

# Bendix® Commercial Aircraft Cylindrical Connectors

12-101-2



# BT-M high temperature

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The Bendix "BT-M" firewall electrical connectors were specially designed for service where high temperature performance and direct exposure to flame are prevalent.

It is important to note that the "BT-M" series is divided into two categories. The first category, "BT-M," utilizes a MS-R type silicone grommet and clamp for termination of open wiring. The second category, the "BT-MA," utilizes a conduit adapter for termination of cable conduit.

The "BT-M" series connector will maintain a functional circuit under extreme heat of 2000°F for 5 minutes. It will also sustain a flame barrier for an additional 15 minutes. Continuous duty at an elevated temperature up to 450°F is assured.

## COMPONENTS

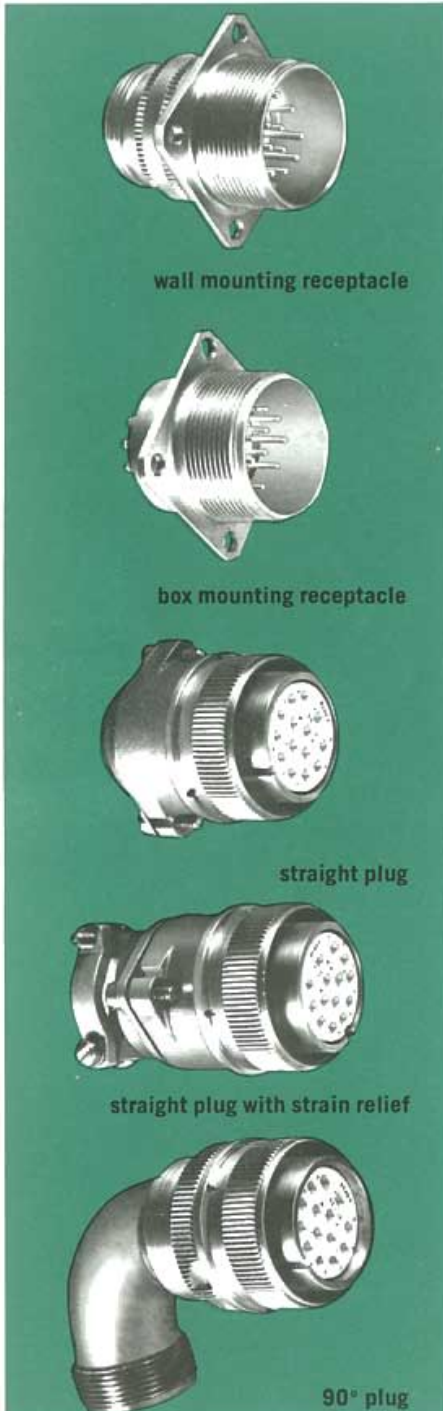
- Stainless Steel Shells provide added durability and resistance to corrosion.
- High density alumina oxide inserts provide increased performance in the following characteristics:
  - (a) High resistance to vibration damage.
  - (b) Durability.
  - (c) Over all connector reliability.
- Crimped type, gold plated contacts designed for use with wire conforming to MIL-W-5086 requirements.

## HOW TO ORDER

To more easily illustrate ordering procedure, part number BT06M-16-9PX(SR) is shown as follows:

$\frac{BT}{1}$      $\frac{06}{2}$      $\frac{M}{3}$     -     $\frac{16}{4}$     -     $\frac{9}{5}$      $\frac{P}{6}$      $\frac{X}{7}$      $\frac{(SR)}{8}$

1. Connector type
2. Shell style
  - 00 designates wall mount receptacle
  - 02 designates box mount receptacle
  - 06 designates straight plug
  - 08 designates 90° plug
3. Termination
  - M designates open wiring termination
  - MA designates cable conduit termination
4. Shell size
  - 10 thru 32 available (page 4)
5. Insert arrangement — 16-9
  - Complete listing of insert patterns (pages 5, 6)
6. Contacts
  - P designates pins, S designates sockets
7. Alternate insert rotation. No letter required for normal rotation position, alternate positions, page 4
8. Strain relief accessory (pages 7, 9, 10)



# BT-M specifications

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## WIRE WELL DATA

Contact Size	4	8	12	16
Well Dia.	+ .005 .281 - .003	+ .004 .179 - .002	+ .004 .098 - .000	+ .004 .063 - .000
Well Depth + .031 - .000	.500	.500	.250	.250

## CONTACT PART NUMBERS

Pin Contact	Socket Contact	Plating
10-407018-XX9	10-407019-XX9	100 mil gold over nickel <sup>o</sup>
10-407018-XXT	10-407019-XXT	30 mil rhodium over silver
10-101649-XXP	10-101649-XXS	50 mil gold over nickel
10-746XX	(Pin or Socket)	200 mil silver

<sup>o</sup>Plating normally supplied.

Various contact platings are available. Please check with factory for availability of platings not shown. For complete contact part numbers, see p. 11.

## CONTACT RATING

Contact Size	Rated Current	Test Current	Potential Drop Millivolts Max.*
16	13	13	35
12	23	23	30
8	46	46	25
4	80	80	14

\*End to End

## CONTACT ARRANGEMENT SERVICE RATING

MS Service	Recommended Operating Voltage at Sea Level		Test Voltage AC rms
	DC	AC rms	
Inst.	250	200	1000
A	700	500	2000
D	1250	900	2800
E	1750	1250	3500
B	2450	1750	4500
C	4200	3000	7000

# BT-M

## insert availability identification alternate positions

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Insert Arrangement	Total Contacts	Contact Size				Service Rating	Alternate Positioning Degrees			
		4	8	12	16		W	X	Y	Z
10SL-3	3				3	A	°	°	°	°
10SL-4	2				2	A	°	°	°	°
12S-3	2				2	A	70	145	215	290
14S-2	4				4	Inst.	°	120	240	°
14S-5	5				5	Inst.	°	110	°	°
14S-6	6				6	Inst.	°	°	°	°
14S-7	3				3	A	90	180	270	°
14S-9	2				2	A	70	145	215	290
16S-1	7				7	A	80	°	°	280
16S-8	5				5	A	°	170	265	°
16-9	4			2	2	A	35	110	250	325
16-10	3			3		A	90	180	270	°
16-11 <sup>**</sup>	2			2		A	35	110	250	325
18-1	10				10	***	70	145	215	290
18-4	4				4	D	35	110	250	325
18-11	5			5		A	°	170	265	°
20-27	14				14	A	35	110	250	325
22-19	14				14	A	80	110	250	280
22-22	4		4			A	°	110	250	°
24-7 <sup>**</sup>	16			2	14	A	80	110	250	280
24-22	4		4			D	45	110	250	°
28-11	22			4	18	A	80	110	250	280
28-12	26				26	A	90	180	270	°
28-16	20				20	A	80	110	250	280
32-7	35			7	28	****	80	125	235	280
32-17	4	4				D	45	110	250	°

\*Indicated positions are not available.

\*\*Tooled in Socket Arrangement Only.

\*\*\*B, C, F, G = A, Balance = Inst.

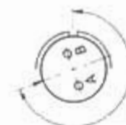
\*\*\*\*A, B, h, i = Inst., Balance = A.



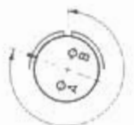
POSITION W



POSITION X



POSITION Y



POSITION Z

Views looking into front face of pin insert or rear of socket insert.

# BT-M

## insert arrangements

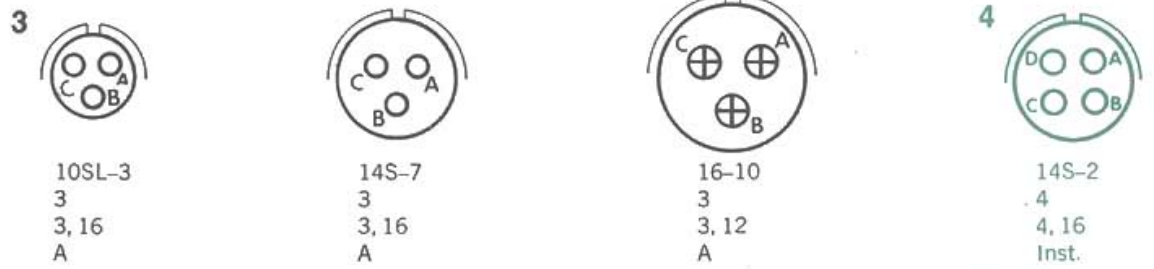
front face of pin inserts illustrated

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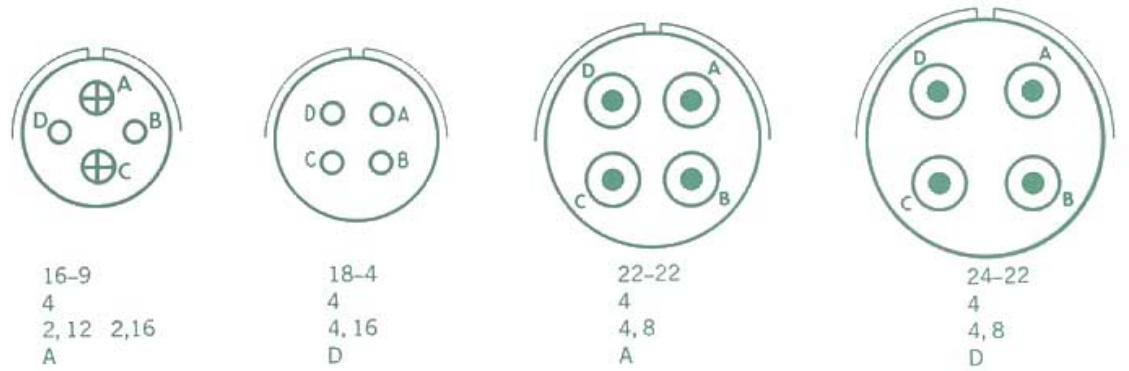
insert arrangement  
number of contacts  
size of contacts  
service rating



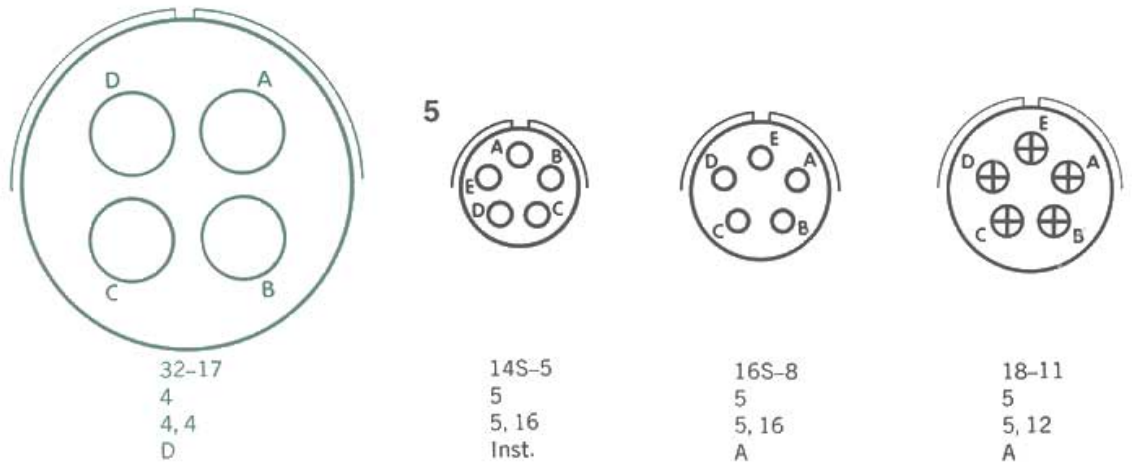
insert arrangement  
number of contacts  
size of contacts  
service rating



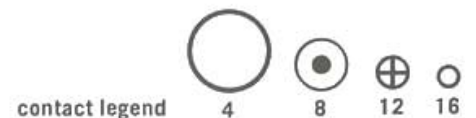
insert arrangement  
number of contacts  
size of contacts  
service rating



insert arrangement  
number of contacts  
size of contacts  
service rating



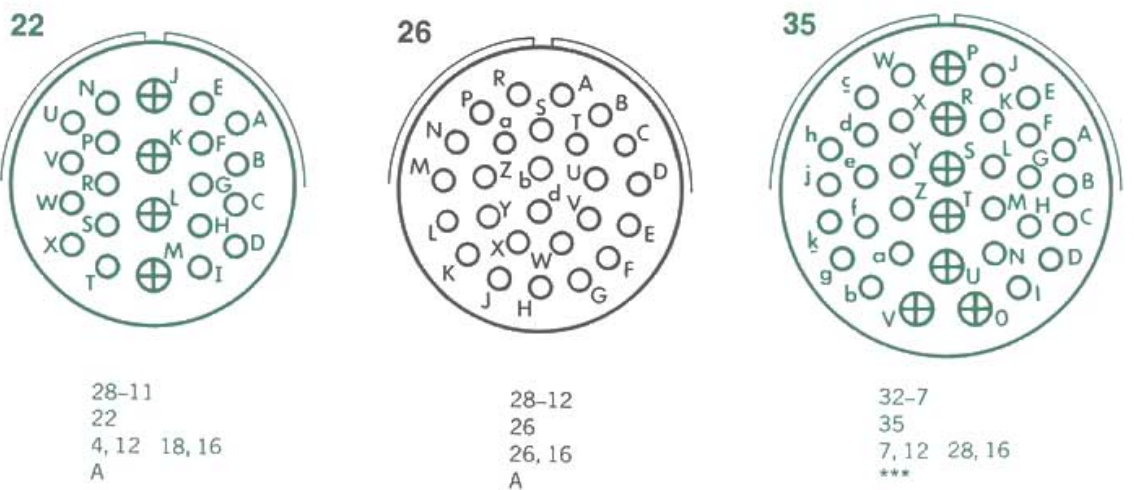
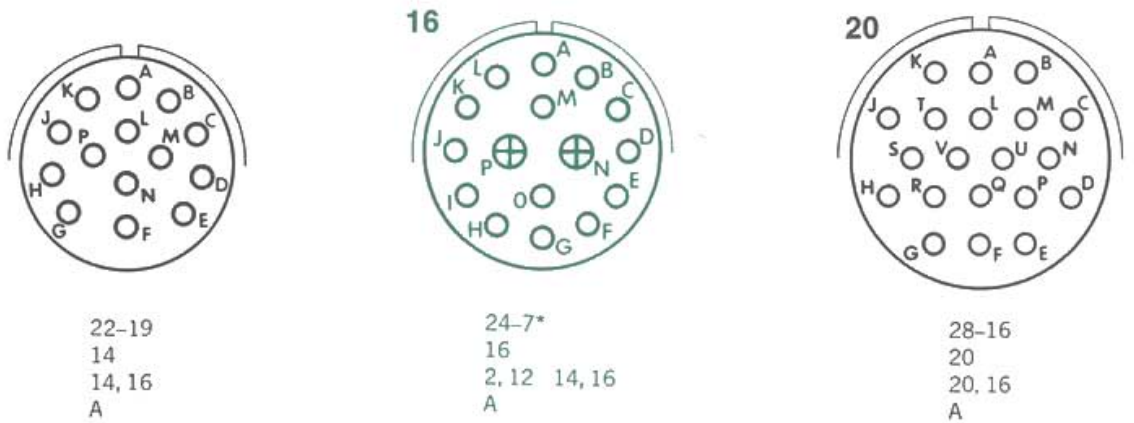
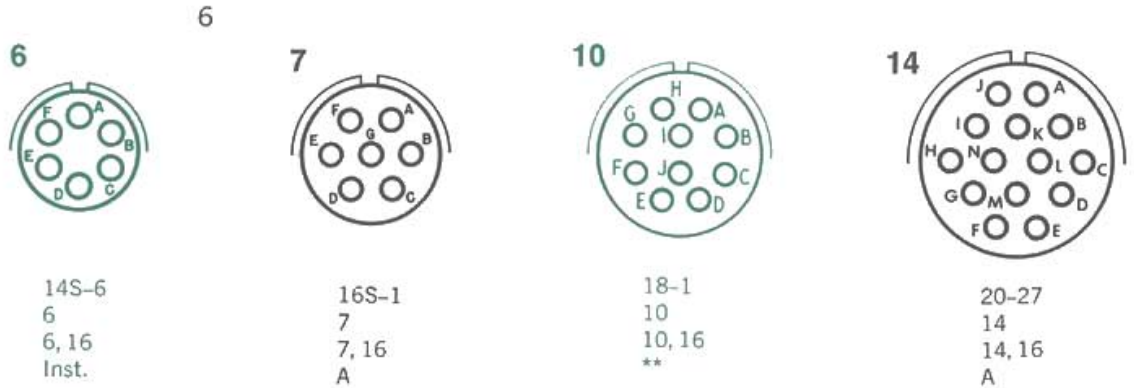
\*Tooled in Socket Arrangement Only



# BT-M

## insert arrangements (continued)

front face of pin inserts illustrated



\*Tooled in Socket Arrangement Only.

\*\*B, C, F, G = A, Balance = Inst.

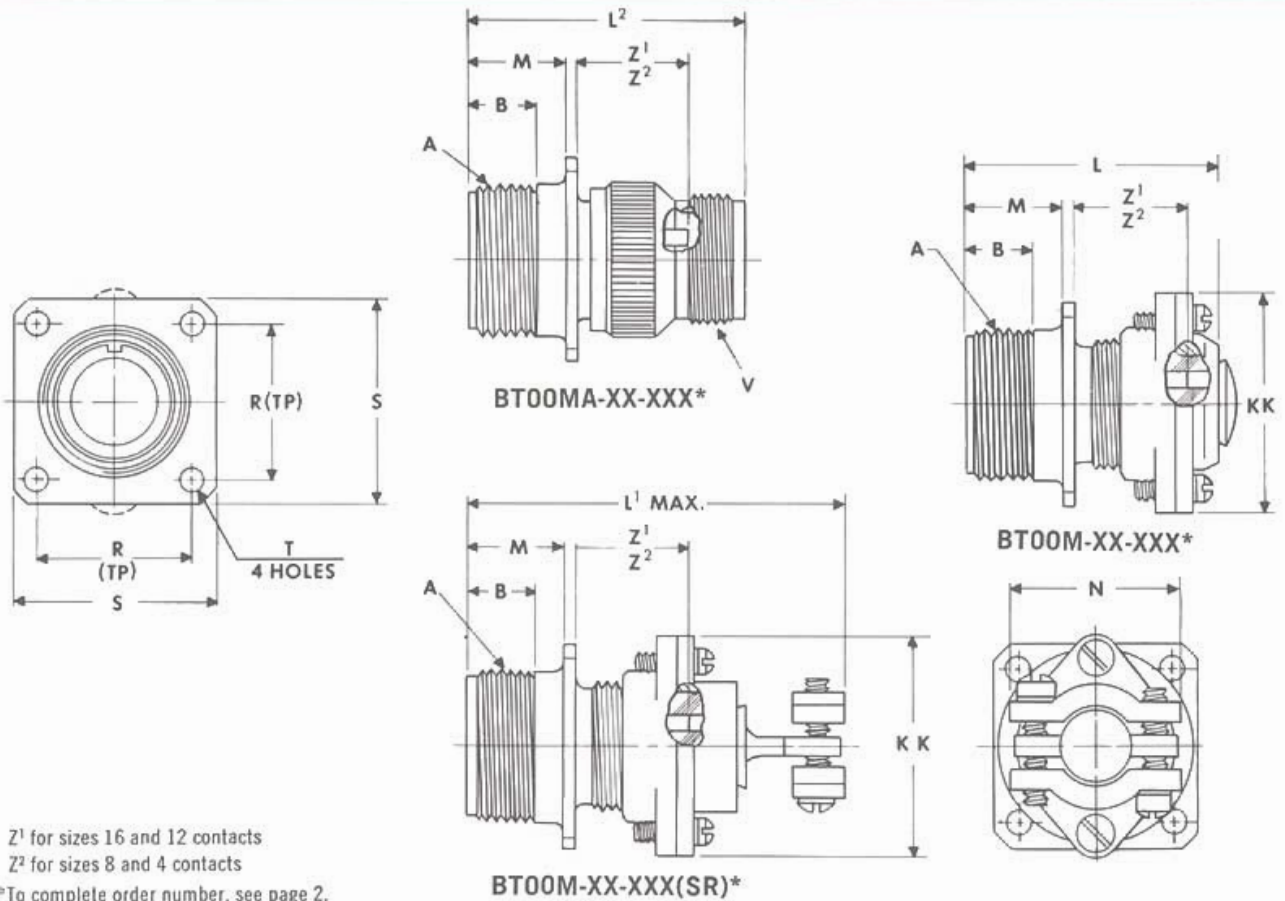
\*\*\*A, B, h, j = Inst., Balance = A.



# BT-M BTOO

## wall mounting receptacle

7



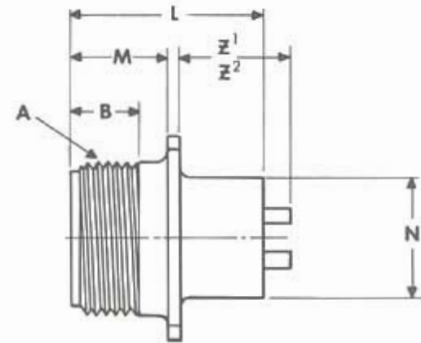
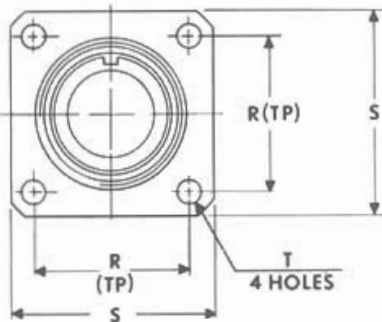
Shell Size	A Thread Class 2A	B Min. Full	L +.025 -.015	L <sup>1</sup> Max.	L <sup>2</sup> ±.030	M +.016 -.000	R ±.005	S ±.020	T Dia. +.004 -.002	KK ±.031	Z <sup>1</sup> +.045 -.071	Z <sup>2</sup> +.040 -.066	N Max.	V Thread Class 2A
10SL	.6250-24UNEF	.391	1.702	2.337	1.671	.562	.719	1.000	.150	1.297	.655		.884	.6250-24UNEF
12S	.7500-20UNEF	.391	1.672	2.306	1.609	.562	.812	1.094	.150	1.110	.655		.884	.6250-24UNEF
12	.7500-20UNEF	.625	1.906	2.541	1.844	.750	.812	1.094	.150	1.110	.781		.884	.6250-24UNEF
14S	.8750-20UNEF	.391	1.672	2.306	1.609	.562	.906	1.188	.150	1.297	.655		1.010	.7500-20UNEF
14	.8750-20UNEF	.625	1.906	2.541	1.844	.750	.906	1.188	.150	1.297	.781	.984	1.010	.7500-20UNEF
16S	1.0000-20UNEF	.391	1.672	2.306	1.609	.562	.969	1.281	.150	1.422	.655		1.134	.8750-20UNEF
16	1.0000-20UNEF	.625	1.906	2.541	1.844	.750	.969	1.281	.150	1.422	.781	.984	1.134	.8750-20UNEF
18	1.1250-18UNEF	.625	1.906	2.666	1.938	.750	1.062	1.375	.177	1.547	.749	.952	1.197	1.0000-20UNEF
20	1.2500-18UNEF	.625	1.906	2.666	1.844	.750	1.156	1.500	.177	1.734	.749	.952	1.448	1.1875-18UNEF
22	1.3750-18UNEF	.625	1.906	2.666	1.938	.750	1.250	1.625	.177	1.859	.749	.952	1.448	1.1875-18UNEF
24	1.5000-18UNEF	.625	1.984	2.745	1.969	.812	1.375	1.750	.177	1.984	.687	.890	1.636	1.4375-18UNEF
28	1.7500-18UNEF	.625	1.984	2.745	2.188	.812	1.562	2.000	.177	2.156	.687	.890	1.636	1.4375-18UNEF
32	2.0000-18UNEF	.625	2.047	3.133	2.157	.875	1.750	2.250	.209	2.531	.593	.796	2.222	1.7500-18UNEF

All dimensions for reference only

# BT-M BT02

## box mounting receptacle

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BT02MA-XX-XXX\*

Z<sup>1</sup> for sizes 16 and 12 contacts

Z<sup>2</sup> for sizes 8 and 4 contacts

\*To complete order number, see page 2.

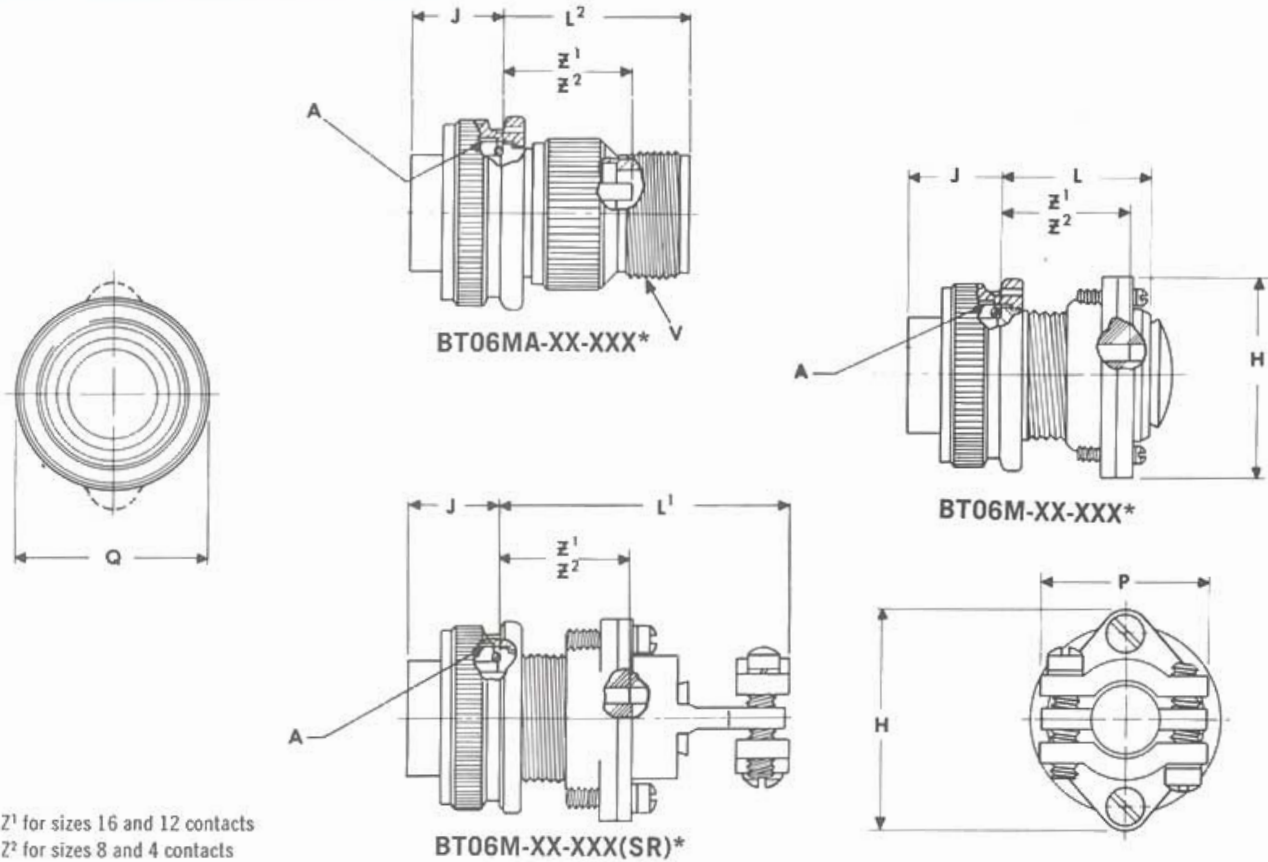
Shell Size	A Thread Class 2A	B Min. Full Thread	L ±.010	M +.016 -.000	R ±.005	S ±.020	T +.004 -.002	Z <sup>1</sup> +.045 -.071	Z <sup>2</sup> +.040 -.066	N Dia. ±.010
10SL	.6250-24UNEF	.391	1.109	.562	.719	1.000	.150	.655		.656
12S	.7500-20UNEF	.391	1.109	.562	.812	1.094	.150	.655		.594
12	.7500-20UNEF	.625	1.344	.750	.812	1.094	.150	.781		.594
14S	.8750-20UNEF	.391	1.109	.562	.906	1.188	.150	.655		.719
14	.8750-20UNEF	.625	1.344	.750	.906	1.188	.150	.781	.984	.719
16S	1.0000-20UNEF	.391	1.109	.562	.969	1.281	.150	.655		.844
16	1.0000-20UNEF	.625	1.344	.750	.969	1.281	.150	.781	.984	.844
18	1.1250-18UNEF	.625	1.344	.750	1.062	1.375	.177	.749	.952	.969
20	1.2500-18UNEF	.625	1.344	.750	1.156	1.500	.177	.749	.952	1.125
22	1.3750-18UNEF	.625	1.344	.750	1.250	1.625	.177	.749	.952	1.250
24	1.5000-18UNEF	.625	1.406	.812	1.375	1.750	.177	.687	.890	1.375
28	1.7500-18UNEF	.625	1.406	.812	1.562	2.000	.177	.687	.890	1.594
32	2.0000-18UNEF	.625	1.469	.875	1.750	2.250	.209	.593	.796	1.844

All dimensions for reference only



# BT-M BT06 straight plug

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Z<sup>1</sup> for sizes 16 and 12 contacts

Z<sup>2</sup> for sizes 8 and 4 contacts

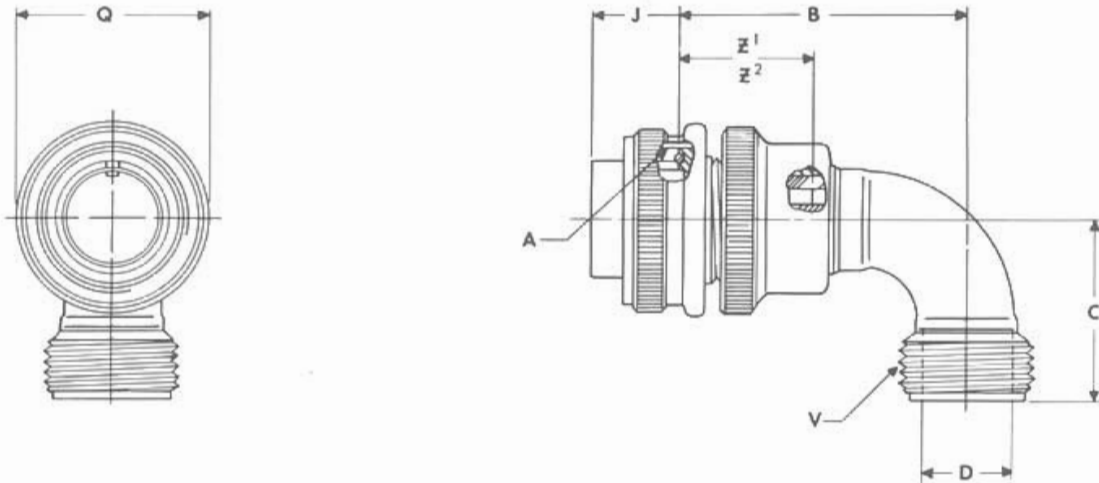
\*To complete order number, see page 2.

Shell Size	H ±.031	A Thread Class 2B	J ±.005	L +.025 -.015	L <sup>1</sup> Max.	L <sup>2</sup> ±.030	P Max.	Q Dia. Max.	Z <sup>1</sup> ±.050	Z <sup>2</sup> ±.045	V Thread Class 2A
10SL	1.297	.6250-24UNEF	.531	1.171	1.812	1.140	.884	.978	.748		.6250-24UNEF
12S	1.110	.7500-20UNEF	.531	1.140	1.812	1.078	.884	1.010	.748		.6250-24UNEF
12	1.110	.7500-20UNEF	.719	1.187	1.797	1.125	.884	1.010	.874		.6250-24UNEF
14S	1.297	.8750-20UNEF	.531	1.140	1.812	1.078	1.010	1.135	.748		.7500-20UNEF
14	1.297	.8750-20UNEF	.719	1.187	1.797	1.125	1.010	1.135	.874	1.077	.7500-20UNEF
16S	1.422	1.0000-20UNEF	.531	1.140	1.812	1.078	1.134	1.260	.748		.8750-20UNEF
16	1.422	1.0000-20UNEF	.719	1.187	1.797	1.125	1.134	1.260	.874	1.077	.8750-20UNEF
18	1.547	1.1250-18UNEF	.719	1.187	1.953	1.219	1.197	1.354	.874	1.077	1.0000-20UNEF
20	1.734	1.2500-18UNEF	.719	1.187	1.953	1.125	1.448	1.479	.874	1.077	1.1875-18UNEF
22	1.859	1.3750-18UNEF	.719	1.187	1.953	1.219	1.448	1.604	.874	1.077	1.1875-18UNEF
24	1.984	1.5000-18UNEF	.719	1.266	2.031	1.251	1.636	1.729	.874	1.077	1.4375-18UNEF
28	2.156	1.7500-18UNEF	.719	1.266	2.031	1.470	1.636	1.979	.874	1.077	1.4375-18UNEF
32	2.531	2.0000-18UNEF	.719	1.326	2.422	1.438	2.222	2.229	.874	1.077	1.7500-18UNEF

All dimensions for reference only

# BT-M BT08 90° plug

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BT08M-XX-XXX\*

Z<sup>1</sup> for sizes 16 and 12 contacts

Z<sup>2</sup> for sizes 8 and 4 contacts

\*To complete order number, see page 2.

Shell Size	A Thread Class 2B	B Max.	D Dia. +.010 -.000	J ±.005	Q Dia. Max.	V Thread Class 2A	Z <sup>1</sup> ±.050	Z <sup>2</sup> ±.045	C ±.020
10SL	.6250-24UNEF	1.384	.375	.531	.978	.6250-24UNEF	.748		.907
12S	.7500-20UNEF	1.453	.375	.531	1.010	.6250-24UNEF	.748		.907
12	.7500-20UNEF	1.500	.375	.719	1.010	.6250-24UNEF	.874		.907
14S	.8750-20UNEF	1.578	.500	.531	1.135	.7500-20UNEF	.748		1.032
14	.8750-20UNEF	1.625	.500	.719	1.135	.7500-20UNEF	.874	1.077	1.032
16S	1.0000-20UNEF	1.734	.625	.531	1.260	.8750-20UNEF	.748		1.188
16	1.0000-20UNEF	1.781	.625	.719	1.260	.8750-20UNEF	.874	1.077	1.188
18	1.1250-18UNEF	1.969	.750	.719	1.354	1.0000-20UNEF	.874	1.077	1.406
20	1.2500-18UNEF	2.062	.875	.719	1.479	1.1875-18UNEF	.874	1.077	1.500
22	1.3750-18UNEF	2.188	1.000	.719	1.604	1.1875-18UNEF	.874	1.077	1.625
24	1.5000-18UNEF	2.438	1.125	.719	1.729	1.4375-18UNEF	.874	1.077	1.812
28	1.7500-18UNEF	2.656	1.250	.719	1.979	1.4375-18UNEF	.874	1.077	2.278
32	2.0000-18UNEF	2.938	1.547	.719	2.229	1.7500-18UNEF	.874	1.077	2.282

All dimensions for reference only

# BT-M

## application tools

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Size	Contacts	Crimp Tool	Locator	Attachment	Turret Hd. Daniels Mfg Corp.	Service Instructions
16	10-407018-159 10-407018-15T 10-101649-16P 10-74670	11-6941-4 MS3191-1 MS3191-4 M22520/1-01	11-6932-40 11-7771-23	Screw 11-7670	W 122 TH 122	L-730, L-406 L-406
16	10-407019-159 10-407019-15T 10-101649-16S 10-74675	11-6941-4 MS3191-1 MS3191-4 M22520/1-01	11-6932-40 11-7771-23	Screw 11-7670	W 122 TH 122	L-730, L-406 L-406
16L	10-407018-169 10-407018-16T 10-101649-17P 10-74661	11-6941 MS3191-1 MS3191-4 M22520/1-01	11-6932-5 11-7771-22	Screw 11-7670	W 122 TH 122	L-730, L-406 L-406
16L	10-407019-169 10-407019-16T 10-101649-17S 10-74663	11-6941 MS3191-1 MS3191-4 M22520/1-01	11-6932-28 11-7771-24	Screw 11-7670	W 122 TH 122	L-730, L-406 L-406
12	10-407018-129 10-407018-12T 10-101649-12P 10-74691	11-6941 MS3191-4 M22520/1-01	11-6932-6	Screw 11-7670	W 122 TH 122	L-730, L-406
12	10-407019-129 10-407019-12T 10-101649-12S 10-74695	11-6941 MS3191-4 M22520/1-01	11-6932-6	Screw 11-7670	W 122 TH 122	L-730, L-406
8	10-407018-89 10-407018-8T 10-101649-8P 10-74665	11-7702-10	11-7740-5	Yoke 11-8444		L-738, L-406
8	10-407019-89 10-407019-8T 10-101649-8S 10-74666	11-7702-10	11-7740-5	Yoke 11-8444		L-738, L-406
4	10-407018-49 10-407018-4T 10-101649-4P 10-74678	11-7702-11	11-7740-5	Yoke 11-8444		L-738, L-406
4	10-407019-49 10-407019-4T 10-101649-4S 10-74684	11-7702-11	11-7740-5	Yoke 11-8444		L-738, L-406

BT-M, BT-MA Tool Data—Reference Assy. Drawing 10-205XXX. Reference Service Instructions L-406.

# BT-RA

## high temperature rear release, rear removable

12

wall mounting receptacle  
with strain relief



straight plug with strain relief

The Bendix BT-RA connector meets the applicable requirements of Class A connectors to MIL-C-5015D and will operate continuously at temperatures up to 1000°F. Intermateability and interchangeability with MIL-C-5015 connectors is assured. This connector series features rear removable crimp type contacts to ease assembly procedures and provides very little change in millivolt drop (contact resistance) during and after exposure to high temperature and vibration.

### COMPONENTS

- Shells and coupling nuts are fabricated from stainless steel to provide durability and resistance to corrosion and high temperature.
- Contacts are machined from nickel and are heavy gold plated for excellent electrical properties at high temperatures.
- Inserts are ceramic moldings and contain spring clips for retaining contacts.

This combination of materials and plating also provides resistance to radiation and oxidation.

### HOW TO ORDER

To more easily illustrate ordering procedure, part number BT06RA-12S-3W (118) is shown as follows:

$\frac{BT}{1}$      $\frac{06}{2}$      $\frac{RA}{3}$     -     $\frac{12S}{4}$     -     $\frac{3}{5}$      $\frac{S}{6}$      $\frac{W}{7}$      $\frac{(118)}{8}$

1. Connector type
2. Shell style  
00 designates wall mount receptacle  
06 designates straight plug
3. Service class
4. Shell size  
10 thru 28 are available (page 13)
5. Insert arrangement  
Complete listing of insert patterns (page 14)
6. Contacts  
P designates pins, S designates sockets
7. Alternate insert rotation (page 13). No letter required for normal rotation.
8. Long contact with insulation cup, if required (pages 15, 16)

# BT-RA

## specifications and insert availability, identification, alternate positions

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### WIRE WELL DATA

Contact Size	Conductor Well Dia.	Conductor Well Depth
16	+ .002	+ .031
	.066 - .000	.250 - .000
12	+ .004	+ .031
	.098 - .000	.250 - .000

### CONTACT RATING

Contact Size	Rated Current	Test Current	Potential Drop Millivolts Max *
16	13	13	30
12	23	23	30

\*Measured end to end.

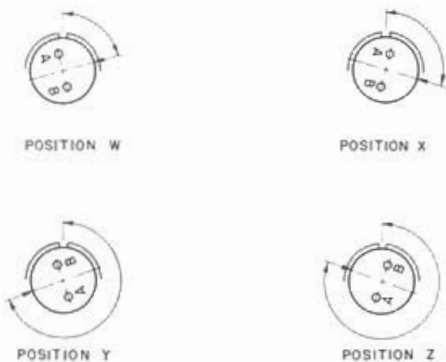
### WIRE WELL DATA (118)

Contact Size	Well Diameter		Well Depth	
	Conductor	Insulation	Conductor	Insulation
16	+ .002	+ .002	+ .037	+ .006
	.066 - .000	.115 - .000	.289 - .000	.247 - .000
12	+ .004	+ .002	+ .037	+ .006
	.098 - .000	.177 - .000	.289 - .000	.247 - .000

### SERVICE RATING

Service Rating	Suggested Operating Voltage (Sea Level)		Test Voltage AC rms
	DC	AC rms	
Inst.	250	200	1000
A	700	500	2000
D	1250	900	2800
E	1750	1250	3500
B	2450	1750	4500
C	4200	3000	7000

### INSERT AVAILABILITY AND IDENTIFICATION — ALTERNATE POSITIONS



Views looking into front face of pin insert or rear of socket insert.

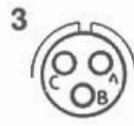
Insert Arrangement	Total Contacts	Contact Size		Service Rating	Alternate Positioning Degrees			
		12	16		W	X	Y	Z
10SL-3	3		3	A	°	°	°	°
10SL-4	2		2	A	°	°	°	°
12S-3	2		2	A	70	145	215	290
12S-10	4		4	Inst.	°	°	°	°
14S-2	4		4	Inst.	°	120	240	°
14S-7	3		3	A	90	180	270	°
16S-1	7		7	A	80	°	°	280
16S-8	5		5	A	°	170	265	°
18-1	10		10	**	70	145	215	290
20-29	17		17	A	80	°	°	280
22-14	19		19	A	80	110	250	280
28-20	14	10	4	A	80	110	250	280
28-21	37		37	A	80	110	250	280

\*Indicated positions are not available.

\*\*B, C, F, G = A, Balance = Inst.

# BT-RA insert arrangements

14



insert arrangement  
number of contacts  
size of contacts  
service rating

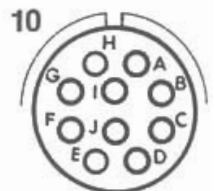
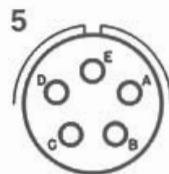
10SL-4  
2  
2, 16  
A

12S-3  
2  
2, 16  
A

10SL-3  
3  
3, 16  
A

14S-7  
3  
3, 16  
A

12S-10  
4  
4, 16  
Inst.



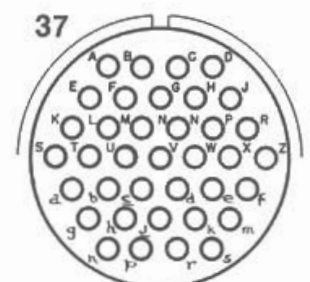
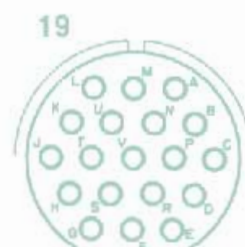
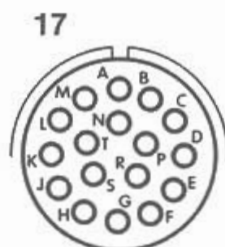
insert arrangement  
number of contacts  
size of contacts  
service rating

14S-2  
4  
4, 16  
Inst.

16S-8  
5  
5, 16  
A

16S-1  
7  
7, 16  
A

18-1  
10  
10, 16  
\*



insert arrangement  
number of contacts  
size of contacts  
service rating

28-20  
14  
10, 12 4, 16  
A

20-29  
17  
17, 16  
A

22-14  
19  
19, 16  
A

28-21  
37  
37, 16  
A

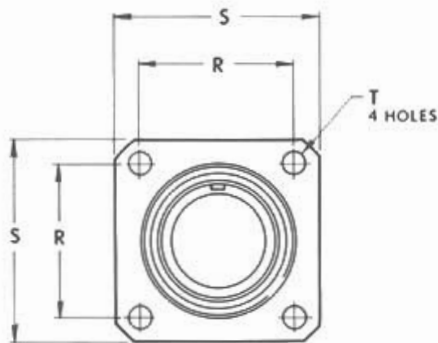
\*B, C, F, G = A, Balance = Inst.

contact legend 12 16

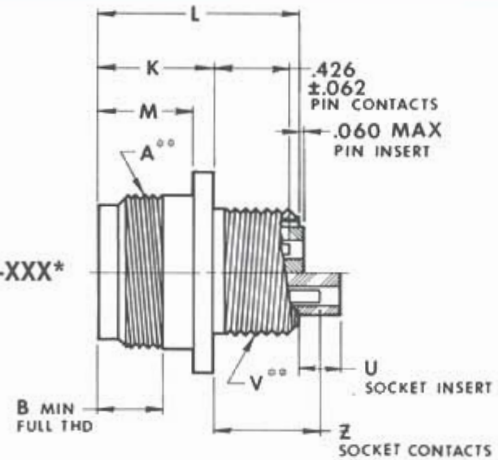
# BT-RA BTOORA

wall mounting receptacle

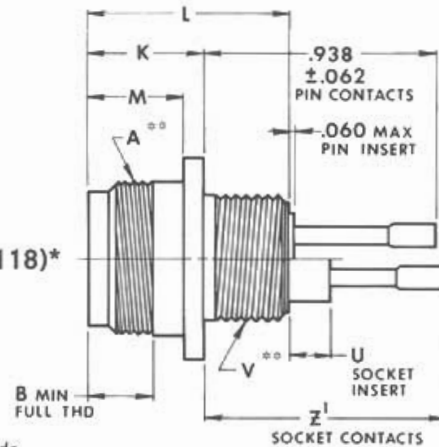
15



BTOORA-XX-XXX\*



BTOORA-XX-XXX(118)\*



Z<sup>1</sup> for sizes 16 and 12 contacts

\*To complete order number, see page 12.

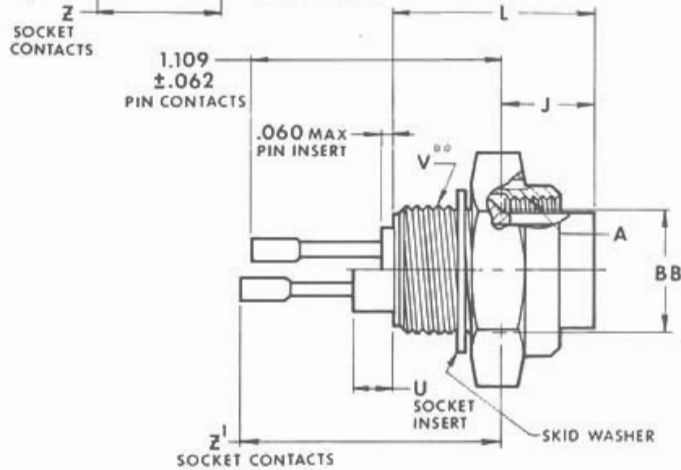
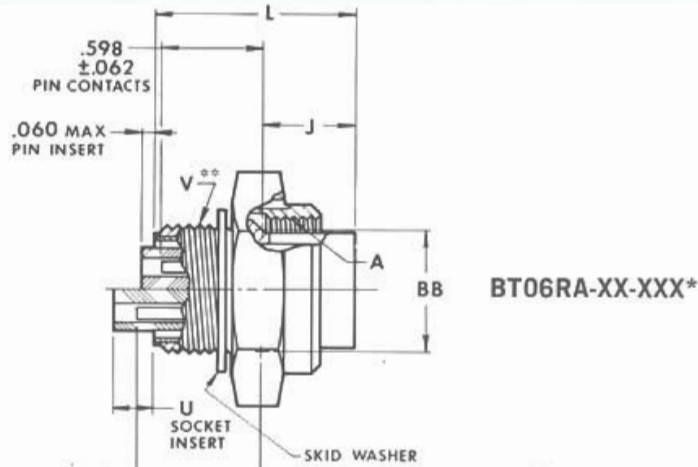
°° Indicated threads have the basic thread form of UNEF-3A and their diameters have been reduced 0.003 inch to prevent galling at high temperature. They will mate with UNEF-2B or UNEF-3B threads.

Shell Size	A Unified Form Special Size	B Min.	K	L ±.016	M +.010 - .000	R ±.005	S ±.020	T Dia. +.004 - .002	U Max.	V - Left Hand Unified Form Special Size	Z ±.062	Z <sup>1</sup> ±.062
10SL	.6250-24	.391	.672	1.156	.562	.719	1.000	.150	.263	.6250-24	.629	1.141
12S	.7500-20	.391	.672	1.156	.562	.812	1.094	.150	.263	.6250-24	.629	1.141
12	.7500-20	.625	.860	1.344	.750	.812	1.094	.150	.075	.6250-24	.442	.953
14S	.8750-20	.391	.672	1.156	.562	.906	1.188	.150	.263	.7500-20	.629	1.141
14	.8750-20	.625	.860	1.344	.750	.906	1.188	.150	.075	.7500-20	.442	.953
16S	1.0000-20	.391	.672	1.156	.562	.969	1.281	.150	.263	.8750-20	.629	1.141
16	1.0000-20	.625	.860	1.344	.750	.969	1.281	.150	.075	.8750-20	.442	.953
18	1.1250-18	.625	.860	1.344	.750	1.062	1.375	.177	.075	1.0000-20	.442	.953
20	1.2500-18	.625	.860	1.344	.750	1.156	1.500	.177	.075	1.1250-18	.442	.953
22	1.3750-18	.625	.860	1.344	.750	1.250	1.625	.177	.075	1.2500-18	.442	.953
24	1.5000-18	.625	.860	1.344	.750	1.375	1.750	.177	.075	1.3750-18	.442	.953
28	1.7500-18	.625	.860	1.344	.750	1.562	2.000	.177	.075	1.6250-18	.442	.953

All dimensions for reference only

# BT-RA BT06RA straight plug

16



Z' for sizes 16 and 12 contacts

\*To complete order number, see page 12.

°° Indicated threads have the basic thread form of UNEF-3A and their diameters have been reduced 0.003 inch to prevent galling at high temperature. They will mate with UNEF-2B or UNEF-3B threads.

Shell Size	A Thread Class 2B	J ±.005	L ±.016	Q Hex	U Max.	V—Left Hand Unified Form Special Size	Z ±.062	Z' ±.062	BB Datum Dia
10SL	.6250-24UNEF	.516	1.156	.875 ± .002	.263	.6250-24	.786	1.297	.490
12S	.7500-20UNEF	.516	1.156	.875 ± .002	.263	.6250-24	.786	1.297	.604
12	.7500-20UNEF	.703	1.344	.875 ± .002	.075	.6250-24	.598	1.109	.604
14S	.8750-20UNEF	.516	1.156	1.000 ± .002	.263	.7500-20	.786	1.297	.729
14	.8750-20UNEF	.703	1.344	1.000 ± .002	.075	.7500-20	.598	1.109	.729
16S	1.0000-20UNEF	.516	1.156	1.125 ± .003	.263	.8750-20	.786	1.297	.854
16	1.0000-20UNEF	.703	1.344	1.125 ± .003	.075	.8750-20	.598	1.109	.854
18	1.1250-18UNEF	.703	1.344	1.250 ± .003	.075	1.0000-20	.598	1.109	.972
20	1.2500-18UNEF	.703	1.344	1.375 ± .003	.075	1.1250-18	.598	1.109	1.097
22	1.3750-18UNEF	.703	1.344	1.500 ± .003	.075	1.2500-18	.598	1.109	1.222
24	1.5000-18UNEF	.703	1.344	1.625 ± .003	.075	1.3750-18	.598	1.109	1.347
28	1.7500-18UNS	.703	1.344	1.875 ± .003	.075	1.6250-18	.598	1.109	1.566

All dimensions for reference only



# BT-RA

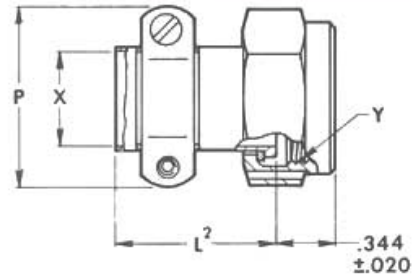
## accessories

### cable clamps

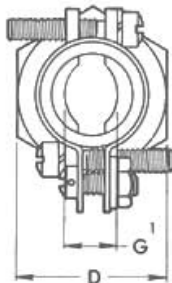
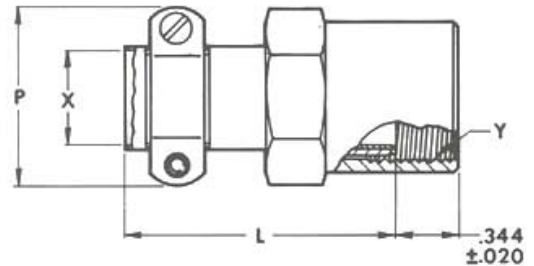
17



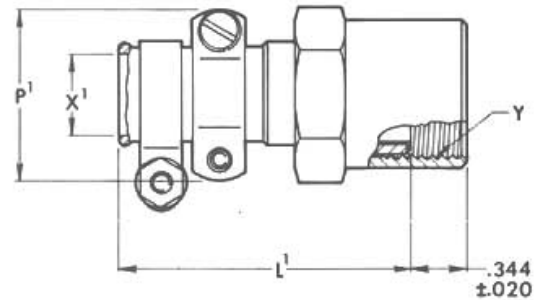
**10-466019-XX\*\***  
straight, no spacer, for non (118) types



**10-466022-XX\***  
straight, with spacer for (118) types



**10-466062-XX\***  
straight, with spacer for (118) types,  
and braid attachment



\*Typical part number. To complete order number add insert arrangement. See page 12.

\*\*Complete order number listed below.

Part Number (118) Type with Spacer	Part Number (118) Type with Spacer & Braid Attach.	Part Number Non (118) Type	Shell Size	D Hex	G Max. Closed	G¹ Max. Closed	L +.030 -.010	L¹ ±.010	L²	P Max.	P¹ Max.	X Dia. Min.	X¹ Dia. Min.	Y Thread (LH) Modified	
														Size Class 2B	Modified Minor Dia.
10-466022	10-466062	10-466019-11	10SL	.750	.342	.248	1.413	1.688		.984	.891	.454	.386	.6250-24UNEF	.588-.593
10-466023	10-466063	10-466019-12	12S	.750	.342	.248	1.413	1.688	.938	.984	.891	.454	.386	.6250-24UNEF	.588-.593
10-466024	10-466064	10-466019-13	12	.750	.342	.248	1.225	1.522	.750	.984	.891	.454	.386	.6250-24UNEF	.588-.593
10-466025	10-466065	10-466019-14	14S	.875	.386	.342	1.413	1.688	.938	1.109	1.000	.531	.490	.7500-20UNEF	.705-.710
10-466026	10-466066	10-466019-15	14	.875	.386	.342	1.225	1.522	.750	1.109	1.000	.531	.490	.7500-20UNEF	.705-.710
10-466027	10-466067	10-466019-16	16S	1.000	.386	.386	1.413	1.688	.938	1.172	1.109	.656	.587	.8750-20UNEF	.830-.835
10-466028	10-466068	10-466019-17	16	1.000	.386	.386	1.225	1.522	.750	1.172	1.109	.656	.587	.8750-20UNEF	.830-.835
10-466029	10-466069	10-466019-18	18	1.125	.580	.480	1.225	1.522	.750	1.422	1.203	.776	.687	1.0000-20UNEF	.955-.960
10-466030	10-466070	10-466019-20	20	1.250	.580	.580	1.225	1.522	.750	1.609	1.422	.931	.823	1.1250-18UNEF	1.080-1.085
10-466031	10-466071	10-466019-22	22	1.375	.718	.580	1.225	1.522	.750	1.703	1.609	1.026	.938	1.2500-18UNEF	1.201-1.206
10-466032	10-466072	10-466019-24	24	1.500	.718	.718	1.225	1.522	.750	1.859	1.703	1.151	1.063	1.3750-18UNEF	1.330-1.335
10-466033	10-466073	10-466019-28	28	1.750	.780	.718	1.225	1.522	.750	2.016	1.891	1.371	1.290	1.6250-18UNEF	1.576-1.581

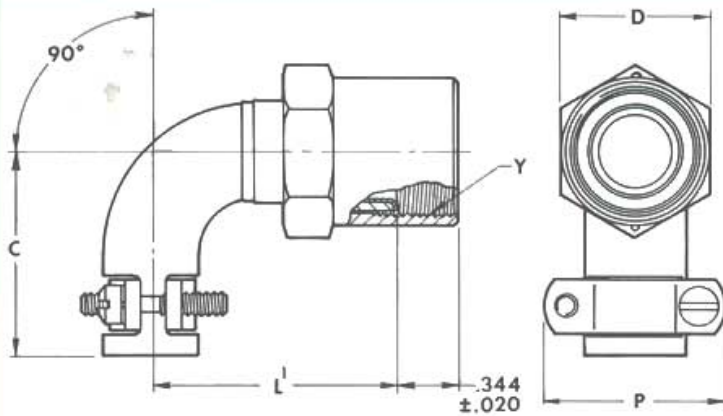
All dimensions for reference only

# BT-RA

## accessories

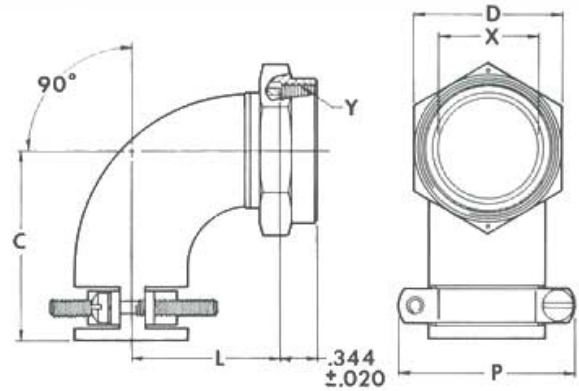
### 90° cable clamps

18



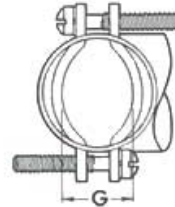
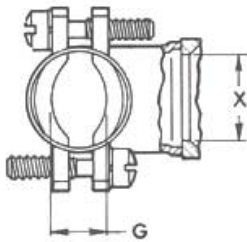
#### 10-466042-XX\*

90° elbow, with spacer for (118) types



#### 10-466018-XX\*\*

90° elbow, no spacer, for non (118) types



\*Typical part number. To complete order number add insert arrangement. See page 12.

\*\*Complete order number listed below.

Part Number (118) Type with Spacer	Part Number Non (118) Type	Shell Size	C	D Hex	G Max. (Closed)	L +.031 -.016	L' ±.031	P Max.	X Dia. Min.	Y Thread (LH) Modified	
										Size Class 2B	Modified Minor Dia.
10-466042	10-466018-11	10SL	1.094	.750	.342	.922	1.453	.984	.386	.6250-24UNEF	.588-.593
10-466043	10-466018-12	12S	1.094	.750	.342	.922	1.453	.984	.386	.6250-24UNEF	.588-.593
10-466044	10-466018-13	12	1.094	.750	.342	.828	1.266	.984	.386	.6250-24UNEF	.588-.593
10-466045	10-466018-14	14S	1.219	.875	.386	1.047	1.578	1.109	.490	.7500-20UNEF	.705-.710
10-466046	10-466018-15	14	1.219	.875	.386	.953	1.391	1.109	.490	.7500-20UNEF	.705-.710
10-466047	10-466018-16	16S	1.281	1.000	.386	1.109	1.641	1.172	.587	.8750-20UNEF	.830-.835
10-466048	10-466018-17	16	1.281	1.000	.386	1.016	1.453	1.172	.587	.8750-20UNEF	.830-.835
10-466049	10-466018-18	18	1.406	1.125	.580	1.188	1.578	1.422	.687	1.0000-20UNEF	.955-.960
10-466050	10-466018-20	20	1.500	1.250	.580	1.281	1.672	1.609	.823	1.1250-18UNEF	1.080-1.085
10-466051	10-466018-22	22	1.625	1.375	.718	1.406	1.797	1.703	.938	1.2500-18UNEF	1.201-1.206
10-466052	10-466018-24	24	1.812	1.500	.718	1.594	1.984	1.859	1.063	1.3750-18UNEF	1.330-1.335
10-466053	10-466018-28	28	2.078	1.750	.780	1.859	2.250	2.016	1.290	1.6250-18UNEF	1.576-1.581

All dimensions for reference only

# BT-RA application tools

19

Contract Part No. (With Insulation Cup)		Buchanan Crimp Tool	Buchanan Positioner	Daniels Crimp Tool	Daniels Turret Head	Bendix		Mil Spec Insertion Removal
						Insertion	Removal	
12P	10-407490-12	11743	7009133	M22520/1-01	TH309			NAS 1664 M83723/31-12
12S	10-407491-12	11743	7009132	M22520/1-01	TH309			NAS 1664 M83723/31-12
16P	10-407490-16	11743	7008568 7008563	M22520/1-01	TH309			NAS 1664 M83723/31-16
16S	10-407491-16	11743	7008569 7008564	M22520/1-01	TH309			NAS 1664 M83723/31-16
16/20P	10-497194-16	11743	7008563	M22520/1-01	TH309			NAS 1664 M83723/31-16
16/20S	10-497195-16	11743	7008564	M22520/1-01	TH309			NAS 1664 M83723/31-16
No Insul. Cup								
12P	10-407422-12	11743				11-8674-12	11-8675-12	NAS 1664 M83723/31-12
12S	10-407423-12	11743				11-8674-12	11-8675-12	NAS 1664 M83723/31-12
16P	10-407422-16	11743	7008571 7008570	M22520/1-01	TH309	11-8674-16	11-8675-16	NAS 1664 M83723/31-16
16S	10-407423-16	11743	7008573 7008572	M22520/1-01	TH309	11-8674-16	11-8675-16	NAS 1664 M83723/31-16
16/20P	10-497088-16	11743	7008570	M22520/1-01	TH309	11-8674-16		NAS 1664 M83723/31-16
16/20S	10-497089-16	11743	7008572	M22520/1-01	TH309	11-8674-16		NAS 1664 M83723/31-16

BT-RA Tool Data — Reference Assy. Drawing 10-4284XX

Buchanan Positioner:

# 7009133 used with wire size 12 and 14  
 # 7009132 used with wire size 12 and 14  
 # 7008568 used with wire size 16 and 18  
 # 7008563 used with wire size 20  
 # 7008569 used with wire size 16 and 18  
 # 7008564 used with wire size 20  
 # 7008563 used with wire size 20 and 22

# 7008564 used with wire size 20 and 22  
 # 7008571 used with wire size 16 and 18  
 # 7008570 used with wire size 20  
 # 7008573 used with wire size 16 and 18  
 # 7008572 used with wire size 20  
 # 7008570 used with wire size 20 and 22  
 # 7008572 used with wire size 20 and 22

# DC

## fluid resistant resilient insert

20

The Bendix DC connector series is approved for DC-8, DC-9, and DC-10 aircraft applications. This family of electrical connectors is designed to meet the applicable requirements of MIL-C-26482 and provides complete mating interchangeability with 3 point bayonet coupling connectors covered by MIL-C-26482. Contacts are crimp type utilizing MIL-C-23216 geometry and MS3190 wire wells.

### COMPONENTS

- Shells and coupling nuts are made from high grade aluminum alloy and are cadmium plated to QQ-P-416 with olive drab chromate after treatment.
- Contacts are machined from high grade copper alloy and are gold plated.
- Resilient inserts, main joint gaskets, and strain relief glands are molded from EPT (Ethylene Propylene Terpolymer) material which exhibits the following characteristics:
  - excellent electrical properties.
  - operating temperature range from  $-65^{\circ}\text{F}$  to  $+300^{\circ}\text{F}$ .
  - resistance to Ozone and Corona.
  - resistance to Skydrol and other synthetic oils, Hydrazine, and Oxydizing acids.
- Resilient O'ring on DC 24 jam nut is molded from a butyl material that exhibits characteristics which are similar to EPT.

### HOW TO ORDER

To more easily illustrate ordering procedure, part number DC26F-10-6PW(SR) less contacts is shown as follows:

DC  $\frac{26}{1}$   $\frac{F}{2}$  -  $\frac{10}{3}$  -  $\frac{6}{4}$   $\frac{P}{5}$   $\frac{W}{6}$   $\frac{(SR)}{7}$   $\frac{\text{less contacts}}{8}$   $\frac{9}{9}$

1. Connector type
2. Shell style
  - 20 designates wall mount receptacle
  - 21 designates cable connecting plug
  - 24 designates jam nut receptacle
  - 26 designates straight plug
3. Service class
  - E — environmental open wire sealing
  - F — environmental open wire sealing with strain relief
4. Shell size
  - 10 thru 22 are available (page 21)
5. Insert arrangements
  - Complete listing of insert patterns (page 22)
6. Contacts
  - P designates pins, S designates sockets
7. Alternate insert rotation (page 21)
8. (SR) Suffix must be specified on class "F" connectors
9. Connector assemblies may be purchased less contacts by so stating



wall mounting receptacle



cable connecting plug



straight plug



jam nut receptacle

# DC

## specifications and insert availability, identification, alternate positions

21

### CONTACT RATING

Contact Size*	Test Current*	Potential Drop Millivolts*
20	7.5	55
16	13	50

\*See requirements per MIL-C-23216

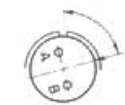
### CRIMP WELL DATA

Contact Size	Wire Well Data	
	20	16
Conductor Well Dia.	+ .002 .048 - .000	+ .002 .066 - .000
Conductor Well Depth	+ .037 .189 - .000	+ .031 .250 - .000
Insulation Well Dia.	+ .002 .091 - .000	Not Applicable
Insulation Well Depth	+ .006 .072 - .000	Not Applicable

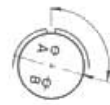
### WORKING VOLTAGE

Service Rating	Maximum Working Voltage			
	Sea Level		70,000 ft.	
	AC rms	DC	AC rms	DC
I	600	840	300	420
II	1000	1400	450	630

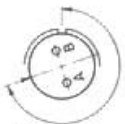
### INSERT AVAILABILITY AND IDENTIFICATION — ALTERNATE POSITIONS



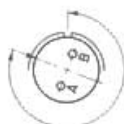
POSITION W



POSITION X



POSITION Y



POSITION Z

Views looking into front face of pin insert or rear of socket insert.

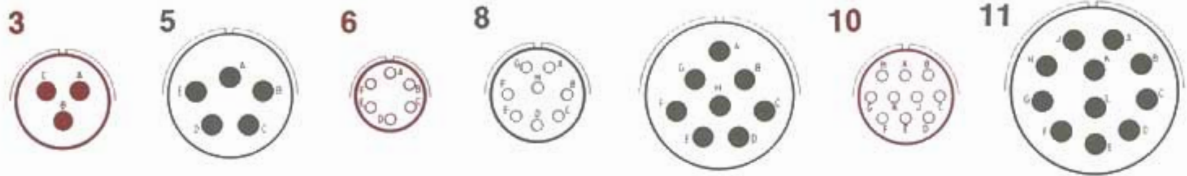
Insert Arrangements	Total Contacts	Contact Size		Service Rating	Alternate Positioning Degrees			
		16	20		W	X	Y	Z
10-6	6		6	I	90	°	°	°
12-3	3	3		II	°	°	180	°
12-8	8		8	I	90	112	203	292
12-10	10		10	I	60	155	270	295
14-5	5	5		II	40	92	184	273
14-15	15	1	14	I	17	110	155	234
14-18	18		18	I	15	90	180	270
14-19	19		19	I	30	165	315	°
16-8	8	8		II	54	152	180	331
16-26	26		26	I	60	°	275	338
18-11	11	11		II	62	119	241	340
18-32	32		32	I	85	138	222	265
20-16	16	16		II	238	318	333	347
20-39	39	2	37	I	63	144	252	333
20-41	41		41	I	45	126	225	°
22-21	21	21		II	16	135	175	349
22-55	55		55	I	30	142	226	314

\*Indicated positions are not available.

# DC insert arrangements

front face of pin inserts illustrated

22



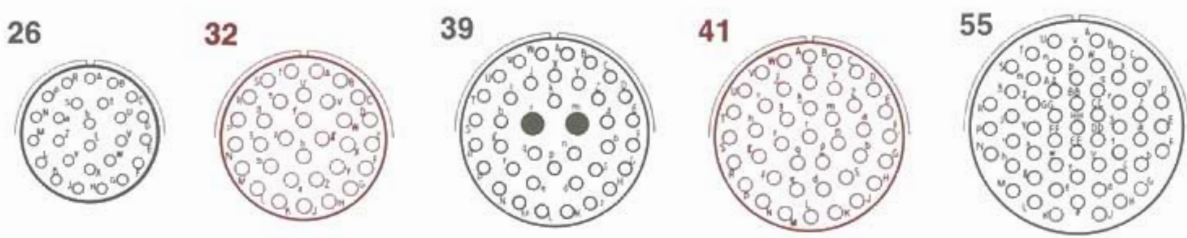
insert arrangement  
number of contacts  
size of contacts  
service rating

<b>3</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>11</b>
12-3	14-5	10-6	12-8	16-8	18-11
3	5	6	8	8	11
3, 16	5, 16	6, 20	8, 20	8, 16	11, 16
II	II	I	I	II	II



insert arrangement  
number of contacts  
size of contacts  
service rating

<b>15</b>	<b>16</b>	<b>18</b>	<b>19</b>	<b>21</b>
14-15	20-16	14-18	14-19	22-21
15	16	18	19	21
1, 16 14, 20	16, 16	18, 20	19, 20	21, 16
I	II	I	I	II



insert arrangement  
number of contacts  
size of contacts  
service rating

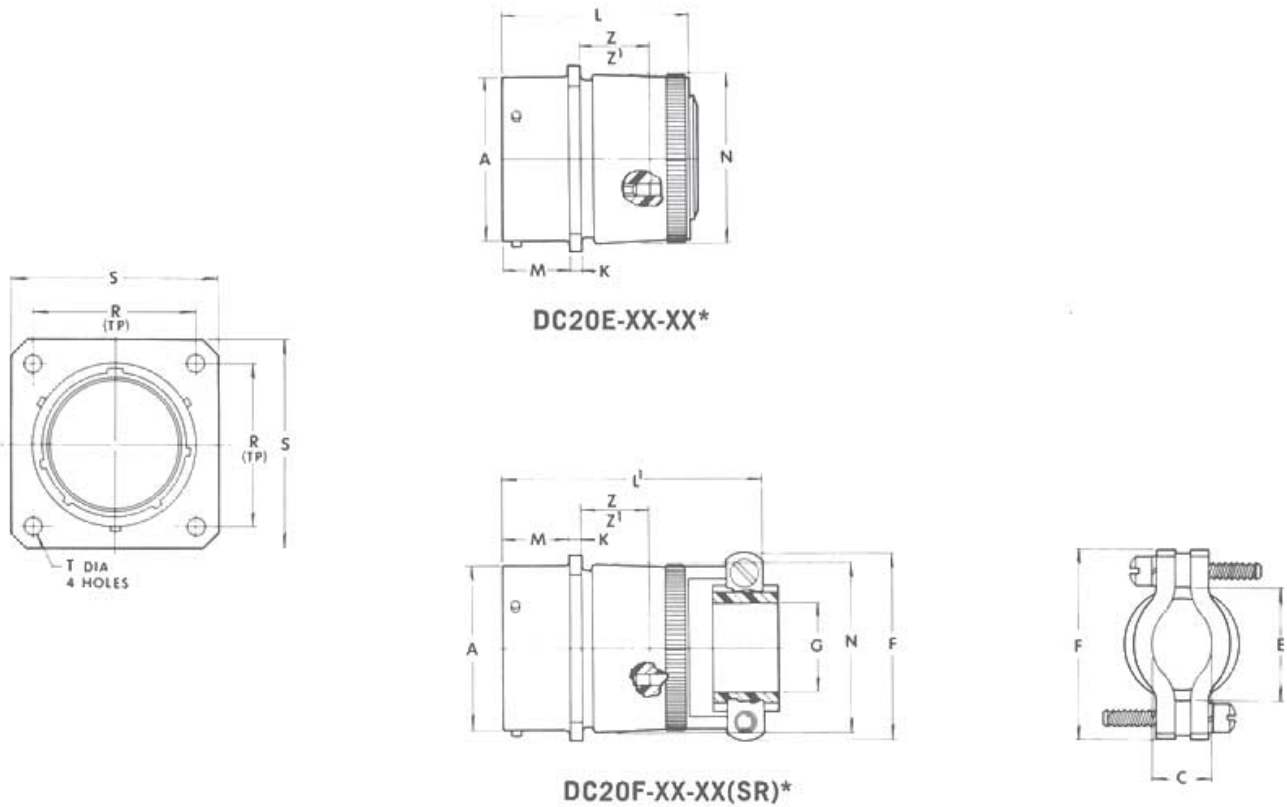
<b>26</b>	<b>32</b>	<b>39</b>	<b>41</b>	<b>55</b>
16-26	18-32	20-39	20-41	22-55
26	32	39	41	55
26, 20	32, 20	2, 16 37, 20	41, 20	55, 20
I	I	I	I	I

● ○  
contact legend 16 20

# DC DC20

## wall mounting receptacle

23



Z for pin contacts  
Z' for socket contacts

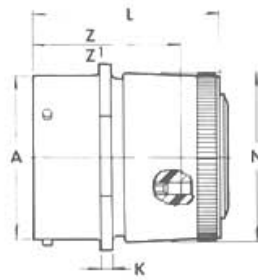
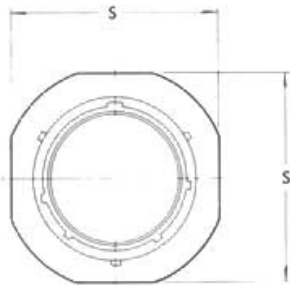
\*To complete order number, see page 20.

Shell Size	A Dia. +.001 -.005	K ±.016	M +.031 -.000	R (TP)	S Max.	T Dia. ±.005	L Max.	N Dia. Max.	L' Max.	F Max.	G +.010 -.025 Dia. Free	E Min.	C Closed Max.	Z ±.055	Z' ±.055
10	.590	.062	.431	.719	.954	.120	1.328	.685	1.922	.891	.188	.297	.187	.509	.443
12	.750	.062	.431	.812	1.047	.120	1.328	.813	1.922	1.016	.312	.422	.281	.509	.443
14	.875	.062	.431	.906	1.141	.120	1.328	.930	1.922	1.141	.375	.547	.325	.509	.443
16	1.000	.062	.431	.969	1.234	.120	1.328	1.057	2.000	1.203	.500	.609	.356	.509	.443
18	1.125	.062	.431	1.062	1.328	.120	1.328	1.175	2.000	1.469	.625	.734	.456	.509	.443
20	1.250	.094	.556	1.156	1.453	.120	1.359	1.301	2.172	1.469	.625	.734	.519	.414	.353
22	1.375	.094	.556	1.250	1.578	.120	1.359	1.428	2.172	1.656	.750	.922	.519	.414	.353

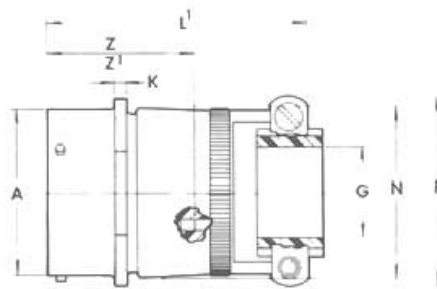
All dimensions for reference only

# DC DC21 cable connecting plug

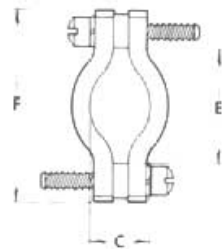
24



DC21E-XX-XX\*



DC21F-XX-XX(SR)\*



Z for pin contacts  
Z' for socket contacts

\*To complete order number, see page 20.

Shell Size	A Dia. +.001 -.005	K ±.016	S Max.	L Max.	N Dia. Max.	L' Max.	G +.010 -.025 Dia. Free	F Max.	Z ±.035	Z' ±.035	E Min.	C Closed Max.
10	.590	.094	.955	1.328	.685	1.922	.188	.891	1.002	.941	.297	.187
12	.750	.094	1.048	1.328	.813	1.922	.312	1.016	1.002	.941	.422	.281
14	.875	.094	1.142	1.328	.930	1.922	.375	1.141	1.002	.941	.547	.325
16	1.000	.094	1.236	1.328	1.057	2.000	.500	1.203	1.002	.941	.609	.356
18	1.125	.094	1.329	1.328	1.175	2.000	.625	1.469	1.002	.941	.734	.456
20	1.250	.115	1.455	1.359	1.301	2.172	.625	1.469	1.064	1.003	.734	.519
22	1.375	.115	1.579	1.359	1.428	2.172	.750	1.656	1.064	1.003	.922	.519

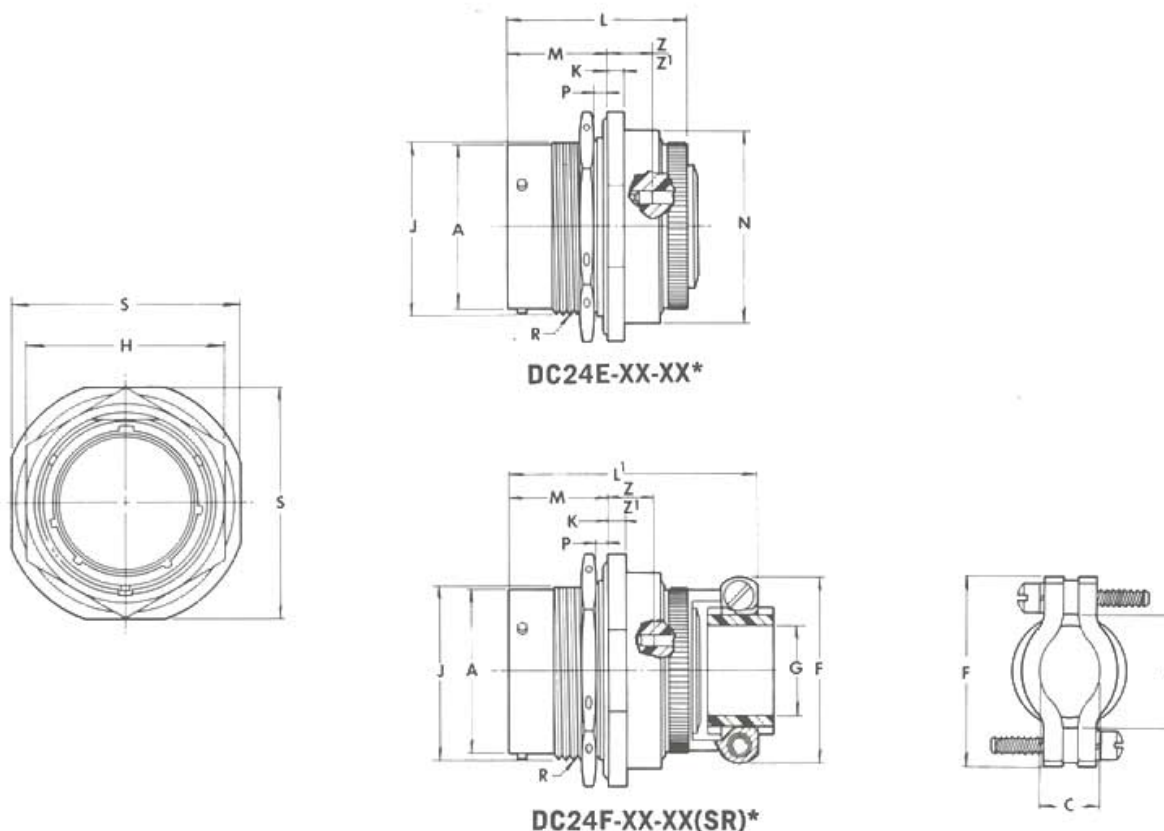
All dimensions for reference only



# DC DC24

## jam nut receptacle

25



Z for pin contacts  
Z' for socket contacts

\*To complete order number, see page 20.

Shell Size	A Dia.	J Flat	K	M	H	Panel Thickness		S	L	N	L'	F	G	E	C	R	Z	Z'
	+ .001 - .005	+ .000 - .010	+ .011 - .010	± .005	Hex Max.	Min.	Max.	Max.	Max.	Max.	Max.	Max.	+ .010 - .025 Dia. Free	Min.	Closed Max.	Thread Class 2A	± .030	± .030
10	.590	.655	.125	.696	.892	.062	.125	1.078	1.438	.874	1.922	.891	.188	.297	.187	.6875-24UNEF	.293	.232
12	.750	.818	.125	.696	1.079	.062	.125	1.266	1.438	.999	1.922	1.016	.312	.422	.281	.8750-20UNEF	.293	.232
14	.875	.942	.125	.696	1.205	.062	.125	1.391	1.438	1.124	1.922	1.141	.375	.547	.325	1.0000-20UNEF	.293	.232
16	1.000	1.066	.125	.696	1.329	.062	.125	1.516	1.438	1.249	2.000	1.203	.500	.609	.356	1.1250-18UNEF	.293	.232
18	1.125	1.191	.125	.696	1.455	.062	.125	1.641	1.438	1.374	2.000	1.469	.625	.734	.456	1.2500-18UNEF	.293	.232
20	1.250	1.316	.156	.884	1.579	.062	.250	1.828	1.625	1.530	2.172	1.469	.625	.734	.519	1.3750-18UNEF	.167	.106
22	1.375	1.441	.156	.884	1.705	.062	.250	1.954	1.625	1.655	2.172	1.656	.750	.922	.519	1.5000-18UNEF	.167	.106

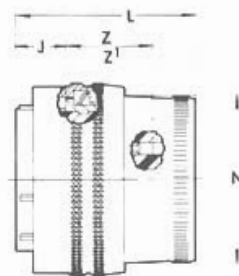
All dimensions for reference only

# DC

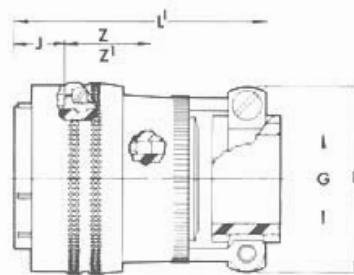
## DC26

### straight plug

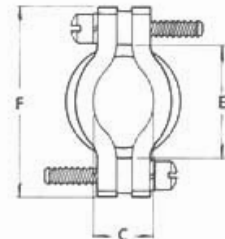
26



DC26E-XX-XX\*



DC26F-XX-XX(SR)\*



Z for pin contacts  
Z' for socket contacts

\*To complete order number, see page 20.

Shell Size	Q Dia. Max.	L Max.	N Max.	L' Max.	G +.010 -.025 Dia. Free	F Max.	E Min.	C Closed Max.	Z ±.045	Z' ±.045	J ±.010
10	.859	1.328	.685	1.922	.188	.891	.297	.187	.640	.579	.353
12	1.031	1.328	.813	1.922	.312	1.016	.422	.281	.640	.579	.353
14	1.156	1.328	.930	1.922	.375	1.141	.547	.325	.640	.579	.353
16	1.281	1.328	1.057	2.000	.500	1.203	.609	.356	.640	.579	.353
18	1.391	1.328	1.175	2.000	.625	1.469	.734	.456	.640	.579	.353
20	1.531	1.297	1.301	2.109	.625	1.469	.734	.519	.578	.517	.415
22	1.656	1.297	1.428	2.109	.750	1.656	.922	.519	.578	.517	.415

All dimensions for reference only

# DC application tools

27

Size	Contact	Crimp Tool	Turret Head	Insertion Tool	Removal Tool
20	Pin 10-314980-20P Socket 10-257982-20F	11-7295 Buchanan Crimp Tool 11148* MS3191-4 M22520/1-01	MS3191-3T M22520/1-02	11-8107-20 11-7401-20	11-7880-20
20/16WW	Pin 10-330930-20F Socket 10-330931-20F	11-7295 with special positioner 11-7758 MS3191-4 M22520/1-01	MS3191-3T M22520/1-02	11-8107-16 11-7401-16	11-7880-20
16	Pin 10-314980-16P Socket 10-257982-16F	11-7295 Buchanan Crimp Tool 11148* MS3191-4 M22520/1-01	MS3191-3T M22520/1-02	11-8107-16 11-7401-16	11-7880-16
16/20WW	Pin 10-330932-16F Socket 10-330933-16F	11-7295 with special positioner 11-7757 MS3191-4 M22520/1-01	MS3191-3T M22520/1-02	11-8107-20 11-7401-20	11-7880-16

DC Tool Data—Typical Assy. Drawing 71-452100 thru 71-452114. Reference Service Instructions L-729, L-730, L-740, MG-1113.

\*This is Buchanan Automatic Crimp Tool. Contacts are supplied in reels.

# 10-244

## operating temperature up to 400°

28

Bendix 10-244 type connectors have been specifically designed for aircraft engine compartment applications.

The combination of fluoroelastomer resilient parts, gray anodized hardware, and rhodium plated crimp contacts enables the connector to withstand operating temperatures up to 400°F.

### COMPONENTS

- The plug shells are machined from high grade aluminum alloy and the receptacle shells are die cast aluminum. This combination provides plugs with greater strength. All aluminum parts incorporate a gray anodized finish which provides added corrosion resistance.
- All of the resilient components are molded from a specially formulated fluoroelastomer compound which is highly resistant to turbine oils, kerosene and JP-4. This material will provide satisfactory operation when subjected to splashing conditions of Skydrol 500.
- All connectors employ crimp type copper alloy rhodium plated contacts which are supplied with the connector. Nylon pilot pins are also supplied to aid in the insertion of the socket contacts.

### HOW TO ORDER

To more easily illustrate ordering procedure, part number 10-244218-1P is shown as follows:

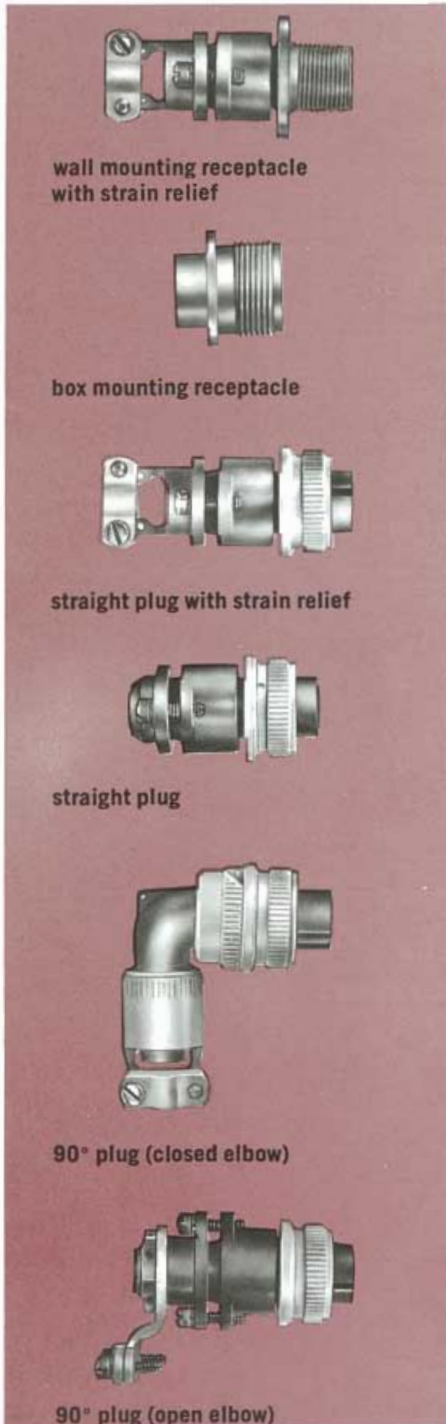
$$\frac{10-2442}{1} \quad \frac{18}{2} \quad - \quad \frac{1}{3} \quad \frac{P}{4}$$

1. Connector type and shell style (pages 33-37)
2. Shell size  
8 thru 28 (page 30)
3. Insert arrangement  
Complete listing of insert patterns (pages 31, 32)
4. Contact type and insert rotation (page 30)  
P for pins, S for sockets in a normal rotation

When an alternate position of the insert is required, this is indicated by adding another letter such as "W" to the ordering number listed. However, due to the limitations in our data processing equipment, this additional letter cannot be processed by the equipment. Therefore, when alternate insert location is desired, select from the table below the one letter that indicates both the type of contacts and the insert location required and add it to the order number.

MS Letters	Bendix Letters	MS Letters	Bendix Letters
PW	G	SW	H
PX	I	SX	J
PY	K	SY	L
PZ	M	SZ	N

The order number for a 10-2442XX-XXX mounting receptacle in shell size 18 with an MS arrangement of 18-1 with pin contacts and with the insert located in alternate position "W" would be: 10-244218-1G.



wall mounting receptacle  
with strain relief

box mounting receptacle

straight plug with strain relief

straight plug

90° plug (closed elbow)

90° plug (open elbow)

# 10-244 specifications

29

## CONTACT PART NUMBERS

Size	Pin Contact	Socket Contact
16 (Long)	10-229192-166	10-229193-166
16 (Short)	10-229192-156	10-229193-156
12	10-229192-126	10-229193-126
8	10-229192-86	10-229193-86

## PILOT PINS

Size	Part No.
12	10-242758-12
16	10-242758-16
8	10-242758-8

## WIRE WELL DATA

Contact Size	8	12	16
Well Dim.	+ .004 .179 - .002	+ .004 .098 - .000	+ .004 .063 - .000
Well Depth	.500	.250	.250
+ .031 - .000			

## CONTACT RATING

Contact Size	Rated Current	Test Current	Potential Drop Millivolts Max.*
16	13	13	35
12	23	23	30
8	46	46	25

\*End to end.

## CONTACT ARRANGEMENT SERVICE RATING

MS Service	Recommended Operating Voltage at Sea Level		Test Voltage AC rms
	DC	AC rms	
Inst.	250	200	1000
A	700	500	2000
D	1250	900	2800
E	1750	1250	3500
B	2450	1750	4500
C	4200	3000	7000

# 10-244

## insert availability identification alternate positions

30

Insert Arrangement	Total Contacts	Insert		Contact Size				Service Rating	Grommet			Alternate Positioning Degrees			
		Pin	Socket	4	8	12	16		90° Plug (Closed)	Wall Mt. Rec. Str. Plug	90° Plug (Open)	W	X	Y	Z
8S-1	1		X				1	A				*	*	*	*
10S-2	1		X				1	A	X	X		*	*	*	*
10SL-3	3	X	X				3	A	X	X	X	*	*	*	*
10SL-4	2	X	X				2	A	X	X		*	*	*	*
12S-3	2	X	X				2	A	X	X	X	70	145	215	290
14S-2	4	X	X				4	Inst.	X	X		*	120	240	*
14S-5	5	X	X				5	Inst.	X	X	X	*	110	*	*
14S-6	6	X	X				6	Inst.		X		*	*	*	*
14S-7	3	X	X				3	A	X						
14S-9	2	X	X				2	A	X	X	X	70	145	215	290
16S-1	7	X	X				7	A	X	X		80	*	*	280
16S-8	5	X	X				5	A	X	X		*	170	265	*
16-11	2	X	X			2		A		X		35	110	250	325
16-13	2	X	X			2		A		X		35	110	250	325
18-1	10	X	X				10	**	X	X		70	145	215	290
18-4	4	X	X				4	D		X		35	110	250	325
18-8	8		X			1	7	A		X		70	*	*	290
18-12	6	X	X				6	A		X		80	*	*	280
18-19	10	X	X				10	A	X	X		*	120	240	*
18-22	3		X				3	D	X			70	145	215	290
20-15	7	X	X			7		A				80	*	*	280
20-27	14	X	X				14	A		X		35	110	250	325
20-29	17	X	X				17	A	X	X		80	*	*	280
22-14	19	X	X				19	A		X		80	110	250	280
22-19	14	X	X				14	A	X			80	110	250	280
22-22	4		X		4			A		X		*	110	250	*
22-28	7		X			7		A		X		80	*	*	280
24-2	7		X			7		D		X		80	*	*	280
24-22	4	X	X		4			D		X		45	110	250	*
28-2	14	X	X			2	12	D		X		35	110	250	325
28-9	12	X	X			6	6	D		X		80	110	250	280
28-11	22		X			4	18	A		X		80	110	250	280
28-21	37	X	X				37	A		X		80	110	250	280
28-22	6		X	3			3	D		X		70	145	215	290

\*Indicated positions are not available.

\*\*B, C, F, G = A, Balance = Inst.

# 10-244

## insert arrangements

front face of pin inserts illustrated

31

1



8S-1  
1  
1, 16  
A

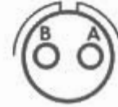


10S-2  
1  
1, 16  
A

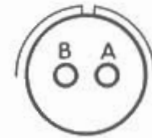
2



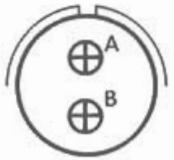
10SL-4  
2  
2, 16  
A



12S-3  
2  
2, 16  
A

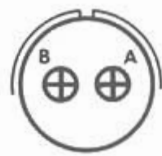


14S-9  
2  
2, 16  
A



16-11  
2  
2, 12  
A

insert arrangement  
number of contacts  
size of contacts  
service rating



16-13  
2  
2, 12  
A

3



10SL-3  
3  
3, 16  
A

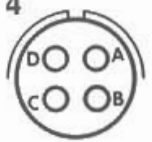


14S-7  
3  
3, 16  
A



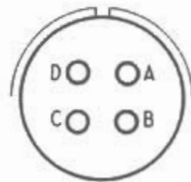
18-22  
3  
3, 16  
D

4

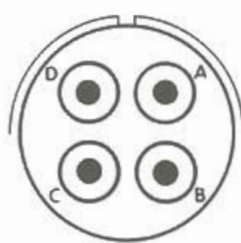


14S-2  
4  
4, 16  
Inst.

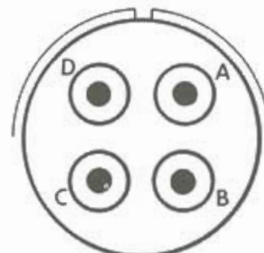
insert arrangement  
number of contacts  
size of contacts  
service rating



18-4  
4  
4, 16  
D



22-22  
4  
4, 8  
A



24-22  
4  
4, 8  
D

5



14S-5  
5  
5, 16  
Inst.



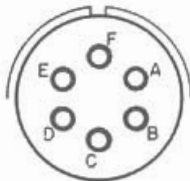
10S-8  
5  
5, 16  
A

insert arrangement  
number of contacts  
size of contacts  
service rating

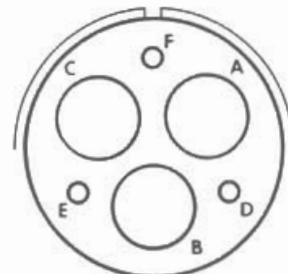
6



14S-6  
6  
6, 16  
Inst.



18-12  
6  
6, 16  
A



28-22  
6  
3, 4 3, 16  
D

7



16S-1  
7  
7, 16  
A



20-15  
7  
7, 12  
A

insert arrangement  
number of contacts  
size of contacts  
service rating

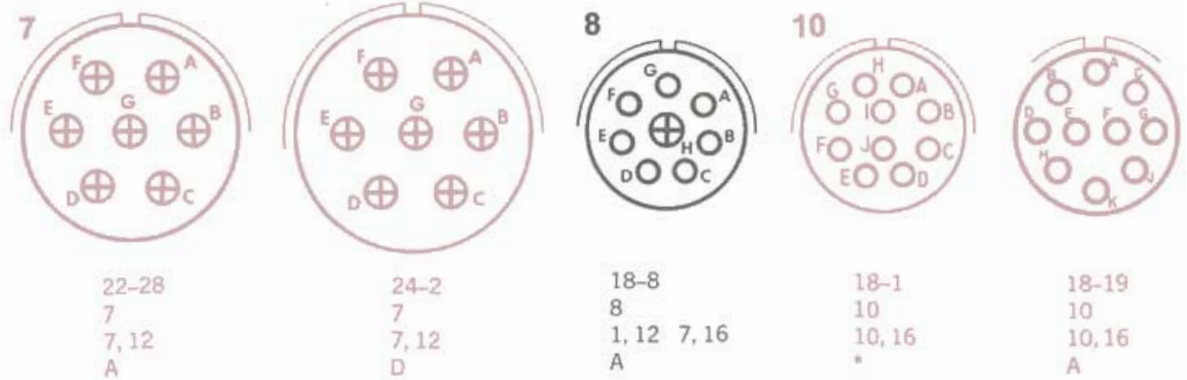


# 10-244

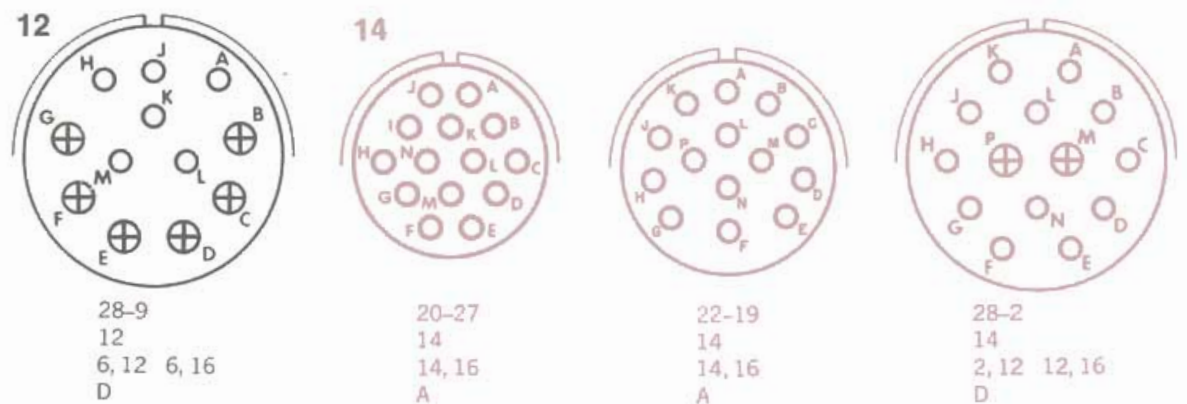
## insert arrangements (continued)

front face of pin inserts illustrated

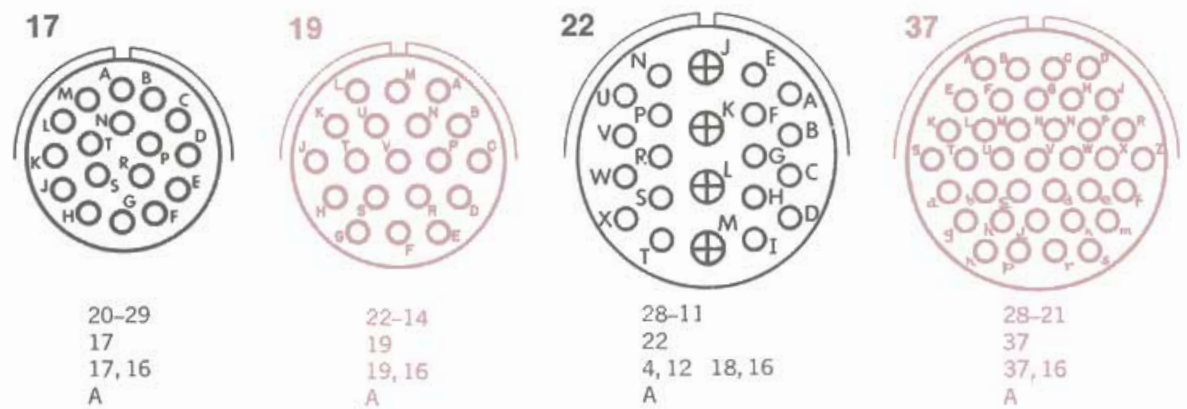
32



insert arrangement  
number of contacts  
size of contacts  
service rating



insert arrangement  
number of contacts  
size of contacts  
service rating



insert arrangement  
number of contacts  
size of contacts  
service rating

\*B, C, F, G = A, Balance = Inst.

contact legend 12 16

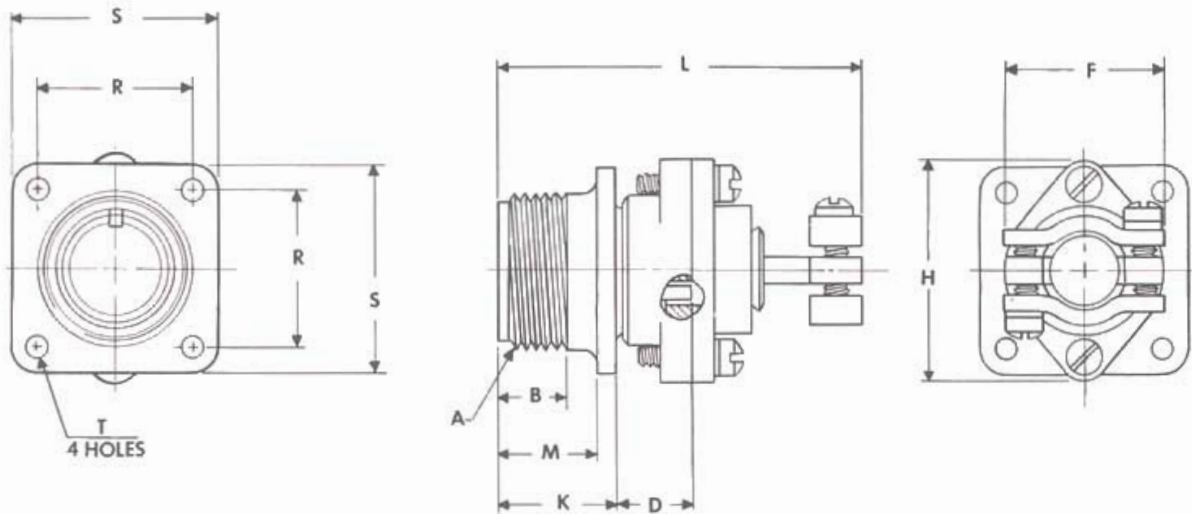


# 10-244

# 10-2440

## wall mounting receptacle

33



10-2440XX-XX\*

\*To complete order number, see page 28.

\*For insert and grommet availability, see page 30.

Order Number	Shell Size	A Thread Class 2A	B Min. Full Thread	F Max.	H Max.	K +.020 -.010	L Max.	M +.010 -.000	R ±.005	S	T Dia. +.004 -.002	D ±.060
10-244010	10S	.6250-24NEF	.391	.775	1.026	.672	2.192	.562	.719	1.000	.120	.469
10-244011	10SL	.6250-24NEF	.391	.837	1.120	.672	2.192	.562	.719	1.000	.120	.469
10-244012	12S	.7500-20UNEF	.450	.837	1.120	.672	2.192	.562	.812	1.094	.120	.469
10-244013	12	.7500-20UNEF	.625	.837	1.120	.860	2.536	.750	.812	1.094	.120	.672
10-244014	14S	.8750-20UNEF	.450	.963	1.307	.672	2.192	.562	.906	1.188	.120	.469
10-244015	14	.8750-20UNEF	.625	.963	1.307	.860	2.536	.750	.906	1.188	.120	.672
10-244016	16S	1.0000-20UNEF	.450	1.087	1.432	.672	2.192	.562	.969	1.281	.120	.469
10-244017	16	1.0000-20UNEF	.625	1.087	1.432	.860	2.536	.750	.969	1.281	.120	.672
10-244018	18	1.1250-18NEF	.625	1.150	1.557	.891	2.661	.750	1.062	1.375	.120	.641
10-244020	20	1.2500-18NEF	.625	1.399	1.744	.891	2.661	.750	1.156	1.500	.120	.641
10-244022	22	1.3750-18NEF	.625	1.399	1.869	.891	2.661	.750	1.250	1.625	.120	.641
10-244024	24	1.5000-18NEF	.625	1.587	1.994	.953	2.739	.812	1.375	1.750	.147	.578

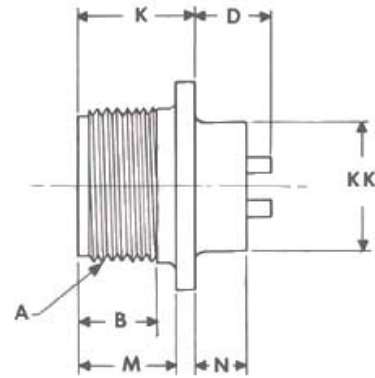
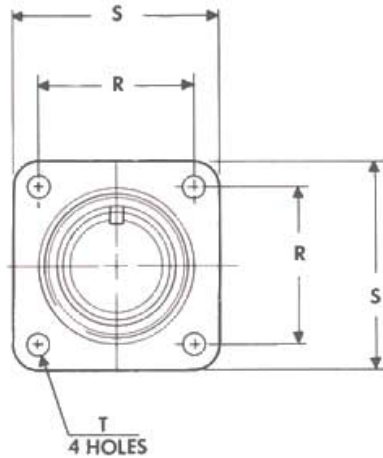
All dimensions for reference only

# 10-244

# 10-2442

## box mounting receptacle

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10-2442XX-XX\*

\*To complete order number, see page 28.

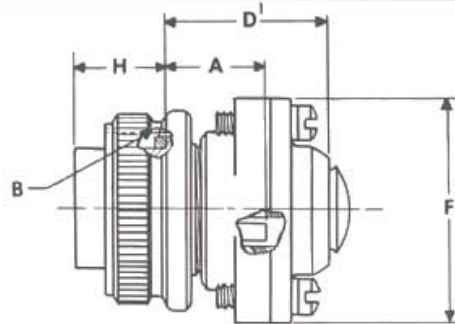
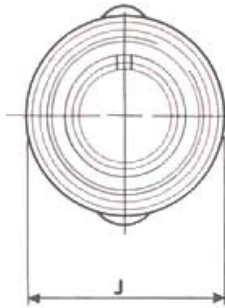
\*For insert and grommet availability, see page 30.

Order Number	Shell Size	A Thread Class 2A	B Min. Full Thread	K +.020 -.010	M +.010 -.000	N +.000 -.010	R ± .005	S	T Dia. +.004 -.002	D +.050 -.060	KK Dia. +.010 -.000
10-244210	10S	.6250-24NEF	.391	.672	.562	.297	.719	1.000	.120	.679	.500
10-244211	10SL	.6250-24NEF	.391	.672	.562	.297	.719	1.000	.120	.679	.625
10-244212	12S	.7500-20UNEF	.450	.672	.562	.297	.812	1.094	.120	.679	.625
10-244213	12	.7500-20UNEF	.625	.860	.750	.484	.812	1.094	.120	.672	.625
10-244214	14S	.8750-20UNEF	.450	.672	.562	.297	.906	1.188	.120	.679	.750
10-244215	14	.8750-20UNEF	.625	.860	.750	.484	.906	1.188	.120	.672	.750
10-244216	16S	1.0000-20UNEF	.450	.672	.562	.297	.969	1.281	.120	.679	.875
10-244217	16	1.0000-20UNEF	.625	.860	.750	.484	.969	1.281	.120	.672	.875
10-244218	18	1.1250-18NEF	.625	.891	.750	.453	1.062	1.375	.120	.641	1.000
10-244220	20	1.2500-18NEF	.625	.891	.750	.453	1.156	1.500	.120	.641	1.125
10-244222	22	1.3750-18NEF	.625	.891	.750	.453	1.250	1.625	.120	.641	1.250

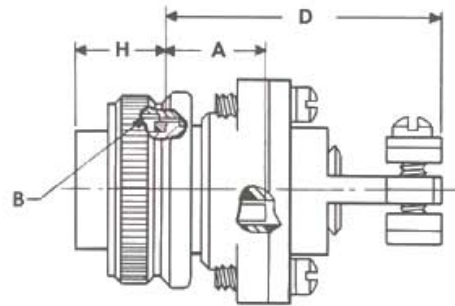
All dimensions for reference only

# 10-244 10-2446 straight plug

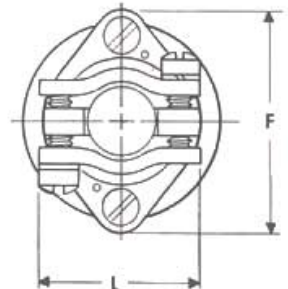
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10-2625XX-XX\*



10-2446XX-XX\*



\*To complete order number, see page 28.

\*For insert and grommet availability, see page 30.

ORDER NUMBER		Shell Size	A ±.045	B Thread Class 2B	D Max.	D' Max.	H ±.005	J Dia. Max.	F Dia. Max.	L Max.
Without Strain Relief	With Strain Relief									
10-262581	10-244610	10S	.609	.6250-24UNEF	1.661	1.057	.531	.869	1.026	.775
10-262582	10-244611	10SL	.609	.6250-24UNEF	1.661	1.057	.531	.945	1.120	.837
10-262583	10-244612	12S	.609	.7500-20UNEF	1.661	1.057	.531	.995	1.120	.837
10-262584	10-244613	12	.812	.7500-20UNEF	1.817	1.212	.719	.995	1.120	.837
10-262585	10-244614	14S	.609	.8750-20UNEF	1.661	1.057	.531	1.123	1.307	.963
10-262586	10-244615	14	.812	.8750-20UNEF	1.817	1.212	.719	1.123	1.307	.963
10-262587	10-244616	16S	.609	1.0000-20UNEF	1.661	1.057	.531	1.250	1.432	1.087
10-262588	10-244617	16	.812	1.0000-20UNEF	1.942	1.212	.719	1.250	1.432	1.087
10-262589	10-244618	18	.812	1.1250-18UNEF	1.942	1.212	.719	1.333	1.557	1.150
10-262590	10-244620	20	.812	1.2500-18UNEF	1.942	1.212	.719	1.461	1.744	1.399
10-262591	10-244622	22	.812	1.3750-18UNEF	1.942	1.212	.719	1.588	1.869	1.399
10-262592	10-244624	24	.812	1.5000-18UNEF	2.021	1.291	.719	1.715	1.994	1.587
10-262593	10-244628	28	.812	1.7500-18UNS	2.021	1.291	.719	1.968	2.166	1.587

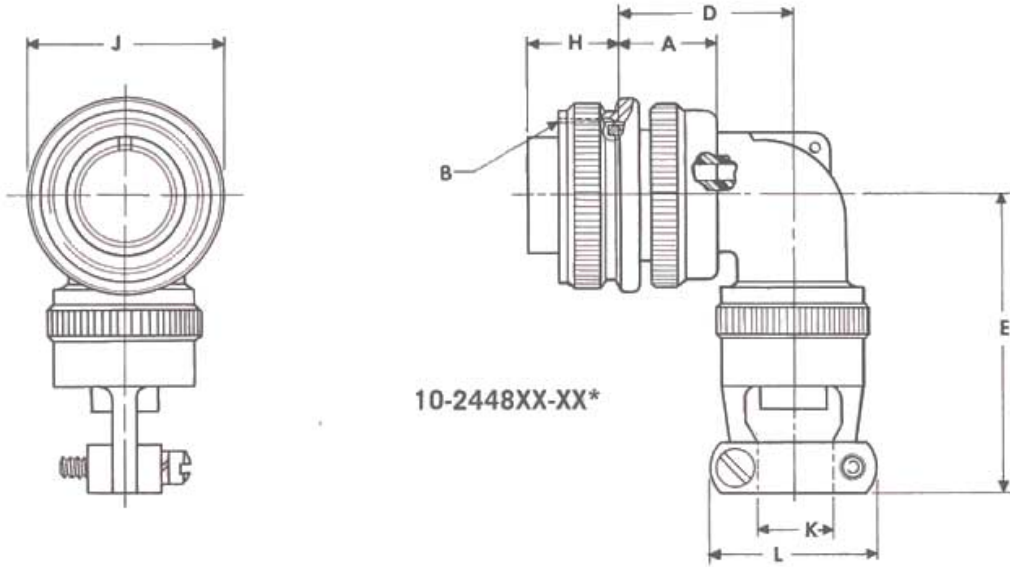
All dimensions for reference only

# 10-244

# 10-2448

## 90° plug (closed)

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\*To complete order number, see page 28.

\*For insert and grommet availability, see page 30.

Order Number	Shell Size	A ±.045	B Thread Class 2B	D Max.	E Max.	H ±.005	J Dia. Max.	K Dia.	L Max.
10-244810	10S	.609	.6250-24UNEF	.927	1.706	.531	.869	.250	.775
10-244811	10SL	.609	.6250-24UNEF	.951	1.769	.531	.945	.312	.837
10-244812	12S	.609	.7500-20UNEF	.956	1.769	.531	.995	.312	.837
10-244813	12	.812	.7500-20UNEF	1.143	1.769	.719	.995	.312	.837
10-244814	14S	.609	.8750-20UNEF	1.020	1.831	.531	1.123	.438	.963
10-244815	14	.812	.8750-20UNEF	1.207	1.831	.719	1.123	.438	.963
10-244816	16S	.609	1.0000-20UNEF	1.146	1.894	.531	1.250	.562	1.087
10-244817	16	.812	1.0000-20UNEF	1.333	1.894	.719	1.250	.562	1.087
10-244818	18	.812	1.1250-18UNEF	1.395	2.099	.719	1.333	.625	1.150
10-244820	20	.812	1.2500-18UNEF	1.598	2.224	.719	1.461	.750	1.400
10-244822	22	.812	1.3750-18UNEF	1.598	2.286	.719	1.588	.750	1.400

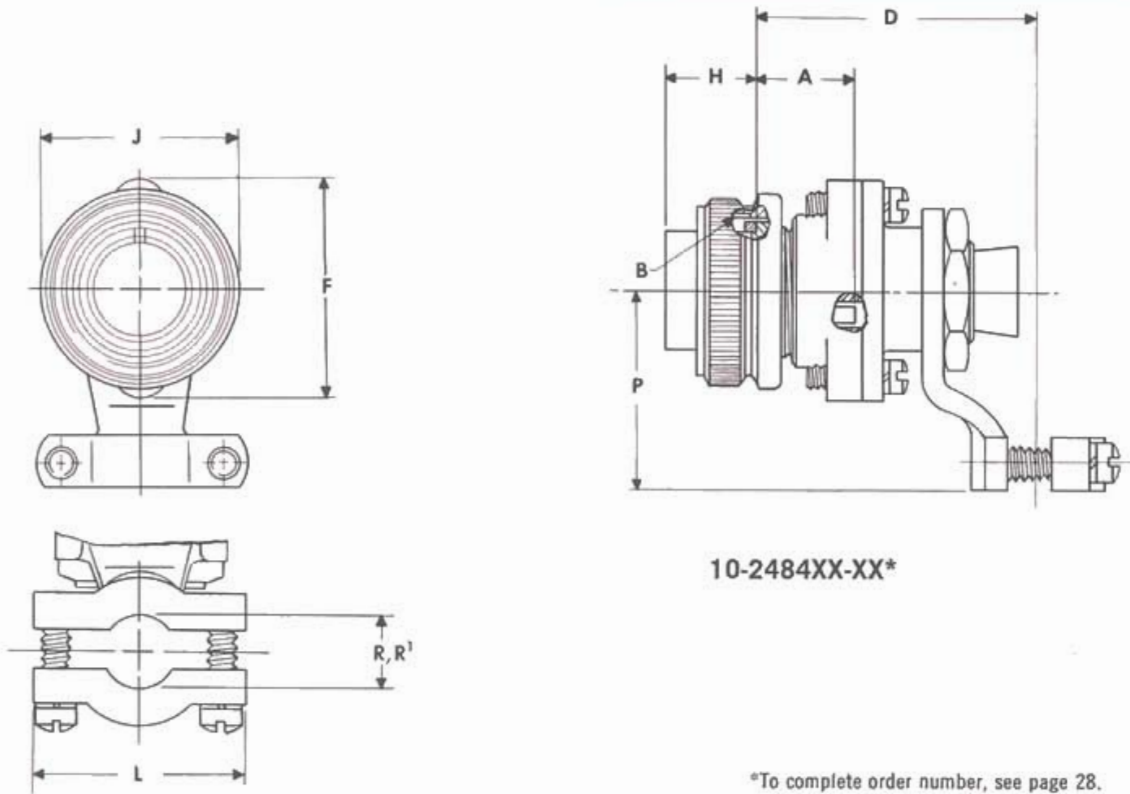
All dimensions for reference only

# 10-244

# 10-2484

## 90° plug (open)

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10-2484XX-XX\*

\*To complete order number, see page 28.

\*For insert and grommet availability, see page 30.

Order Number	Shell Size	A ±.045	B Thread Class 2B	D Max.	F Dia. Max.	H ±.005	J Dia. Max.	L Max.	P Max.	R Max. Cable	R <sub>1</sub> Min. Cable
10-248481	10S	.609	.6250-24UNEF	1.463	1.026	.531	.869	.755	1.016	.172	.082
10-248482	10SL	.609	.6250-24UNEF	1.463	1.120	.531	.946	.817	1.078	.281	.114
10-248483	12S	.609	.7500-20UNEF	1.518	1.120	.531	.995	.817	1.078	.281	.114
10-248484	12	.812	.7500-20UNEF	1.674	1.120	.719	.995	.817	1.078	.281	.114
10-248485	14S	.609	.8750-20UNEF	1.674	1.307	.531	1.123	.943	1.203	.406	.176
10-248486	14	.812	.8750-20UNEF	1.830	1.307	.719	1.123	.943	1.203	.406	.176
10-248487	16S	.609	1.0000-20UNEF	1.731	1.432	.531	1.250	1.067	1.265	.500	.238
10-248488	16	.812	1.0000-20UNEF	1.883	1.432	.719	1.250	1.067	1.265	.500	.238
10-248489	18	.812	1.1250-18UNEF	1.933	1.557	.719	1.333	1.149	1.328	.531	.208
10-248490	20	.812	1.2500-18UNEF	2.025	1.744	.719	1.461	1.399	1.359	.656	.302
10-248491	22	.812	1.3750-18UNEF	2.072	1.869	.719	1.588	1.399	1.421	.750	.302

All dimensions for reference only

# 10-244 application tools

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Size	Contacts	Pilot Pins	Crimp Tool	Turret Hd. Daniels Mig. Corp.	Turret Hd. Buchanan	Positioner	Insertion Tool	Removal Tool
16L	Pin 10-229192-166 See Ser. Inst. L-722 & L-729	10-242758-16	MS3191-1	W 296 TH 296	616266	*11-7771-3	11-7345	11-8475 or 11-8250
	MS3191-4 M22520/1-01		*11-7771-2					
16S	Socket 10-229193-166 See Ser. Inst. L-722 & L-729	10-242758-16	MS3191-1	W 296 TH 296	616266	*11-7771-1	11-7345	11-8475 or 11-8250
	MS3191-4 M22520/1-01		*11-7771-1					
12	Pin 10-229192-126 See Ser. Inst. L-722 & L-729	10-242758-12	MS3191-1	W 296 TH 296	616266	*11-7771-4	11-7082	11-8475 or 11-8250
	MS3191-4 M22520/1-01		*11-7771-4					
8	Socket 10-229193-126 See Ser. Inst. L-722 & L-729	10-242758-12	MS3191-1	W 296 TH 296	616266		11-7082	11-8475 or 11-8250
	MS3191-4 M22520/1-01							
8	Pin 10-229192-86 See Ser. Inst. L-738 & L-722	10-242758-8	11-7838-1				11-8220	11-8250
	and locator 11-7740-5							
8	Socket 10-229193-86 See Ser. Inst. L-738 & L-722	10-242758-8	11-7838-1				11-8220	11-8250
	and locator 11-7740-5							

\*Use with MS3191-1 Crimp Tool

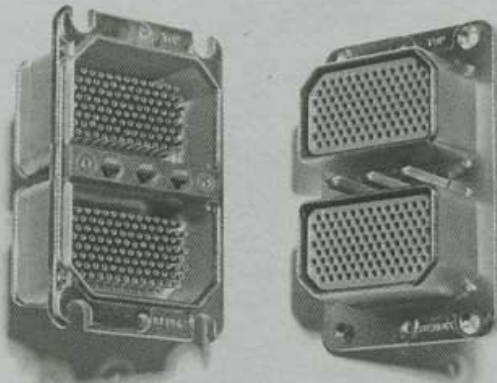
11-8475 Kit includes tips for contact size 16 & 12

11-8250 Kit includes tips for contact size 16, 12 & 18

# Commercial Aircraft Specials

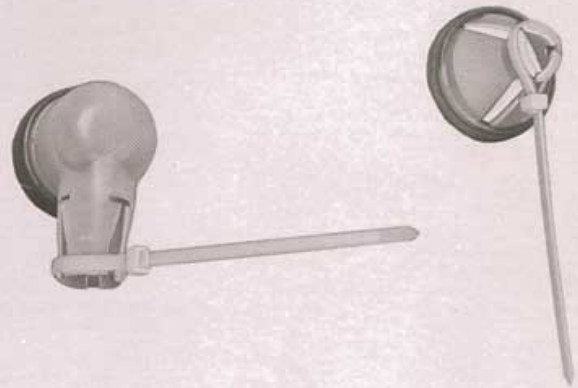
39

A BT-RA type electrical connector in Pygmy shell sizes and insert arrangements is presently available in a limited number of insert arrangements. This connector series is designated PCBT-RA and will meet all the performance characteristics of the standard BT-RA. For specific information on this connector series, consult our factory.



In addition to the cylindricals covered in this section, Bendix has available many rectangular connectors, such as the ARINC pictured on this page, that are applicable to aircraft installations. The complete line of Bendix rectangulars can be found in our rectangular catalog 12-032-2.

A non-metallic open wire cable support is presently under development in straight and 90° configurations. This support will provide an economic and light weight means of supporting open wire harnesses. For further information, consult our factory.



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