

Microminiature Connector

The following data applies to a standard Phoenix connector with wire. Variations from standard products may cause performance to vary from that mentioned below. Consult factory for special applications and requirements.

SPECIFICATIONS:

STANDARD MATERIALS AND FINISHES

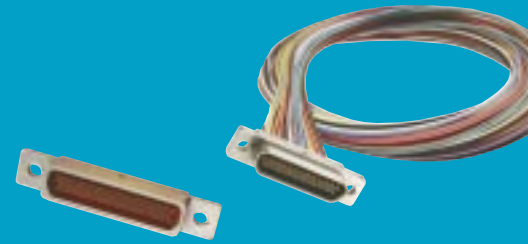
Shell	Aluminum alloy per QQ-A-200/8 (6061-T6) Yellow chromate / cadmium per QQ-P-416
Insulator	Type II, class 3 Polyphenylene sulfide per MIL-M-24519, type GST-40F. Color: black
Contacts	Copper alloy, 50 gold plate over nickel
Mounting Hardware	300 series stainless steel, passivate
Kit, Jackpost (3) Items	300 series stainless steel, passivate
Washers	400 series stainless steel, passivate
Standard Epoxy	EP1730-1 Color: black
High Temperature Epoxy Wire	Stycast 2651/11 up to 200C Insulated: stranded teflon per NEMA-HP3 (MIL-W-16878) Stranded teflon per MIL-W-22759 Uninsulated: solid copper per A-A-59551 (QQ-W-343)

MECHANICAL FEATURES

Coupling	Friction / jackscrews
Polarization	Keystone shaped shells
Contact Spacing	.050 (1.27) Centers
Shell Styles	Plug and receptacle

ELECTRICAL DATA

Number of Contacts	9 thru 100 standard; 5 signal / 2 coax; 5 signal / 2 power; 20 signal / 4 coaxial; 20 signal / 4 power.
Coaxial Cable	RG-178/U
Wire Size	#24 thru #32 AWG
Contact Termination	Multiple indent crimp



The Amphenol Microminiature connector series offers proven Mil Spec performance and reliability in rectangular and strip line micro connectors. Microminiature connectors are available in rectangular D, strip and custom card edge configurations, with contacts on .050 (1.27) centers. Inserts in Micro D miniature connectors with signal and coax contacts are also available.

The Amphenol Microminiature contact system employs a custom stamped and formed Pin Contact recessed within the plug insulator. The socket contact is a precision fabricated tube. Pin and socket contacts are epoxy retained in hi grade thermoplastic insulators.

The contact system has proven reliability, exceeding the performance specifications of Mil-DTL-83513.

Terminations are available in a broad range including solder cup, terminated to wire harness, vertical and right angle PCB.

Plastic and metal shell versions are available, in a broad range of shell finishes.

A broad range of mounting hardware is available (jackscrews, posts, guide pins) as well as straight and angled back-shells.

Microminiature Connector Performance Data

The following data applies to a standard Pheonix connector with wire. variations from standard products cause performance to vary from that mentioned below. consult factory for special applications and requirements.

Test Description	Specification/ Method	Limits
Contact Rating	---	3 amps max.
Magnetic Permeability	MIL-I-17214	2.0 max.
Dielectric Withstanding Voltage at sea level	MIL-STD-1344 Method 3001	{ 600 vac for solder pot 900 vac for standard wire 150 vac for solder pot 300 vac for standard wire
at 70,000 feet altitude (Reduced barometric pressure)		
Insulation Resistance	MIL-STD-1344 Method 3003	5000 megohms min.
Contact Resistance	MIL-DTL-83513	8 milliohms at 3 amps
Contact Engagement Force	MIL-DTL-83513	6.0 oz. max.
Contact Separation Force	MIL-DTL-83513	0.5 oz. min.
Connector Mating Force	MIL-DTL-83513	8.0 oz. max. x no. of contacts
Connector Unmating Force	MIL-DTL-83513	0.5 oz. min. x no. of contacts
Thermal Shock	MIL-STD-1344 Method 1003, Condition A: -550 C TO +1250 C	No physical damage
Physical Shock	Method 2004, Condition E 50 G's, 3 axes, 6 millisecond duration Sawtooth Pulse	No physical damage No loss of continuity > 1 sec.
Vibration	Method 2005, Condition IV 20 G's, 10-2000 Hz, 12 hrs.	No physical damage No loss of continuity > 1 sec.
Durability	MIL-DTL-83513	500 cycles, 500 CPH max.
Salt Spray	Method 1001, Condition B 48 hours	Meets mateability and Contact resistance requirements
Fluid Immersion	MIL-DTL-83513	Meets mateability requirements
Humidity	MIL-STD-1344 Method 1002, Type II (Omit steps 7A and 7B)	1 megohm after step 6, 1000 megohms after 24 hrs. condition
Insertion Retention	MIL-DTL-83513	50.0 lbs. sq. in.
Solderability	MIL-STD-202 Method 208	
Contact Retention	MIL-DTL-83513	5.0 lbs. min. axial load
Thermal Outgassing	SP-R-0022	exceeds MIL-DTL-83513 requirements

ORDERING INFORMATION

Series 100, 102, and 104 Connectors

Qualified to MIL-DTL-83513/01, 02, 03, 04 • Plastic and metal shells are intermateable and intermountable

Available in sizes 9 to 100 • Solder cup or crimp termination

100 R X XXX X - X X X X XX - XX

Connector Series

100 = metal shell per MIL-DTL-83513
102 = all plastic (dimensionally identical to metal shell per MIL-C-83513)
104 = stainless steel shell per M83513 (NON QPL)

Insulator Material

R = Polyphenylene Sulfide

Shell Finish

Omit for series 102 & 104
A = anodize
C = cadmium
G = gold
I = irridite/alodine
N = electroless nickel
S = stainless steel passivated
T = tin

Connector Size

(number of contacts)
 09, 15, 21, 25, 31, 37, 51, 100

Connector Type

P = Plug
S = Receptacle

Wire Size (AWG.)

1 = 32
2 = 30
3 = 28
4 = 26 (standard) *off shelf
5 = 25 (standard for solid uninsulated wire)
6 = 24
 Omit for solder cup contacts

Non Std. Wire Length (Inches)

Hardware

A = .125 mounting holes sizes 9-51
B = standard mounting holes
L = captive low profile jackscrew
K = captive high profile jackscrew
F = standard float mount
R = reverse float mount
M6 = high profile jackscrew, slot head
M5 = low profile jackscrew, slot head
M3 = high profile jackscrew, allen head
M2 = low profile jackscrew, allen head
P = jackpost

Wire Length

A = 18.00
B = 36.00
C = 72.00
D = 0.500 (solid wire only)
E = 1.00 (solid wire only)
X = Non std wire length (add to end of part no.)
 Omit for solder cup contacts

Wire Color / Finish

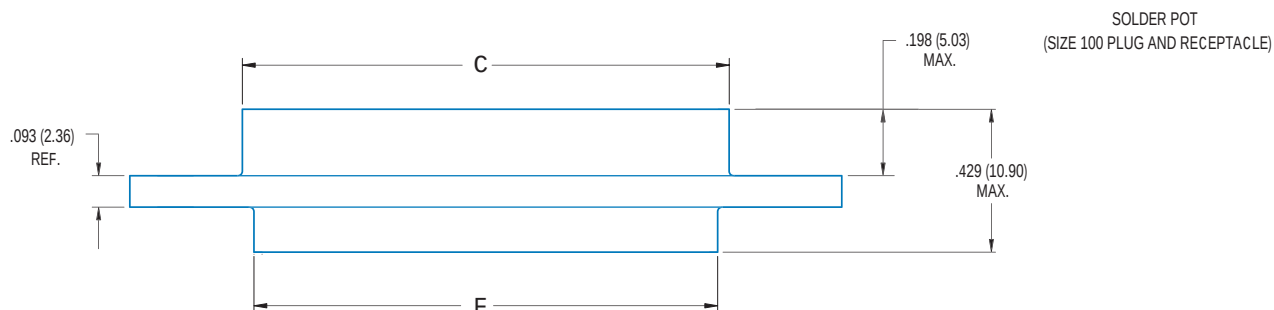
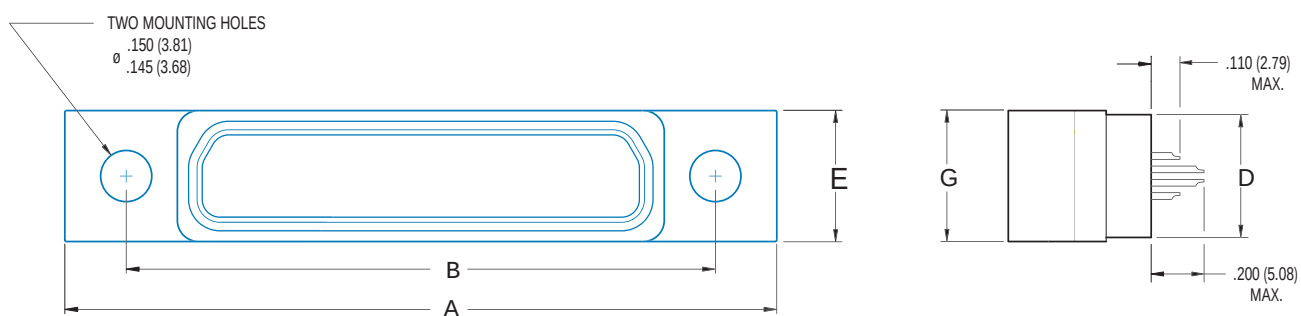
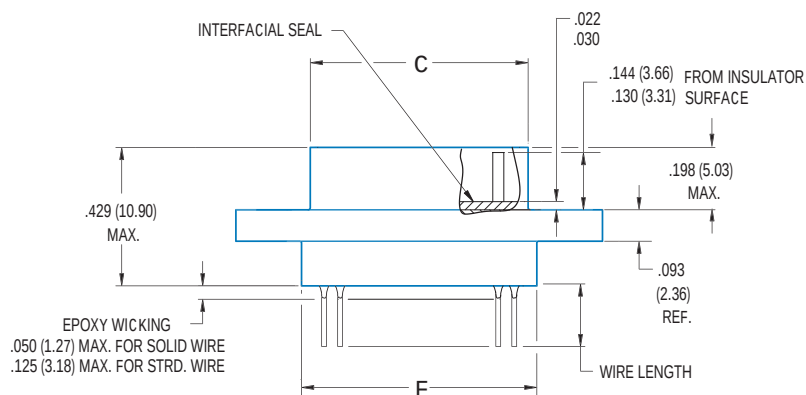
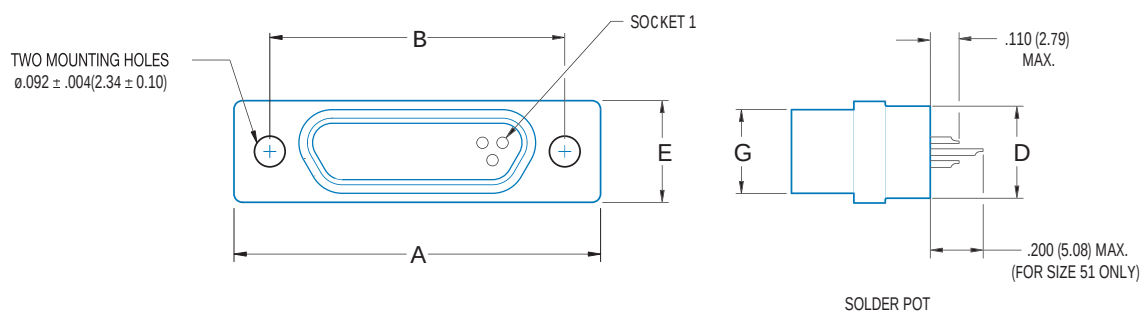
1 = all white
2 = all yellow
3 = solid uninsulated, tin plated
4 = solid uninsulated, gold plated
5 = color coded per mil-std-681, system 1
6 = 1st 10 colors blk. thru wht. repeated
7 = 1st 15 colors blk. thru wht./yel. repeated
 omit for solder cup contacts

Wire Type

A = 7 strd, per NEMA-HP3 (MIL-W-16878/4)
B = 7 strd, per NEMA-HP3 (MIL-W-16878/4)
C = 19 strd, per NEMA-HP3 (MIL-W-16878/4)
D = 19 strd, per NEMA-HP3 (MIL-W-16878/4)
E = per MIL-W-22759/11
L = solid uninsulated
F = per MIL-W-22759/33
 Omit for solder cup contacts

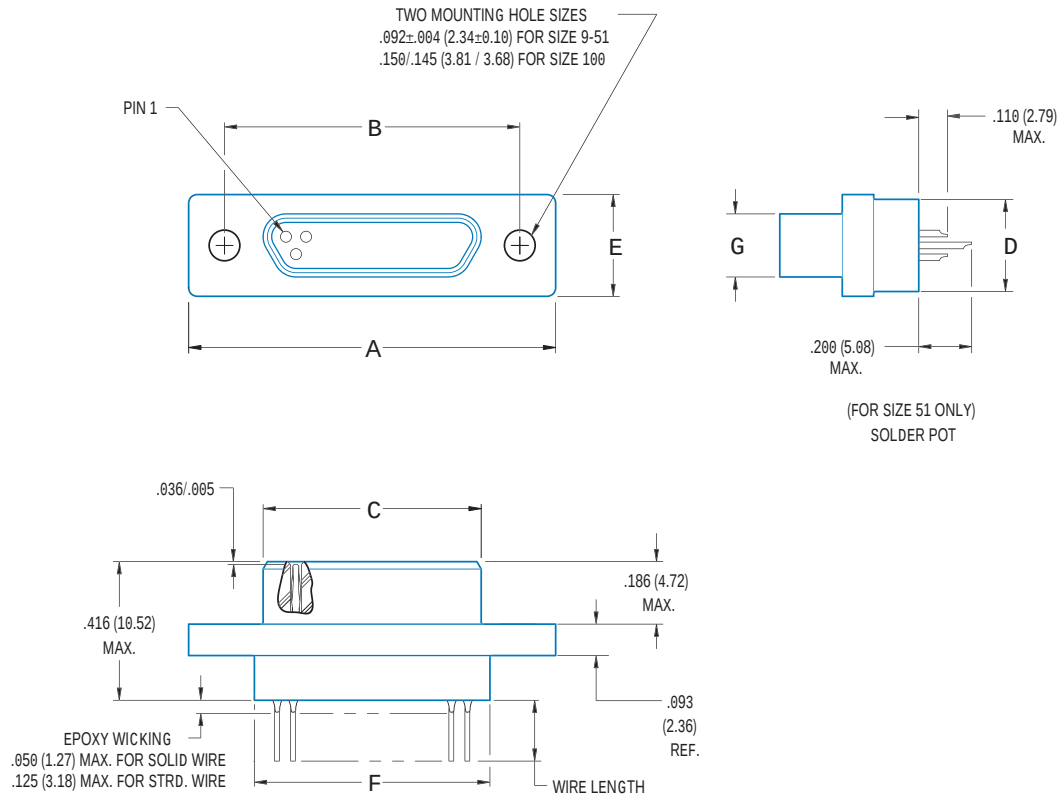
Qualified to MIL-C-83513/02, 04 (series 100)

Connector sizes 9 thru 51



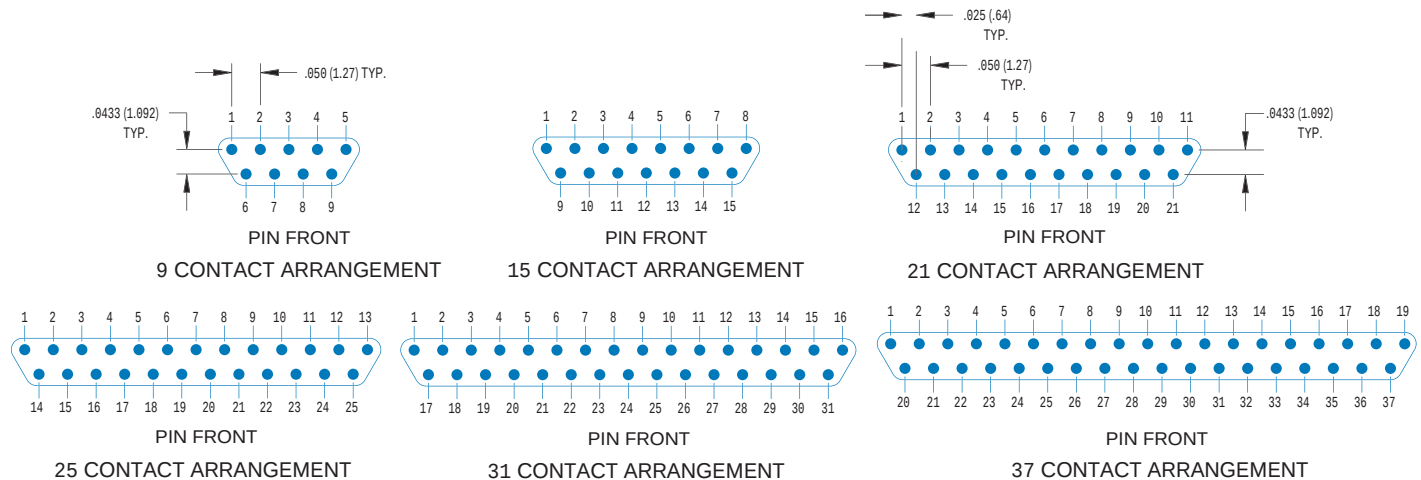
Qualified to MIL-C-83513/01, 03, (Series 100)

Connector sizes 9 to 100



PART NUMBER	A MAX.	B $\pm .005$	C MAX.	D MAX.	E MAX.	F MAX.	G MAX.
100RC09P	.785 (19.94)	.565 (14.35)	.334 (8.48)	.270 (6.86)	.308 (7.82)	.400 (10.16)	.185 (4.70)
100RC09S	.785 (19.94)	.565 (14.35)	.402 (10.21)	.270 (6.86)	.308 (7.82)	.400 (10.16)	.253 (6.43)
100RC15P	.935 (23.75)	.715 (18.16)	.484 (12.29)	.270 (6.86)	.308 (7.82)	.550 (13.97)	.185 (4.70)
100RC15S	.935 (23.75)	.715 (18.16)	.552 (13.97)	.270 (6.86)	.308 (7.82)	.550 (13.97)	.253 (6.43)
100RC21P	1.085 (27.56)	.865 (21.97)	.634 (16.10)	.270 (6.86)	.308 (7.82)	.700 (17.78)	.185 (4.70)
100RC21S	1.085 (27.56)	.865 (21.97)	.702 (17.83)	.270 (6.86)	.308 (7.82)	.700 (17.78)	.253 (6.43)
100RC25P	1.185 (30.10)	.965 (24.51)	.734 (18.64)	.270 (6.86)	.308 (7.82)	.800 (20.32)	.185 (4.70)
100RC25S	1.185 (30.10)	.965 (24.51)	.802 (20.37)	.270 (6.86)	.308 (7.82)	.800 (20.32)	.253 (6.43)
100RC31P	1.335 (33.91)	1.115 (28.32)	.884 (22.45)	.270 (6.86)	.308 (7.82)	.950 (24.13)	.185 (4.70)
100RC31S	1.335 (33.91)	1.115 (28.32)	.952 (24.18)	.270 (6.86)	.308 (7.82)	.950 (24.13)	.253 (6.43)
100RC37P	1.485 (37.72)	1.265 (32.13)	1.034 (26.26)	.270 (6.86)	.308 (7.82)	1.100 (27.94)	.185 (4.70)
100RC37S	1.485 (37.72)	1.265 (32.13)	1.102 (27.99)	.270 (6.86)	.308 (7.82)	1.100 (27.94)	.253 (6.43)
100RC51P	1.435 (36.45)	1.215 (30.86)	.984 (24.99)	.310 (7.87)	.351 (8.92)	1.050 (26.67)	.228 (5.79)
100RC51S	1.435 (36.45)	1.215 (30.86)	1.052 (26.72)	.310 (7.87)	.351 (8.92)	1.050 (26.67)	.296 (7.52)
100RC100P	2.160 (54.86)	1.800 (45.72)	1.384 (35.13)	.360 (9.14)	.394 (10.01)	1.442 (36.63)	.271 (6.88)
100RC100S	2.160 (54.86)	1.800 (45.72)	1.508 (38.10)	.360 (9.14)	.394 (10.01)	1.442 (36.63)	.394 (10.01)

Cavity identification numbers are for reference only and do not appear on the connector

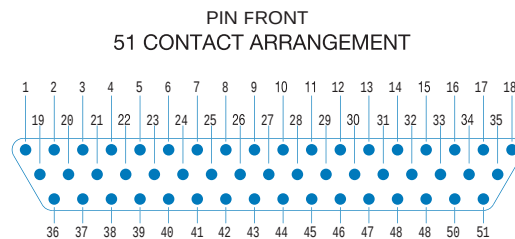


Socket front arrangements are mirror image

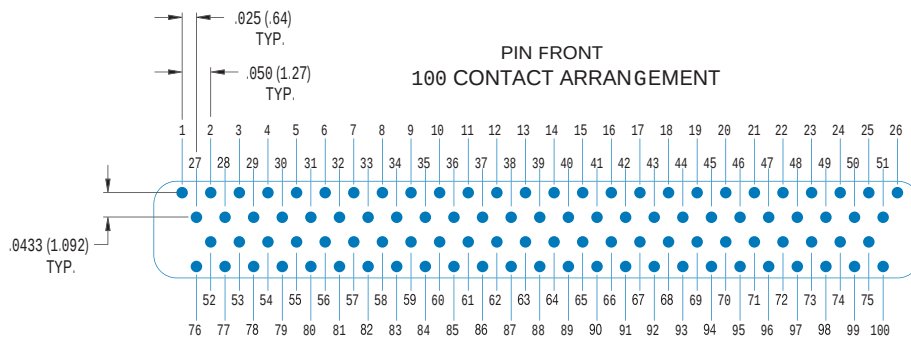
Cavity identification numbers are for reference only and do not appear on the connector

Power and coax contacts are not to MIL-spec

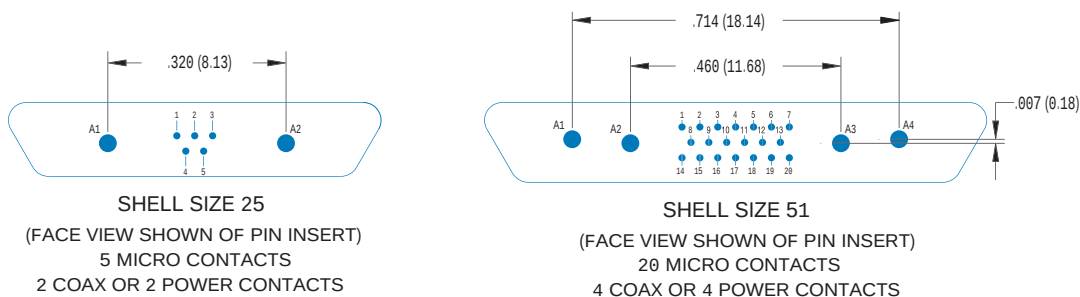
100 Contact Arrangement for Series 100, 101, 102 and 104



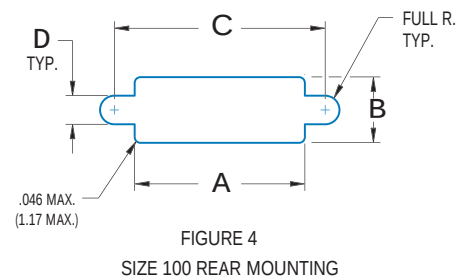
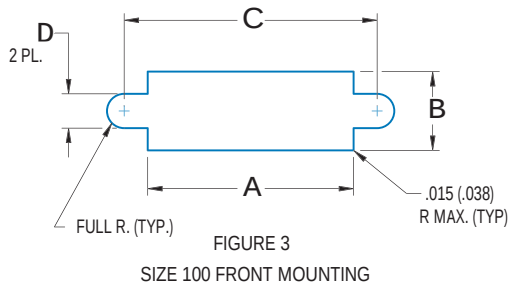
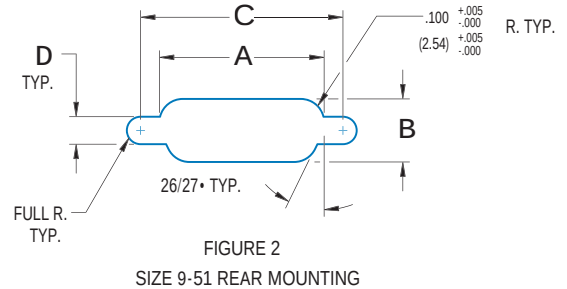
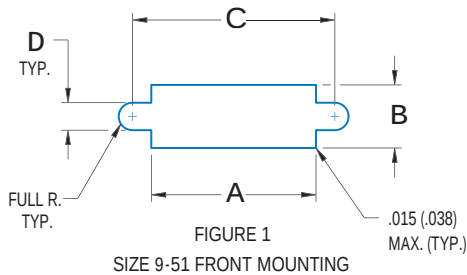
100 Contact Arrangement for Series 100 and 102



Signal, Power, and Coaxial Arrangements



Shell sizes 9 thru 100



SHELL SIZE	CUTOUT FIGURE	A	B	C	D
		+ .004 (0.10) - .000 (0.00)	+ .004 (0.10) - .000 (0.00)	+ .005 (0.13) - .000 (0.00)	+ .005 (0.13) - .000 (0.00)
9	1	.408 (10.36)	.271 (6.88)	.570 (14.48)	.089 (2.26)
	2	.401 (10.19)	.252 (6.40)	.570 (14.48)	.089 (2.26)
15	1	.558 (14.17)	.271 (6.88)	.720 (18.29)	.089 (2.26)
	2	.551 (14.00)	.252 (6.40)	.720 (18.29)	.089 (2.26)
21	1	.708 (17.98)	.271 (6.88)	.870 (22.10)	.089 (2.26)
	2	.701 (17.81)	.252 (6.40)	.870 (22.10)	.089 (2.26)
25	1	.808 (20.52)	.271 (6.88)	.970 (24.64)	.089 (2.26)
	2	.801 (20.34)	.252 (6.40)	.970 (24.64)	.089 (2.26)
31	1	.958 (24.33)	.271 (6.88)	1.120 (28.45)	.089 (2.26)
	2	.951 (24.13)	.252 (6.40)	1.120 (28.45)	.089 (2.26)
37	1	1.108 (28.14)	.271 (6.88)	1.270 (32.26)	.089 (2.26)
	2	1.101 (27.97)	.252 (6.40)	1.270 (32.26)	.089 (2.26)
51	1	1.058 (26.87)	.315 (8.00)	1.220 (30.99)	.089 (2.26)
	2	1.051 (26.70)	.295 (7.49)	1.220 (30.99)	.089 (2.26)
100	3	1.456 (36.98)	.361 (9.17)	1.805 (45.85)	.118 (3.00)
	4	1.520 (38.61)	.401 (10.18)	1.805 (45.85)	.118 (3.00)

NOTES:

1. SHELL SIZES 9-51 FRONT MOUNTING (FIGURE 1) AND REAR MOUNTING (FIGURE 2) CUTOUTS ACCOMMODATE #2-56 SCREWS.
2. SHELL SIZE 100 FRONT MOUNTING (FIGURE 3) AND REAR MOUNTING (FIGURE 4) CUTOUTS ACCOMMODATE #4-40 SCREWS.

ORDERING INFORMATION

PCB Terminating Series 100 and 102 Connectors

Qualified to MIL-DTL-83513/10 thru 27 • Straight and right angle

100 R X XX X - BR X X X - XX

Connector Series

100 = metal shell per MIL-C-83513

102 = all plastic (dimensionally identical to metal shell per MIL-C-83513)

104 = stainless steel shell per M83513 (NON QPL)

Insulator Material

R = Polyphenylene Sulfide

Shell Finish

A = anodize

C = cadmium

N = electroless nickel

G = gold

I = irridite/alodine

T = tin

Omit for series 102

Connector Size

(Number Of Contacts)

09, 15, 21, 25, 31, 37, 51, 100

Connector Type

P = Plug

S = Receptacle

Non Std. Wire Length

(EX = .125)

Lead Length

1 = .109 ± .015

2 = .140 ± .015

3 = .172 ± .015

4 = .250 ± .015

F = Non std. wire length

Threaded Insert

T = Threaded insert

Omit for no threaded insert

Hardware

P = Jackpost

Omit for no jackpost

Termination Type

BS = straight PCB termination per

BR = 90° PCB termination per

CBR = narrow 90° PCB termination per

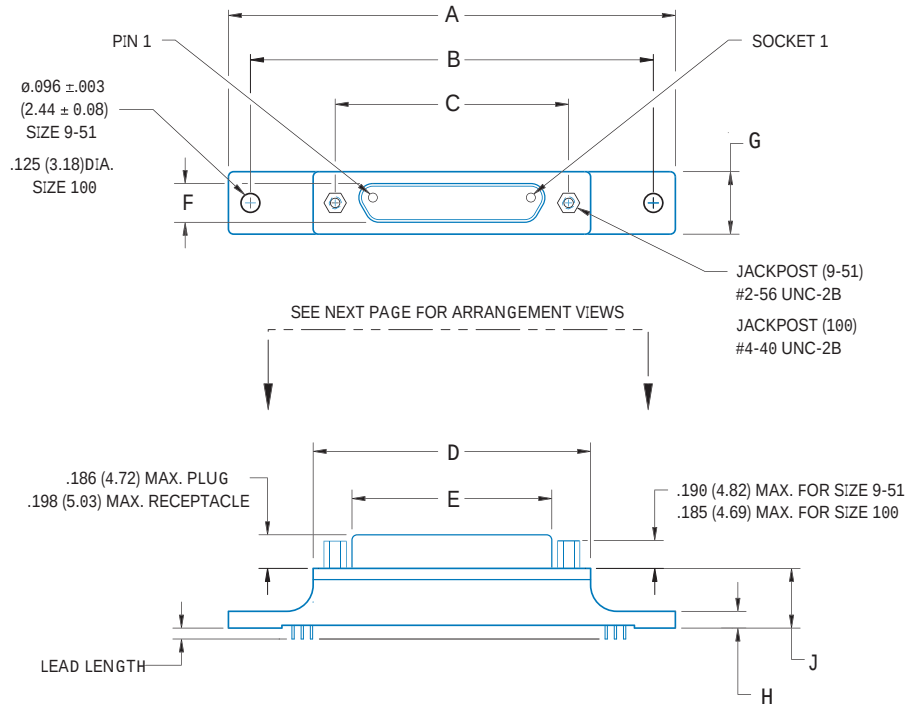
M83513/22, 23, 24, 25, 26, 27

M83513/16, 17, 18, 19, 20, 21

M83513/10, 11, 12, 13, 14, 15

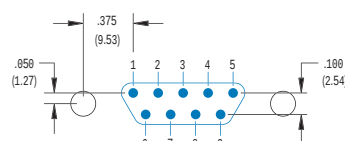
Standard lead termination is #24 AWG, tin plated solid copper, solder dipped

Consult factory for other wire size terminations

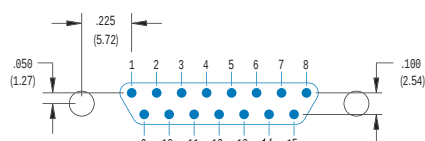


PART NUMBER	A MAX.	B ±.007 (0.18)	C ±.005 (0.13)	D MAX.	E MAX.	F MAX.	G MAX.	H MAX.	J MAX.
100RC09PBS	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.785 (19.84)	.334 (8.48)	.185 (4.70)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC09SBS	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.785 (19.84)	.402 (10.21)	.253 (6.43)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC15PBS	1.390 (35.31)	1.150 (29.21)	.715 (18.16)	.935 (23.75)	.484 (12.29)	.185 (4.70)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC15SBS	1.390 (35.31)	1.150 (29.21)	.715 (18.16)	.935 (23.75)	.552 (13.97)	.253 (6.43)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC21PBS	1.690 (43.93)	1.450 (36.83)	.865 (21.97)	1.085 (27.56)	.634 (16.10)	.185 (4.70)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC21SBS	1.690 (43.93)	1.450 (36.83)	.865 (21.97)	1.085 (27.56)	.702 (17.83)	.253 (6.43)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC25PBS	1.740 (44.20)	1.500 (38.10)	.965 (24.51)	1.185 (30.10)	.734 (18.64)	.185 (4.70)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC25SBS	1.740 (44.20)	1.500 (38.10)	.965 (24.51)	1.185 (30.10)	.802 (20.37)	.253 (6.43)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC31PBS	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	1.335 (33.91)	.884 (22.45)	.185 (4.70)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC31SBS	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	1.335 (33.91)	.952 (24.18)	.253 (6.43)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC37PBS	2.340 (59.44)	2.100 (53.34)	1.265 (32.13)	1.485 (37.72)	1.034 (26.26)	.185 (4.70)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC37SBS	2.340 (59.44)	2.100 (53.34)	1.265 (32.13)	1.485 (37.72)	1.102 (27.99)	.253 (6.43)	.308 (7.82)	.165 (4.19)	.355 (9.02)
100RC51PBS	2.270 (67.66)	2.000 (50.80)	1.215 (30.86)	1.435 (36.45)	.984 (24.99)	.228 (5.79)	.351 (8.92)	.165 (4.19)	.355 (9.02)
100RC51SBS	2.270 (67.66)	2.000 (50.80)	1.215 (30.86)	1.435 (36.45)	1.052 (26.72)	.296 (7.52)	.351 (8.92)	.165 (4.19)	.355 (9.02)
100RC100PBS	3.070 (77.98)	2.800 (71.12)	1.800 (45.72)	2.170 (55.12)	1.384 (35.15)	.271 (6.88)	.460 (11.68)	.303 (7.70)	.550 (12.70)
100RC100SBS	3.070 (77.98)	2.800 (71.12)	1.800 (45.72)	2.170 (55.12)	1.508 (38.30)	.394 (10.01)	.460 (11.68)	.303 (7.70)	.550 (12.70)

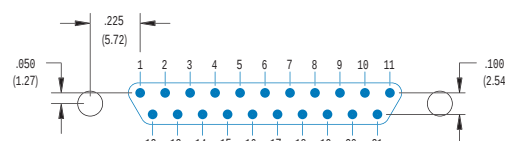
Straight PC configurations for series 100, 101, 102
.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)



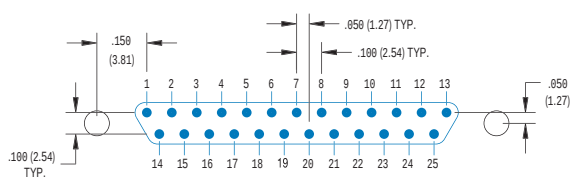
PIN
9 CONTACTS



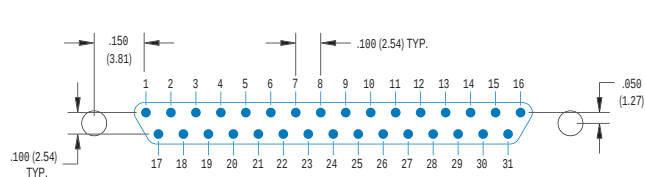
PIN
15 CONTACTS



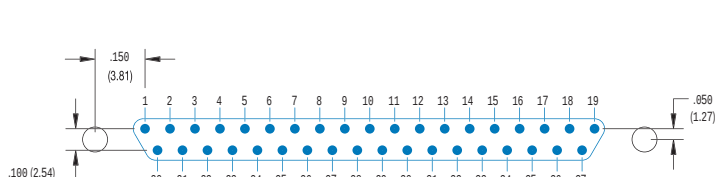
PIN
21 CONTACTS



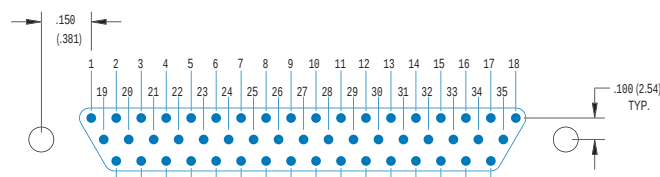
PIN
25 CONTACTS



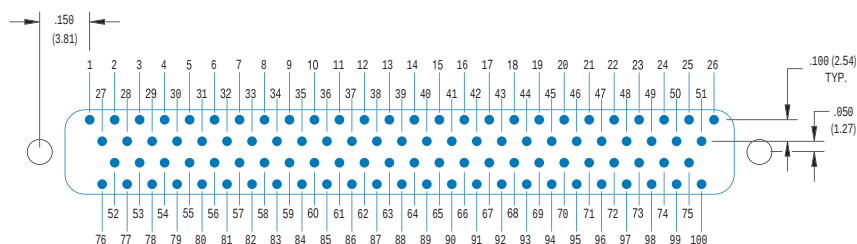
PIN
31 CONTACTS



PIN
37 CONTACTS



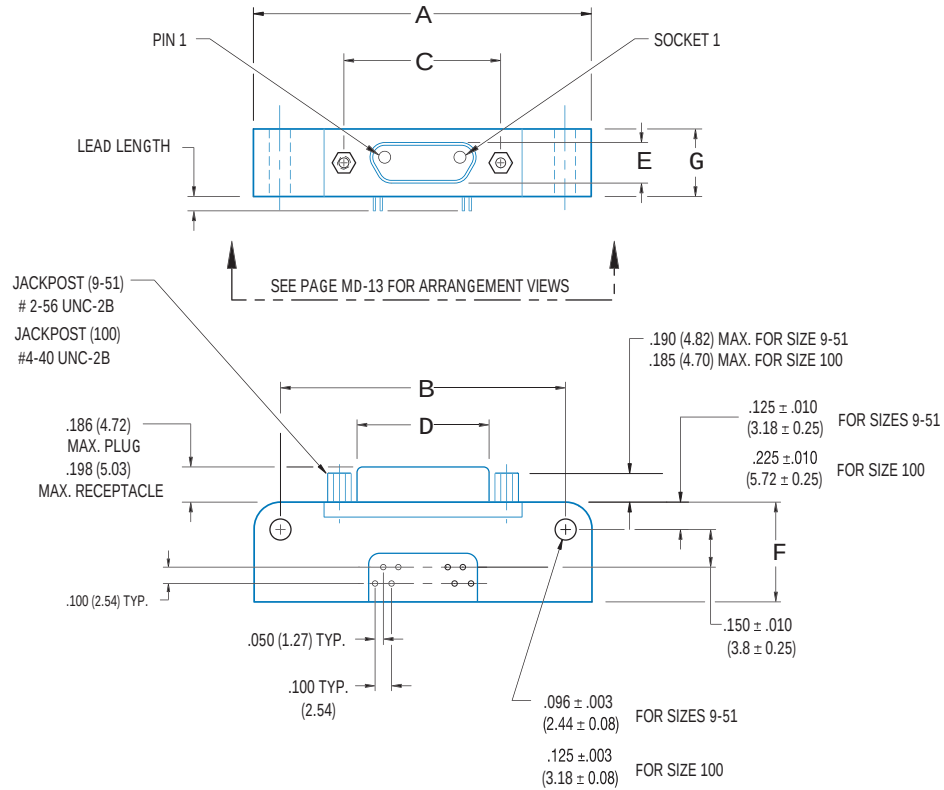
PIN
51 CONTACTS



PIN
100 CONTACTS

Arrangement views are from mating face of connector looking onto PCB.
Socket views are mirrored.

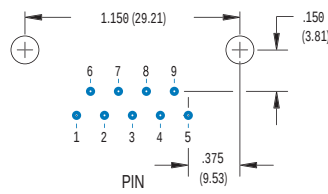
Straight PC configurations for series 100, 101, 102
.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)



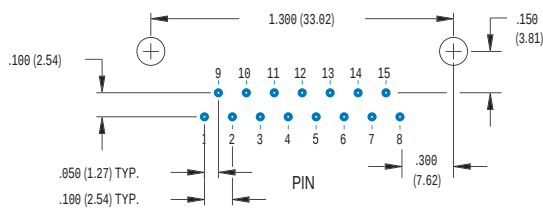
PART NUMBER	A MAX.	B ±.007 (0.18)	C ±.005 (0.13)	D MAX.	E MAX.	F MAX.	G MAX.
100RC09PBR	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.334 (8.48)	.185 (4.70)	.455 (11.56)	.308 (7.82)
100RC09SBR	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.402 (10.21)	.253 (6.43)	.455 (11.56)	.308 (7.82)
100RC15PBR	1.540 (39.12)	1.300 (33.02)	.715 (18.16)	.484 (12.29)	.185 (4.70)	.455 (11.56)	.308 (7.82)
100RC15SBR	1.540 (39.12)	1.300 (33.02)	.715 (18.16)	.552 (13.97)	.253 (6.43)	.455 (11.56)	.308 (7.82)
100RC21PBR	1.690 (42.93)	1.450 (36.83)	.865 (21.97)	.634 (16.10)	.185 (4.70)	.455 (11.56)	.308 (7.82)
100RC21SBR	1.690 (42.93)	1.450 (36.83)	.865 (21.97)	.702 (17.83)	.253 (6.43)	.455 (11.56)	.308 (7.82)
100RC25PBR	1.790 (45.47)	1.550 (39.37)	.965 (24.51)	.734 (18.64)	.185 (4.70)	.455 (11.56)	.308 (7.82)
100RC25SBR	1.790 (45.47)	1.550 (39.37)	.965 (24.51)	.802 (20.37)	.253 (6.43)	.455 (11.56)	.308 (7.82)
100RC31PBR	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	.884 (22.45)	.185 (4.70)	.455 (11.56)	.308 (7.82)
100RC31SBR	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	.952 (24.18)	.253 (6.43)	.455 (11.56)	.308 (7.82)
100RC37PBR	2.340 (59.40)	2.100 (53.34)	1.265 (32.13)	1.034 (26.26)	.185 (4.70)	.455 (11.56)	.308 (7.82)
100RC37SBR	2.340 (59.40)	2.100 (53.34)	1.265 (32.13)	1.102 (27.99)	.253 (6.43)	.455 (11.56)	.308 (7.82)
100RC51PBR	1.875 (47.63)	1.600 (40.64)	1.125 (30.86)	.984 (24.99)	.228 (5.79)	.565 (14.35)	.351 (8.92)
100RC51SBR	1.875 (47.63)	1.600 (40.64)	1.125 (30.86)	1.052 (26.72)	.296 (7.52)	.565 (14.35)	.351 (8.92)
100RC100PBR	2.780 (70.61)	2.500 (63.50)	1.800 (45.72)	1.386 (35.15)	.271 (6.88)	.765 (19.43)	.394 (10.01)
100RC100SBR	2.780 (70.61)	2.500 (63.50)	1.800 (45.72)	1.508 (38.10)	.394 (10.01)	.765 (19.43)	.394 (10.01)

90° PC configurations for series 100, 101, 102
.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)

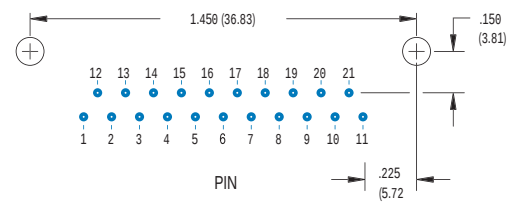
9 CONTACTS



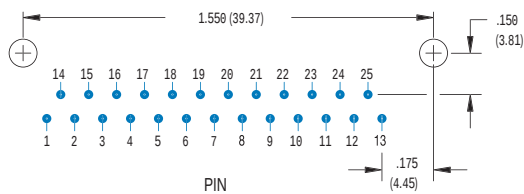
15 CONTACTS



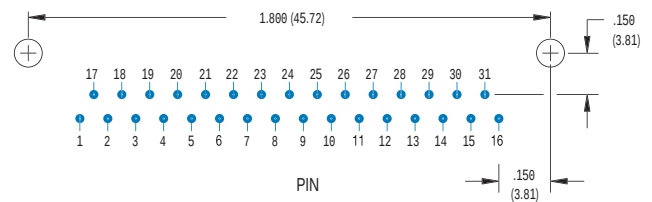
21 CONTACTS



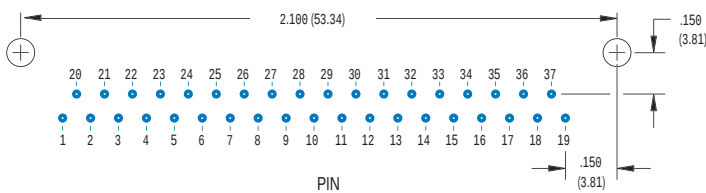
25 CONTACTS



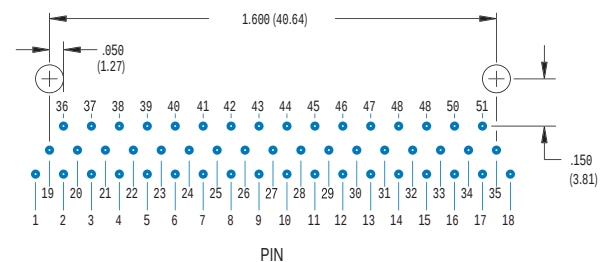
31 CONTACTS



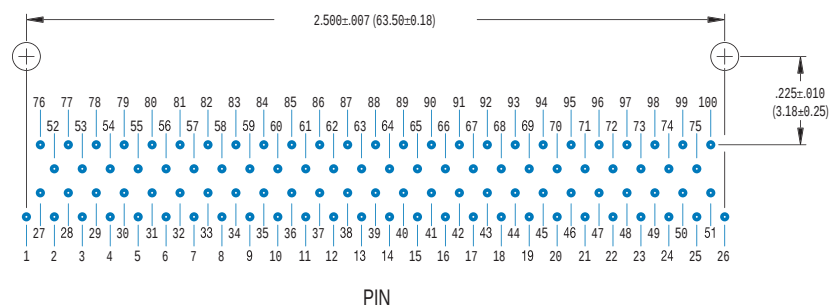
37 CONTACTS



51 CONTACTS



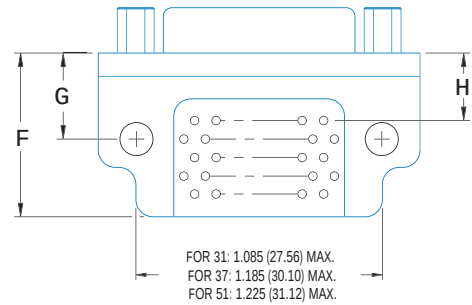
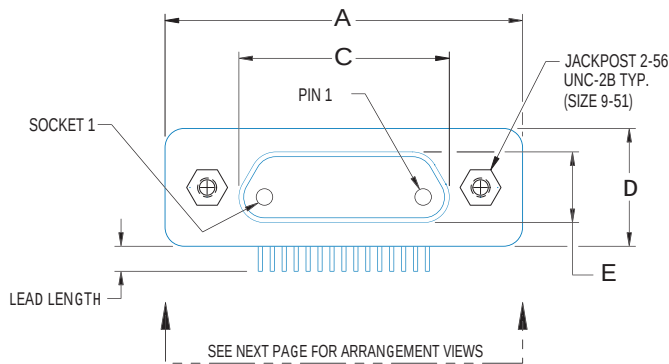
100 CONTACTS



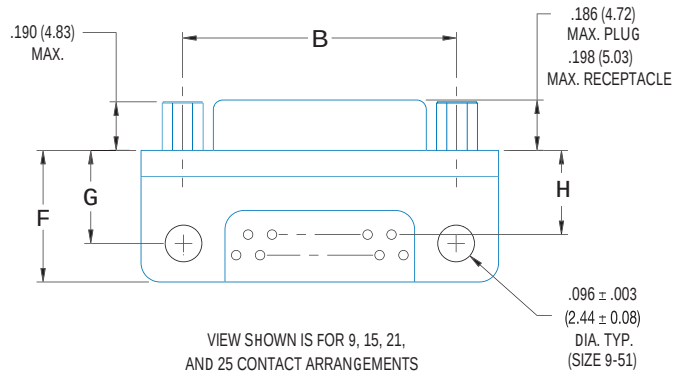
Arrangement views as looking onto mounting surface of connector.
Socket views are mirrored.

Standard lead termination is #24 AWG, tin plated, solid copper, solder dipped

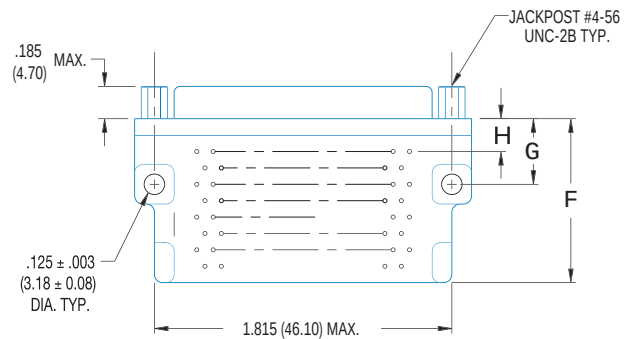
Consult factory for other wire size termination



VIEW SHOWN IS FOR 31, 37, AND 51 ARRANGEMENTS



VIEW SHOWN IS FOR 9, 15, 21, AND 25 CONTACT ARRANGEMENTS

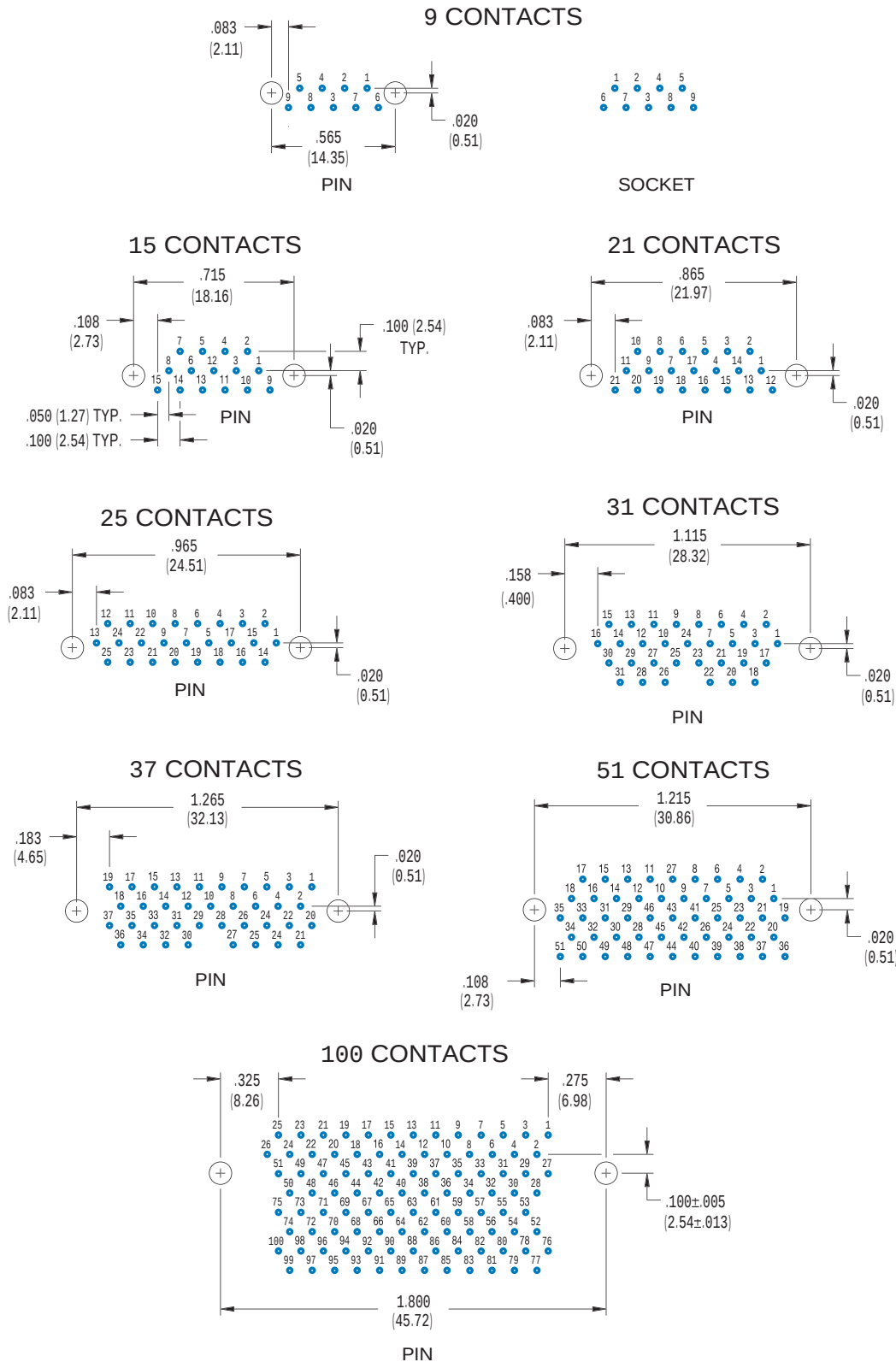


VIEW SHOWN IS FOR 100 ARRANGEMENT

PART NUMBER	A MAX.	B ±.005 (0.13)	C MAX.	D MAX.	E MAX.	F MAX.	G ±.010 (±0.25)	H ±.010 (±0.25)
100RC09PCBR	.785 (19.94)	.565 (14.35)	.334 (8.48)	.308 (7.82)	.185 (4.70)	.420 (10.67)	.250 (6.35)	.230 (5.81)
100RC09SCBR	.785 (19.94)	.565 (14.35)	.402 (10.21)	.308 (7.82)	.253 (6.43)	.420 (10.67)	.250 (6.35)	.230 (5.81)
100RC15PCBR	.935 (23.75)	.715 (18.16)	.484 (12.29)	.308 (7.82)	.185 (4.70)	.420 (10.67)	.250 (6.35)	.130 (3.30)
100RC15SCBR	.935 (23.75)	.715 (18.16)	.552 (13.97)	.308 (7.82)	.253 (6.43)	.420 (10.67)	.250 (6.35)	.130 (3.30)
100RC21PCBR	1.085 (27.56)	.865 (21.97)	.634 (16.10)	.308 (7.82)	.185 (4.70)	.420 (10.67)	.250 (6.35)	.130 (3.30)
100RC21SCBR	1.085 (27.56)	.865 (21.97)	.702 (17.83)	.308 (7.82)	.253 (6.43)	.420 (10.67)	.250 (6.35)	.130 (3.30)
100RC25PCBR	1.185 (30.10)	.965 (24.51)	.734 (18.64)	.308 (7.82)	.185 (4.70)	.420 (10.67)	.250 (6.35)	.130 (3.30)
100RC25SCBR	1.185 (30.10)	.965 (24.51)	.802 (20.37)	.308 (7.82)	.253 (6.43)	.420 (10.67)	.250 (6.35)	.130 (3.30)
100RC31PCBR	1.335 (33.91)	1.115 (28.32)	.884 (22.45)	.308 (7.82)	.185 (4.70)	.520 (13.21)	.250 (6.35)	.130 (3.30)
100RC31SCBR	1.335 (33.91)	1.115 (28.32)	.952 (24.18)	.308 (7.82)	.253 (6.43)	.520 (13.21)	.250 (6.35)	.130 (3.30)
100RC37PCBR	1.485 (37.72)	1.265 (32.13)	1.034 (26.26)	.308 (7.82)	.185 (4.70)	.520 (13.21)	.250 (6.35)	.130 (3.30)
100RC37SCBR	1.485 (37.72)	1.265 (32.13)	1.102 (27.99)	.308 (7.82)	.253 (6.43)	.520 (13.21)	.250 (6.35)	.130 (3.30)
100RC51PCBR	1.435 (36.45)	1.215 (30.86)	.984 (24.99)	.351 (8.92)	.228 (5.79)	.650 (16.15)	.300 (7.62)	.150 (3.81)
100RC51SCBR	1.435 (36.45)	1.215 (30.86)	1.052 (26.72)	.351 (8.92)	.296 (7.52)	.650 (16.15)	.300 (7.62)	.150 (3.81)
100RC100PCBR	2.170 (55.12)	1.800 (45.72)	1.384 (35.15)	.394 (10.01)	.271 (6.88)	1.000 (25.40)	.400 (10.16)	.200 (5.08)
100RC100SCBR	2.170 (55.12)	1.800 (45.72)	1.508 (38.10)	.394 (10.01)	.394 (10.01)	1.000 (25.40)	.400 (10.16)	.200 (5.08)

90° narrow profile PC terminations for series 100, 101, 102

.100 (2.54) x .100 (2.54) grid pattern, offset .050 (1.27)



Arrangement views as looking onto mounting surface of connector.

Socket views are mirrored.

ORDERING INFORMATION

Series 101 Connectors

Qualified to MIL-C-83513/06, 07, 08, 09 • Available in sizes 9 to 51 • Solder cup or wire termination

101 R XXX X - X X X XXX XX - XX

Connector Series

101 = All plastic shell
per MIL-C-83513

Insulator Material

R = Polyphenylene Sulfide

Connector Size

(Number Of Contacts)

09, 15, 21, 25, 31, 37, 51

Connector Type

P = Plug

S = Receptacle

Wire Size (AWG.)

1 = 32

2 = 30

3 = 28

4 = 26 (standard) *off shelf

5 = 25 (standard for solid uninsulated wire)

6 = 24

Omit for solder cup contacts

Wire Type

A = 7 STRD, per NEMA-HP3 (MIL-W-16878/4)

B = 7 STRD, per NEMA-HP3 (MIL-W-16878/4)

C = 19 STRD, per NEMA-HP3 (MIL-W-16878/4)

D = 19 STRD, per NEMA-HP3 (MIL-W-16878/4)

E = per MIL-W-22759/11

F = per MIL-W-22759/33

L = Solid uninsulated

Omit for solder cup contacts

Non Std. Wire Length (Inches)

Hardware

B = Standard mounting holes

L = Captive low profile jackscrew

K = Captive high profile jackscrew

F = Standard float mount

R = Reverse float mount

M2 = Low profile jackscrew, allen head

M3 = High profile jackscrew, allen head

M5 = Low profile jackscrew, slot head

M6 = High profile jackscrew, slot head

P = Jackpost

Wire Length

A = 18.00

B = 36.00

C = 72.00

D = 0.500

E = 1.00

Omit for solder cup contacts

Wire Colour / Finish

1 = All White

2 = All Yellow

3 = Solid uninsulated, tin plated

4 = Solid uninsulated, gold plated

5 = Color coded per MIL-STD-681, System 1

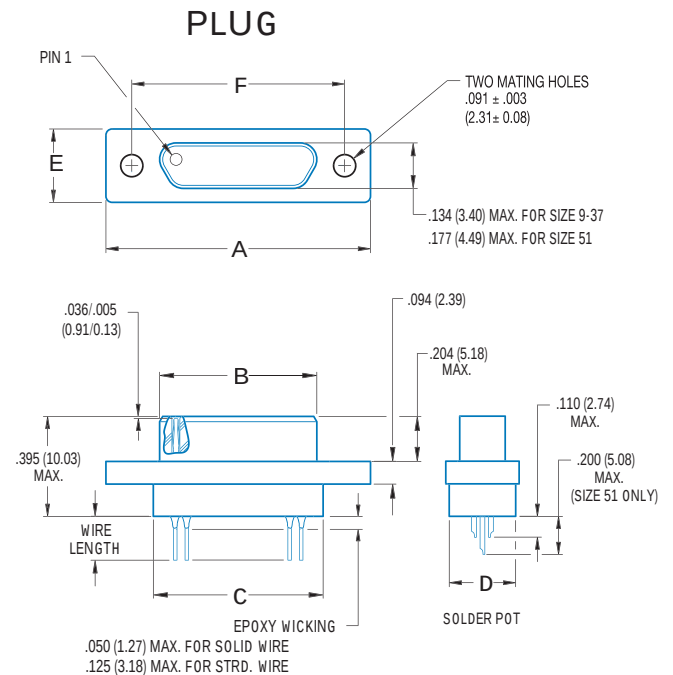
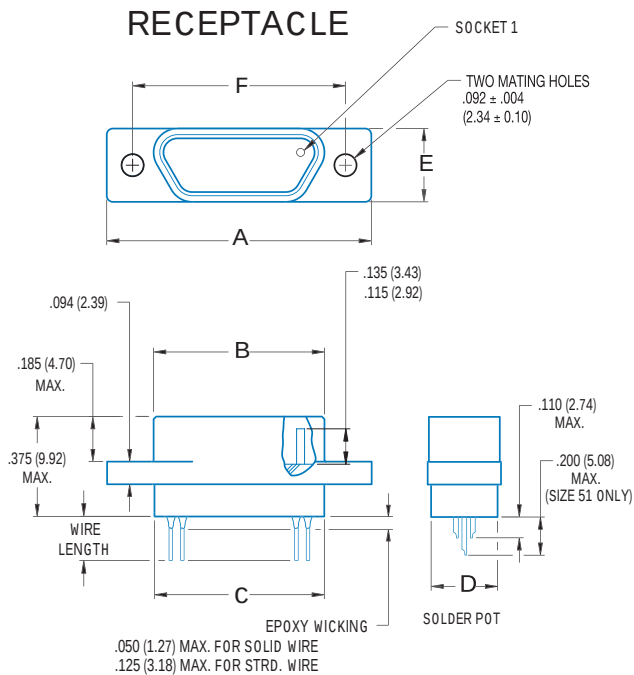
6 = 1st 10 colors blk. thru wht. repeated

7 = 1st 15 colors blk. thru wht./yel. repeated

Omit for solder cup contacts

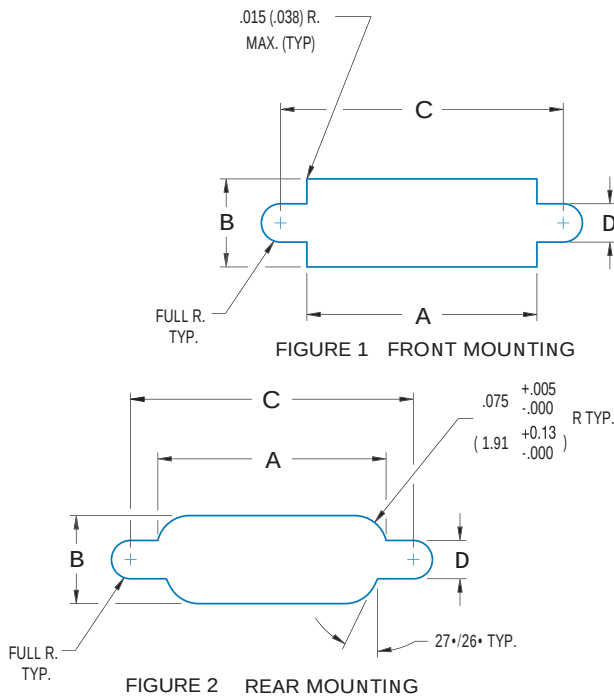
Qualified to MIL-C-83513/06, 07, 08, 09

Connector sizes 9 thru 51



PART NUMBER	A MAX.	B MAX.	C MAX.	D MAX.	E MAX.	F ±.005 (±0.13)
101R09P	.788 (20.02)	.292 (7.42)	.408 (10.36)	.173 (4.39)	.218 (5.54)	.565 (14.35)
101R09S	.788 (20.02)	.380 (9.65)	.408 (10.36)	.173 (4.39)	.218 (5.54)	.565 (14.35)
101R15P	.938 (23.82)	.442 (11.23)	.588 (14.17)	.173 (4.39)	.218 (5.54)	.715 (18.16)
101R15S	.938 (23.82)	.530 (13.46)	.588 (14.17)	.173 (4.39)	.218 (5.54)	.715 (18.16)
101R21P	1.088 (27.64)	.592 (15.04)	.708 (17.98)	.173 (4.39)	.218 (5.54)	.865 (21.97)
101R21S	1.088 (27.64)	.680 (17.27)	.708 (17.98)	.173 (4.39)	.218 (5.54)	.865 (21.97)
101R25P	1.188 (30.18)	.692 (17.58)	.808 (20.56)	.173 (4.39)	.218 (5.54)	.965 (24.51)
101R25S	1.188 (30.18)	.780 (19.81)	.808 (20.56)	.173 (4.39)	.218 (5.54)	.965 (24.51)
101R31P	1.338 (33.98)	.842 (21.39)	.958 (24.33)	.173 (4.39)	.218 (5.54)	1.115 (28.32)
101R31S	1.338 (33.98)	.930 (23.62)	.958 (24.33)	.173 (4.39)	.218 (5.54)	1.115 (28.32)
101R37P	1.488 (37.80)	.992 (25.20)	1.108 (28.14)	.173 (4.39)	.218 (5.54)	1.265 (32.13)
101R37S	1.488 (37.80)	1.080 (27.43)	1.108 (28.14)	.173 (4.39)	.218 (5.54)	1.265 (32.13)
101R51P	1.438 (36.52)	.942 (23.93)	1.058 (26.87)	.220 (5.59)	.260 (6.60)	1.215 (30.86)
101R51S	1.438 (36.52)	1.030 (26.16)	1.058 (26.87)	.220 (5.59)	.260 (6.60)	1.215 (30.86)

Connector sizes 9 thru 51



SIZE	CUTOUT FIGURE	A +.004 (0.10) -.000 (0.00)	B +.004 (0.10) -.000 (0.00)	C +.005 (0.13) -.000 (0.00)	D +.005 (0.13) -.000 (0.00)
9	1	.408 (10.36)	.172 (4.37)	.570 (14.48)	.089 (2.26)
	2	.378 (9.60)	.217 (5.51)	.570 (14.48)	.089 (2.26)
15	1	.588 (14.94)	.172 (4.37)	.720 (18.29)	.089 (2.26)
	2	.528 (13.41)	.217 (5.51)	.720 (18.29)	.089 (2.26)
21	1	.708 (17.98)	.172 (4.37)	.870 (22.10)	.089 (2.26)
	2	.678 (17.22)	.217 (5.51)	.870 (22.10)	.089 (2.26)
25	1	.808 (20.52)	.172 (4.37)	.970 (24.64)	.089 (2.26)
	2	.778 (19.76)	.217 (5.51)	.970 (24.64)	.089 (2.26)
31	1	.958 (24.33)	.172 (4.37)	1.120 (28.45)	.089 (2.26)
	2	.928 (23.57)	.217 (5.51)	1.120 (28.45)	.089 (2.26)
37	1	1.108 (28.14)	.172 (4.37)	1.270 (32.26)	.089 (2.26)
	2	1.078 (27.38)	.217 (5.51)	1.270 (32.26)	.089 (2.26)
51	1	1.058 (26.87)	.215 (5.46)	1.220 (30.99)	.089 (2.26)
	2	1.028 (26.11)	.261 (6.63)	1.220 (30.99)	.089 (2.26)

Micro D Plastic Connector PCB Termination

ORDERING INFORMATION

PCB Termination Series 101 Connectors

Straight and right angle • Connector sizes 9 thru 51

101 R XX X BR X X X - XXX

Connector Series

101 = All plastic shell
per MIL-C-83513

R = Polyphenylene Sulfide

Insulator Material

R = Polyphenylene Sulfide

Connector Size

(Number Of Contacts)

09, 15, 21, 25, 31, 37, 51

Connector Type

P = Plug

S = Receptacle

Non Std. Wire Length (Inches)
(EX = .125)

Lead Length

1 = .109 ± .015

2 = .140 ± .015

3 = .172 ± .015

4 = .250 ± .015

Threaded Insert

T = Threaded Insert

Omit for no threaded insert

Hardware

P = Jackpost

Omit for no jackpost

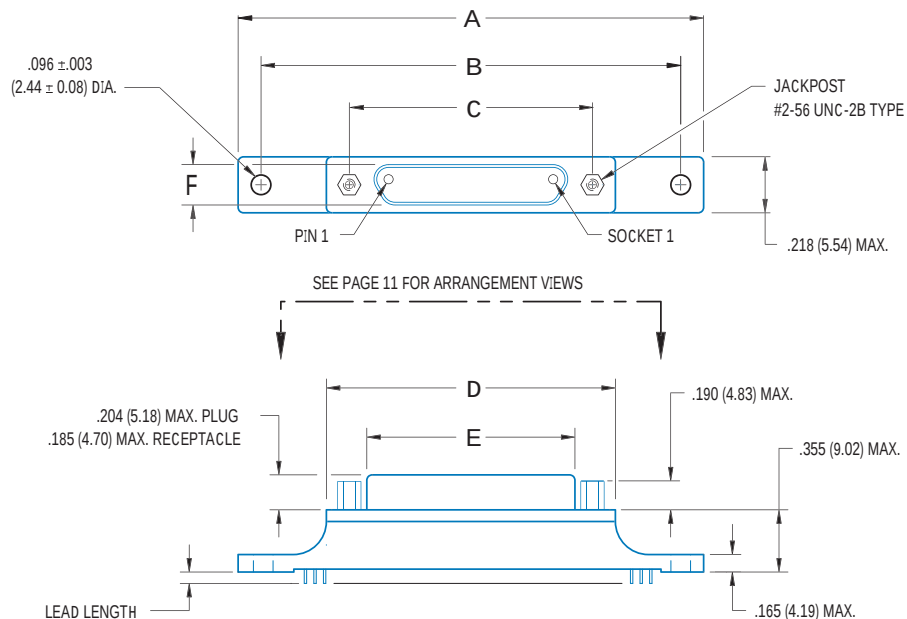
Termination Type

BS = Straight PCB termination per

BR = 90° PCB termination per

CBR = Narrow 90° PCB termination per

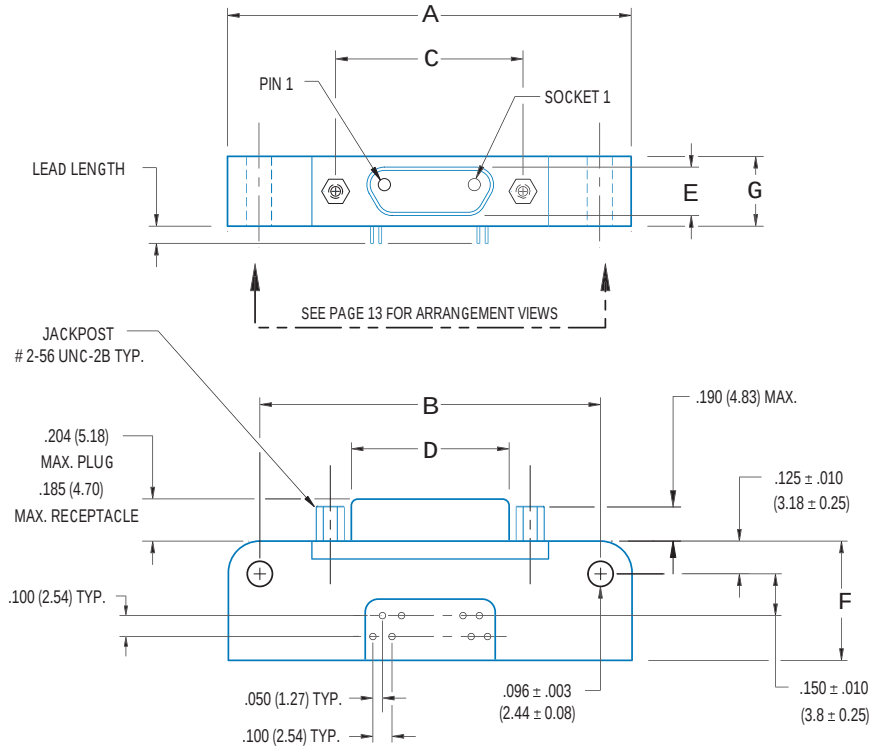
Standard lead termination is #24 AWG, tin plated, solid copper, solder dipped
Consult factory for other wire size terminations • Sizes 9 thru 37



PART NUMBER	A MAX.	B ±.007 (0.18)	C ±.005 (0.13)	D MAX.	E MAX.	F MAX.
101R09P	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.788 (20.02)	.292 (7.42)	.134 (3.40)
101R09S	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.788 (20.02)	.380 (9.65)	.218 (5.54)
101R15P	1.390 (35.31)	1.150 (29.21)	.715 (18.16)	.938 (23.82)	.442 (11.23)	.134 (3.40)
101R15S	1.390 (35.31)	1.150 (29.21)	.715 (18.16)	.938 (23.82)	.530 (13.46)	.218 (5.54)
101R21P	1.690 (43.93)	1.450 (36.83)	.865 (21.97)	1.088 (27.64)	.592 (15.04)	.134 (3.40)
101R21S	1.690 (43.93)	1.450 (36.83)	.865 (21.97)	1.088 (27.64)	.680 (17.27)	.218 (5.54)
101R25P	1.740 (44.20)	1.500 (38.10)	.965 (24.51)	1.188 (30.18)	.692 (17.58)	.134 (3.40)
101R25S	1.740 (44.20)	1.500 (38.10)	.965 (24.51)	1.188 (30.18)	.780 (19.81)	.218 (5.54)
101R31P	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	1.338 (33.98)	.842 (21.39)	.134 (3.40)
101R31S	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	1.338 (33.98)	.930 (23.62)	.218 (5.54)
101R37P	2.340 (59.44)	2.100 (53.34)	1.265 (32.13)	1.488 (37.80)	.992 (25.20)	.134 (3.40)
101R37S	2.340 (59.44)	2.100 (53.34)	1.265 (32.13)	1.488 (37.80)	1.080 (27.43)	.218 (5.54)

Standard lead termination is #24 AWG, tin plated, solid copper, solder dipped

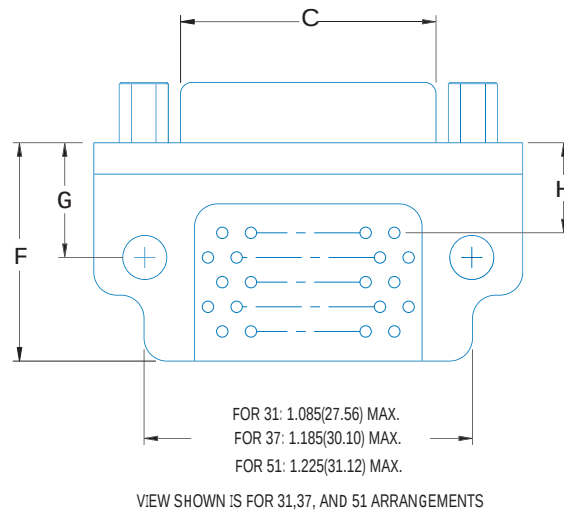
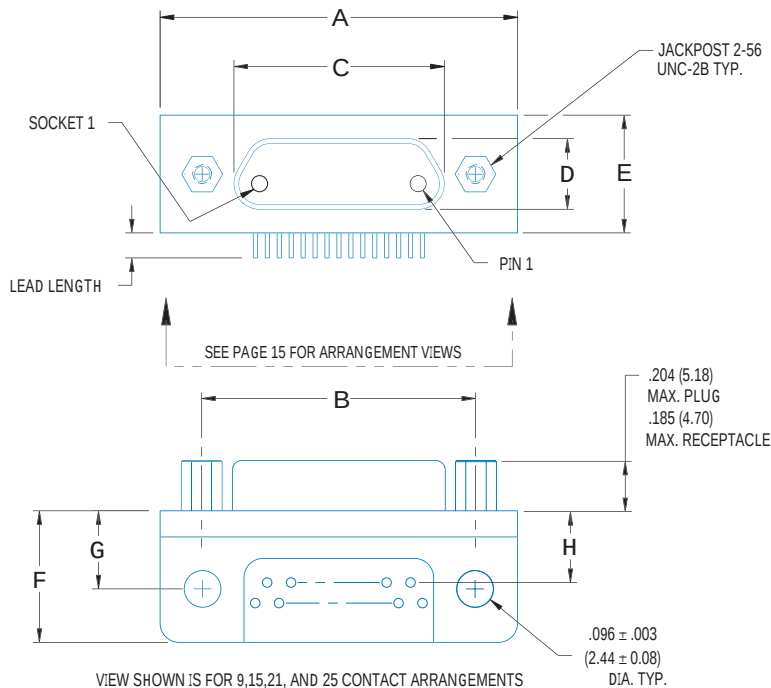
Consult factory for other wire size terminations • Sizes 9 thru 51



PART NUMBER	A MAX.	B ±.007 (0.18)	C ±.005 (0.13)	D MAX.	E MAX.	F MAX.	G MAX.
101R09PBR	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.292 (7.42)	.134 (3.35)	.455 (11.56)	.218 (5.54)
101R09SBR	1.390 (35.31)	1.150 (29.21)	.565 (14.35)	.380 (9.65)	.218 (5.54)	.455 (11.56)	.218 (5.54)
101R15PBR	1.540 (39.12)	1.300 (33.02)	.715 (18.16)	.442 (11.23)	.134 (3.35)	.455 (11.56)	.218 (5.54)
101R15SBR	1.540 (39.12)	1.300 (33.02)	.715 (18.16)	.530 (13.46)	.218 (5.54)	.455 (11.56)	.218 (5.54)
101R21PBR	1.690 (42.93)	1.450 (36.83)	.865 (21.97)	.592 (15.04)	.134 (3.35)	.455 (11.56)	.218 (5.54)
101R21SBR	1.690 (42.93)	1.450 (36.83)	.865 (21.97)	.680 (17.27)	.218 (5.54)	.455 (11.56)	.218 (5.54)
101R25PBR	1.790 (45.47)	1.550 (39.37)	.965 (24.51)	.692 (17.58)	.134 (3.35)	.455 (11.56)	.218 (5.54)
101R25SBR	1.790 (45.47)	1.550 (39.37)	.965 (24.51)	.780 (19.81)	.218 (5.54)	.455 (11.56)	.218 (5.54)
101R31PBR	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	.842 (21.39)	.134 (3.35)	.455 (11.56)	.218 (5.54)
101R31SBR	2.040 (51.82)	1.800 (45.72)	1.115 (28.32)	.930 (23.62)	.218 (5.54)	.455 (11.56)	.218 (5.54)
101R37PBR	2.340 (59.44)	2.100 (53.34)	1.265 (32.13)	.992 (25.20)	.134 (3.35)	.455 (11.56)	.218 (5.54)
101R37SBR	2.340 (59.44)	2.100 (53.34)	1.265 (32.13)	1.080 (27.43)	.218 (5.54)	.455 (11.56)	.218 (5.54)
101R51PBR	1.875 (47.63)	1.600 (40.64)	1.215 (30.86)	.942 (23.93)	.177 (4.50)	.565 (14.35)	.260 (6.60)
101R51SBR	1.875 (47.63)	1.600 (40.64)	1.215 (30.86)	1.030 (26.16)	.260 (6.60)	.565 (14.35)	.260 (6.60)

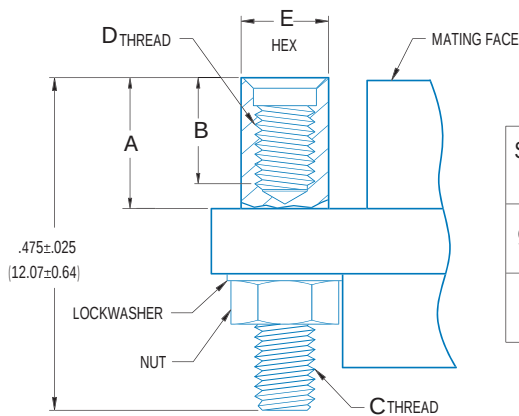
Standard lead termination is #24 AWG, tin plated, solid copper, solder dipped

Consult factory for other wire size terminations • Sizes 9 thru 51



PART NUMBER	A MAX.	B ±.005 (0.13)	C MAX.	D MAX.	E MAX.	F MAX.	G ±.010 (±0.25)	H ±.010 (±0.25)
101R09PCBR	.788 (20.02)	.565 (14.35)	.292 (7.42)	.134 (3.35)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.230 (5.81)
101R09SCBR	.788 (20.02)	.565 (14.35)	.380 (9.65)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.230 (5.81)
101R15PCBR	.938 (23.82)	.715 (18.16)	.442 (11.23)	.134 (3.35)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
101R15SCBR	.938 (23.82)	.715 (18.16)	.530 (13.46)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
101R21PCBR	1.088 (27.64)	.865 (21.97)	.592 (15.04)	.134 (3.35)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
101R21SCBR	1.088 (27.64)	.865 (21.97)	.680 (17.27)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
101R25PCBR	1.188 (30.18)	.965 (24.51)	.692 (17.58)	.134 (3.35)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
101R25SCBR	1.188 (30.18)	.965 (24.51)	.780 (19.81)	.218 (5.54)	.218 (5.54)	.420 (10.67)	.250 (6.35)	.130 (3.30)
101R31PCBR	1.338 (33.98)	1.115 (28.32)	.842 (21.39)	.134 (3.35)	.218 (5.54)	.520 (13.21)	.250 (6.35)	.130 (3.30)
101R31SCBR	1.338 (33.98)	1.115 (28.32)	.930 (23.62)	.218 (5.54)	.218 (5.54)	.520 (13.21)	.250 (6.35)	.130 (3.30)
101R37PCBR	1.488 (37.80)	1.265 (32.13)	.992 (25.20)	.134 (3.35)	.218 (5.54)	.520 (13.21)	.250 (6.35)	.130 (3.30)
101R37SCBR	1.488 (37.80)	1.265 (32.13)	1.080 (27.43)	.218 (5.54)	.218 (5.54)	.520 (13.21)	.250 (6.35)	.130 (3.30)
101R51PCBR	1.438 (36.52)	1.215 (30.86)	.942 (23.93)	.177 (4.50)	.260 (6.60)	.650 (16.15)	.300 (7.62)	.150 (3.81)
101R51SCBR	1.438 (36.52)	1.215 (30.86)	1.030 (26.16)	.260 (6.60)	.260 (6.60)	.650 (16.15)	.300 (7.62)	.150 (3.81)

Qualified to MIL-C-83513/05



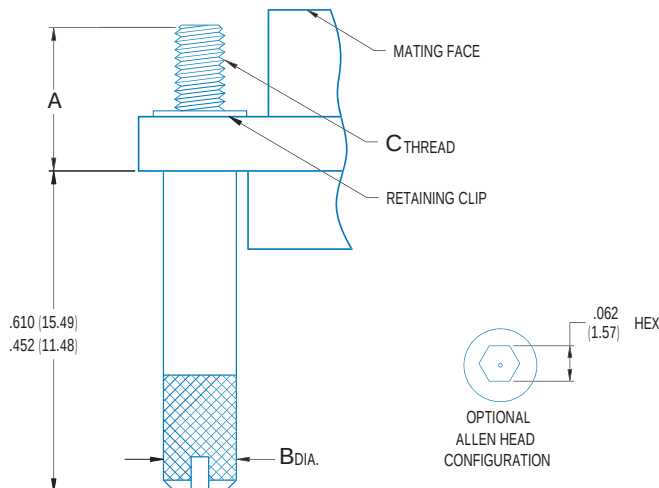
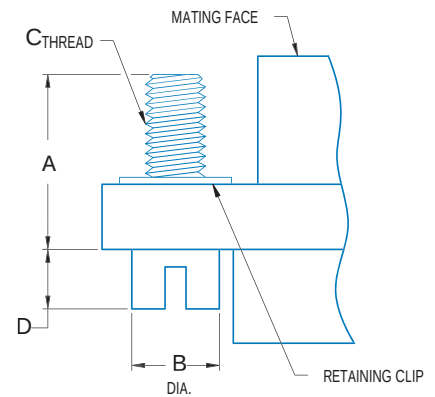
JACKPOST ASSEMBLY

SHELL SIZE	PART # CODE	SPECIFICATION NUMBER	A	B MIN.	C THREAD	D THREAD	E HEX
9-51	P	M83513/05-07	.190/.185 (4.83/4.70)	.155 (3.94)	#2-56 UNC-2A	#2-56 UNC-2B	.125 (3.18)
100	P	M83513/05-17	.185/.180 (4.70/4.58)	.170 (4.32)	#4-40 UNC-2A	#4-40 UNC-2B	.187 (4.75)

LOW PROFILE JACKSCREW

(AVAILABLE IN SLOT HEAD AND ALLEN HEAD CONFIGURATIONS)

SHELL SIZE	PART # CODE	SPECIFICATION NUMBER	A	B	C THREAD	D
9-51	M5	M83513/05-05 (SLOT HEAD)	.258/.235 (6.55/5.97)	.125 (3.18)	#2-56 UNC-2A	.103/.070 (2.62/1.78)
	M3	M83513/05-02 (ALLEN HEAD)	.258/.235 (6.55/5.97)	.125 (3.18)	#2-56 UNC-2A	.103/.070 (2.62/1.78)
100	M5	M83513/05-15 (SLOT HEAD)	.287±.005 (7.29±0.13)	.187 (4.75)	#4-40 UNC-2A	.098 (2.49)
	M3	M83513/05-12 (ALLEN HEAD)	.287±.005 (7.29±0.13)	.187 (4.75)	#4-40 UNC-2A	.098 (2.49)

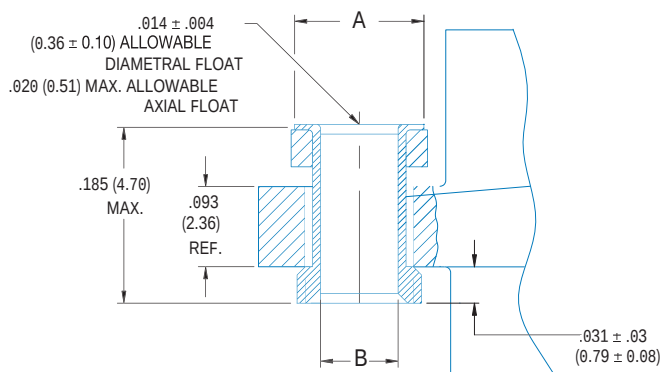


HIGH PROFILE JACKSCREW

(AVAILABLE IN SLOT HEAD AND ALLEN HEAD CONFIGURATIONS)

SHELL SIZE	PART # CODE	SPECIFICATION NUMBER	A	B	C THREAD
9-51	M6	M83513/05-06 (SLOT HEAD)	.258/.235 (6.55/5.97)	.125 (3.18)	#2-56 UNC-2A
	M3	M83513/05-03 (ALLEN HEAD)	.258/.235 (6.55/5.97)	.125 (3.18)	#2-56 UNC-2A
100	M6	M83513/05-16 (SLOT HEAD)	.287±.005 (7.29±0.13)	.187 (4.75)	#4-40 UNC-2A
	M3	M83513/05-13 (ALLEN HEAD)	.287±.005 (7.29±0.13)	.187 (4.75)	#4-40 UNC-2A

INCHES (MM)



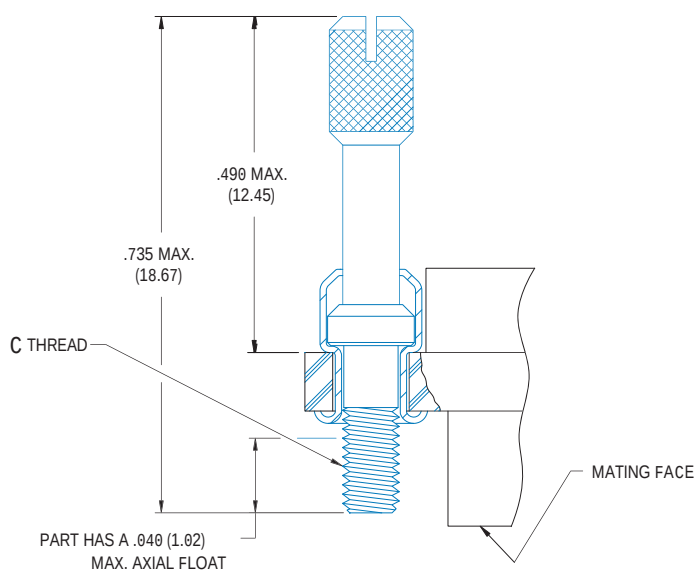
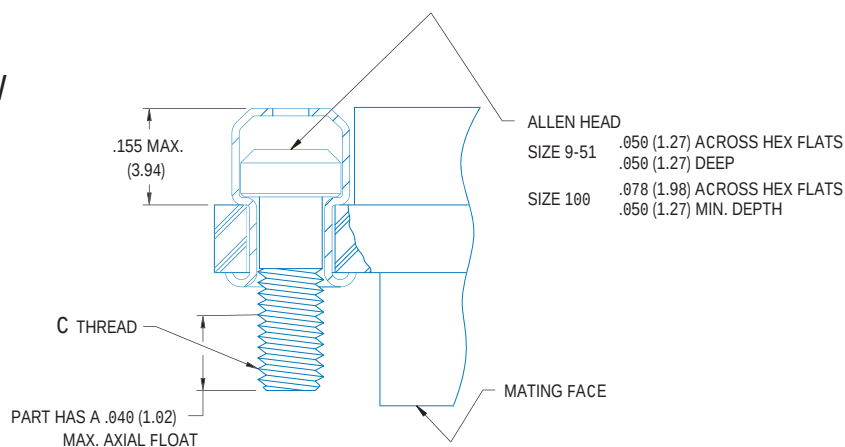
FLOAT MOUNT

SHELL SIZE	PART # CODE	A DIA.	B DIA.
9-51	F	.150±.003 (3.81±.076)	.090±.0015 (2.99±0.038)
100	F	.174±.005 (4.40±0.13)	.116±.002 (2.95±.051)

LOW PROFILE JACKSCREW

(AVAILABLE IN ALLEN HEAD CONFIGURATION)

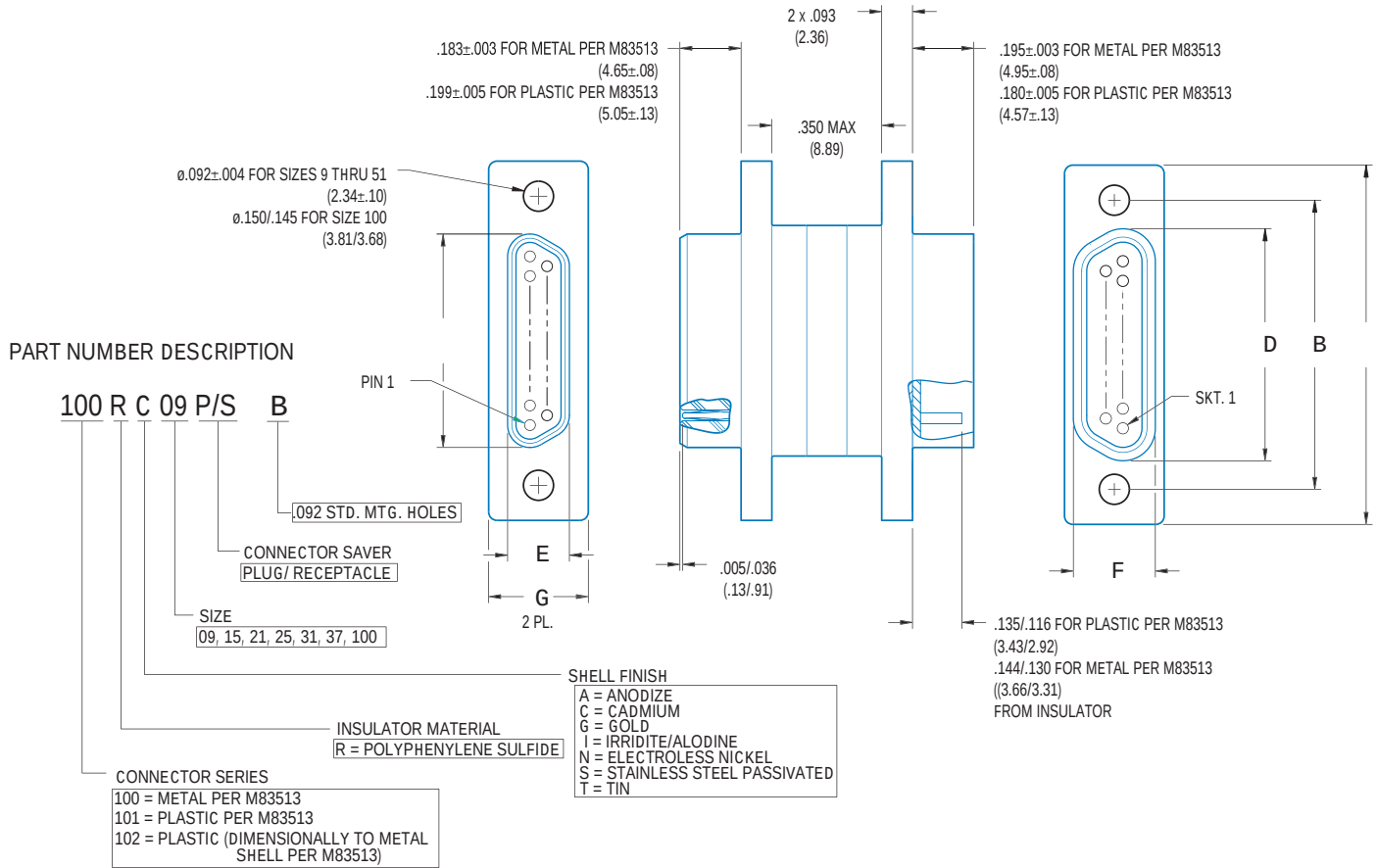
SHELL SIZE	PART # CODE	C THREAD
9-51	L	#2-56 UNC-2A
100	L	#4-40 UNC-2A



HIGH PROFILE JACKSCREW

(AVAILABLE IN SLOT HEAD CONFIGURATION)

SHELL SIZE	PART # CODE	C THREAD
9-51	K	#2-56 UNC-2A
100	K	#4-40 UNC-2A



PART NUMBER	A MAX.	B $\pm .005$	C MAX.	D MAX.	E MAX.	F MAX.	G MAX.
100R*09P/S	.785 (19.94)	.565 (14.35)	.334 (8.48)	.402 (10.21)	.185 (4.70)	.253 (6.43)	.308 (7.82)
100R*15P/S	.935 (23.75)	.715 (18.16)	.484 (12.29)	.552 (13.97)	.185 (4.70)	.253 (6.43)	.308 (7.82)
100R*21P/S	1.085 (27.56)	.865 (21.97)	.634 (16.10)	.702 (17.83)	.185 (4.70)	.253 (6.43)	.308 (7.82)
100R*25P/S	1.185 (30.10)	.965 (24.51)	.734 (18.64)	.802 (20.37)	.185 (4.70)	.253 (6.43)	.308 (7.82)
100R*31P/S	1.335 (33.91)	1.115 (28.32)	.884 (22.45)	.952 (24.18)	.185 (4.70)	.253 (6.43)	.308 (7.82)
100R*37P/S	1.485 (37.72)	1.265 (32.13)	1.034 (26.26)	1.102 (27.99)	.185 (4.70)	.253 (6.43)	.308 (7.82)
100R*51P/S	1.435 (36.45)	1.215 (30.86)	.984 (24.99)	1.052 (26.72)	.228 (5.79)	.296 (7.52)	.351 (8.92)
100R*100P/S	2.170 (55.12)	1.800 (45.72)	1.384 (35.13)	1.508 (38.10)	.271 (6.88)	.394 (10.01)	.394 (10.01)
101R09P/S	.788 (20.02)	.565 (14.35)	.292 (7.42)	.380 (9.65)	.134 (3.40)	.218 (5.54)	.218 (5.54)
101R15P/S	.938 (23.82)	.715 (18.16)	.442 (11.23)	.530 (13.46)	.134 (3.40)	.218 (5.54)	.218 (5.54)
101R21P/S	1.088 (27.64)	.865 (21.97)	.592 (15.04)	.680 (17.27)	.134 (3.40)	.218 (5.54)	.218 (5.54)
101R25P/S	1.188 (30.18)	.965 (24.51)	.692 (17.58)	.780 (19.81)	.134 (3.40)	.218 (5.54)	.218 (5.54)
101R31P/S	1.338 (33.98)	1.115 (28.32)	.842 (21.39)	.930 (23.62)	.134 (3.40)	.218 (5.54)	.218 (5.54)
101R37P/S	1.488 (37.80)	1.265 (32.13)	.992 (25.20)	1.080 (27.43)	.134 (3.40)	.218 (5.54)	.218 (5.54)
101R51P/S	1.438 (36.52)	1.215 (30.86)	.942 (23.93)	1.030 (26.16)	.177 (4.49)	.260 (6.60)	.260 (6.60)