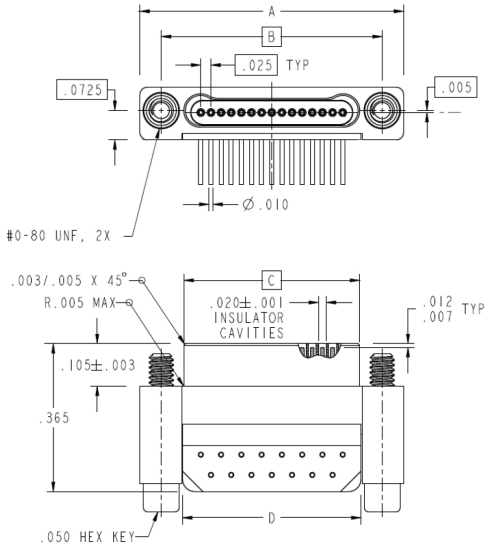


Dimensions are in inch (mm)

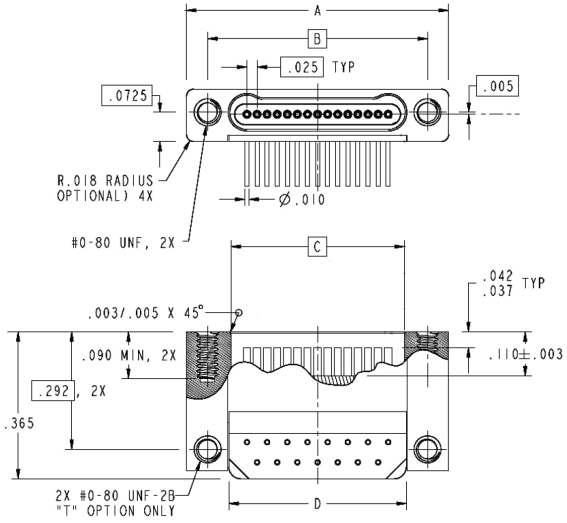
SIZE	A	B	C		D	E	F
			PLUG	RECEPTACLE			
09	.375 (9.53)	.270 (6.86)	.160 (4.06)	.163 (4.14)	.0575 (1.46)	.125 (3.18)	.170 (4.32)
15	.450 (11.43)	.345 (8.76)	.235 (5.97)	.238 (6.05)			.245 (6.22)
21	.525 (13.34)	.420 (10.67)	.310 (7.87)	.313 (7.95)			.320 (8.13)
25	.575 (14.61)	.470 (11.94)	.360 (9.14)	.363 (9.22)			.370 (9.40)
31	.650 (16.51)	.545 (13.84)	.435 (11.05)	.438 (11.13)			.445 (11.30)
37	.725 (18.42)	.620 (15.75)	.510 (12.95)	.513 (13.03)			.520 (13.21)
51	.900 (22.86)	.795 (20.19)	.685 (17.40)	.688 (17.48)			.695 (17.65)
65	1.075 (27.31)	.970 (24.64)	.860 (21.84)	.863 (21.92)			.870 (22.10)
69	1.125 (28.58)	1.020 (25.91)	.910 (23.11)	.913 (23.19)			.920 (23.37)
85	1.377 (34.98)	1.246 (31.65)	1.110 (28.19)	1.113 (28.27)	.0700 (1.78)	.150 (3.81)	1.120 (28.45)

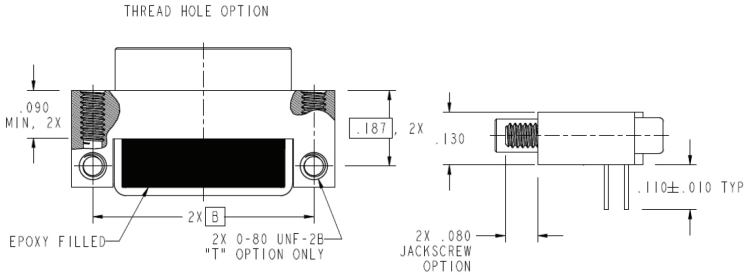
SINGLE ROW

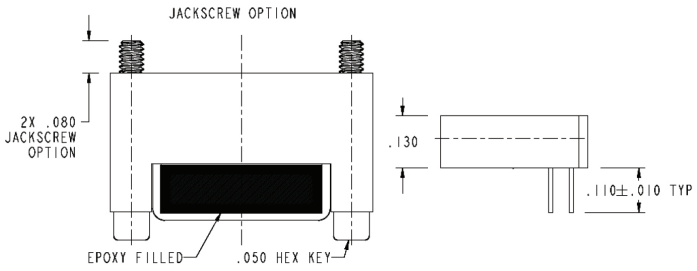
PLUG



RECEPTACLE





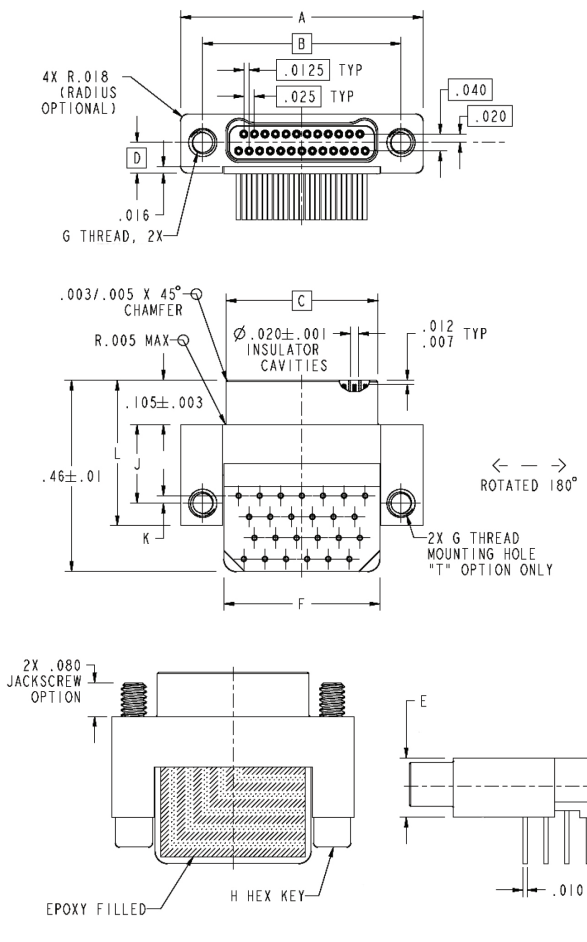


Dimensions are in inch (mm)

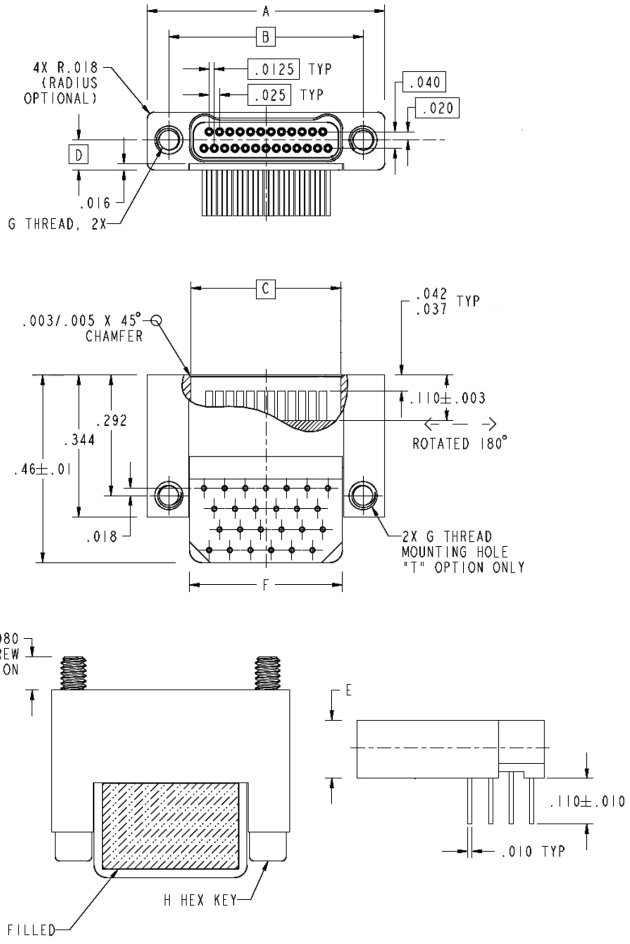
SIZE	A	B	C		D
			PLUG	RECEPTACLE	MAX
09	.500 (12.70)	.395 (10.03)	.284 (7.21)	.285 (7.24)	.295 (7.49)
15	.650 (16.51)	.545 (13.84)	.434 (11.02)	.435 (11.05)	.445 (11.30)
21	.800 (20.32)	.695 (17.65)	.584 (14.83)	.585 (14.86)	.595 (15.11)
25	.900 (22.86)	.795 (20.19)	.684 (17.37)	.685 (17.40)	.695 (17.65)
31	1.050 (26.67)	.945 (24.00)	.834 (21.18)	.835 (21.21)	.845 (21.46)
37	1.200 (30.48)	1.095 (27.81)	.984 (24.99)	.985 (25.02)	.995 (25.27)
51	1.550 (39.37)	1.445 (36.70)	1.334 (33.88)	1.335 (33.91)	1.345 (34.16)

DUAL ROW

PLUG



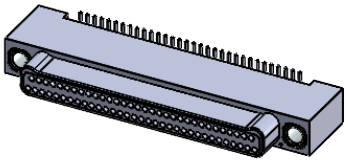
RECEPTACLE

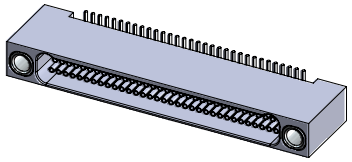


Dimensions are in inch (mm)

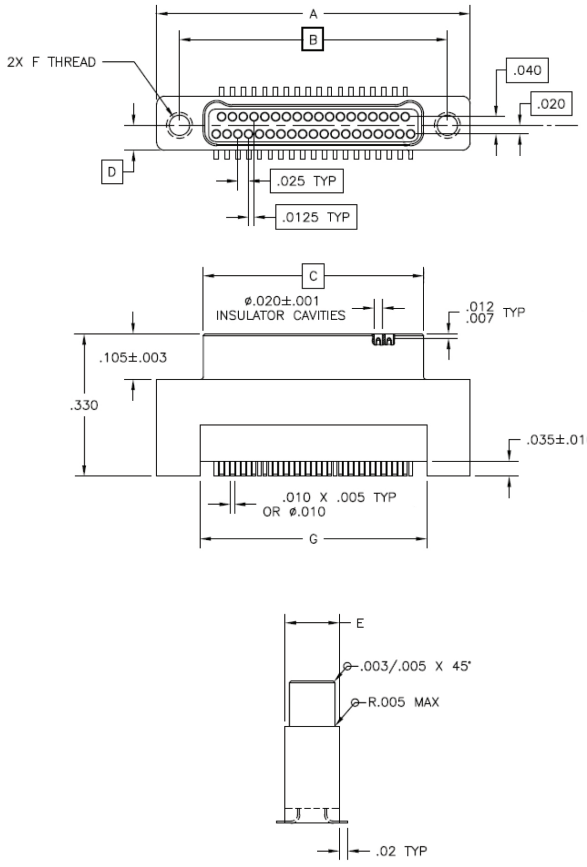
SIZE	A	B	C		D	E	F	J	K	L
			PLUG	RECEPTACLE						
09	.375 (9.53)	.270 (6.86)	.160 (4.06)	.163 (4.14)	.0725 (1.84)	.140 (3.56)	.170 (4.32)	.187 (4.75)	.018 (0.46)	.344 (8.74)
15	.450 (11.43)	.345 (8.76)	.235 (5.97)	.238 (6.05)			.245 (6.22)			
21	.525 (13.34)	.420 (10.67)	.310 (7.87)	.313 (7.95)			.320 (8.13)			
25	.575 (14.61)	.470 (11.94)	.360 (9.14)	.363 (9.22)			.370 (9.40)			
31	.650 (16.51)	.545 (13.84)	.435 (11.05)	.438 (11.13)			.445 (11.30)			
37	.725 (18.42)	.620 (15.75)	.510 (12.95)	.513 (13.03)			.520 (13.21)			
51	.900 (22.86)	.795 (20.19)	.685 (17.40)	.688 (17.48)			.695 (17.65)			
65	1.075 (27.31)	.970 (24.64)	.860 (21.84)	.863 (21.92)			.870 (22.10)			
69	1.125 (28.58)	1.020 (25.91)	.910 (23.11)	.913 (23.19)			.920 (23.37)			
85	1.377 (34.98)	1.246 (31.65)	1.110 (28.19)	1.113 (28.27)	.085 (2.16)	.165 (4.19)	1.120 (28.45)	.244 (6.20)	.075 (1.91)	.410 (10.41)

DUAL ROW

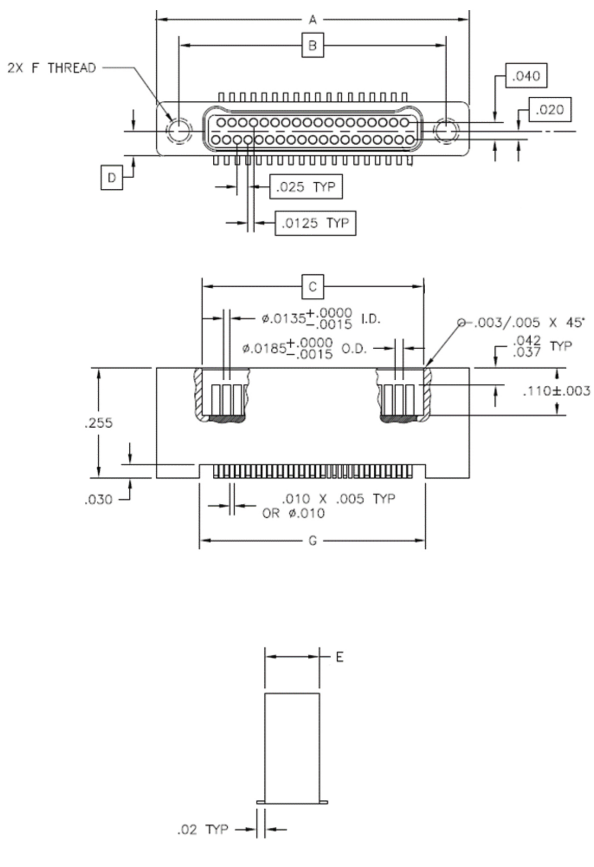




PLUG



RECEPTACLE

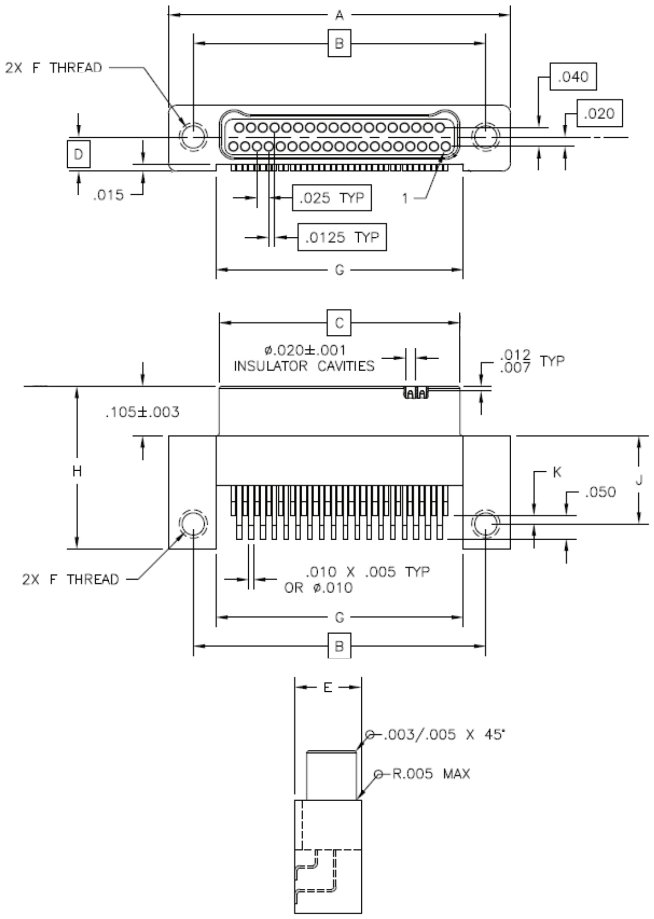


Dimensions are in inch (mm)

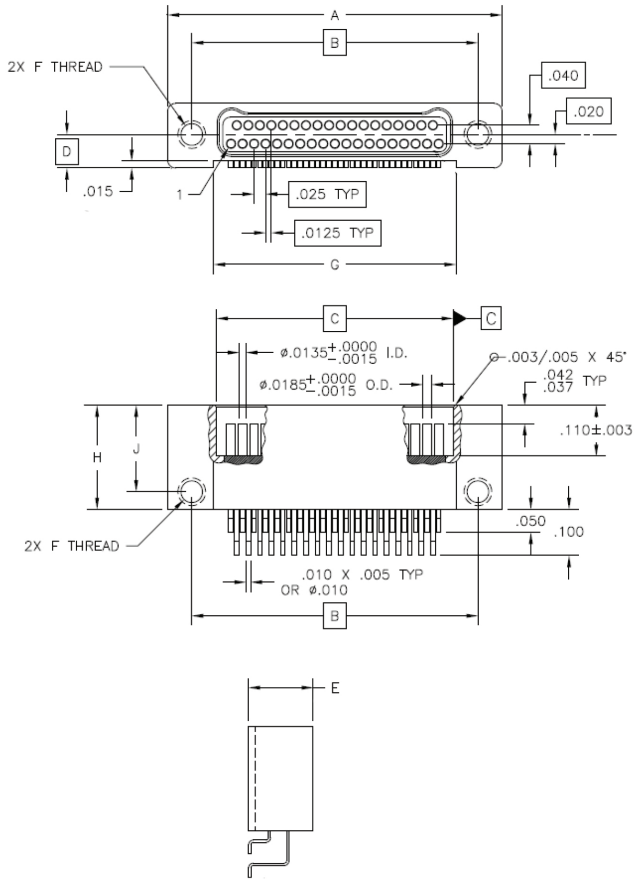
SIZE	A	B	C		D	E	G MAX
			PLUG	RECEPTACLE			
09	.375 (9.53)	.270 (6.86)	.160 (4.06)	.163 (4.14)	.0575 (1.46)	.125 (3.18)	.175 (4.45)
15	.450 (11.43)	.345 (8.76)	.235 (5.97)	.238 (6.05)			.250 (6.35)
21	.525 (13.34)	.420 (10.67)	.310 (7.87)	.313 (7.95)			.325 (8.26)
25	.575 (14.61)	.470 (11.94)	.360 (9.14)	.363 (9.22)			.375 (9.53)
31	.650 (16.51)	.545 (13.84)	.435 (11.05)	.438 (11.13)			.450 (11.43)
37	.725 (18.42)	.620 (15.75)	.510 (12.95)	.513 (13.03)			.525 (13.34)
51	.900 (22.86)	.795 (20.19)	.685 (17.40)	.688 (17.48)			.700 (17.78)
65	1.075 (27.31)	.970 (24.64)	.860 (21.84)	.863 (21.92)			.875 (22.23)
69	1.125 (28.58)	1.020 (25.91)	.910 (23.11)	.913 (23.19)			.925 (23.50)
85	1.377 (34.98)	1.246 (31.65)	1.110 (28.19)	1.113 (28.27)	.700 (1.78)	.150 (3.81)	1.120 (28.45)

DUAL ROW

PLUG



RECEPTACLE



Dimensions are in inch (mm)

SIZE	A	B	C		D	E	G MAX	H		J		K
			PLUG	RECEPT.				PLUG	RECEPT.	PLUG	RECEPT.	
09	.375 (9.53)	.270 (6.86)	.160 (4.06)	.163 (4.14)	.0725 (1.84)	.140 (3.56)	.175 (4.45)	.345 (8.76)	.225 (5.71)	.187 (4.75)		.018 (0.46)
15	.450 (11.43)	.345 (8.76)	.235 (5.97)	.238 (6.05)			.250 (6.35)					
21	.525 (13.34)	.420 (10.67)	.310 (7.87)	.313 (7.95)			.325 (8.26)					
25	.575 (14.61)	.470 (11.94)	.360 (9.14)	.363 (9.22)			.375 (9.53)					
31	.650 (16.51)	.545 (13.84)	.435 (11.05)	.438 (11.13)			450 (11.43)					
37	.725 (18.42)	.620 (15.75)	.510 (12.95)	.513 (13.03)			.525 (13.34)					
51	.900 (22.86)	.795 (20.19)	.685 (17.40)	.688 (17.48)			.700 (17.78)					
65	1.075 (27.31)	.970 (24.64)	.860 (21.84)	.863 (21.92)			.875 (22.23)					
69	1.125 (28.58)	1.020 (25.91)	.910 (23.11)	.913 (23.19)			.925 (23.50)					
85	1.377 (34.98)	1.246 (31.65)	1.110 (28.19)	1.113 (28.27)	.085 (2.16)	.165 (4.19)	1.120 (28.45)	.375 (9.75)	.270 (6.86)	.205 (5.21)	.210 (5.33)	.036 (0.91)

OVERVIEW OF COUPLING STYLES AND SERIES

Amphenol circular Nano connectors bring Nano contact density into rugged circular shells. Optimized for secure coupling, shielding and minimal stack height in aerospace and C4I platforms.

The below summarizes available coupling styles and the corresponding series:

Composite NC05 Series	Composite-insert circular Nano connector for mixed signal and controlled impedance needs in space-constrained applications.
Low Profile Metal Shell NC08 Series	Low-profile metal-shell variant that minimizes stack height while improving EMI/RFI shielding.
Bayonet Lock NCLX9 Series	Quick-mate bayonet coupling for fast mate/unmate cycles with robust retention.
Breakaway NC1X9 Series	Breakaway options for tamper-resistant or safety-release installations.
Thread Lock NCTX9 Series	Threaded coupling for positive, vibration-resistant retention in high-g environments.
Keyed NC3X9K Series	Polarized/keyed shells to enforce orientation and support mixed-key configurations.

FOR MORE INFORMATION

GENERAL INQUIRIES

sales@amphenolcanada.com
+1 (416) 291-4401

SUPPORT BY REGION:

amphenolcanada.com/**Sales**

Amphenol CANADA
MILITARY & AEROSPACE

CIRCULAR NANO

Amphenol's Circular Nano connectors combine nano-D contact density in a circular configuration, offering compact and versatile options for mission-critical applications

Available will all-plastic or metal shell configurations, for threaded, bayonet, breakaway and keyed styles, the family is optimized for controlled-impedance, high-vibration and harsh-environment applications common to aerospace and C4I platforms.

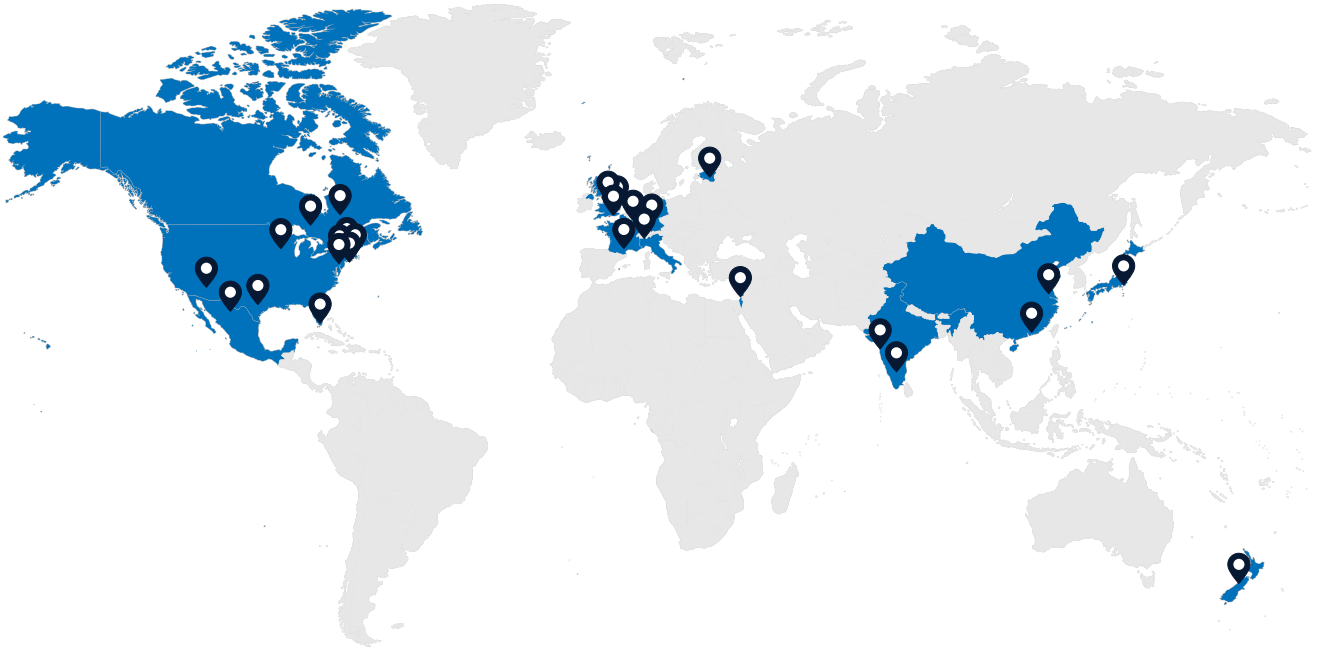
SPECIFICATIONS

Shell	Material	Metal	» Aluminum alloy » Stainless Steel (Passivated)
	Finish	Metal	» Anodized (Black) » Zinc Nickel (Black Chromate) » Cadmium (Yellow Chromate) » Olive Drab Cadmium » Chem Film » Gold » Zinc Nickel - 48 hrs » Pure Electro-Deposited Al » Nickel fluorocarbon polymer » Electroless Nickel
Insulator / PCB Backshell			Liquid Crystal Polymer (LCP)
Contacts	Material		Copper alloy, 50 micro-inches gold plate over nickel
	Spacing		0.050 (1.27mm) centers
	Quantity		4 | 6 | 7 | 11 | 16 | 19 | 28 | 37 | 39 | 44 | 55
Hardware			Stainless steel, passivated
Potting Material	Standard		EP1730-1 or equivalent
	High Temp		EP173859 or equivalent
Wire	Insulated		NEMA-HP3 (MIL-W-16878) SAE AS22759 DSCC 04047
Coupling			Friction or Jackscrews into jackposts/threaded Inserts

FEATURES

- High contact density in a circular footprint
- Versions for controlled-impedance stripline and high-speed signals
- Multiple coupling styles: threaded, bayonet, breakaway and keyed
- Low-profile metal shell option for reduced stack height
- Robust EMI/RFI shielding and improved mechanical retention vs. rectangular shells
- Designed for vibration, shock and harsh environments

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Amphenol CANADA
MILITARY & AEROSPACE



SMC
Catalog



Product Overview
Brochure



Multi-Modular ARINC
Catalog

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R58 Catalog



ARINC 600 Catalog



ARINC 404 Catalog

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Rev.1 — 09/2026