



A.B. Electronic Components Ltd.

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Telephone : 01-437 7581



Connector Manual

M4

Pattern 104

Pattern 104 Double Density



A.B. ELECTRONIC COMPONENTS LTD

ALSO MANUFACTURE

MULTI PIN CONNECTOR TYPES

SB-MSE	(Similar to MIL-C-5015)
SB-GPD	(General purpose industrial)
SB-HD	(Trailer Connectors)
SB-Intervehicle	(Power take-off (1500 amps))
SB-MP	(Miniature power (60 amps))
SB-FW	(Tape cable Connectors)
SB-800	(.01" Edge Connectors)

Potentiometers
Switches
Ceramic Capacitors
Miniature DC Motors
Thick Film Microcircuits
Tuners
Printed Circuits
Aerials and Vision Network Equipment
Electronic Sub Assemblies

FURTHER DETAILS ON REQUEST

ERRATA.

Title page SB to NATO Part No.—Page 1-15.

NATO Part No. to SB—Page 16-24

SV to SB—Page 24-25

The following numbers should be altered as detailed :-

Catalogue Page	A.B. Electronics Part No. :	Equivalent to NATO Part No :
1	SB-601	097 - 0058 or 011 - 9877
2	SB4-A-576	974 - 2264
6	SB4-BM-6PCE0	
6	SB4-BM-6PCE1	949 - 6769
16	SB-104T4-AM-4PCE0	013 - 0765
16	SB-104T4-AM-4PCE1	013 - 0766
16	SB-104T4-AM-4PCE2	013 - 0767
16	SB-104T4-AM-4PCE3	013 - 0768
16	SB-104T4-AM-4PCE4	013 - 0769
16	SB-104T4-AM-4PCE5	013 - 0770
16	SB-104T4-AM-6PCE0	013 - 0777
16	SB-104T4-AM-6PCE1	013 - 0778
16	SB-104T4-AM-6PCE2	013 - 0779
16	SB-104T4-AM-6PCE3	013 - 0780
16	SB-104T4-AM-6PCE4	013 - 0781
16	SB-104T4-AM-6PCE5	013 - 0782
16	SB-104T4-AM-12PCE0	013 - 0789
16	SB-104T4-AM-12PCE1	013 - 0790
16	SB-104T4-AM-12PCE2	013 - 0791
16	SB-104T4-AM-12PCE3	013 - 0792
16	SB-104T4-AM-12PCE4	013 - 0793
16	SB-104T4-AM-12PCE5	013 - 0794
18	SB-104T4-BL-4SE0	013 - 1548
	↓	
	SB-104T4-BL-25SE5	013 - 1577
	(All X's in the A.B. Nos. to be changed to E's)	
21	SB4-A-576	947 - 2264
22	SB4-BL-25PX3	940 - 8588

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SELECTION INDEX

SB-M4

SB-104

SB-104 DD*

ALUMINIUM OR BRASS SHELLS

ALUMINIUM OR BRASS SHELLS

Shell Size	No of Contacts	Current Rating AMPS	Voltage A C (r m s)	Voltage D C	Page		No of Contacts	Current Rating AMPS	Voltage A C (r m s)	Voltage D C	Page	
					Alum	Brass					Alum	Brass
SMALL	2	19	250	350	10/11	22/23	2	19	350	500	34/35	50/51
	3	5	250	350	10/11	22/23	3	5	350	500	34/35	50/51
	4	5	250	350	10/11	22/23	4	5	350	500	34/35	50/51
	6	5	250	350	10/11	22/23	6	5	350	500	34/35	50/51
							*12	3	350	500	66/67	80/81
MEDIUM	4	19	250	350	12/13	24/25	4	19	350	500	36/37	52/53
	6	5	2 kV Peak	2 kV	12/13	24/25	6	5	2 kV Peak	2 kV	36/37	52/53
	12	5	250	350	12/13	24/25	12	5	350	500	36/37	52/53
							*26	3	350	500	68/69	82/83
LARGE							4	1-19	350	500	38/39	54/55
								3-60				
							5	3-19	350	500	38/39	54/55
								2-60				
							6	19	3 kV Peak	3 kV	40/41	56/57
							9	19	350	500	40/41	56/57
	18	5	6-2 kV Peak 12-250	6-2 kV 12-350	14/15	26/27	18	5	6-2 kV Peak 12-350	6-2 kV 12-350	42/43	58/59
	25	5	250	350	14/15	26/27	25	5	350	500	42/43	58/59
							*37	3	350	500	70/71	84/85
							*62	3	350	500	72/73	

All Connectors are available with Inserts in a Range of Orientations. See Pages 4-7.

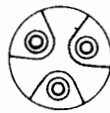
Specifications:--	SB-M4	Aluminium	Page 9
	SB-M4	Brass	Page 21
	SB-104	Aluminium	Page 33
	SB-104	Brass	Page 49
	SB-104DD	Aluminium	Page 65
	SB-104DD	Brass	Page 79

PLAN FORMS

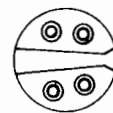
ACTUAL SIZE



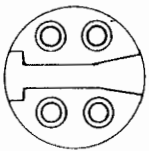
2 WAY
SMALL



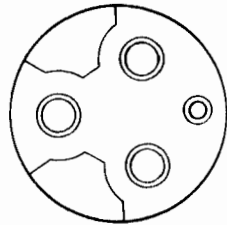
3 WAY
SMALL



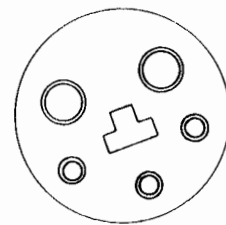
4 WAY
SMALL



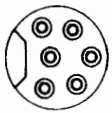
4 WAY
MEDIUM



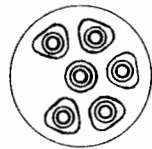
4 WAY
LARGE



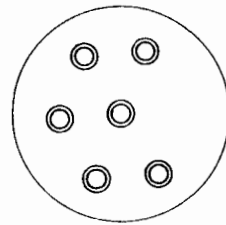
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LARGE



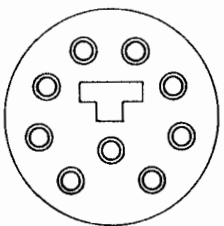
6 WAY
SMALL



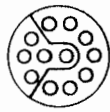
6 WAY
MEDIUM



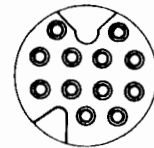
6 WAY
LARGE



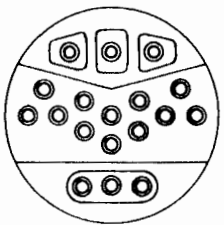
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LARGE



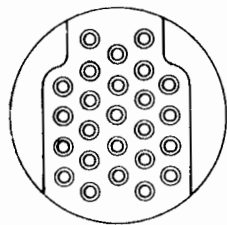
12 WAY
SMALL



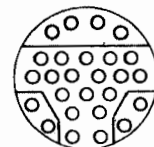
12 WAY
MEDIUM



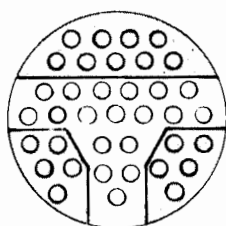
18 WAY
LARGE



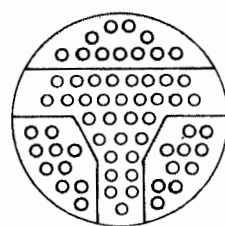
25 WAY
LARGE



26 WAY
MEDIUM



37 WAY
LARGE



62 WAY
LARGE

ORIENTATIONS

SMALL SHELL

ORIENTATION	2 CONTACT		3 CONTACT		4 CONTACT		5 CONTACT		2 CONTACT	
	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET
0										
1										
2										
3										
4										
5										

THESE ORIENTATIONS ARE NOT TO BE PROVIDED

ORIENTATIONS

MEDIUM SHELL

ORIENTATION	2 CONTACT		4 CONTACT		6 CONTACT		12 CONTACT		26 CONTACT	
	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET
0										
1										
2										
3										
4										
5										

NOT YET AVAILABLE

ORIENTATIONS

LARGE SHELL

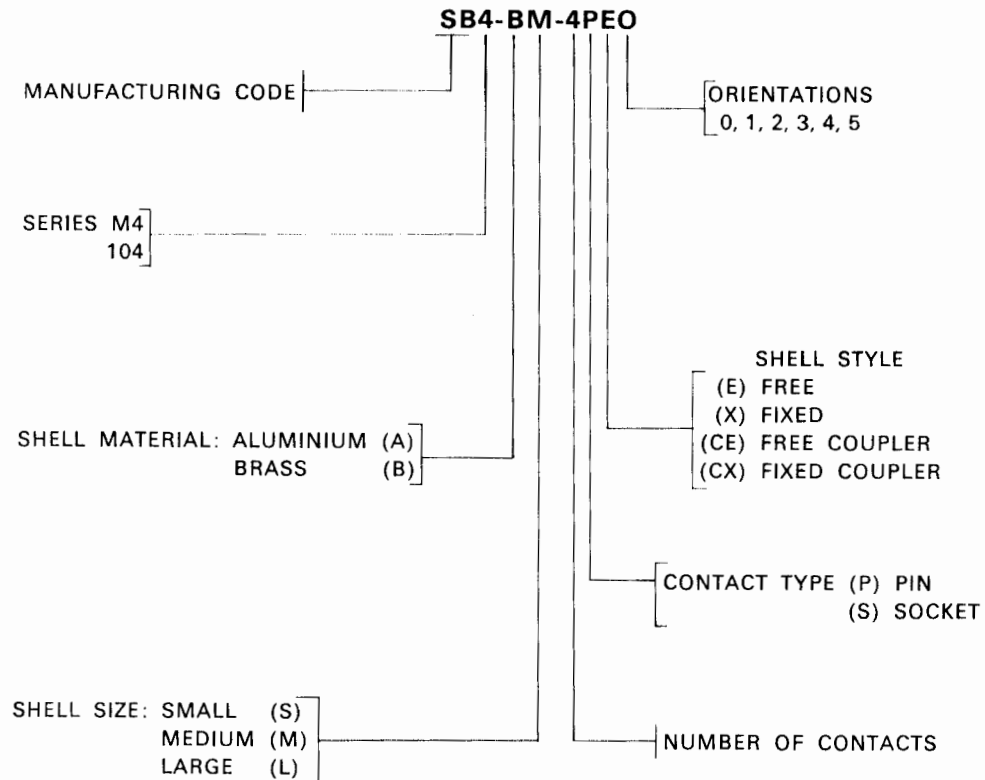
ORIENTATION	4 CONTACT		5 CONTACT		6 CONTACT		9 CONTACT	
	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET
0								
1								
2								
3								
4								
5								

ORIENTATIONS

LARGE SHELL

ORIENTATION	18 CONTACT		25 CONTACT		37 CONTACT		62 CONTACT	
	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET	PLUG	SOCKET
0								
1								
2								
3								
4								
5								

STANDARD SB-M4/SB-104 PART NUMBER MAKE-UP

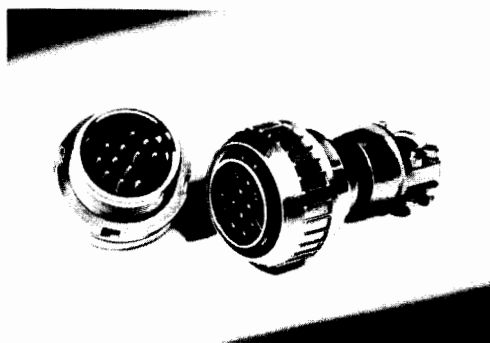


In this series, the part number make-up is devised to provide ease of identification and the ability to change series, etc., without the need of total part number changes.

SB-M4

ALUMINIUM

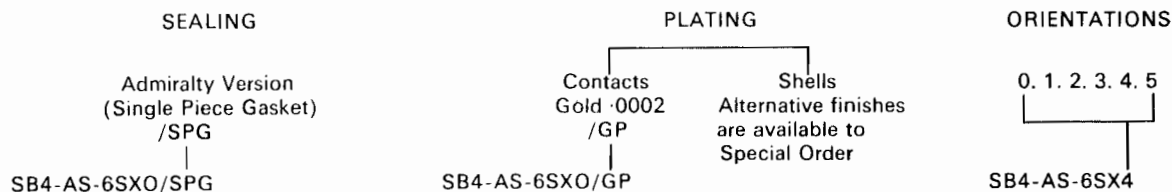
Electrical Connectors



SPECIFICATION

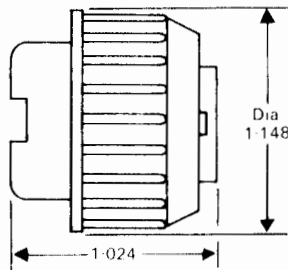
MANUFACTURE	In accordance with DEF. 5321/AB. M4770.
CONSTRUCTION	Natural Finish Aluminium shells. Contacts retained between phenolic mouldings and sealing gaskets. Positive orientation by keyways.
TEMPERATURE RANGE	− 40° C. to + 85° C.
SEALING	Maximum leakage of 1 cc./hr. at a pressure differential of 20 p.s.i.
CONTACTS	High quality brass, silver plated to DTD. 919A giving maximum contact resistance of 2 milliohms.
CURRENT RATING	5 and 19 amps as indicated.
VOLTAGE RATINGS	250 V a.c. and 2 kV peak where indicated.
INSULATION RESISTANCE	Between any contact and earth exceeds 5,000 megohms initially and will not fall below 10 megohms under the worst environmental conditions of the specification

VARIATIONS

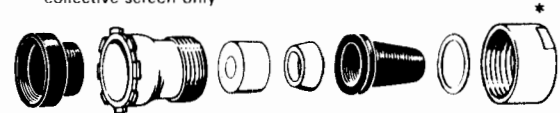
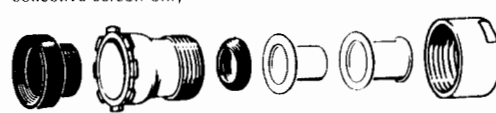


ALUMINIUM SB-M4

SMALL SHELL

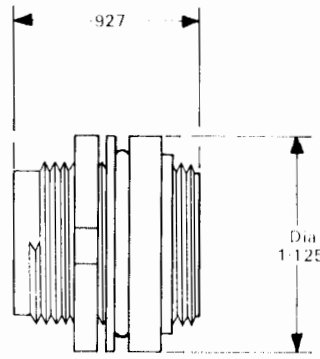
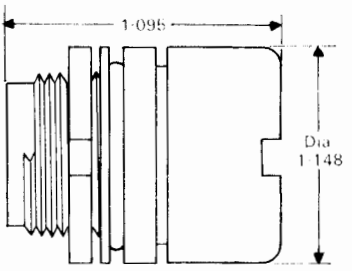
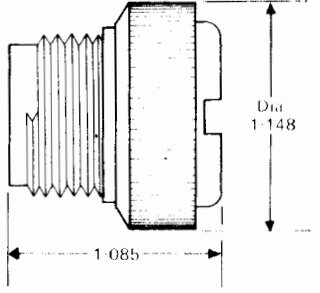
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	2	19	250	SB4-AS-2PEO	SB4-AS-2SEO	
	3	5	250	SB4-AS-3PEO	SB4-AS-3SEO	
	4	5	250	SB4-AS-4PEO	SB4-AS-4SEO	
	6	5	250	SB4-AS-6PEO	SB4-AS-6SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	230	350	SB4-A-521	SB4-A-531	a
	310	410	SB4-A-520	SB4-A-530	b
	360 - 220	410 - 275	SB4-A-522	SB4-A-532	b
DEF10 Types A & P Cable Multicore cable totally unscreened 	230	360	SB4-A-561	SB4-A-571	a
	295	430	SB4-A-560	SB4-A-570	b
	340 x 200	410 - 275	SB4-A-562	SB4-A-572	b
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	280	370	SB4-A-501	SB4-A-511	a
	330 - 190	410 - 270	SB4-A-502	SB4-A-512	b

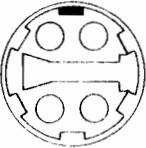
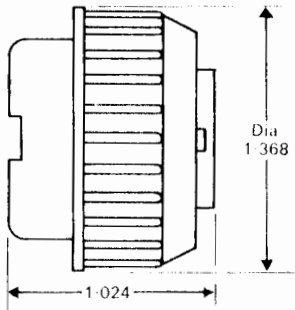
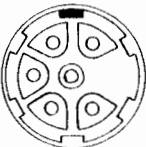
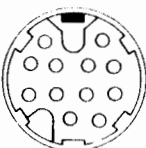
ALUMINIUM SB-M4

SMALL SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	2	19	250	SB4-AS-2PXO	SB4-AS-2SXO	
	3	5	250	SB4-AS-3PXO	SB4-AS-3SXO	
	4	5	250	SB4-AS-4PXO	SB4-AS-4SXO	
	6	5	250	SB4-AS-6PXO	SB4-AS-6SXO	
	2	19	250	SB4-AS-2PCXO	SB4-AS-2SCXO	Panel Mounted Coupler 
	3	5	250	SB4-AS-3PCXO	SB4-AS-3SCXO	
	4	5	250	SB4-AS-4PCXO	SB4-AS-4SCXO	
	6	5	250	SB4-AS-6PCXO	SB4-AS-6SCXO	
	2	19	250	SB4-AS-2PCEO	SB4-AS-2SCEO	Cable Mounted Coupler 
	3	5	250	SB4-AS-3PCEO	SB4-AS-3SCEO	
	4	5	250	SB4-AS-4PCEO	SB4-AS-4SCEO	
	6	5	250	SB4-AS-6PCEO	SB4-AS-6SCEO	

ALUMINIUM SB-M4

MEDIUM SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	4	19	250	SB4-AM-4PEO	SB4-AM-4SEO	
	6	5	2 kV Peak	SB4-AM-6PEO	SB4-AM-6SEO	
	12	5	250	SB4-AM-12PEO	SB4-AM-12SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O.D.		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only * 	.310	.440	SB4-A-523	SB4-A-533	d
	.345	.480	SB4-A-524	SB4-A-534	e
	.470	.530	SB4-A-525	SB4-A-535	f
	.525	.575	SB4-A-526	SB4-A-536	f
DEF10 Types A & P Cable Multicore cable totally unscreened 	.295	.440	SB4-A-563	SB4-A-573	d
	.325	.480	SB4-A-564	SB4-A-574	e
	.455	.520	SB4-A-565	SB4-A-575	f
	.480	.570	SB4-A-566	SB4-A-576	f
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.390	.460	SB4-A-503	SB4-A-513	d
	.455	.480	SB4-A-504	SB4-A-514	e
	.530	.575	SB4-A-506	SB4-A-516	f
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	.460	.530	SB4-A-546	SB4-A-556	f
	.530	.575	SB4-A-547	SB4-A-557	f
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads * 	.470	.530	SB4-A-586	SB4-A-596	f
	.525	.575	SB4-A-587	SB4-A-597	f

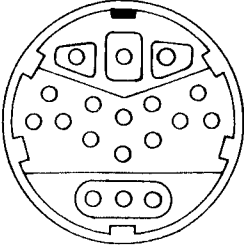
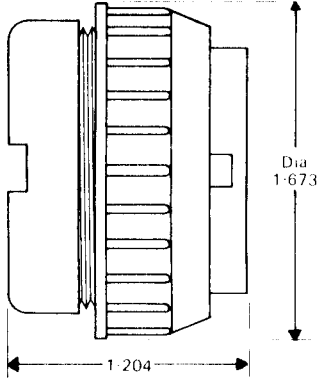
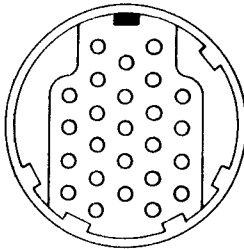
ALUMINIUM SB-M4

MEDIUM SHELL

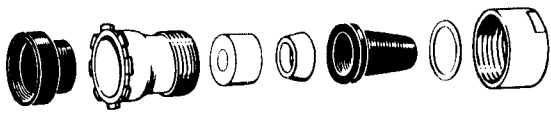
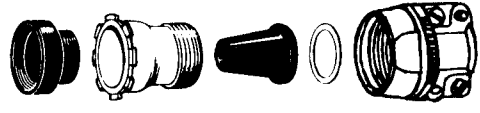
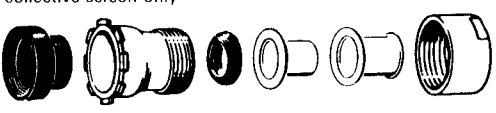
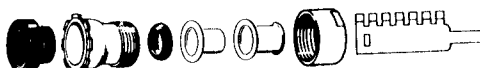
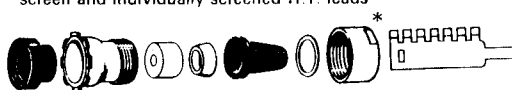
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	4	19	250	SB4-AM-4PXO	SB4-AM-4SXO	
	6	5	2 kV Peak	SB4-AM-6PXO	SB4-AM-6SXO	
	12	5	250	SB4-AM-12PXO	SB4-AM-12SXO	
	4	19	250	SB4-AM-4PCXO	SB4-AM-4SCXO	Panel Mounted Coupler
	6	5	2 kV Peak	SB4-AM-6PCXO	SB4-AM-6SCXO	
	12	5	250	SB4-AM-12PCXO	SB4-AM-12SCXO	
	4	19	250	SB4-AM-4PCEO	SB4-AM-4SCEO	Cable Mounted Coupler
	6	5	2 kV Peak	SB4-AM-6PCEO	SB4-AM-6SCEO	
	12	5	250	SB4-AM-12PCEO	SB4-AM-12SCEO	

ALUMINIUM SB-M4

LARGE SHELL

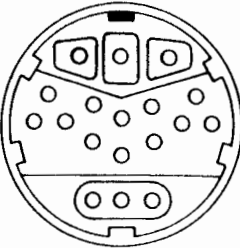
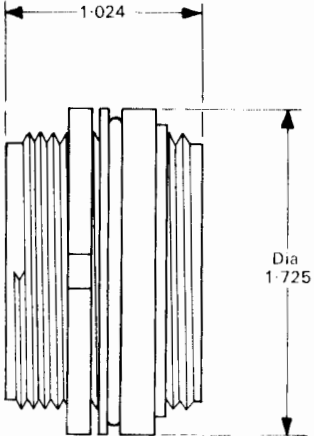
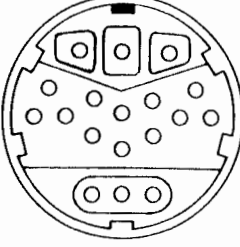
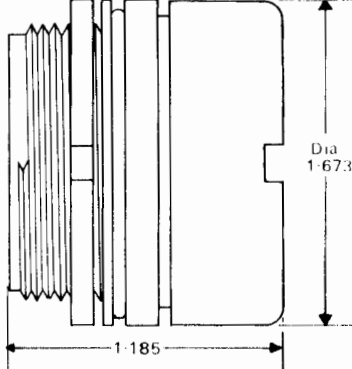
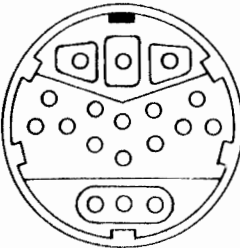
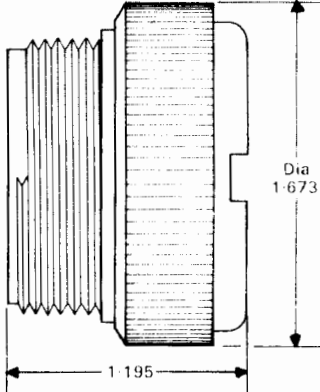
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-AL-18PEO	SB4-AL-18SEO	
	25	5	250	SB4-AL-25PEO	SB4-AL-25SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only * 	·470	·530	SB4-A-527	SB4-A-537	g
	·525	·575	SB4-A-528	SB4-A-538	g
	·690	·745	SB4-A-529	SB4-A-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	·450	·540	SB4-A-567	SB4-A-577	g
	·510	·560	SB4-A-568	SB4-A-578	g
	690	·735	SB4-A-569	SB4-A-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	·460	·530	SB4-A-507	SB4-A-517	g
	·530	·575	SB4-A-508	SB4-A-518	g
	·685	·760	SB4-A-509	SB4-A-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	·685	·760	SB4-A-548	SB4-A-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads * 	·690	·760	SB4-A-588	SB4-A-598	h

ALUMINIUM SB-M4

LARGE SHELL

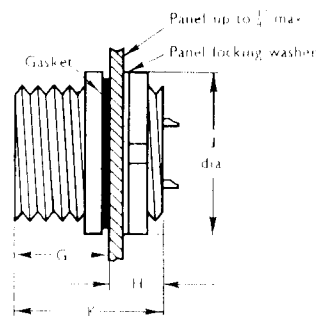
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-AL-18PXO	SB4-AL-18SXO	
	25	5	250	SB4-AL-25PXO	SB4-AL-25SXO	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-AL-18PCXO	SB4-AL-18SCXO	Panel Mounted Coupler 
	25	5	250	SB4-AL-25PCXO	SB4-AL-25SCXO	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-AL-18PCEO	SB4-AL-18SCEO	Cable Mount Coupler 
	25	5	250	SB4-AL-25PCEO	SB4-AL-25SCEO	

ALUMINIUM SB-M4

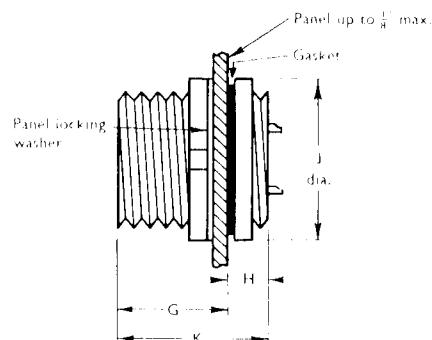
PANEL MOUNTING DETAILS

(for wiring details see chart inside back cover)

MOUNTED FROM FRONT OF PANEL



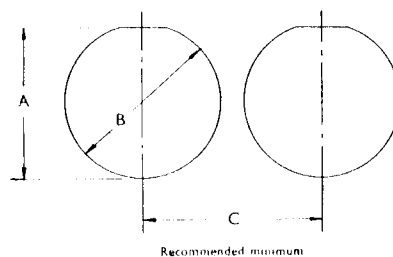
MOUNTED FROM REAR OF PANEL



Shell Size	Front Mounting	G	Rear Mounting	Front Mounting	H	Rear Mounting	J	K
Small	.612		.540	.290		.362	1.125	.902
Medium	.612		.540	.290		.362	1.343	.902
Large	.681		.609	.338		.410	1.718	1.019

PANEL PIERCING DETAILS

The 'flat' is not essential for sealing and is provided for location only



Shell Size	A	B	C
Small	.811/.816	.848/.853	1.413
Medium	1.033/1.038	1.067/1.072	1.562
Large	1.410/1.415	1.442/1.447	2.00

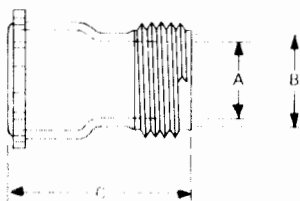
Panel Mounting Washers are required where panel thickness is $\frac{1}{16}$ " or less.

ALUMINIUM SB-M4

ACCESSORIES AND SPARES

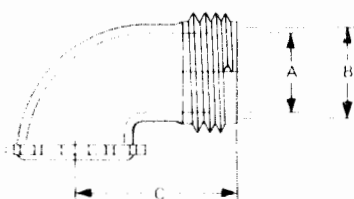
Outlets and Cable Clamps

STRAIGHT OUTLET



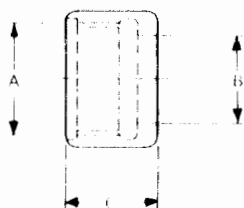
Shell Size	Code	Part Number	A	B	C
Small	a	SB4 A-341	412	490	974
	b	SB4 A-342	457	545	974
Medium	d	SB4 A-343	468	578	982
	e	SB4 A-344	520	625	982
	f	SB4 A-345	600	730	1 977
Large	g	SB4 A-346	625	735	1 137
	h	SB4 A-347	800	910	2 166

RIGHT ANGLE OUTLET



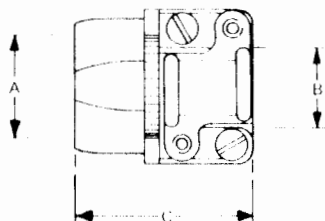
Shell Size	Code	Part Number	A	B	C
Small	a	SB4 A-351	412	490	858
	b	SB4 A-352	457	545	858
Medium	d	SB4 A-353	468	578	940
	e	SB4 A-354	520	625	940
	f	SB4 A-355	600	730	1 250
Large	g	SB4 A-356	625	735	1 070
	h	SB4 A-357	800	910	1 870

UNION NUT



Shell Size	Code	Part Number	A	B	C
Small	a	SB4 A-361	594	475	473
	b	SB4 A-362	640	525	473
Medium	d	SB4 A-363	687	574	473
	e	SB4 A-364	734	616	473
	f	SB4 A-365	844	705	473
Large	g	SB4 A-365	844	735	473
	h	SB4 A-366	1 068	885	537

CABLE CLAMP



Shell Size	Code	Part Number	A	B min	B max	C
Small	a	SB4 A-371	594	182	448	942
	b	SB4 A-372	640	200	495	942
Medium	d	SB4 A-373	687	210	510	942
	e	SB4 A-374	734	258	550	942
	f	SB4 A-375	844	357	665	942
Large	g	SB4 A-375	844	357	665	942
	h	SB4 A-376	1 062	465	830	1 067

OUTLET COMPLETE WITH NUT

Shell Size	Code	Straight	Right Angle
Small	a	SB4 A-301	SB4 A-311
	b	SB4 A-302	SB4 A-312
Medium	d	SB4 A-303	SB4 A-313
	e	SB4 A-304	SB4 A-314
	f	SB4 A-305	SB4 A-315
Large	g	SB4 A-306	SB4 A-316
	h	SB4 A-307	SB4 A-317

OUTLET COMPLETE WITH CABLE CLAMP

Shell Size	Code	Straight	Right Angle
Small	a	SB4 A-321	SB4 A-331
	b	SB4 A-322	SB4 A-332
Medium	d	SB4 A-323	SB4 A-333
	e	SB4 A-324	SB4 A-334
	f	SB4 A-325	SB4 A-335
Large	g	SB4 A-326	SB4 A-336
	h	SB4 A-327	SB4 A-337

ALUMINIUM SB-M4

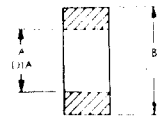
ACCESSORIES AND SPARES

OUTLET GASKET
(RUBBER)



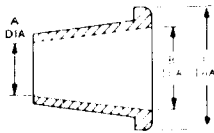
Code	Part Number	A	B
a	SB 601	666	375
b	SB 601	666	375
d	SB 602	882	375
e	SB 602	882	375
f	SB 602	882	375
g	SB 603	1 259	375
h	SB 603	1 259	375

CABLE SLEEVE
(RUBBER)



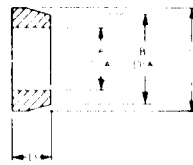
Code	Part Number	A	B
a	SB 621	156	503
b	SB 621	156	503
d	SB 622	312	562
e	SB 622	312	562
f	SB 623	406	687
g	SB 623	406	687
h	SB 624	562	812

UNION GASKET
(RUBBER)



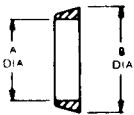
Code	Part Number	A	B	C
a	SB 611	218	345	535
b	SB 613	275	430	625
b	SB 612	340 200	400 260	580
d	SB 613	275	430	625
e	SB 614	315	477	672
f	SB 615	440	505	780
f	SB 616	500	565	780
g	SB 615	440	505	780
g	SB 616	500	565	780
h	SB 617	670	735	984

STALING RING
(RUBBER)



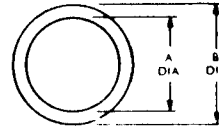
Code	Part Number	A	B	C	D
a	SB 631	200	320	485	156
b	SB 633	362	484	558	205
b	SB 632	335 195	445	520	205
d	SB 633	362	484	558	205
e	SB 634	400	491	533	280
f	SB 635	440	640	715	205
f	SB 636	500	640	715	205
g	SB 635	440	640	715	205
g	SB 636	500	460	715	205
h	SB 637	665	805	809	205

COMPRESSION RING
(BRASS)



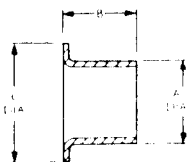
Code	Part Number	A	B
a	SB 811	353	465
b	SB 812	408	520
d	SB 813	438	549
e	SB 814	478	589
f	SB 815	573	706
g	SB 815	573	706
h	SB 816	743	880

THRUST RING
(BRASS)



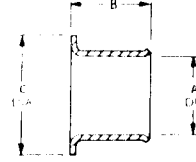
Code	Part Number	A	B
a	SB 821	442	538
b	SB 820	498	583
b	SB 822	510 375	583
d	SB 823	517	632
e	SB 824	564	677
f g	SB 825	668	787
h	SB 826	838	993

INNER FERRULE
(BRASS)



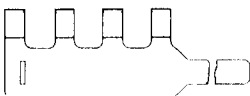
Code	Part Number	A	B	C
a	SB 841	356	360	540
b	SB 842	271 411	360	585
d	SB 843	441	360	634
e	SB 844	481	360	681
f	SB 845	516	360	784
f	SB 846	576	360	784
g	SB 845	516	360	784
g	SB 846	576	360	784
h	SB 847	741	360	986

OUTER FERRULE
(BRASS)



Code	Part Number	A	B	C
a	SB 831	380	420	540
b	SB 832	296 436	420	585
d	SB 833	465	420	634
e	SB 834	505	420	681
f	SB 835	540	420	784
f	SB 836	600	420	784
g	SB 835	540	420	784
g	SB 836	600	420	784
h	SB 837	765	420	986

BONDING CLIP
(BRASS)



Code	Part Number	No. of Tags
f	SB 861	4
h	SB 862	7

PANEL MOUNTING WASHER
(BRASS)



Shell Size	Part Number
Small	SB 874
Medium	SB 875
Large	SB 876

FOR USE WITH PANELS OF $\frac{1}{2}$ " OR LESS

ALUMINIUM SB-M4

ACCESSORIES AND SPARES

Outlet Nut



Shell Size	Part Number	Dia I/D
Small	SB4 A-391	.850
Medium	SB4 A-392	1.015
Large	SB4 A-393	1.450

Outlet Nut
(Couplers)



Shell Size	Part Number	Dia I/D
Small	SB4 A-396	.950
Medium	SB4 A-397	1.150
Large	SB4 A-398	1.550

Panel Locking Ring



Shell Size	Part Number	Dia I/D
Small	SB4 A-851	.850
Medium	SB4 A-852	1.070
Large	SB4 A-853	1.450

Panel Mounting Ring



Shell Size	Part Number	Dia I/D
Small	SB4 A-871	.850
Medium	SB4 A-872	1.070
Large	SB4 A-873	1.450

Panel Locking Washer



Shell Size	Part Number	Dia I/D
Small	SB4 A-401	.850
Medium	SB4 A-402	1.070
Large	SB4 A-403	1.450

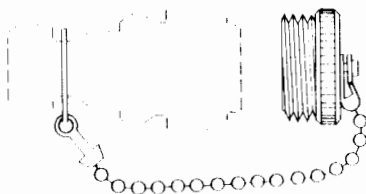
Panel Mounting Gasket



Shell Size	Part Number	Dia I/D
Small	SB4 A-641	.650
Medium	SB4 A-642	.900
Large	SB4 A-643	1.200

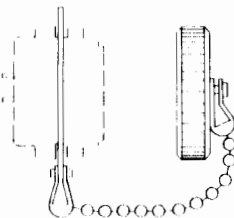
PROTECTIVE CAPS

FREE CONNECTORS



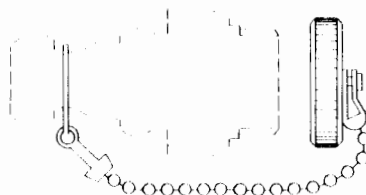
Shell Size	Ball Chain	Nylon Cord
Small	SB4 A-384	SB4 A-484
Medium	SB4 A-385	SB4 A-485
Large	SB4 A-386	SB4 A-486

FIXED CONNECTORS



Shell Size	Ball Chain	Nylon Cord
Small	SB4 A-381	SB4 A-481
Medium	SB4 A-382	SB4 A-482
Large	SB4 A-383	SB4 A-483

FREE COUPLERS

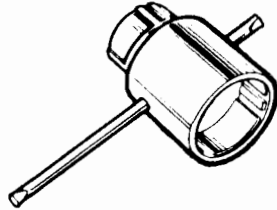


Shell Size	Ball Chain	Nylon Cord
Small	SB4 A-387	SB4 A-487
Medium	SB4 A-388	SB4 A-488
Large	SB4 A-389	SB4 A-489

ALUMINIUM SB-M4

ASSEMBLY TOOLS

BODY HOLDER

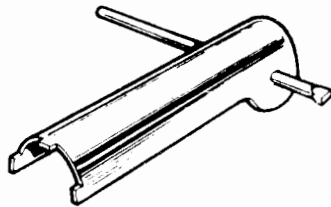


SMALL SB-694

MEDIUM SB-695

LARGE SB-696

TUBULAR SPANNER

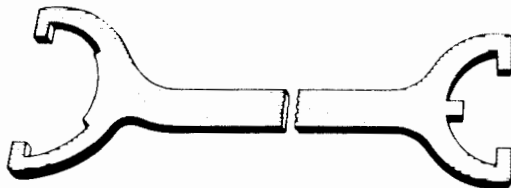


SMALL SB-697

MEDIUM SB-698

LARGE SB-699

DOUBLE-ENDED SPANNER



SMALL SB-691

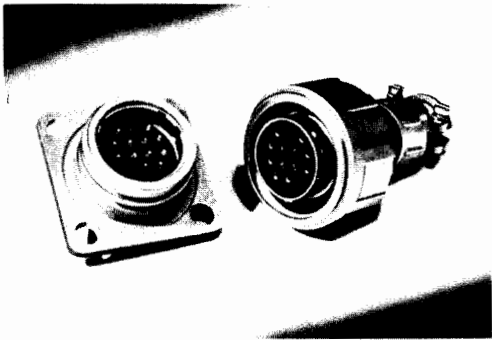
MEDIUM SB-692

LARGE SB-693

SB-M4

BRASS

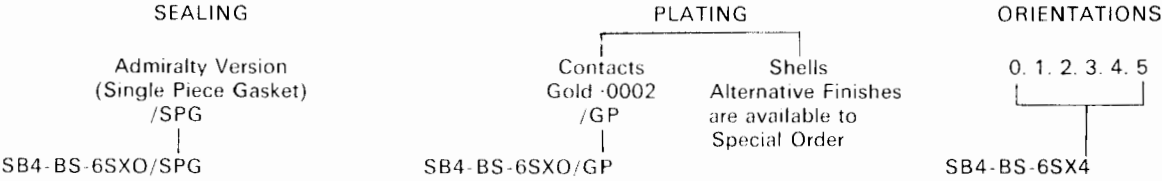
Electrical Connectors



SPECIFICATION

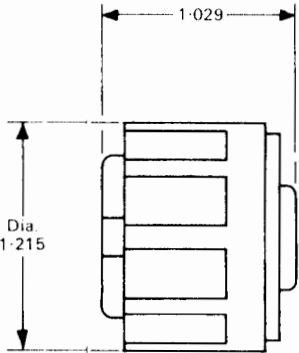
MANUFACTURE	In accordance with DEF. 5321/AB. M4770.
CONSTRUCTION	Passivated, Cadmium Plated Brass Shells. Contacts retained between phenolic mouldings and sealing gaskets. Positive orientation by keyways.
TEMPERATURE RANGE	- 40 C. to + 85 C.
SEALING	Maximum leakage of 1 cc./hr. at a pressure differential of 20 p.s.i.
CONTACTS	High quality brass, silver plated to DTD. 919A giving maximum contact resistance of 2 milliohms
CURRENT RATING	5 and 19 amps as indicated.
VOLTAGE RATINGS	250 V a.c. and 2 kV peak where indicated.
INSULATION RESISTANCE	Between any contact and earth exceeds 5,000 megohms initially and will not fall below 10 megohms under the worst environmental conditions of the specification.

VARIATIONS

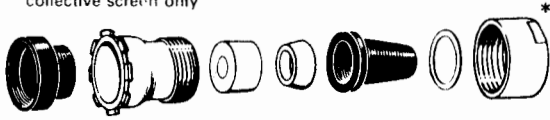
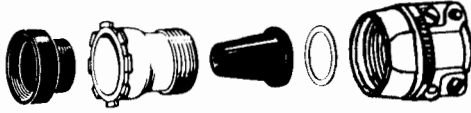


BRASS SB-M4

SMALL SHELL

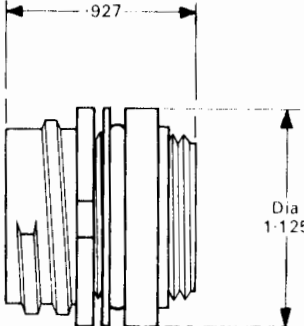
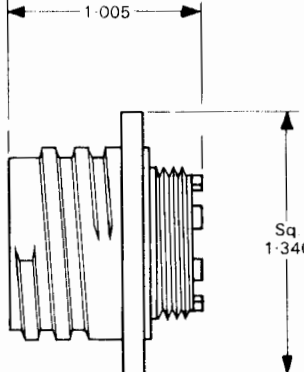
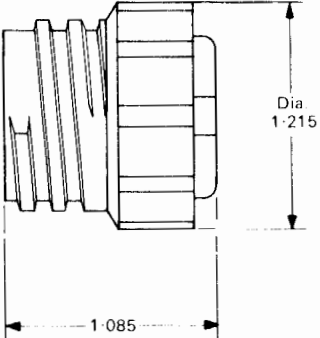
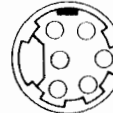
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r m s)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	2	19	250	SB4-BS-2PEO	SB4-BS-2SEO	
	3	5	250	SB4-BS-3PEO	SB4-BS-3SEO	
	4	5	250	SB4-BS-4PEO	SB4-BS-4SEO	
	6	5	250	SB4-BS-6PEO	SB4-BS-6SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only * 	.230	.350	SB4-B-521	SB4-B-531	a
	.310	.410	SB4-B-520	SB4-B-530	b
	.360 x .220	.410 x .275	SB4-B-522	SB4-B-532	b
DEF10 Types A & P Cable Multicore cable totally unscreened 	.230	.360	SB4-B-561	SB4-B-571	a
	.295	.430	SB4-B-560	SB4-B-570	b
	.340 x .200	.410 x .275	SB4-B-562	SB4-B-572	b
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.280	.370	SB4-B-501	SB4-B-511	a
	.330 x .190	.410 x .270	SB4-B-502	SB4-B-512	b

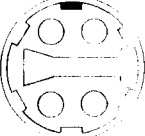
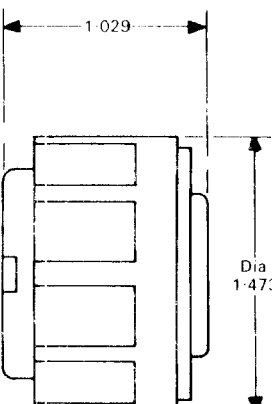
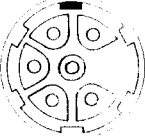
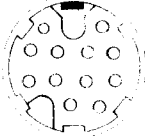
BRASS SB-M4

SMALL SHELL

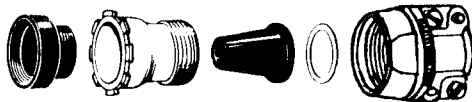
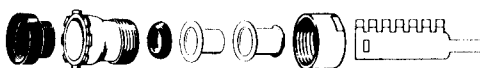
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	2	19	250	SB4-BS-2PXO/RF	SB4-BS-2SXO/RF	Round Flange 
	3	5	250	SB4-BS-3PXO/RF	SB4-BS-3SXO/RF	
	4	5	250	SB4-BS-4PXO/RF	SB4-BS-4SXO/RF	
	6	5	250	SB4-BS-6PXO/RF	SB4-BS-6SXO/RF	
	2	19	250	SB4-BS-2PXO	SB4-BS-2SXO	Panel Mounted Unit Square Flange 
	3	5	250	SB4-BS-3PXO	SB4-BS-3SXO	
	4	5	250	SB4-BS-4PXO	SB4-BS-4SXO	
	6	5	250	SB4-BS-6PXO	SB4-BS-6SXO	
	2	19	250	SB4-BS-2PCEO	SB4-BS-2SCEO	Cable Mounted Coupler 
	3	5	250	SB4-BS-3PCEO	SB4-BS-3SCEO	
	4	5	250	SB4-BS-4PCEO	SB4-BS-4SCEO	
	6	5	250	SB4-BS-6PCEO	SB4-BS-6SCEO	

BRASS SB-M4

MEDIUM SHELL

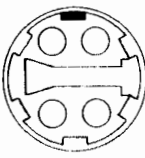
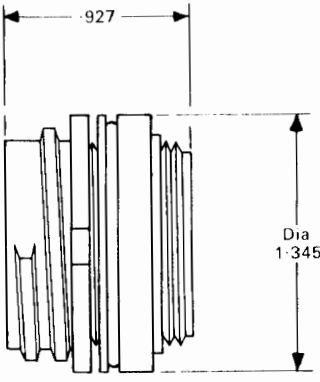
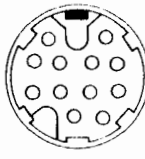
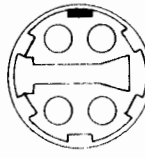
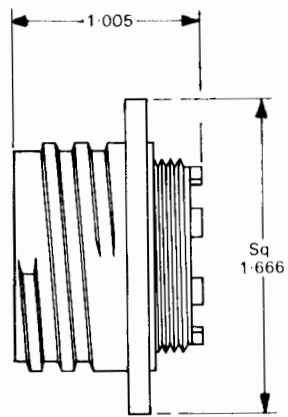
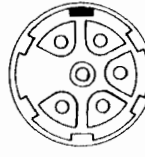
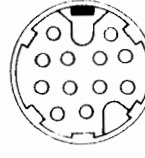
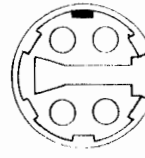
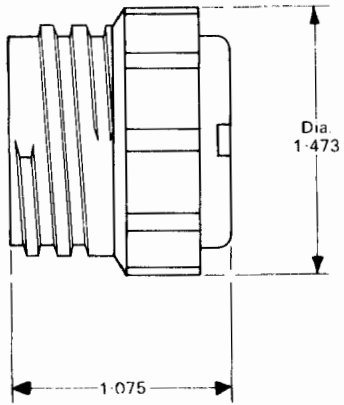
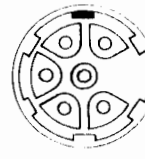
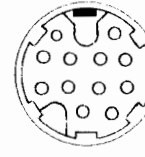
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	4	19	250	SB4-BM-4PEO	SB4-BM-4SEO	
	6	5	2 kV Peak	SB4-BM-6PEO	SB4-BM-6SEO	
	12	5	250	SB4-BM-12PEO	SB4-BM-12SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only * 	.310	.440	SB4-B-523	SB4-B-533	d
	.345	.480	SB4-B-524	SB4-B-534	e
	.470	.530	SB4-B-525	SB4-B-535	f
	.525	.575	SB4-B-526	SB4-B-536	f
DEF10 Types A & P Cable Multicore cable totally unscreened 	.295	.440	SB4-B-563	SB4-B-573	d
	.325	.480	SB4-B-564	SB4-B-574	e
	.455	.520	SB4-B-565	SB4-B-575	f
	.480	.570	SB4-B-566	SB4-B-576	f
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.390	.460	SB4-B-503	SB4-B-513	d
	.455	.480	SB4-B-504	SB4-B-514	e
	.530	.575	SB4-B-506	SB4-B-516	f
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H T leads 	.460	.530	SB4-B-546	SB4-B-556	f
	.530	.575	SB4-B-547	SB4-B-557	f
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H T leads 	.470	.530	SB4-B-586	SB4-B-596	f
	.525	.575	SB4-B-587	SB4-B-597	f

BRASS SB-M4

MEDIUM SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	4	19	250	SB4-BM-4PXO/RF	SB4-BM-4SXO/RF	Round Flange 
	6	5	2 kV Peak	SB4-BM-6PXO/RF	SB4-BM-6SXO/RF	
	12	5	250	SB4-BM-12PXO/RF	SB4-BM-12SXO/RF	
	4	19	250	SB4-BM-4PXO	SB4-BM-4SXO	Panel Mounted Unit Square Flange 
	6	5	2 kV Peak	SB4-BM-6PXO	SB4-BM-6SXO	
	12	5	250	SB4-BM-12PXO	SB4-BM-12SXO	
	4	19	250	SB4-BM-4PCEO	SB4-BM-4SCEO	Cable Mounted Coupler 
	6	5	2 kV Peak	SB4-BM-6PCEO	SB4-AM-6SCEO	
	12	5	250	SB4-BM-12PCEO	SB4-BM-12SCEO	

BRASS SB-M4

LARGE SHELL

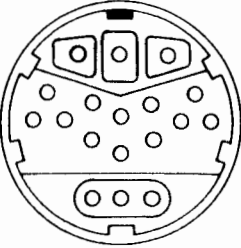
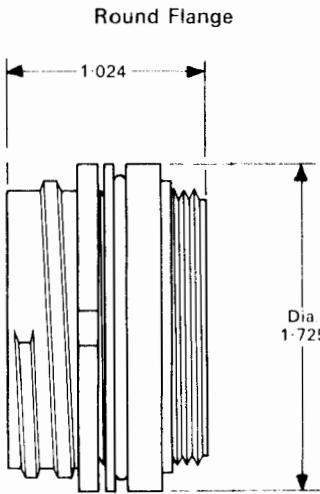
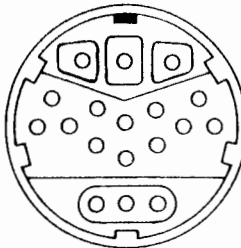
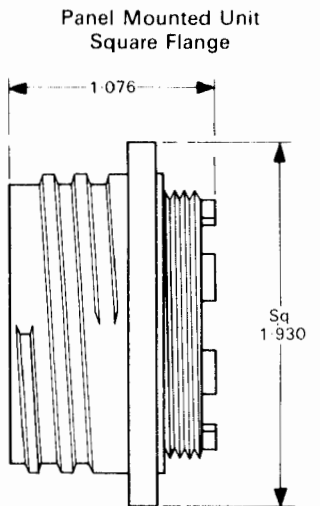
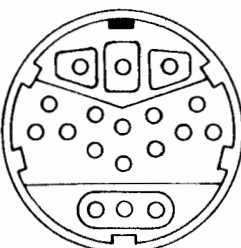
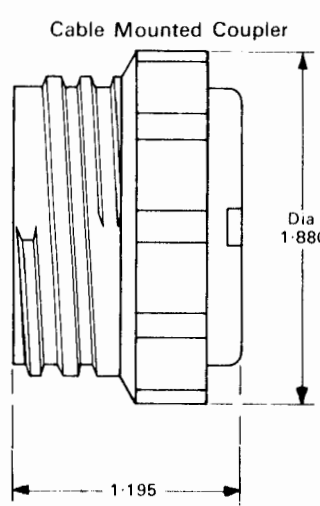
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-BL-18PEO	SB4-BL-18SEO	
	25	5	250	SB4-BL-25PEO	SB4-BL-25SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	.470	.530	SB4-B-527	SB4-B-537	g
	.525	.575	SB4-B-528	SB4-B-538	g
	.690	.745	SB4-B-529	SB4-B-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	.450	.540	SB4-B-567	SB4-B-577	g
	.510	.560	SB4-B-568	SB4-B-578	g
	.690	.735	SB4-B-569	SB4-B-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.460	.530	SB4-B-507	SB4-B-517	g
	.530	.575	SB4-B-508	SB4-B-518	g
	.685	.760	SB4-B-509	SB4-B-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	.685	.760	SB4-B-548	SB4-B-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	.690	.760	SB-B-588	SB4-B-598	h

BRASS SB-M4

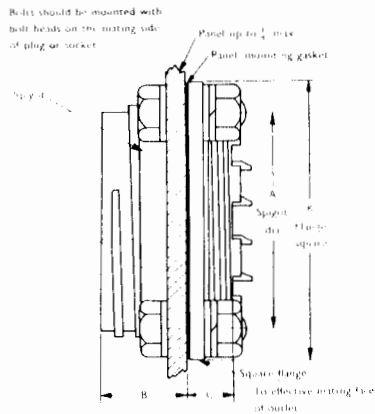
LARGE SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-BL-18PXO/RF	SB4-BL-18SXO/RF	Round Flange 
	25	5	250	SB4-BL-25PXO/RF	SB4-BL-25SXO/RF	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-BL-18PXO	SB4-BL-18SXO	Panel Mounted Unit Square Flange 
	25	5	250	SB4-BL-25PXO	SB4-BL-25SXO	
	18	5	6 Pins 2 kV Peak 12 Pins 250 V Peak	SB4-BL-18PCEO	SB4-BL-18SCEO	Cable Mounted Coupler 
	25	5	250	SB4-BL-25PCEO	SB4-BL-25SCEO	

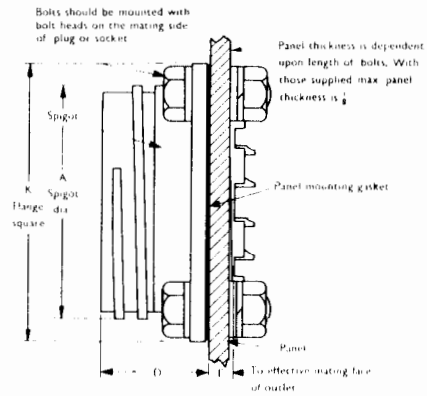
BRASS SB-M4

PANEL MOUNTING DETAILS (for wiring details see chart inside back cover)

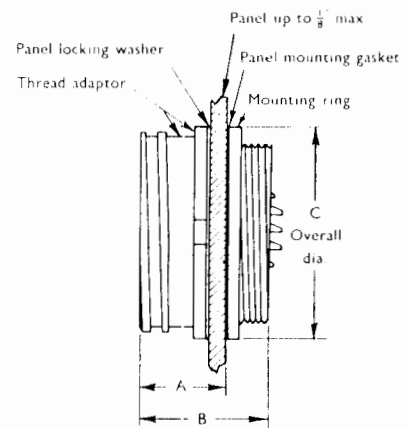
MOUNTED FROM REAR OF PANEL



MOUNTED FROM FRONT OF PANEL



MOUNTED FROM FRONT OR REAR OF PANEL

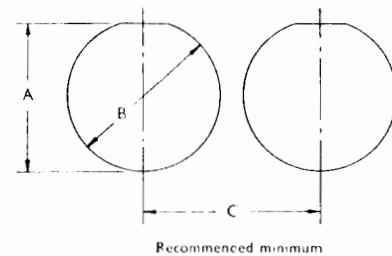
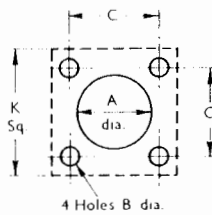


SQUARE FLANGE

Shell Size	A	B	C	D	E	K
Small	.995/1.000	.54	.38	.67	.26	1.33
Medium	1.215/1.220	.55	.38	.68	.26	1.65
Large	1.590/1.595	.61	.40	.70	.25	1.92

ROUND FLANGE

Shell Size	A	B	C
Small	.60	.90	1.125
Medium	.60	.90	1.343
Large	.67	1.02	1.718



Shell Size	A	B	C	K
Small	.995/1.000	.417 4BA	1.000	1.33
Medium	1.215/1.220	.191 2BA	1.235	1.65
Large	1.590 1.595	.191 2BA	1.515	1.92

Shell size	A	B	C
Small	.811 .816	.848 .853	1.413
Medium	1.033 1.038	1.067 1.072	1.562
Large	1.410 1.415	1.442 1.447	2.00

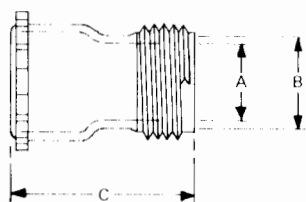
Panel Mounting Washers are required where panel thickness is $\frac{1}{32}$ or less

BRASS SB-M4

ACCESSORIES AND SPARES

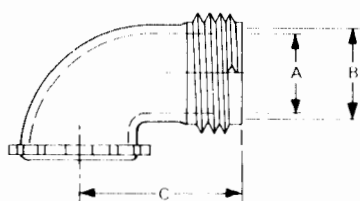
Outlets and Cable Clamps

STRAIGHT OUTLET



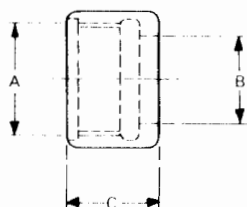
Shell Size	Code	Part Number	A	B	C
Small	a	SB4-B-341	412	490	974
	b	SB4-B-342	457	545	974
Medium	d	SB4-B-343	468	578	982
	e	SB4-B-344	520	625	982
	f	SB4-B-345	600	730	1 977
Large	g	SB4-B-346	625	735	1 137
	h	SB4-B-347	800	910	2 166

RIGHT ANGLE OUTLET



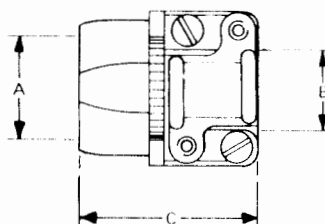
Shell Size	Code	Part Number	A	B	C
Small	a	SB4-B-351	412	490	858
	b	SB4-B-352	457	545	858
Medium	d	SB4-B-353	468	578	940
	e	SB4-B-354	520	625	940
	f	SB4-B-355	600	730	1 250
Large	g	SB4-B-356	625	735	1 070
	h	SB4-B-357	800	910	1 870

UNION NUT



Shell Size	Code	Part Number	A	B	C
Small	a	SB4-B-361	594	475	473
	b	SB4-B-362	640	525	473
Medium	d	SB4-B-363	687	574	473
	e	SB4-B-364	734	616	473
	f	SB4-B-365	844	705	473
Large	g	SB4-B-365	844	705	473
	h	SB4-B-366	1 068	885	537

CABLE CLAMP



Shell Size	Code	Part Number	A	B min	B max	C
Small	a	SB4-B-371	594	182	448	942
	b	SB4-B-372	640	200	495	942
Medium	d	SB4-B-373	687	210	510	942
	e	SB4-B-374	734	258	550	942
	f	SB4-B-375	844	357	665	942
Large	g	SB4-B-375	844	357	665	942
	h	SB4-B-376	1 062	465	830	1 067

OUTLET COMPLETE WITH NUT

Shell Size	Code	Straight	Right Angle
Small	a	SB4-B-301	SB4-B-311
	b	SB4-B-302	SB4-B-312
Medium	d	SB4-B-303	SB4-B-313
	e	SB4-B-304	SB4-B-314
	f	SB4-B-305	SB4-B-315
Large	g	SB4-B-306	SB4-B-316
	h	SB4-B-307	SB4-B-317

OUTLET COMPLETE WITH CABLE CLAMP

Shell Size	Code	Straight	Right Angle
Small	a	SB4-B-321	SB4-B-331
	b	SB4-B-322	SB4-B-332
Medium	d	SB4-B-323	SB4-B-333
	e	SB4-B-324	SB4-B-334
	f	SB4-B-325	SB4-B-335
Large	g	SB4-B-326	SB4-B-336
	h	SB4-B-327	SB4-B-337

BRASS SB-M4

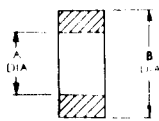
ACCESSORIES AND SPARES

OUTLET GASKET
(RUBBER)



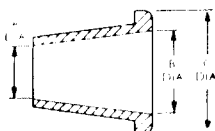
Code	Part Number	A	B
a	SB-601	.666	.375
b	SB-601	.666	.375
d	SB-602	.882	.375
e	SB-602	.882	.375
f	SB-602	.882	.375
g	SB-603	1.259	.375
h	SB-603	1.259	.375

CABLE SLEEVE
(RUBBER)



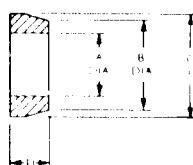
Code	Part Number	A	B
a	SB-621	.156	.503
b	SB-621	.156	.503
d	SB-622	.312	.562
e	SB-622	.312	.562
f	SB-623	.406	.687
g	SB-623	.406	.687
h	SB-624	.562	.812

UNION GASKET
(RUBBER)



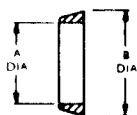
Code	Part Number	A	B	C
a	SB-611	.218	.345	.535
b	SB-613	.275	.430	.625
b	SB-612	.340	.400	.580
		.200	.260	
d	SB-613	.275	.430	.625
e	SB-614	.315	.477	.672
f	SB-615	.440	.505	.780
f	SB-616	.500	.565	.780
g	SB-615	.440	.505	.780
g	SB-616	.500	.565	.780
h	SB-617	.670	.735	.984

SEALING RING
(RUBBER)



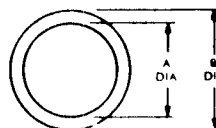
Code	Part Number	A	B	C	D
a	SB-631	.200	.320	.485	.156
b	SB-633	.362	.484	.558	.205
b	SB-632	.335	.445	.520	.205
		.195			
d	SB-633	.362	.484	.558	.205
e	SB-634	.400	.491	.533	.280
f	SB-635	.440	.640	.715	.205
f	SB-636	.500	.640	.715	.205
g	SB-635	.440	.640	.715	.205
g	SB-636	.500	.640	.715	.205
h	SB-637	.665	.805	.809	.205

COMPRESSION RING
(BRASS)



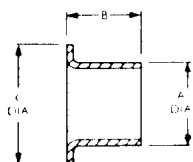
Code	Part Number	A	B
a	SB-811	.353	.465
b	SB-812	.408	.520
d	SB-813	.438	.549
e	SB-814	.478	.589
f	SB-815	.573	.706
g	SB-815	.573	.706
h	SB-816	.743	.880

THRUST RING
(BRASS)



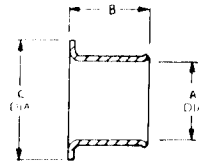
Code	Part Number	A	B
a	SB-821	.442	.538
b	SB-820	.498	.583
b	SB-822	.510	.583
		.375	
d	SB-823	.517	.632
e	SB-824	.564	.677
f g	SB-825	.668	.787
h	SB-826	.838	.993

INNER FERRULE
(BRASS)



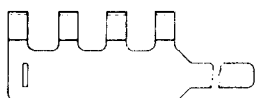
Code	Part Number	A	B	C
a	SB-841	.356	.360	.540
b	SB-842	.271	.360	.585
		.411		
d	SB-843	.441	.360	.634
e	SB-844	.481	.360	.681
f	SB-845	.516	.360	.784
f	SB-846	.576	.360	.784
g	SB-845	.516	.360	.784
g	SB-846	.576	.360	.784
h	SB-847	.741	.360	.986

OUTER FERRULE
(BRASS)



Code	Part Number	A	B	C
a	SB-831	.380	.420	.540
b	SB-832	.296	.420	.585
		.436		
d	SB-833	.465	.420	.634
e	SB-834	.505	.420	.681
f	SB-835	.540	.420	.784
f	SB-836	.600	.420	.784
g	SB-835	.540	.420	.784
g	SB-836	.600	.420	.784
h	SB-837	.765	.420	.986

BONDING CLIP
(BRASS)



Code	Part Number	No. of Tags
f	SB-861	4
h	SB-862	7

PANEL MOUNTING WASHER
(BRASS)



Shell Size	Part Number
Small	SB-874
Medium	SB-875
Large	SB-876

FOR USE WITH PANELS OF $\frac{1}{32}$ " OR LESS

BRASS SB-M4

ACCESSORIES AND SPARES

OUTLET NUT



Shell Size	Part Number	Dia. I/D
Small	SB4-B-391	.850
Medium	SB4-B-392	1.015
Large	SB4-B-393	1.450

COURSE THREAD ADAPTOR



Shell Size	Part Number	Dia. I/D
Small	SB4-B-891	.850
Medium	SB4-B-892	1.070
Large	SB4-B-893	1.450

PANEL MOUNTING GASKET
(For Square Flange Connectors)



Shell Size	Part Number	Dia. I/D
Small	SB4-B-671	1.000
Medium	SB4-B-672	1.220
Large	SB4-B-673	1.595

PANEL MOUNTING RING



Shell Size	Part Number	Dia. I/D
Small	SB4-B-871	.850
Medium	SB4-B-872	1.070
Large	SB4-B-873	1.450

PANEL LOCKING WASHER



Shell Size	Part Number	Dia. I/D
Small	SB4-B-401	.850
Medium	SB4-B-402	1.070
Large	SB4-B-403	1.450

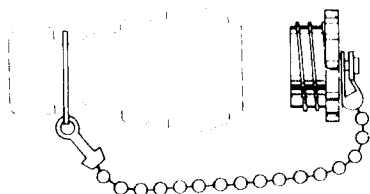
PANEL MOUNTING GASKET



Shell Size	Part Number	Dia. I/D
Small	SB4-B-641	.650
Medium	SB4-B-642	.900
Large	SB4-B-643	1.200

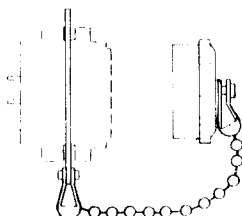
PROTECTIVE CAPS

FREE CONNECTORS



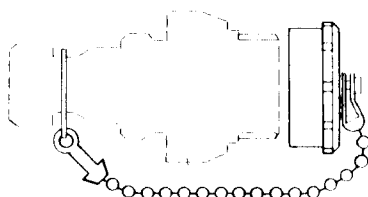
Shell Size	Brass		Polythene		Polythene Cap only
	Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	SB4-B-784	SB4-B-884			
Medium	SB4-B-785	SB4-B-885			
Large	SB4-B-786	SB4-B-886			

FIXED CONNECTORS



Shell Size		Brass		Polythene		Polythene Cap only
		Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	Sq. Flg	SB4-B-781	SB4-B-881	SB4-B-661	SB4-B-461	SB4-B-667
	Rd. Flg	SB4-B-777	SB4-B-877	SB4-B-677	SB4-B-477	
Medium	Sq. Flg	SB4-B-782	SB4-B-882	SB4-B-662	SB4-B-462	SB4-B-668
	Rd. Flg	SB4-B-778	SB4-B-878	SB4-B-678	SB4-B-478	
Large	Sq. Flg	SB4-B-783	SB4-B-883	SB4-B-663	SB4-B-463	SB4-B-669
	Rd. Flg	SB4-B-779	SB4-B-879	SB4-B-679	SB4-B-479	

FREE COUPLERS

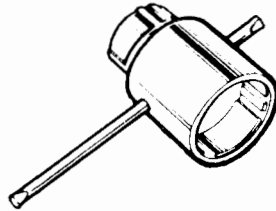


Shell Size		Brass		Polythene		Polythene Cap only
		Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small		SB4-B-787	SB4-B-887	SB4-B-664	SB4-B-464	SB4-B-667
Medium		SB4-B-788	SB4-B-888	SB4-B-665	SB4-B-465	SB4-B-668
Large		SB4-B-789	SB4-B-889	SB4-B-666	SB4-B-466	SB4-B-669

BRASS SB-M4

ASSEMBLY TOOLS

BODY HOLDER

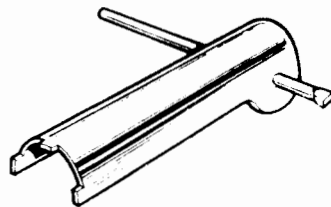


SMALL SB-694

MEDIUM SB-695

LARGE SB-696

TUBULAR SPANNER

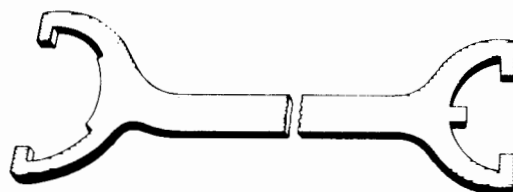


SMALL SB-697

MEDIUM SB-698

LARGE SB-699

DOUBLE-ENDED SPANNER



SMALL SB-691

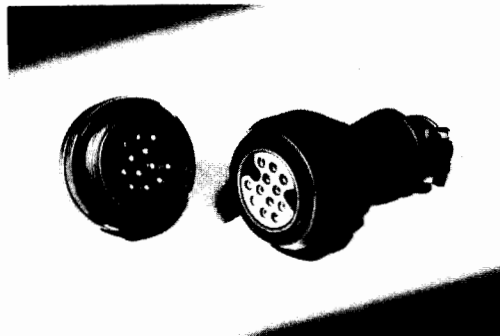
MEDIUM SB-692

LARGE SB-693

SB-104

ALUMINIUM

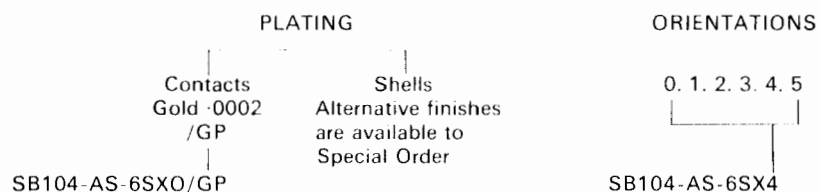
Electrical Connectors



SPECIFICATION

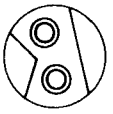
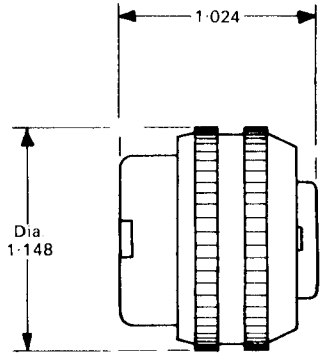
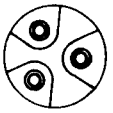
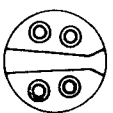
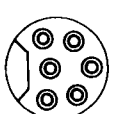
MANUFACTURE	In accordance with DEF. 5325-2/DEF. STAN 59-35 (Part 1 Section 2 Pat 104) to replace, interchange and intermate with M.4. connectors manufactured to DEF. 5321.
CONSTRUCTION	Aluminium shells with bonded monobloc neoprene mouldings available in oriented positions.
TEMPERATURE	T4: -55 C. to +100 C.
SEALING	Maximum leakage rate of 1 cc./hr. at a pressure differential of 20 p.s.i.
CONTACTS	High quality brass silver plated to DTD. 919A giving a maximum contact resistance of 2 milliohms. Socket contacts are of the closed entry type to eliminate test prod damage.
CURRENT RATINGS	5, 19 and 60 Amps as indicated.
VOLTAGE RATINGS	350 V a.c. and 2 kV peak where indicated.
INSULATION RESISTANCE	Between any contact and earth exceeds 5,000 megohms initially and will not fall below 10 megohms under the worst conditions of the specification.
CORROSION RESISTANCE	Plated to QQ-P-416A olive drab.

VARIATIONS

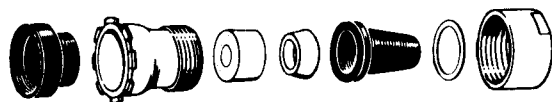
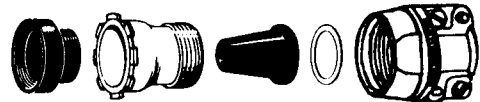
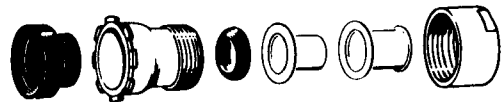


ALUMINIUM SB-104

SMALL SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	2	19	350	SB104T4-AS-2PEO	SB104T4-AS-2SEO	
	3	5	350	SB104T4-AS-3PEO	SB104T4-AS-3SEO	
	4	5	350	SB104T4-AS-4PEO	SB104T4-AS-4SEO	
	6	5	350	SB104T4-AS-6PEO	SB104T4-AS-6SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only * 	.230	.350	SB104-A-521	SB104-A-531	a
	.310	.410	SB104-A-520	SB104-A-530	b
	.360 × .220	.410 × .275	SB104-A-522	SB104-A-532	b
DEF10 Types A & P Cable Multicore cable totally unscreened 	.230	.360	SB104-A-561	SB104-A-571	a
	.295	.430	SB104-A-560	SB104-A-570	b
	.340 × .200	.410 × .275	SB104-A-562	SB104-A-572	b
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.280	.370	SB104-A-501	SB104-A-511	a
	.330 × .190	.410 × .270	SB104-A-502	SB104-A-512	b

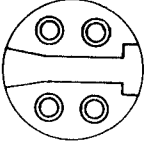
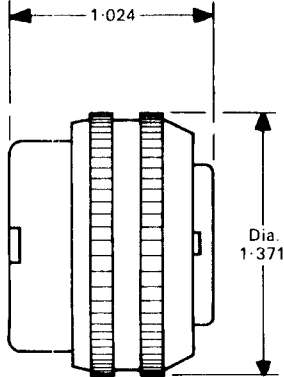
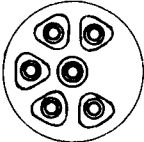
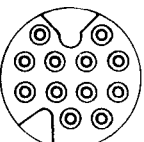
ALUMINIUM SB-104

SMALL SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	2	19	350	SB104T4-AS-2PXO	SB104T4-AS-2SXO	
	3	5	350	SB104T4-AS-3PXO	SB104T4-AS-3SXO	
	4	5	350	SB104T4-AS-4PXO	SB104T4-AS-4SXO	
	6	5	350	SB104T4-AS-6PXO	SB104T4-AS-6SXO	
	2	19	350	SB104T4-AS-2PCXO	SB104T4-AS-2SCXO	Panel Mounted Coupler
	3	5	350	SB104T4-AS-3PCXO	SB104T4-AS-3SCXO	
	4	5	350	SB104T4-AS-4PCXO	SB104T4-AS-4SCXO	
	6	5	350	SB104T4-AS-6PCXO	SB104T4-AS-6SCXO	
	2	19	350	SB104T4-AS-2PCEO	SB104T4-AS-2SCEO	Cable Mounted Coupler
	3	5	350	SB104T4-AS-3PCEO	SB104T4-AS-3SCEO	
	4	5	350	SB104T4-AS-4PCEO	SB104T4-AS-4SCEO	
	6	5	350	SB104T4-AS-6PCEO	SB104T4-AS-6SCEO	

ALUMINIUM SB-104

MEDIUM SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	4	19	350	SB104T4-AM-4PEO	SB104T4-AM-4SEO	
	6	5	2 kV Peak	SB104T4-AM-6PEO	SB104T4-AM-6SEO	
	12	5	350	SB104T4-AM-12PEO	SB104T4-AM-12SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only * 	.310	.440	SB104-A-523	SB104-A-533	d
	.345	.480	SB104-A-524	SB104-A-534	e
	.470	.530	SB104-A-525	SB104-A-535	f
	.525	.575	SB104-A-526	SB104-A-536	f
DEF10 Types A & P Cable Multicore cable totally unscreened 	.295	.440	SB104-A-563	SB104-A-573	d
	.325	.480	SB104-A-564	SB104-A-574	e
	.455	.520	SB104-A-565	SB104-A-575	f
	.480	.570	SB104-A-566	SB104-A-576	f
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.390	.460	SB104-A-503	SB104-A-513	d
	.455	.480	SB104-A-504	SB104-A-514	e
	.530	.575	SB104-A-506	SB104-A-516	f
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	.460	.530	SB104-A-546	AB104-A-556	f
	.530	.575	SB104-A-547	SB104-A-557	f
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads * 	.470	.530	SB104-A-586	SB104-A-596	f
	.525	.575	SB104-A-587	SB104-A-597	f

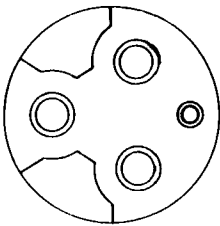
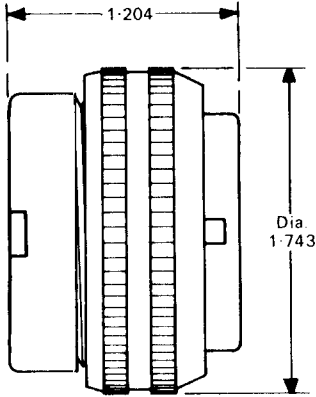
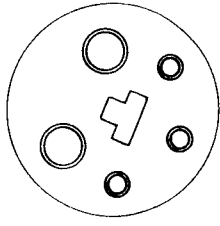
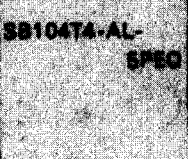
ALUMINIUM SB-104

MEDIUM SHELL

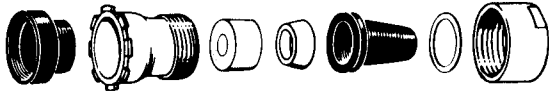
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	4	19	350	SB104T4-AM-4PXO	SB104T4-AM-4SXO	
	6	5	2 kV Peak	SB104T4-AM-6PXO	SB104T4-AM-6SXO	
	12	5	350	SB104T4-AM-12PXO	SB104T4-AM-12SXO	
	4	19	350	SB104T4-AM-4PCXO	SB104T4-AM-4SCXO	Panel Mounted Coupler
	6	5	2 kV Peak	SB104T4-AM-6PCXO	SB104T4-AM-6SCXO	
	12	5	350	SB104T4-AM-12PCXO	SB104T4-AM-12SCXO	
	4	19	350	SB104T4-AM-4PCEO	SB104T4-AM-4SCEO	Cable Mounted Coupler
	6	5	2 kV Peak	SB104T4-AM-6PCEO	SB104T4-AM-6SCEO	
	12	5	350	SB104T4-AM-12PCEO	SB104T4-AM-12SCEO	

ALUMINIUM SB-104

LARGE SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	 SB104T4-AL-4SEO	SB104T4-AL-4SEO	
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	 SB104T4-AL-5SEO	SB104T4-AL-5SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	·470	·530	SB104-A-527	SB104-A-537	g
	·525	·575	SB104-A-528	SB104-A-538	g
	·690	·745	SB104-A-529	SB104-A-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	·450	·540	SB104-A-567	SB104-A-577	g
	·510	·560	SB104-A-568	SB104-A-578	g
	·690	·735	SB104-A-569	SB104-A-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	·460	·530	SB104-A-507	SB104-A-517	g
	·530	·575	SB104-A-508	SB104-A-518	g
	·685	·760	SB104-A-509	SB104-A-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	·685	·760	SB104-A-548	SB104-A-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	·690	·760	SB104-A-588	SB104-A-598	h

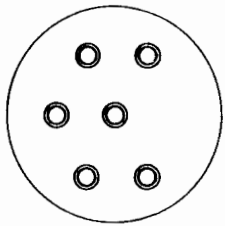
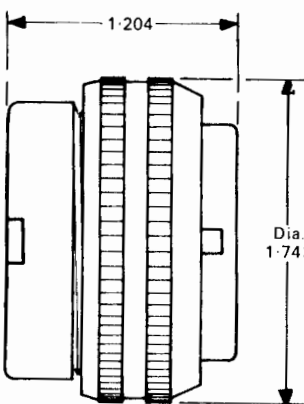
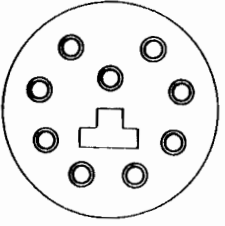
ALUMINIUM SB-104

LARGE SHELL

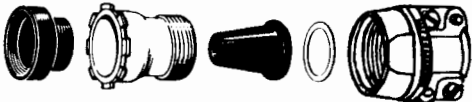
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps.	Voltage Voltage (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	SB104T4-AL- 4PXO	SB104T4-AL- 4SXO	
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	SB104T4-AL- 5PXO	SB104T4-AL- 5SXO	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	SB104T4-AL- 4PCXO	SB104T4-AL- 4SCXO	Panel Mounted Coupler
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	SB104T4-AL- 5PCXO	SB104T4-AL- 5SCXO	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	SB104T4-AL- 4PCEO	SB104T4-AL- 4SCEO	Cable Mounted Coupler
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	SB104T4-AL- 5PCEO	SB104T4-AL- 5SCEO	

ALUMINIUM SB-104

LARGE SHELL

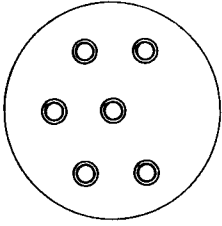
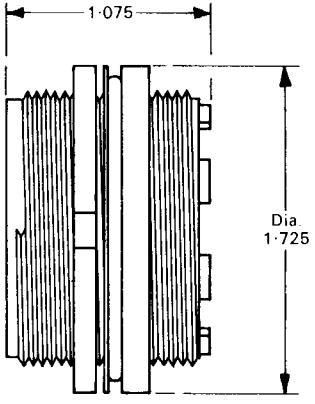
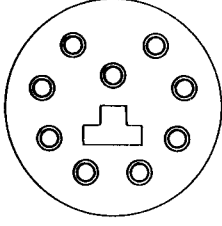
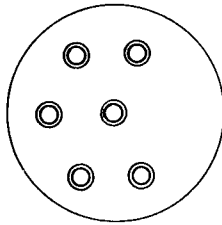
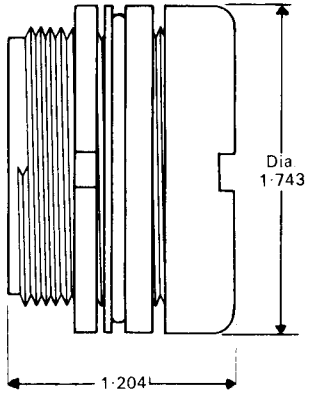
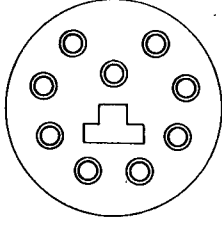
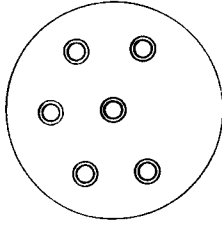
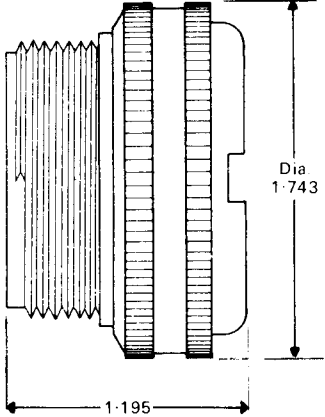
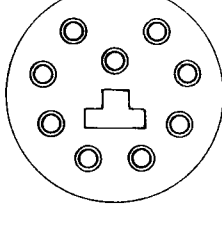
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	6	19	3 kV Peak	SB104T4-AL- 6PEO	SB104T4-AL- 6SEO	
	9	19	350	SB104T4-AL- 9PEO	SB104T4-AL- 9SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	.470	.530	SB104-A-527	SB104-A-537	g
	.525	.575	SB104-A-528	SB104-A-538	g
	.690	.745	SB104-A-529	SB104-A-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	.450	.540	SB104-A-567	SB104-A-577	g
	.510	.560	SB104-A-568	SB104-A-578	g
	.690	.735	SB104-A-569	SB104-A-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.460	.530	SB104-A-507	SB104-A-517	g
	.530	.575	SB104-A-508	SB104-A-518	g
	.685	.760	SB104-A-509	SB104-A-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	.685	.760	SB104-A-548	SB104-A-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	.690	.760	SB104-A-588	SB104-A-598	h

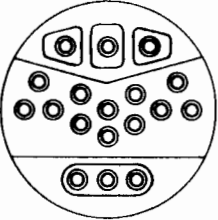
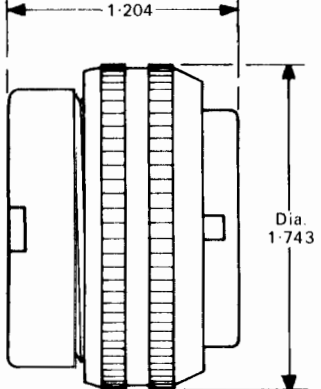
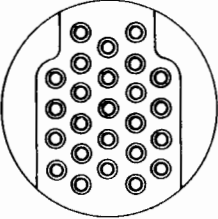
ALUMINIUM SB-104

LARGE SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	6	19	3 kV Peak	SB104T4-AL- 6PXO	SB104T4-AL- 6SXO	
	9	19	350	SB104T4-AL- 9PXO	SB104T4-AL- 9SXO	
	6	19	3 kV Peak	SB104T4-AL- 6PCXO	SB104T4-AL- 6SCXO	Panel Mounted Coupler 
	9	19	350	SB104T4-AL- 9PCXO	SB104T4-AL- 9SCXO	
	6	19	3 kV Peak	SB104T4-AL- 6PCEO	SB104T4-AL- 6SCEO	Cable Mounted Coupler 
	9	19	350	SB104T4-AL- 9PCEO	SB104T4-AL- 9SCEO	

ALUMINIUM SB-104

LARGE SHELL

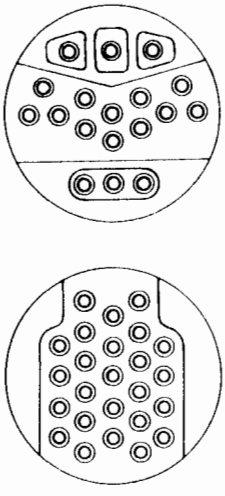
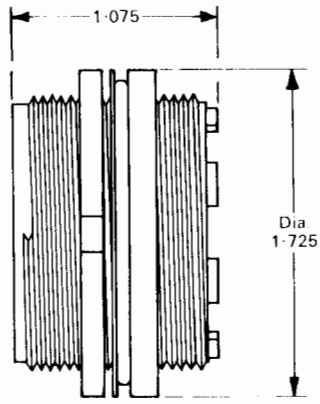
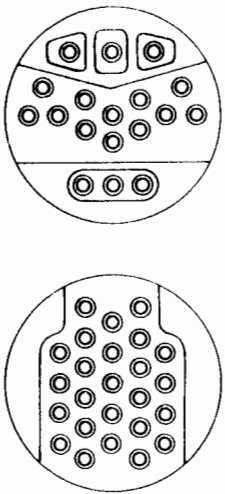
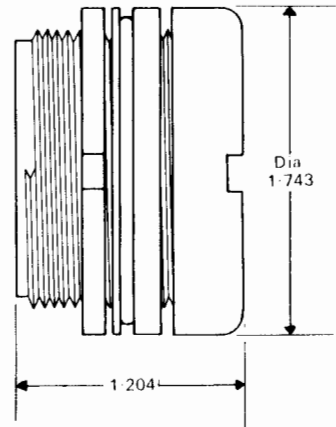
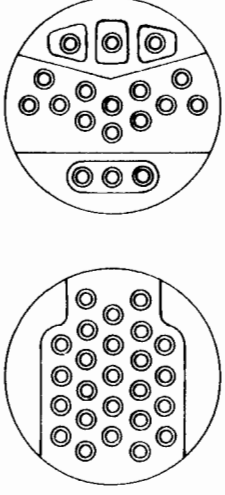
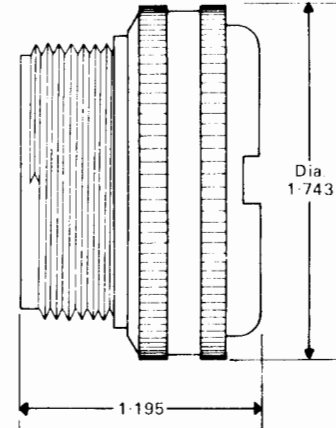
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-AL- 18PEO	SB104T4-AL- 18SEO	
	25	5	350	SB104T4-AL- 25PEO	SB104T4-AL- 25SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	·470	·530	SB104-A-527	SB104-A-537	g
	·525	·575	SB104-A-528	SB104-A-538	g
	·690	·745	SB104-A-529	SB104-A-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	·450	·540	SB104-A-567	SB104-A-577	g
	·510	·560	SB104-A-568	SB104-A-578	g
	·690	·735	SB104-A-569	SB104-A-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	·460	·530	SB104-A-507	SB104-A-517	g
	·530	·575	SB104-A-508	SB104-A-518	g
	·685	·760	SB104-A-509	SB104-A-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	·685	·760	SB104-A-548	SB104-A-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	·690	·760	SB104-A-588	SB104-A-598	h

ALUMINIUM SB-104

LARGE SHELL

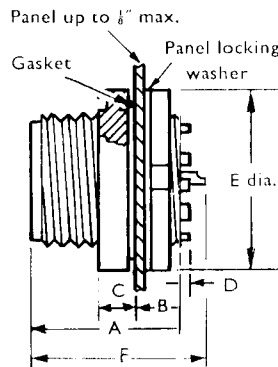
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-AL- 18PXO	SB104T4-AL- 18SXO	
	25	5	350	SB104T4-AL- 25PXO	SB104T4-AL- 25SXO	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-AL- 18PCXO	SB104T4-AL- 18SCXO	Panel Mounted Coupler 
	25	5	350	SB104T4-AL- 25PCXO	SB104T4-AL- 25SCXO	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-AL- 18PCEO	SB104T4-AL- 18SCEO	Cable Mounted Coupler 
	25	5	350	SB104T4-AL- 25PCEO	SB104T4-AL- 25SCEO	

ALUMINIUM SB-104

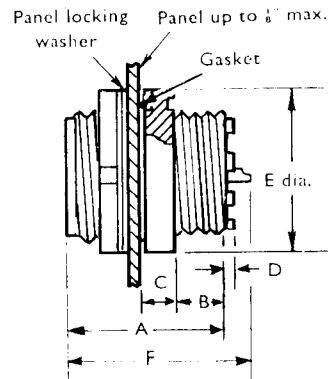
PANEL MOUNTING DETAILS

(for wiring details see chart inside back cover)

MOUNTED FROM FRONT OF PANEL



MOUNTED FROM REAR OF PANEL

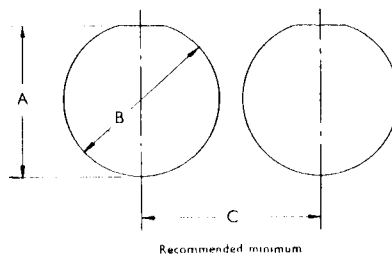


Shell Size	A	B min.	C min.	D	Dia. E max.	F max.
Small	.96	.240	.130	.045	1.160	1.08
Medium	.96	.240	.130	.045	1.390	1.08
Large	1.07	.300	.150	.060	1.760	1.15

Note: When mounted from front of panel, Outlet Fittings cannot be used.

PANEL PIERCING DETAILS

The 'flat' is not essential for sealing and is provided for location only



Shell Size	A	B	C
Small	.811/.816	.848/.853	1.413
Medium	1.033/1.038	1.067/1.072	1.562
Large	1.410/1.415	1.442/1.447	2.00

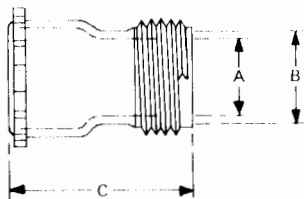
Panel Mounting Washers are required where panel thickness is $\frac{1}{32}$ " or less.

ALUMINIUM SB-104

ACCESSORIES AND SPARES

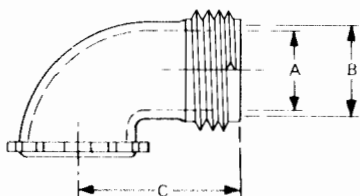
Outlets and Cable Clamps

STRAIGHT OUTLET



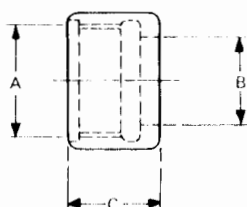
Shell Size	Code	Part Number	A	B	C
Small	a	SB104-A-341	412	490	974
	b	SB104-A-342	457	545	974
Medium	d	SB104-A-343	468	578	982
	e	SB104-A-344	520	625	982
	f	SB104-A-345	600	730	1 977
Large	g	SB104-A-346	625	735	1 137
	h	SB104-A-347	800	910	2 166

RIGHT ANGLE OUTLET



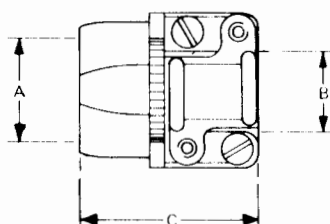
Shell Size	Code	Part Number	A	B	C
Small	a	SB104-A-351	412	490	858
	b	SB104-A-352	457	545	858
Medium	d	SB104-A-353	468	578	940
	e	SB104-A-354	520	625	940
	f	SB104-A-355	600	730	1 250
Large	g	SB104-A-356	625	735	1 070
	h	SB104-A-357	800	910	1 870

UNION NUT



Shell Size	Code	Part Number	A	B	C
Small	a	SB104-A-361	594	475	473
	b	SB104-A-362	640	525	473
Medium	d	SB104-A-363	687	574	473
	e	SB104-A-364	734	616	473
	f	SB104-A-365	844	705	473
Large	g	SB104-A-365	844	705	473
	h	SB104-A-366	1 068	885	537

CABLE CLAMP



Shell Size	Code	Part Number	A	B min	B max	C
Small	a	SB104-A-371	594	182	448	942
	b	SB104-A-372	640	200	495	942
Medium	d	SB104-A-373	687	210	510	942
	e	SB104-A-374	734	258	550	942
	f	SB104-A-375	844	357	665	942
Large	g	SB104-A-375	844	357	665	942
	h	SB104-A-376	1 062	465	830	1 067

OUTLET COMPLETE WITH NUT

Shell Size	Code	Straight	Right Angle
Small	a	SB104-A-301	SB104-A-311
	b	SB104-A-302	SB104-A-312
Medium	d	SB104-A-303	SB104-A-313
	e	SB104-A-304	SB104-A-314
	f	SB104-A-305	SB104-A-315
Large	g	SB104-A-306	SB104-A-316
	h	SB104-A-307	SB104-A-317

OUTLET COMPLETE WITH CABLE CLAMP

Shell Size	Code	Straight	Right Angle
Small	a	SB104-A-321	SB104-A-331
	b	SB104-A-322	SB104-A-332
Medium	d	SB104-A-323	SB104-A-333
	e	SB104-A-324	SB104-A-334
	f	SB104-A-325	SB104-A-335
Large	g	SB104-A-326	SB104-A-336
	h	SB104-A-327	SB104-A-337

ALUMINIUM SB-104

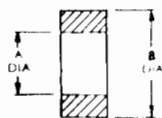
ACCESSORIES AND SPARES

OUTLET GASKET
(RUBBER)



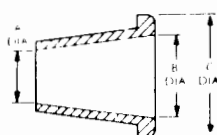
Code	Part Number	A	B
a	SB-601	.666	.375
b	SB-601	.666	.375
d	SB-602	.882	.375
e	SB-602	.882	.375
f	SB-602	.882	.375
g	SB-603	1.259	.375
h	SB-603	1.259	.375

CABLE SLEEVE
(RUBBER)



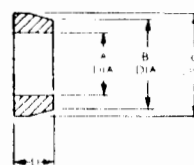
Code	Part Number	A	B
a	SB-621	.156	.503
b	SB-621	.156	.503
d	SB-622	.312	.562
e	SB-622	.312	.562
f	SB-623	.406	.687
g	SB-623	.406	.687
h	SB-624	.562	.812

UNION GASKET
(RUBBER)



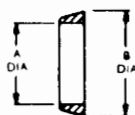
Code	Part Number	A	B	C
a	SB-611	.218	.345	.535
b	SB-613	.275	.430	.625
b	SB-612	.340	.400	.580
		.200	.260	
d	SB-613	.275	.430	.625
e	SB-614	.315	.477	.672
f	SB-615	.440	.505	.780
f	SB-616	.500	.565	.780
g	SB-615	.440	.505	.780
g	SB-616	.500	.565	.780
h	SB-617	.670	.735	.984

SEALING RING
(RUBBER)



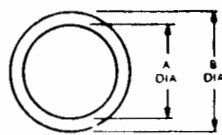
Code	Part Number	A	B	C	D
a	SB-631	.200	.320	.485	.156
b	SB-633	.362	.484	.558	.205
b	SB-632	.335	.445	.520	.205
		.195			
d	SB-633	.362	.484	.558	.205
e	SB-634	.400	.491	.533	.280
f	SB-635	.440	.640	.715	.205
f	SB-636	.500	.640	.715	.205
g	SB-635	.440	.640	.715	.205
g	SB-636	.500	.640	.715	.205
h	SB-637	.665	.805	.809	.205

COMPRESSION RING
(BRASS)



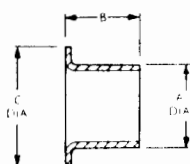
Code	Part Number	A	B
a	SB-811	.353	.465
b	SB-812	.408	.520
d	SB-813	.438	.549
e	SB-814	.478	.589
f	SB-815	.573	.706
g	SB-815	.573	.706
h	SB-816	.743	.880

THRUST RING
(BRASS)



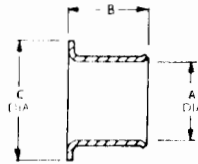
Code	Part Number	A	B
a	SB-821	.442	.538
b	SB-820	.498	.583
b	SB-822	.510	.583
		.375	
d	SB-823	.517	.632
e	SB-824	.564	.677
f g	SB-825	.668	.787
h	SB-826	.838	.993

INNER FERRULE
(BRASS)



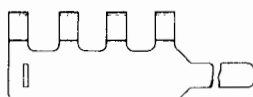
Code	Part Number	A	B	C
a	SB-841	.356	.360	.540
b	SB-842	.271 / .411	.360	.585
d	SB-843	.441	.360	.634
e	SB-844	.481	.360	.681
f	SB-845	.516	.360	.784
f	SB-846	.576	.360	.784
g	SB-845	.516	.360	.784
g	SB-846	.576	.360	.784
h	SB-847	.741	.360	.986

OUTER FERRULE
(BRASS)



Code	Part Number	A	B	C
a	SB-831	.380	.420	.540
b	SB-832	.296 / .436	.420	.585
d	SB-833	.465	.420	.634
e	SB-834	.505	.420	.681
f	SB-835	.540	.420	.784
f	SB-836	.600	.420	.784
g	SB-835	.540	.420	.784
g	SB-836	.600	.420	.784
h	SB-837	.765	.420	.986

BONDING CLIP
(BRASS)



Code	Part Number	No. of Tags
f	SB-861	4
h	SB-862	7

PANEL MOUNTING WASHER
(BRASS)



Shell Size	Part Number
Small	SB-874
Medium	SB-875
Large	SB-876

FOR USE WITH PANELS OF $\frac{1}{32}$ " OR LESS

ALUMINIUM SB-104

ACCESSORIES AND SPARES

Outlet Nut



Shell Size	Part Number	Dia I/D
Small	SB104-A-391	.850
Medium	SB104-A-392	1.015
Large	SB104-A-393	1.450

Outlet Nut
(Couplers)



Shell Size	Part Number	Dia I/D
Small	SB104-A-396	.850
Medium	SB104-A-397	1.070
Large	SB104-A-398	1.450

Panel Locking Ring



Shell Size	Part Number	Dia I/D
Small	SB104-A-851	.850
Medium	SB104-A-852	1.070
Large	SB104-A-853	1.450

Panel Mounting Ring



Supplied as integral part
of SB104 Aluminium only.
Not available as spare.

Panel Locking Washer



Shell Size	Part Number	Dia I/D
Small	SB104-A-401	.850
Medium	SB104-A-402	1.070
Large	SB104-A-403	1.450

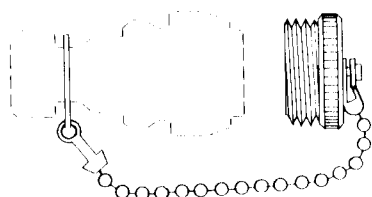
Panel Mounting Gasket



Shell Size	Part Number	Dia I/D
Small	SB104-A-641	.650
Medium	SB104-A-642	.900
Large	SB104-A-643	1.200

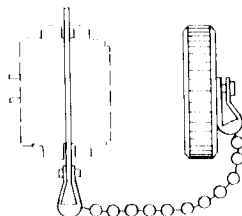
PROTECTIVE CAPS

FREE CONNECTORS



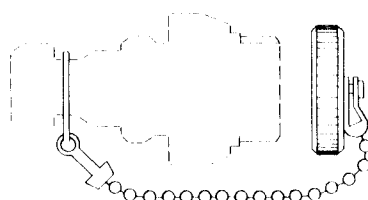
Shell Size	Ball Chain	Nylon Cord
Small	SB104-A-384	SB104-A-484
Medium	SB104-A-385	SB104-A-485
Large	SB104-A-386	SB104-A-486

FIXED CONNECTORS



Shell Size	Ball Chain	Nylon Cord
Small	SB104-A-381	SB104-A-481
Medium	SB104-A-382	SB104-A-482
Large	SB104-A-383	SB104-A-483

FREE COUPLERS

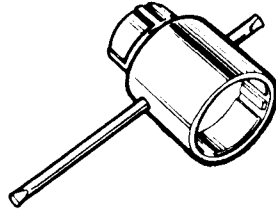


Shell Size	Ball Chain	Nylon Cord
Small	SB104-A-387	SB104-A-487
Medium	SB104-A-388	SB104-A-488
Large	SB104-A-389	SB104-A-489

ALUMINIUM SB-104

ASSEMBLY TOOLS

BODY HOLDER

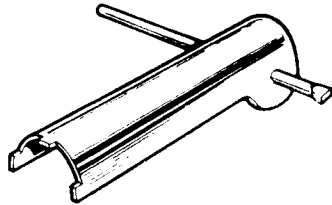


SMALL SB-694

MEDIUM SB-695

LARGE SB-696

TUBULAR SPANNER

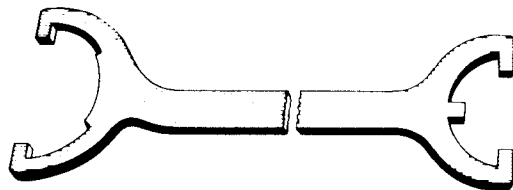


SMALL SB-697

MEDIUM SB-698

LARGE SB-699

DOUBLE-ENDED SPANNER



SMALL SB-691

MEDIUM SB-692

LARGE SB-693

SB-104

BRASS

Electrical Connectors



SPECIFICATION

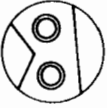
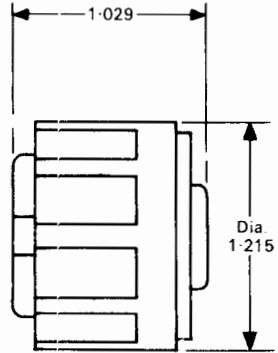
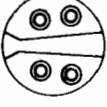
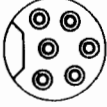
MANUFACTURE	In accordance with DEF. 5325-2/DEF. STAN 59-35 (Part 1 Section 2 Pat 104) to replace, interchange and intermate with M.4. connectors manufactured to DEF.5321.
CONSTRUCTION	Brass shells with bonded monobloc neoprene mouldings available in oriented positions.
TEMPERATURE	T4: -55°C to +100°C.
SEALING	Maximum leakage rate of 1 cc./hr. at a pressure differential of 20 p.s.i.
CONTACTS	High quality brass silver plated to DTD. 919A giving a maximum contact resistance of 2 milliohms. Socket contacts are of the closed entry type to eliminate test prod damage.
CURRENT RATINGS	5, 19 and 60 Amps as indicated.
VOLTAGE RATINGS	350 V a.c. and 2 kV peak—where indicated.
INSULATION RESISTANCE	Between any contact and earth exceeds 5,000 megohms initially and will not fall below 10 megohms under the worst conditions of the specification.
CORROSION RESISTANCE	Plated to QQ-P-416A olive drab.

VARIATIONS

PLATING		ORIENTATIONS
Contacts Gold .0002 /GP	Shells Alternative finishes are available to Special Order	0. 1. 2. 3. 4. 5
SB104-BS-6SX0/GP		SB104-BS-6SX4

BRASS SB-104

SMALL SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	2	19	350	SB104T4-BS-2PEO	SB104T4-BS-2SEO	
	3	5	350	SB104T4-BS-3PEO	SB104T4-BS-3SEO	
	4	5	350	SB104T4-BS-4PEO	SB104T4-BS-4SEO	
	6	5	350	SB104T4-BS-6PEO	SB104T4-BS-6SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	.230	.350	SB104-B-521	SB104-B-531	a
	.310	.410	SB104-B-520	SB104-B-530	b
	.360 × .220	.410 × .275	SB104-B-522	SB104-B-532	b
DEF10 Types A & P Cable Multicore cable totally unscreened 	.230	.360	SB104-B-561	SB104-B-571	a
	.295	.430	SB104-B-560	SB104-B-570	b
	.340 × .200	.410 × .275	SB104-B-562	SB104-B-572	b
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.280	.370	SB104-B-501	SB104-B-511	a
	.330 × .190	.410 × .270	SB104-B-502	SB104-B-512	b

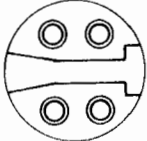
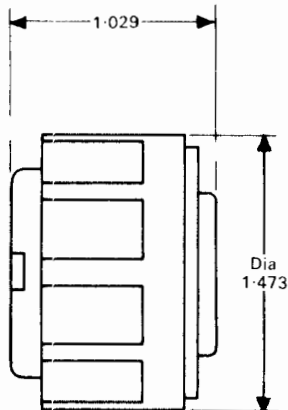
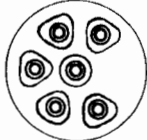
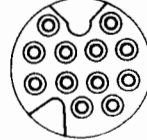
BRASS SB-104

SMALL SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	2	19	350	SB104T4-BS- 2PXO/RF	SB104T4-BS- 2SXO/RF	Round Flange 927 Dia 1.125
	3	5	350	SB104T4-BS- 3PXO/RF	SB104T4-BS- 3SXO/RF	
	4	5	350	SB104T4-BS- 4PXO/RF	SB104T4-BS- 4SXO/RF	
	6	5	350	SB104T4-BS- 6PXO/RF	SB104T4-BS- 6SXO/RF	
	2	19	350	SB104T4-BS- 2PXO	SB104T4-BS- 2SXO	Panel Mounting Unit Square Flange 1.005 Sq 1.340
	3	5	350	SB104T4-BS- 3PXO	SB104T4-BS- 3SXO	
	4	5	350	SB104T4-BS- 4PXO	SB104T4-BS- 4SXO	
	6	5	350	SB104T4-BS- 6PXO	SB104T4-BS- 6SXO	
	2	19	350	SB104T4-BS- 2PCEO	SB104T4-BS- 2SCEO	Cable Mounted Coupler Dia 1.215 1.085
	3	5	350	SB104T4-BS- 3PCEO	SB104T4-BS- 3SCEO	
	4	5	350	SB104T4-BS- 4PCEO	SB104T4-BS- 4SCEO	
	6	5	350	SB104T4-BS- 6PCEO	SB104T4-BS- 6SCEO	

BRASS SB-104

MEDIUM SHELL

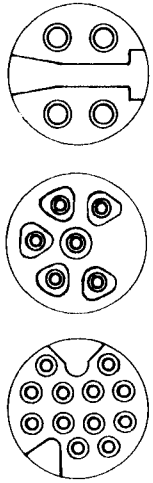
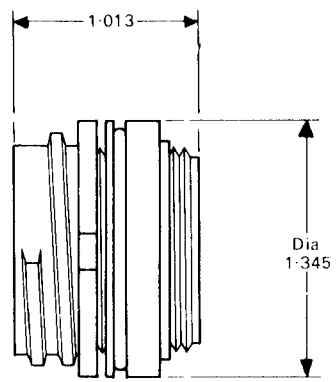
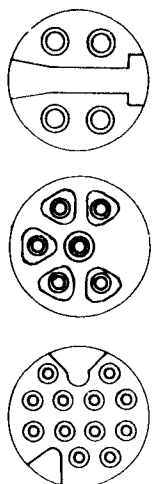
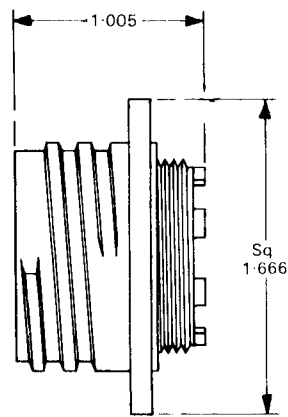
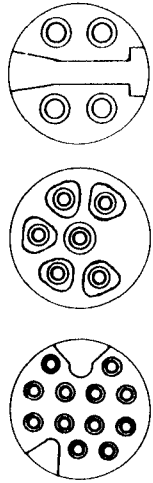
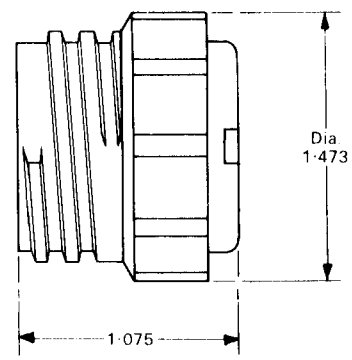
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	4	19	350	SB104T4-BM-4PEO	SB104T4-BM-4SEO	
	6	5	2 kV Peak	SB104T4-BM-6PEO	SB104-BM-6SEO	
	12	5	350	SB104T4-BM-12PEO	SB104T4-BM-12SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	.310	.440	SB104-B-523	SB104-B-533	d
	.345	.480	SB104-B-524	SB104-B-534	e
	.470	.530	SB104-B-525	SB104-B-535	f
	.525	.575	SB104-B-526	SB104-B-536	f
DEF10 Types A & P Cable Multicore cable totally unscreened 	.295	.440	SB104-B-563	SB104-B-573	d
	.325	.480	SB104-B-564	SB104-B-574	e
	.455	.520	SB104-B-565	SB104-B-575	f
	.480	.570	SB104-B-566	SB104-B-576	f
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.390	.460	SB104-B-503	SB104-B-513	d
	.455	.480	SB104-B-504	SB104-B-514	e
	.530	.575	SB104-B-506	SB104-B-515	f
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	.460	.530	SB104-B-546	SB104-B-556	f
	.530	.575	SB104-B-547	SB104-B-557	f
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	.470	.530	SB104-B-586	SB104-B-596	f
	.525	.575	SB104-B-587	SB104-B-597	f

BRASS SB-104

MEDIUM SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	4	19	350	SB104T4-BM-4PXO/RF	SB104T4-BM-4SXO/RF	Round Flange 
	6	5	2 kV Peak	SB104T4-BM-6PXO/RF	SB104T4-BM-6SXO/RF	
	12	5	350	SB104T4-BM-12PXO/RF	SB104T4-BM-12SXO/RF	
	4	19	350	SB104T4-BM-4PXO	SB104T4-BM-4SXO	Panel Mounted Unit Square Flange 
	6	5	2 kV Peak	SB104T4-BM-6PXO	SB104T4-BM-6SXO	
	12	5	350	SB104T4-BM-12PXO	SB104T4-BM-12SXO	
	4	19	350	SB104T4-BM-4PCEO	SB104T4-BM-4SCEO	Cable Mounted Coupler 
	6	5	2 kV Peak	SB104T4-BM-6PCEO	SB104T4-BM-6SCEO	
	12	5	350	SB104T4-BM-12PCEO	SB104T4-BM-12SCEO	

BRASS SB-104

LARGE SHELL

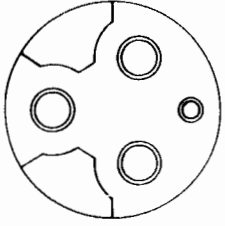
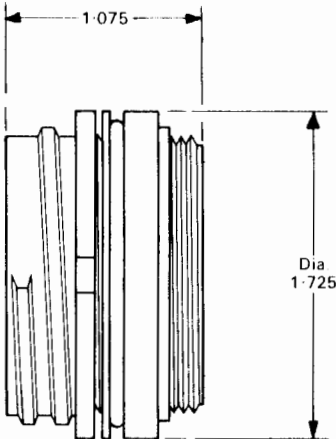
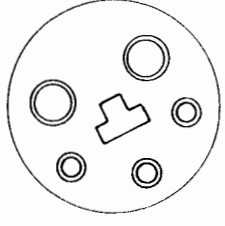
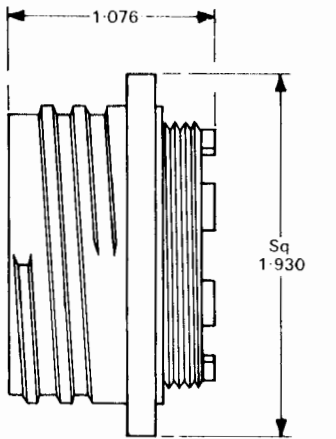
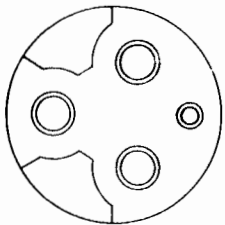
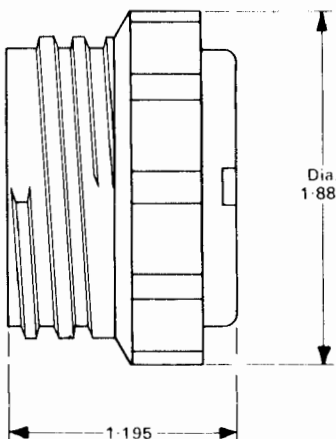
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	SB104T4-BL- 4PEO	SB104T4-BL- 4SEO	
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	SB104T4-BL- 5PEO	SB104T4-BL- 5SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	470	530	SB104-B-527	SB104-B-537	g
	525	575	SB104-B-528	SB104-B-538	g
	690	745	SB104-B-529	SB104-B-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	450	540	SB104-B-567	SB104-B-577	g
	510	560	SB104-B-568	SB104-B-578	g
	690	735	SB104-B-569	SB104-B-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	460	530	SB104-B-507	SB104-B-517	g
	530	575	SB104-B-508	SB104-B-518	g
	685	760	SB104-B-509	SB104-B-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	685	760	SB104-B-548	SB104-B-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	690	760	SB104-B-588	SB104-B-598	h

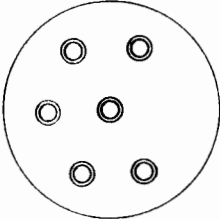
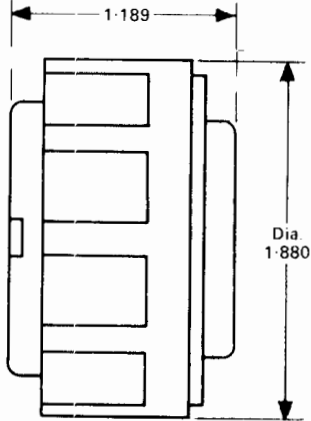
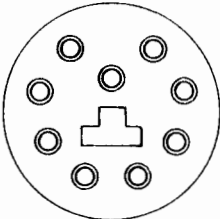
BRASS SB-104

LARGE SHELL

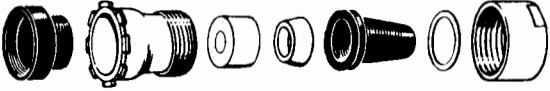
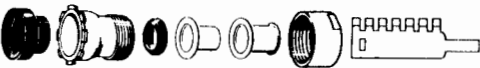
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	SB104T4-BL- 4PXO/RF	SB104T4-BL- 4SXO/RF	Round Flange 
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	SB104T4-BL- 5PXO/RF	SB104T4-BL- 5SXO/RF	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	SB104T4-BL- 4PXO	SB104T4-BL- 4SXO	Panel Mounted Unit Square Flange 
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	SB104T4-BL- 5PXO	SB104T4-BL- 5SXO	
	4	1 Pin 19 Amps 3 Pins 60 Amps	350	SB104T4-BL- 4PCEO	SB104T4-BL- 4SCEO	Cable Mounted Coupler 
	5	3 Pins 19 Amps 2 Pins 60 Amps	350	SB104T4-BL- 5PCEO	SB104T4-BL- 5SCEO	

BRASS SB-104

LARGE SHELL

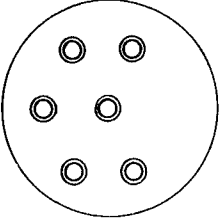
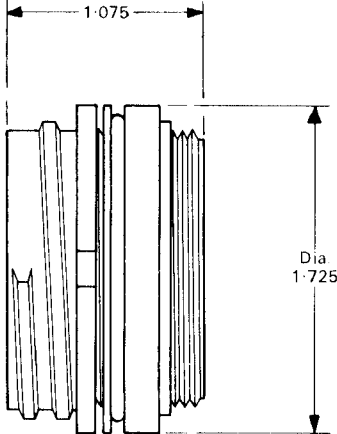
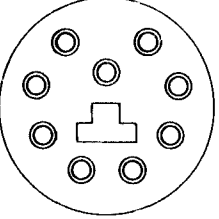
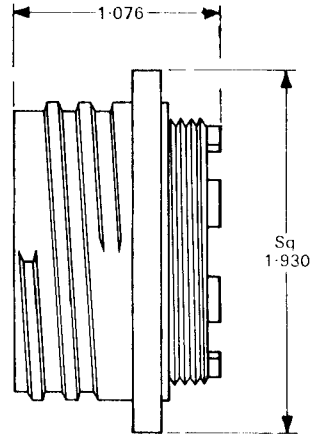
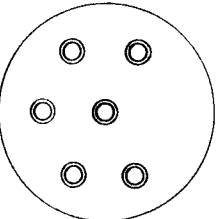
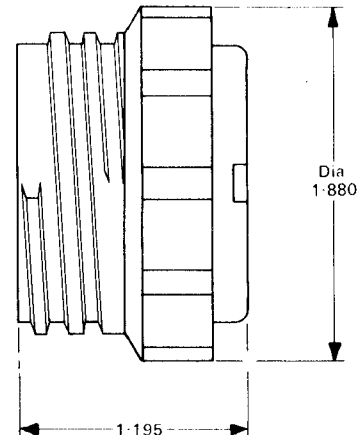
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	6	19	3 kV Peak	SB104T4-BL- 6PEO	SB104T4-BL- 6SEO	
	9	19	350	SB104T4-BL- 9PEO	SB104T4-BL- 9SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	.470	.530	SB104-B-527	SB104-B-537	g
	.525	.575	SB104-B-528	SB104-B-538	g
	.690	.745	SB104-B-529	SB104-B-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	.450	.540	SB104-B-567	SB104-B-577	g
	.510	.560	SB104-B-568	SB104-B-578	g
	.690	.735	SB104-B-569	SB104-B-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.460	.530	SB104-B-507	SB104-B-517	g
	.530	.575	SB104-B-508	SB104-B-518	g
	.685	.760	SB104-B-509	SB104-B-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	.685	.760	SB104-B-548	SB104-B-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	.690	.760	SB104-B-588	SB104-B-598	h

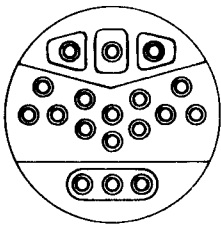
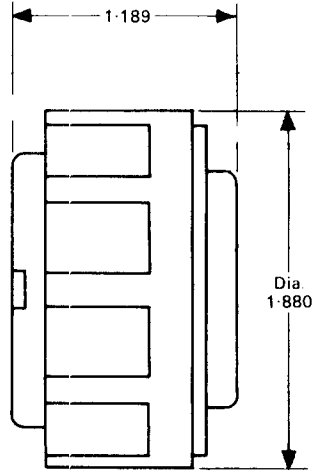
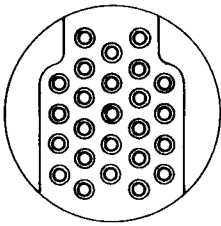
BRASS SB-104

LARGE SHELL

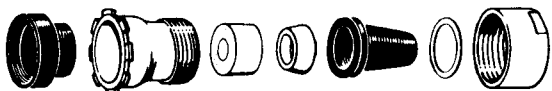
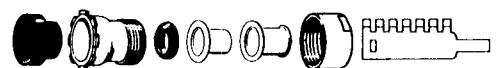
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	6	19	3 kV Peak	SB104T4-BL- 6PXO/RF	SB104T4-BL- 6SXO/RF	Round Flange 
	9	19	350	SB104T4-BL- 9PXO/RF	SB104T4-BL- 9SXO/RF	
	6	19	3 kV Peak	SB104T4-BL- 6PXO	SB104T4-BL- 6SXO	Panel Mounted Unit Square Flange 
	9	19	350	SB104T4-BL- 9PXO	SB104T4-BL- 9SXO	
	6	19	3kV Peak	SB104T4-BL- 6PCEO	SB104T4-BL- 6SCEO	Cable Mounted Coupler 
	9	19	350	SB104T4-BL- 9PCEO	SB104T4-BL- 9SCEO	

BRASS SB-104

LARGE SHELL

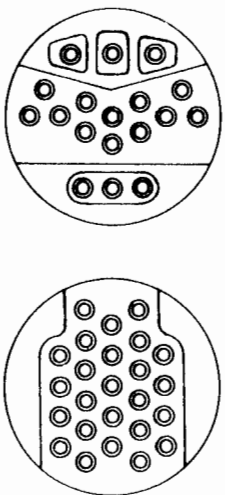
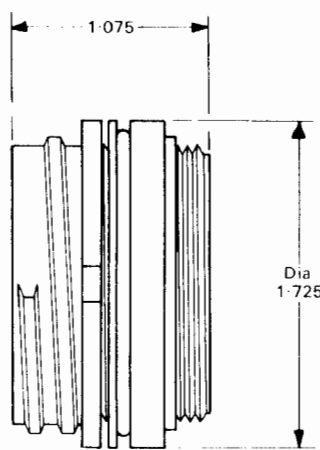
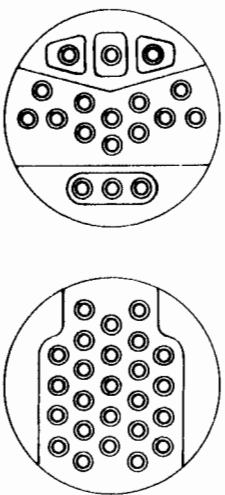
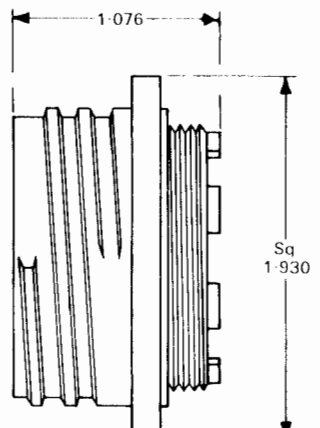
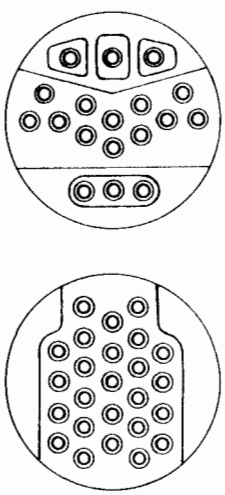
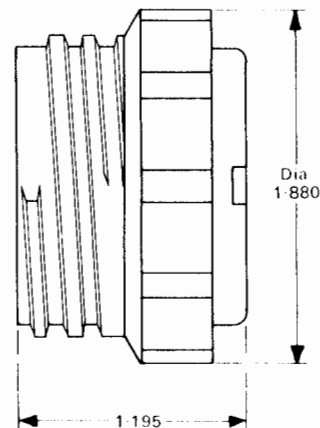
Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers		Cable Mounted or "Free" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-BL-18PEO	SB104T4-BL-18SEO	
	25	5	350	SB104T4-BL-25PEO	SB104T4-BL-25SEO	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
DEF10 Types D, E & F Cable Multicore cable with all individually screened leads and no collective screen DEF10 Types C & R Cable Multicore cable with inner collective screen only 	.470	.530	SB104-B-527	SB104-B-537	g
	.525	.575	SB104-B-528	SB104-B-538	g
	.690	.745	SB104-B-529	SB104-B-539	h
DEF10 Types A & P Cable Multicore cable totally unscreened 	.450	.540	SB104-B-567	SB104-B-577	g
	.510	.560	SB104-B-568	SB104-B-578	g
	.690	.735	SB104-B-569	SB104-B-579	h
DEF10 Types B & Q Cable Multicore cable with outer collective screen only 	.460	.530	SB104-B-507	SB104-B-517	g
	.530	.575	SB104-B-508	SB104-B-518	g
	.685	.760	SB104-B-509	SB104-B-519	h
DEF10 Type H Cable Multicore cable with outer collective screen and individually screened H.T. leads 	.685	.760	SB104-B-548	SB104-B-558	h
DEF10 Type J Cable Multicore cable with inner collective screen and individually screened H.T. leads 	.690	.760	SB104-B-588	SB104-B-598	h

BRASS SB-104

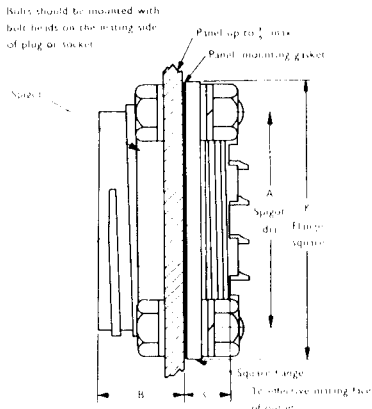
LARGE SHELL

Plan Form (Actual Size)	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers		Panel Mounted or "Fixed" Unit
				Pin Contacts	Socket Contacts	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-BL- 18PXO/RF	SB104T4-BL- 18SXO/RF	Round Flange 
	25	5	350	SB104T4-BL- 25PXO/RF	SB104T4-BL- 25SXO/RF	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-BL- 18PXO	SB104T4-BL- 18SXO	Panel Mounted Unit Square Flange 
	25	5	350	SB104T4-BL- 25PXO	SB104T4-BL- 25SXO	
	18	5	6 Pins 2 kV Peak 12 Pins 350 V Peak	SB104T4-BL- 18PCEO	SB104T4-BL- 18SCEO	Cable Mounted Coupler 
	25	5	350	SB104T4-BL- 25PCEO	SB104T4-BL- 25SCEO	

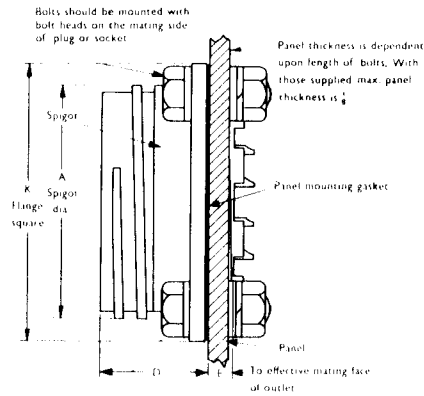
BRASS SB-104

PANEL MOUNTING DETAILS (for wiring details see chart inside back cover)

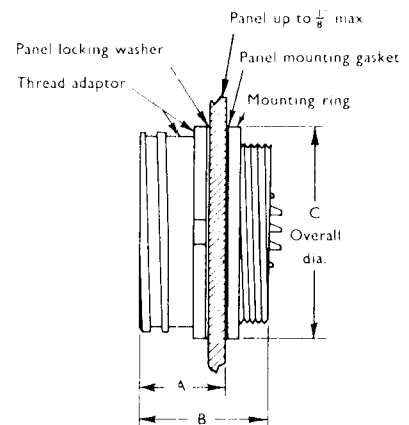
MOUNTED FROM REAR OF PANEL



MOUNTED FROM FRONT OF PANEL



MOUNTED FROM FRONT OR REAR OF PANEL

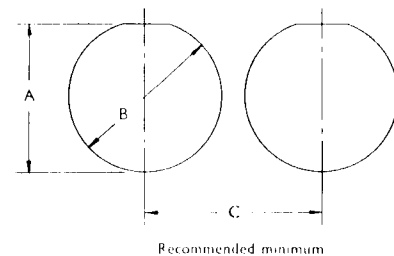
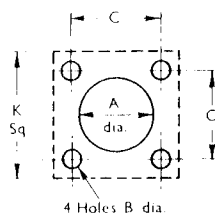


SQUARE FLANGE

Shell Size	A	B	C	D	E	K
Small	.995/1.000	.54	.38	.67	.26	1.33
Medium	1.215/1.220	.55	.38	.68	.26	1.65
Large	1.590/1.595	.61	.40	.70	.25	1.92

ROUND FLANGE

Shell Size	A	B	C
Small	.60	.90	1.125
Medium	.60	.90	1.343
Large	.67	1.02	1.718



Shell Size	A	B	C	K
Small	.995/1.000	.417 4BA	1.000	1.33
Medium	1.215/1.220	.191 2BA	1.235	1.65
Large	1.590 1.595	.191 2BA	1.515	1.92

Shell size	A	B	C
Small	.811/.816	.848/.853	1.413
Medium	1.033/1.038	1.067/1.072	1.562
Large	1.410/1.415	1.442/1.447	2.00

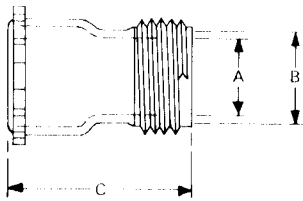
Panel Mounting Washers are required where panel thickness is $\frac{1}{32}$ " or less

BRASS SB-104

ACCESSORIES AND SPARES

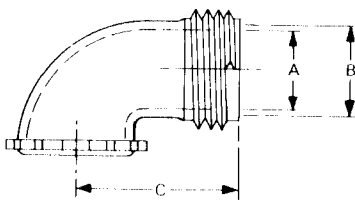
Outlets and Cable Clamps

STRAIGHT OUTLET



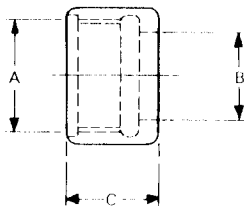
Shell Size	Code	Part Number	A	B	C
Small	a	SB104-B-341	412	490	974
	b	SB104-B-342	457	545	974
Medium	d	SB104-B-343	468	578	982
	e	SB104-B-344	520	625	982
	f	SB104-B-345	600	730	1 977
Large	g	SB104-B-346	625	735	1 137
	h	SB104-B-347	800	910	2 166

RIGHT ANGLE OUTLET



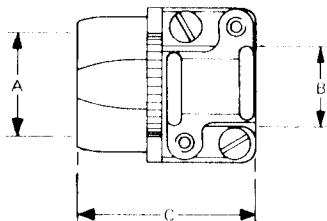
Shell Size	Code	Part Number	A	B	C
Small	a	SB104-B-351	412	490	858
	b	SB104-B-352	457	545	858
Medium	d	SB104-B-353	468	578	940
	e	SB104-B-354	520	625	940
	f	SB104-B-355	600	730	1 250
Large	g	SB104-B-356	625	735	1 070
	h	SB104-B-357	800	910	1 870

UNION NUT



Shell Size	Code	Part Number	A	B	C
Small	a	SB104-B-361	594	475	473
	b	SB104-B-362	640	525	473
Medium	d	SB104-B-363	687	574	473
	e	SB104-B-364	734	616	473
	f	SB104-B-365	844	705	473
Large	g	SB104-B-366	844	705	473
	h	SB104-B-366	1 068	885	537

CABLE CLAMP



Shell Size	Code	Part Number	A	B min	B max	C
Small	a	SB104-B-371	594	182	448	942
	b	SB104-B-372	640	200	495	942
Medium	d	SB104-B-373	687	210	510	942
	e	SB104-B-374	734	258	550	942
	f	SB104-B-375	844	357	665	942
Large	g	SB104-B-376	844	357	665	942
	h	SB104-B-376	1 062	465	830	1 067

OUTLET COMPLETE WITH NUT

Shell Size	Code	Straight	Right Angle
Small	a	SB104-B-301	SB104-B-311
	b	SB104-B-302	SB104-B-312
Medium	d	SB104-B-303	SB104-B-313
	e	SB104-B-304	SB104-B-314
	f	SB104-B-305	SB104-B-315
Large	g	SB104-B-306	SB104-B-316
	h	SB104-B-307	SB104-B-317

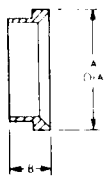
OUTLET COMPLETE WITH CABLE CLAMP

Shell Size	Code	Straight	Right Angle
Small	a	SB104-B-321	SB104-B-331
	b	SB104-B-322	SB104-B-332
Medium	d	SB104-B-323	SB104-B-333
	e	SB104-B-324	SB104-B-334
	f	SB104-B-325	SB104-B-335
Large	g	SB104-B-326	SB104-B-336
	h	SB104-B-327	SB104-B-337

BRASS SB-104

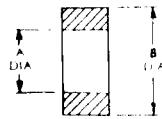
ACCESSORIES AND SPARES

OUTLET GASKET
(RUBBER)



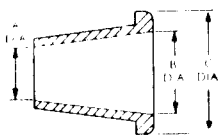
Code	Part Number	A	B
a	SB-601	666	375
b	SB-601	666	375
d	SB-602	882	375
e	SB-602	882	375
f	SB-602	882	375
g	SB-603	1 259	375
h	SB-603	1 259	375

CABLE SLEEVE
(RUBBER)



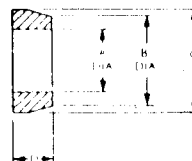
Code	Part Number	A	B
a	SB-621	156	503
b	SB-621	156	503
d	SB-622	312	562
e	SB-622	312	562
f	SB-623	406	687
g	SB-623	406	687
h	SB-624	562	812

UNION GASKET
(RUBBER)



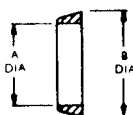
Code	Part Number	A	B	C
a	SB-611	218	345	535
b	SB-613	275	430	625
b	SB-612	340	400	580
		200	260	
d	SB-613	275	430	625
e	SB-614	315	477	672
f	SB-615	440	505	780
f	SB-616	500	565	780
g	SB-615	440	505	780
g	SB-616	500	565	780
h	SB-617	670	735	984

SEALING RING
(RUBBER)



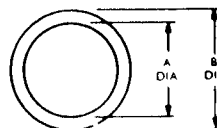
Code	Part Number	A	B	C	D
a	SB-631	200	320	485	156
b	SB-633	362	484	558	205
b	SB-632	335	445	520	205
		195			
d	SB-633	362	484	558	205
e	SB-634	400	491	533	280
f	SB-635	440	640	715	205
f	SB-636	500	640	715	205
g	SB-635	440	640	715	205
g	SB-636	500	460	715	205
h	SB-637	665	805	809	205

COMPRESSION RING
(BRASS)



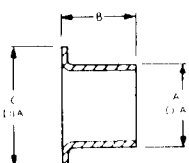
Code	Part Number	A	B
a	SB-811	353	465
b	SB-812	408	520
d	SB-813	438	549
e	SB-814	478	589
f	SB-815	573	706
g	SB-815	573	706
h	SB-816	743	880

THRUST RING
(BRASS)



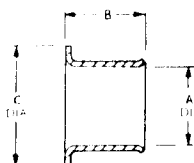
Code	Part Number	A	B
a	SB-821	442	538
b	SB-820	498	583
b	SB-822	510	583
		375	
d	SB-823	517	632
e	SB-824	564	677
f g	SB-825	668	787
h	SB-826	838	993

INNER FERRULE
(BRASS)



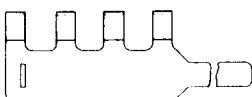
Code	Part Number	A	B	C
a	SB-841	356	360	540
b	SB-842	271/411	360	585
d	SB-843	441	360	634
e	SB-844	481	360	681
f	SB-845	516	360	784
f	SB-846	576	360	784
g	SB-845	516	360	784
g	SB-846	576	360	784
h	SB-847	741	360	986

OUTER FERRULE
(BRASS)



Code	Part Number	A	B	C
a	SB-831	380	420	540
b	SB-832	296/436	420	585
d	SB-833	465	420	634
e	SB-834	505	420	681
f	SB-835	540	420	784
f	SB-836	600	420	784
g	SB-835	540	420	784
g	SB-836	600	420	784
h	SB-837	765	420	986

BONDING CLIP
(BRASS)



Code	Part Number	No. of Tags
f	SB-861	4
h	SB-862	7

PANEL MOUNTING WASHER
(BRASS)



Shell Size	Part Number
Small	SB-874
Medium	SB-875
Large	SB-876

FOR USE WITH PANELS OF $\frac{1}{4}$ " OR LESS

BRASS SB-104

ACCESSORIES AND SPARES

OUTLET NUT



Shell Size	Part Number	Dia I/D
Small	SB104-B-391	.850
Medium	SB104-B-392	1.015
Large	SB104-B-393	1.450

COURSE THREAD ADAPTOR



Shell Size	Part Number	Dia I/D
Small	SB104-B-891	.850
Medium	SB104-B-892	1.070
Large	SB104-B-893	1.450

PANEL MOUNTING GASKET
(For Square Flange Connectors)



Shell Size	Part Number	Dia I/D
Small	SB104-B-671	1.000
Medium	SB104-B-672	1.220
Large	SB104-B-673	1.595

PANEL MOUNTING RING



Shell Size	Part Number	Dia I/D
Small	SB104-B-871	.850
Medium	SB104-B-872	1.070
Large	SB104-B-873	1.450

PANEL LOCKING WASHER



Shell Size	Part Number	Dia I/D
Small	SB104-B-401	.850
Medium	SB104-B-402	1.070
Large	SB104-B-403	1.450

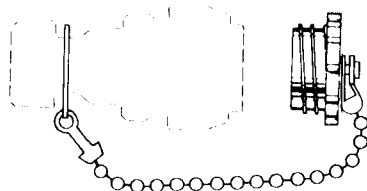
PANEL MOUNTING GASKET



Shell Size	Part Number	Dia I/D
Small	SB104-B-641	.650
Medium	SB104-B-642	.900
Large	SB104-B-643	1.250

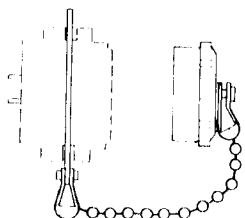
PROTECTIVE CAPS

FREE CONNECTORS



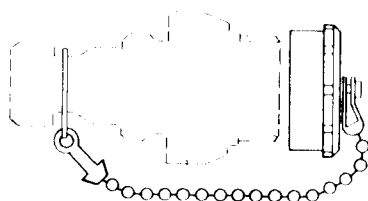
Shell Size	Brass		Polythene		Polythene Cap only
	Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	SB104-B-784	SB104-B-884			
Medium	SB104-B-785	SB104-B-885			
Large	SB104-B-786	SB104-B-886			

FIXED CONNECTORS



Shell Size		Brass		Polythene		Polythene Cap only
		Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	Sq Flg	SB104-B-781	SB104-B-881	SB104-B-661	SB104-B-461	SB104-B-667
	Rd Flg	SB104-B-777	SB104-B-877	SB104-B-677	SB104-B-477	
Medium	Sq Flg	SB104-B-782	SB104-B-882	SB104-B-662	SB104-B-462	SB104-B-668
	Rd Flg	SB104-B-778	SB104-B-878	SB104-B-678	SB104-B-478	
Large	Sq Flg	SB104-B-783	SB104-B-883	SB104-B-663	SB104-B-463	SB104-B-669
	Rd Flg	SB104-B-779	SB104-B-879	SB104-B-679	SB104-B-479	

FREE COUPLERS

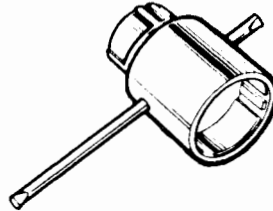


Shell Size	Brass		Polythene		Polythene Cap only
	Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	SB104-B-787	SB104-B-887	SB104-B-664	SB104-B-464	SB104-B-667
Medium	SB104-B-788	SB104-B-888	SB104-B-665	SB104-B-465	SB104-B-668
Large	SB104-B-789	SB104-B-889	SB104-B-666	SB104-B-466	SB104-B-669

BRASS SB-104

ASSEMBLY TOOLS

BODY HOLDER

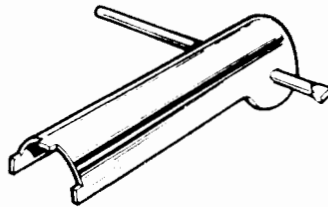


SMALL SB-694

MEDIUM SB-695

LARGE SB-696

TUBULAR SPANNER

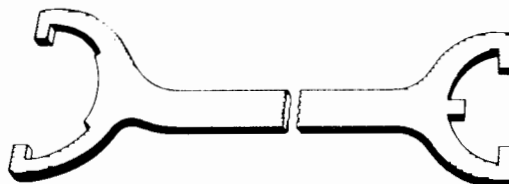


SMALL SB-697

MEDIUM SB-698

LARGE SB-699

DOUBLE-ENDED SPANNER



SMALL SB-691

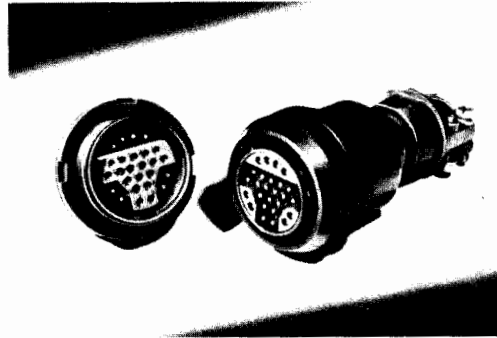
MEDIUM SB-692

LARGE SB-693

SB-104 DD

ALUMINIUM

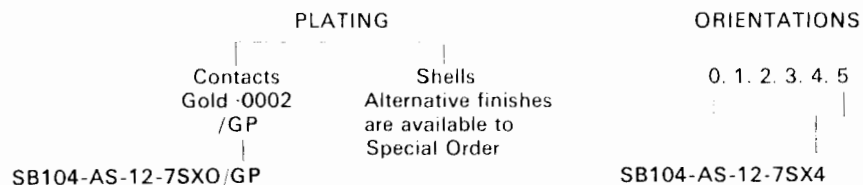
Electrical Connectors



SPECIFICATION

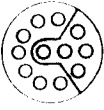
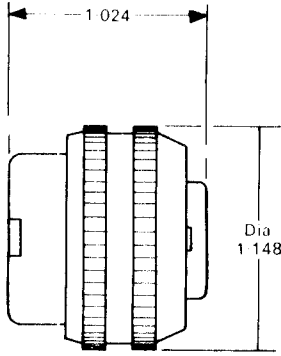
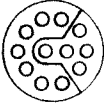
MANUFACTURE	In accordance with DEF. 5325-2, DEF. STAN 59-35 (Part 1 Section 2 Pat 104). The increased densities have been achieved by using 0.040 in. diameter contacts and mixing both pins and sockets on individual units.
CONSTRUCTION	Aluminium shells with bonded neoprene inserts available in oriented positions. Individual conductors may be sealed by a rear grommet under compression where open loom wiring is employed. Sealing of multicore sheathed cable is achieved by utilising the standard range of Pattern 104 straight and right angle accessory sets. Alternatively, both rear grommet and straight outlet accessory sets may be combined to provide individual conductor and cable sealing where extreme environments may be encountered.
TEMPERATURE	T4: -55°C to +100°C.
SEALING	Maximum leakage range of 1 cc./hr. at a pressure differential of 20 p.s.i.
CONTACTS	High quality brass, silver or gold plated to give a maximum contact resistance of 2 milliohms. Socket contacts are of the closed entry type to prevent probe damage.
CURRENT RATING	3 Amps. and 5 Amps.
VOLTAGE RATING	350 V a.c.
INSULATION RESISTANCE	Between any contact and earth exceeds 5,000 megohms initially and will not fall below 10 megohms under the worst conditions of the specification.
CORROSION RESISTANCE	Plated to QQ-P-416A olive drab.

VARIATIONS



ALUMINIUM SB-104 DD

SMALL SHELL

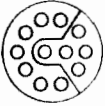
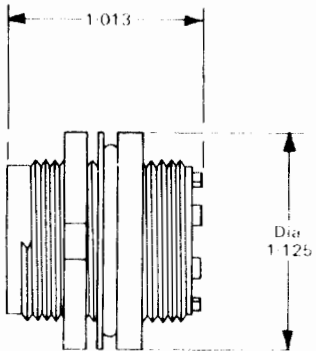
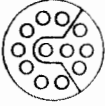
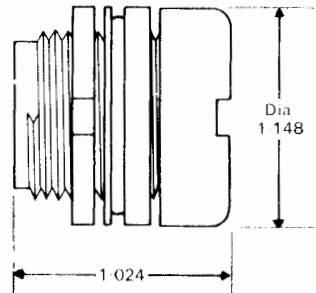
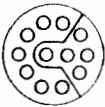
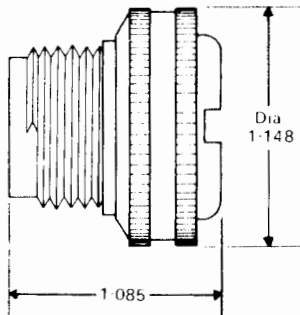
Plan Form	Number of Contacts	Current Rating Amps	Voltage A C (r m s.)	Part Numbers	Cable Mounted or "Free" Unit
 P	12	3	350	SB104T4-AS-12-7PEO Contains 5 Socket Contacts 7 Pin Contacts	
 S	12	3	350	SB104T4-AS-12-7SEO Contains 7 Socket Contacts 5 Pin Contacts	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O.D.		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
Multicore cable with all individually screened leads and no collective screen Including D E F 10 and D E F 158 Types. Multicore cable with inner collective screen only Including D E F 10 and D E F 158 Types	.230	.350	SB104-A-521	SB104-A-531	a
	.310	.410	SB104-A-520	SB104-A-530	b
Multicore cable totally unscreened Including D E F 10 and D E F 158 Types	.230	.360	SB104-A-561	SB104-A-571	a
	.295	.430	SB104-A-560	SB104-A-570	b
	.340 x .200	.410 x .275	SB104-A-562	SB104-A-572	b
Grommet Sealing Assembly	FREE UNITS ONLY				
	.045	.090	SB104-901-P	SB104-901-S	
	COUPLERS AND FIXED UNITS ONLY				
	.045	.090	SB104-902-P	SB104-902-S	
	FOR USE WITH CONNECTORS CODED 'P' OR 'S' AS INDICATED				

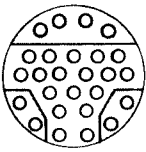
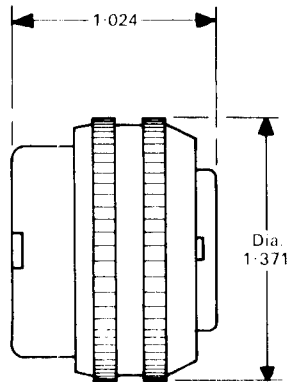
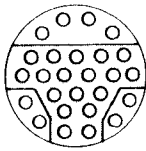
ALUMINIUM SB-104 DD

SMALL SHELL

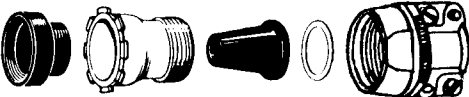
Plan Form	Number of Contacts	Current Rating Amps	Voltage A C (r.m.s.)	Part Numbers	Panel Mounted or "Fixed" Unit
 S	12	3	350	SB104T4-AS-12-7SXO Contains 7 Socket Contacts 5 Pin Contacts	
	12	3	350	SB104T4-AS-12-7PXO Contains 5 Socket Contacts 7 Pin Contacts	
 S	12	3	350	SB104T4-AS-12-7SCXO Contains 7 Socket Contacts 5 Pin Contacts	Panel Mounted Coupler 
	12	3	350	SB104T4-AS-12-7PCXO Contains 5 Socket Contacts 7 Pin Contacts	
 S	12	3	350	SB104T4-AS-12-7SCEO Contains 7 Socket Contacts 5 Pin Contacts	Cable Mounted Coupler 
	12	3	350	SB104T4-AS-12-7PCEO Contains 5 Socket Contacts 7 Pin Contacts	

ALUMINIUM SB-104 DD

MEDIUM SHELL

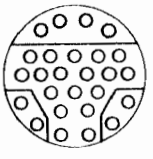
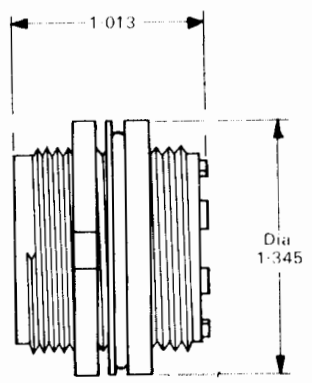
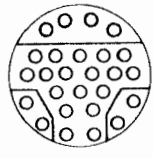
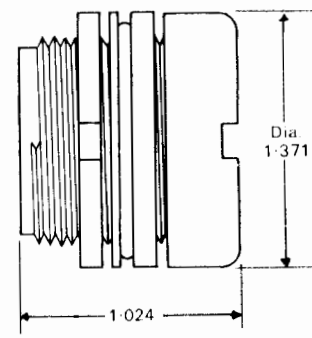
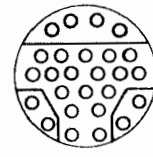
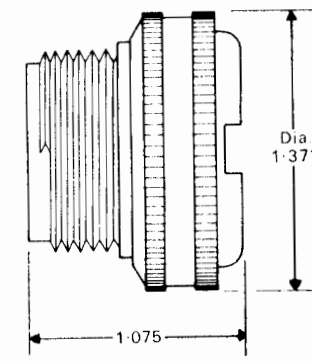
Plan Form	Number of Contacts	Current Rating Amps	Voltage A.C (r.m.s.)	Part Numbers	Cable Mounted or "Free" Unit
 P	26	3	350	SB104T4-AM-26-18PEO Contains 8 Socket Contacts 18 Pin Contacts	
 S	26	3	350	SB104T4-AM-26-18SEO Contains 18 Socket Contacts 8 Pin Contacts	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O.D.		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
Multicore cable with all individually screened leads and no collective screen Including D E F 10 and D E F 158 Types. Multicore cable with inner collective screen only Including D E F 10 and D E F 158 Types 	.310	.440	SB104-A-523	SB104-A-533	d
	.345	.480	SB104-A-524	SB104-A-534	e
	.470	.530	SB104-A-525	SB104-A-535	f
	.525	.575	SB104-A-526	SB104-A-536	f
Multicore cable totally unscreened Including D E F 10 and D E F 158 Types 	.295	.440	SB104-A-563	SB104-A-573	d
	.325	.480	SB104-A-564	SB104-A-574	e
	.455	.520	SB104-A-565	SB104-A-575	f
	.480	.570	SB104-A-566	SB104-A-576	f
Grommet Sealing Assembly 	FREE UNITS ONLY				
	.045	.090	SB104-903-P	SB104-903-S	
	COUPLERS AND FIXED UNITS ONLY				
	.045	.090	SB104-904-P	SB104-904-S	

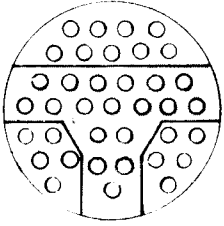
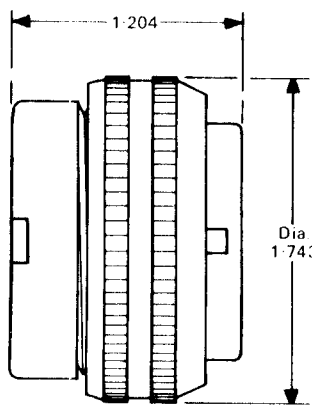
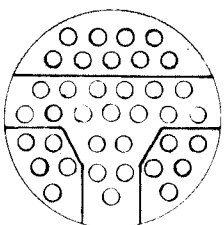
ALUMINIUM SB-104 DD

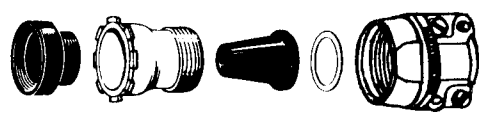
MEDIUM SHELL

Plan Form	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers	Panel Mounted or "Fixed" Unit
 S	26	3	350	SB104T4-AM-26-18SXO Contains 18 Socket Contacts 8 Pin Contacts	 1.013 Dia 1.345
	26	3	350	SB104T4-AM-26-18PXO Contains 8 Socket Contacts 18 Pin Contacts	
 S	26	3	350	SB104T4-AM-26-18SCXO Contains 18 Socket Contacts 8 Pin Contacts	Panel Mounted Coupler  Dia 1.371 1.024
	26	3	350	SB104T4-AM-26-18PCXO Contains 8 Socket Contacts 18 Pin Contacts	
 S	26	3	350	SB104T4-AM-26-18SCEO Contains 18 Socket Contacts 8 Pin Contacts	Cable Mounted Coupler  Dia 1.371 1.075
	26	3	350	SB104T4-AM-26-18PCEO Contains 8 Socket Contacts 18 Pin Contacts	

ALUMINIUM SB-104 DD

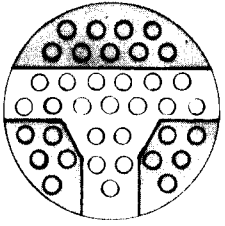
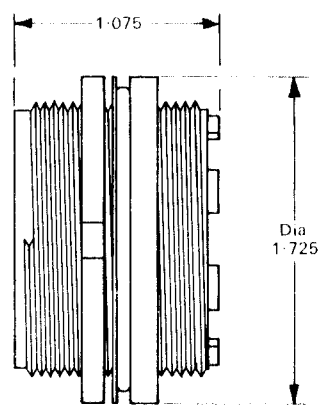
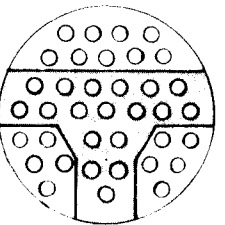
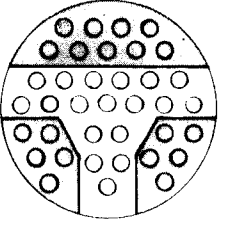
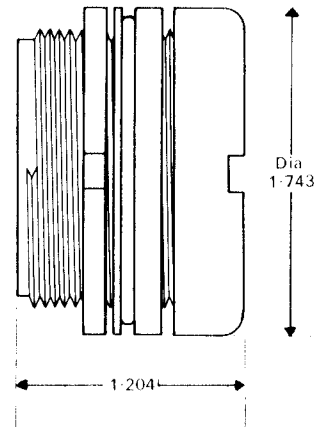
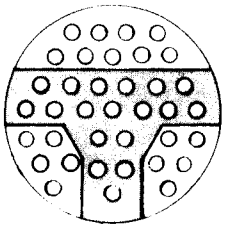
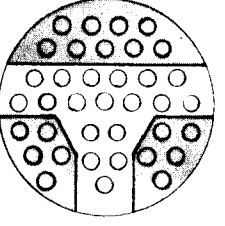
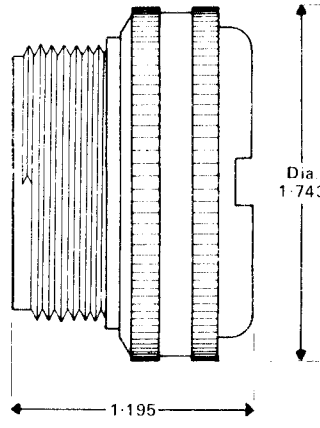
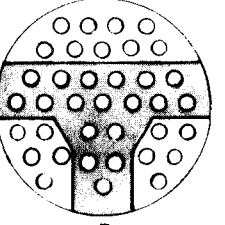
LARGE SHELL

Plan Form	Number of Contacts	Current Rating Amps	Voltage A C (r m s.)	Part Numbers	Cable Mounted or "Free" Unit
 P	37	3	350	SB104T4-AL-37-19PEO Contains 18 Socket Contacts 19 Pin Contacts	
 S	37	3	350	SB104T4-AL-37-19SEO Contains 19 Socket Contacts 18 Pin Contacts	

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
Multicore cable with all individually screened leads and no collective screen Including D E F 10 and D E F 158 Types. Multicore cable with inner collective screen only Including D E F 10 and D E F 158 Types 	.470	.530	SB104-A-527	SB104-A-537	g
	.525	.575	SB104-A-528	SB104-A-538	g
	.690	.745	SB104-A-529	SB104-A-539	h
Multicore cable totally unscreened Including D E F 10 and D E F 158 Types 	.450	.540	SB104-A-567	SB104-A-577	g
	.510	.560	SB104-A-568	SB104-A-578	g
	.690	.735	SB104-A-569	SB104-A-579	h
Grommet Sealing Assembly 	FREE UNITS ONLY				
	.045	.090	SB104-905-P	SB104-905-S	
	COUPLERS AND FIXED UNITS ONLY				
	.045	.090	SB104-906-P	SB104-906-S	

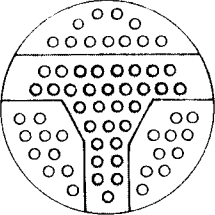
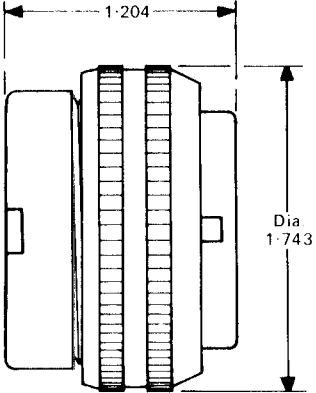
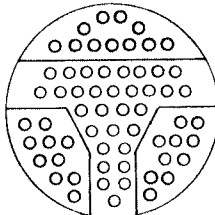
ALUMINIUM SB-104 DD

LARGE SHELL

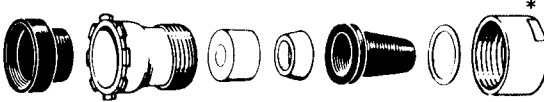
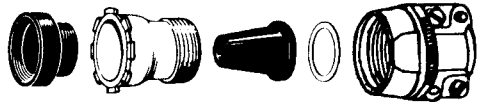
Plan Form	Number of Contacts	Current Rating Amps	Voltage A.C (r.m.s.)	Part Numbers	Panel Mounted or "Fixed" Unit
 S	37	3	350	SB104T4-AL-37-19SXO Contains 19 Socket Contacts 18 Pin Contacts	 1.075 Dia 1.725
 P	37	3	350	SB104T4-AL-37-19PXO Contains 18 Socket Contacts 19 Pin Contacts	
 S	37	3	350	SB104T4-AL-37-19SCXO Contains 19 Socket Contacts 18 Pin Contacts	Panel Mounted Coupler  1.204 Dia 1.743
 P	37	3	350	SB104T4-AL-37-19PCXO Contains 18 Socket Contacts 19 Pin Contacts	
 S	37	3	350	SB104T4-AL-37-19SCEO Contains 19 Socket Contacts 18 Pin Contacts	Cable Mounted Coupler  1.195 Dia 1.743
 P	37	3	350	SB104T4-AL-37-19PCEO Contains 18 Socket Contacts 19 Pin Contacts	

ALUMINIUM SB-104 DD

LARGE SHELL

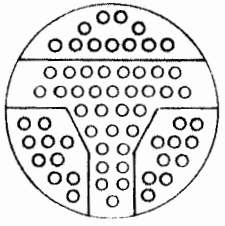
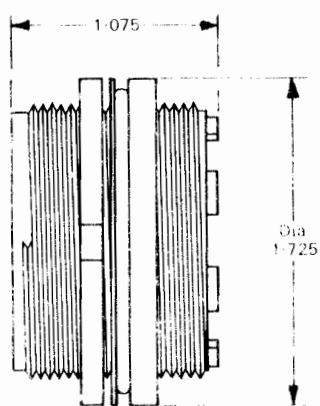
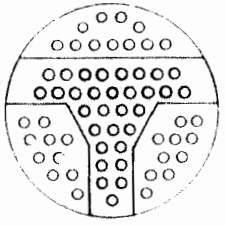
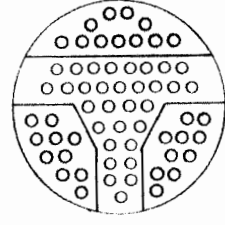
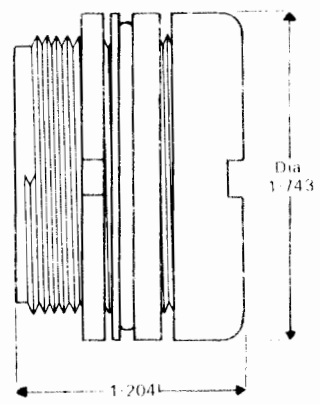
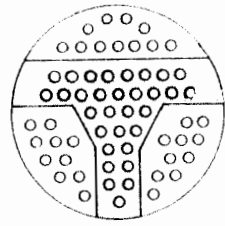
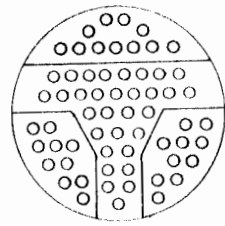
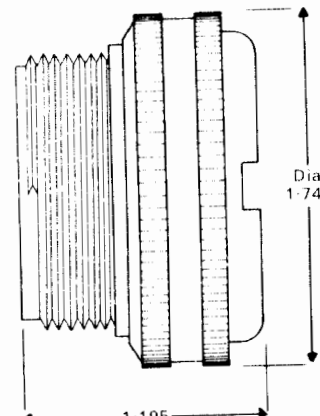
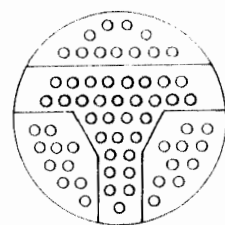
Plan Form	Number of Contacts	Current Rating Amps	Voltage A C (r.m.s.)	Part Numbers	Cable Mounted or "Free" Unit
 S	62	3	350	SB104T4-AL-62-31SEO Contains 31 Socket Contacts 31 Pin Contacts	
 P	62	3	350	SB104T4-AL-62-31PEO Contains 31 Socket Contacts 31 Pin Contacts	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min.	Max.	Straight Outlet	Rt. Angle Outlet	
Multicore cable with all individually screened leads and no collective screen Including D E F 10 and D E F 158 Types. Multicore cable with inner collective screen only Including D E F 10 and D E F 158 Types 	.470	.530	SB104-A-527	SB104-A-537	g
	.525	.575	SB104-A-528	SB104-A-538	g
	.690	.745	SB104-A-529	SB104-A-539	h
Multicore cable totally unscreened Including D E F 10 and D E F 158 Types 	.450	.540	SB104-A-567	SB104-A-577	g
	.510	.560	SB104-A-568	SB104-A-578	g
	.690	.735	SB104-A-569	SB104-A-579	h
Grommet Sealing Assembly 	FREE UNITS ONLY				
	.045	.090	SB104-907-P	SB104-907-S	
	COUPLERS AND FIXED UNITS ONLY				
	.045	.090	SB104-908-P	SB104-908-S	

ALUMINIUM SB-104 DD

LARGE SHELL

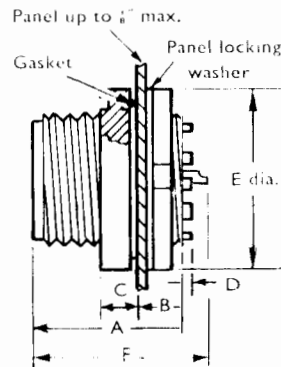
Plan Form	Number of Contacts	Current Rating Amps	Voltage A.C (r.m.s.)	Part Numbers	Panel Mounted or "Fixed" Unit
 P	62	3	350	SB104T4-AL-62-31PXO Contains 31 Socket Contacts 31 Pin Contacts	 1-075 Dia 1-725
 S	62	3	350	SB104T4-AL-62-31SXO Contains 31 Socket Contacts 31 Pin Contacts	
 P	62	3	350	SB104T4-AL-62-31PCXO Contains 31 Socket Contacts 31 Pin Contacts	Panel Mounted Coupler  Dia 1-743 1-204
 S	62	3	350	SB104T4-AL-62-31SCXO Contains 31 Socket Contacts 31 Pin Contacts	
 P	62	3	350	SB104T4-AL-62-31PCEO Contains 31 Socket Contacts 31 Pin Contacts	Cable Mounted Coupler  Dia 1-743 1-195
 S	62	3	350	SB104T4-AL-62-31SCEO Contains 31 Socket Contacts 31 Pin Contacts	

ALUMINIUM SB-104 DD

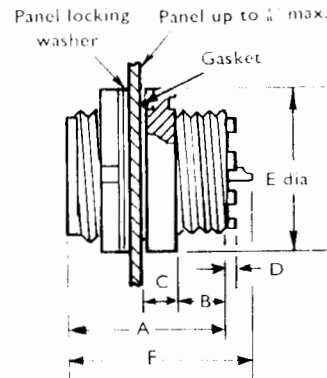
PANEL MOUNTING DETAILS

(for wiring details see chart inside back cover)

MOUNTED FROM FRONT OF PANEL



MOUNTED FROM REAR OF PANEL

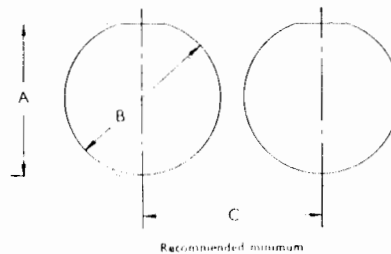


Shell Size	A	B min.	C min.	D	Dia. E max.	F max.
Small	.96	.240	.130	.045	1.160	1.08
Medium	.96	.240	.130	.045	1.390	1.08
Large	1.07	.300	.150	.060	1.760	1.15

Note: When mounted from front of panel, Outlet Fittings cannot be used.

PANEL PIERCING DETAILS

The "flat" is not essential for sealing and is provided for location only



Shell Size	A	B	C
Small	.811/.816	.848/.853	1.413
Medium	1.033/1.038	1.067/1.072	1.562
Large	1.410/1.415	1.442/1.447	2.00

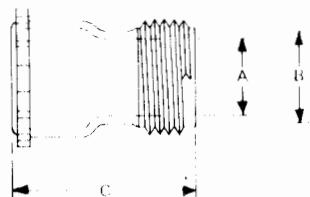
Panel Mounting Washers are required where panel thickness is $\frac{1}{16}$ " or less.

ALUMINIUM SB-104 DD

ACCESSORIES AND SPARES

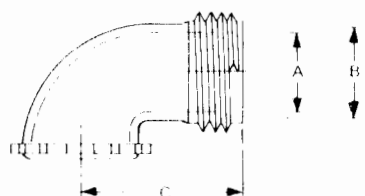
Outlets and Cable Clamps

STRAIGHT OUTLET



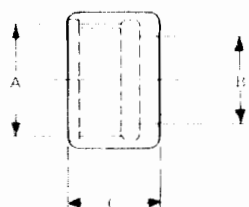
Shell Size	Code	Part Number	A	B	C
Small	a	SB104 A 341	412	490	974
	b	SB104 A 342	457	545	974
Medium	d	SB104 A 343	468	578	982
	e	SB104 A 344	520	625	982
	f	SB104 A 345	600	730	1 977
Large	g	SB104 A 346	625	735	1 137
	h	SB104 A 347	800	910	2 166

RIGHT ANGLE OUTLET



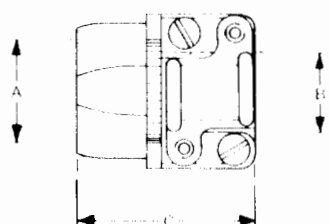
Shell Size	Code	Part Number	A	B	C
Small	a	SB104 A 351	412	490	858
	b	SB104 A 352	457	545	858
Medium	d	SB104 A 353	468	578	940
	e	SB104 A 354	520	625	940
	f	SB104 A 355	600	730	1 250
Large	g	SB104 A 356	625	735	1 070
	h	SB104 A 357	800	910	1 870

UNION NUT



Shell Size	Code	Part Number	A	B	C
Small	a	SB104 A 361	594	475	473
	b	SB104 A 362	640	525	473
Medium	d	SB104 A 363	687	574	473
	e	SB104 A 364	734	616	473
	f	SB104 A 365	844	705	473
Large	g	SB104 A 365	844	705	473
	h	SB104 A 366	1 068	885	537

CABLE CLAMP



Shell Size	Code	Part Number	A	B min	B max	C
Small	a	SB104 A 371	594	182	448	942
	b	SB104 A 372	640	200	495	942
Medium	d	SB104 A 373	687	210	510	942
	e	SB104 A 374	734	258	550	942
	f	SB104 A 375	844	357	665	942
Large	g	SB104 A 375	844	357	665	942
	h	SB104 A 376	1 062	465	830	1 067

OUTLET COMPLETE WITH NUT

Shell Size	Code	Straight	Right Angle
Small	a	SB104 A 301	SB104 A 311
	b	SB104 A 302	SB104 A 312
Medium	d	SB104 A 303	SB104 A 313
	e	SB104 A 304	SB104 A 314
	f	SB104 A 305	SB104 A 315
Large	g	SB104 A 306	SB104 A 316
	h	SB104 A 307	SB104 A 317

OUTLET COMPLETE WITH CABLE CLAMP

Shell Size	Code	Straight	Right Angle
Small	a	SB104 A 321	SB104 A 331
	b	SB104 A 322	SB104 A 332
Medium	d	SB104 A 323	SB104 A 333
	e	SB104 A 324	SB104 A 334
	f	SB104 A 325	SB104 A 335
Large	g	SB104 A 326	SB104 A 336
	h	SB104 A 327	SB104 A 337

ALUMINIUM SB-104 DD

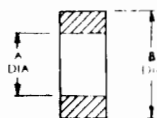
ACCESSORIES AND SPARES

OUTLET GASKET
(RUBBER)



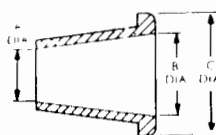
Code	Part Number	A	B
a	SB-601	666	375
b	SB-601	666	375
d	SB-602	882	375
e	SB-602	882	375
f	SB-602	882	375
g	SB-603	1259	375
h	SB-603	1259	375

CABLE SLEEVE
(RUBBER)



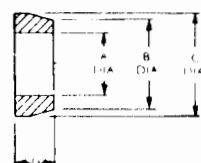
Code	Part Number	A	B
a	SB-621	156	503
b	SB-621	156	503
d	SB-622	312	562
e	SB-622	312	562
f	SB-623	406	687
g	SB-623	406	687
h	SB-624	562	812

UNION GASKET
(RUBBER)



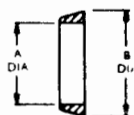
Code	Part Number	A	B	C
d	SB-611	218	345	535
b	SB-613	275	430	625
b	SB-612	340	400	580
		200	260	
d	SB-613	275	430	625
e	SB-614	315	477	672
f	SB-615	440	505	780
	SB-616	500	565	780
g	SB-615	440	505	780
g	SB-616	500	565	780
h	SB-617	670	735	984

SEALING RING
(RUBBER)



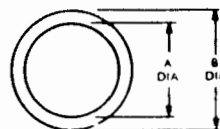
Code	Part Number	A	B	C	D
a	SB-631	200	320	485	156
b	SB-633	362	484	558	205
b	SB-632	335	445	520	205
		195			
d	SB-633	362	484	558	205
e	SB-634	400	491	533	280
f	SB-635	440	640	715	205
f	SB-636	500	640	715	205
g	SB-635	440	640	715	205
g	SB-636	500	640	715	205
h	SB-637	665	805	809	205

COMPRESSION RING
(BRASS)



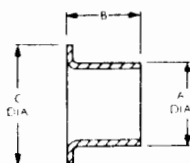
Code	Part Number	A	B
a	SB-811	353	465
b	SB-812	408	520
d	SB-813	438	549
e	SB-814	478	589
f	SB-815	573	706
g	SB-815	573	706
h	SB-816	743	880

THRUST RING
(BRASS)



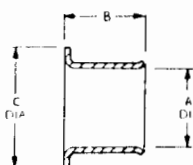
Code	Part Number	A	B
a	SB-821	442	538
b	SB-820	498	583
b	SB-822	510	583
		375	
d	SB-823	517	632
e	SB-824	564	677
f-g	SB-825	668	787
h	SB-826	838	993

INNER FERRULE
(BRASS)



Code	Part Number	A	B	C
a	SB-841	356	360	540
b	SB-842	271	360	585
		411		
d	SB-843	441	360	634
e	SB-844	481	360	681
f	SB-845	516	360	784
f	SB-846	576	360	784
g	SB-845	516	360	784
g	SB-846	576	360	784
h	SB-847	741	360	986

OUTER FERRULE
(BRASS)



Code	Part Number	A	B	C
a	SB-831	380	420	540
b	SB-832	296	420	585
		436		
d	SB-833	465	420	634
e	SB-834	505	420	681
f	SB-835	540	420	784
f	SB-836	600	420	784
g	SB-835	540	420	784
g	SB-836	600	420	784
h	SB-837	765	420	986

BONDING CLIP
(BRASS)



Code	Part Number	No. of Tags
f	SB-861	4
h	SB-862	7

PANEL MOUNTING WASHER
(BRASS)



Shell Size	Part Number
Small	SB-874
Medium	SB-875
Large	SB-876

FOR USE WITH PANELS OF $\frac{1}{32}$ " OR LESS

GROMMET



PLAN FORM	FOR CONNECTORS CODED	
	P	S
12	SB-911-P	SB-911-S
26	SB-912-P	SB-912-S
37	SB-913-P	SB-913-S
62	SB-914-P	SB-914-S

FILLER PLUG



SB-918

SKID RING



Shell Size	Part Number	Dia I D
Small	SB-915	531
Medium	SB-916	730
Large	SB-917	1100

ALUMINIUM SB-104 DD

ACCESSORIES AND SPARES

Outlet Nut



Shell Size	Part Number	Dia. I/D
Small	SB104-A-391	.850
Medium	SB104-A-392	1.015
Large	SB104-A-393	1.450

Outlet Nut
(Couplers)



Shell Size	Part Number	Dia. I/D
Small	SB104-A-396	.850
Medium	SB104-A-397	1.015
Large	SB104-A-398	1.450

Panel Locking Ring



Shell Size	Part Number	Dia. I/D
Small	SB104-A-851	.850
Medium	SB104-A-852	1.070
Large	SB104-A-853	1.450

Panel Mounting Ring



Supplied as integral part
of SB104 Aluminium only.
Not available as spare.

Panel Locking Washer



Shell Size	Part Number	Dia. I/D
Small	SB104-A-401	.850
Medium	SB104-A-402	1.070
Large	SB104-A-403	1.450

Panel Mounting Gasket



Shell Size	Part Number	Dia. I/D
Small	SB104-A-641	.650
Medium	SB104-A-642	.900
Large	SB104-A-643	1.200

GROMMET FOLLOWER



Shell Size	Part Number	Dia. I/D
Small	SB104-919	.600
Medium	SB104-920	.720
Large	SB104-921	1.260

GROMMET NUT



Shell Size	Part Number	Dia. I/D
Small	SB104-922*	.850
Medium	SB104-923*	1.015
Large	SB104-924*	1.450

* Add Suffix E when required for free Units

* Add Suffix X when required for fixed and coupler Units

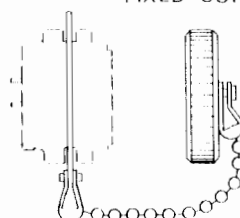
PROTECTIVE CAPS

FREE CONNECTORS



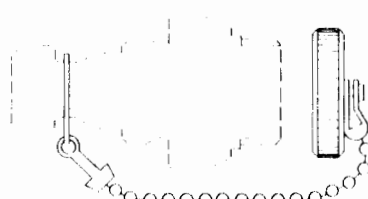
Shell Size	Ball Chain	Nylon Cord
Small	SB104-A-384	SB104-A-484
Medium	SB104-A-385	SB104-A-485
Large	SB104-A-386	SB104-A-486

FIXED CONNECTORS



Shell Size	Ball Chain	Nylon Cord
Small	SB104-A-381	SB104-A-481
Medium	SB104-A-382	SB104-A-482
Large	SB104-A-383	SB104-A-483

FREE COUPLERS

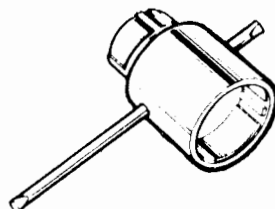


Shell Size	Ball Chain	Nylon Cord
Small	SB104-A-387	SB104-A-487
Medium	SB104-A-388	SB104-A-488
Large	SB104-A-389	SB104-A-489

ALUMINIUM SB-104 DD

ASSEMBLY TOOLS

BODY HOLDER

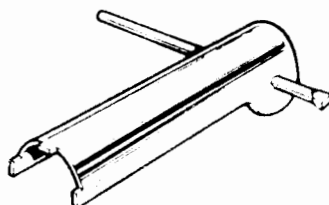


SMALL SB-694

MEDIUM SB-695

LARGE SB-696

TUBULAR SPANNER



SMALL SB-697

MEDIUM SB-698

LARGE SB-699

DOUBLE-ENDED SPANNER



SMALL SB-691

MEDIUM SB-692

LARGE SB-693

SB-104 DD

BRASS

Electrical Connectors



SPECIFICATION

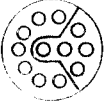
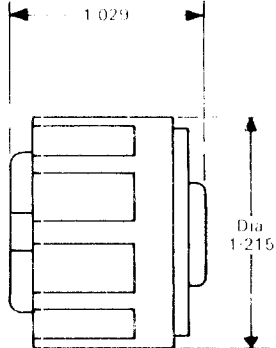
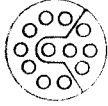
MANUFACTURE	In accordance with DEF. 5325-2 DEF. STAN 59-35 (Part 1 Section 2 Pat 104). The increased densities have been achieved by using 0.040 in. diameter contacts and mixing both pins and sockets on individual units.
CONSTRUCTION	Brass shells with bonded neoprene inserts available in oriented positions. Individual conductors may be sealed by a rear grommet under compression where open loom wiring is employed. Sealing of multicore sheathed cable is achieved by utilising the standard range of Pattern 104 straight and right angle accessory sets. Alternatively, both rear grommet and straight outlet accessory sets may be combined to provide individual conductor and cable sealing where extreme environments may be encountered.
TEMPERATURE	T4: - 55 C to +100 C.
SEALING	Maximum leakage range of 1 cc./hr. at a pressure differential of 20 p.s.i.
CONTACTS	High quality brass, silver or gold plated to give a maximum contact resistance of 2 milliohms. Socket contacts are of the closed entry type to prevent probe damage.
CURRENT RATING	3 Amps.
VOLTAGE RATING	350 V a.c.
INSULATION RESISTANCE	Between any contact and earth exceeds 5,000 megohms initially and will not fall below 10 megohms under the worst conditions of the specification.
CORROSION RESISTANCE	Plated to QQ-P-4-416A olive drab.

VARIATIONS

PLATING		ORIENTATIONS
Contacts Gold .0002 /GP	Shells Alternative finishes are available to Special Order	0. 1. 2. 3. 4. 5
SB104-AS-12-7SXO GP		SB104-AS-12-7SX4

BRASS SB-104 DD

SMALL SHELL

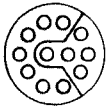
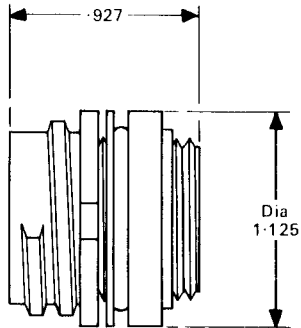
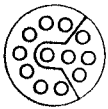
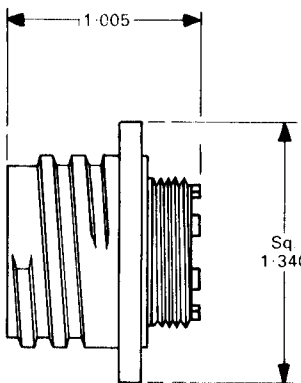
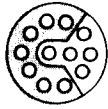
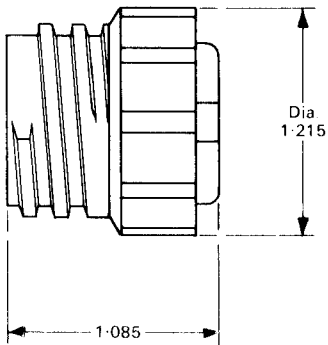
Plan Form	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers	Cable Mounted or "Free" Unit
 P	12	3	350	SB104T4-BS-12-7PEO Contains 5 Socket Contacts 7 Pin Contacts	
 S	12	3	350	SB104T4 BS 12 7SEO Contains 7 Socket Contacts 5 Pin Contacts	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O.D.		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
Multicore cable with all individually screened leads and no collective screen Including D E F 10 and D E F 158 Types Multicore cable with inner collective screen only Including D E F 10 and D E F 158 Types 	230	350	SB104-B-521	SB104-B-531	a
	310	410	SB104-B-520	SB104-B-530	b
Multicore cable totally unscreened Including D E F 10 and D E F 158 Types 	230	360	SB104-B-561	SB104-B-571	a
	295	430	SB104-B-560	SB104-B-570	b
	340 - 200	410 - 275	SB104-B-562	SB104-B-572	b
Grommet Sealing Assembly 	FREE AND FIXED UNITS				
	045	090	SB104-901-P	SB104-901-S	

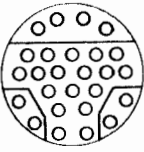
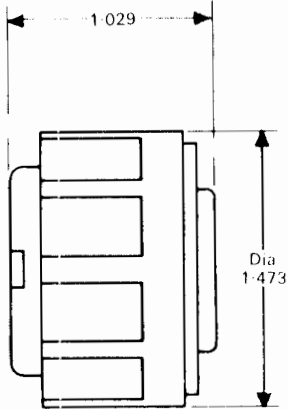
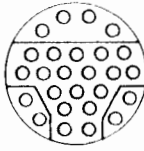
BRASS SB-104 DD

SMALL SHELL

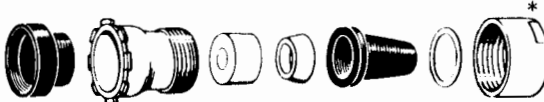
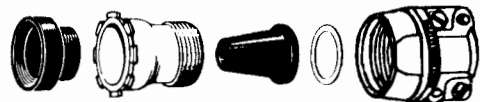
Plan Form	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers	Panel Mounted or "Fixed" Unit
 S	12	3	350	SB104T4-BS-12-7SXO/RF Contains 7 Socket Contacts 5 Pin Contacts	Round Flange  Dia 1.125
	12	3	350	SB104T4-BS-12-7PXO/RF Contains 5 Socket Contacts 7 Pin Contacts	
 S	12	3	350	SB104T4-BS-12-7SXO Contains 7 Socket Contacts 5 Pin Contacts	Fixed Unit Square Flange  Sq 1.340
	12	3	350	SB104T4-BS-12-7PXO Contains 5 Socket Contacts 7 Pin Contacts	
 S	12	3	350	SB104T4-BS-12-7SCEO Contains 7 Socket Contacts 5 Pin Contacts	Cable Mounted Coupler  Dia 1.215 1.085
	12	3	350	SB104T4-BS-12-7PCEO Contains 5 Socket Contacts 7 Pin Contacts	

BRASS SB-104 DD

MEDIUM SHELL

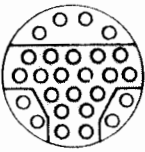
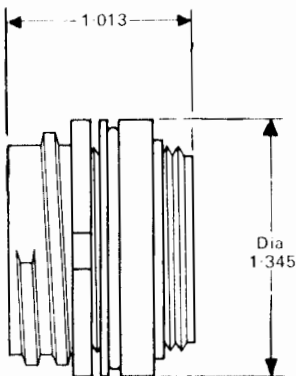
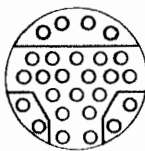
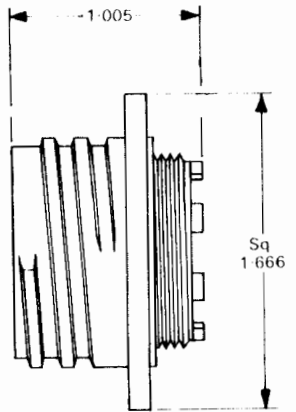
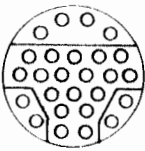
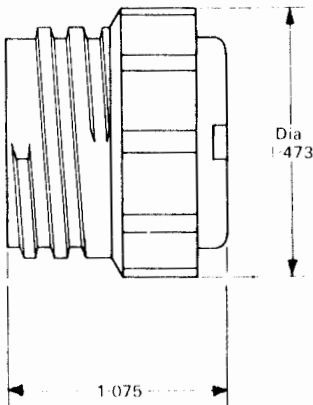
Plan Form	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers	Cable Mounted or "Free" Unit
 P	26	3	350	SB104T4-BM-26-18PEO Contains 8 Socket Contacts 18 Pin Contacts	
 S	26	3	350	SB104T4-BM-26-18SEO Contains 18 Socket Contacts 8 Pin Contacts	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
Multicore cable with all individually screened leads and no collective screen Including D E F 10 and D E F 158 Types. Multicore cable with inner collective screen only Including D E F 10 and D E F 158 Types 	.310	.440	SB104-B-523	SB104-B-533	d
	.345	.480	SB104-B-524	SB104-B-534	e
	.470	.530	SB104-B-525	SB104-B-535	f
	.525	.575	SB104-B-526	SB104-B-536	f
Multicore cable totally unscreened Including D E F 10 and D E F 158 Types 	.295	.440	SB104-B-563	SB104-B-573	d
	.325	.480	SB104-B-564	SB104-B-574	e
	.455	.520	SB104-B-565	SB104-B-575	f
	.480	.570	SB104-B-566	SB104-B-576	f
Grommet Sealing Assembly 	FREE AND FIXED UNITS				
	.045	.090	SB104-903-P	SB104-903-S	

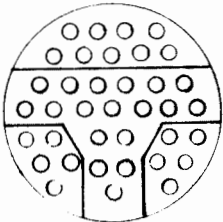
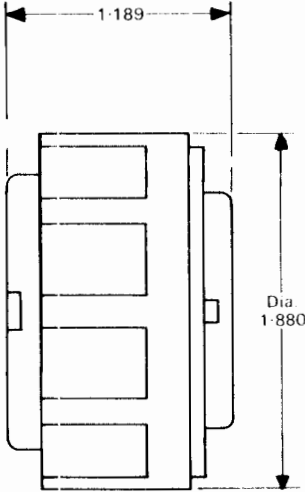
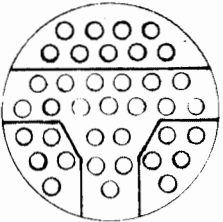
BRASS SB-104 DD

MEDIUM SHELL

Plan Form	Number of Contacts	Current Rating Amps	Voltage A.C. (r.m.s.)	Part Numbers	Panel Mounted or "Fixed" Unit
 S	26	3	350	SB104T4-BM-26-18SXO/RF Contains 18 Socket Contacts 8 Pin Contacts	Round Flange 
	26	3	350	SB104T4-BM-26-18PXO/RF Contains 8 Socket Contacts 18 Pin Contacts	
 P	26	3	350	SB104T4-BM-26-18SXO Contains 18 Socket Contacts 8 Pin Contacts	Fixed Unit Square Flange 
	26	3	350	SB104T4-BM-26-18PXO Contains 8 Socket Contacts 18 Pin Contacts	
 S	26	3	350	SB104T4-BM-26-18SCEO Contains 18 Socket Contacts 8 Pin Contacts	Cable Mounted Coupler 
	26	3	350	SB104T4-BM-26-18PCEO Contains 8 Socket Contacts 18 Pin Contacts	

BRASS SB-104 DD

LARGE SHELL

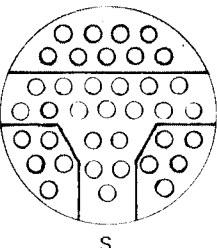
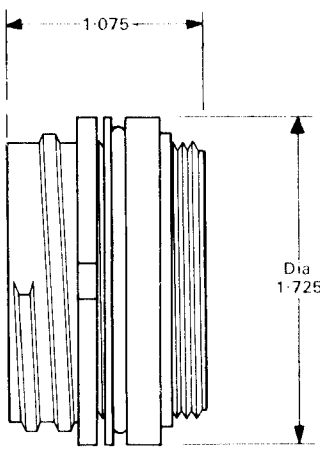
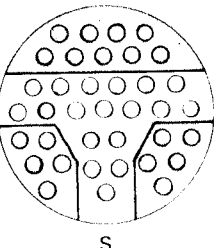
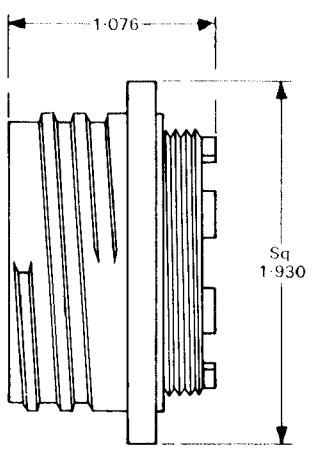
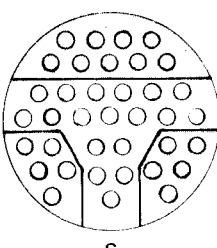
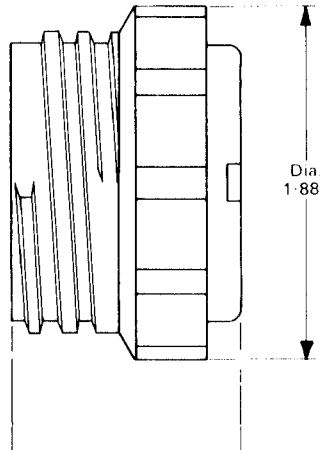
Plan Form	Number of Contacts	Current Rating Amps	Voltage A C (r m s)	Part Numbers	Cable Mounted or "Free" Unit
 P	37	3	350	SB104T4-BL-37-19PEO Contains 18 Socket Contacts 19 Pin Contacts	
 S	37	3	350	SB104T4-BL-37-19SEO Contains 19 Socket Contacts 18 Pin Contacts	

CABLE FITTINGS

Cable Fittings must be ordered as Additional Items to Connectors	Cable O/D		Complete Outlet and Accessory Sets		Code
	Min	Max	Straight Outlet	Rt. Angle Outlet	
Multicore cable with all individually screened leads and no collective screen Including D E F 10 and D E F 158 Types. Multicore cable with inner collective screen only Including D E F 10 and D E F 158 Types	.470	.530	SB104-B-527	SB104-B-537	g
	.525	.575	SB104-B-528	SB104-B-538	g
	.690	.745	SB104-B-529	SB104-B-539	h
Multicore cable totally unscreened Including D E F 10 and D E F 158 Types	.450	.540	SB104-B-567	SB104-B-577	g
	.510	.560	SB104-B-568	SB104-B-578	g
	.690	.735	SB104-B-569	SB104-B-579	h
Grommet Sealing Assembly	FREE AND FIXED UNITS				
	.045	.090	SB104-905-P	SB104-905-S	

BRASS SB-104 DD

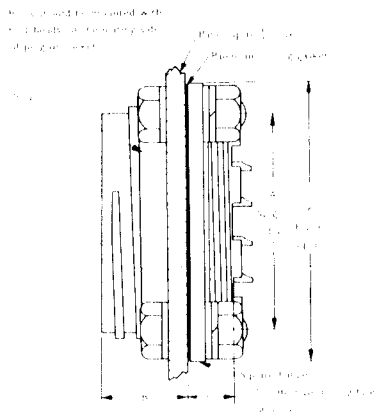
LARGE SHELL

Plan Form	Number of Contacts	Current Rating Amps	Voltage A C (r.m.s.)	Part Numbers	Panel Mounted or "Fixed" Unit
 S	37	3	350	SB104T4-BL-37-19SXO/RF Contains 19 Socket Contacts 18 Pin Contacts	Round Flange  1-075 Dia 1-725
	37	3	350	SB104T4-BL-37-19PXO/RF Contains 18 Socket Contacts 19 Pin Contacts	
 S	37	3	350	SB104T4-BL-37-19SXO Contains 19 Socket Contacts 18 Pin Contacts	Fixed Unit Square Flange  1-076 Sq 1-930
	37	3	350	SB104T4-BL-37-19PXO Contains 18 Socket Contacts 19 Pin Contacts	
 S	37	3	350	SB104T4-BL-37-19SCEO Contains 19 Socket Contacts 18 Pin Contacts	Cable Mounted Coupler  Dia 1-880 1-195
	37	3	350	SB104T4-BL-37-19PCEO Contains 18 Socket Contacts 19 Pin Contacts	

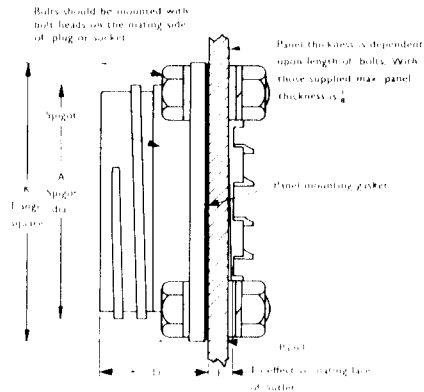
BRASS SB-104 DD

PANEL MOUNTING DETAILS (for wiring details see chart inside back cover)

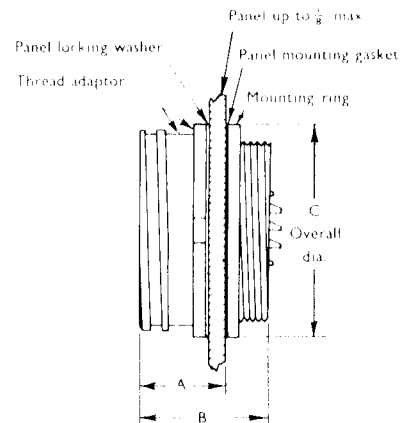
MOUNTED FROM REAR OF PANEL



MOUNTED FROM FRONT OF PANEL



MOUNTED FROM FRONT OR REAR OF PANEL

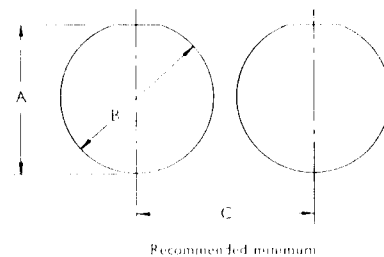
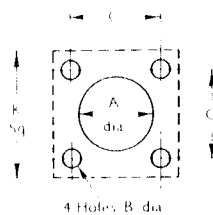


SQUARE FLANGE

Shell Size	A	B	C	D	E	K
Small	.995/1.000	.54	.38	.67	.26	1.33
Medium	1.215/1.220	.55	.38	.68	.26	1.65
Large	1.590/1.595	.61	.40	.70	.25	1.92

ROUND FLANGE

Shell Size	A	B	C
Small	.60	.90	1.125
Medium	.60	.90	1.343
Large	.67	1.02	1.718



Shell Size	A	B	C	K
Small	.995/1.000	.417 4BA	1.000	1.33
Medium	1.215/1.220	.191 2BA	1.235	1.65
Large	1.590/1.595	.191 2BA	1.515	1.92

Shell size	A	B	C
Small	.811/.816	.848-.853	1.413
Medium	1.033/1.038	1.067/1.072	1.562
Large	1.410/1.415	1.442/1.447	2.00

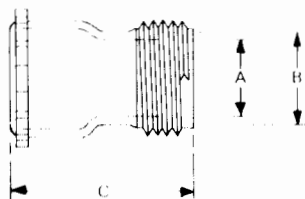
Panel Mounting Washers are required where panel thickness is $\frac{1}{16}$ " or less

BRASS SB-104 DD

ACCESSORIES AND SPARES

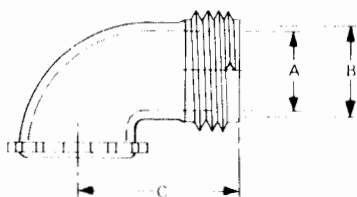
Outlets and Cable Clamps

STRAIGHT OUTLET



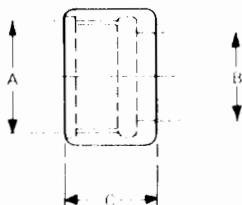
Shell Size	Code	Part Number	A	B	C
Small	a	SB104-B-341	412	490	974
	b	SB104-B-342	457	545	974
Medium	d	SB104-B-343	468	578	982
	e	SB104-B-344	520	625	982
	f	SB104-B-345	600	730	1 977
Large	g	SB104-B-346	625	735	1 137
	h	SB104-B-347	800	910	2 166

RIGHT ANGLE OUTLET



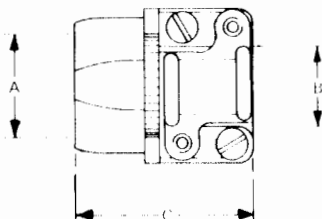
Shell Size	Code	Part Number	A	B	C
Small	a	SB104-B-351	412	490	858
	b	SB104-B-352	457	545	858
Medium	d	SB104-B-353	468	578	940
	e	SB104-B-354	520	625	940
	f	SB104-B-355	600	730	1 250
Large	g	SB104-B-356	625	735	1 070
	h	SB104-B-357	800	910	1 870

UNION NUT



Shell Size	Code	Part Number	A	B	C
Small	a	SB104-B-361	594	475	473
	b	SB104-B-362	640	525	473
Medium	d	SB104-B-363	687	574	473
	e	SB104-B-364	734	616	473
	f	SB104-B-365	844	705	473
Large	g	SB104-B-365	844	705	473
	h	SB104-B-366	1 068	885	537

CABLE CLAMP



Shell Size	Code	Part Number	A	B min	B max	C
Small	a	SB104-B-371	594	182	448	942
	b	SB104-B-372	640	200	495	942
Medium	d	SB104-B-373	687	210	510	942
	e	SB104-B-374	734	258	550	942
	f	SB104-B-375	844	357	665	942
Large	g	SB104-B-375	844	357	665	942
	h	SB104-B-376	1 062	465	830	1 067

OUTLET COMPLETE WITH NUT

Shell Size	Code	Straight	Right Angle
Small	a	SB104-B-301	SB104-B-311
	b	SB104-B-302	SB104-B-312
Medium	d	SB104-B-303	SB104-B-313
	e	SB104-B-304	SB104-B-314
	f	SB104-B-305	SB104-B-315
Large	g	SB104-B-306	SB104-B-316
	h	SB104-B-307	SB104-B-317

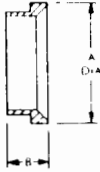
OUTLET COMPLETE WITH CABLE CLAMP

Shell Size	Code	Straight	Right Angle
Small	a	SB104-B-321	SB104-B-331
	b	SB104-B-322	SB104-B-332
Medium	d	SB104-B-323	SB104-B-333
	e	SB104-B-324	SB104-B-334
	f	SB104-B-325	SB104-B-335
Large	g	SB104-B-326	SB104-B-336
	h	SB104-B-327	SB104-B-337

BRASS SB-104 DD

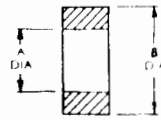
ACCESSORIES AND SPARES

OUTLET GASKET
(RUBBER)



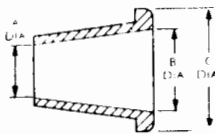
Code	Part Number	A	B
a	SB-601	.666	.375
b	SB-601	.666	.375
d	SB-602	.882	.375
e	SB-602	.882	.375
f	SB-602	.882	.375
g	SB-603	1.259	.375
h	SB-603	1.259	.375

CABLE SLEEVE
(RUBBER)



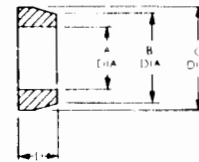
Code	Part Number	A	B
a	SB-621	.156	.503
b	SB-621	.156	.503
d	SB-622	.312	.562
e	SB-622	.312	.562
f	SB-623	.406	.687
g	SB-623	.406	.687
h	SB-624	.562	.812

UNION GASKET
(RUBBER)



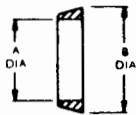
Code	Part Number	A	B	C
a	SB-611	.218	.345	.535
b	SB-613	.275	.430	.625
b	SB-612	.340/ .200	.400/ .260	.580
d	SB-613	.275	.430	.625
e	SB-614	.315	.477	.672
f	SB-615	.440	.505	.780
	SB-616	.500	.565	.780
g	SB-615	.440	.505	.780
g	SB-616	.500	.565	.780
h	SB-617	.670	.735	.984

SEALING RING
(RUBBER)



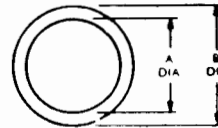
Code	Part Number	A	B	C	D
a	SB-631	.200	.320	.485	.156
b	SB-633	.362	.484	.558	.205
b	SB-632	.335/ .195	.445	.520	.205
d	SB-633	.362	.484	.558	.205
e	SB-634	.400	.491	.533	.280
f	SB-635	.440	.640	.715	.205
f	SB-636	.500	.640	.715	.205
g	SB-635	.440	.640	.715	.205
g	SB-636	.500	.460	.715	.205
h	SB-637	.665	.805	.809	.205

COMPRESSION RING
(BRASS)



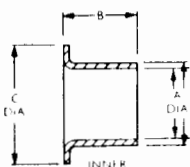
Code	Part Number	A	B
a	SB-811	.353	.465
b	SB-812	.408	.520
d	SB-813	.438	.549
e	SB-814	.478	.589
f	SB-815	.573	.706
g	SB-815	.573	.706
h	SB-816	.743	.880

THRUST RING
(BRASS)



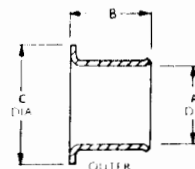
Code	Part Number	A	B
a	SB-821	.442	.538
b	SB-820	.498	.583
b	SB-822	.510 .375	.583
d	SB-823	.517	.632
e	SB-824	.564	.677
f, g	SB-825	.668	.787
h	SB-826	.838	.993

INNER FERRULE
(BRASS)



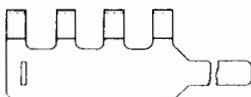
Code	Part Number	A	B	C
a	SB-841	.356	.360	.540
b	SB-842	.271/ .411	.360	.585
d	SB-843	.441	.360	.634
e	SB-844	.481	.360	.681
f	SB-845	.516	.360	.784
f	SB-846	.576	.360	.784
g	SB-845	.516	.360	.784
g	SB-846	.576	.360	.784
h	SB-847	.741	.360	.986

OUTER FERRULE
(BRASS)



Code	Part Number	A	B	C
a	SB-831	.380	.420	.540
b	SB-832	.296/ .436	.420	.585
d	SB-833	.465	.420	.634
e	SB-834	.505	.420	.681
f	SB-835	.540	.420	.784
f	SB-836	.600	.420	.784
g	SB-835	.540	.420	.784
g	SB-836	.600	.420	.784
h	SB-837	.765	.420	.986

BONDING CLIP
(BRASS)



Code	Part Number	No. of Tags
f	SB-861	4
h	SB-862	7

PANEL MOUNTING WASHER
(BRASS)



Shell Size	Part Number
Small	SB-871
Medium	SB-872
Large	SB-873

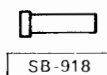
FOR USE WITH PANELS OF $\frac{1}{32}$ " OR LESS

GROMMET



PLAN FORM	FOR CONNECTORS CODED	
	P	S
12	SB-911-P	SB-911-S
26	SB-912-P	SB-912-S
37	SB-913-P	SB-913-S
62	SB-914-P	SB-914-S

FILLER PLUG



SKID RING



Shell Size	Part Number	Dia. I/D
Small	SB-915	.531
Medium	SB-916	.730
Large	SB-917	1.100

BRASS SB-104 DD

ACCESSORIES AND SPARES

OUTLET NUT



Shell Size	Part Number	Dia. I/D
Small	SB104-B-391	.850
Medium	SB104-B-392	1.015
Large	SB104-B-393	1.450

PANEL MOUNTING GASKET
(For Square Flange Connectors)



Shell Size	Part Number	Dia. I/D
Small	SB104-B-671	1.000
Medium	SB104-B-672	1.220
Large	SB104-B-673	1.595

PANEL LOCKING WASHER



Shell Size	Part Number	Dia. I/D
Small	SB104-B-401	.850
Medium	SB104-B-402	1.070
Large	SB104-B-403	1.450

GROMMET FOLLOWER



Shell Size	Part Number	Dia. I/D
Small	SB104-919	.600
Medium	SB104-920	.720
Large	SB104-921	1.260

COURSE THREAD ADAPTOR



Shell Size	Part Number	Dia. I/D
Small	SB104-B-891	.850
Medium	SB104-B-892	1.070
Large	SB104-B-893	1.450

PANEL MOUNTING RING



Shell Size	Part Number	Dia. I/D
Small	SB104-B-871	.850
Medium	SB104-B-872	1.070
Large	SB104-B-873	1.450

PANEL MOUNTING GASKET



Shell Size	Part Number	Dia. I/D
Small	SB104-B-641	.650
Medium	SB104-B-642	.900
Large	SB104-B-643	1.250

GROMMET NUT



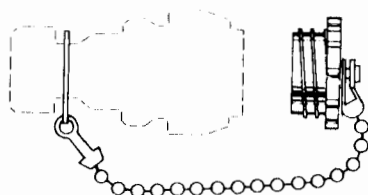
Shell Size	Part Number	Dia. I/D
Small	SB104-922*	.850
Medium	SB104-923*	1.015
Large	SB104-924*	1.450

* Add Suffix E when required for free Units

* Add Suffix X when required for fixed and coupler Units

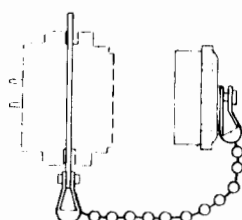
PROTECTIVE CAPS

FREE CONNECTORS



Shell Size	Brass		Polythene		Polythene Cap only
	Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	SB104-B-784	SB104-B-884			
Medium	SB104-B-785	SB104-B-885			
Large	SB104-B-786	SB104-B-886			

FIXED CONNECTORS



Shell Size		Brass		Polythene		Polythene Cap only
		Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	Sq Flg	SB104-B-781	SB104-B-881	SB104-B-661	SB104-B-461	SB104-B-667
	Rd Flg	SB104-B-777	SB104-B-877	SB104-B-677	SB104-B-477	
Medium	Sq Flg	SB104-B-782	SB104-B-882	SB104-B-662	SB104-B-462	SB104-B-668
	Rd Flg	SB104-B-778	SB104-B-878	SB104-B-678	SB104-B-478	
Large	Sq Flg	SB104-B-783	SB104-B-883	SB104-B-663	SB104-B-463	SB104-B-669
	Rd Flg	SB104-B-779	SB104-B-879	SB104-B-679	SB104-B-479	

FREE COUPLERS

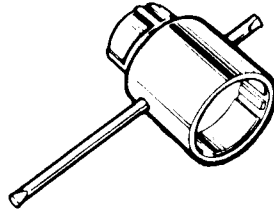


Shell Size	Brass		Polythene		Polythene Cap only
	Ball Chain	Nylon Cord	Ball Chain	Nylon Cord	
Small	SB104-B-787	SB104-B-887	SB104-B-664	SB104-B-464	SB104-B-667
Medium	SB104-B-788	SB104-B-888	SB104-B-665	SB104-B-465	SB104-B-668
Large	SB104-B-789	SB104-B-889	SB104-B-666	SB104-B-466	SB104-B-669

BRASS SB-104 DD

ASSEMBLY TOOLS

BODY HOLDER

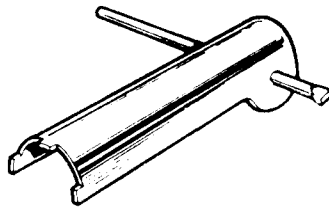


SMALL SB-694

MEDIUM SB-695

LARGE SB-696

TUBULAR SPANNER

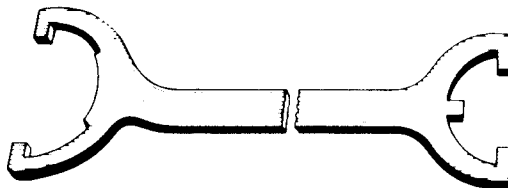


SMALL SB-697

MEDIUM SB-698

LARGE SB-699

DOUBLE-ENDED SPANNER



SMALL SB-691

MEDIUM SB-692

LARGE SB-693

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Metric Conversion table

The tables are direct reading for all values between 0.01 and 10 inches and are based on the conversion factor 1 in. = 25.4 mm. This factor is correct to an accuracy of about 1 part in 10⁶.

At the foot of the table there is a table of differences for thousandths of an inch. These values of differences, if divided by ten, can be used for conversions involving tenths of thousandths of an inch.

Conversion
ths to mm.
(calculated to
nearest .001 mm.)

$\frac{1}{16}$	0.397
$\frac{1}{8}$	0.794
$\frac{3}{16}$	1.191
$\frac{1}{4}$	1.583
$\frac{5}{16}$	1.984
$\frac{3}{8}$	2.381
$\frac{7}{16}$	2.778
$\frac{1}{2}$	3.175
$\frac{9}{16}$	3.572
$\frac{5}{8}$	3.969
$\frac{11}{16}$	4.366
$\frac{3}{4}$	4.763
$\frac{13}{16}$	5.159
$\frac{7}{8}$	5.556
$\frac{15}{16}$	5.953
1	6.350
$1\frac{1}{16}$	6.747
$1\frac{1}{8}$	7.144
$1\frac{1}{4}$	7.541
$1\frac{3}{8}$	7.938
$1\frac{1}{2}$	8.334
$1\frac{5}{8}$	8.731
$1\frac{3}{4}$	9.128
$1\frac{7}{8}$	9.525
2	9.922
$2\frac{1}{16}$	10.319
$2\frac{1}{8}$	10.716
$2\frac{1}{4}$	11.113
$2\frac{3}{8}$	11.509
$2\frac{1}{2}$	11.906
$2\frac{5}{8}$	12.303
3	12.700

Inches	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.000	0.254	0.508	0.762	1.016	1.270	1.524	1.778	2.032	2.286
0.1	2.540	2.794	3.048	3.302	3.556	3.810	4.064	4.318	4.572	4.826
0.2	5.080	5.334	5.588	5.842	6.096	6.350	6.604	6.858	7.112	7.366
0.3	7.620	7.874	8.128	8.382	8.636	8.890	9.144	9.398	9.652	9.906
0.4	10.160	10.414	10.668	10.922	11.176	11.430	11.684	11.938	12.192	12.446
0.5	12.700	12.954	13.208	13.462	13.716	13.970	14.224	14.478	14.732	14.986
0.6	15.240	15.494	15.748	16.002	16.256	16.510	16.764	17.018	17.272	17.526
0.7	17.780	18.034	18.288	18.542	18.796	19.050	19.304	19.558	19.812	20.066
0.8	20.320	20.574	20.828	21.082	21.336	21.590	21.844	22.098	22.352	22.606
0.9	22.860	23.114	23.368	23.622	23.876	24.130	24.384	24.638	24.892	25.146
1.0	25.400	25.654	25.908	26.162	26.416	26.670	26.924	27.178	27.432	27.686
1.1	27.940	28.194	28.448	28.702	28.956	29.210	29.464	29.718	29.972	30.226
1.2	30.480	30.734	30.988	31.242	31.496	31.750	32.004	32.258	32.512	32.766
1.3	33.020	33.274	33.528	33.782	34.036	34.290	34.544	34.798	35.052	35.306
1.4	35.560	35.814	36.068	36.322	36.576	36.830	37.084	37.338	37.592	37.846
1.5	38.100	38.354	38.608	38.862	39.116	39.370	39.624	39.878	40.132	40.386
1.6	40.640	40.894	41.148	41.402	41.656	41.910	42.164	42.418	42.672	42.926
1.7	43.180	43.434	43.688	43.942	44.196	44.450	44.704	44.958	45.212	45.466
1.8	45.720	45.974	46.228	46.482	46.736	46.990	47.244	47.498	47.752	48.006
1.9	48.260	48.514	48.768	49.022	49.276	49.530	49.784	50.038	50.292	50.546
2.0	50.800	51.054	51.308	51.562	51.816	52.070	52.324	52.578	52.832	53.086
2.1	53.340	53.594	53.848	54.102	54.356	54.610	54.864	55.118	55.372	55.626
2.2	55.880	56.134	56.388	56.642	56.896	57.150	57.404	57.658	57.912	58.166
2.3	58.420	58.674	58.928	59.182	59.436	59.690	59.944	60.198	60.452	60.706
2.4	60.960	61.214	61.468	61.722	61.976	62.230	62.484	62.738	62.992	63.246
2.5	63.500	63.754	64.008	64.262	64.516	64.770	65.024	65.278	65.532	65.786
2.6	66.040	66.294	66.548	66.802	67.056	67.310	67.564	67.818	68.072	68.326
2.7	68.580	68.834	69.088	69.342	69.596	69.850	70.104	70.358	70.612	70.866
2.8	71.120	71.374	71.628	71.882	72.136	72.390	72.644	72.898	73.152	73.406
2.9	73.660	73.914	74.168	74.422	74.676	74.930	75.184	75.438	75.692	75.946
3.0	76.200	76.454	76.708	76.962	77.216	77.470	77.724	77.978	78.232	78.486
3.1	78.740	78.994	79.248	79.502	79.756	80.010	80.264	80.518	80.772	81.026
3.2	81.280	81.534	81.788	82.042	82.296	82.550	82.804	83.058	83.312	83.566
3.3	83.820	84.074	84.328	84.582	84.836	85.090	85.344	85.598	85.852	86.106
3.4	86.360	86.614	86.868	87.122	87.376	87.630	87.884	88.138	88.392	88.646
3.5	88.900	89.154	89.408	89.662	89.916	90.170	90.424	90.678	90.932	91.186
3.6	91.440	91.694	91.948	92.202	92.456	92.710	92.964	93.218	93.472	93.726
3.7	93.980	94.234	94.488	94.742	94.996	95.250	95.504	95.758	96.012	96.266
3.8	96.520	96.774	97.028	97.282	97.536	97.790	98.044	98.298	98.552	98.806
3.9	99.060	99.314	99.568	99.822	100.076	100.330	100.584	100.838	101.092	101.346
4.0	101.600	101.854	102.108	102.362	102.616	102.870	103.124	103.378	103.632	103.886
4.1	104.140	104.394	104.648	104.902	105.156	105.410	105.664	105.918	106.172	106.426
4.2	106.680	106.934	107.188	107.442	107.696	107.950	108.204	108.458	108.712	108.966
4.3	109.220	109.474	109.728	109.982	110.236	110.490	110.744	110.998	111.252	111.506
4.4	111.760	112.014	112.268	112.522	112.776	113.030	113.284	113.538	113.792	114.046
4.5	114.300	114.554	114.808	115.062	115.316	115.570	115.824	116.078	116.332	116.586
4.6	116.840	117.094	117.348	117.602	117.856	118.110	118.364	118.618	118.872	119.126
4.7	119.380	119.634	119.888	120.142	120.396	120.650	120.904	121.158	121.412	121.666
4.8	121.920	122.174	122.428	122.682	122.936	123.190	123.444	123.698	123.952	124.206
4.9	124.460	124.714	124.968	125.222	125.476	125.730	125.984	126.238	126.492	126.746
5.0	127.000	127.254	127.508	127.762	128.016	128.270	128.524	128.778	129.032	129.286

Table of differences for .001"

Inches	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009
mm.	0.0254	0.0508	0.0762	0.1016	0.1270	0.1524	0.1778	0.2032	0.2286

INCHES TO MILLIMETRES

Example—To convert .248" to mm, the value for .24" (6 096 mm) obtained by inspection is added to the difference for 008" (2 032 mm) to give a figure of 6 2992 mm.

The tables have been calculated without rounding off so that the range may be extended to 100" (by using a multiplying factor of 10) without loss of numerical accuracy provided that the limitations of accuracy are observed.

Inches	0 00	0 01	0 02	0 03	0 04	0 05	0 06	0 07	0 08	0 09
5 0	127 000	127 254	127 508	127 762	128 016	128 270	128 524	128 778	129 032	129 286
5 1	129 540	129 794	130 048	130 302	130 556	130 810	131 064	131 318	131 572	131 826
5 2	132 080	132 334	132 588	132 842	133 096	133 350	133 604	133 858	134 112	134 366
5 3	134 620	134 874	135 128	135 382	135 636	135 890	136 144	136 398	136 652	136 906
5 4	137 160	137 414	137 668	137 922	138 176	138 430	138 684	138 938	139 192	139 446
5 5	139 700	139 954	140 208	140 462	140 716	140 970	141 224	141 478	141 732	141 986
5 6	142 240	142 494	142 748	143 002	143 256	143 510	143 764	144 018	144 272	144 526
5 7	144 780	145 034	145 288	145 542	145 796	146 050	146 304	146 558	146 812	147 066
5 8	147 320	147 574	147 828	148 082	148 336	148 590	148 844	149 098	149 352	149 606
5 9	149 860	150 114	150 368	150 622	150 876	151 130	151 384	151 638	151 892	152 146
6 0	152 400	152 654	152 908	153 162	153 416	153 670	153 924	154 178	154 432	154 686
6 1	154 940	155 194	155 448	155 702	155 956	156 210	156 464	156 718	156 972	157 226
6 2	157 480	157 734	157 988	158 242	158 496	158 750	159 004	159 258	159 512	159 766
6 3	160 020	160 274	160 528	160 782	161 036	161 290	161 544	161 798	162 052	162 306
6 4	162 560	162 814	163 068	163 322	163 576	163 830	164 084	164 338	164 592	164 846
6 5	165 100	165 354	165 608	165 862	166 116	166 370	166 624	166 878	167 132	167 386
6 6	167 640	167 894	168 148	168 402	168 656	168 910	169 164	169 418	169 672	169 926
6 7	170 180	170 434	170 688	170 942	171 196	171 450	171 704	171 958	172 212	172 466
6 8	172 720	172 974	173 228	173 482	173 736	173 990	174 244	174 498	174 752	175 006
6 9	175 260	175 514	175 768	176 022	176 276	176 530	176 784	177 038	177 292	177 546
7 0	177 800	178 054	178 308	178 562	178 816	179 070	179 324	179 578	179 832	180 086
7 1	180 340	180 594	180 848	181 102	181 356	181 610	181 864	182 118	182 372	182 626
7 2	182 880	183 134	183 388	183 642	183 896	184 150	184 404	184 658	184 912	185 166
7 3	185 420	185 674	185 928	186 182	186 436	186 690	186 944	187 198	187 452	187 706
7 4	187 960	188 214	188 468	188 722	188 976	189 230	189 484	189 738	189 992	190 246
7 5	190 500	190 754	191 008	191 262	191 516	191 770	192 024	192 278	192 532	192 786
7 6	193 040	193 294	193 548	193 802	194 056	194 310	194 564	194 818	195 072	195 326
7 7	195 580	195 834	196 088	196 342	196 596	196 850	197 104	197 358	197 612	197 866
7 8	198 120	198 374	198 628	198 882	199 136	199 390	199 644	199 898	200 152	200 406
7 9	200 660	200 914	201 168	201 422	201 676	201 930	202 184	202 438	202 692	202 946
8 0	203 200	203 454	203 708	203 962	204 216	204 470	204 724	204 978	205 232	205 486
8 1	205 740	205 994	206 248	206 502	206 756	207 010	207 264	207 518	207 772	208 026
8 2	208 280	208 534	208 788	209 042	209 296	209 550	209 804	210 058	210 312	210 566
8 3	210 820	211 074	211 328	211 582	211 836	212 090	212 344	212 598	212 852	213 106
8 4	213 360	213 614	213 868	214 122	214 376	214 630	214 884	215 138	215 392	215 646
8 5	215 900	216 154	216 408	216 662	216 916	217 170	217 424	217 678	217 932	218 186
8 6	218 440	218 694	218 948	219 202	219 456	219 710	219 964	220 218	220 472	220 726
8 7	220 980	221 234	221 488	221 742	221 996	222 250	222 504	222 758	223 012	223 266
8 8	223 520	223 774	224 028	224 282	224 536	224 790	225 044	225 298	225 552	225 806
8 9	226 060	226 314	226 568	226 822	227 076	227 330	227 584	227 838	228 092	228 346
9 0	228 600	228 854	229 108	229 362	229 616	229 870	230 124	230 378	230 632	230 886
9 1	231 140	231 394	231 648	231 902	232 156	232 410	232 664	232 918	233 172	233 426
9 2	233 680	233 934	234 188	234 442	234 696	234 950	235 204	235 458	235 712	235 966
9 3	236 220	236 474	236 728	236 982	237 236	237 490	237 744	237 998	238 252	238 506
9 4	238 760	239 014	239 268	239 522	239 776	240 030	240 284	240 538	240 792	241 046
9 5	241 300	241 554	241 808	242 062	242 316	242 570	242 824	243 078	243 332	243 586
9 6	243 840	244 094	244 348	244 602	244 856	245 110	245 364	245 618	245 872	246 126
9 7	246 380	246 634	246 888	247 142	247 396	247 650	247 904	248 158	248 412	248 666
9 8	248 920	249 174	249 428	249 682	249 936	250 190	250 444	250 698	250 952	251 206
9 9	251 460	251 714	251 968	252 222	252 476	252 730	252 984	253 238	253 492	253 746
10 0	254 000	254 254	254 508	254 762	255 016	255 270	255 524	255 778	256 032	256 286

Conversion
64ths to mm.
(calculated to
nearest .001 mm.)

$\frac{3.3}{64}$	13.097
$\frac{1.7}{32}$	13.494
$\frac{3.5}{64}$	13.891
$\frac{9}{16}$	14.288
$\frac{3.7}{64}$	14.684
$\frac{1.9}{32}$	15.081
$\frac{3.9}{64}$	15.478
$\frac{5}{8}$	15.875
$\frac{4.1}{64}$	16.272
$\frac{2.1}{32}$	16.669
$\frac{4.3}{64}$	17.066
$\frac{1.1}{16}$	17.463
$\frac{4.5}{64}$	17.859
$\frac{2.3}{32}$	18.256
$\frac{4.7}{64}$	18.653
$\frac{3}{4}$	19.050
$\frac{4.9}{64}$	19.447
$\frac{2.5}{32}$	19.844
$\frac{5.1}{64}$	20.241
$\frac{1.3}{16}$	20.638
$\frac{5.3}{64}$	21.034
$\frac{2.7}{32}$	21.431
$\frac{5.5}{64}$	21.828
$\frac{7}{8}$	22.225
$\frac{5.7}{64}$	22.622
$\frac{2.9}{32}$	23.019
$\frac{5.9}{64}$	23.416
$\frac{1.5}{16}$	23.813
$\frac{6.1}{64}$	24.209
$\frac{3.1}{32}$	24.606
$\frac{6.3}{64}$	25.003
1	25.400

Note—When converting inches to mm. and vice versa it should be remembered that the original dimension is often subject to tolerance.

NOTES