

general configuration — 57 series solder termination

description

Micro-Ribbon connectors offer a fast, economical and distinctively different method of achieving electrical interconnection.

The heart of the connector is the ribbon contact, selectively plated gold over nickel on a copper alloy base.

With contacts designed to mate easily and positively, the 57 series Micro-Ribbon connector delivers electrically and mechanically sound interconnections time after time.

Exceptionally versatile, 57 series Micro-Ribbon connectors are available in rack and panel, cable to panel, cable to cable and printed circuit types.

general specifications

Current Capacity	5 amps per contact
Voltage Rating	700 volts D.C. at sea level 200 volts D.C. at 70,000 ft.
Operating Temperature	-55°C to +105°C -67°F to +221°F
Wire Sizes	Solid: 22-gauge maximum Stranded: 24-gauge maximum
Contacts	Selectively plated 20 microinches gold over 50 microinches nickel on a copper alloy base
Dielectric	Diallyl phthalate per MIL-M-14G Type MDG
Shells	Zinc-plated steel with clear chromate coating; trapezoidal shape for polarization.

features

- Copper alloy contacts, selectively plated gold-over-nickel for excellent current-carrying characteristics.
- UL 94 VO rated diallyl phthalate dielectric per MIL-M-14G Type MDG, for operation at up to 700 volts D.C. (sea level) without shorting or flashover. Resists cracking or chipping and has low moisture absorption.
- Float bushings on receptacles allow .020" radial float, for easy mating.
- Zinc-plated steel outer shell, with clear chromate finish, for corrosion resistance.
- Wide, flat mating surfaces, pressed tightly together by flexing action of both contacts, for electrical continuity.
- Positive mating action that wipes contacts clean, removing film or foreign matter, for low contact resistance.
- Solder cup type contact tails (for easy wire attachment) and pin style tails (for printed circuit board attachment) both are available. A high barrier between contact rows also is available.
- A trapezoidal-shape shell that assures correct polarity.

connector deviations (1,000 piece m.o.q)

Deviation Number	Deviation Description for 57/157 Series Connectors
(398)	Connector shells and steel hardware nickel plated
(424)	Contacts fully plated, 30 microinches gold select over 50 microinches nickel.
(438)	Gold flashed contacts on mating area, 50 microinches min. nickel underplate.
(441)	Tin plated shells
(448)	Contacts selectively plated, 30 microinches min. gold on mating area, 50 microinches min. nickel underplate
(450)	Contacts selectively plated, 50 microinches min. gold on mating area, 50 microinches min. nickel underplate

NOTE: Not all part numbers are available in all deviations. To verify availability contact the factory directly, or your local manufacturer's representative or distributor. Check with factory for other deviations not listed above.

connector deviation ordering information

To order a deviation of a catalog miniature-ribbon connector, add one of the listed deviation numbers in parenthesis to the catalog part number. Example: To order 57-10500 with tin plated shells, request 57-10500 (441).

NOTE: Only one deviation number can be applied to a catalog part number at a time.



UL
Component
Recognition

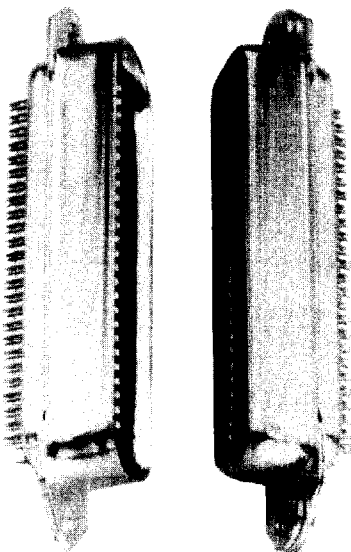


Canadian
Standards
Association

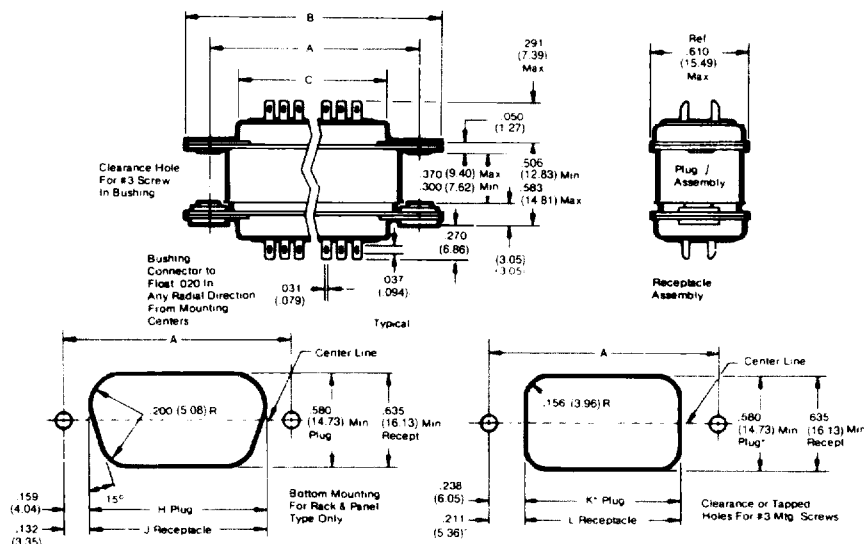
FILE E64911

FILE LR 45516-14

57 series rack-and-panel connectors



dimensions



		14 Contacts		24 Contacts		36 Contacts		50 Contacts		64 Contacts	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
	A	1.417	35.99	1.842	46.79	2.352	59.74	2.947	74.85	3.542	89.97
	B	1.750	44.45	2.175	55.25	2.685	68.20	3.280	83.31	3.875	98.43
	C	.910	23.11	1.335	33.91	1.845	46.86	2.440	61.98	3.035	77.09
Bottom Mounting	H	1.099	27.92	1.524	38.71	2.034	51.66	2.629	66.78	3.224	81.89
	J	1.153	29.29	1.578	40.08	2.088	53.04	2.683	68.15	3.278	83.26
Top Mounting	K	.941	23.90	1.366	34.70	1.876	47.65	2.471	62.76	3.066	77.88
	L	.995	25.27	1.420	36.07	1.930	49.02	2.525	64.14	3.120	79.25

order information

			Solder Cup Tails With			
			Low Barrier Insert		High Barrier Insert	
Contacts	Plugs: Fix-mounted*	Plugs: Fix-mounted**	Receptacles: Float-mounted*	Receptacles: Less Float Bushings**	Plugs: Fix-mounted*	Receptacles: Float-mounted*
14	57-10140	consult sales office	57-20140	57-20140-4	N/A	N/A
24	57-10240	57-10240-4***	57-20240	57-20240-2***	N/A	N/A
36	57-10360	57-10360-22	57-20360	57-20360-3	57-10360-14	57-20360-10
50	57-10500	57-10500-48	57-20500	57-20500-15	57-10500-6	57-20500-6
64	—	—	—	—	57-10640	57-20640

*.103" Mounting Hole (accepts #3 screw — not included)

** .185" Mounting Hole (accepts #8 screw — not included)

***IEEE Type

IEEE mounting hardware

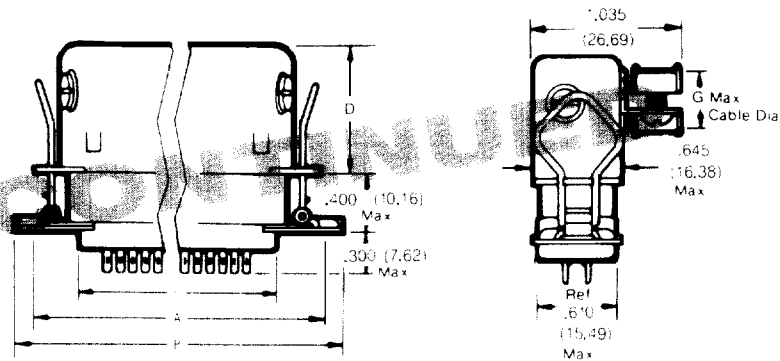
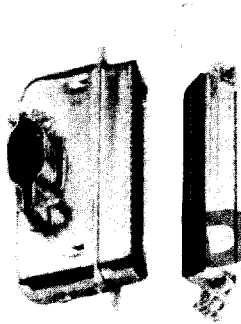
408-153819 Inside panel mount hardware includes two each studs, nuts, washers.

408-153818 Outside panel mount hardware includes two each studs, nuts, washers.

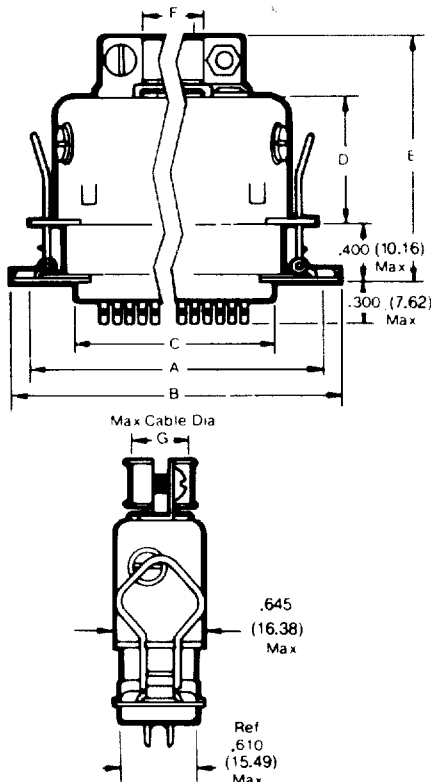
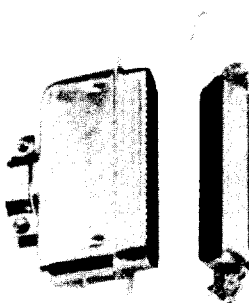
PLEASE NOTE: Amphenol rack and panel receptacle connectors have float bushings which allow .020" (6.008mm) radial float. Plugs and receptacles have solder cup tails and accept 22-gauge solid or 24-gauge (maximum) stranded wire. U.L. recognized.

57 series cable-to-panel connectors

side cable entry type



top cable entry type



dimensions

	14 Contacts		24 Contacts		36 Contacts		50 Contacts	
	In.	mm	In.	mm	In.	mm	In.	mm
A	1.417	35.992	1.842	46.787	2.352	59.741	2.947	74.854
B	1.770	44.958	2.195	55.753	2.705	68.707	3.300	83.820
C	.910	23.114	1.335	33.909	1.845	46.863	2.440	61.976
D	.850	21.59	.830	21.08	.910	23.11	1.000	25.4
E	1.665	42.29	1.645	41.78	1.725	43.82	1.815	46.10
F	.348	8.84	.473	12.01	.648	16.46	.772	19.61
G	.348	8.84	.473	12.01	.500	12.7	.500	12.7

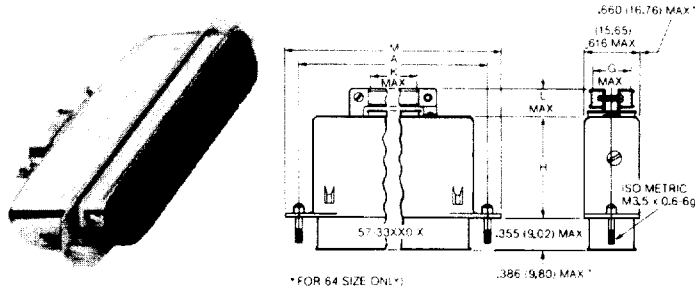
NOTE: All dimensions are reference.

order information

Contacts	Plugs: Top Cable Entry Part Number	Plugs: Side Cable Entry Part Number	Receptacle Mating Connection With Spring Latches Part Number
14	57-30140	57-50140	57-40140
24	57-30240	57-50240	57-40240
36	57-30360 (screwtype hood)	57-50360	57-40360
36	57-30360-18 (snap on hood)	—	—
36	—	—	57-40360-9 (high barrier)
50	57-30500	57-50500	57-40500
50	57-30500-3 (high barrier)	—	57-40500-4 (high barrier)

57 series cable-to-panel connectors

top cable entry type for screw lock



order information

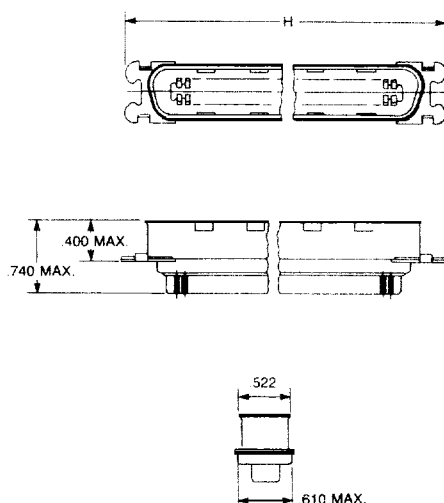
Contacts	Plug: Top Cable Entry With Zinc Plated Shells For Screw Locking Part Number	Plug: Top Cable Entry With Nickel Plated Shells For Screw Locking Part Number
14	57-33140-1	57-33140-2
24	57-33240-1	57-33240-2
36	57-33360-1	57-33360-2
50	57-33500-1	57-33500-2

NOTE: Top cable entry plugs for screw locking can be mated with rack and panel type connectors utilizing IEEE mounting hardware.

dimensions

Size	14		24		36		50	
Dim.	Inch	mm	Inch	mm	Inch	mm	Inch	mm
A	1.417	35.99	1.842	46.79	2.352	59.74	2.947	74.85
G	.442	10.72	.468	11.89	.468	11.89	.468	11.89
H	.843	21.41	.825	20.96	.905	22.99	.995	25.27
K	.348	8.84	.473	12.01	.639	16.23	.766	19.46
L	.405	10.29	.400	10.16	.405	10.29	.405	10.29
M	1.729	43.92	2.154	54.71	2.664	67.67	3.259	82.78

top cable entry type for overmold cable assemblies



dimensions

	36 Contacts		50 Contacts	
	In.	mm	In.	mm
H	2.431	61.75	3.030	76.96

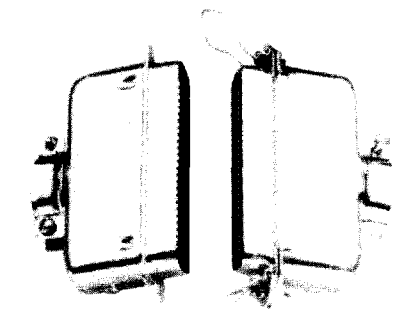
NOTE: All dimensions are reference.

order information

Contacts	Plugs: With Ball Latch Ears For Overmold Cable Assemblies (low barrier) Part Number	Plugs: With Ball Latch Ears For Overmold Cable Assemblies (high barrier) Part Number
36	57-10360-29 (441)	57-10360-28 (441)
50	—	57-10500-79 (441)

57 series cable-to-cable connectors

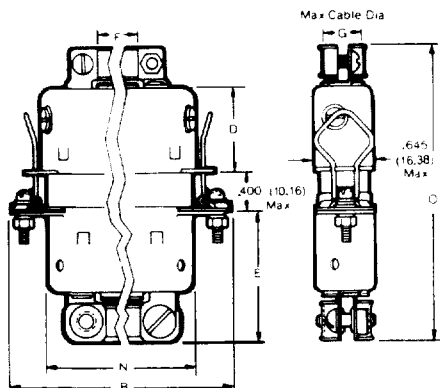
top cable entry type



dimensions

	14 Contacts		24 Contacts		36 Contacts		50 Contacts	
	in.	mm	in.	mm	in.	mm	in.	mm
B	1.770	44.958	2.195	55.753	2.705	68.707	3.300	83.820
D	.850	21.59	.830	21.08	.910	23.11	1.000	25.4
E	1.255	31.88	1.235	31.37	1.315	33.4	1.405	35.69
F	.348	8.84	.473	12.01	.648	16.46	.772	19.61
G	.348	8.84	.473	12.01	.500	12.7	.500	12.7
N	1.153	29.286	1.578	40.081	2.089	53.061	2.683	68.148
O	2.906	73.812	2.875	73.025	3.032	77.013	3.218	81.737

NOTE: All dimensions are reference.

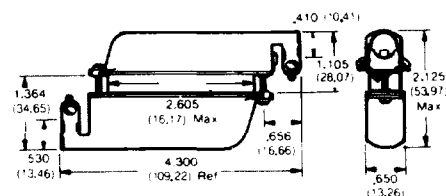
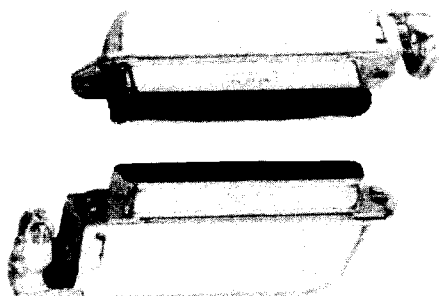


order information

Contacts	Plugs: Top Cable Entry Part Number	Plugs: Side Cable Entry Part Number	Receptacle Mating Connection With Spring Latches Part Number
14	57-30140		57-60140
24	57-30240	57-50240	57-60240
36	57-30360	57-50360	57-60360
50	57-30500	57-50500	57-60500
50	57-30500-3 (high barrier)	—	—

running cable type

NOTE: Only available in 50 contact size.



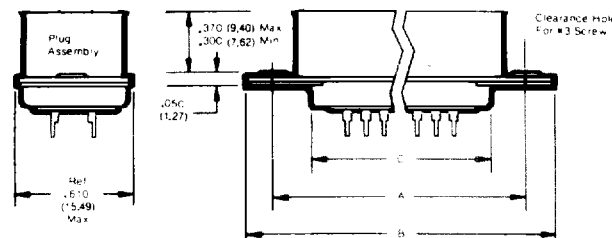
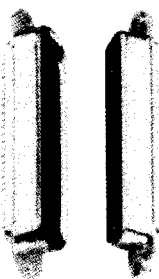
Low Profile Hood

order information

50-Size Plug Connectors w/ Metal Hoods Part Number	
57-10500-7	(low hood)— $\frac{5}{8}$ "
57-10500-7 (402)	(low hood, bulk-packed, egg crating)— $\frac{5}{8}$ "
57-10500-14	(high hood)— $\frac{7}{8}$ "
50-Size Receptacle Connectors w/ Metal Hoods Part Number	
57-20500-7	(high hood)— $\frac{7}{8}$ "
57-20500-7 (402)	(high hood, egg crated)— $\frac{7}{8}$ "
57-20500-19	(low hood)— $\frac{5}{8}$ "

57 series printed circuit connectors

straight tail without spring latch



dimensions (See P.C. Board layout on page 8.)

	14 Contacts		24 Contacts		36 Contacts		50 Contacts	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.
A	1.417	35.991	1.842	46.787	2.352	59.741	2.947	74.854
B	1.750	44.450	2.175	55.245	2.685	68.199	3.280	83.312
C	.910	23.114	1.335	33.909	1.845	46.863	2.440	61.976
D	.510	12.954	.935	22.749	1.445	36.703	2.040	51.816

order information

Plugs/PC Contacts (.100" tail)*.

Contacts	Part Number
14	57-10140-4
24	57-10240-3
36	57-10360-13
50	57-10500-27

Receptacles/PC Contacts (.100" tail): Float-Mounted*

Contacts	Part Number
14	57-20140-8
24	57-20240-8
36	57-20360-9
50	57-20500-31

Receptacles/PC Contacts (.100" tail): Without Float Bushings**

Contacts	Part Number
14	57-20140-12
24	57-20240-14
36	57-20360-15
50	57-20500-65

Plugs/PC Contacts (.135" tail)*.

Contacts	Part Number
14	57-10140-5
24	57-10240-5
36	57-10360-17
50	57-10500-46

Receptacles/PC Contacts (.135" tail): Without Float Bushings**

Contacts	Part Number
14	57-20140-10
24	57-20240-11
36	57-20360-13
50	57-20500-58

Receptacles/PC Contacts (.156" tail): Without Float Bushings**

Contacts	Part Number
14	N/A
24	57-20240-23
36	57-20360-19
50	57-20500-85

Plugs/PC Contacts (.156" tail)*.

Contacts	Part Number
14	N/A
24	57-10240-12
36	57-10360-25
50	57-10500-73

* 103" Mounting Hole (accepts #3 screw — not included)

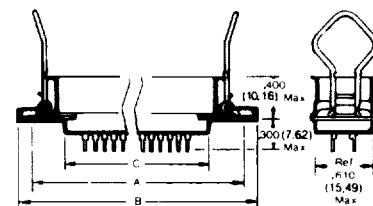
** 185" Mounting Hole (accepts #8 screw — not included)

straight tail with spring latch



order information

Contacts	Receptacles/ PC Contacts With Spring Latch (.100" tail)	Receptacles/ PC Contacts With Spring Latch (.135" tail)	Receptacle PC Contacts With Spring Latch (.156" tail)
14	57-40140-8	57-40140-11	N/A
24	57-40240-9	57-40240-11	57-40240-14
36	57-40360-12	57-40360-16	57-40360-24
50	57-40500-9	57-40500-16	57-40500-24



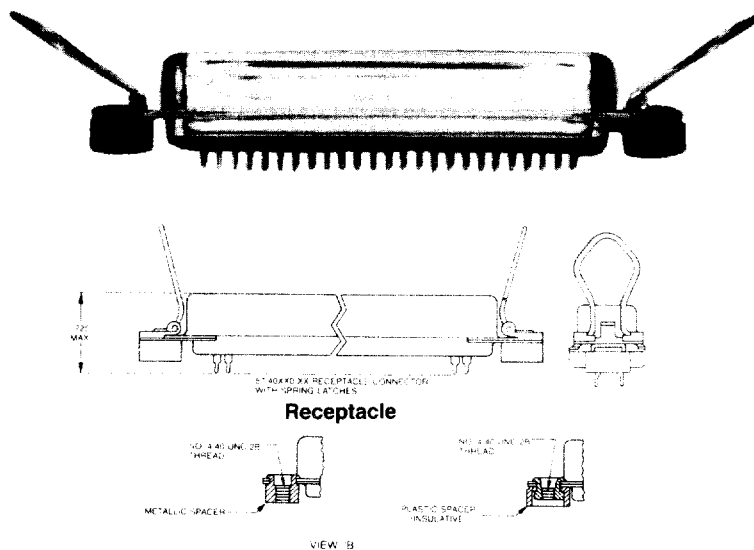
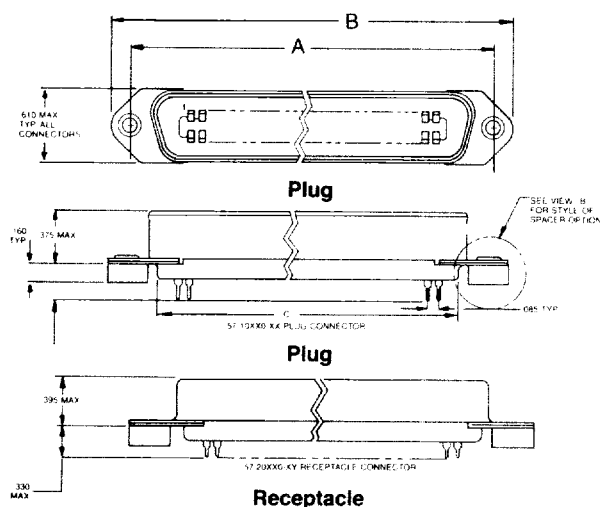
dimensions

See dimensions table at top of page.

(See P.C. Board layout on page 8.)

57 series printed circuit connectors (cont.)

straight tail with standoff



dimensions

See dimensions table at top of page 7.

order information

Plugs/PC Contacts (.156) Metallic Standoff

24	57-10240-14
36	57-10360-27
50	57-10500-77

Receptacles/PC Contacts (.156) Metallic Standoff

24	57-20240-25
36	57-20360-21
50	57-20500-87

Receptacles/PC Contacts (.156) And Spring Latches Metallic Standoff

24	57-40240-16
36	57-40360-23
50	57-40500-26

Plugs/PC Contacts (.156) Insulative Standoff

24	57-10240-13
36	57-10360-26
50	57-10500-69

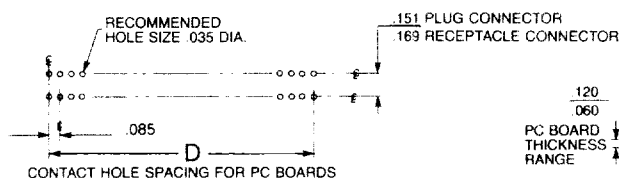
Receptacles/PC Contacts (.156) Insulative Standoff

24	57-20240-24
36	57-20360-20
50	57-20500-79

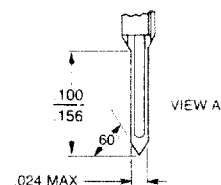
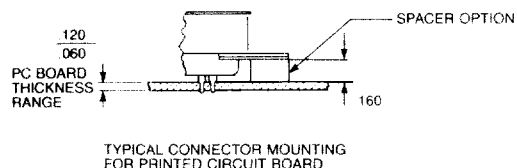
Receptacles/PC Contacts (.156) And Spring Latches Insulative Standoff

24	57-40240-15
36	57-40360-21
50	57-40500-23

typical mounting, contact hole spacing and termination lengths for PC boards

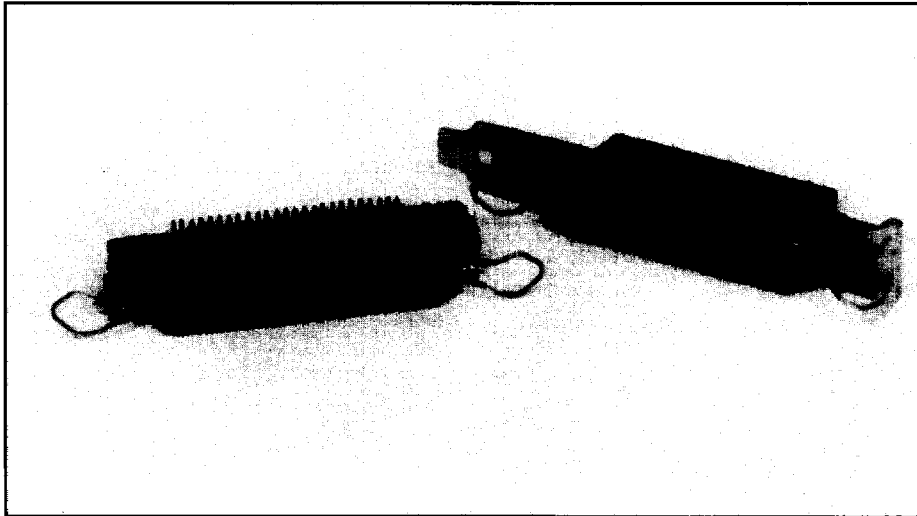


See dimensions table at top of page 7.



57 series right angle PCB mount receptacle

(see also page 25, 57LE right angle)



Amphenol introduces a new low profile right angle printed circuit board receptacle for Host Adapter Accessory Cards. Developed in response to newly emerging SCSI applications, it is also an ideal choice for any application requiring a low-cost, right angle PC tail connector.

Available in either standard, or reverse polarization, these receptacles are completely intermateable with standard Amphenol micro-ribbon® connectors. To accommodate PC panel or chassis thickness, the front shell has been lengthened 0.100". A 0.070" reduction in connector-to-board height, as measured from PCB surface to connector centerline, provides a lower profile to accommodate PC Host Adapter Card/IO Port configurations.

Beryllium copper contacts feature recessed "Closed Front Entry" design for improved ESD suppression. The positive mating action of these contacts is self-wiping and self-cleaning, resulting in highly reliable electrical continuity and low contact resistance. Spring clip or jack screw mounting hardware assures connectors remain tightly engaged.

specifications

Current rating: 5 amps/contact
Voltage rating: 700 VDC at sea level
 200 VDC at 70,000 ft.
Withstanding voltage: 1,000 VAC
Insulation resistance: 1,000 Megaohms min
Contact resistance: 15 Milliohms max
Operating temperature: -67°F to +221°F
 (-55°C to +105°C)

Insulator material: Reinforced thermoplastic UL 94 V-O rated, black
Contact material: Beryllium Copper
Shell material: Steel, Aluminum killed, Zinc plated with clear chromate finish
Ground bracket: Cold rolled Steel; bright Tin plated

Contact plating: 30 microinches Gold in mating area, 100 microinches Tin/Lead on tails, 50 microinches Nickel underplate

Mounting plates: Cold rolled Steel; Zinc plated with clear chromate finish

order information

Series

Tail Length /Mtg. Thd. Size /Connection Style

A = 0.125" / #6-32 thd. /spring latch
 C = 0.125" / #4-40 thd. /spring latch
 E = 0.125" / #6-32 thd. /jackscrew
 G = 0.125" / #4-40 thd. /jackscrew

57-B X 50 X -XX X 00

Receptacle Style/Contact Material

B = standard "D" polarization/Beryllium Copper
 D = reverse "D" polarization/Beryllium Copper

Ground Bracket Type

1 = #4-40 thd. extrusion
 2 = P.C.B. locking tabs (.062 P.C.B.)

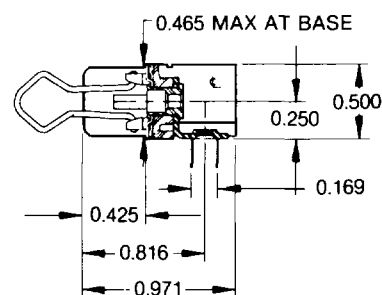
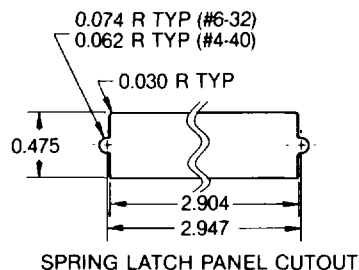
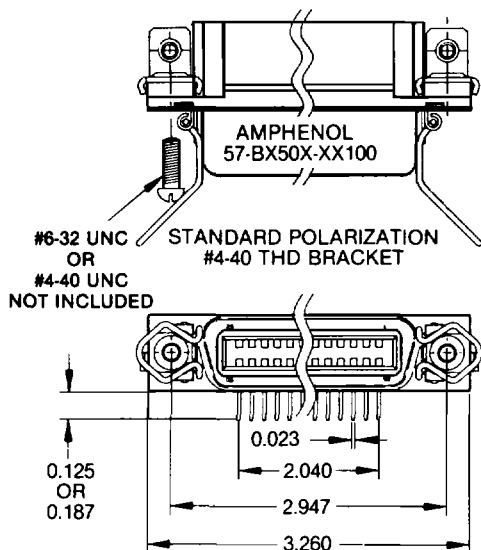
AM =

30 micro in. min Gold on mating area; 100 micro in. Tin/Lead on tails; 50 micro-in min Nickel underplate.

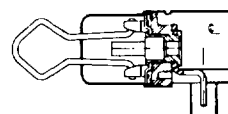
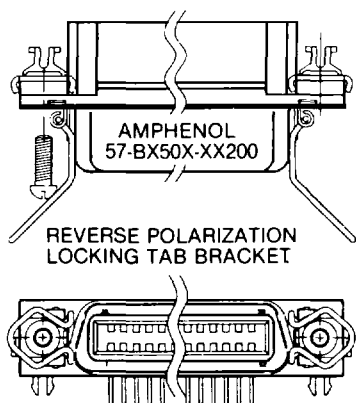
57 series right angle PCB mount receptacle (cont.)

receptacle with spring latch

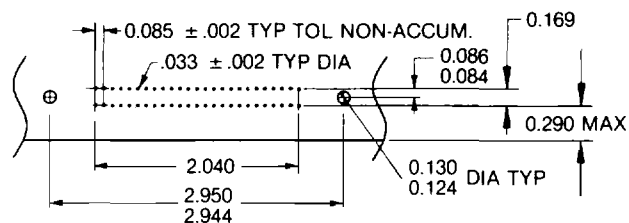
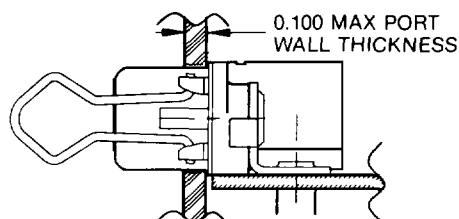
Standard Polarization



Reverse Polarization



mounting specifications



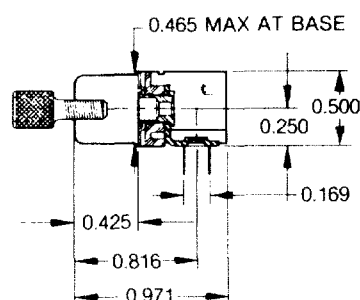
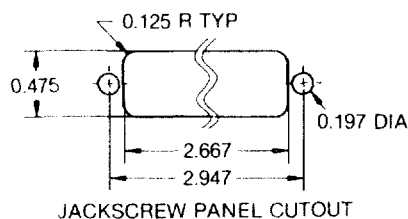
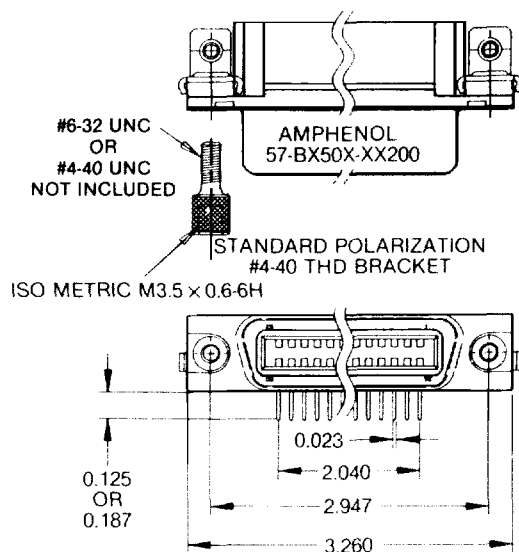
Mounting Hardware Supplied Separately (20 screws per package—order by number of packages)

Hardware Description		Part Number For Screw With #6-32 External Thread	Part Number For Screw With #4-40 External Thread
Screw For Spring Latch Receptacle		57-1911-01	57-2030
Jackscrews (Internal Thread Size)	M3.5 × 0.6-6H	57-1912-02	57-2031
	#4-40 UNC-2B	—	57-2054

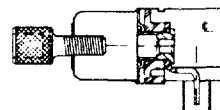
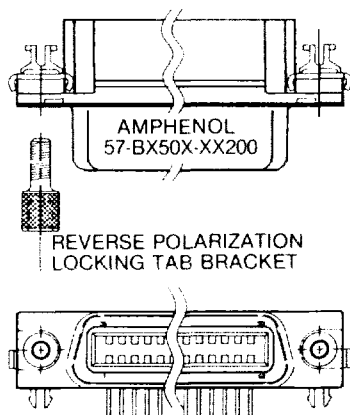
57 series right angle PCB mount receptacle (cont.)

receptacle with jack screw

Standard Polarization



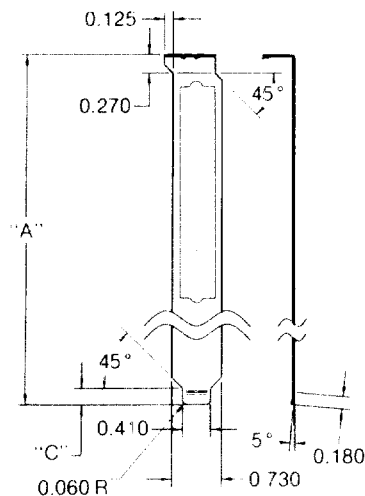
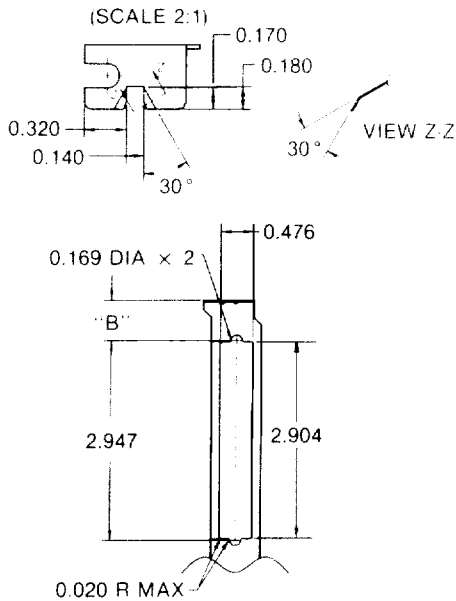
Reverse Polarization



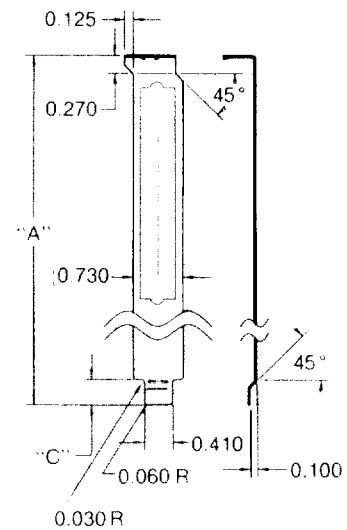
Item	Material	Standard Plating
Housing	Reinforced thermoplastic UL rated 94V-0, black	
Contacts	0.008" Beryllium Copper	30 microinches Gold mating area; 100 microinches Tin/Lead on tails; 50 microinches Nickel underplating
Shell	Cold rolled Steel Aluminum killed, deep draw quality	.0002-.0004" electrodeposited clear chromate over .0002-.0004" electrodeposited Zinc per spec. QQ-Z-325, Class 3, Type II
Ground bracket	Cold rolled Steel	.0002-.0004" bright Tin plating
Rivets	SAE C-1006 Steel	.0002-.0004" electrodeposited clear chromate over .0002-.0004" electrodeposited Zinc per spec QQ-Z-325, Class 3, Type II
Spring latch	0.038" dia. Stainless Steel wire	

57 series right angle PCB mount receptacle (cont.)

host adapter card mounting plates for 50 position receptacle



Straight Tab



Dual 45° Tab

dimensions/order information (10 000 pc. MOQ)

Tab Style	Amphenol Part Number	Dimensions		
		A	B	C
Straight	57-2039-802	4.750	0.562	0.240
Dual 45°	57-2039-902	4.150	0.630	0.346

applications

Host Adapter Card Accessories

