

# Amphenol® ARINC 404 Rack and Panel Connectors

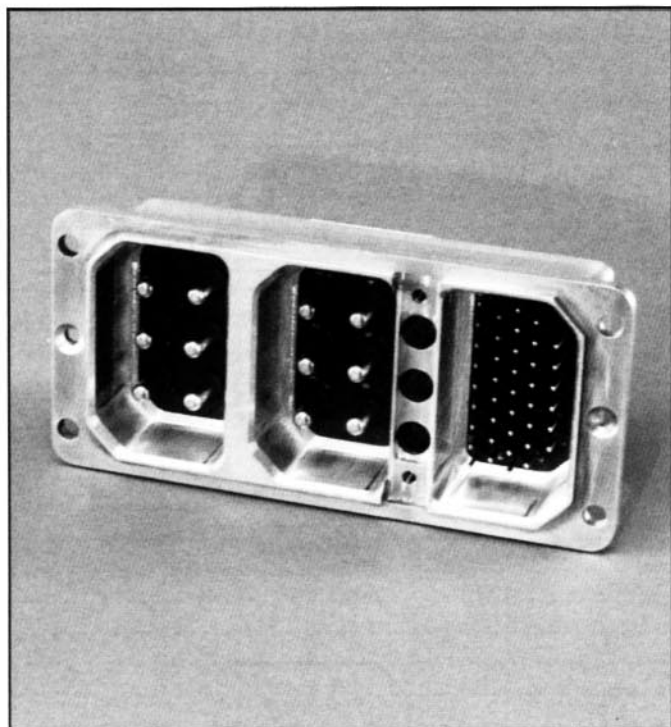
SL-378-3



— Amphenol® Canada Corporation —

# Amphenol® ARINC 404

## rack and panel connectors



### Introduction

Amphenol's "AR" Series, ARINC rack and panel connectors are designed to meet or exceed the requirements of MIL-C-81659 and ARINC Specification 404. The "AR" Series is a multi-purpose connector used in aerospace, military and computer periphery applications.

These connectors are available in five shell styles with up to four insert cavities. Inserts in this product line accommodate signal and power contacts in sizes 12, 16, 20 and 22. Coaxial contacts are available in sizes 5 and 9. Insert arrangements are available utilizing a single type contact or a combination of standard and coaxial contacts.

Non-environmental and environmentally sealed connectors are offered. The environmental sealing is accomplished by wire sealing grommets and interfacial seals. Application specific designs, including transient protection, are available from Amphenol. Please ask your local sales engineer or contact Amphenol, Canada Corporation for further information.

### Performance Specifications

Amphenol "AR" Series Connectors are designed per ARINC 404 specifications and utilize pin and socket contacts manufactured in conformance with MIL-C-39029B.

**Insulation Resistance:** . . . . . 5000 megohms @25°C

#### Dielectric Withstanding Voltage (Sea Level):

	Service Rating A	Service Rating B*
Environmental Sealed	1,500V rms	1,800V rms
Non-environmental, Standard	1,000V rms	1,500V rms

**Temperature Range:** . . . . . (-55°C to +125°C) -67°F to +257°F

#### Contact Current Rating:

Size 22 (#22 AWG Wire)	5.0 amps
Size 20 (#20 AWG Wire)	7.5 amps
Size 16 (#16 AWG Wire)	13.0 amps
Size 12 (#12 AWG Wire)	23.0 amps

#### Contact Retention:

Size 22	15 lb. (min.)
Size 20	20 lb. (min.)
Size 16	25 lb. (min.)
Size 12	30 lb. (min.)

**Durability (Mating and Unmating):** . . . . . 500 cycles

**Salt Spray:** . . . . . MIL-STD-1344, Method 1001, Condition B

**Vibration:** . . . . . MIL-STD-1344, Method 2005, Condition IV

\* Meets service ratings as shown in MS 3157

### Material Specifications

#### Shell:

Die cast aluminum alloy per QQ-A-591/A380; cadmium plated with yellow chromate conversion per QQ-P-416, Type II Class 2.

#### Insertion Retention Plates:

Aluminum alloy, blue anodized per MIL-A-8625

**Screws & Washers:** . . . . . Stainless steel, passivated

**Dielectric, Hard:** . . . . . Epoxy, per MIL-M-24325

**Keying Posts and Nuts:** . . . . . Stainless steel, passivated

**Keying Inserts (Receptacle Only):** . . . . . Aluminum alloy

#### Pin and Socket Body:

Material . . . . . Copper alloy  
Finish . . . . . Gold over nickel over copper plate

**Socket Sleeve:** . . . . . Material - passivated stainless steel

#### Coaxial Contact Body Components:

Materials . . . . . Brass & beryllium copper  
Finish . . . . . Gold plated

#### Coaxial Contact Ferrules:

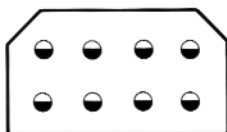
Materials . . . . . Annealed copper alloy  
Finish . . . . . Gold plated

# ARINC 404

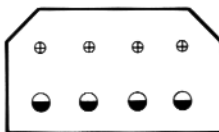
## contact arrangements

### Amphenol® “AR” Series Connectors

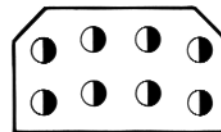
Front face of pin insert shown.



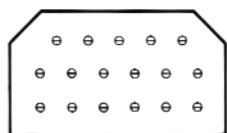
**Insert 8**  
(8) Size 12 Contacts



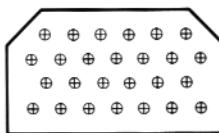
**Insert D8**  
(4) Size 12 Contacts  
(4) Size 16 Contacts or  
(4) Size 15 Coax Contacts



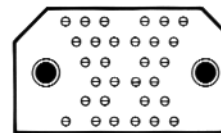
**Insert C8**  
(8) Size 9 Coax Contacts



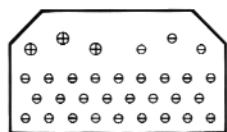
**Insert 17**  
(17) Size 20 Contacts



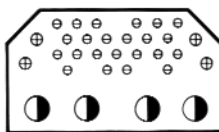
**Insert 26**  
(26) Size 16 Contacts or  
(26) Size 15 Coax Contacts



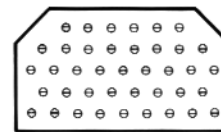
**Insert 32C2**  
(30) Size 20 Contacts  
(2) Size 5 Coax Contacts



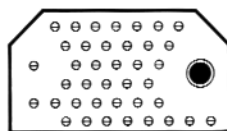
**Insert 32**  
(29) Size 20 Contacts  
(3) Size 16 Contacts



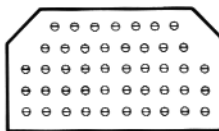
**Insert 32C4**  
(24) Size 20 Contacts  
(4) Size 16 Contacts  
(4) Size 9 Coax Contacts



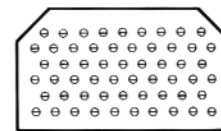
**Insert 40**  
(40) Size 20 Contacts



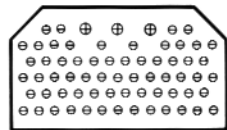
**Insert 40C1**  
(39) Size 20 Contacts  
(1) Size 5 Coax Contact



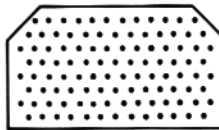
**Insert 45**  
(45) Size 20 Contacts



**Insert 57**  
(57) Size 20 Contacts



**Insert 67**  
(64) Size 20 Contacts  
(3) Size 16 Contacts or  
(3) Size 15 Coax Contacts



**Insert 106**  
(106) Size 22 Contacts  
with metal contact retention clips

#### Notes:

1. Mating face of pin insert shown. Socket face is mirror image.
2. Some arrangements are not available in all series. Consult Amphenol for more information.
3. Insert 106 has reversed contact sex.
4. For military version, consult Amphenol Canada Corporation.

#### CONTACT LEGEND



# ARINC 404

## insert availability and identification

Insert Arrangement	Type	Class	Pin	Socket
			(X designates available)	
7		A	X	X
7		E		
7		B		
8		A	X	X
8		E	X	X
8		B	X	X
D8		A	X	X
D8		E	X	X
D8		B		
C8		A	X	X
C8		E	X	X
C8		B	X	X
17	LD	A	X	X
17	LD	E		
17	LD	B		
26		A	X	X
26		E	X	X
26		B	X	X
32C2*	HD	A	X	X
32C2*	HD	E	X	X
32C2*	HD	B		
32C2	LD	A	X	X
32C2	LD	E		
32C2	LD	B	X	X
32	LD	A	X	X
32	LD	E		
32	LD	B		
32C4*	HD	A	X	X
32C4*	HD	E	X	X
32C4*	HD	B		
32C4	LD	A	X	X
32C4	LD	E	X	X
32C4	LD	B	X	X
33C4*	HD	A	X	X
33C4*	HD	E	X	X
33C4*	HD	B		

Insert Arrangement	Type	Class	Pin	Socket
			(X designates available)	
36C7*		A	X	X
36C7*		E	X	X
36C7*		B		
40*	HD	A	X	X
40*	HD	E	X	X
40*	HD	B		
40	LD	A	X	X
40	LD	E	X	X
40	LD	B	X	X
40C1*	HD	A	X	X
40C1*	HD	E	X	X
40C1*	HD	B		
40C1	LD	A	X	X
40C1	LD	E	X	X
40C1	LD	B	X	X
45*	HD	A	X	X
45*	HD	E	X	X
45*	HD	B		
45	LD	A	X	X
45	LD	E	X	X
45	LD	B	X	X
57*	HD	A	X	X
57*	HD	E	X	X
57*	HD	B		
57	LD	A	X	X
57	LD	E	X	X
57	LD	B	X	X
67	HD	A	X	X
67	HD	E	X	X
67	HD	B	X	X
106		A	X	X
106		E	X	X
106		B		X

For availability of other arrangements, consult Amphenol Canada Corporation.

LD designates Low Density size 20 contacts.

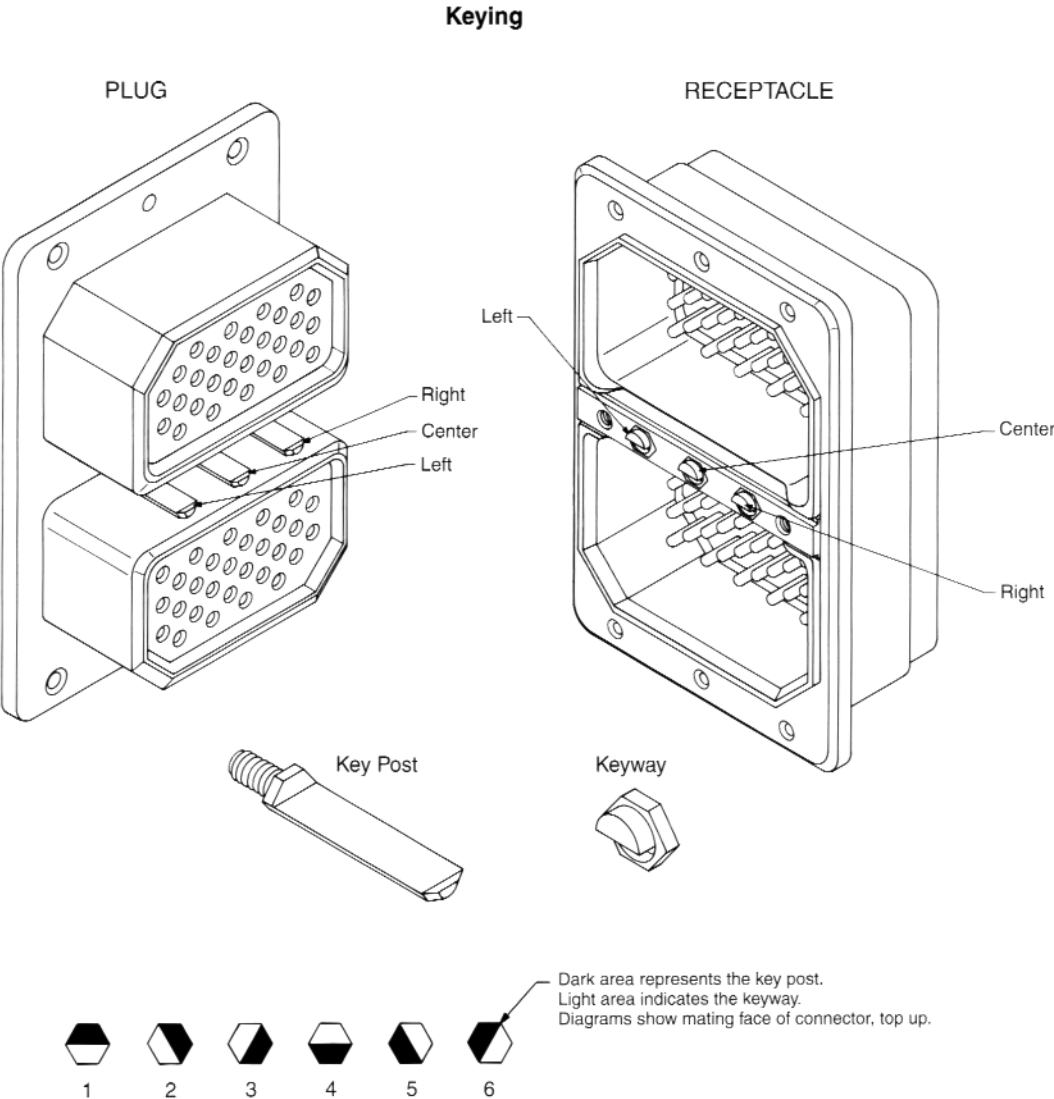
HD designates High Density size 20 contacts.

\* designates Military style inserts



# ARINC 404

## keying



### Keying Components

Key post Kit	3 posts, 3 nuts (for Plug)	AC-040020-P01
Keyway Kit	3 keyways, 1 plate, 2 screws (for Receptacle)	AC-040020-K01

NOTES: 1. If polarizing position code is (- -), posts and keys will not be installed, but supplied with connector.  
2. If the last two digits are designated 00, it means that polarizing posts are not supplied.  
See page 5 for polarizing positions.

# ARINC 404

## polarizing positions

The following chart lists the polarizing position codes that will describe the keying positions available. See how to order procedure on page 12 for incorporating these polarizing codes into part numbers.

Plug				Receptacle			
CODE	POSITIONS			CODE	POSITIONS		
	Left Key Post	Center Key Post	Right Key Post		Left Key Post	Center Key Post	Right Key Post
00	-	-	-	00	-	-	-
01	1	1	1	01	4	4	4
02	2	1	1	02	4	4	3
03	3	1	1	03	4	4	2
04	4	1	1	04	4	4	1
05	5	1	1	05	4	4	6
06	6	1	1	06	4	4	5
07	1	1	6	07	5	4	4
08	2	1	6	08	5	4	3
09	3	1	6	09	5	4	2
10	4	1	6	10	5	4	1
11	5	1	6	11	5	4	6
12	6	1	6	12	5	4	5
13	1	1	5	13	6	4	4
14	2	1	5	14	6	4	3
15	3	1	5	15	6	4	2
16	4	1	5	16	6	4	1
17	5	1	5	17	6	4	6
18	6	1	5	18	6	4	5
19	1	1	4	19	1	4	4
20	2	1	4	20	1	4	3
21	3	1	4	21	1	4	2
22	4	1	4	22	1	4	1
23	5	1	4	23	1	4	6
24	6	1	4	24	1	4	5
25	1	1	3	25	2	4	4
26	2	1	3	26	2	4	3
27	3	1	3	27	2	4	2
28	4	1	3	28	2	4	1
29	5	1	3	29	2	4	6
30	6	1	3	30	2	4	5
31	1	1	2	31	3	4	4
32	2	1	2	32	3	4	3
33	3	1	2	33	3	4	2
34	4	1	2	34	3	4	1
35	5	1	2	35	3	4	6
36	6	1	2	36	3	4	5
37	1	2	1	37	4	3	4
38	2	2	1	38	4	3	3
39	3	2	1	39	4	3	2
40	4	2	1	40	4	3	1
41	5	2	1	41	4	3	6
42	6	2	1	42	4	3	5
43	1	2	6	43	5	3	4
44	2	2	6	44	5	3	3
45	3	2	6	45	5	3	2
46	4	2	6	46	5	3	1
47	5	2	6	47	5	3	6
48	6	2	6	48	5	3	5
49	1	2	5	49	6	3	4

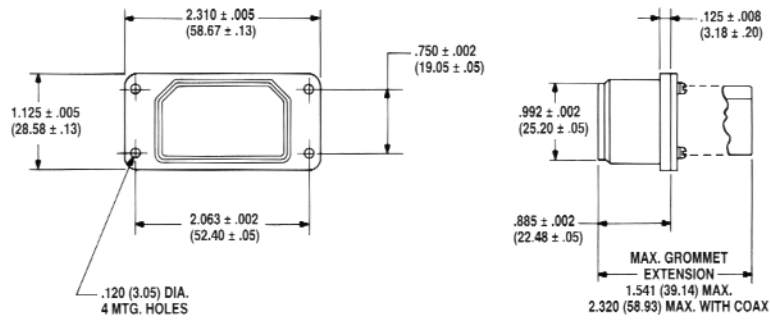
Plug				Receptacle			
CODE	POSITIONS			CODE	POSITIONS		
	Left Key Post	Center Key Post	Right Key Post		Left Key Post	Center Key Post	Right Key Post
50	2	2	5	50	6	3	3
51	3	2	5	51	6	3	2
52	4	2	5	52	6	3	1
53	5	2	5	53	6	3	6
54	6	2	5	54	6	3	5
55	1	2	4	55	1	3	4
56	2	2	4	56	1	3	3
57	3	2	4	57	1	3	2
58	4	2	4	58	1	3	1
59	5	2	4	59	1	3	6
60	6	2	4	60	1	3	5
61	1	2	3	61	2	3	4
62	2	2	3	62	2	3	3
63	3	2	3	63	2	3	2
64	4	2	3	64	2	3	1
65	5	2	3	65	2	3	6
66	6	2	3	66	2	3	5
67	1	2	2	67	3	3	4
68	2	2	2	68	3	3	3
69	3	2	2	69	3	3	2
70	4	2	2	70	3	3	1
71	5	2	2	71	3	3	6
72	6	2	2	72	3	3	5
73	1	3	1	73	4	2	4
74	2	3	1	74	4	2	3
75	3	3	1	75	4	2	2
76	4	3	1	76	4	2	1
77	5	3	1	77	4	2	6
78	6	3	1	78	4	2	5
79	1	3	6	79	5	2	4
80	2	3	6	80	5	2	3
81	3	3	6	81	5	2	2
82	4	3	6	82	5	2	1
83	5	3	6	83	5	2	6
84	6	3	6	84	5	2	5
85	1	3	5	85	6	2	4
86	2	3	5	86	6	2	3
87	3	3	5	87	6	2	2
88	4	3	5	88	6	2	1
89	5	3	5	89	6	2	6
90	6	3	5	90	6	2	5
91	1	3	4	91	1	2	4
92	2	3	4	92	1	2	3
93	3	3	4	93	1	2	2
94	4	3	4	94	1	2	1
95	5	3	4	95	1	2	6
96	6	3	4	96	1	2	5
97	1	3	3	97	2	2	4
98	2	3	3	98	2	2	3
99	3	3	3	99	2	2	2

# ARINC 404 Single Bay Connectors

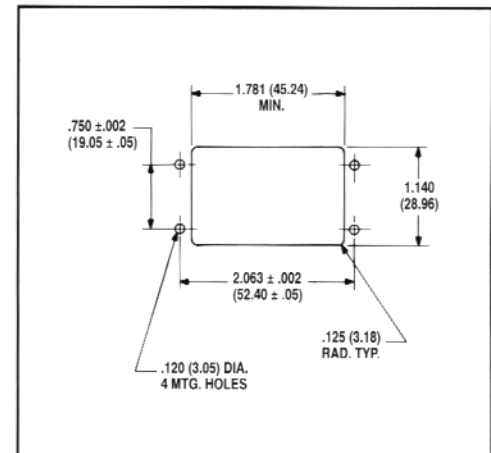
## Single Bay Connectors - Dimensional Drawings

### PLUG

#### "A" STYLE, NON-POLARIZED



### PANEL CUTOUT



### PLUG

AR A (\*) (\*\*) 3 (\*\*\*)

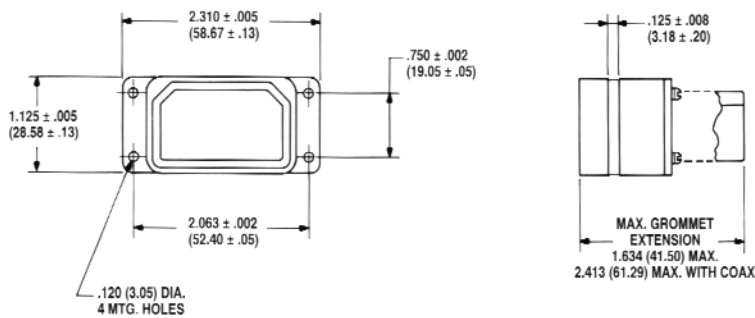
Designates \_\_\_\_\_  
Single Bay Non-Polarized

Designates \_\_\_\_\_  
Plug

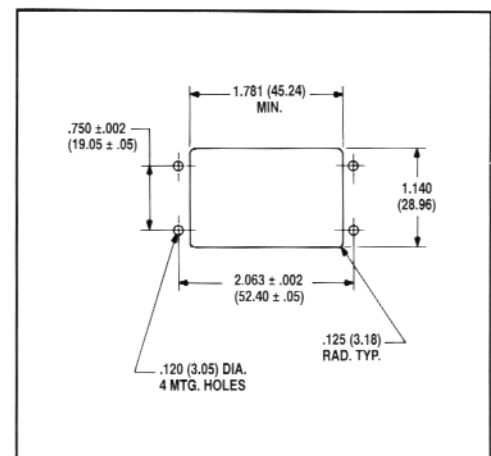
— See coding below and pages 12 - 15 to complete order number.

### RECEPTACLE

#### "A" STYLE, NON-POLARIZED



### PANEL CUTOUT



### RECEPTACLE

AR A (\*) (\*\*) 4 (\*\*\*)

Designates \_\_\_\_\_  
Single Bay Non-Polarized

Designates \_\_\_\_\_  
Receptacle

— See coding below and pages 12 - 15 to complete order number.

(\*) Class

(\*\*) Insert Arrangement

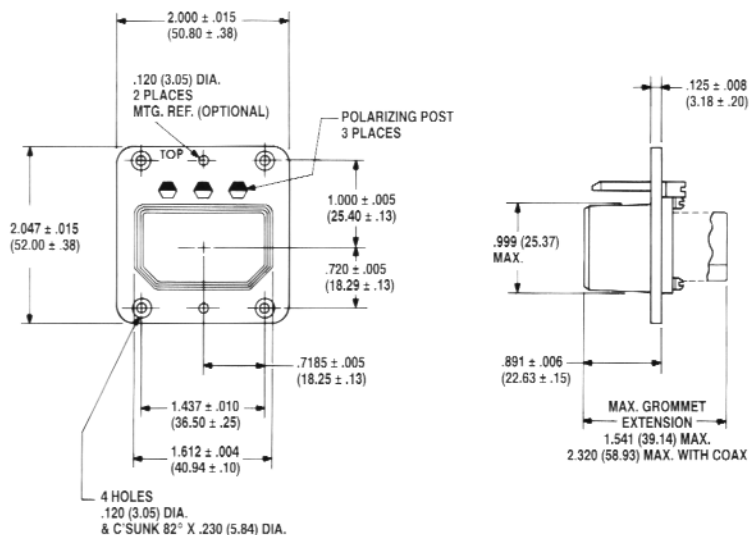
(\*\*\*) Modification code, polarization position and customer ordering code.

Dimensions are shown in inches and (mm). All dimensions are for reference only.

# ARINC 404 Single Bay Connectors

## Single Bay Connectors - Dimensional Drawings

### PLUG "B" STYLE, POLARIZED



#### PLUG

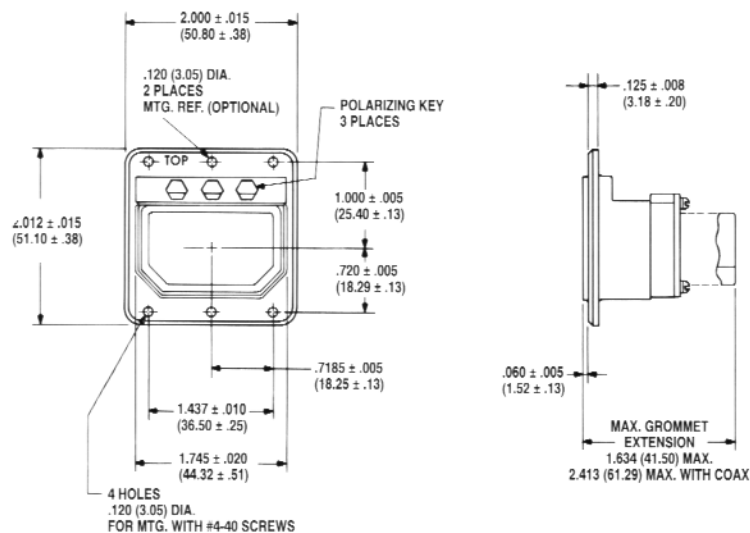
AR B (\*) (\*\*) 3 (\*\*\*)

Designates \_\_\_\_\_  
Single Bay Polarized

Designates \_\_\_\_\_  
Plug

- See coding below and pages 12 - 15 to complete order number.

### RECEPTACLE "B" STYLE, POLARIZED



#### RECEPTACLE

AR B (\*) (\*\*) 4 (\*\*\*)

Designates \_\_\_\_\_  
Single Bay Polarized

Designates \_\_\_\_\_  
Receptacle

- See coding below and pages 12 - 15 to complete order number.

(\*) Class

(\*\*) Insert Arrangement

(\*\*\*) Modification code, polarization position and customer ordering code.

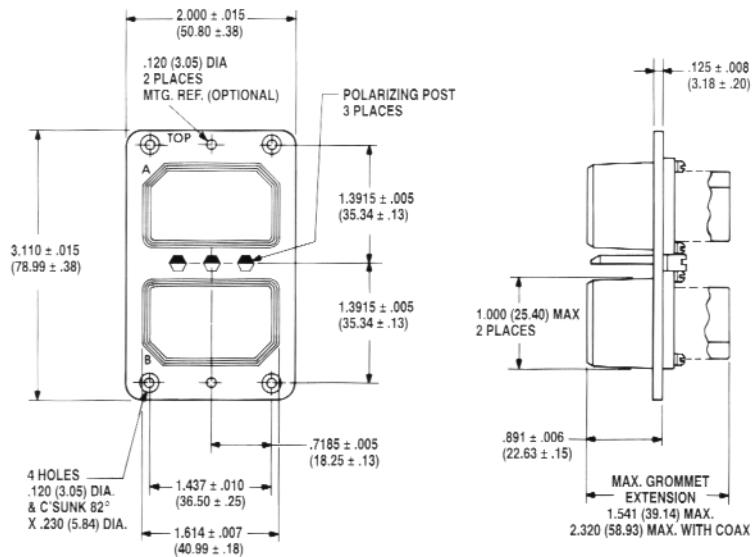
Dimensions are shown in inches and (mm). All dimensions are for reference only.



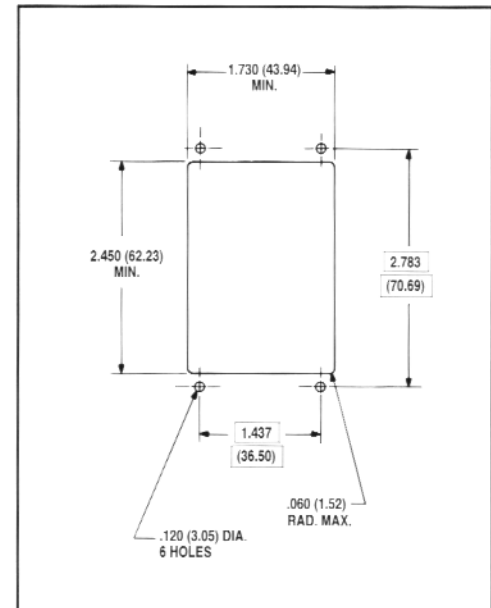
# ARINC 404 Double Bay Connectors

## Double Bay Connectors - Dimensional Drawings

### PLUG



### PANEL CUTOUT



### PLUG

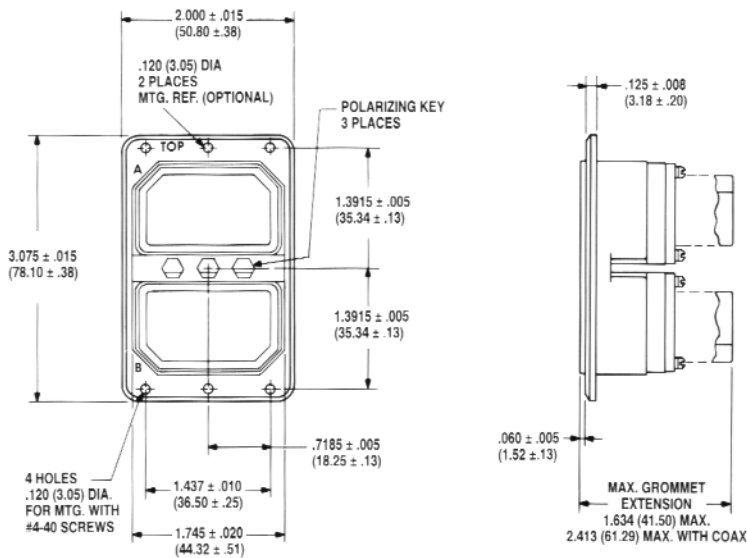
AR 2 (\*) (\*\*) 3 (\*\*\*)

Designates Double Bay Polarized

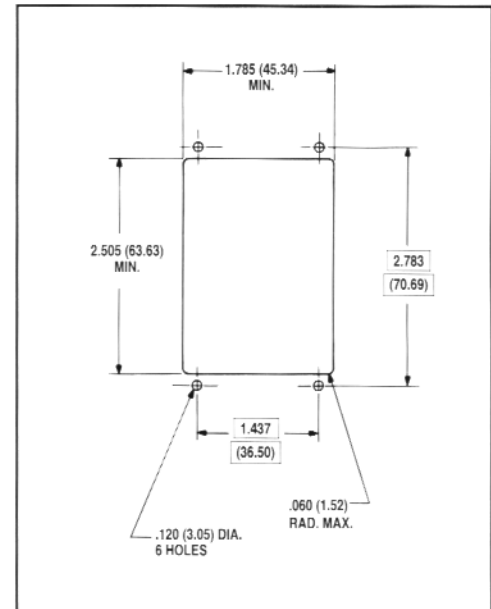
Designates Plug

– See coding below and pages 12 - 15 to complete order number.

### RECEPTACLE



### PANEL CUTOUT



### RECEPTACLE

AR 2 (\*) (\*\*) 4 (\*\*\*)

Designates Double Bay Polarized

Designates Receptacle

– See coding below and pages 12 - 15 to complete order number.

(\*) Class

(\*\*) Insert Arrangement

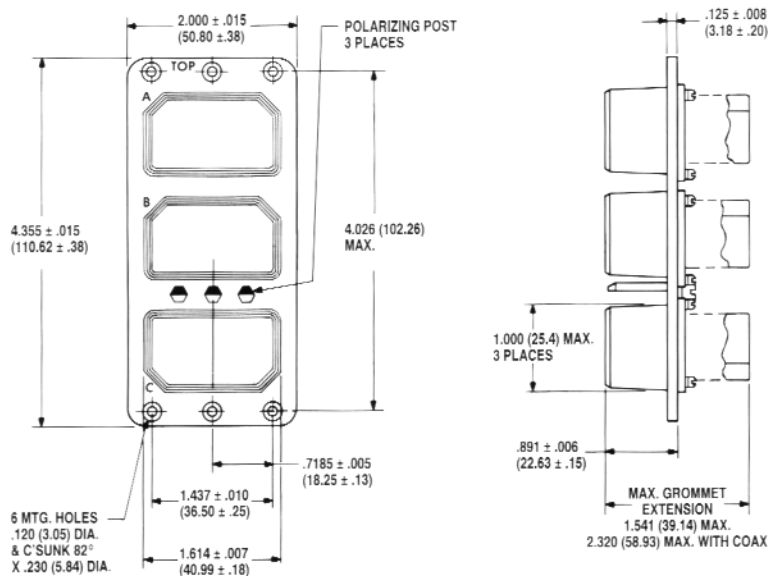
(\*\*\*) Modification code, polarization position and customer ordering code.

Dimensions are shown in inches and (mm). All dimensions are for reference only.

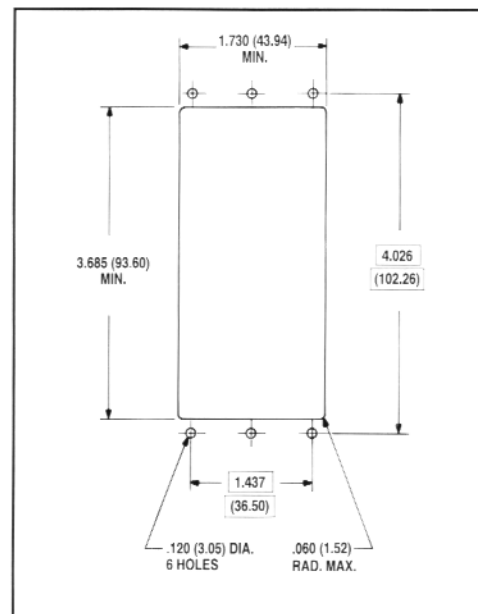
# ARINC 404 Triple Bay Connectors

## Triple Bay Connectors - Dimensional Drawings

### PLUG



### PANEL CUTOUT



### PLUG

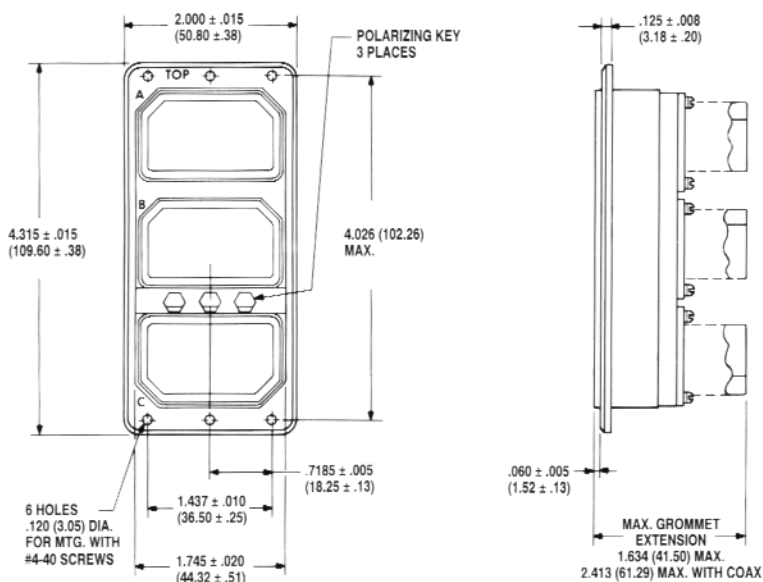
AR 3 (\*) (\*\*) 3 (\*\*\*)

Designates Triple Bay Polarized

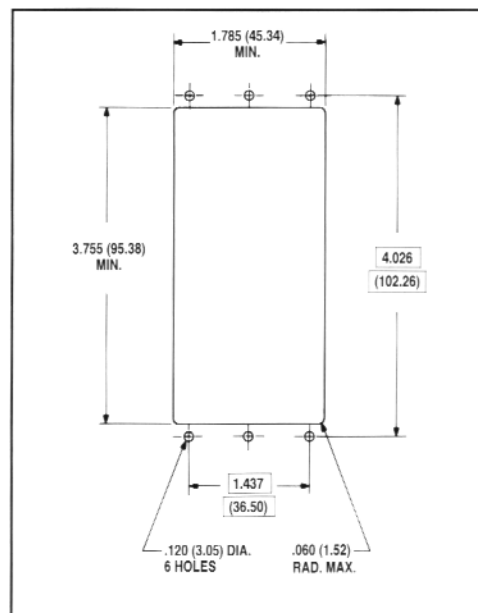
Designates Plug

- See coding below and pages 12 - 15 to complete order number.

### RECEPTACLE



### PANEL CUTOUT



### RECEPTACLE

AR 3 (\*) (\*\*) 4 (\*\*\*)

Designates Triple Bay Polarized

Designates Receptacle

- See coding below and pages 12 - 15 to complete order number.

(\*) Class

(\*\*) Insert Arrangement

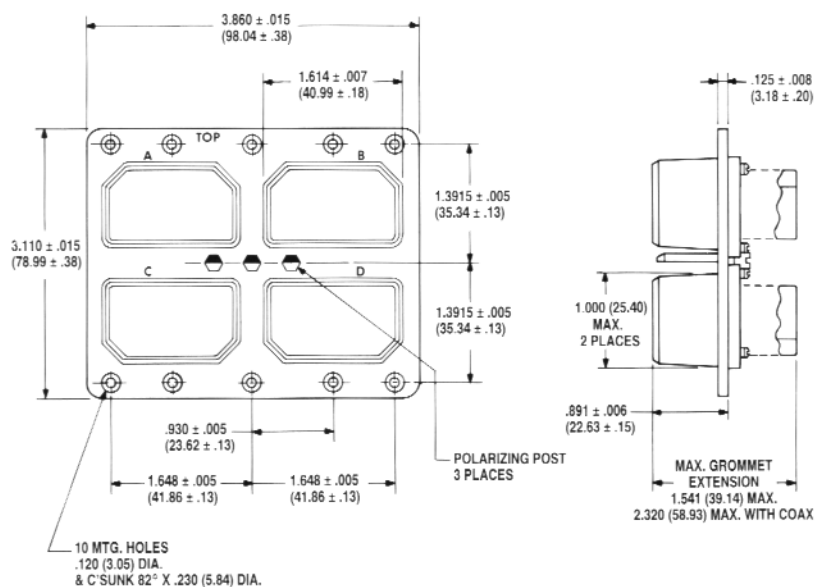
(\*\*\*) Modification code, polarization position and customer ordering code.

Dimensions are shown in inches and (mm). All dimensions are for reference only.

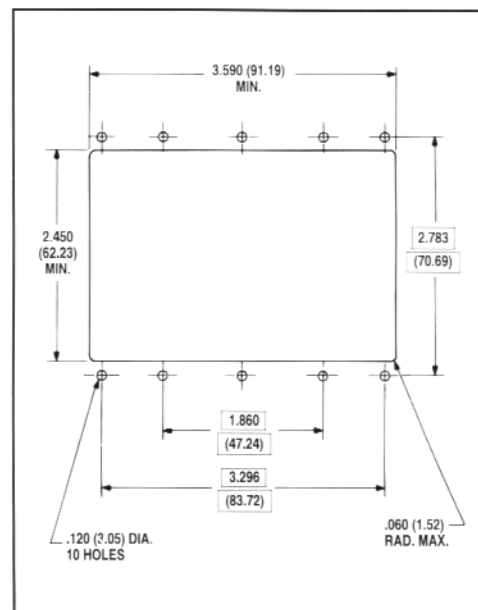
# ARINC 404 Four Bay Connectors

## Four Bay Connectors - Dimensional Drawings

### PLUG



### PANEL CUTOUT



### PLUG

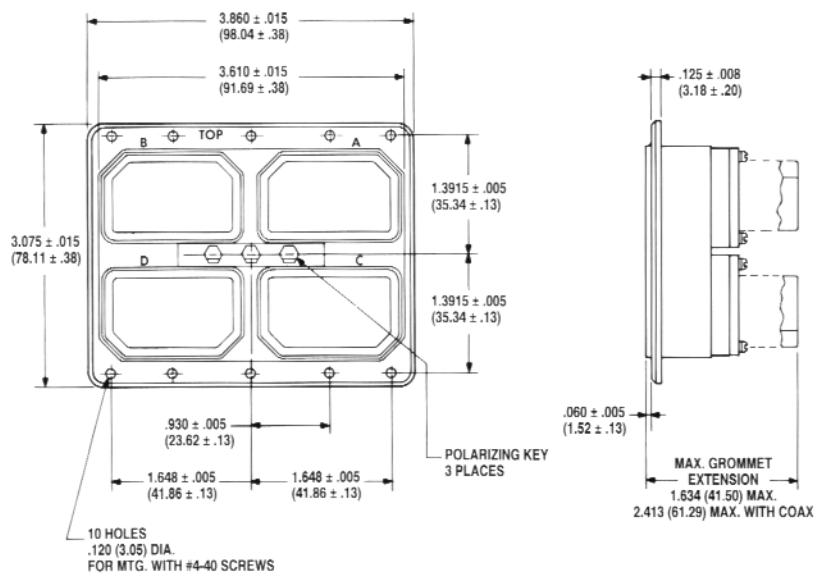
AR 4 (\*) (\*\*) 3 (\*\*\*)

Designates  
Four Bay Polarized

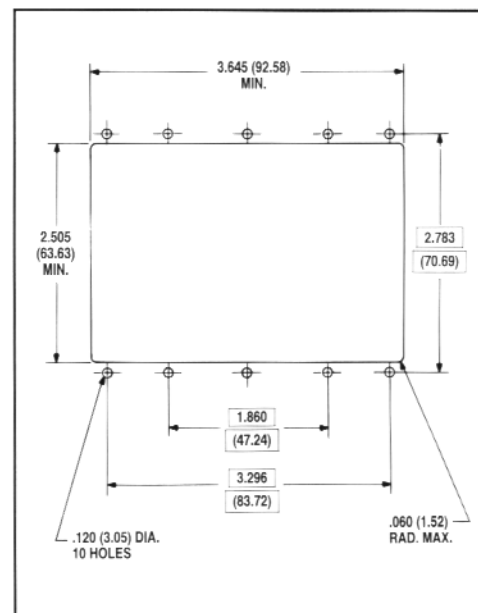
Designates  
Plug

— See coding below and pages 12 - 15 to complete order number.

### RECEPTACLE



### PANEL CUTOUT



### RECEPTACLE

AR 4 (\*) (\*\*) 4 (\*\*\*)

Designates  
Four Bay Polarized

Designates  
Receptacle

— See coding below and pages 12 - 15 to complete order number.

(\*) Class

(\*\*) Insert Arrangement

(\*\*\*) Modification code, polarization position and customer ordering code.

Dimensions are shown in inches and (mm). All dimensions are for reference only.

# ARINC 404

## contact data, protective dust covers

Contacts for Amphenol® ARINC 404 Rack and Panel Connectors can be ordered separately.  
Use part numbers shown in the charts below for ordering contacts and applicable tools.  
For further information consult Amphenol® Canada Corporation.

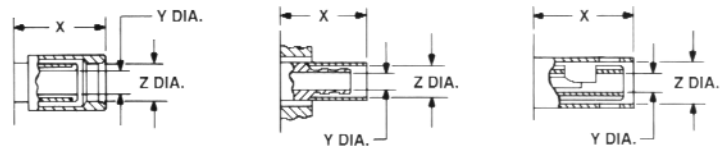
### ARINC 404 Power/Signal Contacts

Contact Size/Type	Pin		Socket		Insertion/ Removal Tool	Crimping Tool	Positioner	Wire Accom.	Layout Usage
	Military Part Number	Amphenol Part Number	Military Part Number	Amphenol Part Number					
22-22 Crimp	M39029/11-144	AC-752222-079	M39029/12-148	AC-762222-079	M81969/1-01	M22520/2-01	M22520/2-23	22 24 26	106
20-20 Crimp High Density	M39029/11-145	AC-752020-081	M39029/12-149	AC-762020-081	M81969/1-02	M22520/2-01MS-3191-1	M22520/2-08 Standard	20 22 24	17 32 32C2 32C4 40 40C1 45 57
20-20 Crimp Low Density		AC-772020-080		AC-782020-080					
16-16 Crimp	M39029/11-146	AC-751616-076	M39029/12-150	AC-761616-076	M81969/1-03	M22520/1-01 MS-3191-1	M22520/1-02 Standard	16 18 20	D8 26 32 32C4 67
12-12 Crimp	M39029/11-147	AC-751212-078	M39029/12-151	AC-761212-078	M81969/14-04	M22520/1-01	M22520/1-11	12 14	8 D8

### ARINC 404 Coax Contacts

Contact Size/Type	Pin Amphenol Part Number	Socket Amphenol Part Number	Layout Usage	Cable Accommodation	Style	Dimension (See drawings below)		
						X Max.	Y Dia.	Z Dia.
Coax - Size 5	AC-600002-001	AC-600003-001	32C2	RG-59/U, RG-62/U	A	.760 (19.30)	.153 ± .005 (3.89 ± .127)	.252 ± .005 (6.40 ± .127)
	AC-600002-002	AC-600003-002	32C2	RG-58/U	B	.760 (19.30)	.123 ± .005 (3.12 ± .127)	.206 ± .005 (5.23 ± .127)
	AC-600002-005	AC-600003-005	32C2 40C1	RG-58/U	J	0.798 (20.27)	.125 ± .005 (3.18 ± .127)	.268 ± .005 (6.81 ± .127)
Coax - Size 9	AC-600002-003	AC-600003-003	C8 32C4	RG-58/U	G	.500 (12.70)	.125 ± .005 (3.18 ± .127)	.206 ± .005 (5.23 ± .127)
	AC-600002-003A	AC-600003-003A	C8 32C4	RG-142/U	G	.500 (12.70)	.125 ± .005 (3.18 ± .127)	.206 ± .005 (5.23 ± .127)
	AC-600002-004	AC-600003-004	C8 32C4	RG-174/U, RG-179/U, RG-187/U, RG-188/U	H	0.592 (15.04)	.067 ± .005 (1.70 ± .127)	.116 ± .005 (2.95 ± .127)

### Coax Contacts Dimensional Data



### ARINC Protective Dust Covers (Conductive)

Plug	Receptacle
AC-100000-591	AC-100000-601

Amphenol® part numbers meet MIL specifications, but are not MIL qualified. Military part numbers are for reference only.  
For further information on cable terminations, tooling or accessories consult Amphenol® Canada Corporation.  
Dimensions are shown in inches and (mm).

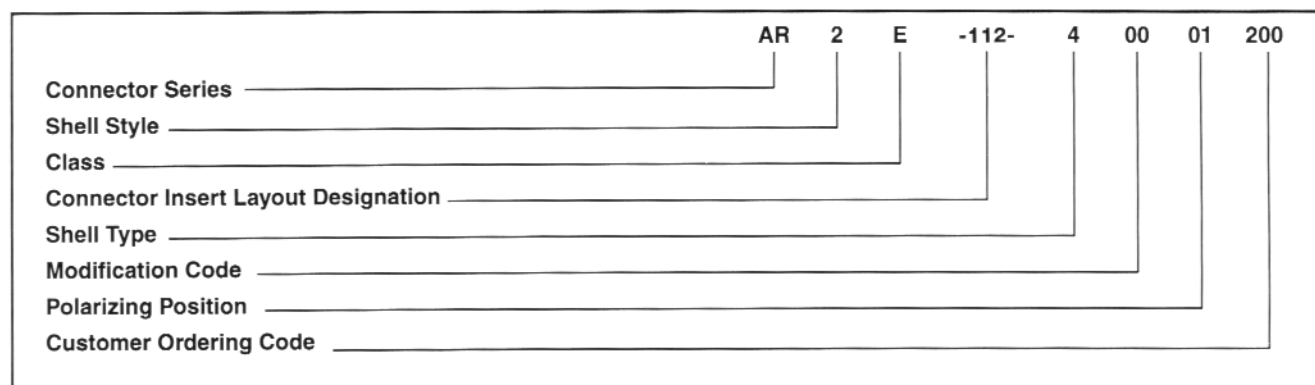


# ARINC 404

## how to order

### Amphenol® “AR” Series Connectors

To more easily illustrate ordering procedure for ARINC 404, “AR” Series connectors, part number AR2E-112-40001200 is shown as follows:



#### Connector Series

AR designates Amphenol ARINC 404

#### Shell Style

- A Single Bay, non-polarized
- B Single Bay, polarized
- 2 Double Bay, polarized
- 3 Triple Bay, polarized
- 4 Four Bay, polarized

#### Class

- A - Non-environmental, standard commercial connector
- E - Environmentally sealed connector
- B - Non-environmental standard commercial connector with wire separators

#### Connector Insert Layout Designation

See charts on pages 13 and 14. Choose desired insert layout arrangements; then enter the connector insert arrangement designation from the charts. For military style inserts, include an 'M' ahead of the Insert Designator number.

#### Shell Type

- 4 - Receptacle (box side)
- 3 - Plug (rack side)

#### Modification Code

See page 16 for illustration and description of codes.

#### Polarizing Position

- 01 thru 99 (per ARINC 404) See chart on page 5.
- 00 - Polarizing posts or keys not supplied with connector.
- Two dashes designate that the posts and keys will be supplied with the connector but not installed.

#### Customer Ordering Code

- 200 - Standard connector kit with standard contacts. Coaxial contacts are not supplied with the connector and must be ordered separately by Amphenol part number.
- 201 - 200 customer ordering code without contacts. Contacts must be ordered separately by Amphenol part number.
- 202 - 201 customer ordering code with keys unassembled and packaged in a separate container.
- 203 - 201 customer ordering code with inserts and retainer plates unassembled.

#### Customer Ordering Code, cont.

- 204 - 200 customer ordering code with spare contacts equal to 3% of contact population per connector per contact size.
- 205 - 200 customer ordering code with size #22 contacts having a wire range of 28 - 30 AWG.
- 206 - 200 customer ordering code with keying unassembled and packaged separately within the connector container.
- 207 - 200 customer ordering code except connector to be supplied less signal contacts and with coaxial contacts.
- 210 - 200 customer ordering code with special contacts per customer specifications.
- 211 - 200 customer ordering code except connector is built less the polarizing keys. Keys must be ordered separately by Amphenol part number.
- 212 - 206 & 204 customer ordering codes with special contacts per customer specification.
- 216 - 200 customer ordering code with special contacts as per customer specification.
- 220 - 200 customer ordering code with connector kit unassembled.
- 221 - 200 customer ordering code with Low Insertion Force (LIF) contacts.
- 230 - Special modification per customer request.
- 231 - Special modification per customer request less contacts.
- 234 - Special modification per customer request with spare contacts - 3% of contact population per connector per contact size.
- 250 - Standard connector kit, except shell and retainer plates plated electroless nickel.
- 251 - 250 customer ordering code with assembled connector only; contacts must be ordered separately by Amphenol part number.
- 254 - 250 customer ordering code with spare contacts - 3% of contact population per connector per contact size.
- 255 - 250 customer ordering code with size #22 contacts having a wire range of 28 - 30.
- 6xx - Use the 6xx to designate connectors supplied with insertion/removal tools (MIL-I-81969/1) and the 200 series guide for other variations by substituting a 6 for a 2.
- 8xx - Use 8xx to designate the inclusion of dust caps and the 200 series guide for other variations. (example: code 203 becomes 803).

# ARINC 404

how to order, cont.

## connector insert layout designations

Common available ARINC 404 configurations are listed below and on page 14. The connector layout designator number represents the desired inserts in the order of shell cavities used - A, B, C and D, as applicable (as shown in the following charts). Consult Amphenol Canada Corporation for further availability of insert combinations.

Insert Designator	Shell Cavity Insert Position			
	A	B	C	D
001	26P	—	—	—
002	26S	—	—	—
003	26P	26P	—	—
004	26S	26S	—	—
005	26P	26P	26P	—
006	26S	26S	26S	—
007	26P	26P	26P	26P
008	26S	26S	26S	26S
009	40P	—	—	—
010	40S	—	—	—
011	40P	40P	—	—
012	40S	40S	—	—
013	40P	40P	40P	—
014	40S	40S	40S	—
015	40P	40P	40P	40P
016	40S	40S	40S	40S
017	45P	—	—	—
018	45S	—	—	—
019	45P	45P	—	—
020	45S	45S	—	—
021	45P	45P	45P	—
022	45S	45S	45S	—
023	45P	45P	45P	45P
024	45S	45S	45S	45S
025	57P	—	—	—
026	57S	—	—	—
027	57P	57P	—	—
028	57S	57S	—	—
029	57P	57P	57P	—
030	57S	57S	57S	—
031	57P	57P	57P	57P
032	57S	57S	57S	57S
033	67P	—	—	—
034	67S	—	—	—
035	67P	67P	—	—
036	67S	67S	—	—
037	67P	67P	67P	—
038	67S	67S	67S	—
039	67P	67P	67P	67P
040	67S	67S	67S	67S
041	106P	—	—	—
042	106S	—	—	—
043	106P	106P	—	—
044	106S	106S	—	—
045	106P	106P	106P	—
046	106S	106S	106S	—
047	106P	106P	106P	106P
048	106S	106S	106S	106S
057	106S	26P	—	—
058	106P	26S	—	—
059	26P	106S	—	—

Insert Designator	Shell Cavity Insert Position			
	A	B	C	D
060	26S	106P	—	—
061	26P	26P	26P	26S
062	26S	26S	26S	26P
063	10C3P	10C3P	C8P	67P
064	10C3S	10C3S	C8S	67S
065	C8P	C8P	C8P	—
066	C8S	C8S	C8S	—
067	C8P	C8P	106S	—
068	C8S	C8S	106P	—
069	C8P	33C4P	—	—
070	C8S	33C4S	—	—
071	67P	106S	—	—
072	67S	106P	—	—
073	67P	67P	C8P	—
074	67S	67S	C8S	—
075	67P	67P	106S	—
076	67S	67S	106P	—
077	67P	106S	33C4P	—
078	67S	106P	33C4S	—
079	67P	106S	67P	—
080	67S	106P	67S	—
081	67P	67P	33C4P	33C4P
082	67S	67S	33C4S	33C4S
083	D8P	—	—	—
084	D8S	—	—	—
085	C8P	C8P	67P	67P
086	C8S	C8S	67S	67S
087	106S	C8P	—	—
088	106P	C8S	—	—
089	106S	67P	—	—
090	106P	67S	—	—
091	106S	106S	67P	—
092	106P	106P	67S	—
093	106S	106S	33C4P	—
094	106P	106P	33C4S	—
095	106S	C8P	106S	106S
096	106P	C8S	106P	106P
097	106S	67P	106S	C8P
098	106P	67S	106P	C8S
099	106S	67P	C8P	C8P
100	106P	67S	C8S	C8S
101	106S	106S	67P	67P
102	106P	106P	67S	67S
103	33C4P	—	—	—
104	33C4S	—	—	—
105	33C4P	106S	—	—
106	33C4S	106P	—	—
107	33C4P	C8P	—	—
108	33C4S	C8S	—	—
109	C2P	40C1P	—	—
110	C2S	40C1S	—	—

# ARINC 404

how to order, cont.

connector insert layout designations, cont.

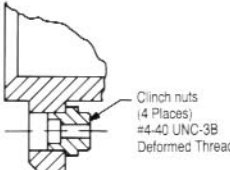
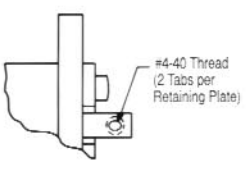
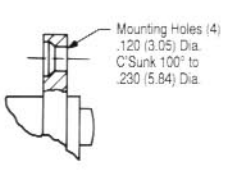
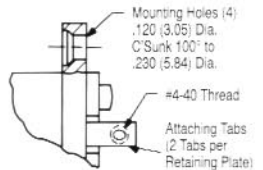
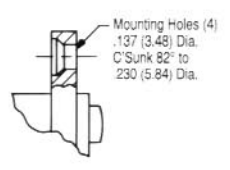
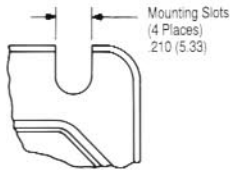
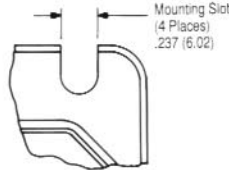
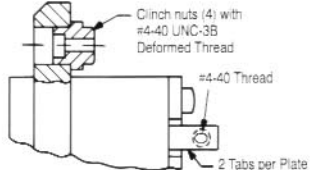
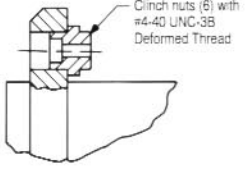
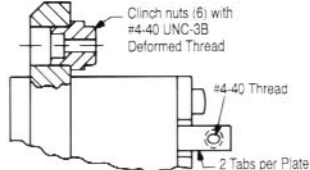
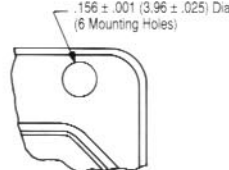
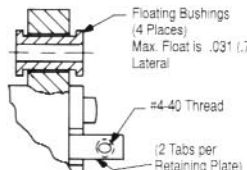
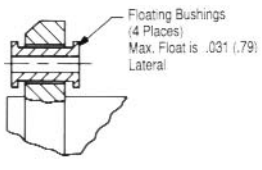
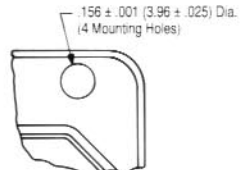
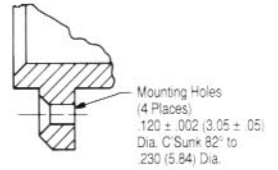
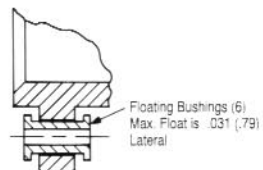
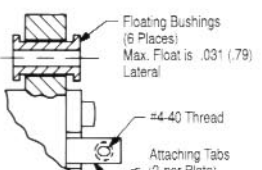
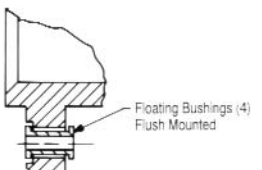
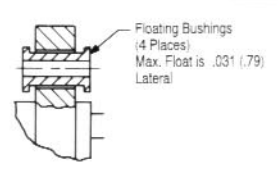
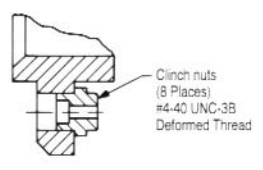
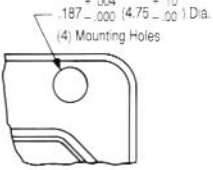
Insert Designator	Shell Cavity Insert Position			
	A	B	C	D
111	C2P	57P	–	–
112	C2S	57S	–	–
113	C3P	67P	–	–
114	C3S	67S	–	–
115	C3P	106S	–	–
116	C3S	106P	–	–
117	C3P	106S	–	–
118	C3S	106P	–	–
119	10C3P	32C2P	–	–
120	10C3S	32C2S	–	–
121	32C2P	40C1P	–	–
122	32C2S	40C1S	–	–
123	32C2P	45P	–	–
124	32C2S	45S	–	–
125	32C2P	57P	–	–
126	32C2S	57S	–	–
127	32C2P	67P	–	–
128	32C2S	67S	–	–
129	32C2P	106S	–	–
130	32C2S	106P	–	–
131	40C1P	40C1P	–	–
132	40C1S	40C1S	–	–
133	57P	106S	–	–
134	57S	106P	–	–
135	C8P	–	–	–
136	C8S	–	–	–
137	10C3P	–	–	–
138	10C3S	–	–	–
139	32C2P	–	–	–
140	32C2S	–	–	–
141	40C1P	–	–	–
142	40C1S	–	–	–
143	67C3P	–	–	–
144	67C3S	–	–	–
145	C8P	57P	–	–
146	C8S	57S	–	–
147	57P	26P	–	–
148	57S	26S	–	–
149	32C4P	–	–	–
150	32C4S	–	–	–
151	32C4P	106S	–	–
152	32C4S	106P	–	–
153	67C3P	67C3P	32C4P	32C4P
154	67C3S	67C3S	32C4S	32C4S
155	C8P	32C4P	–	–
156	C8S	32C4S	–	–
157	106S	106S	32C4P	–
158	106P	106P	32C4S	–
159	32C4P	C8P	–	–
160	32C4S	C8S	–	–

Insert Designator	Shell Cavity Insert Position			
	A	B	C	D
161	67C3P	106S	32C4P	–
162	67C3S	106P	32C4S	–
163	C8P	C8P	–	–
164	26P	26P	–	–
165	C8P	26P	–	–
166	C8S	26S	–	–
170	57S	32C2S	–	–
171	57P	32C2P	–	–
173	106P	106P	106P	67S
174	106S	106S	106S	67P
175	106S	106S	32C4P	26P
176	106P	106P	32C4S	26S
180	32C4S	32C2S	–	–
181	32C4P	32C2P	–	–
200	40S	26S	8S	C6S
201	40P	26P	5P	C6P
297	26P	32C4P	–	–
298	26S	32C4S	–	–
400	32C2S	32C2S	57S	–
401	32C2P	32C2P	57P	–
500	C8P	C6P	–	–
501	C8S	C6S	–	–
502	C6P	C8P	–	–
503	C6S	C8S	–	–
504	106P	BLANK	106P	BLANK
505	26S	67S	–	–
506	26P	67P	–	–
507	C8P	106P	–	–
508	C8S	106S	–	–
509	18P	57P	–	–
510	18S	57S	–	–
511	8P	45P	–	–
512	8S	45S	–	–
513	26P	67P	67P	–
514	26S	67S	67S	–
515	106P	C2S	–	–
516	106S	C2P	–	–
517	C8P	106P	106P	106P
518	C8S	106S	106S	106S
519	106P	106P	106P	26P
520	106S	106S	106S	26S
521	67S	67S	106P	106P
522	67P	67P	106S	106S
523	67P	26P	C3P	–
524	32C4P	32C4P	32C4P	–
525	67P	D8P	–	–
526	40S	32C4S	–	–
527	40P	32C4P	–	–
528	8P	17P	–	–
529	8S	17S	–	–

# ARINC 404

## how to order, cont. modification codes

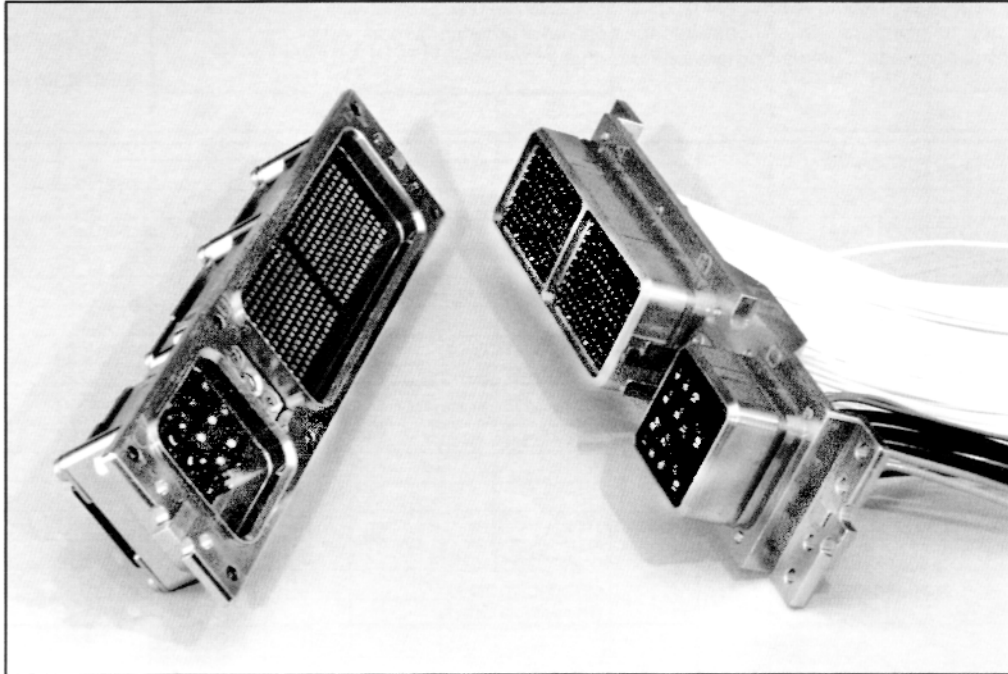
The modification codes illustrated on this page apply to both ARINC 404 plugs and receptacles unless otherwise indicated. How to order, page 12, shows how to incorporate these codes into the connector ordering number. Additional modifications may be available; consult Amphenol Canada Corporation for further information.

<p>Standard Housing with .120 (3.05) Dia. Mounting Holes</p> <p><b>MODIFICATION 00</b></p>	 <p>Clinch nuts (4 Places) #4-40 UNC-3B Deformed Thread</p> <p><b>MODIFICATION 01</b></p>	 <p>#4-40 Thread (2 Tabs per Retaining Plate)</p> <p><b>MODIFICATION 02 (Attaching Tabs)</b></p>	 <p>Mounting Holes (4) .120 (3.05) Dia. C'Sunk 100° to .230 (5.84) Dia.</p> <p><b>MODIFICATION 03</b></p>
 <p>Mounting Holes (4) .120 (3.05) Dia. C'Sunk 100° to .230 (5.84) Dia.</p> <p>#4-40 Thread</p> <p>Attaching Tabs (2 Tabs per Retaining Plate)</p> <p><b>MODIFICATION 04</b></p>	 <p>Mounting Holes (4) .137 (3.48) Dia. C'Sunk 82° to .230 (5.84) Dia.</p> <p><b>MODIFICATION 08</b></p>	 <p>Mounting Slots (4 Places) .210 (5.33)</p> <p><b>MODIFICATION 12 (Receptacle Only)</b></p>	 <p>Mounting Slots (4 Places) .237 (6.02)</p> <p><b>MODIFICATION 13 (Receptacle Only)</b></p>
 <p>Clinch nuts (4) with #4-40 UNC-3B Deformed Thread</p> <p>#4-40 Thread</p> <p>2 Tabs per Plate</p> <p><b>MODIFICATION 17 (Receptacle Only)</b></p>	 <p>Clinch nuts (6) with #4-40 UNC-3B Deformed Thread</p> <p><b>MODIFICATION 18</b></p>	 <p>Clinch nuts (6) with #4-40 UNC-3B Deformed Thread</p> <p>#4-40 Thread</p> <p>2 Tabs per Plate</p> <p><b>MODIFICATION 19</b></p>	 <p>.156 ± .001 (3.96 ± .025) Dia. (6 Mounting Holes)</p> <p><b>MODIFICATION 20</b></p>
 <p>Floating Bushings (4 Places) Max. Float is .031 (.79) Lateral</p> <p>#4-40 Thread</p> <p>(2 Tabs per Retaining Plate)</p> <p><b>MODIFICATION 22</b></p>	 <p>Floating Bushings (4 Places) Max. Float is .031 (.79) Lateral</p> <p><b>MODIFICATION 23 (Receptacle Only)</b></p>	 <p>.156 ± .001 (3.96 ± .025) Dia. (4 Mounting Holes)</p> <p><b>MODIFICATION 25</b></p>	 <p>Mounting Holes (4 Places) .120 ± .002 (3.05 ± .05) Dia. C'Sunk 82° to .230 (5.84) Dia.</p> <p><b>MODIFICATION 26 (Receptacle Only)</b></p>
 <p>Floating Bushings (6) Max. Float is .031 (.79) Lateral</p> <p><b>MODIFICATION 29</b></p>	 <p>Floating Bushings (6 Places) Max. Float is .031 (.79) Lateral</p> <p>#4-40 Thread</p> <p>Attaching Tabs (2 per Plate)</p> <p><b>MODIFICATION 30</b></p>	 <p>Floating Bushings (4) Flush Mounted</p> <p><b>MODIFICATION 33</b></p>	 <p>Floating Bushings (4 Places) Max. Float is .031 (.79) Lateral</p> <p><b>MODIFICATION 39 (Plug Only)</b></p>
 <p>Clinch nuts (8 Places) #4-40 UNC-3B Deformed Thread</p> <p><b>MODIFICATION 42 (Four Bay Shells Only)</b></p>	 <p>.187 ± .004 to .197 ± .010 (4.75 to 5.00) Dia. (4) Mounting Holes</p> <p><b>MODIFICATION 46</b></p>	<p>Dimensions are shown in inches and (mm). All dimensions for reference only.</p>	



# Additional ARINC Products

## ARINC 600



### ARINC 600 Series

The ARINC 600 is the successor to the ARINC 404 for many of the new avionic designs. Compared to the ARINC 404, the ARINC 600 features lower mating force contacts, increased contact count, and a front release, floating keying system. Amphenol's ARINC 600 series meets all relevant ARINC 600 connector specifications. Design features of this series include:

- Low insertion force contacts
- Three shell styles with up to six insert cavities
- Inserts accommodate signal and power contacts, sizes 12, 16, 20 and 22
- Coaxial, printed circuit board and wire wrap contact options available
- Field replaceable inserts for size 22 and power contacts
- Front removable keying posts
- Up to 800 size 22 contact positions in one connector
- Waveguide connections available

For detailed information on ARINC 600 Connectors ask for brochure SL-379.

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Fax: 607-563-5351

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Telex: (851) 96157 AMPHNL G

**Amphenol Limited**

**Spectra Strip Limited**

Romsey Industrial Estate  
Greatbridge Road  
Romsey, Hampshire SO5 OHR  
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**GERMANY**

**Amphenol-Tuchel Electronics GmbH**

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**Amphenol Italia S.P.A.**

Galleria Gandhi, 2-27  
20017 Mazzo di Rho  
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Italy  
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Fax: (390-2) 935-03206  
Telex: 334623 AMPHIT I

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Phone: (31-3403) 78754  
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P.O. Box 2047  
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**Bar-Tec Ltd.**

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44102  
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**INDIA**

**Amphetronix Ltd.**

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Fax: (91-212) 790581  
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**JAPAN**

**Nippon Interconnect Company**

689-1, Aza Nogami, Iseochi  
Ritto-Cho, Shiga 520-30  
Japan  
Phone: (81-3) 3263-5611  
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**Africa**

**SOUTH AFRICA**

**Pace Electronic Components (PTY) Ltd.**

Cnr. Vanacht & Gewel Streets  
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# Amphenol® ARINC 600 Rack and Panel Connectors

SL-379-3



— Amphenol® Canada Corporation —



# Amphenol® ARINC 600

## rack and panel connectors

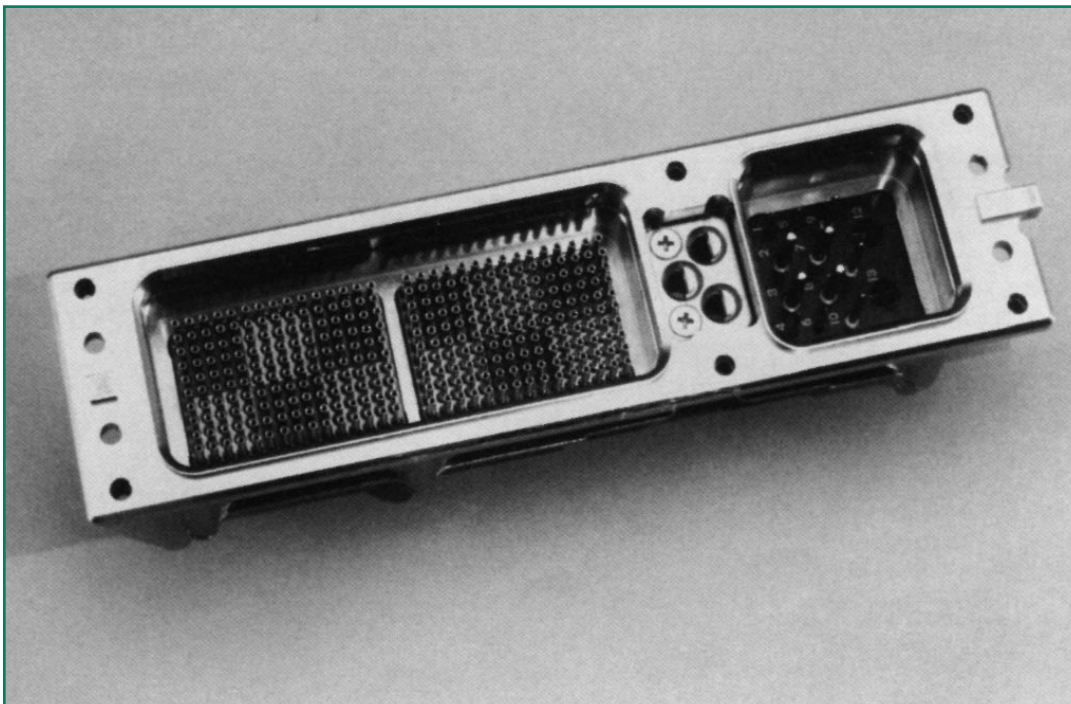
### Introduction

ARINC 600 Connectors are a recognized standard rack and panel connector for aircraft applications. The ARINC 600 is the successor to the ARINC 404 for many of the new avionic designs. Compared to the ARINC 404, the ARINC 600 features lower mating force contacts, increased contact count and a front release, floating keying system.

Amphenol's extensive product offering will meet the most demanding needs of our customers. At the design-in stage, Amphenol's sales engineers will work with you to select a connector from our standard product line or coordinate the design of an application specific connector. Amphenol's ARINC 600 rack and panel connectors are designed to meet all relevant ARINC 600 connector specifications.

Amphenol ARINC 600 Connectors offer:

- Low insertion force contacts
- Both environmental and non-environmental versions
- Front removable keying posts
- Field replaceable inserts for size 22 and power contacts
- Up to 800 size 22 contact positions in one connector
- Crimp, coaxial, power, printed circuit, and wire wrap contacts
- Waveguide connections





# Amphenol® ARINC 600

## rack and panel connectors

### Performance Specifications

Amphenol "A" Series Connectors are designed per ARINC 600 specifications and utilize pin and socket contacts manufactured in conformance with MIL-C-39029B.

Dielectric withstanding voltage (DWV):	1500Vrms 500 Vrms @ 50,000 ft. (15,240m)
Contact continuous current ratings:	Size 22 - 5.0A; Size 20 - 7.5A Size 16 - 13.0A; Size 12 - 23.0A
Contact resistance:	
Size 22:	8.0 milliohms, initial (max.) 11.0 milliohms, conditioned (max.)
Size 20:	7.0 milliohms, initial (max.) 8.5 milliohms, conditioned (max.)
Size 16:	3.5 milliohms, initial (max.) 5.0 milliohms, conditioned (max.)
Size 12:	2.0 milliohms, initial (max.) 2.5 milliohms, conditioned (max.)
Insulation resistance:	5.0 gigohms min. at 500 VDC
Engagement/separation force:	Shell size 1 - 27 lbs. (120N) max. Shell size 2 - 60 lbs. (267N) max. Shell size 3 - 105 lbs. (467N) max.
Durability:	500 cycles min. - mating & unmating
Temperature range:	-65°C (-86° F) to +125°C (+275° F)
Fluid immersion (Class A only) resistance:	(1) Hydraulic fluid per MIL-H-5606 (2) Lubricating oil (synthetic) per MIL-L-23699 (3) 1:3 mix of isopropyl alcohol & mineral spirits per FED. SPECS. TT-I-735 & TT-T-291 respectively.
Vibration:	MIL-STD-1344, Method 2005.1, condition value E: random - 16.4G minimum severity: 8 hours in each of 3 mutually perpendicular planes with 100mA electrical load. No visible damage, breakage, cracking or loosening of parts and no discontinuities exceeding 1 microsecond.
Shock:	MIL-STD-1344, Method 2004.1, test condition A: Three shocks in each direction along each of 3 axes, mutually perpendicular to each other. No visible damage, breakage, cracking or loosening of parts and no discontinuities exceeding 1 microsecond.

### Material Specifications

Shells:	Aluminum alloy per QQ-A 225/8, cadmium plate per QQ-P-416, Class 2, Type II, yellow Iridite or Die cast per QQ-A-591, with CHEM film per MIL-C-5541
Retaining plates:	Aluminum alloy per QQ-A-225/8, electroless nickel plated per MIL-C-26074
Polarizing keys:	Aluminum alloy per QQ-A-225/8, electroless nickel plated per MIL-C-26074
Insulator material:	Glass filled epoxy (Commercial) Glass filled diallyl phthalate per MIL-M-14, Type SDG-F (Military)
Inserts, grounded:	Aluminum alloy per QQ-A-225/8 electroless nickel plated per MIL-C-26074
Screws, lockwashers, washers:	Stainless steel - passivated
Contact bodies:	Copper alloy gold plated per MIL-G-45204, Type II, Grade C, Class 1
Contact retention clips:	Copper, gold plated per MIL-G-45204, Type II, Grade C, Class 1
Seals & grommets:	Silicone/fluorosilicone elastomer blend per MIL-R-25988
O-Rings:	Silicone/fluorosilicone rubber, colored blue
Waveguides:	Aluminum alloy per QQ-A-225/8, yellow Iridite finish
EMI springs:	Beryllium copper per QQ-C-533, electroless nickel plated per MIL-C-26074

# ARINC 600

## insert availability and identification

Insert Arrangement	Connector Class*	Contact		Plug	Receptacle
		Removable	Releasable	(X designates available)	
60	D	Rear	Rear	X	X
	F	Front	Front		X
	E	Rear	Rear	X	X
Blank	E&D	–	–	X	X
5W2	D	Rear	Rear	X	X
	E	Rear	Rear	X	X
Blank	E&D	–	–	X	X
150	D	Rear	Rear	X	X
	F	Front	Front		X
	E	Rear	Rear	X	X
71W1	D	Rear	Rear	X	X
	E	Rear	Rear	X	X
71W1A	D	Rear	Rear	X	X
	E	Rear	Rear	X	X
2W2	D	Rear	Rear	X	X
13W2	D	Rear	Rear	X	X
	E	Rear	Rear	X	X
Blank	E&D	–	–	X	X
100	D	Rear	Rear	X	X
	F	Front	Front		X
	E	Rear	Rear	X	X
Blank	E&D	–	–	X	X
85	D	–	–		
	F	Front	Front		
	D	Rear	Rear		
	E	–	–		
	F	Front	Front		
	E	Rear	Rear		
4W4	D	Rear	Rear	X	X
120T2	D	Rear	Rear	X	X
	F	Front	Front		
	E	Rear	Rear		
59	D	Rear	Rear		
	F	Front	Front		
	E	Rear	Rear		
10T10	D	Rear	Rear	X	X
	F	Front	Front		X
	E	Rear	Rear		
121	D	Rear	Rear	X	X
	F	Front	Front		X
	E	Rear	Rear		
6T6	D	Rear	Rear	X	X
	F	Front	Front		X
	D	Rear	Front		X
34	D	Rear	Rear	X	X

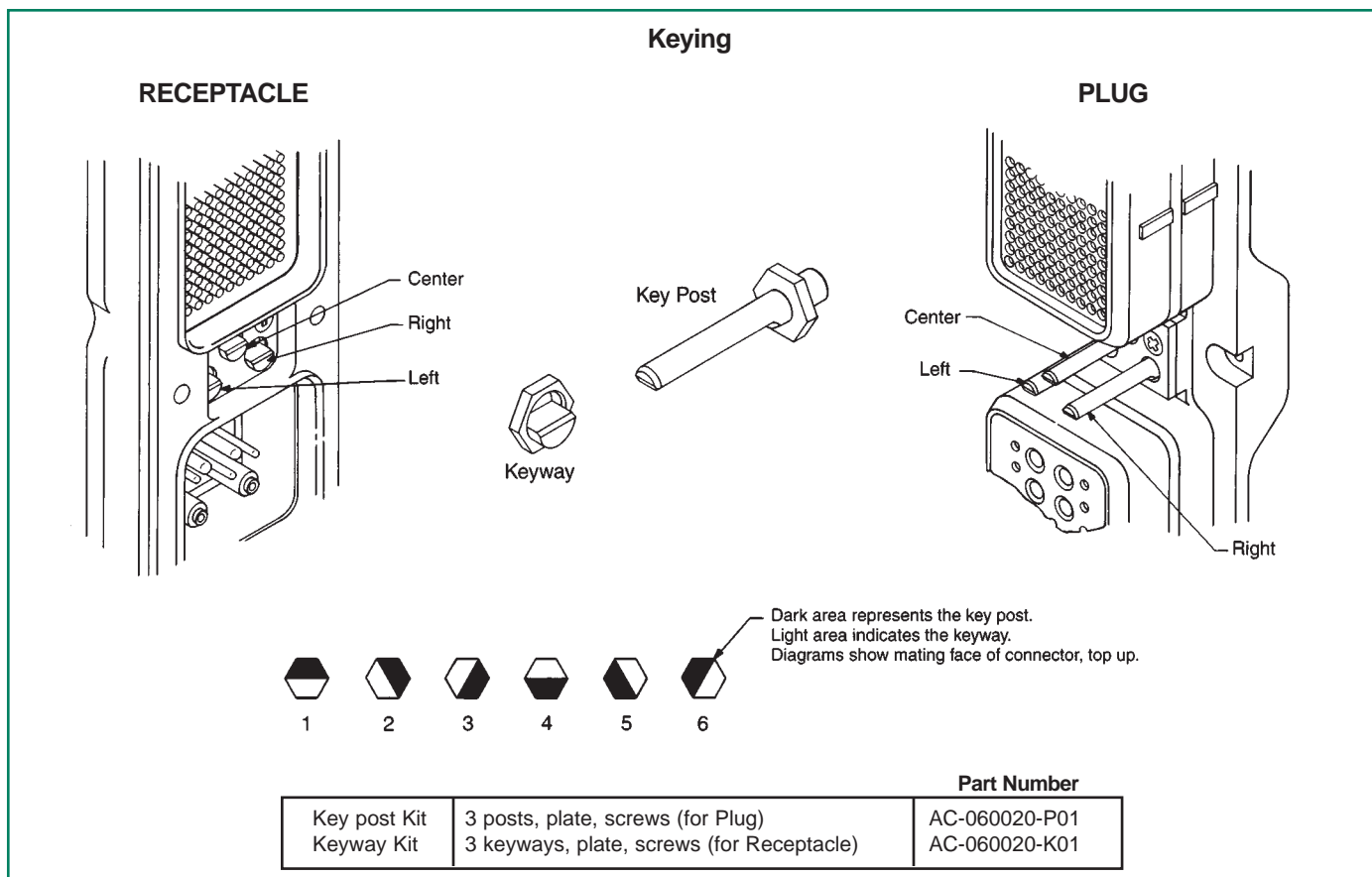
For availability of other arrangements, consult Amphenol Canada Corporation.

\* E designates Environmental

D designates Non-Environmental

# ARINC 600

## keying and polarizing positions



The following chart lists the polarizing positions of available keying positions.  
See how to order procedure on page 15 for incorporating these polarizing positions into part numbers.

Plug				Receptacle		
Position	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
00	-	-	-	-	-	-
01	1	1	1	4	4	4
02	2	1	1	4	4	3
03	3	1	1	4	4	2
04	4	1	1	4	4	1
05	5	1	1	4	4	6
06	6	1	1	4	4	5
07	1	1	6	5	4	4
08	2	1	6	5	4	3
09	3	1	6	5	4	2
10	4	1	6	5	4	1
11	5	1	6	5	4	6
12	6	1	6	5	4	5
13	1	1	5	6	4	4
14	2	1	5	6	4	3
15	3	1	5	6	4	2
16	4	1	5	6	4	1
17	5	1	5	6	4	6
18	6	1	5	6	4	5

Plug				Receptacle		
Position	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
19	1	1	4	1	4	4
20	2	1	4	1	4	3
21	3	1	4	1	4	2
22	4	1	4	1	4	1
23	5	1	4	1	4	6
24	6	1	4	1	4	5
25	1	1	3	2	4	4
26	2	1	3	2	4	3
27	3	1	3	2	4	2
28	4	1	3	2	4	1
29	5	1	3	2	4	6
30	6	1	3	2	4	5
31	1	1	2	3	4	4
32	2	1	2	3	4	3
33	3	1	2	3	4	2
34	4	1	2	3	4	1
35	5	1	2	3	4	6
36	6	1	2	3	4	5
37	1	2	1	4	3	4

Plug				Receptacle		
Position	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
38	2	2	1	4	3	3
39	3	2	1	4	3	2
40	4	2	1	4	3	1
41	5	2	1	4	3	6
42	6	2	1	4	3	5
43	1	2	6	5	3	4
44	2	2	6	5	3	3
45	3	2	6	5	3	2
46	4	2	6	5	3	1
47	5	2	6	5	3	6
48	6	2	6	5	3	5
49	1	2	5	6	3	4
50	2	2	5	6	3	3
51	3	2	5	6	3	2
52	4	2	5	6	3	1
53	5	2	5	6	3	6
54	6	2	5	6	3	5
55	1	2	4	1	3	4
56	2	2	4	1	3	3

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# ARINC 600

## polarizing positions

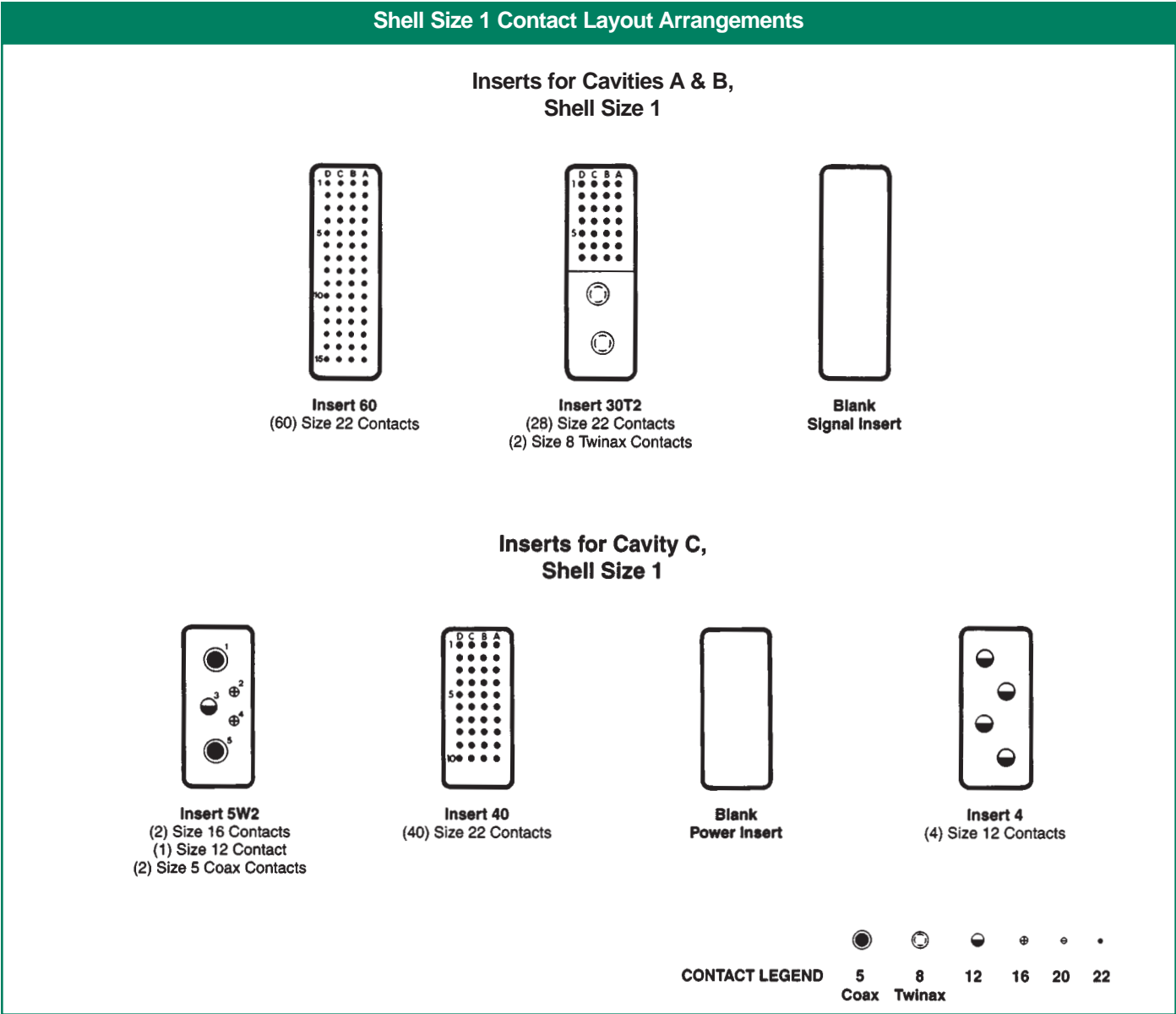
The following chart continues (from page 4) listing the polarizing positions of available keying positions. See how to order procedure on page 15 for incorporating these polarizing codes into part numbers.

Plug				Receptacle		
Position	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
57	3	2	4	1	3	2
58	4	2	4	1	3	1
59	5	2	4	1	3	6
60	6	2	4	1	3	5
61	1	2	3	2	3	4
62	2	2	3	2	3	3
63	3	2	3	2	3	2
64	4	2	3	2	3	1
65	5	2	3	2	3	6
66	6	2	3	2	3	5
67	1	2	2	3	3	4
68	2	2	2	3	3	3
69	3	2	2	3	3	2
70	4	2	2	3	3	1
71	5	2	2	3	3	6
72	6	2	2	3	3	5
73	1	3	1	4	2	4
74	2	3	1	4	2	3
75	3	3	1	4	2	2
76	4	3	1	4	2	1
77	5	3	1	4	2	6
78	6	3	1	4	2	5
79	1	3	6	5	2	4
80	2	3	6	5	2	3
81	3	3	6	5	2	2
82	4	3	6	5	2	1
83	5	3	6	5	2	6
84	6	3	6	5	2	5
85	1	3	5	6	2	4
86	2	3	5	6	2	3
87	3	3	5	6	2	2
88	4	3	5	6	2	1
89	5	3	5	6	2	6
90	6	3	5	6	2	5
91	1	3	4	1	2	4
92	2	3	4	1	2	3
93	3	3	4	1	2	2
94	4	3	4	1	2	1
95	5	3	4	1	2	6
96	6	3	4	1	2	5
97	1	3	3	2	2	4
98	2	3	3	2	2	3
99	3	3	3	2	2	2
100	4	3	3	2	2	1
101	5	3	3	2	2	6
102	6	3	3	2	2	5
103	1	3	2	3	2	4
104	2	3	2	3	2	3
105	3	3	2	3	2	2
106	4	3	2	3	2	1
107	5	3	2	3	2	6
108	6	3	2	3	2	5
109	1	4	1	4	1	4
110	2	4	1	4	1	3

Plug				Receptacle		
Position	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
111	3	4	1	4	1	2
112	4	4	1	4	1	1
113	5	4	1	4	1	6
114	6	4	1	4	1	5
115	1	4	6	5	1	4
116	2	4	6	5	1	3
117	3	4	6	5	1	2
118	4	4	6	5	1	1
119	5	4	6	5	1	6
120	6	4	6	5	1	5
121	1	4	5	6	1	4
122	2	4	5	6	1	3
123	3	4	5	6	1	2
124	4	4	5	6	1	1
125	5	4	5	6	1	6
126	6	4	5	6	1	5
127	1	4	4	1	1	4
128	2	4	4	1	1	3
129	3	4	4	1	1	2
130	4	4	4	1	1	1
131	5	4	4	1	1	6
132	6	4	4	1	1	5
133	1	4	3	2	1	4
134	2	4	3	2	1	3
135	3	4	3	2	1	2
136	4	4	3	2	1	1
137	5	4	3	2	1	6
138	6	4	3	2	1	5
139	1	4	2	3	1	4
140	2	4	2	3	1	3
141	3	4	2	3	1	2
142	4	4	2	3	1	1
143	5	4	2	3	1	6
144	6	4	2	3	1	5
145	1	5	1	4	6	4
146	2	5	1	4	6	3
147	3	5	1	4	6	2
148	4	5	1	4	6	1
149	5	5	1	4	6	6
150	6	5	1	4	6	5
151	1	5	6	5	6	4
152	2	5	6	5	6	3
153	3	5	6	5	6	2
154	4	5	6	5	6	1
155	5	5	6	5	6	6
156	6	5	6	5	6	5
157	1	5	5	6	6	4
158	2	5	5	6	6	3
159	3	5	5	6	6	2
160	4	5	5	6	6	1
161	5	5	5	6	6	6
162	6	5	5	6	6	5
163	1	5	4	1	6	4

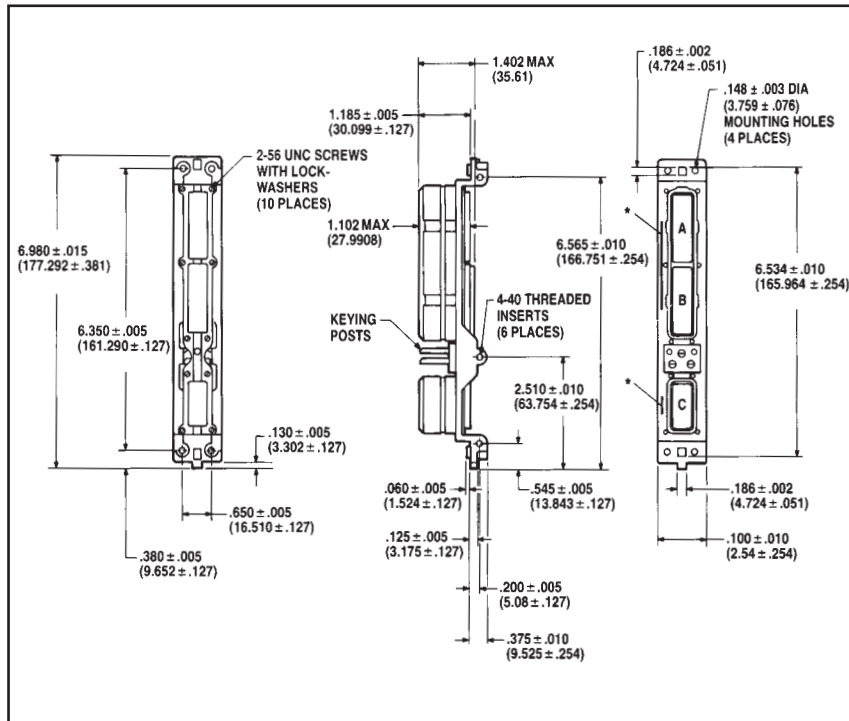
Plug				Receptacle		
Position	Left Post	Center Post	Right Post	Left Post	Center Post	Right Post
164	2	5	4	1	6	3
165	3	5	4	1	6	2
166	4	5	4	1	6	1
167	5	5	4	1	6	6
168	6	5	4	1	6	5
169	1	5	3	2	6	4
170	2	5	3	2	6	3
171	3	5	3	2	6	2
172	4	5	3	2	6	1
173	5	5	3	2	6	6
174	6	5	3	2	6	5
175	1	5	2	3	6	4
176	2	5	2	3	6	3
177	3	5	2	3	6	2
178	4	5	2	3	6	1
179	5	5	2	3	6	6
180	6	5	2	3	6	5
181	1	6	1	4	5	4
182	2	6	1	4	5	3
183	3	6	1	4	5	2
184	4	6	1	4	5	1
185	5	6	1	4	5	6
186	6	6	1	4	5	5
187	1	6	6	5	5	4
188	2	6	6	5	5	3
189	3	6	6	5	5	2
190	4	6	6	5	5	1
191	5	6	6	5	5	6
192	6	6	6	5	5	5
193	1	6	5	6	5	4
194	2	6	5	6	5	3
195	3	6	5	6	5	2
196	4	6	5	6	5	1
197	5	6	5	6	5	6
198	6	6	5	6	5	5
199	1	6	4	1	5	4
200	2	6	4	1	5	3
201	3	6	4	1	5	2
202	4	6	4	1	5	1
203	5	6	4	1	5	6
204	6	6	4	1	5	5
205	1	6	3	2	5	4
206	2	6	3	2	5	3
207	3	6	3	2	5	2
208	4	6	3	2	5	1
209	5	6	3	2	5	6
210	6	6	3	2	5	5
211	1	6	2	3	5	4
212	2	6	2	3	5	3
213	3	6	2	3	5	2
214	4	6	2	3	5	1
215	5	6	2	3	5	6
216	6	6	2	3	5	5

# ARINC 600 Shell Size 1

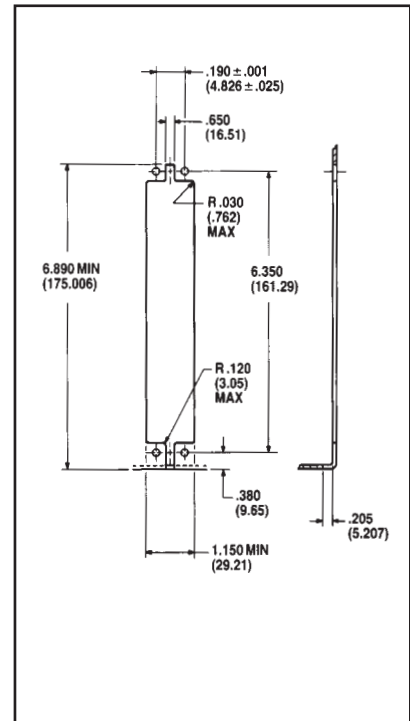


## Shell Size 1 Contact Layout Arrangements

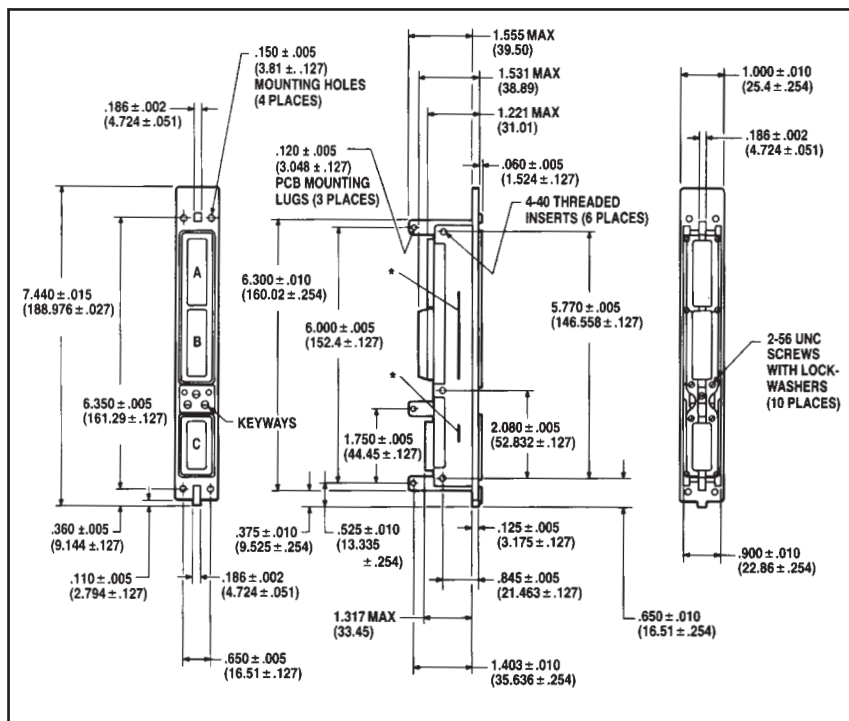
### PLUG



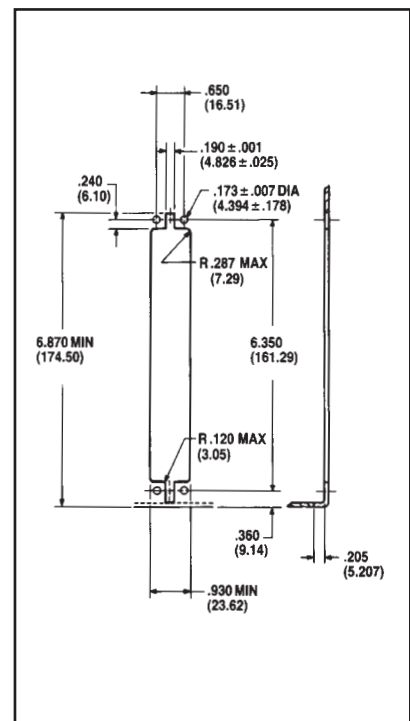
### PANEL CUTOUT



### RECEPTACLE



### PANEL CUTOUT

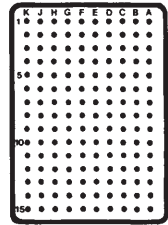


\* Indicates area where "AMPHENOL", catalog number and date code will be ink stamped per 9-5788-3.  
 Dimensions are shown in inches, (mm).  
 All dimensions for reference only.

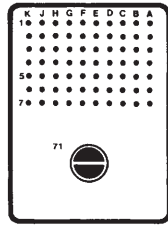
# ARINC 600 Shell Size 2 & 3

## Shell Size 2 & 3 Contact Layout Arrangements

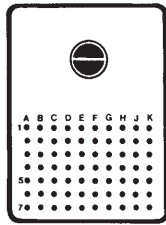
### Inserts for Cavities A & B - Shell Size 2 Inserts for Cavities A, B, D & E - Shell Size 3



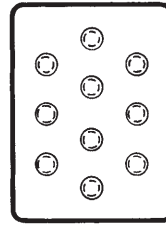
**Insert 150**  
(150) Size 22 Contacts



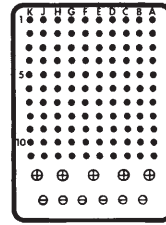
**Insert 71W1**  
(70) Size 22 Contacts  
(1) Size 1 Coax Contact



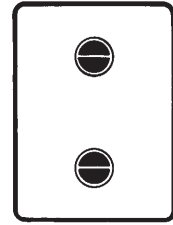
**Insert 71W1A**  
(70) Size 22 Contacts  
(1) Size 1 Coax Contact



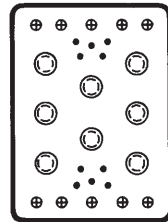
**Insert 10T10**  
(10) Size 8 Twinax Contacts



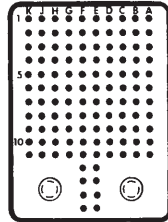
**Insert 121**  
(110) Size 22 Contacts  
(6) Size 20 Contacts  
(5) Size 16 Contacts



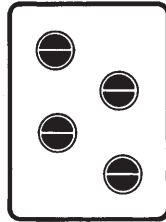
**Insert 2W2**  
(2) Size 1 Coax Contacts



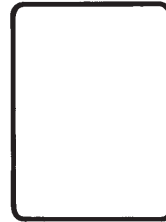
**Insert 28T8**  
(10) Size 22 Contacts  
(10) Size 16 Contacts  
(8) Size 8 Twinax Contacts



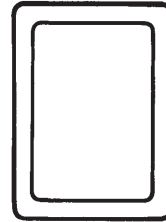
**Insert 120T2**  
(118) Size 22 Contacts  
(2) Size 8 Twinax Contacts



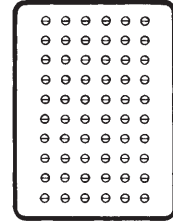
**Insert 4W4**  
(4) Size 1 Coax Contacts



**Blank  
Signal Insert**

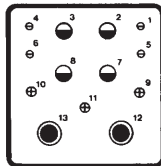


**(WG)  
Waveguide**

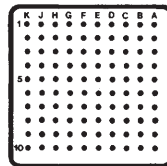


**Insert 60**  
(60) Size 20 Contacts

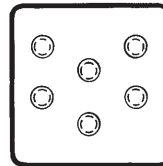
### Inserts for Cavities C - Shell Size 2 Inserts for Cavities C & F - Shell Size 3



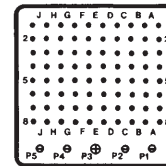
**Insert 13W2**  
(4) Size 12 Contacts  
(3) Size 16 Contacts  
(4) Size 20 Contacts  
(2) Size 5 Coax Contacts



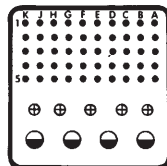
**Insert 100**  
(100) Size 22 Contacts



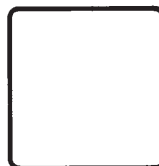
**Insert 6T6**  
(6) Size 8 Twinax Contacts



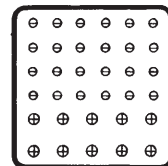
**Insert 85**  
(80) Size 22 Contacts  
(4) Size 20 Contacts  
(1) Size 16 Contact



**Insert 59**  
(50) Size 22 Contacts  
(5) Size 16 Contacts  
(4) Size 12 Contacts



**Blank  
Power Insert**



**Insert 34**  
(24) Size 20 Contacts  
(10) Size 16 Contacts

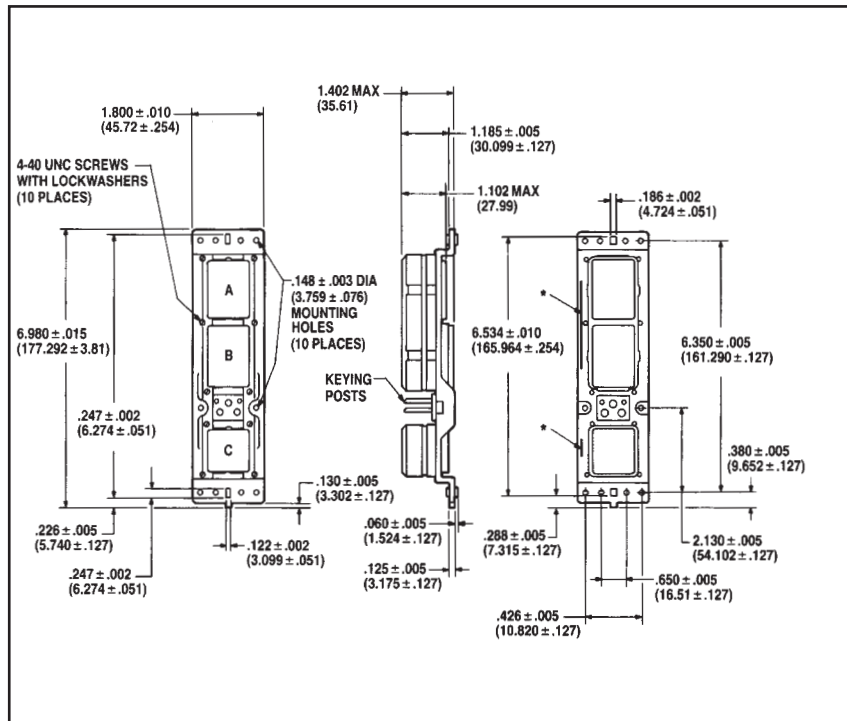




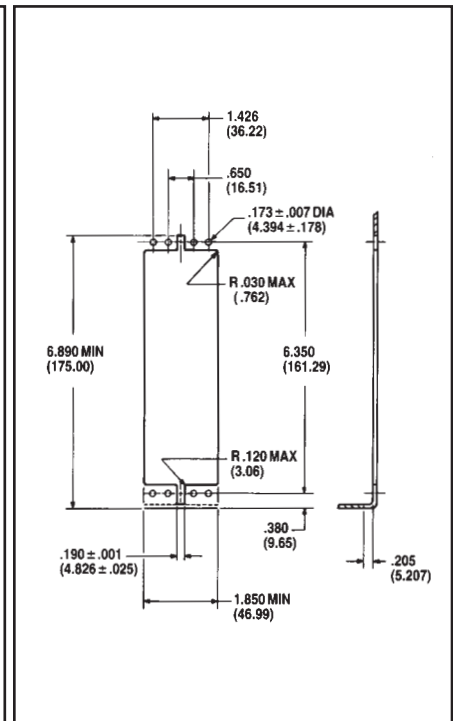
# ARINC 600 Shell Size 2

## Shell Size 2 Dimensional Drawings

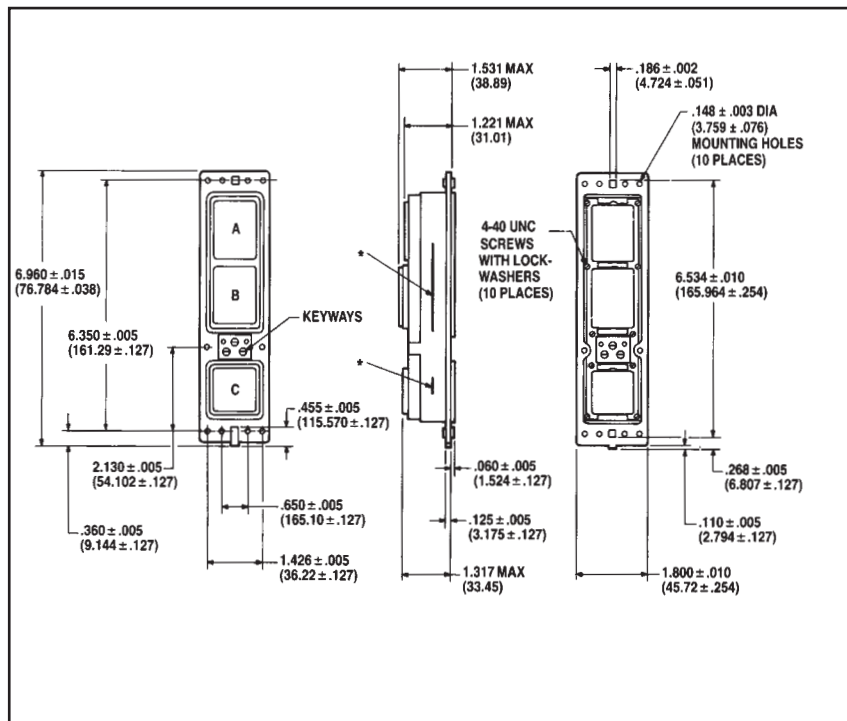
PLUG



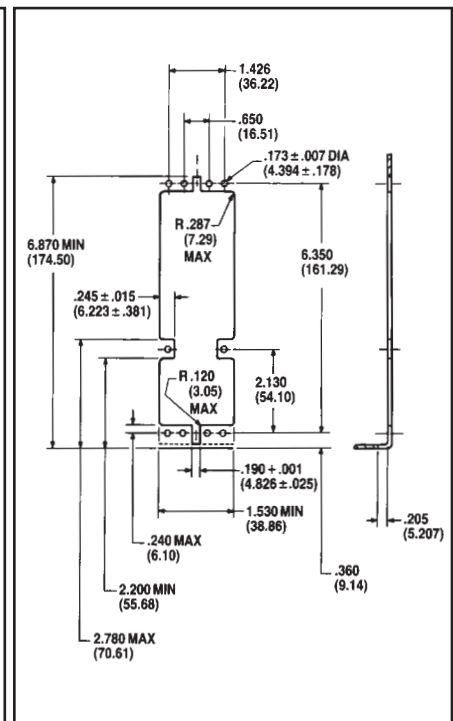
PANEL CUTOUT



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PANEL CUTOUT

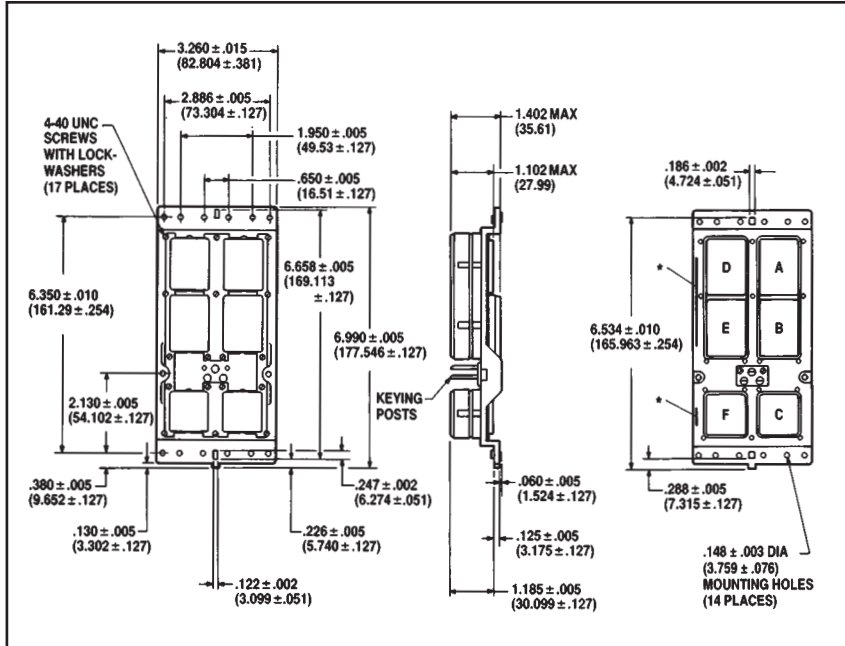


\* Indicates area where "AMPHENOL", catalog number and date code will be ink stamped per 9-5788-3. Dimensions are shown in inches, (mm). All dimensions for reference only.

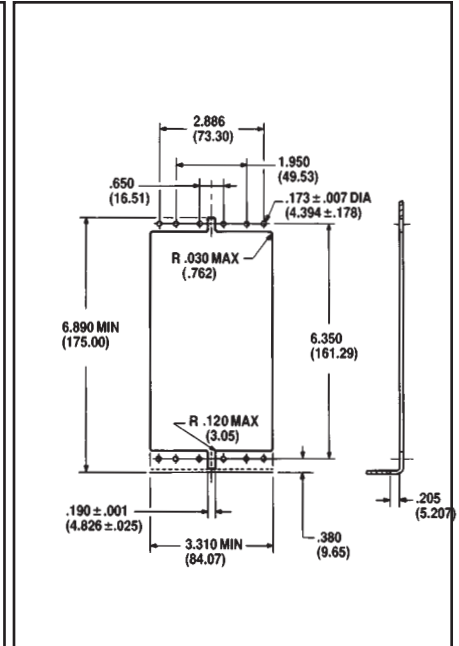
# ARINC 600 Shell Size 3

## Shell Size 3 Dimensional Drawings

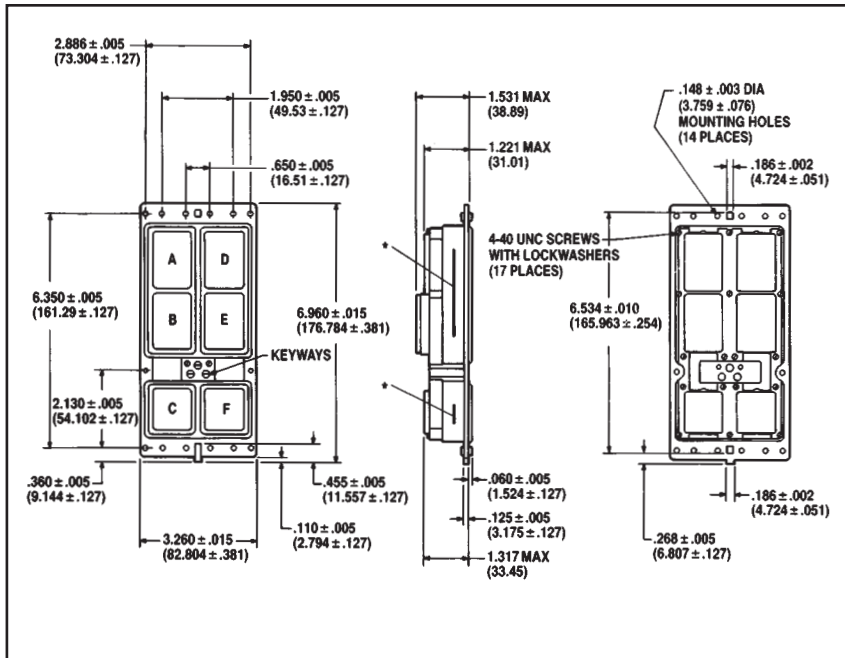
PLUG



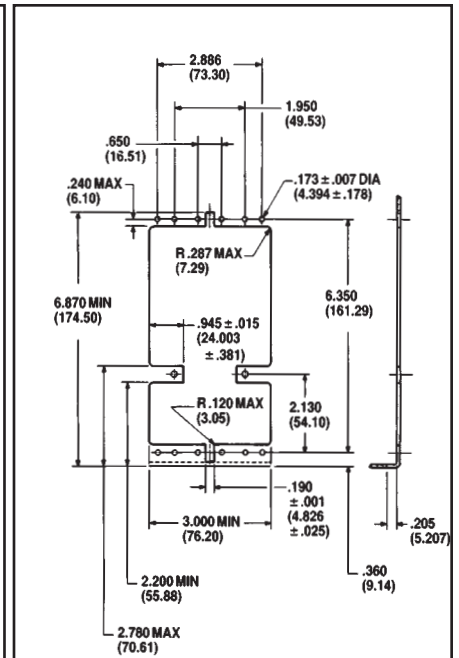
PANEL CUTOUT



RECEPTACLE



PANEL CUTOUT



\* Indicates area where "AMPHENOL", catalog number and date code will be ink stamped per 9-5788-3.  
 Dimensions are shown in inches, (mm).  
 All dimensions for reference only.

# ARINC 600

## contact data

Contacts for Amphenol® ARINC 600 Rack and Panel Connectors can be ordered separately. Use part numbers shown in the charts below for ordering contacts and applicable tools. For further information consult Amphenol Canada Corporation.

### ARINC 600 Power/Signal Contacts, Rear Release

Contact Size/Type	Pin		Socket		Installation Tool	Removal Tool	Crimping Tool	Positioner	Wire		
	Military Part Number	Amphenol Part Number	Military Part Number	Amphenol Part Number					AWG	Insul. Dia. Max.	Strip Length
22 Standard	M39029/93-537	AC-772222-301	M39029/94-601	AC-782222-301	M81969/1-01	M81969/1-01	M22520/2-01	M22520/2-23	26 24 22	.054 (1.4)	.120 ±.010 (3.048 ±.254)
22 Alumel	–	AC-772222-79A	–	AC-782222-79A							
22 Chromel	–	AC-772222-79C	–	AC-782222-79C							
22 Constantan	–	AC-772222-79K	–	AC-782222-79K							
20 Standard	M39029/93-538	AC-772020-302	M39029/94-602	AC-782020-302	M81969/1-02	M81969/1-02	M22520/2-01 or M22520/7-02	M22520/2-08 or M22520/7-02	22 20	.071 (1.8)	.157 ±.010 (3.988 ±.254)
16 Standard	M39029/93-539	AC-771616-303	M39029/94-603	AC-781616-303	M81969/1-03	M81969/1-03	M22520/1-01 or M22520/7-02	M22520/1-02 or M22520/7-03 (Blue)	20 18 16	.103 (2.6)	.250 ±.020 (6.350 ±.508)
16 Sml. Barrel	–	AC-771620-302	–	AC-781620-302							
12 Standard	M39029/93-540	AC-771212-304	M39029/94-604	AC-781212-304	–	M81969/28-02	M22520/1-01	M22520/1-11	14 12	.135 (3.4)	.250 ±.020 (6.350 ±.508)
12 Sml. Barrel	–	AC-771216-304	–	AC-781216-304							

Amphenol part numbers meet MIL specifications, but are not MIL qualified. Military part numbers are for reference only.

### ARINC 600 Wire Wrap Socket Contacts, Front Release

Contact Size/Type	Amphenol Part Number
22 Socket - Wire Wrap (1) L = .250 (6.35)	AC-782291-801
22 Socket - Wire Wrap (2) L = .375 (9.52)	AC-782292-801
22 Socket - Wire Wrap (3) L = .500 (12.7)	AC-782293-801
22 Socket - Wire Wrap (3) L = .641 (16.3)	AC-782294-801

### ARINC 600 PC Tail Socket Contacts, Front Release

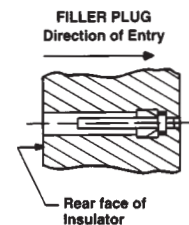
Contact Size/Type	Amphenol Part Number
22 Socket - PC Tail .115 (2.92) (Nom.) Post Extension	AC-782206-801
22 Socket- PC Tail .150 (3.81) (Nom.) Post Extension	AC-782202-801
22 Socket - PC Tail .250 (6.35) (Nom.) Post Extension	AC-782200-801
22 Socket - PC Tail .375 (9.52) (Nom.) Post Extension	AC-782203-801
22 Socket - PC Tail .500 (12.70) (Nom.) Post Extension	AC-782204-801

Dimensions are shown in inches, (mm).

### Filler Plugs

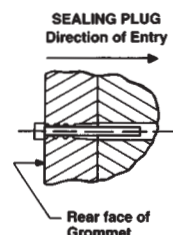
Contact Cavity Size	Amphenol Part Numbers	Color
22	AC-660022-701	Black
20	AC-660020-701	Red
16	AC-660016-701	Blue
12	AC-660012-701	Yellow
8 Coax	AC-660008-701	Red
5 Coax (Plug)	AC-660005-701	White
5 Coax (Recept.)	AC-660004-701	White

Note: Filler plugs are for non-environmental connectors.



### Sealing Plugs

Contact Cavity Size	Amphenol Part Numbers	Color
22	AC-660022-801	Black
20	AC-660020-801	Red
16	AC-660016-801	Blue
12	AC-660012-801	Yellow
8 Coax	AC-660008-801	Red



# ARINC 600

## contact data, cont., protective covers, O-rings

### ARINC 600 Coax and Concentric Twinax Contacts

Contact Type/ Wire Gage	Pin Amphenol Part Number	Socket Amphenol Part Number	Installation Tool	Removal Tool	Crimping Tool	Positioner
Coax - Size 1 SMA, 71W1	AC-661003-201	AC-661001-201		M81969/XX**	M22520/XX** (Inner) M22520/XX** (Outer)	M22520/XX** (Inner) M22520/XX** (Outer)
Coax - Size 5, RG 58	AC-665001-615	AC-665002-615			M22520/2-01 (Inner) M22520/5-01 (Outer)	M22520/XX** (Inner) M22520/5-45A
Coax - Size 5, RG 316	AC-665003-615	AC-665004-615				
Concentric Triax - Size 8, Pin, FR-RR	AC-668171-762		M81969/14-06	M8169/14-06	M22520/2-01 (Inner) M22520/5-01 (Intermediate & Outer)	M22520/2-37 (Inner) 22520/5-200 (Intermediate & Outer)
Concentric Triax - Size 8, Pin, RR-RR	AC-668171-614					
Concentric Triax - Size 8, Socket, RR-RR		AC-668181-614				
Concentric Triax - Size 8, Socket, FR-FR		AC-668189-800				

\*\* To complete order number consult Amphenol Canada Corporation.  
For installation instructions for ARINC 600 coaxial contacts, see L-2078.

Note: FR-RR designates Front Release, Rear Removable  
RR-RR designates Rear Release, Rear Removable  
FR-FR designates Front Release, Front Removable

### Protective Covers

Conductive covers for ARINC 600 connectors can be ordered from charts below. These covers are designed to protect equipment against the risks of electrostatic discharge, and are made of self-extinguishing polyethylene with graphite filler. For availability of clear, non-conductive covers consult Amphenol Canada Corporation.

#### Receptacle Conductive Covers

Shell Size 1	Combination - Signal and Block Cover AC-200000-911	Signal Block Cover only AC-200000-911A
		Power Block Cover only AC-200000-911C
Shell Size 2 & 3	Combination - Signal and Block Cover AC-200000-912	Signal Block Cover only AC-200000-912A
		Power Block Cover only AC-200000-912C

#### Plug Conductive Covers

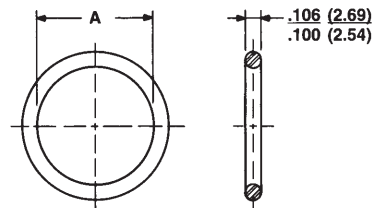
Shell Size 1	Combination - Signal and Block Cover AC-200000-909	Signal Block Cover only AC-200000-909A
		Power Block Cover only AC-200000-909C
Shell Size 2 & 3	Combination - Signal and Block Cover AC-200000-910	Signal Block Cover only AC-200000-910A
		Power Block Cover only AC-200000-910C

### O-Rings

For environmentally sealed connector style, Class E.

Used on Shell/Cavity	Military Part Number	Amphenol Part Number	A Diameter
Shell Size 1, Cavity C	M25988/3-119	AC-206906-119	.934 (23.72)
			.914 (23.22)
Shell Sizes 2 & 3, Cavity C	M25988/3-124	AC-206906-124	1.249 (31.72)
			1.225 (31.12)
Shell Size 1, Cavities A & B	M25988/3-134	AC-206906-134	1.877 (47.68)
			1.847 (46.91)
Shell Sizes 2 & 3, Cavities A & B	M25988/3-142	AC-206906-142	2.382 (60.50)
			2.342 (59.49)

Dimensions are shown in inches, (mm).



To order separate waveguides for ARINC 600 Connectors, consult Amphenol Canada Corporation.

# ARINC 600

## how to order

### Amphenol "A" Series Connectors

To more easily illustrate ordering procedure for ARINC 600, "A" Series connectors, part number AD3-310-30001FO is shown as follows:

	<b>A</b>	<b>D</b>	<b>3</b>	<b>-</b>	<b>310</b>	<b>-</b>	<b>3</b>	<b>00</b>	<b>01</b>	<b>FO</b>
<b>Connector Series</b>										
<b>Class</b>										
<b>Shell Size</b>										
<b>Connector Layout Designator</b>										
<b>Shell Style</b>										
<b>Connector Mounting Modifier</b>										
<b>Polarizing Position</b>										
<b>Modifier (Contact, Finish, Material)</b>										

#### Connector Series

A designates Amphenol ARINC 600

#### Class

D - Non-environmental (rear release, crimp contacts)

E - Environmental (rear release, crimp contacts)

F - Non-environmental (front release, solder and wrap post #22 contacts, rear release all others).

C - Same as E, less O-rings on plug side.

S - Environmental (O-ring is used to seal between connector shell and insulators) with rear release, crimp contacts.

Y - All positions front release (except coax/triax)

J - All positions front release (all sizes)

#### Shell Size

1 - Max. contact capacity - 160

2 - Max. contact capacity - 400

3 - Max. contact capacity - 800

#### Connector Layout Designator

Common available ARINC 600 configurations are listed below for shell sizes 1 and 2, and on the next page for shell size 3.

The connector layout designator number represents the total number of contacts within the layout including waveguides.

Consult Amphenol Canada Corporation for further availability of insert combinations.

Connector Layout Designator Number	Shell Size	Shell Cavity Identification		
		A	B	C
-005	1	-	-	5W2
-060	1	-	60	-
A060	1	60	-	-
-065	1	-	60	5W2
A065	1	60	-	5W2
-120	1	60	60	-
-125	1	60	60	5W2
-013	2	-	-	13W2
-017	2	2W2	2W2	13W2
-071	2	-	71W1	-
A071	2	71W1	-	-
-085	2	Waveguide	71W1	13W2
A085	2	71W1	Waveguide	13W2
-86M	2	2W2	71W1A	13W2
-093	2	4W4	4W4	85
-100	2	-	-	100
-137	2	121	10T10	6T6
-137A	2	4W4	120T2	13W2
T141	2	120T2	10T10	13W2
-142	2	71W1	71W1	-
155C	2	71W1A	71W1	13W2
155M	2	71W1A	71W1A	13W2
-155	2	71W1	71W1	13W2

Connector Layout Designator Number	Shell Size	Shell Cavity Identification		
		A	B	C
158M	2	2W2	71W1A	85
-163	2	-	150	13W2
A163	2	150	-	13W2
-164	2	150	Waveguide	13W2
A164	2	Waveguide	150	13W2
165M	2	150	2W2	13W2
A165	2	2W2	150	13W2
-167	2	4W4	150	13W2
-173	2	150	10T10	13W2
-205	2	71W1	121	13W2
-234	2	150	71W1	13W2
A234	2	71W1	150	13W2
-244	2	150	60	34
-246	2	120T2	120T2	6T6
-248	2	121	121	6T6
-250	2	-	150	100
250A	2	150	Blank	100
-300	2	150	150	-
-306	2	150	150	6T6
-313	2	150	150	13W2
-370	2	150	120T2	100
-400	2	150	150	100

(Chart continues with shell size 3 configurations on next page)

# ARINC 600

## how to order, cont.

### Connector Layout Designator, cont.

Common available ARINC 600 configurations are listed below for shell size 3. The connector layout designator number represents the total number of contacts within the layout including waveguides. Consult Amphenol Canada Corporation for further availability of Insert combinations.

Connector Layout Designator Number	Shell Size	Shell Cavity Identification					
		A	B	C	D	E	F
-021	3	4W4	4W4	13W2	Blank	–	–
-026	3	–	–	13W2	–	–	13W2
113	3	–	–	100	–	–	13W2
A113	3	–	–	13W2	–	–	100
-114	3	–	–	–	–	–	–
-137A	3	4W4	120T2	13W2	–	–	–
-231	3	121	10T10	100	–	–	–
269M	3	2W2	2W2	13W2	2W2	150	100
271M	3	2W2	2W2	13W2	4W4	150	100
271C	3	4W4	4W4	13W2	Blank	150	100
-284	3	71W1	71W1	–	71W1	71W1	–
-310	3	71W1	71W1	13W2	71W1	71W1	13W2
-313A	3	150	Blank	13W2	150	Blank	Blank
-326	3	–	150	13W2	–	150	13W2
330M	3	2W2	2W2	13W2	150	150	13W2
A330	3	150	150	13W2	2W2	2W2	13W2
-444	3	150	121	13W2	150	10T10	Blank
-450	3	150	150	6T6	121	10T10	13W2
-450A	3	150	150	–	121	–	13W2
-454	3	150	150	Blank	121	Blank	13W2
-496	3	121	121	6T6	121	121	6T6
-510	3	121	121	13W2	121	121	13W2
-537	3	4W4	120T2	100	150	150	13W2
-552	3	121	121	34	121	121	34
0559	3	10T10	120T2	100	150	120T2	59
-600	3	150	150	–	150	150	–
-620	3	150	60	100	150	60	100
-626	3	150	150	13W2	150	150	13W2
0699	3	150	120T2	100	150	120T2	59
-713	3	150	150	100	150	150	13W2
A713	3	150	150	13W2	150	150	100
-734	3	150	150	100	150	150	34
-742	3	121	150	100	121	150	100
-800	3	150	150	100	150	150	100

### Shell Style

- 3 - Plug (rack side)
- 4 - Receptacle (box side)



# ARINC 600

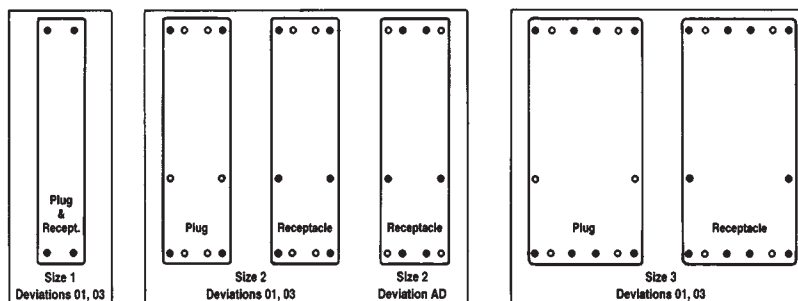
## how to order, cont.

### Connector Mounting Modifier

- 00 - Standard design, .148 dia. holes
- 01 - With #6-32 ESNA (#12 NCFMA2-62) clinch nuts (see chart)
- 02 - Size 1 receptacle only - less 3 printed circuit board mounting lugs
- 03 - With #4-40 ESNA (#22 NCFMA2-40) clinch nuts (see chart)

Connector Size	Number of Clinch Nuts	
	Plug	Receptacle
1	4	4
2	4	6
3	8	10

### Mounting Modifiers with Clinch Nuts



Darkened areas in diagrams indicate clinch nut positions.

### Connector Mounting Modifier, cont

- 08 - Size 2 and 3 plug and receptacle only with #4-40 ESNA (#22 NCFMA2-40) clinch nuts (all mounting holes)
- 09 - Size 2 and 3 plug and receptacle only with #6-32 ESNA (#12 NCFMA2-62) clinch nuts (all mounting holes)
- 10 - Size 2 connectors with #4-40 ESNA (#22NCFMA2-40) clinch nuts installed in two mounting holes between cavities B and C
- 11 - Size 2 connectors with #6-32 ESNA (#12NCFMA2-62) clinch nuts installed in two mounting holes between cavities B and C
- 17 - Nickel and EMI, std. .148 holes
- 18 - Nickel and EMI with #6-32 clinch nuts (09)
- 23 - With floating eyelets ( .048 min. radial float) 4 corner holes per connector
- 89 - Nickel plating, std. .148 holes
- AA - 01 MOD and Nickel plated
- AB - Nickel plated and #4-40 clinch nuts all holes (08 & 09)
- AC - Nickel plated and #6-32 clinch nuts (09)
- AD - #4-40 clinch nuts in size 2 shell (6 places as shown)

Consult factory if other modifications are required.

### Polarizing Position

- 01 thru 216 (per ARINC 600) See listing of available keying positions, pages 4 and 5.
- 00 - Polarizing posts or keys not installed but supplied with connector

### Modifier (Contact, Finish, Material)\*

- OO - Rear release, crimp, signal and power contacts supplied with connector (when applicable)
- FO - Contacts not supplied with connector (FO not stamped on connector)
- FR - Front release all contacts
- SA - Front release .025 (0.63) D. x .150 (3.81) solder post and crimp, rear release power contacts (when applicable) supplied installed in connector
- SB - Front release .025 (0.63) D. x .250 (6.35) solder post and crimp, rear release power contacts (when applicable) supplied installed in connector
- SC - Front release .025 (0.63) D. x .375 (9.53) solder post and crimp, rear release power contacts (when applicable) supplied installed in connector
- SD - Front release .025 (0.63) D. x .500 (12.7) solder post and crimp, rear release power contacts (when applicable) supplied installed in connector
- WA - Front release .025 (0.63) Sq. x .250 (6.35) (1 wrap) wrap post and crimp, rear release power contacts (when applicable) supplied installed in connector
- WB - Front release .025 (0.63) Sq. x .375 (9.53) (2 wraps) wrap post and crimp, rear release power contacts (when applicable) supplied installed in connector
- WC - Front release .025 (0.63) Sq. x .500 (12.7) (3 wraps) wrap post and crimp, rear release power contacts (when applicable) supplied installed in connector
- WD - Front release .025 (0.64) Sq. x .641 (16.28) (3 wraps) wrap post and crimp, rear release power contacts (when applicable) supplied installed in connector

\* All modifiers (contact, finish, material) at end of part number are alpha (not numerical).

NOTE: Coaxial Contacts to be ordered separately.

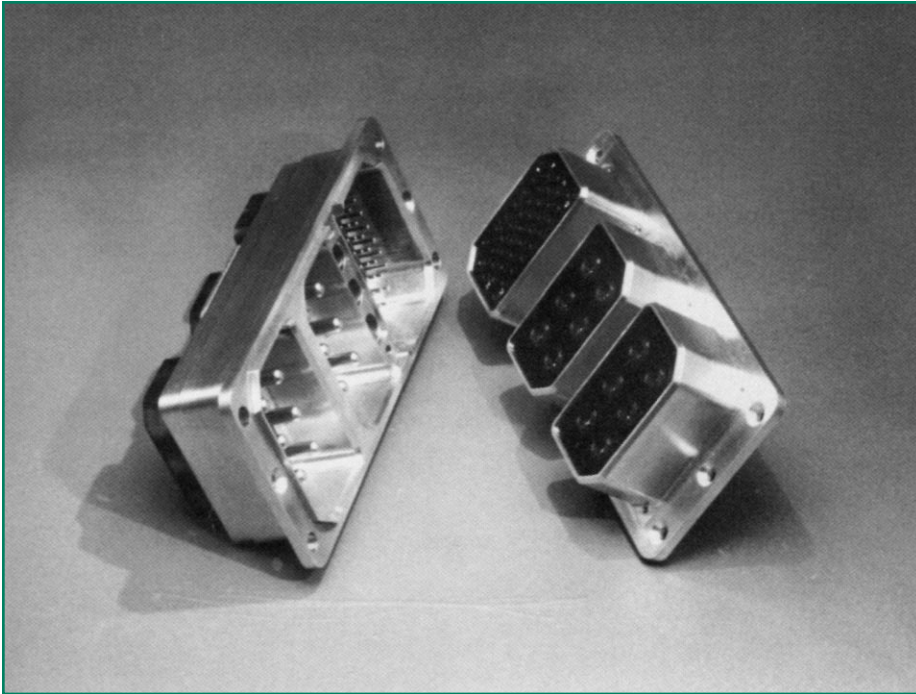
Dimensions are shown in inches, (mm).

Dimensions subject to change.



# Additional ARINC Products

## ARINC 404



### ARINC 404 Series

Amphenol "AR" Series Rack and Panel Connectors meet or exceed the requirements of MIL-C-81659 and ARINC Specification 404. The "AR" Series is a multi-purposed connector used in aerospace, military, and computer periphery applications.

Design features include:

- Five shell styles with up to four insert cavities
- Inserts accommodate signal and power contacts, sizes 12, 16, 20 and 22
- Coaxial contacts available in sizes 5, 9 and 11
- Up to 424 contacts in one connector
- Non-environmental and environmentally sealed connectors offered
- Transient protection design available

For detailed information on ARINC 404 Connectors ask for brochure SL-378-3.

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**JAPAN**  
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689-1, Aza Nogami, Iseochi  
Ritto-Cho, Shiga 520-30  
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