

MIL-DTL-38999, Series III TV, Configurator

Online at www.amphenol-aerospace.com

Now you can build a part number for Military and Commercial MIL-DTL-38999 Series III through our online configurator, located on the home page of www.amphenol-aerospace.com.

38999

III

Duallok

II

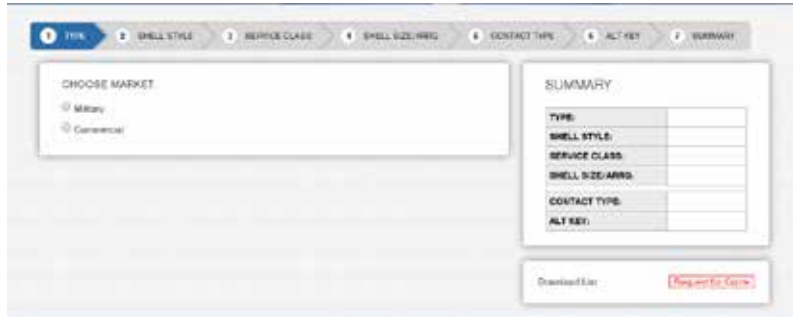
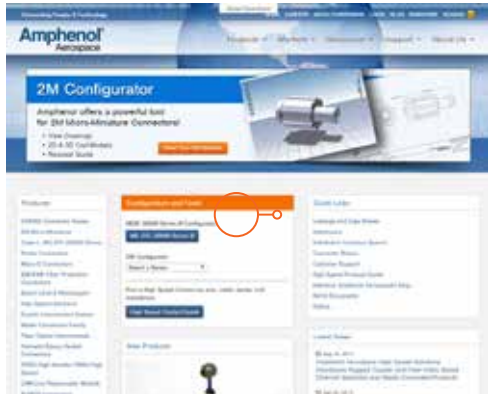
I

SJT

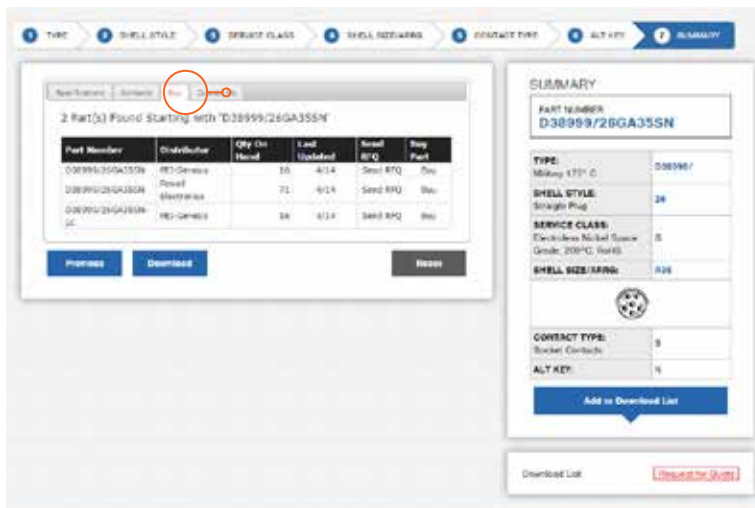
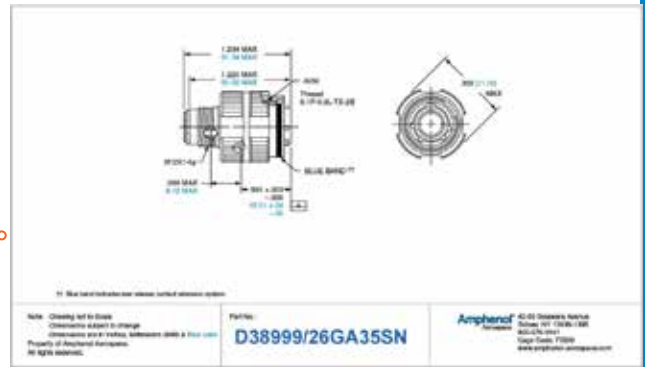
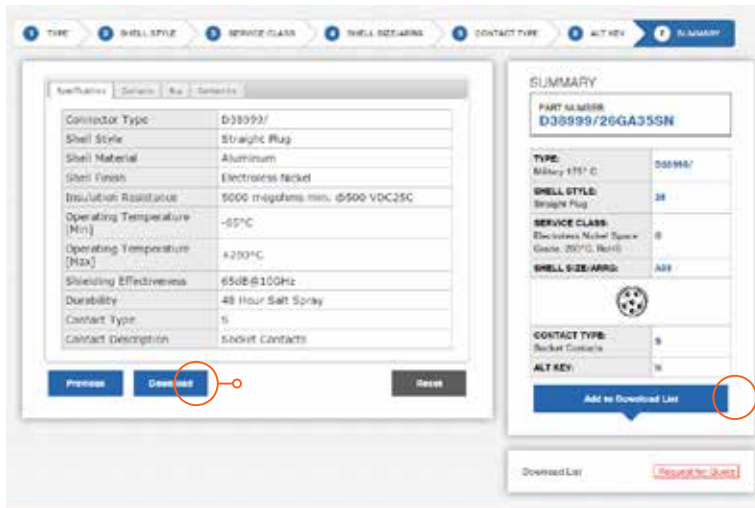
Access

Aquacon

Series III



After building a part number, you have the option to download the drawing and specifications, buy if available through distribution channels, Request a Quote and the ability to download multiple part numbers to a list to manage your needs.



Military to Commercial Shell Style Conversion Table

How to Order (Military)

38999

MILITARY	DESCRIPTION	COMMERCIAL
D38999/20	Wall Mounting Receptacle	TVP00 or TVPS00 (AL & SS); CTVP00, CTVPS00 (Composite)
D38999/21	Hermetic Box Mounting Receptacle	TVPS02Y, TVPS02YN
D38999/23	Hermetic Jam Nut Receptacle	TVS07Y, TVS07YN
D38999/24	Jam Nut Receptacle	TV07, TVS07 (AL & SS); CTV00, CTVS00 (Composite)
D38999/26	Straight Plug	TV06, TVS06
D38999/25	Solder Mount Receptacle (Hermetic)	TVSI
D38999/27	Weld Mounted Receptacle (Hermetic)	TVSHI

HOW TO ORDER: MILITARY

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Connector Type	Shell Style	Service Class	Shell Size- Insert Arrangement	Contact Type	Alternate Keying Position
D38999/	20	J	G35	P	N

1. CONNECTOR TYPE

38999/	MIL-DTL-38999 III
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2. SHELL STYLE

20	Wall Mount Receptacle
21	Box Mount Receptacle Hermetic
26	Straight Plug
24	Jam Nut Receptacle
23	Jam Nut Receptacle Hermetic
25	Solder Mount Receptacle Hermetic
27	Weld Mounted Receptacle, (Hermetic) Only

3. SERVICE CLASS

Military	Finish	RoHS	Material	Material/ Description
C	Anodic Coating	■	Aluminum	200°C, 500 hour salt spray
F	Electroless Nickel	■	Aluminum	200°C, EMI shielding -65dB @ 10GHz, 48 hour salt spray
G	Electroless Nickel	■	Aluminum	200°C, Space grade, 48 hour salt spray
J	Olive Drab Cadmium		Composite	175°C, 2000 hours dynamic salt spray, EMI Shielding -50 dB@10 GHz specification min.
K	Passivated Stainless Steel	■	Stainless Steel	200°C, firewall capability, 500 hour salt spray resistance, EMI -45 dB @ 10 GHz specification min.
L	Stainless Steel w/ Nickel Plate	■	Stainless Steel	Corrosion resistant steel, 200°C, 500 hour salt spray, , non firewall, EMI shielding -65dB @ 10GHz specification min.
M	Electroless Nickel	■	Composite	200°C, EMI shielding -65dB @ 10GHz, 2000 hours dynamic salt spray
N	Stainless Steel w/ Nickel Plate	■	Stainless Steel	Hermetic connectors, corrosion resistant steel, 200°C
S	Stainless Steel w/ Nickel Plate	■	Stainless Steel	Non-hermetic connectors, corrosion resistant steel, 200°, firewall capability, 500 hour salt spray, EMI shielding -65dB @ 10GHz specification min.
T	Durmalon plated	■	Aluminum	Nickel-PTFE alternative to Cadmium, 175°C, 500 hour salt spray, EMI -50dB at 10GHz specification min.
W	Olive Drab Cadmium		Aluminum	175°C , 500 hour salt spray, EMI Shielding -50 dB@10 GHz specification min.
Y	Stainless Steel	■	Stainless Steel	Hermetic seal, 200°C passivated stainless steel
Z	Zinc-Nickel Plated	■	Aluminum	Zinc-Nickel Alternative to Cadmium, +175°C, 500 hour salt spray, EMI Shielding -50 dB @ 10 GHz specification min.

Series III

A

4. SELECT A SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 2-5

Shell Size & Insert Arrangements are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement.

Triple Start Threads									Mil Shell Size
A	B	C	D	E	F	G	H	J	Amphenol Shell size
9	11	13	15	17	19	21	23	25	

5. CONTACT TYPE

P	500 Cycle Pin Contacts, if require Less Contacts place (LC) at the end of part number
S	500 Cycle Socket Contacts, if require Less Contacts place (LC) at the end of part number
H	1500 Pin Cycle Contacts
J	1500 Socket Cycle Contacts
A	Less Pin Contacts
B	Less Socket Contacts
X	Eyelet contacts, hermetics only

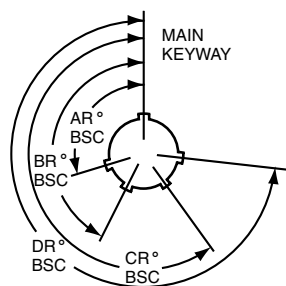
6. ALTERNATE KEY POSITION

Key/Keyway Position					
N	A	B	C	D	E

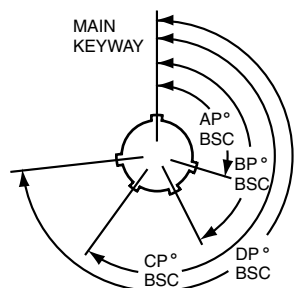
KEY/KEYWAY POSITION

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stays fixed, minor keys rotate. Inserts are not rotated in conjunction with the master key/keyway.

PLUG (front face shown)



RECEPTACLE (front face shown)



Shell Size	Key & Keyway Arrangement Identification Letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
A (9)	N*	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
B (11) C (13) D (15)	N*	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
E (17) F (19)	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
G (21) H (23) J (25)	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272

MIL-DTL-38999, Series III TV

How to Order (Commercial)

38999

1. SELECT A TYPE & CLASS

1.	2.	3.	4.	5.	** If Required
Type & Class	Shell Size-Insert Arrg.	Contact Type	Alternate Position	PCB Length**	
TVPS00RB-					

	ALUMINUM						
	Electroless Nickel	Olive Drab Cadmium	Durmalon	Black Zinc	Electroless Nickel (With Ground Plane)	Olive Drab Cadmium (With Ground Plane)	Marine Bronze
Temperature	200°C	175°C	175°C	175°C	200°C	175°C	200°C
Salt Spray	48 Hrs	500 Hrs	500 Hrs	500 Hrs	48 Hrs	500 Hrs	2,000 Hrs
EMI Shielding	-65dB @ 10GHz	-65dB @ 10GHz	-50dB @ 10GHz	-50dB @ 10GHz	-65dB @ 10GHz	-65dB @ 10GHz	-65dB @ 10GHz
RoHS							

Receptacle	Wall Mounting Receptacle	TVPS00RF-	TVP00RW-	TVP00DT-	TVP00DZ-	TVP00RGF-	TVP00RGW-	TVPS00RB-
	Box Mounting Receptacle	TVPS02RF-	TVP02RW-	TVP02DT-	TVP02DZ-	TVP02RGF-	TVP02RGW-	TVPS02RB-
	Line Receptacle	TVS01RF-	TV01RW-	TV01DT-	TV01DZ-	TV01RGF-	TV01RGW-	TVS01RB-
	Jam Nut Receptacle	TVS07RF-	TV07RW-	TV07DT-	TV07DZ-	TV07RGF-	TV07RGW-	TVS07RB-

Plugs	Straight Plug	TVS06RF-	TV06RW-	TV06DT-	TV06DZ-	TV06RGF-	TV06RGW-	TVS06RB-
	Flange Mounted Plug	TVS09RF-	TV09RW-	TV09DT-	TV09DZ-	TV09RGF-	TV09RGW-	TVS09RB-
	Straight Plug w Duallok	TVS56RF-	TV56RW-	TV56DT-	TV56DZ-	TV56RGF-	TV56RGW-	TVS56RB-
	Straight Plug w Clutch-Lok*	-	-	-	-	-	-	-

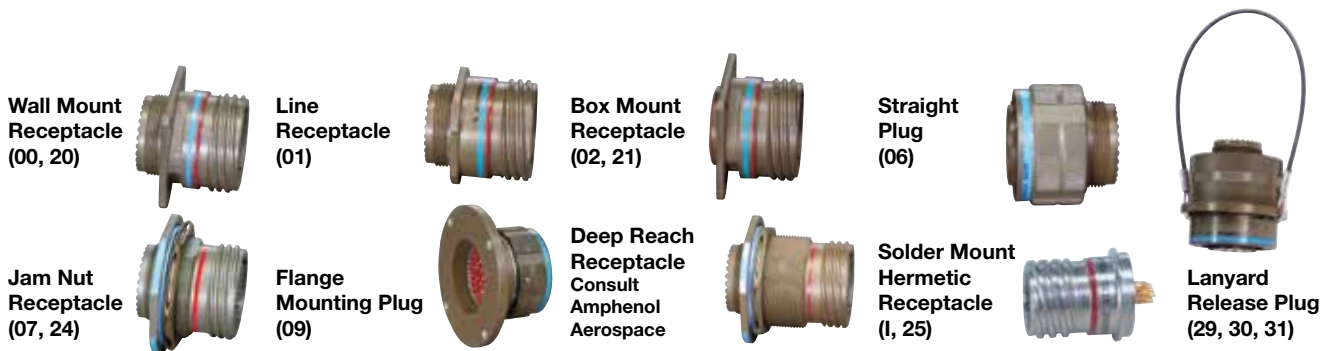
* Stamped with Mil-Spec #D38999

Printed Circuit Board	Wall Mounting Receptacle	TVPS00RF-	TVP00RW-	TVP00DT-	TVP00DZ-	-	-	TVPS00RB-
	Box Mounting Receptacle	TVPS02RF-	TVP02RW-	TVP02DT-	TVP02DZ-	-	-	TVPS02RB-
	Jam Nut	TVS07RF-	TV07RW-	TV07DT-	TV07DZ-	-	-	TVS07RB-
	Wall Mount (Double Flange)	TVPS40RF-	TVP40RW-	TVP40DT-	TVP40DZ-	-	-	TVPS40RB-
	Jam Nut (Double Flange)	TVS47RF-	TV47RW-	TV47DT-	TV47DZ-	-	-	TVS47RB-
	Wall Mount (Clinch Nuts)	TVPS10RF-	TVP10RW-	TVP10DT-	TVP10DZ-	-	-	TVPS10RB-
	Box Mount (Clinch Nuts)	TVPS12RF-	TVP12RW-	TVP12DT-	TVP12DZ-	-	-	TVPS12RB-

Hermetic	Box Mounting Receptacle	Hermetic only available in Stainless Steel
	Jam Nut Receptacle	
	Solder Mount	
	Wall Mounting Receptacle	

Insert arrangements using multi-axial (i.e. coax, twinax, triax shielded) contacts should not be used in firewall applications.

*Coaxial arrangements are not available in firewall classes.



MIL-DTL-38999, Series III TV

How to Order (Commercial)

COMPOSITE				STAINLESS STEEL			
Electroless Nickel	Olive Drab Cadmium	Electroless Nickel (With Ground Plane)	Olive Drab Cadmium (With Ground Plane)	Passivated (Firewall)	Passivated (Non-Firewall)	Nickel Plated (Firewall)	Nickel Plated (Non-Firewall)
200°C	175°C	200°C	175°C	200°C	200°C	200°C	200°C
2,000 Hrs	2,000 Hrs	2,000 Hrs	2,000 Hrs	500 Hrs	500 Hrs	500 Hrs	500 Hrs
-65dB @ 10GHz	-65dB @ 10GHz	-65dB @ 10GHz	-65dB @ 10GHz	-65dB @ 10GHz	-65dB @ 10GHz	-65dB @ 10GHz	-50dB @ 10GHz

CTVPS00RF-	CTVP00RW-	CTVP00RGF-	CTVP00RGW-	TVPS00RK-	TVPS00RKN-	TVPS00RS-	TVPS00RL-
CTVPS02RF-	CTVP02RW-	CTVP02RGF-	CTVP02RGW-	TVPS02RK-	TVPS02RKN-	TVPS02RS-	TVPS02RL-
CTVS01RF-	CTV01RW-	CTV01RGF-	CTV01RGW-	TVS01RK-	TVS01RKN-	TVS01RS-	TVS01RL-
CTVS07RF-	CTV07RW-	CTV07RGF-	CTV07RGW-	TVS07RK-	TVS07RKN-	TVS07RS-	TVS07RL-

CTVS06RF-	CTV06RW-	CTV06RGF-	CTV06RGW-	TVS06RK-	TVS06RKN-	TVS06RS-	TVS06RL-
CTVS09RF-	CTV09RW-	CTV09RGF-	CTV09RGW-	TVS09RK-	TVS09RKN-	TVS09RS-	TVS09RL-
CTVS56RF-	CTV56RW-	CTV56RGF-	CTV56RGW-	TVS56RK-	TVS56RKN-	TVS56RS-	TVS56RL-
-	-	-	-	MTVS26RK-	-	-	-

				TVPS00RK-	TVPS00RKN-	TVPS00RS-	TVPS00RL-
				TVPS02RK-	TVPS02RKN-	TVPS02RS-	TVPS02RL-
				TVS07RK-	TVS07RKN-	TVS07RS-	TVS07RL-
				TVPS40RK-	TVPS40RKN-	TVPS40RS-	TVPS40RL-
				TVS47RK-	TVS47RKN-	TVS47RS-	TVS47RL-
				TVPS10RK-	TVPS10RKN-	TVPS10RS-	TVPS10RL-
				TVPS12RK-	TVPS12RKN-	TVPS12RS-	TVPS12RL-

Hermetic only available in Stainless Steel	-	TVPS02Y-	-	TVPS02YN-
	-	TVS07Y-	-	TVS07YN-
	-	TVSIY-	-	TVSIYN-
	-	TVSHIY-	-	TVSHIYN-

1. Type & Class	2. Shell Size-Insert Arrg.	3. Contact Type	4. Alternate Position	5. PCB Length**	** If Required
	11-4	P			

2. SELECT A SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 2-5

Shell Size & Insert Arrangements are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement.

* Size 7 and 7H are Double Start Threads only

3. CONTACT TYPE

P	500 Cycle Pin Contacts, if require Less Contacts place (LC) at the end of part number
S	500 Cycle Socket Contacts, if require Less Contacts place (LC) at the end of part number
H	1500 Cycle Pin Contacts
J	1500 Cycle Socket Contacts
X	Eyelet contacts, hermetics only

MIL-DTL-38999, Series III TV

How to Order (Alternate Keying) Commercial

38999

III

Dualok

II

I

SJT

Access

Aquacon

Series III

4. SELECT A ALTERNATE KEYING COMMERCIAL

1.	2.	3.	4.	5.
Type & Class	Shell Size- Insert Arrg.	Contact Type	Alternate Position	PCB Length**
			N	

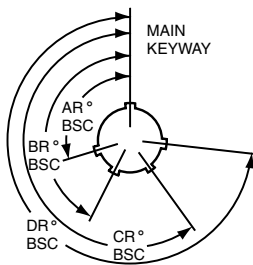
Shell Size	Key & Keyway Arrangement Identification Letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
7, 7H	N*	120	240		
	A	132	248		
	B	80	230	NA	NA
	C	140	275		
	D	155	234		
9	N*	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
11, 13, and 15	N*	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
17 and 19	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
21, 23, and 25	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
25L, 33, and 37	N*	80	142	188	293
	A	135	170	188	310
	B	49	169	188	244
	C	66	140	188	257
	D	62	145	188	280

* An "N" designation is used on D38999 military part number but not on the commercial versions

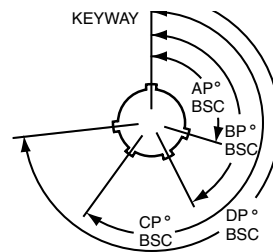
KEY/KEYWAY POSITION

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stays fixed, minor keys rotate. Inserts are not rotated in conjunction with the master key/keyway.

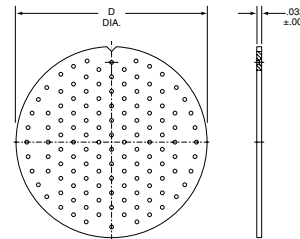
PLUG (FRONT FACE SHOWN)



RECEPTACLE (FRONT FACE SHOWN)



Alignment Disc



Shell Size	D Dia. ±.010
9	.234
11	.350
13	.500
15	.725
17	.750
19	.850
21	.953
23	1.147
25	1.250

5. PCB LENGTH FOR COMMERCIAL ONLY

Contact Stickout	Pin Contacts	Pin Contacts with Alignment Disk	** If Required
.150"	(P15)	(P15AD)	
.250"	(P25)	(P25AD)	
.350"	(P35)	(P35AD)	

Contact Stickout	Socket Contacts	Socket Contacts with Alignment Disk
.150"	(S15)	(S15AD)
.250"	(S25)	(S25AD)
.350"	(S35)	(S35AD)

5. PCB LENGTH FOR HD38999 ONLY

9-9, 11-19, 13-32, 15-55, 17-73, 19-88, 21-121, 23-151, 25-187

PCB tail stickout +/- .040 inch	Without Alignment Disk		With Alignment Disk	
	Pins	Sockets	Pins	Sockets
.100" nominal	(P1*)	(S1)	(P1AD)	(S1AD)
.150" nominal	(P15*)	(S15)	(P15AD)	(S15AD)
.200" nominal	(P2)	(S2)	(P2AD)	(S2AD)
.250" nominal	(P25*)	(S25)	(P25AD)	(S25AD)
.300" nominal	(P3*)	(S3)	(P3AD)	(S3AD)
.350" nominal	(P35)	(S35)	(P35AD)	(S35AD)

* Not available in TV40 wall mount double flange receptacle or TV47 jam nut double flange receptacle styles.

Note: Standard tail diameter is 0.019±.001 Stick out is measured from the end of the connector shell to end of the contact

HOW TO ORDER - BOEING BACC63 CT & CU

1.	2.	3.	4.	5.	6.	7.	8.
Boeing Basic Number	Style	Shell Size	Shell Finish & Contact	Insert Arrangement	Contact Type	Alternate Keying Position	Ordering Option
BACC63	CT	15	–	19	P	N	H

COMPOSITE

1. BOEING NUMBER	
BACC63	Boeing

2. STYLE	
CT	Composite Plug
CU	Composite Receptacle

3. SHELL SIZE	
15	One Shell Size

4. SHELL FINISH & CONTACT	
C	CT Style Only. Cadmium Plated, Grounded
D	Cadmium Plated, ungrounded
G	Nickel Plated, Grounded
–	Nickel Plated, Ungrounded

5. INSERT ARRANGEMENTS-
Consult Amphenol Aerospace for insert arrangements available.

6. CONTACT TYPE	
P	Pin
S	Socket

7. ALTERNATE KEYING POSITION	
N	Normal
A-E	Alternates

8. ORDERING OPTIONS	
H	Without Contacts & Seal Plugs
Blank	With Contacts & Seal Plugs

HOW TO ORDER - BOEING BACC63 DB & DC

1.	2.	3.	4.	5.	6.
Boeing Basic Number	Style	Shell Size-Insert Arrangement	Contact Type	Alternate Keying Position	Ordering Option
BACC63	DB	15-19	P	N	H
BACC63	DC	17-8	P	N	H

STAINLESS STEEL

1. BOEING NUMBER	
BACC63	Boeing

2. SELECT A STYLE	
DB	Stainless Steel Plug
DC	Stainless Steel Receptacle

4. CONTACT TYPE	
P	Pin
S	Socket

5. ALTERNATE KEYING POSITION	
N	Normal
A-E	Alternates

6. ORDERING OPTION	
H	Without Contacts & Seal Plugs
Blank	With Contacts & Seal Plugs

3. SELECT A SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 2-5

Shell Size & Insert Arrangements are on pages 2-5. First number represents Shell Size, second number is the Insert Arrangement. Please include the dash.