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ARinc 600 Series

Rack & Panel Rectangular Connector

Brief introduction

- Good performance of environment resistance
- 216 kinds of anti-misoperation styles
- High density up to 800 signal contacts
- Low insertion force contacts
- Mounting panel are insulator modules for free collocation.
- Apply to aviation and military equipment cabinet
- Accord to ARINC600 specification.

- Contacts: signal, power, coaxial, tripe coaxial, opticalfiber 2 pin differential, 4 pin differential
- Standard: Arinc600

Specification

1. Material and surface treatment

Item	Material	Plating
Shell	Aluminum alloy	----
insulator	PPS plastic	----
Contact	Copper alloy	Gold plating
Encapsulant & sealed ring	Silicon rubber	----

2. Mechanical properties

- Durability: 500 times
- Vibrations: 10Hz~2000Hz, 196m/s^2
- Shock: 490m/s^2
- Insertion and extraction force:

  type 1 connector: ≤120N;
  type 2 connector: ≤267N;
  type 3 connector: ≤467N;

3. Electric properties

- Dielectric withstanding voltage:

Item	Mated	Unmated
Sea level	1500V	1500V
15000m	500V	500

- Insulation resistance: ≥5000MΩ
- Voltage rating: 500V max
  125V at 21000m
- Resistance to salt spray: 96h
- Current rating:

Contact Spec.	Cable type	Current Rating	(A) Max Voltage Drop(mV)
#22	22	5	40
	24	3	30
	26	2	25
#20	20	7.5	55
	22	5	40
	24	3	30
#16	16	13	50
#12	12	23	45

How to order

Arinc600 Series of Sunkye	R042	1	1	-125	-P	05	01	F0	-A

Sealing Level:
0 — sealed
1 — unsealed
2— semi sealed(without O-ring on plug side)
3 — semi sealed(non O ring ,no pouring glued sea)

Shell Type: 1-2-3
It can be changed as per customer's requirement.

Insets arrangement code: See page4~page6

Connector type: P —plug (rack side)
R —receptacle (box side)

Mounting Style:
More information and coding: see page 11

Polarization Code
00: Rack plug = polarizing key delivered unmounted
Equipment receptacle = polarizing eyes delivered unmounted
01 to M6: Rack plug = location of polarizing key delivered mounted
Equipment receptacle = location of polarizing eyes delivered mounted
Coding: see pages 12 to 13

Contact type
00-rear release,crimp contacts
B0-straight to PCB contacts
F0-without contact
FR-front release all contacts
SA-front release signal contacts (0.635 Dia.X 3.81 PC tail termination) and rear release other contacts (crimp termination)
SB-front release signal contacts (0.635 Dia.X 6.35 PC tail termination) and rear release other contacts (crimp termination)
SC-front release signal contacts (0.635 Dia.X 9.53 PC tail termination) and rear release other contacts (crimp termination)
SD-front release signal contacts (0.635 Dia.X 12.7 PC tail termination) and rear release other contacts (crimp termination)
WA-front release signal contacts (0.635 Sq.X 6.35(1 wrap) wire wrap termination) and rear release other contacts (crimp termination)
WB-front release signal contacts (0.635 Sq.X 9.53(2 wraps) wire wrap termination) and rear release other contacts (crimp termination)
WC-front release signal contacts (0.635 Sq.X 12.7(3 wraps) wire wrap termination) and rear release other contacts (crimp termination)
WD-front release signal contacts (0.635 Sq.X 16.28 (4 wraps) wire wrap termination) and rear release other contacts (crimp termination)

Contact type	Plug contact	Receptacle contact
signal contact	pin	socket
power contact	socket	pin
high frequency contact	socket	pin

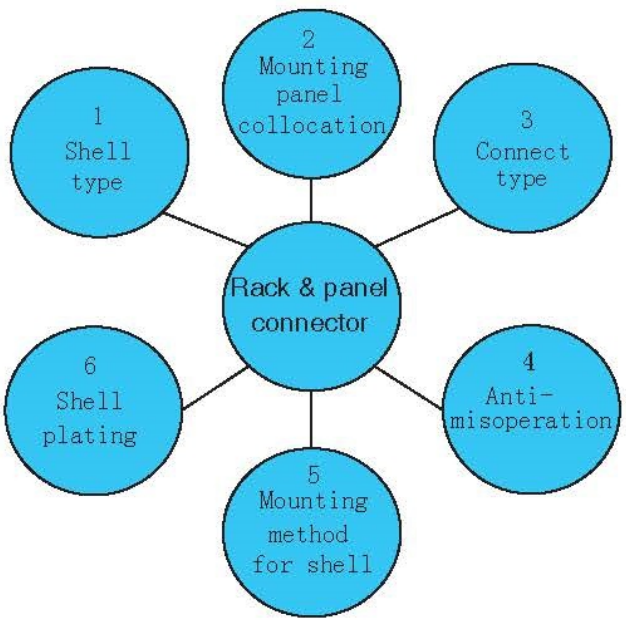
Shell plating:
no designation:nickel plating
A- anodizing
C- rainbow cadmium plating
D- army green cadmium plating

Example: R042 12-313-P 13 01 00
This means R042 connector, unsealed,2# shell,313 is collocation code,cavity A&B match with 2-150 insulator, cavity C match with 13w2 insulator, plug, standard mounting, key position code 01,crimp contact parts and components are supplied for your assembly.

Note: (1)Dimensions are shown in mm.
(2)For any other requirement,please consult us.

R042 Collocation Components

Options of product



Inserts arrangement code of shell size 1&2

Insert Code	Shell Size	Cavity A	Cavity B	Cavity C	Insert Code	Shell Size	Cavity A	Cavity B	Cavity C
-005	1	-	-	5W2	158M	2	2W2	71W1A	85
-060	1	-	60	-	-163	2	-	150	13W2
A060	1	60	-	-	A163	2	150	-	13W2
-065	1	-	60	5W2	-164	2	150	Waveguide	13W2
A065	1	60	-	5W2	A164	2	Waveguide	150	13W2
-120	1	60	60	-	165M	2	150	2W2	13W2
-125	1	60	60	5W2	A165	2	2W2	150	13W2
-013	2	-	-	13W2	-167	2	4W4	150	13W2
-017	2	2W2	2W2	13W2	-173	2	150	10T10	13W2
-071	2	-	71W1	-	-205	2	71W1	121	13W2
A071	2	71W1	-	-	-234	2	150	71W1	13W2
-085	2	Waveguide	71W1	13W2	A234	2	71W1	150	13W2
A085	2	71W1	Waveguide	13W2	-244	2	150	60	34
-86M	2	2W2	71W1A	13W2	-246	2	120T2	120T2	6T6
-093	2	4W4	4W4	85	-248	2	121	121	6T6
-100	2	-	-	100	-250	2	-	150	100
-137	2	121	10T10	6T6	A250	2	150	blank	100
-137A	2	4W4	120T2	13W2	-300	2	150	150	-
T141	2	120T2	10T10	13W2	-306	2	150	150	6T6
-142	2	71W1	71W1	-	-313	2	150	150	13W2
155C	2	71W1A	71W1	13W2	-370	2	150	120T2	100
155M	2	71W1A	71W1A	13W2	-400	2	150	150	100
-155	2	71W1	71W1	13W2					

Inserts arrangement code of shell size 3

Insert Code	Shell Size	Cavity A	Cavity B	Cavity C	Cavity D	Cavity E	Cavity F
-021	3	4W4	4W4	13W2	blank	-	-
-026	3	-	-	13W2	-	-	13W2
-113	3	-	-	100	-	-	13W2
-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	150	150	13W2	150	150	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	100	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

Notes: please contact us if the special arrangement is demanded. The above is part of the regular on

All Connectors

Inserts Layout

Shell Size 1

Cavity A & B

60 pts

60 #22

Blank

Signal Insert

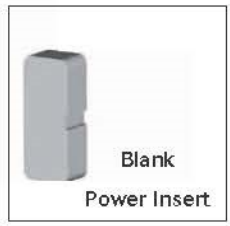
Cavity C

40 pts

40 #22

5W2

2 #16
1 #12
2 #5



Blank

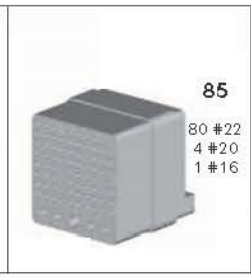
Power Insert

Shell Size2 &3

Cavity C & F

100

100 #22



85

80 #22
4 #20
1 #16

13W2

4 #20
3 #16
4 #12
2 #8

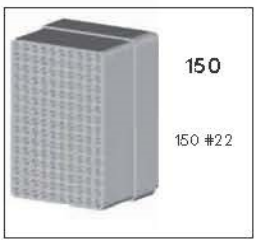
6T6

6 #8

Blank

Power Insert

Cavity A ,B, D&E



150

150 #22

121

110 #22
6 #20
5 #16

120T2

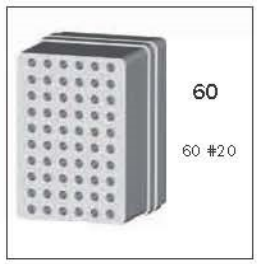
118 #22
2 #8

71W1

70 #22
1 #1

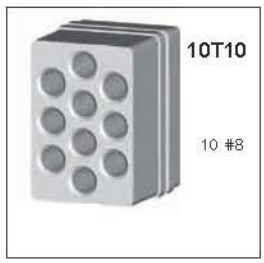
71W1A

70 #22
1 #1



60

60 #20

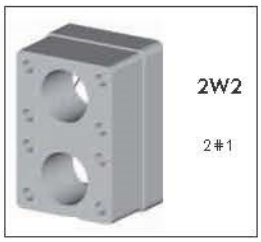


10T10

10 #8

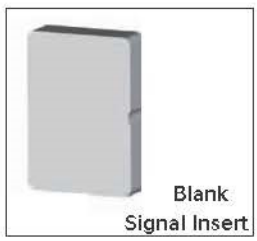
4W4

4 #1



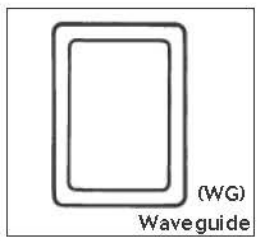
2W2

2#1



Blank

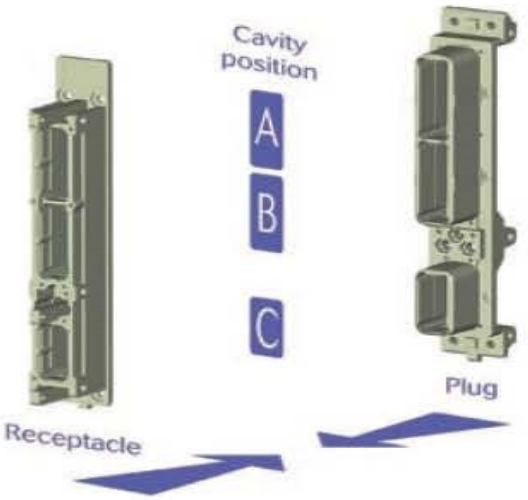
Signal Insert



(WG)

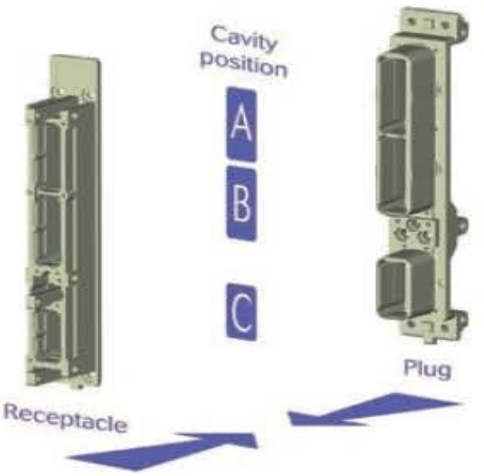
Waveguide

Cavity Overview



Shell Size 1

- 2 cavities "A & B" for Signal inserts
- 1 cavity "C" for Power inserts
- See page8 for shells dimensions

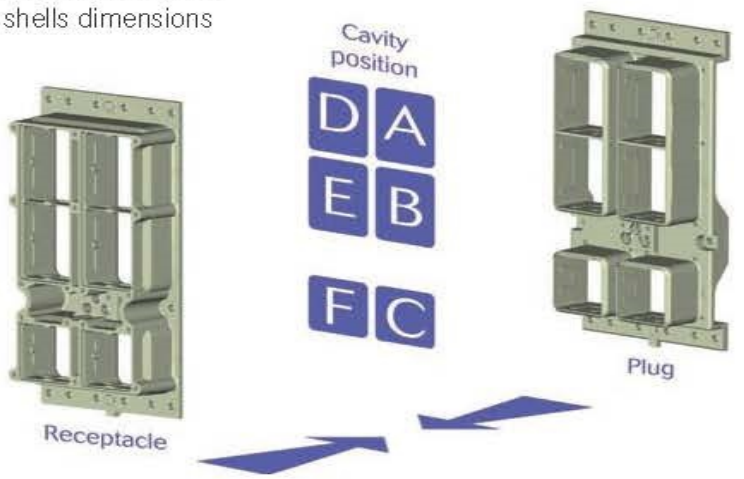


Shell Size 2

- 2 cavities "A & B" for Signal inserts
- 1 cavity "C" for Power inserts
- See page9 for shells dimensions

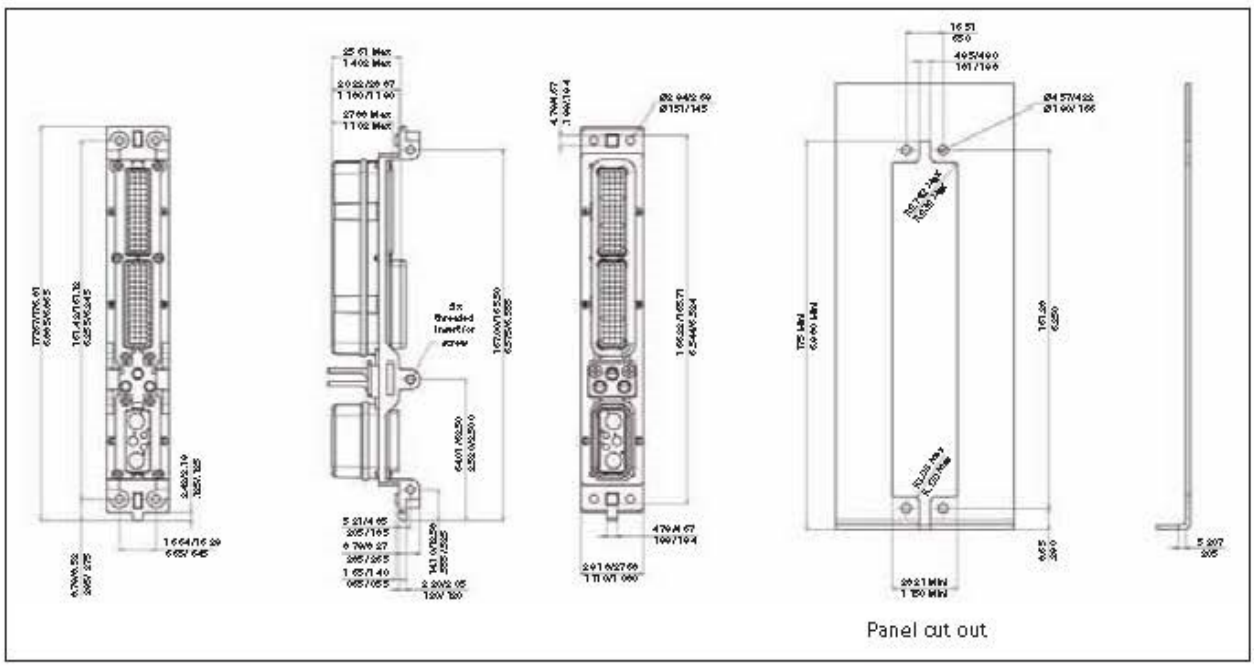
Shell Size 3

- 4 cavities "A, B, D & E" for Signal
- 2 cavities "C & F" for Power inserts
- See page10 for shells dimensions

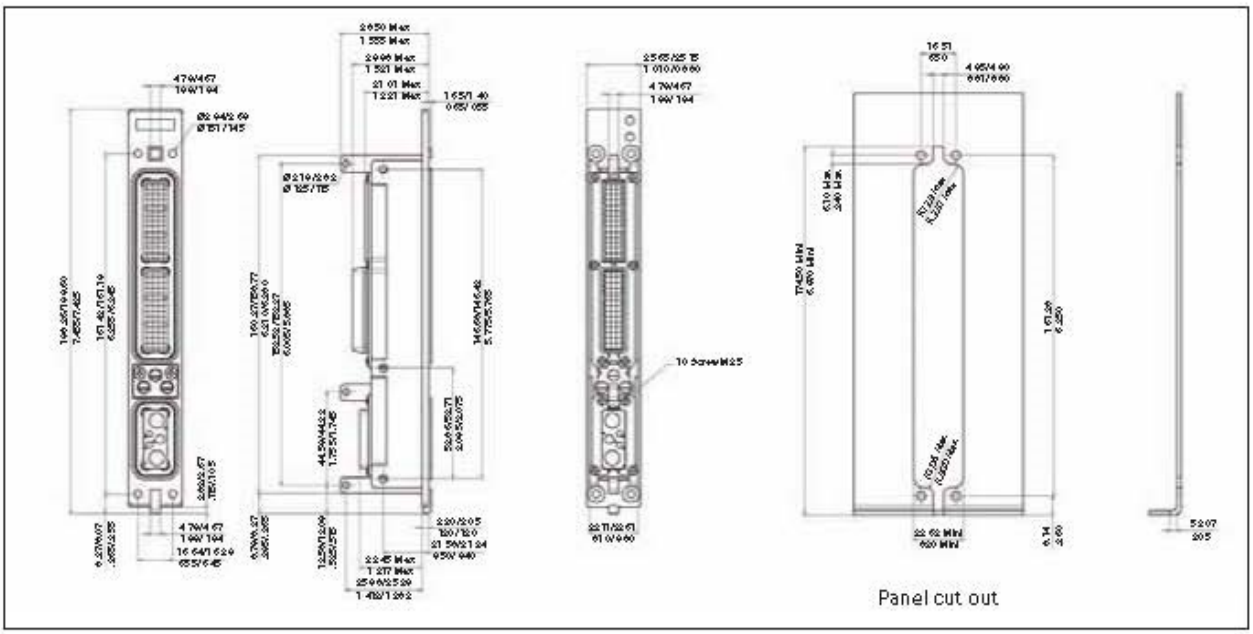


Shell Size & Shell Type

Shell Size 1 - Plug(mm/inch)



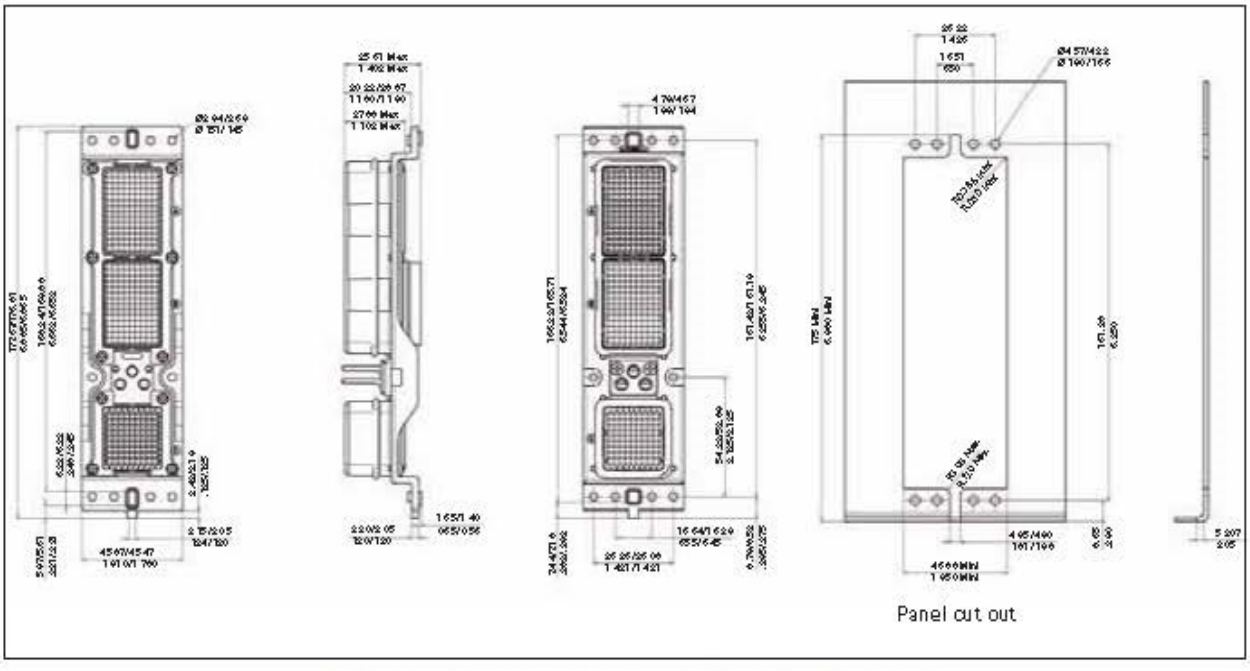
Shell Size 1 - Receptacle(mm/inch)



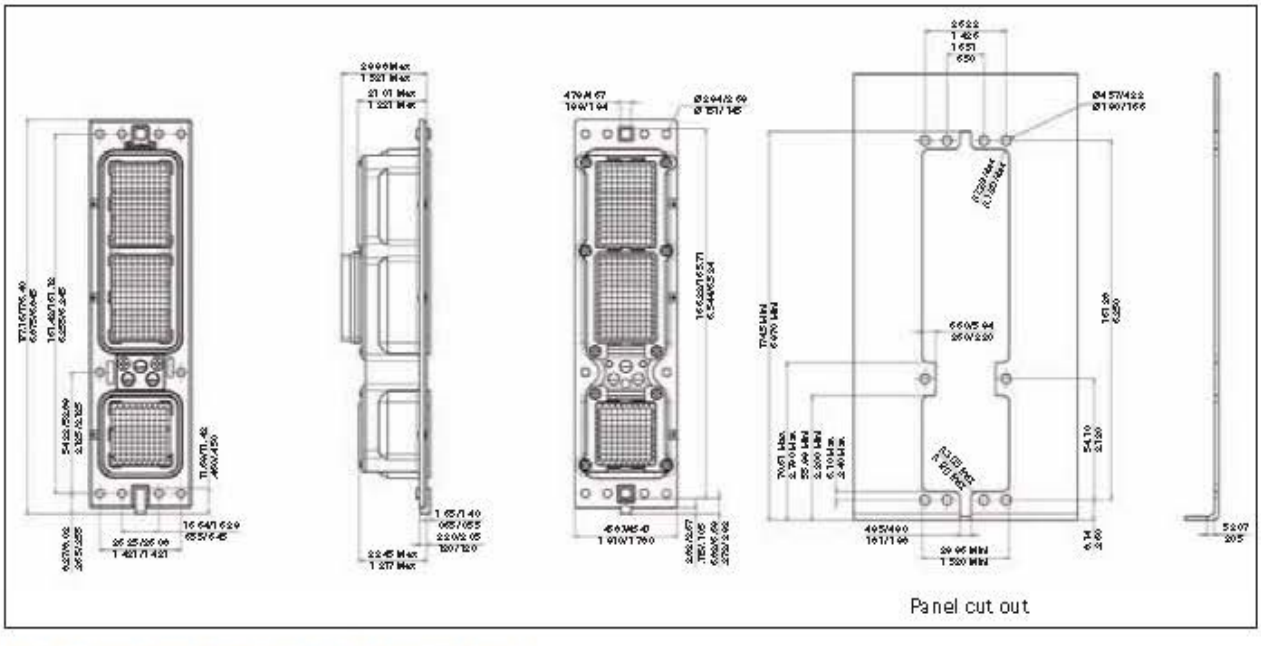
Note:Dimensions are shown in mm(inches).

Shell Size & Shell Type

Shell Size 2 - Plug(mm/inch)



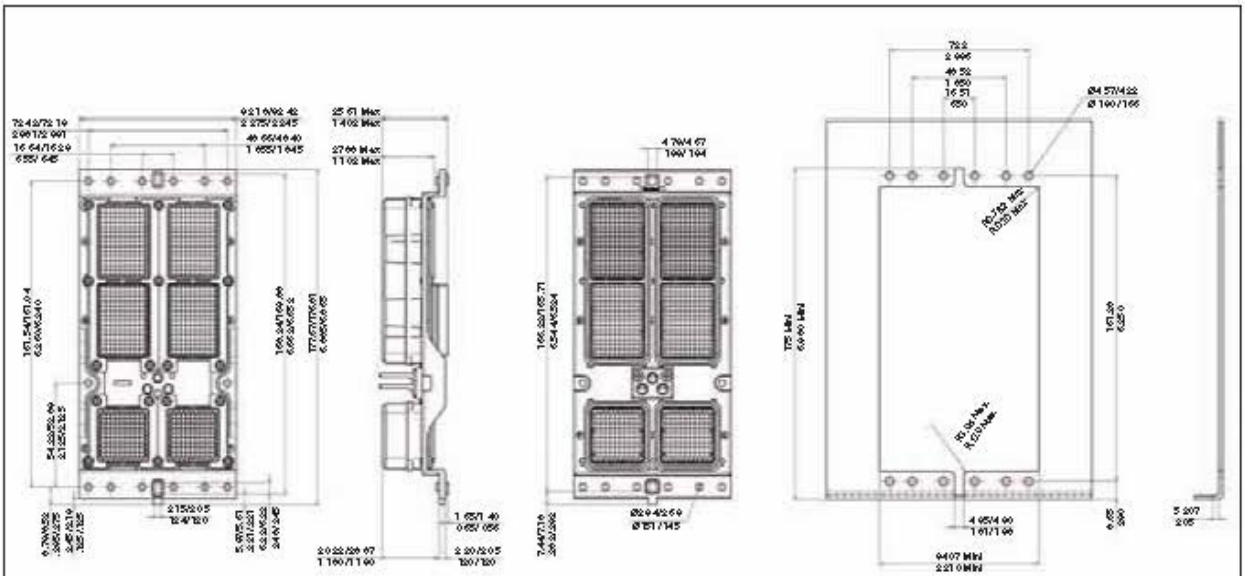
Shell Size 2 - Receptacle(mm/inch)



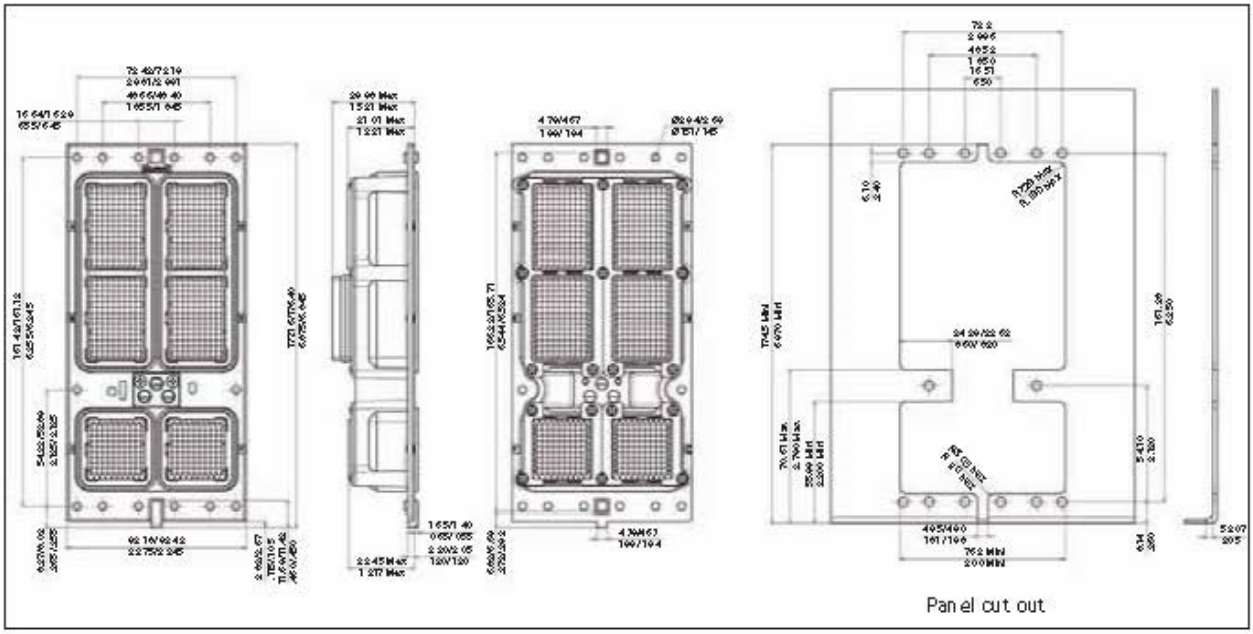
Note: Dimensions are shown in mm(inches).

Shell Size & Shell Type

Shell Size 3 -Plug(mm/inch)



Shell Size 3 -Receptacle(mm/inch)



Note:Dimensions are shown in mm(inches).

Mounting Style

Mounting Style

Standard mounting

05: Standard mounting shell size 1
13: Standard mounting shell size 2 & 3

Float mounting

FL: Float mounting, 6-32 eyelet (qty 4)
FN: Float mounting, 6-32 self-locking threaded inserts (qty 4)
FT: Float mounting, 4-40 (qty 4)
FS: Float mounting, 4-40 self-locking threaded inserts (qty 4)

Self-locking inserts

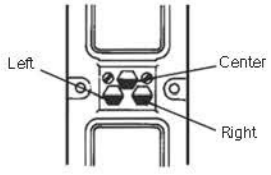
M3: M3 self-locking inserts, shells size 2 & 3 (qty 2)
N3: M3 self-locking inserts in all holes shells size 1, 2 & 3
LN: 6-32 self-locking threaded inserts *
SL: 4-40 self-locking threaded inserts *
TL: 4-40 self-locking threaded inserts in all holes
TN: 6-32 self-locking threaded inserts in all holes

*

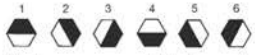
Shells	Receptacle			Plug		
	1	2	3	1	2	3
Numbers of self-locking threaded inserts	4	6	10	4	4	8

For other mounting styles, please consult us.

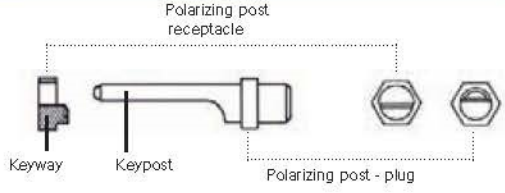
Polarization Code



Location of polarizing keys
(view of engaging face)



Dark area represents the key post.
Light area indicates the keyway.



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

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

Polarization Code

Code number		Receptacle Shell			Plug shell		
Sunkye	Norm	Left key	Center key	Right key	Left post	Center post	Right post
A0	100	2	2	1	4	3	3
A1	101	2	2	6	5	3	3
A2	102	2	2	5	6	3	3
A3	103	3	2	4	1	3	2
A4	104	3	2	3	2	3	2
A5	105	3	2	2	3	3	2
A6	106	3	2	1	4	3	2
A7	107	3	2	6	5	3	2
A8	108	3	2	5	6	3	2
A9	109	4	1	4	1	4	1
B0	110	4	1	3	2	4	1
B1	111	4	1	2	3	4	1
B2	112	4	1	1	4	4	1
B3	113	4	1	6	5	4	1
B4	114	4	1	5	6	4	1
B5	115	5	1	4	1	4	6
B6	116	5	1	3	2	4	6
B7	117	5	1	2	3	4	6
B8	118	5	1	1	4	4	6
B9	119	5	1	6	5	4	6
C0	120	5	1	5	6	4	6
C1	121	6	1	4	1	4	5
C2	122	6	1	3	2	4	5
C3	123	6	1	2	3	4	5
C4	124	6	1	1	4	4	5
C5	125	6	1	6	5	4	5
C6	126	6	1	5	6	4	5
C7	127	1	1	4	1	4	4
C8	128	1	1	3	2	4	4
C9	129	1	1	2	3	4	4
D0	130	1	1	1	4	4	4
D1	131	1	1	6	5	4	4
D2	132	1	1	5	6	4	4
D3	133	2	1	4	1	4	3
D4	134	2	1	3	2	4	3
D5	135	2	1	2	3	4	3
D6	136	2	1	1	4	4	3
D7	137	2	1	6	5	4	3
D8	138	2	1	5	6	4	3
D9	139	3	1	4	1	4	2
E0	140	3	1	3	2	4	2
E1	141	3	1	2	3	4	2
E2	142	3	1	1	4	4	2
E3	143	3	1	6	5	4	2
E4	144	3	1	5	6	4	2
E5	145	4	6	4	1	5	1
E6	146	4	6	3	2	5	1
E7	147	4	6	2	3	5	1
E8	148	4	6	1	4	5	1
E9	149	4	6	6	5	5	1
F0	150	4	6	5	6	5	1
F1	151	5	6	4	1	5	6
F2	152	5	6	3	2	5	6
F3	153	5	6	2	3	5	6
F4	154	5	6	1	4	5	6
F5	155	5	6	6	5	5	6
F6	156	5	6	5	6	5	6
F7	157	6	6	4	1	5	5

Code number		Receptacle Shell			Plug shell		
Sunkye	Norm	Left key	Center key	Right key	Left post	Center post	Right post
F8	158	6	6	3	2	5	5
F9	159	6	6	2	3	5	5
G0	160	6	6	1	4	5	5
G1	161	6	6	6	5	5	5
G2	162	6	6	5	6	5	5
G3	163	1	6	4	1	5	4
G4	164	1	6	3	2	5	4
G5	165	1	6	2	3	5	4
G6	166	1	6	1	4	5	4
G7	167	1	6	6	5	5	4
G8	168	1	6	5	6	5	4
G9	169	2	6	4	1	5	3
H0	170	2	6	3	2	5	3
H1	171	2	6	2	3	5	3
H2	172	2	6	1	4	5	3
H3	173	2	6	6	5	5	3
H4	174	2	6	5	6	5	3
H5	175	3	6	4	1	5	2
H6	176	3	6	3	2	5	2
H7	177	3	6	2	3	5	2
H8	178	3	6	1	4	5	2
H9	179	3	6	6	5	5	2
J0	180	3	6	5	6	5	2
J1	181	4	5	4	1	6	1
J2	182	4	5	3	2	6	1
J3	183	4	5	2	3	6	1
J4	184	4	5	1	4	6	1
J5	185	4	5	6	5	6	1
J6	186	4	5	5	6	6	1
J7	187	5	5	4	1	6	6
J8	188	5	5	3	2	6	6
J9	189	5	5	2	3	6	6
K0	190	5	5	1	4	6	6
K1	191	5	5	6	5	6	6
K2	192	5	5	5	6	6	6
K3	193	6	5	4	1	6	5
K4	194	6	5	3	2	6	5
K5	195	6	5	2	3	6	5
K6	196	6	5	1	4	6	5
K7	197	6	5	6	5	6	5
K8	198	6	5	5	6	6	5
K9	199	1	5	4	1	6	4
L0	200	1	5	3	2	6	4
L1	201	1	5	2	3	6	4
L2	202	1	5	1	4	6	4
L3	203	1	5	6	5	6	4
L4	204	1	5	5	6	6	4
L5	205	2	5	4	1	6	3
L6	206	2	5	3	2	6	3
L7	207	2	5	2	3	6	3
L8	208	2	5	1	4	6	3
L9	209	2	5	6	5	6	3
M0	210	2	5	5	6	6	3
M1	211	3	5	4	1	6	2
M2	212	3	5	3	2	6	2
M3	213	3	5	2	3	6	2
M4	214	3	5	1	4	6	2
M5	215	3	5	6	5	6	2
M6	216	3	5	5	6	6	2

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ARINC 600 Series

Contacts

■ Signal contact

Contacts Type	Pin	Socket
#22		

■ Power contact

Contacts Type	Pin	Socket
#20		
#16		
#12		

■ Matching cable

Contact Spec.	Cable		Outer Dia.(mm)	
	Sectional area (mm^2)	Cable Spec. (AWG)	Min.	Max.
#22	0.15~0.38	26,24,22	Φ 0.7	Φ 1.35
#20	0.21~0.60	24,22,20	Φ 1.02	Φ 1.8
#16	0.60~1.34	20,18,16	Φ 1.73	Φ 2.6
#12	1.91~3.18	14,12	Φ 2.48	Φ 3.4

Contacts

■ Coaxial contact

Contact Spec.	frequency range	characteristic impedance
#8 Coaxial	0Hz~500MHz	75Ω
#5 Coaxial	0Hz~500MHz	50Ω
#1 Coaxial	0Hz~5GHz	50Ω

Solid Picture

Contacts Type	Pin	Socket
#8 Coaxial		
#5 Coaxial		
#1 Coaxial		