FCC
SERIES

FILTER PRODUCTS

Amphenol®

www.amphenol.com

Amphenol®

The Company

Amphenol Canada Corp. a subsidiary of Amphenol Corporation, is an international leader in the manufacture of *Filtered Connectors* and *Specialty Interconnect Devices*, and has been pioneering EMI and EMP technologies for more than 40 years.

Located in Toronto, Canada, our ISO 9001 certified facility employs approximately 400 people. Our activities are dedicated to the design, development and manufacture of EMI/EMP filter connector products which are used in Commercial, Industrial, Communications, Military and Aerospace applications worldwide. Our expertise in understanding and supporting our customers' filter interconnect needs has earned Amphenol Canada a reputation of quality and excellence among the world's leading users of electronic components.

What is a Filtered Connector?

A ***filtered connector*** is the combination of filter elements in a connector, forming one neat, compact interconnect device that can filter unwanted EMI. The most popular configuration is when capacitors are mounted inside the connector between each of the contacts and the connector ground shell.

Benefits

Better EMI Control – With minimized lead inductances and short, direct paths to ground of the filter, performance will typically out perform the same filter components on a P.C.B. by a factor of three to one.

PCB Space Savings – Incorporating filter elements into the connector, enables simplification of the required filter schematic for the necessary performance plus a savings of 2-4 square inches.

Cost Savings – Filter elements, such as inductors and capacitors, must no longer be purchased, stocked, assembled or tested. Fewer components means greater reliability at lower cost.

Easy EMI/RFI Upgrade – These compact filtered connectors fit standard non-filtered connector footprints. For improved EMC performance, simply replace the existing connector with a filtered connector.

EMC Compliance & Immunity – EMI that is generated from the electronic device, radiated or conducted, will be re-directed to chassis ground through the connector shell. This same device will also protect the system from external EMI/RFI noise (such as radio transmitters, ESD, or natural phenomena such as lightning) in the same way.

Choosing the Right Capacitance for Your Filter Connector

(1) Determine the highest frequency that the filter connector needs to pass unaffected.

(2) Which frequencies are causing trouble, either with emissions or with immunity to interference?

(3) Scan the Insertion Loss charts on page 2 to select a filter which provides little or no insertion loss (filtering) at the frequency determined from step 1, yet gives the greatest possible insertion loss at the frequencies determined in step 2.

Nominal Insertion Loss values described in this catalog are based on the Mil-STD-220 test method - a 50 ohm balanced load and source impedance. Different systems will differ from this and hence, the filter connector may perform differently. The final decision will be determined from actual EMI/RFI testing of the equipment in question.

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FCC17 Series

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Micro–Ribbon Series

FCC57 Series

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RF Series

456 Series

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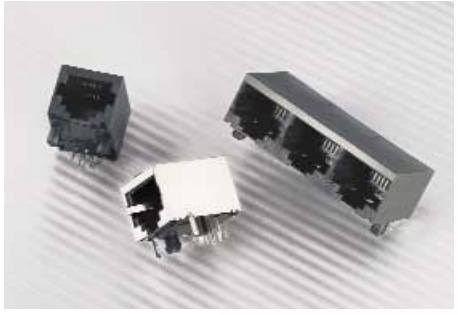
Modular Jacks



FRJ / FRJA Series

Filtered & Shielded -
See Modular Jack Catalogue

FCC17 & FCC57 Series

ELECTRICAL DATA

Contact Resistance: 15 milliohms maximum per MIL-STD-1344 Method 3002

Insulation Resistance: 3000 megohms minimum per MIL-STD-1344 Method 3003.1

Current Rating: 5 Amps DC maximum
2 Amps RF filtering maximum

FCC17 Combo: 20-40 Amps

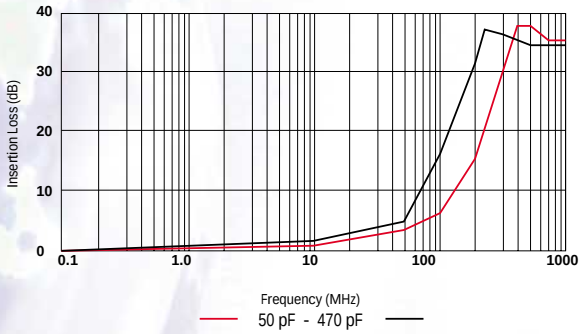
Filter Performance:

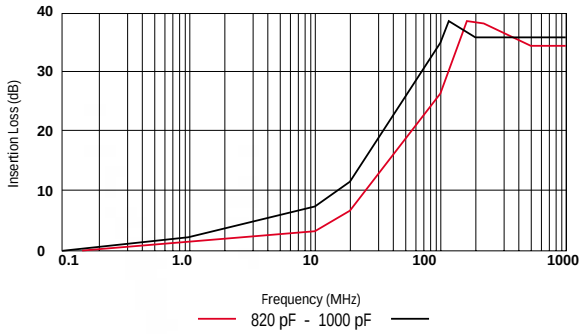
Filter Capacitance (pF) @25°C, 1 kHz, 1.0 VRMS	50 ± 15%	180 ± 15%	330 ± 15%	470 ± 15%	820 ± 15%	1000 ± 15%	1200 ± 15%	2200 ± 15%	5600 ± 20%	47000 ± 20%
Dielectric Material: NPO or X7R										
Insertion Loss (dB)										
(per MIL-STD-220 @ 25°C) .5 MHz									3	15
1 MHz								1	5	20
5 MHz				1	1	1	1	5	11	27
10 MHz			1	2	3	3	4	8	16	32
50 MHz		4	7	11	16	16	17	23	32	32
100 MHz	2	12	15	22	30	30	30	32	32	32
200 MHz	12	27	28	30	32	32	32	32	32	32
1000 MHz	32	32	32	32	32	32	32	32	32	32
Working Voltage (VDC)	300	300	300	300	200	200	200	200	200	50
DWV (VDC) *	600	600	600	600	600	600	600	600	600	150

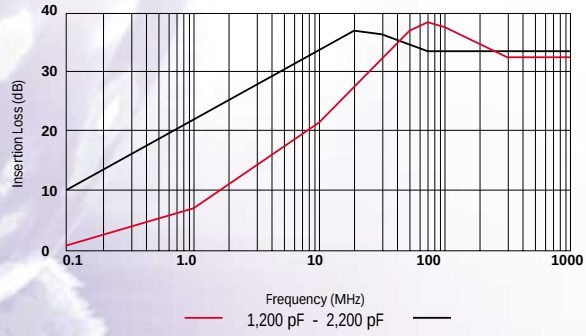
NOTE: A larger range of capacitors available - consult factory.

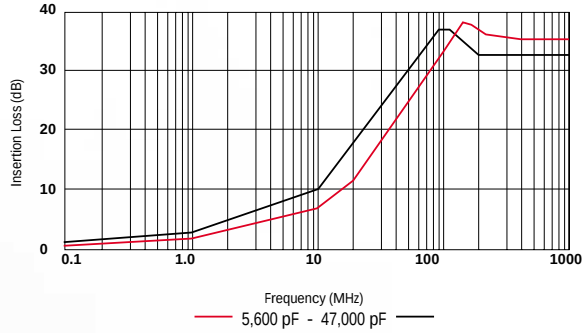
* FCC57 connectors can be specified to meet the requirements of FCC Docket 20780, Part 68, Subpart F (1000 VAC for one minute. Consult factory for details).
FCC17 and FCC57 connectors can withstand a transient voltage spike of 700 V with a rise time of 1 µsec (500 V for 47000 pF).
FCC17 and FCC57 connectors can be specified to meet higher DWV and transient voltage requirement (consult factory).

Typical Insertion Loss Performance (dB)(Per MIL-STD-220, no load)



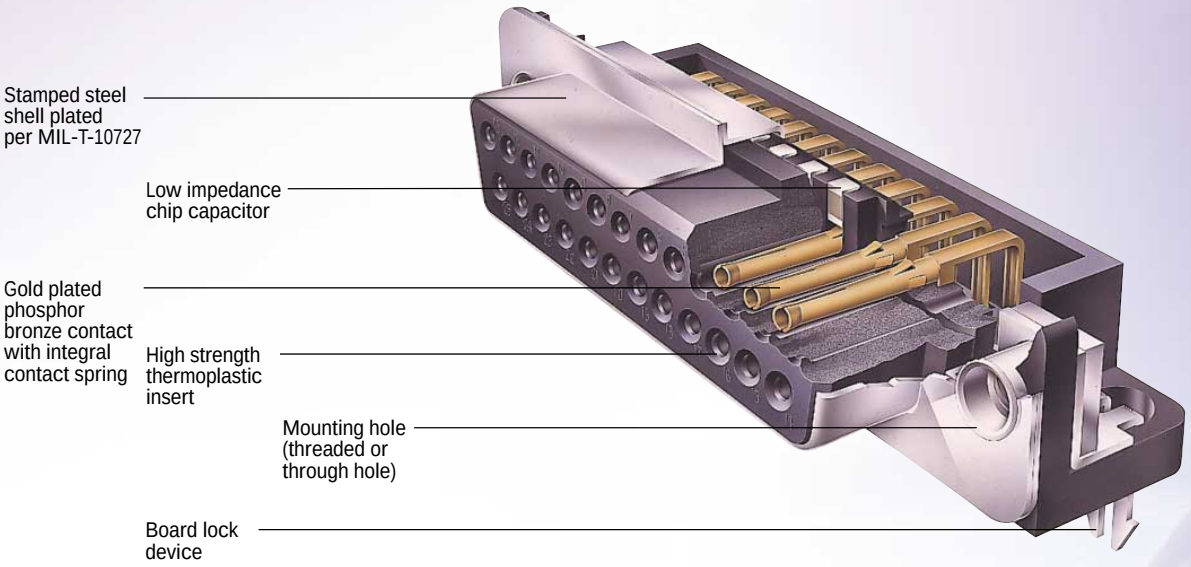






Amphenol® Canada Corp. Telephone: (416) 754-5656 Fax: (416) 754-8668 E-mail: sales@amphenolcanada.com

FCC17 Series Construction



FCC17 & FCC57 Mechanical & Environmental Data

MATERIALS

FCC17	
Shell	Stamped Steel; Tin Plated
Contacts	Phosphor Bronze; 15µ inches [0.38 microns] Au over Ni Optional 50µ inches [1.27 microns] Au available
	FCC17 Combo Copper Alloy 30µ inches [0.76 microns] Au over Ni
Inserts	High Strength Thermoplastic. Complies with UL flammability requirements of 94V-O per UL-STD-94.

FCC57	
Shell	Stamped Steel, Zinc or Aluminum Diecast; Tin Plated
Contacts	Phosphor Bronze; 30µ inches [0.76 microns] Au over Ni Optional 50µ inches [1.27 microns] Au available
Inserts	High Strength Thermoplastic. Complies with UL flammability requirements of 94V-O per UL-STD-94.

ENVIRONMENTAL

FCC17 & FCC57	
OPERATING TEMPERATURE	• -40°C to +85°C
TEMPERATURE CYCLING	• To MIL-STD-1344, Method 1003, Test Cond. A
HUMIDITY	• To MIL-STD-1344, Method 1002, Type I, Test Condition C
VIBRATION	• To MIL-STD-1344, Method 2005, Test Cond. III
DURABILITY	• 200 Cycles Minimum, to MIL-STD-1344, Method 2016
UL File #	E135615
CSA File #	LR68598

FCC17 Series

FILTERED STACKED D-SUB CONNECTORS

Ordering Information – Stacked D-Sub

FCC17 – 2 BP BS – 4 5 5 X

FCC17 **SERIES DESIGNATION**

2 **VERTICAL MOUNTING DIMENSION BETWEEN CONNECTORS**
1 = .625" [15.88 mm]
2 = .750" [19.05 mm]

BP **UPPER CONNECTOR CONFIGURATION**
(Size and Style)

EP:	9 pin	BP:	25 pin
ES:	9 socket	BS:	25 socket
AP:	15 pin	CP:	37 pin
AS:	15 socket	CS:	37 socket

BS **LOWER CONNECTOR CONFIGURATION**
(Size and Style) same as Upper Connector Configuration

4 **MOUNTING**
2: .120" [3.05 mm] Diameter Through Hole on Flanges
4: 4-40 Threaded Inserts on Flanges
E: 4-40 Hex Jack Sockets (supplied loose)

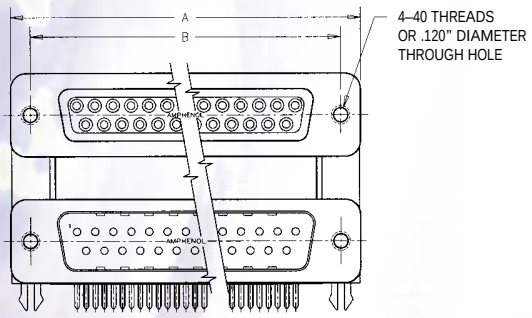
***** For Additional Mounting Options and Filter Capacitance - Consult Factory

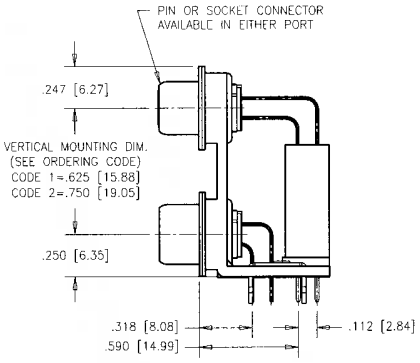
MODIFIER **X**
0: Standard Product
x: Special or Custom Versions

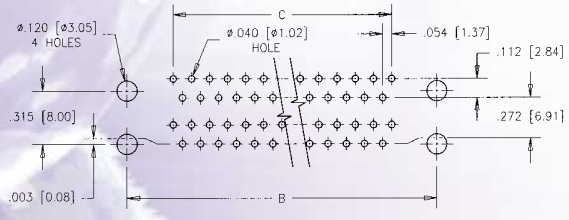
LOWER CONNECTOR FILTER CAPACITANCE **5**
same as Upper Connector Filter Capacitance Designation

UPPER CONNECTOR FILTER CAPACITANCE **5**

D:	50 pF	5:	1,000 pF
0:	180 pF	E:	2,200 pF
F:	330 pF	7:	1,200 pf
1:	470 pF	9:	5,600 pF
4:	820 pF	8:	47,000 pF







PCB LAYOUT

Dimensions

Connector size	A	B	C
9 / 9	1.213 [30.81]	.984 [24.99]	.432 [10.97]
15 / 15	1.541 [39.14]	1.312 [33.32]	.756 [19.20]
25 / 25	2.088 [53.04]	1.852 [47.04]	1.304 [33.12]
37 / 37	2.729 [69.32]	2.500 [63.50]	1.956 [49.68]

Consult factory for alternative arrangements

Amphenol® Canada Corp. Telephone: (416) 754-5656 Fax: (416) 754-8668 E-mail: sales@amphenolcanada.com

Specifications

Filter Characteristics: See Page 2
Electrical Data: See Page 2
Material and Finishes: See Page 3
Environmental Data: See Page 3
UL File # : E135615
CSA File # : LR68598

These products are protected by U.S. Patent # 4500159

Ordering Information – D-Sub

FCC17 – B25 S C – 4 4 0 G

FCC17 SERIES DESIGNATION

B25 SIZE
E09
A15
B25
C37

S CONNECTOR TYPE
A - Adapter
P - Pin
S - Socket

C TERMINATION TYPE
A - Right Angle PC Tail, .318" [8.08 mm] Footprint
B - Right Angle PC Tail, .405" [10.29 mm] Footprint
C - Right Angle PC Tail, .590" [14.99 mm] Footprint
D - Pin/Socket Adapter
E - Vertical Mount PC Tail
M - Solder Cup
N - Vertical Mount PC Tail - Long Body

4 MOUNTING OPTIONS*
A: 4-40 Threaded PC Tail Standoffs with Boardlock, Vertical Mount Only
E: 4-40 Hex Jack Sockets (supplied loose)
F: 4-40 Round Fixed Jack Sockets
2: .120 [3.05 mm] diameter Through hole
3: Self-Locking 4-40 Threaded Inserts
4: 4-40 Threaded Inserts (Standard)
5: 4-40 Threaded Stand-Offs, Vertical Mount
6: M3 Threaded inserts

4 FILTER CAPACITANCE [pF]*
D: 50 pF
B: 100 pF
0: 180 pF
F: 330 pF
1: 470 pF
4: 820 pF
5: 1,000 pF
7: 1,200 pF
E: 2,200 pF
9: 5,600 pF
8: 47,000 pF

0 MODIFIER
0 = Standard Product (Boardlocks on Right Angle D-Subs)
B = Metal Mounting Brackets, for Right Angle D-Subs
D = .315" to Boardlock for .590" footprint
E = Plastic Bracket - No Boardlock
F = No Boardlock, No plastic or metal Bracket - Alignment Strip Only
X = Specials or Custom Versions

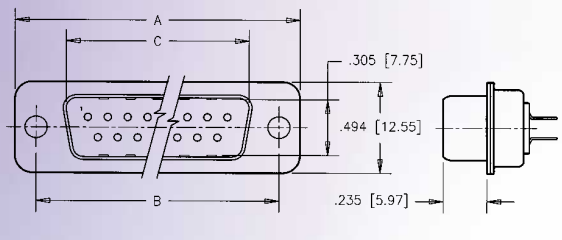
G SPECIALS
No Digit: Standard 15µ inches gold
G: 50 micro inches gold
K: 30 micro inches gold
L: Standard Connector with added ferrite block

* For Additional Mounting Options and Filter Capacitance - Consult Factory

FCC17 Series

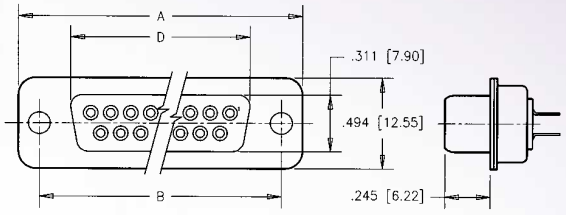
FILTERED D-SUB CONNECTORS

Pin



FRONT VIEW END VIEW

Socket

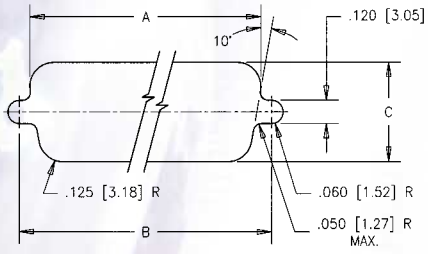


FRONT VIEW END VIEW

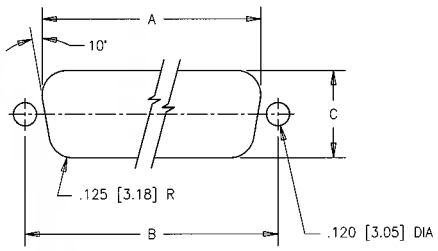
All Dimensions in Inches (mm)

Shell Size	Standard Number of Contacts	A	B	C (for pin connector)	D (for socket connector)
E	9	1.213 [30.81]	.984 [24.99]	.666 [16.92]	.643 [16.33]
A	15	1.541 [39.14]	1.312 [33.32]	.994 [25.25]	.971 [24.66]
B	25	2.088 [53.04]	1.852 [47.04]	1.534 [38.96]	1.511 [38.38]
C	37	2.729 [69.32]	2.500 [63.50]	2.182 [55.42]	2.159 [54.84]

Mounting Dimensions



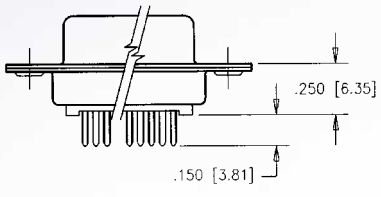
FRONT MOUNTING CUT-OUT



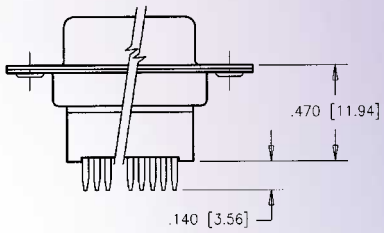
REAR MOUNTING CUT-OUT

Size	Mounting	A	B	C
9	Front	.875 [22.23]	.984 [24.99]	.512 [13.00]
	Rear	.807 [20.50]	.984 [24.99]	.449 [11.40]
15	Front	1.200 [30.48]	1.312 [33.32]	.512 [13.00]
	Rear	1.134 [28.80]	1.312 [33.32]	.449 [11.40]
25	Front	1.744 [44.30]	1.852 [47.04]	.512 [13.00]
	Rear	1.673 [42.49]	1.852 [47.04]	.449 [11.40]
37	Front	2.389 [60.68]	2.500 [63.50]	.512 [13.00]
	Rear	2.326 [59.08]	2.500 [63.50]	.449 [11.40]

Vertical Mount



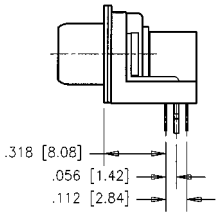
Termination Type E



Termination Type N

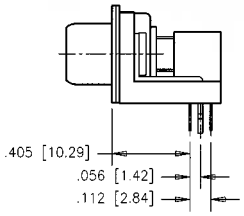
Right Angle, with Boardlocks & Plastic Mounting Brackets

.318" FOOTPRINT



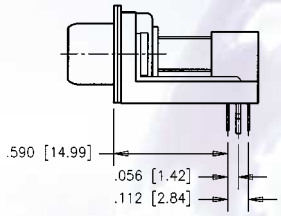
Termination Type A
with Modifier option O

.405" FOOTPRINT



Termination Type B
with Modifier option O

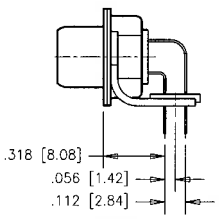
.590" FOOTPRINT



Termination Type C
with Modifier option O

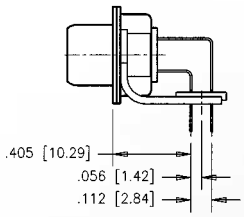
Right Angle, with Metal Mounting Brackets

.318" FOOTPRINT



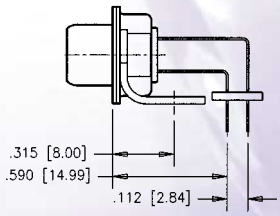
Termination Type A
with Modifier option B

.405" FOOTPRINT



Termination Type B
with Modifier option B

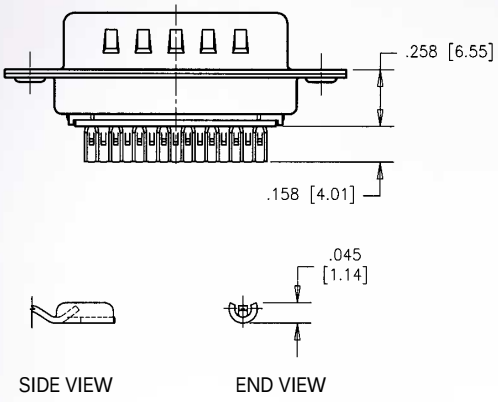
.590" FOOTPRINT



Termination Type C
with Modifier option B

Solder Cup Termination

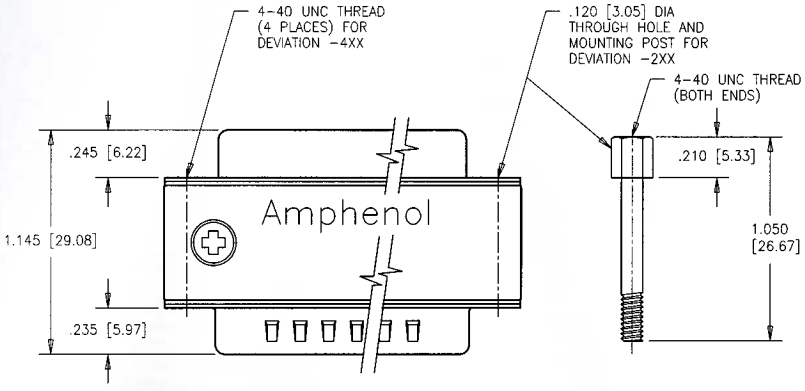
Termination type M



SOLDER CUP DETAIL
(ACCEPTS UP TO 20 AWG WIRE)

Pin-to-Socket Adapter

Termination type D



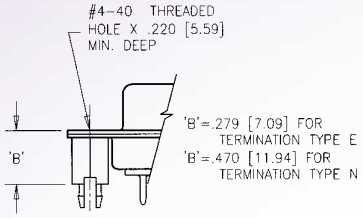
Mounting Options
Through Hole with Mounting Post
4-40 Threaded Inserts

Part No. Example
FCC17-B25AD-2x0
FCC17-B25AD-4x0

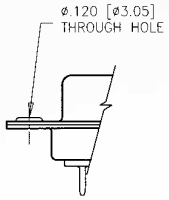
x = To complete the P/N, see page 5 to assign Filter Capacitance Code.
For electrical and mechanical specifications, see pages 2 and 3.

Mounting Options (on Flange)

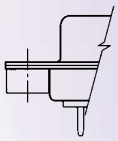
Shown for Vertical Mount Connectors. Codes 2, 3, 4, 6, E and F also available on right angle connectors.



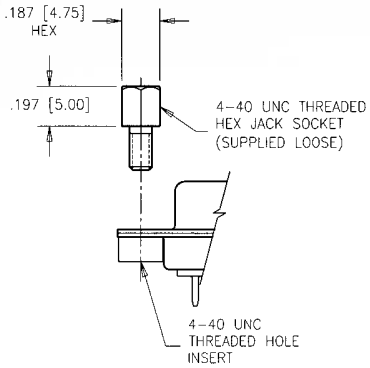
-Axx
4-40 Threaded Standoffs with Boardlocks (Vertical Mount only)
Mounting code A



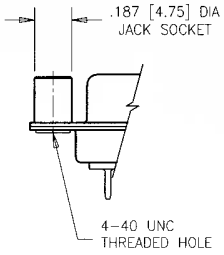
-2xx
.120" (3.05 mm) diameter thru hole
Mounting code 2



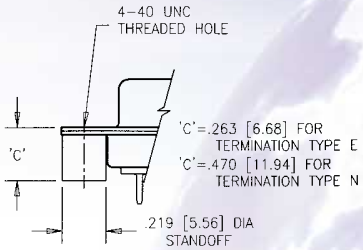
-3xx, 4xx and 6xx
4-40 Threaded Inserts - Self locking
4-40 Threaded inserts (standard)
M3 threaded inserts
Mounting codes 3, 4 and 6



-Exx
4-40 Hex Jack Sockets (supplied loose)
Mounting code E

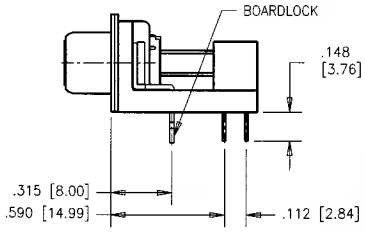


-Fxx
4-40 Round fixed Jack Sockets
Mounting code F

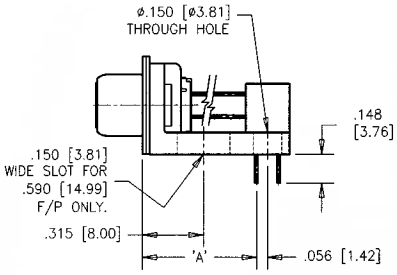


-5xx
4-40 Threaded Standoff (vertical mount only)
Mounting code 5

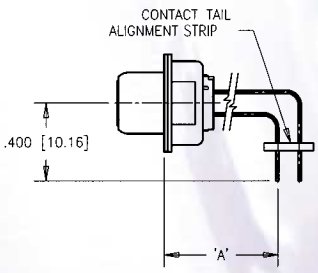
Bracket Options & Specials



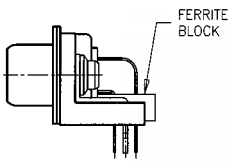
-xxD
.315" to Boardlock
for .590" Footprint only
Modifier option D



-xxE
Plastic bracket only
Modifier option E



-xxF
Alignment Strip Only
No bracket or boardlocks
Modifier option F

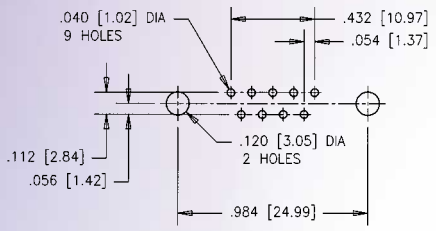


FERRITE
Consult Factory for details

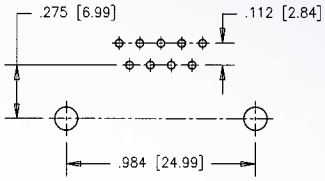
Termination Type	"A" Dimension
A	.318 (8.08)
B	.405 (10.29)
C	.590 (14.99)

PCB Layout

9 SIZE

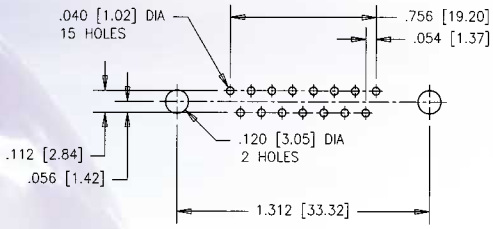


Standard PCB layout

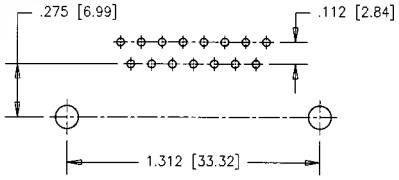


PCB layout for
.590" footprint with Modifier
Options B or D only

15 SIZE

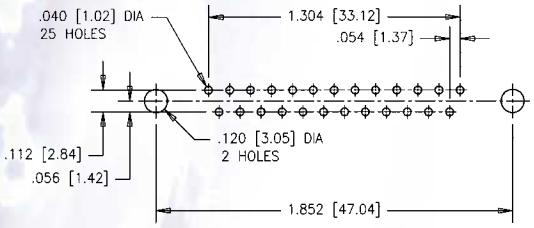


Standard PCB layout

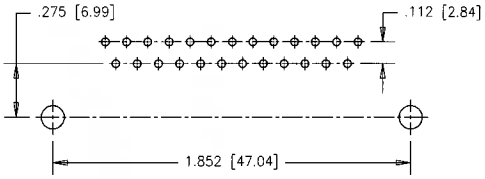


PCB layout for
.590" footprint with Modifier
Options B or D only

25 SIZE

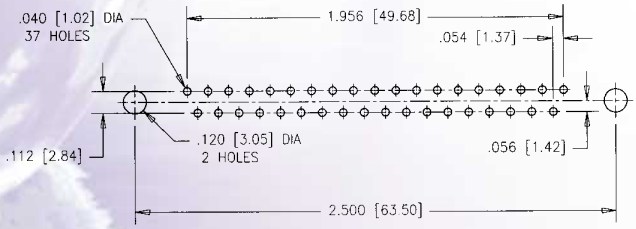


Standard PCB layout

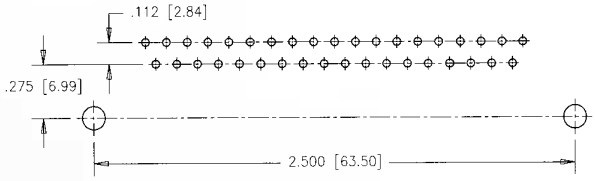


PCB layout for
.590" footprint with Modifier
Options B or D only

37 SIZE



Standard PCB layout



PCB layout for
.590" footprint with Modifier
Options B or D only

Specifications

Filter Characteristics:	See Page 2
Electrical Data:	See Page 2
Material and Finishes:	See Page 3
Environmental Data:	See Page 3
UL File # :	E135615
CSA File # :	LR68598

These products are protected by U.S. Patent # 4500159

Ordering Information – Combo D-Sub

FCC17 – A 3W3 P M – 4 5 0 G

FCC17 SERIES DESIGNATION

A SHELL SIZE
A, B, C, D, E

3W3 ARRANGEMENT
See page 12

P CONNECTOR TYPE
A = Adapter
P = Pin
S = Socket

M TERMINATION TYPE
D = Pin/Socket Adapter
E = Power PC Tail – 40A - .126" Dia., .175" Lg.
K = Power Solder Cup – 10A – Wire Size 16
L = Power Solder Cup – 20A – Wire Size 12
M = Power Solder Cup – 40A – Wire Size 8
R = Power Press Fit – 20A - .145" Lg. - .126" Dia. Hole

4 MOUNTING OPTIONS
2 = .120" dia. mounting holes
3 = 4-40 Threads Self locking
4 = 4-40 Threads
5 = 4-40 Standoffs - PC tail only
6 = M3 Threads
E = 4-40 Hex Jack Sockets [supplied loose]

G PLATING OPTION
Blank = Standard 30 microinches gold
G = 50 microinches gold

0 MODIFIER
0 = Standard
X = Specials or Custom versions [Consult Factory]

5 FILTER CAPACITANCE (pF)

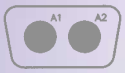
D:	50	pF
B:	100	pF
O:	180	pF
F:	330	pF
I:	470	pF
4:	820	pF
5:	1000	pF
7:	1200	pF
E:	2200	pF
9:	5600	pF
8:	47000	pF

* For Additional Mounting Options and Filter Capacitance - Consult Factory

FCC17 Series

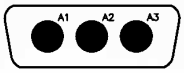
COMBO D-SUB FILTER CONNECTORS

Insert Arrangements - Male Front View



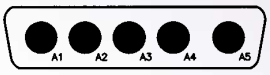
Shell Size E
Arrangement 2W2
No. of Signal Contacts 0
No. of Power Contacts 2

Consult factory
for availability



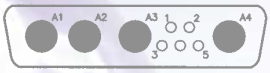
Shell Size A
Arrangement 3W3
No. of Signal Contacts 0
No. of Power Contacts 3

Keyed Version
also available
Consult factory
for availability



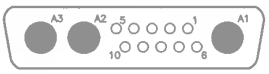
Shell Size B
Arrangement 5W5
No. of Signal Contacts 0
No. of Power Contacts 5

Keyed Version
also available
Consult factory
for availability



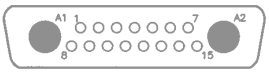
Shell Size B
Arrangement 9W4
No. of Signal Contacts 5
No. of Power Contacts 4

Consult factory
for availability



Shell Size B
Arrangement 13W3
No. of Signal Contacts 10
No. of Power Contacts 3

Consult factory
for availability

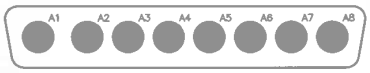


Shell Size B
Arrangement 17W2
No. of Signal Contacts 15
No. of Power Contacts 2

Consult factory
for availability

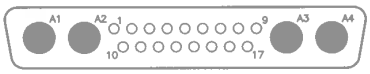
Shell Size C
Arrangement 27W2
No. of Signal Contacts 25
No. of Power Contacts 2

Consult factory
for availability



Shell Size C
Arrangement 8W8
No. of Signal Contacts 0
No. of Power Contacts 8

Consult factory
for availability



Shell Size C
Arrangement 21WA4
No. of Signal Contacts 17
No. of Power Contacts 4

Consult factory
for availability

Consult Factory for Additional Arrangements and Polarization

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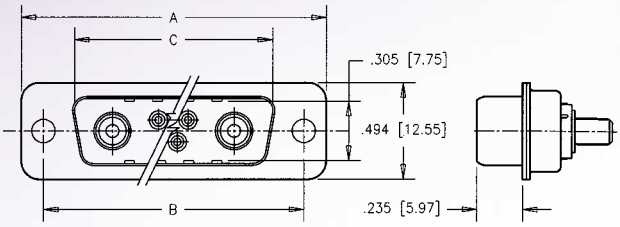
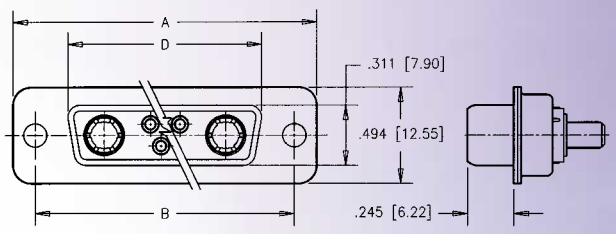
Pin



FRONT VIEW END VIEW

Socket

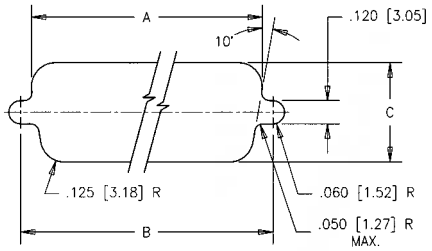


FRONT VIEW END VIEW

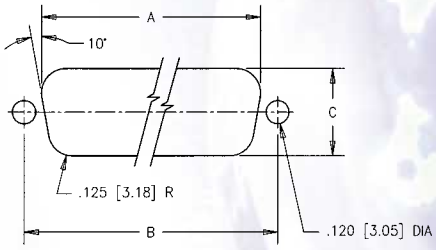
All Dimensions in Inches (mm)

Shell Size	A	B	C (for pin conn. only)	D (for socket conn. only)
E	1.213 [30.81]	.984 [24.99]	.666 [16.92]	.643 [16.33]
A	1.541 [39.14]	1.312 [33.32]	.994 [25.25]	.971 [24.66]
B	2.088 [53.04]	1.852 [47.04]	1.534 [38.96]	1.511 [38.38]
C	2.729 [69.32]	2.500 [63.50]	2.182 [55.42]	2.159 [54.84]

Mounting Dimensions



STANDARD CUT-OUT
(FOR FRONT MOUNTING)



OPTIONAL CUT-OUT
(FOR REAR MOUNTING)

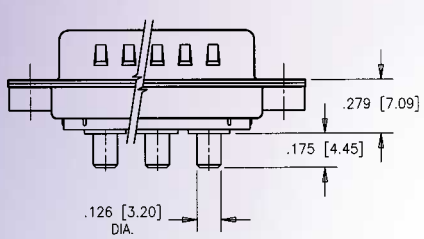
Size	Mounting	A	B	C
E	Front	.875 [22.23]	.984 [24.99]	.512 [13.00]
	Rear	.807 [20.50]	.984 [24.99]	.449 [11.40]
A	Front	1.200 [30.48]	1.312 [33.32]	.512 [13.00]
	Rear	1.134 [28.80]	1.312 [33.32]	.449 [11.40]
B	Front	1.744 [44.30]	1.852 [47.04]	.512 [13.00]
	Rear	1.673 [42.49]	1.852 [47.04]	.449 [11.40]
C	Front	2.389 [60.68]	2.500 [63.50]	.512 [13.00]
	Rear	2.326 [59.08]	2.500 [63.50]	.449 [11.40]

Consult Factory - Shell Size D

FCC17 Series

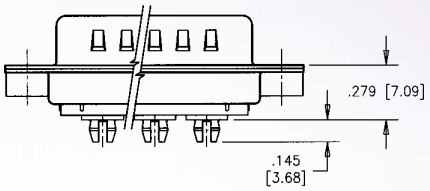
COMBO D-SUB FILTER CONNECTORS

Straight PCB



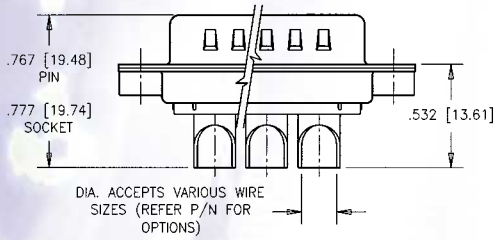
Termination type E

Press Fit



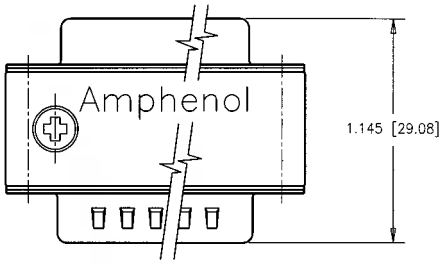
Termination type R

Solder Cup



Termination types: K, L, M

Adapter – Pin/Socket



Termination type: D

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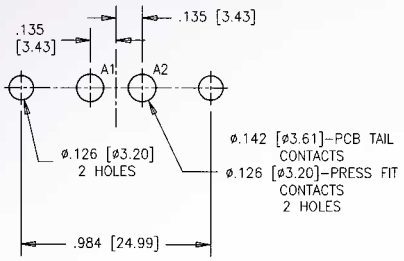
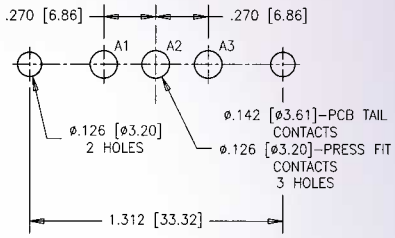
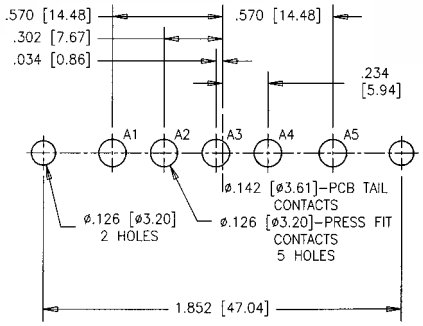
PCB Layout - Straight PCB & Press Fit



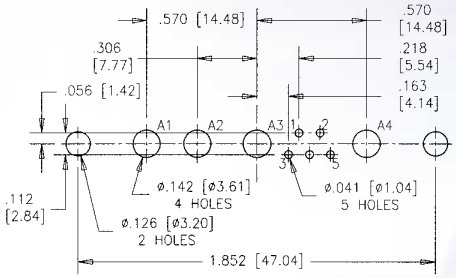
E
2W2



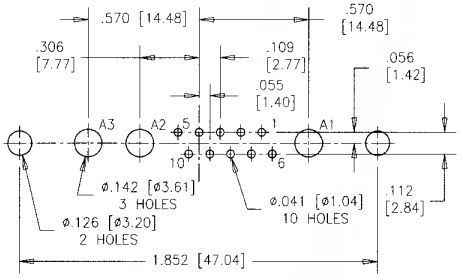
A
3W3



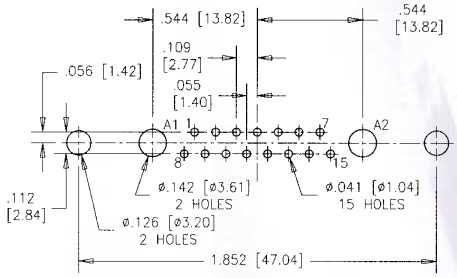
B
5W5



B
9W4
Consult Factory

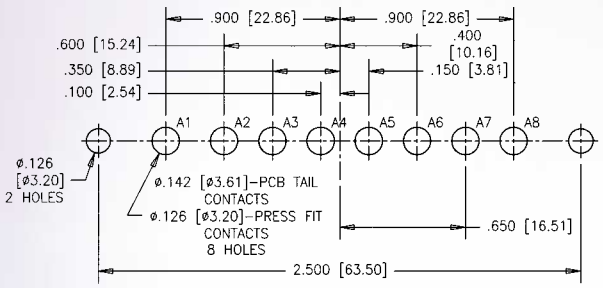


B
13W3
Consult Factory

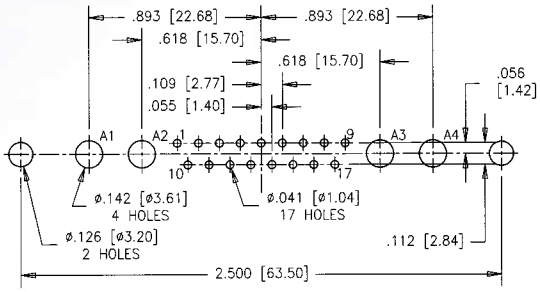


B
17W2
Consult Factory

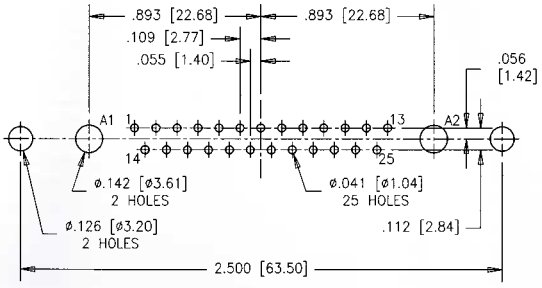
PCB Layout - Straight PCB & Press Fit



C
8W8



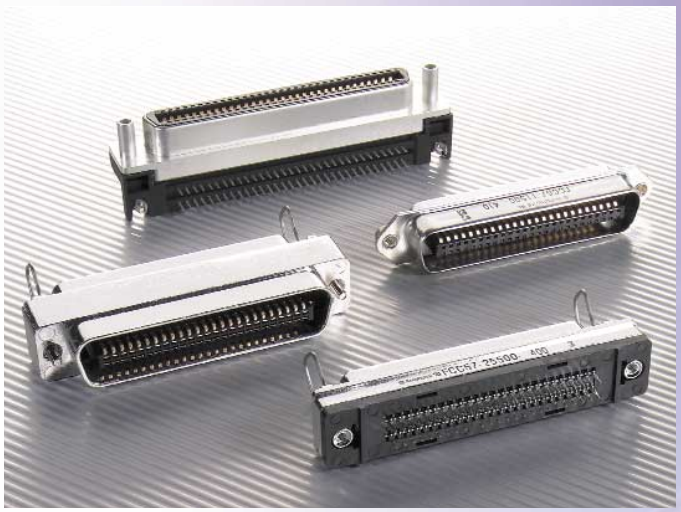
C
21WA4
Consult Factory



C
27W2
Consult Factory

Specifications

Filter Characteristics: See Page 2
Electrical Data: See Page 2
Material and Finishes: See Page 3
Environmental Data: See Page 3
UL File # : E135615
CSA File # : LR68598



These products are protected by U.S. Patent # 4500159

Ordering Information

FCC57 – 2 1 50 2 – 4 1 0 HV

FCC57 SERIES DESIGNATION

2 CONNECTOR TYPE
0 = Adapter
1 = Plug (Available in 50 size only)
2 = Receptacle

1 TERMINATION TYPE
0 = Solder Cup
1 = Straight PCB
2 = Right Angle PCB
5 = Straight PCB Press-Fit
9 = Adapter Plug/Receptacle

50 NUMBER OF CONTACTS
36, 50, 64

2 HOUSING STYLE
0 = Standard
2 = Receptacle without Spring Latches or Spring Holder

4 MOUNTING OPTIONS
2 = .120" [3.05 mm] or .125" diameter hole in flange [not standard for Adapters]
4 = 4-40 Threaded Inserts
5 = 4-40 Threaded Standoff
6 = M3 Threaded Inserts
A = 4-40 Threaded Inserts with boardlocks
E = 4-40 Jack Sockets [Supplied Loose]

1 FILTER CAPACITANCE (pF)
D: 50 pF
B: 100 pF
O: 180 pF
F: 330 pF
I: 470 pF
4: 820 pF
5: 1000 pF
7: 1200 pF
E: 2200 pF
9: 5600 pF
8: 47000 pF

0 MODIFIER
0 = Standard
X = Special or Custom Versions

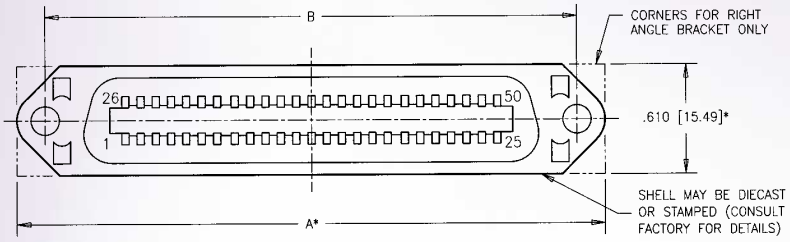
HV VOLTAGE
No digits = Standard
HV - High Voltage [1000V AC per part 68]

High voltage capacitors available (contact factory)

FCC57 Series

FILTERED MICRO-RIBBON CONNECTORS

Receptacle - 36, 50, 64 Size

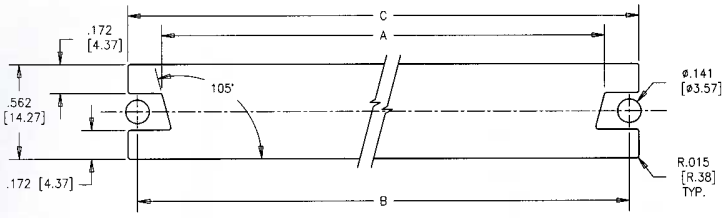


TOP VIEW
RECEPTACLE

Connector Size	A	B
36	2.637 [66.98]	2.350 [59.69
50	3.260 [82.80]	2.947 [74.85]
64	3.835 [97.41]	3.542 [89.97]

Dimensions are different for DieCast Shells
Consult Factory for details

Panel Mounting Dimensions - 36 / 50 / 64 size



REAR MOUNT
[.050 MAX. PANEL THICKNESS]

Connector Size	A	B	B
36	2.043 [71.05]	2.350 [59.69]	2.450 [85.20]
50	2.656 [92.36]	2.947 [74.85]	3.062 [106.48]
64	3.251 [113.06]	3.542 [89.97]	3.657 [127.18]

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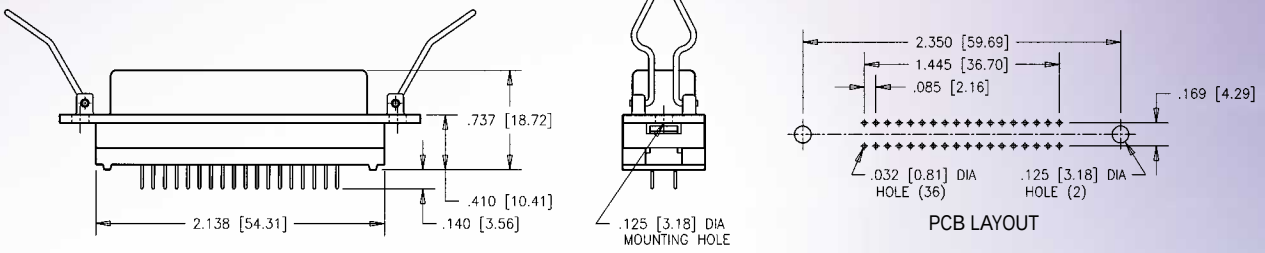
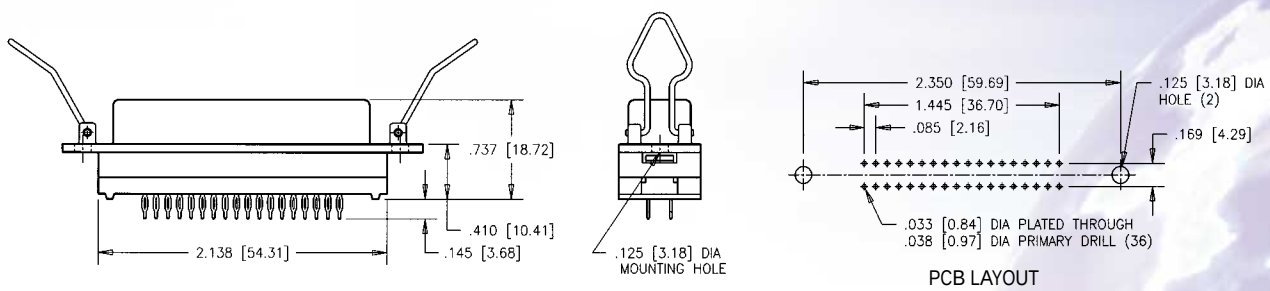
Receptacle

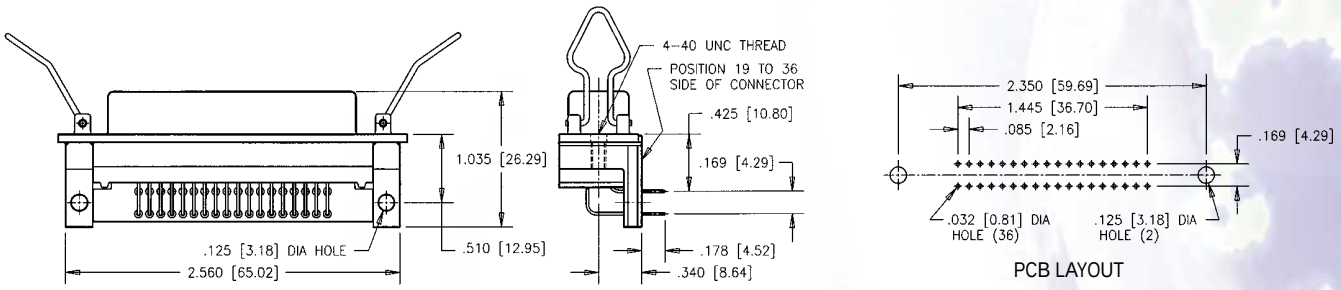
STRAIGHT PCB (FCC57 - 21360 - 1 x 0)



STRAIGHT PRESS-FIT (FCC57 - 25360 - 1 x 0)

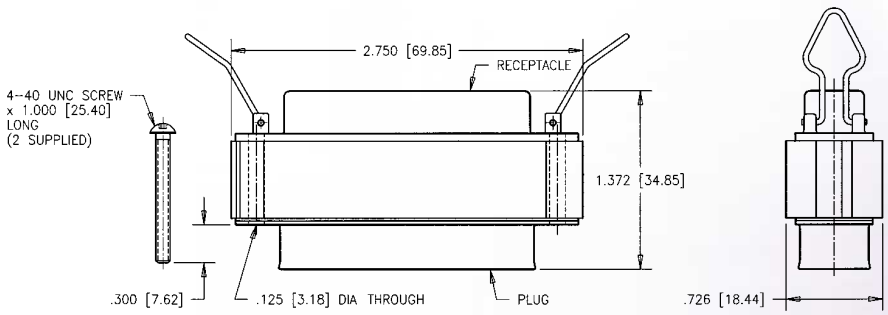


RIGHT ANGLE PCB (FCC57 - 22360 - 1 x 0)



Adapter

PLUG/RECEPTACLE (FCC57 - 09360 - 1 X 0)

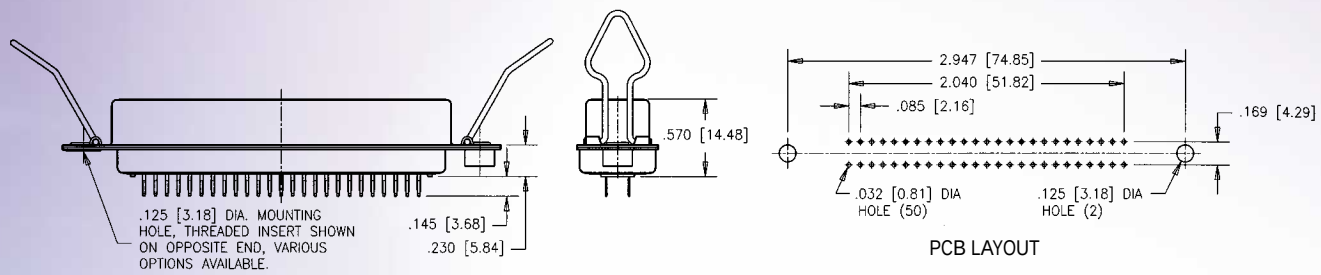


FCC57 Series 50 Size

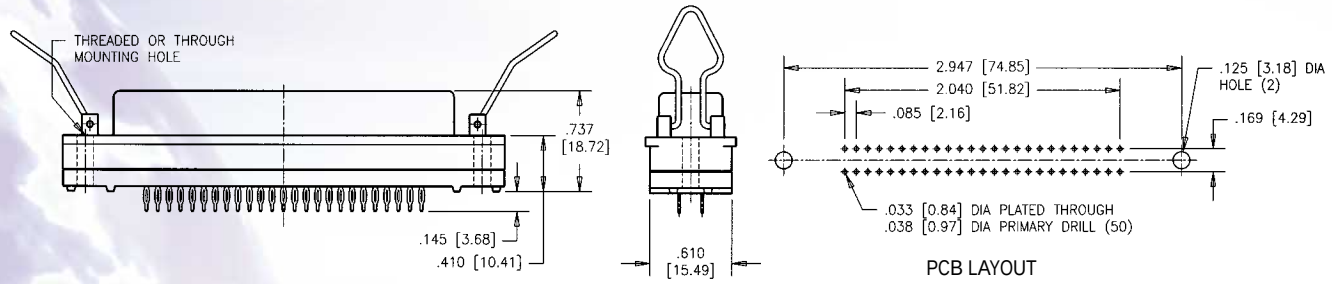
FILTERED MICRO-RIBBON CONNECTORS

Receptacle

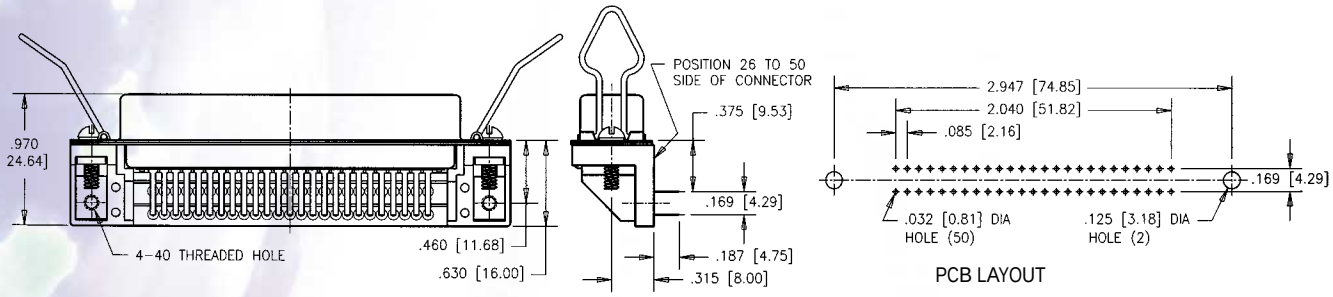
STRAIGHT PCB (FCC57 - 21500 - x x 0)



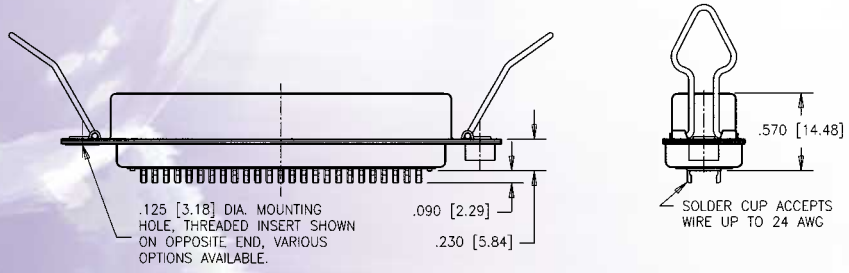
STRAIGHT PRESS-FIT (FCC57 - 25500 - x x 0)



RIGHT ANGLE PCB (FCC57 - 22500 - x x 0)



SOLDER CUP (FCC57 - 20500 - x x 0)



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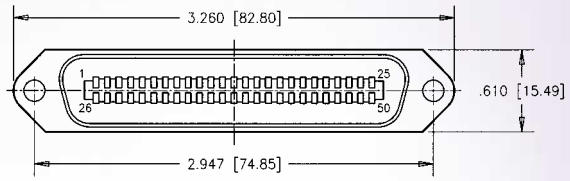
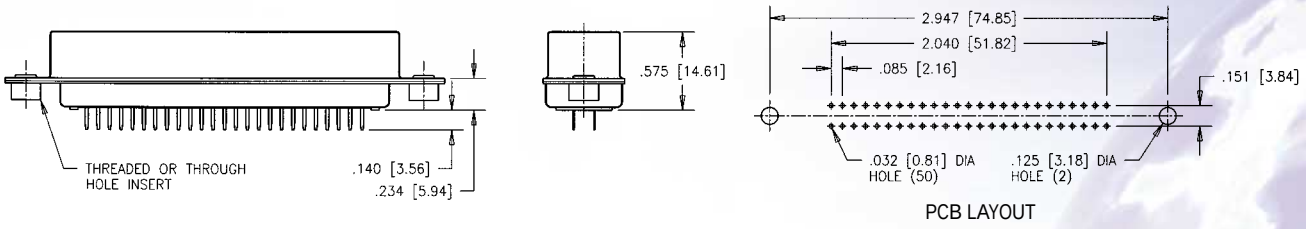
Plug



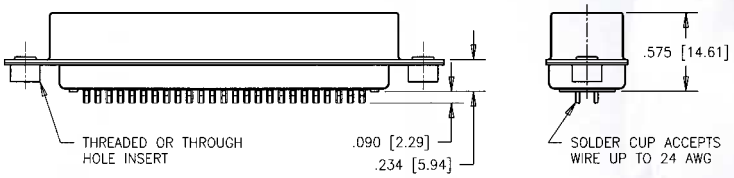
TOP VIEW
PLUG

STRAIGHT PCB (FCC57 - 11500 - x x 0)



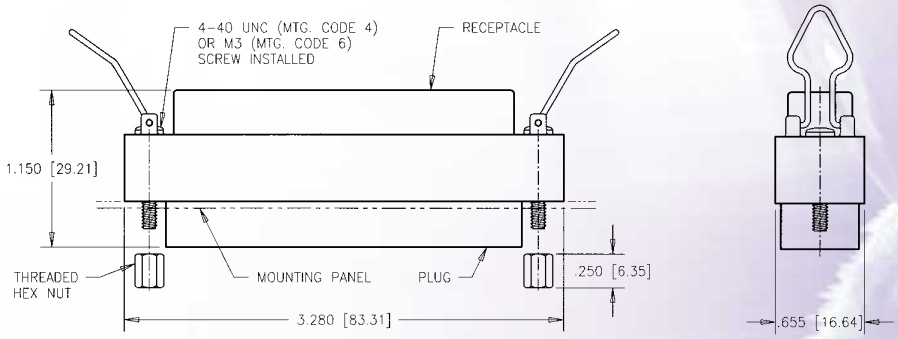
PCB LAYOUT

SOLDER CUP (FCC57 - 10500 - x x 0)



Adapter

PLUG/RECEPTACLE (FCC57 - 09500 - x x 0)

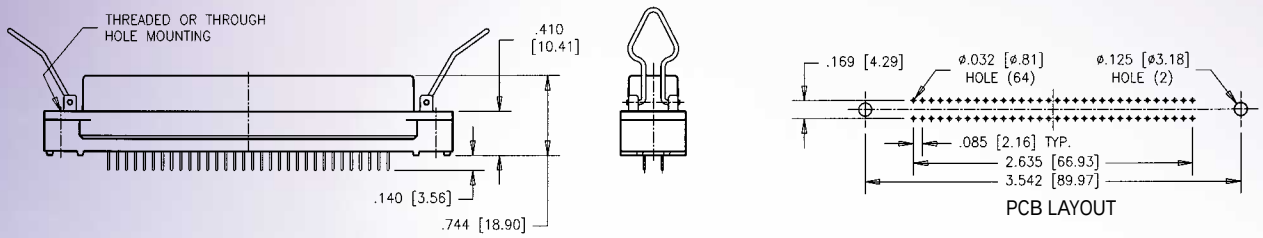


FCC57 Series 64 Size

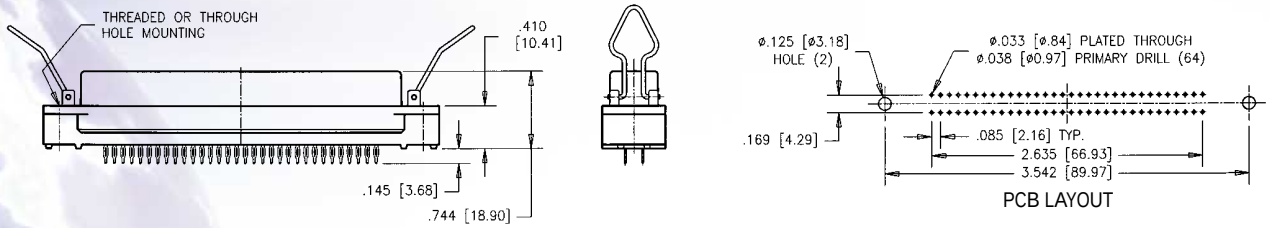
FILTERED MICRO-RIBBON CONNECTORS

Receptacle

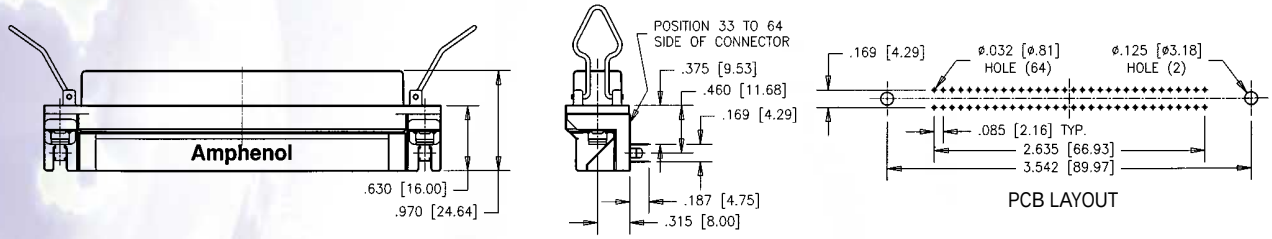
STRAIGHT PCB (FCC57 - 21640 - x 0)



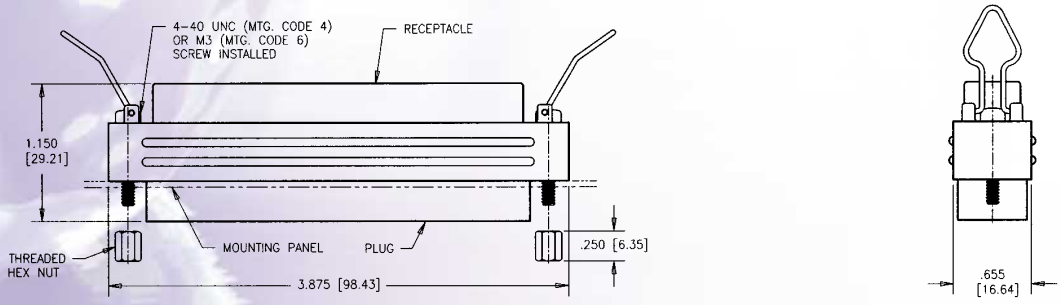
STRAIGHT PRESS-FIT (FCC57 - 25640 - x x 0)



RIGHT ANGLE PCB (FCC57 - 22640 - x x 0)



ADAPTER* (FCC57 - 09640 - x x 0)



*Consult Factory

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Specifications

Mechanical Data:

Shell:	Zinc Diecast or Brass; Nickel plated
Insulator Body:	Thermoplastic
Contact Insulator:	Nylon or Teflon
Center Contact:	Phosphor Bronze or Berylium Copper; Gold plated (456-107S is silver plated)
UL File # :	E135615
CSA File # :	LR68598

Filter Performance:

Capacitance		10,000 pF
Working Voltage		200 VDC (500AC Rear Mt)
DWV		600 VDC (1000VDC for Rear Mt)
Filter Insertion Loss (dB) (per MIL-STD-220 @ 25°C and no load)	1 MHz	4
	5 MHz	16
	10 MHz	18
	30 MHz	25
	50 MHz	30
	1000 MHz	30

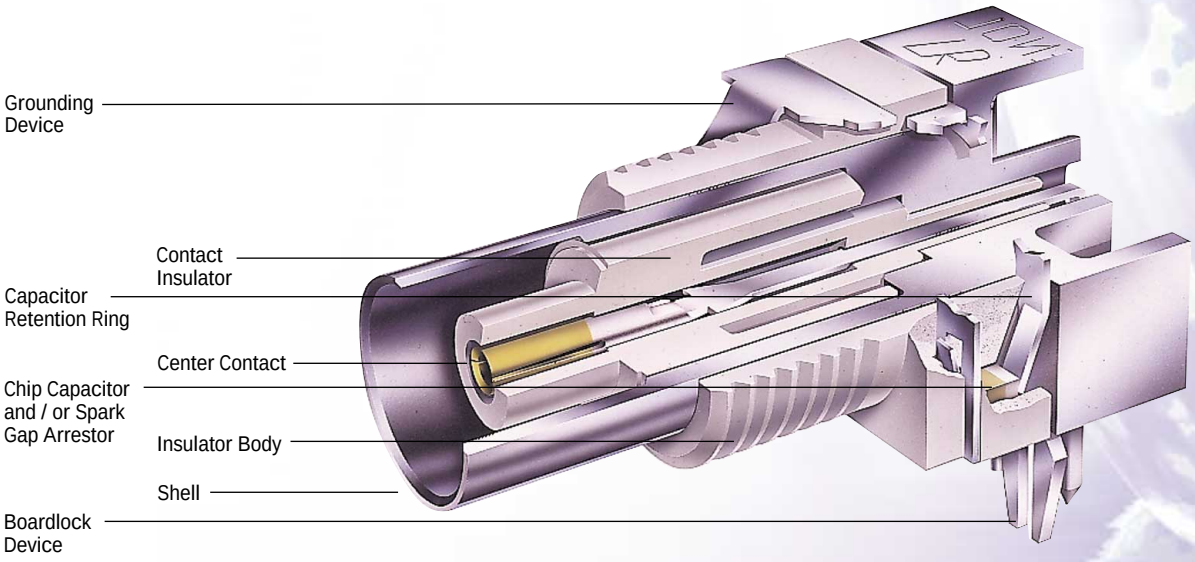
* OTHER CAPACITANCE VALUES ARE AVAILABLE. CONSULT THE FACTORY FOR DETAILS.

These products are protected by U.S.Patent # 4,772,221.

Amphenol's 456 Series of RF connectors provides capacitive decoupling between the connector body and the mounting panel. EMI on the coaxial shield is shunted to the chassis ground through capacitors, while not affecting the DC and power supply frequencies. This reduces ground loop problems and provides a mechanism to harmlessly dissipate ESD to chassis ground.

The RF parameters of these connectors are the same as their non-filtered counterparts. Filtering does not affect the signal contact, but only the shell-to-ground connection. Capacitively decoupled RF connectors are intermateable and inter-changeable with standard non-filtered versions.

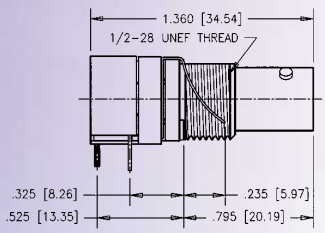
456 Series Construction

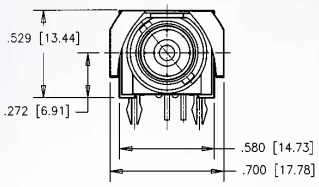


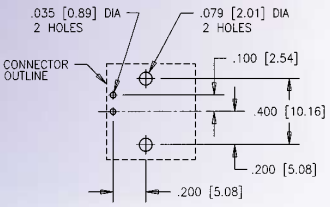
456 Series

CAPACITIVELY DECOUPLED RF CONNECTORS

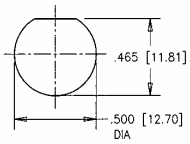
Rear Mount BNC, Right Angle, PCB







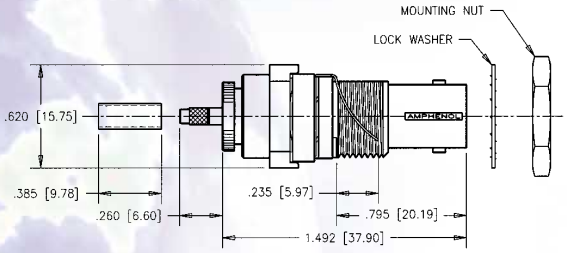
PCB LAYOUT
(COMPONENT SIDE OF BOARD)

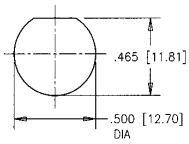


RECOMMENDED
PANEL CUT-OUT

Type	50 Ω	75 Ω
Filtered	456-117	456-717
Filtered (10,000pF), 1000V Spark Gap	456-117S	456-717S
Filtered (10,000pF), 1000V Spark Gap, 1 M Ω Resistor	456-117F	456-717F
Grounded	456-117G	456-717G
Non-Filtered. Panel Insulated (no ground spring)	456-117NF	456-717NF

Rear Mount BNC, Crimp, Cable Size RG179



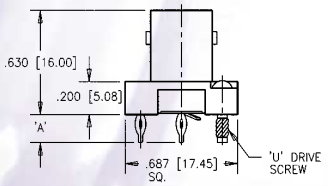


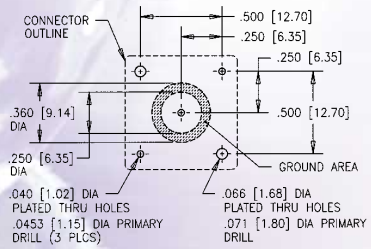
RECOMMENDED
PANEL CUT-OUT

Type	50 Ω	75 Ω
Filtered	456-208	456-218
Grounded	456-208G	456-218G

Note: Also available with Spark gap and / or resistor
* Other Cable Sizes Available. Consult Factory.

Vertical Mount BNC, Press-Fit



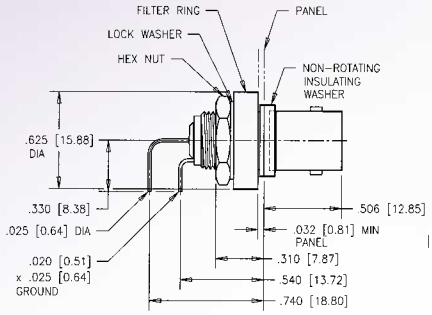


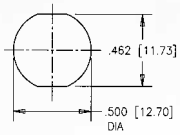
PCB LAYOUT
(COMPONENT SIDE OF BOARD)

Type	50 Ω	75 Ω	Board Thickness	"A"
Filtered	– –	456-107A	.125 (3.18)	.170 (4.32)
Non-Filtered	– –	456-107ANF	.125 (3.18)	.170 (4.32)
Filtered	– –	456-107B	.200 (5.08)	.255 (6.48)
Non-Filtered	– –	456-107BNF	.200 (5.08)	.255 (6.48)

– – Consult Factory for Part Number

Front Mount BNC, Right Angle PCB





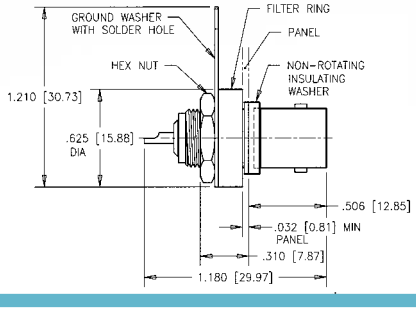
RECOMMENDED PANEL CUT OUT

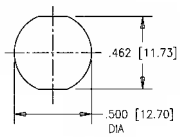
Type	50 Ω	75 Ω
Filtered	– –	456-107

– – Consult factory for part number

Front Mount BNC packaging consists of connector, insulating washer, filter ring, lock washer and hex nut.

Front Mount BNC, Solder-Cup





RECOMMENDED PANEL CUT OUT

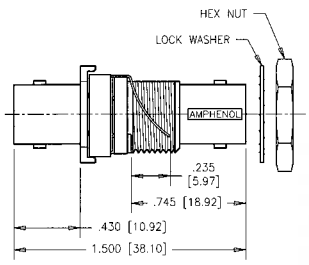
Type	50 Ω	75 Ω
Filtered	456-107SG	456-107TG

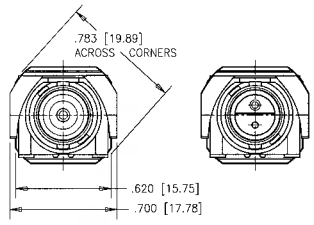
456-107S has silver plated contact (50 Ω).

* Overall part length
1.180 (29.97) for 456-107S
1.245 (31.62) for 456-107SG & 456-107TG.

Front Mount BNC packaging consists of connector, insulating washer, filter ring, ground washer and hex nut.

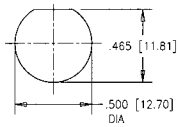
Jack-to-Jack Adapter





BNC END VIEW

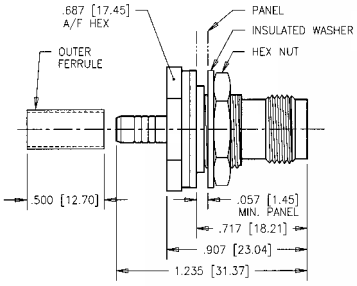
TWIN BNC END VIEW

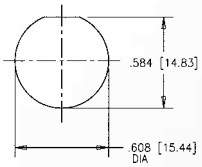


RECOMMENDED PANEL CUT OUT

	Type	50 Ω	75 Ω
BNC:	Filtered	456-915	456-917
Twin BNC:	Filtered	456-920	

TNC Bulkhead Jack, Crimp (RG58/U Cable)





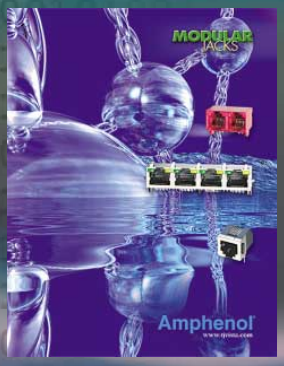
RECOMMENDED PANEL CUT OUT

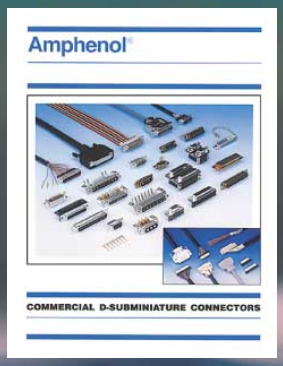
Type	50 Ω	75 Ω
Filtered	456-102	– –

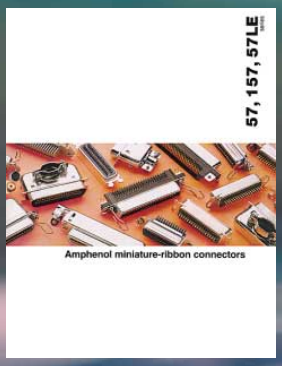
– – Consult factory for part number

Packaging consists of connector, mounting hardware, panel insulator, crimp ferrule and heat shrink tubing.

Amphenol Catalogues







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