

SB-MS connectors conform to the environmental requirements of Mil-C-5015 and are manufactured and approved to the requirements specified by The Military Vehicle Engineering Establishment.

SB-MS connectors rationalize engineering and simplify design by reducing overall size and improving sealing characteristics of contemporary Mil-C-5015 connectors whilst still providing the necessary intermateability and interchangeability features.

Standard SB-MS connectors are pressure sealed, shock and vibration proof. Resilient neoprene morobloc regulators and wire sealing grommets provide positive interfacial and rear sealing capabilities with a continuous operating temperature rating of -50°C to $+100^{\circ}\text{C}$.

High temperature solder type connectors, an extension



to the standard 5MS range, are manufactured in accordance with M.V.E.E. specification 695 and have been developed to meet the severe environmental, temperature and fluid contamination conditions generally associated with high performance military engines.

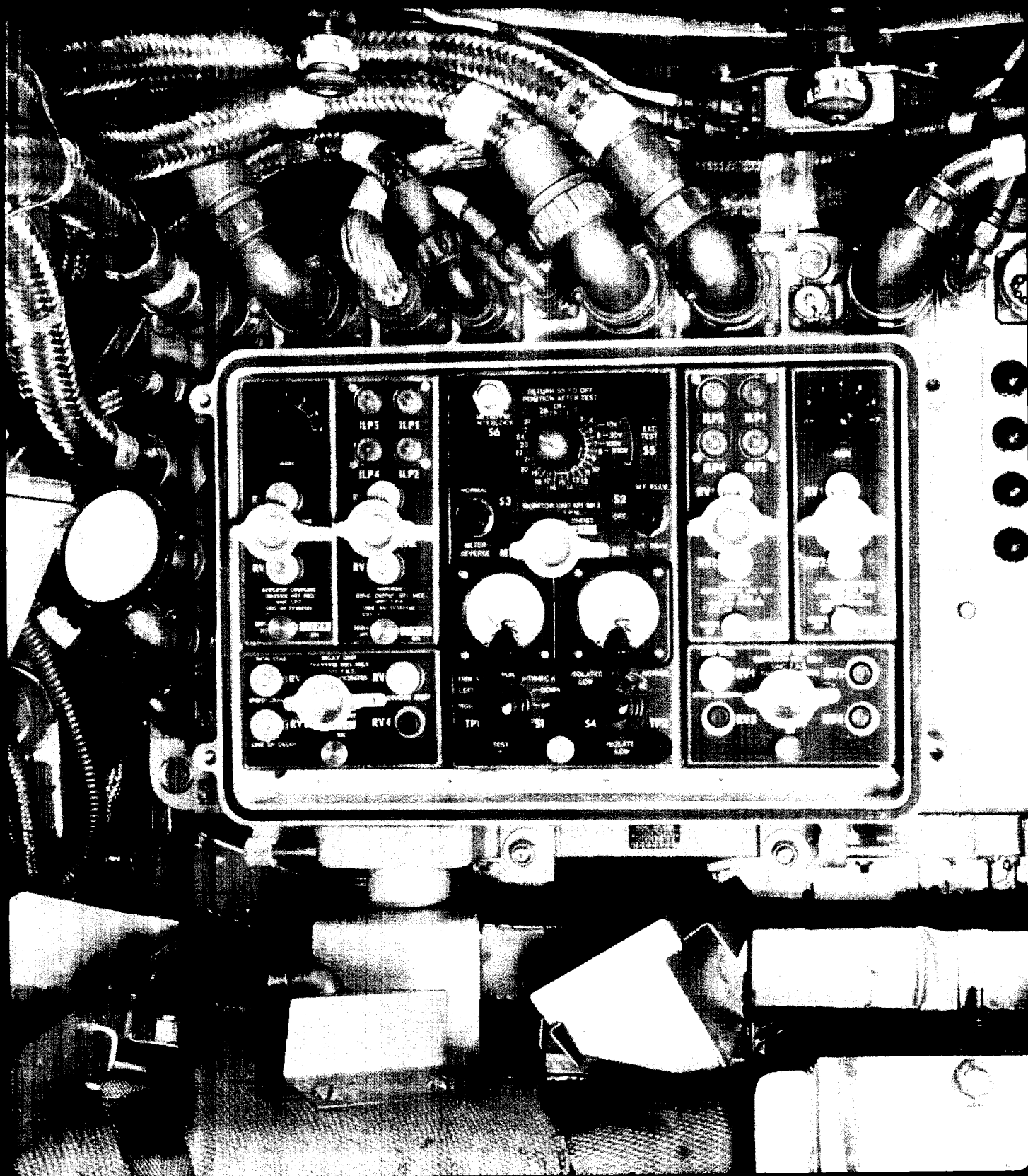
Viton insulators and fluoro-silicone grommets withstand continuous temperatures of -40°C to $+190^{\circ}\text{C}$ and retain the excellent sealing, shock and vibration characteristics featured in the standard 5MS connector.

Accessories for 5MS and H.T.M.S. connectors include straight and angle outlets, strain relief cable clamps, grommets, protective caps, sealing gaskets and telescopic bushings.

The Company reserves the right to change the material specification at any time, without prior notice.



SB-MS

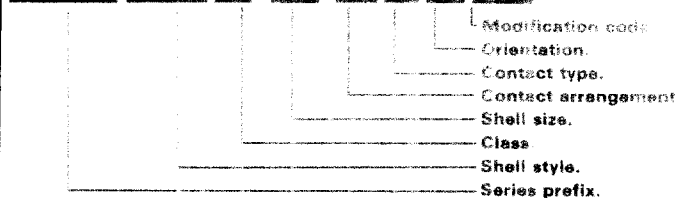


Contents

	PAGE
PART NUMBER MAKE-UP	3
SPECIFICATIONS — SB-MS and H.T.M.S. TYPES	4
CONTACT ARRANGEMENTS — SHELL SIZES 10SL-32	4-5
SELECTION CHART —	6
CONNECTOR ASSEMBLIES — FIXED RECEPTACLE	7
SB-MS 3102E — Fixed Receptacle	8
SB-MS 3100E — Fixed Receptacle Cable Sealed	9
SB-MS 3100E C — Fixed Receptacle Cable Sealed and Clamped	9
SB-MS 3100E MC — Fixed Receptacle Cable Sealed and Clamped	9
SB-MS 3100E A — Fixed Receptacle 90° Angle Cable Sealed	10
SB-MS 3100E AC — Fixed Receptacle 90° Angle Cable Sealed and Clamped	10
CONNECTOR ASSEMBLIES — FREE PLUG	11
SB-MS 3106E — Free Plug Cable Sealed	12
SB-MS 3106E C — Free Plug Cable Sealed and Clamped	12
SB-MS 3106E MC — Free Plug Cable Sealed and Clamped	12
SB-MS 3108E — Free Plug 90° Angle Cable Sealed	13
SB-MS 3108E C — Free Plug 90° Angle Cable Sealed and Clamped	13
CONNECTOR ASSEMBLIES — FREE RECEPTACLE	14
SB-MS 3101E — Free Receptacle Cable Sealed	15
SB-MS 3101E C — Free Receptacle Cable Sealed and Clamped	15
SB-MS 3101E MC — Free Receptacle Cable Sealed and Clamped	15
ACCESSORY SETS	16
SPARES AND ACCESSORIES	16-17
MULTICORE CABLE CLAMP ACCESSORIES	17
GROMMET CABLE CLAMP ACCESSORIES	18
DUST CAPS — FIXED RECEPTACLE	18
DUST CAPS — FREE PLUG	19
TELESCOPIC BUSHINGS	19
FV CROSS REFERENCE NUMBERS	20
OTHER CONNECTORS	21

Part number make-up

SB-MS 3102 E-20-15 P W GM



Series Prefix

SB-MS — Standard 5 MS.
H.T.M.S. — High temperature 5 MS.

Shell Style

3100 — Wall mounting receptacle.
3101 — Cable connecting receptacle.
3102 — Box mounting receptacle.
3106 — Straight plug.
3108 — 90° angle plug.

Class

E — Plain grommet nut with grommet. Not shell style 3102.
E/A — 90° angle with plain grommet nut and grommets. Only for shell style 3100.
E/AC — 90° angle with 5 MS cable clamp and grommets. Only for shell style 3100.
E/C — 5 MS cable clamp and grommet. For shell styles 3100, 3101, 3106, 3108.

E/MC

— Multicore cable clamp and grommet. For shell styles 3100, 3101, 3106. Not suitable for H.T.M.S. series.

Shell size

10SL to 32 — O/D of coupling thread in sixteenths of an inch.

Contact arrangements

— See pages 4-5

Contact type

P — Pin.
S — Socket.

Orientation

N, W, X, Y, Z — See pages 4-5

Modification Code

L.B.E.F. — Less back end fittings.
G.M. — Gold .00127 m/m (0.000050 in) over Nickel .00381 m/m (0.000150 in) AB spec. 301 refers.

Please consult factory if additional modifications are required.





SB-MS

Specification

Condensed data for Standard Materials and Finishes

	5 MS type	H.T.M.S. Type
Shell	Aluminium alloy cadmium plated with olive drab passivation.	Aluminium alloy cadmium plated with olive drab passivation.
Insulator	Bonded monobloc neoprene.	Bonded monobloc fluoro-carbon (Viton).
Grommet	Neoprene.	Fluoro-silicone.
Contacts	High quality brass, silver plated (gold optional) over nickel plate. Socket contacts size 16 and 12 fitted with protective 'probe proof' sleeve.	High quality brass, silver plated (gold optional) over nickel plate. Socket contacts size 16 and 12 fitted with protective 'probe proof' sleeve.
Accessory hardware	Aluminium alloy cadmium plated with olive drab passivation.	Aluminium alloy cadmium plated with olive drab passivation.

Mechanical Features

Coupling	Fine thread, captive coupling nut. Front removable for replacement purposes.	Fine thread, captive coupling nut. Front removable for replacement purposes.
Orientation	Insert orientation.	Insert orientation.
Contact type	Non removable, solder bucket.	Non removable, solder bucket.
Pressure sealing	Max leakage of 1 cm ³ /h at pressure of 100kN/m ² .	Max leakage of 1 cm ³ /h at pressure of 100kN/m ² .

Electrical Data

Current ratings	4.5 amps to 100 amps. Max current ratings of contact arrangement are detailed on page 6	4.5 amps to 100 amps. Max current ratings of contact arrangement are detailed on page 6
Voltage ratings	Working 350 to 750V. Proof 800 to 2000V. For service ratings at sea level see Page 6	Working 350 to 750V. Proof 800 to 2000V. For service ratings at sea level see Page 6
Insulation resistance	Initial 5000 M ohms minimum. In excess of 10M ohms after test.	Initial 5000 M ohms minimum. In excess of 10M ohms after test.
Contact resistance	With silver plating — 5 milliohms max, initial. After test, initial plus 5 milliohms (max).	With silver plating — 5 milliohms max, initial. After test, initial plus 5 milliohms (max).
Temperature rating (environmental)	—55°C to +100°C.	—40°C to + 190°C.

Wiring

	AWG Contact Size	AWG Wire Size	Insulation O/D Limits mm/ins.
To obtain satisfactory moisture sealing with our connectors the use of grommets is essential. The following table indicates the insulation outside diameters that are recommended for AWG and M.S. wire sizes.	16	16 to 22	1.63 to 3.30 (0.064) to (0.130)
	12	12 to 14	2.90 to 4.32 (0.114) to (0.170)
	8	8 to 10	4.04 to 6.48 (0.159) to (0.255)
	4	4 to 6	7.11 to 9.40 (0.280) to (0.370)
	0	0 to 2	10.16 to 13.97 (0.400) to (0.550)

Engaging/Separation Force

Due to an improvement in socket contact design, these details are not available at time of publication

● The metric dimensions in this catalogue are derived from the imperial figures given in brackets.

● The Company reserves the right to change the material specifications at any time, without prior notice.

Contact Arrangements

Insert contact arrangement details as required. The shell size and contact arrangement number are shown in combination i.e. 20-29. The numbers following the dash are the contact arrangements which do not necessarily indicate the number of contacts. This information is detailed on pages 6.

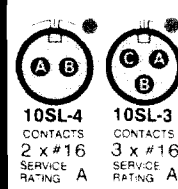
Orientation

Alternative insulator positions are available to prevent mismatching of adjacent connectors and are shown on each contact arrangement diagram.

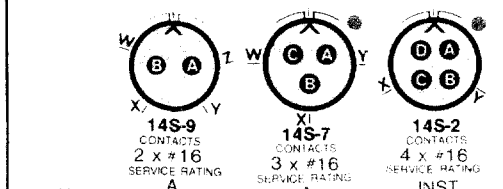
The degrees of orientation available are identified by W.X.Y.Z, which indicate the rotation of the insulator away from position N (normal) shown on the diagram.

● These contact arrangements are also available in the H.T.M.S. series. For availability of additional contact arrangements please consult factory.

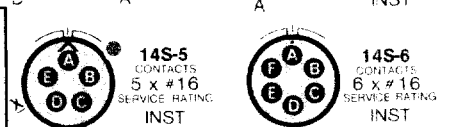
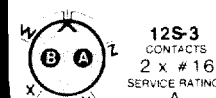
SHELL SIZE 10SL



SHELL SIZE 14S

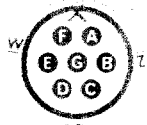


SHELL SIZE 12S



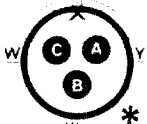
CONNECTORS

SHELL SIZE 16S



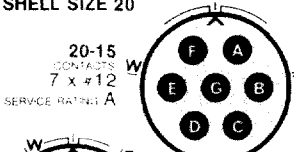
16S-1
CONTACTS
7 x #16
SERVICE RATING A

SHELL SIZE 16

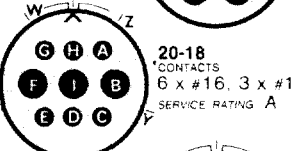


16-10
CONTACTS
3 x #12
SERVICE RATING A

SHELL SIZE 20



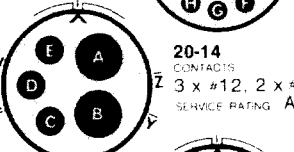
20-15
CONTACTS
7 x #12
SERVICE RATING A



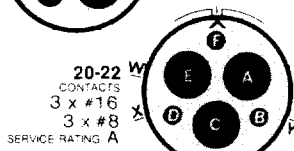
20-18
CONTACTS
6 x #16, 3 x #12
SERVICE RATING A



20-29
CONTACTS
17 x #16
SERVICE RATING A

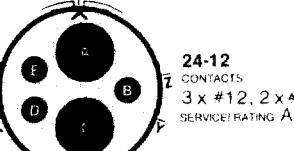


20-14
CONTACTS
3 x #12, 2 x #8
SERVICE RATING A



20-22
CONTACTS
3 x #16
3 x #8
SERVICE RATING A

SHELL SIZE 24

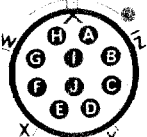


24-12
CONTACTS
3 x #12, 2 x #4
SERVICE RATING A

SHELL SIZE 18

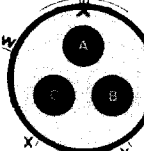


18-11
CONTACTS
5 x #12
SERVICE RATING A

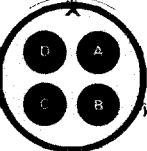


18-1
CONTACTS
10 x #16
SERVICE RATING A & INST

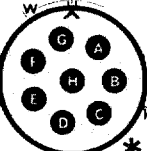
SHELL SIZE 22



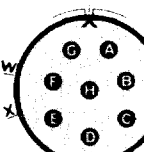
22-2
CONTACTS
3 x #8
SERVICE RATING A



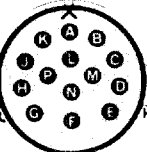
22-22
CONTACTS
4 x #8
SERVICE RATING A



22-23
CONTACTS
8 x #12
SERVICE RATING A & D†



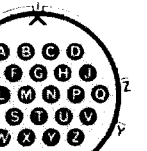
22-18
CONTACTS
8 x #16
SERVICE RATING A & D†



22-19
CONTACTS
14 x #16
SERVICE RATING A

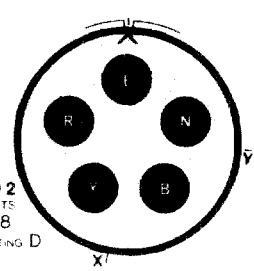


22-14
CONTACTS
19 x #16
SERVICE RATING A

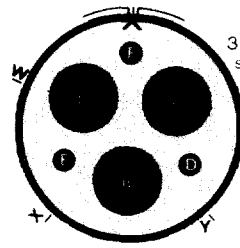


24-28
CONTACTS
24 x #16
SERVICE RATING INST

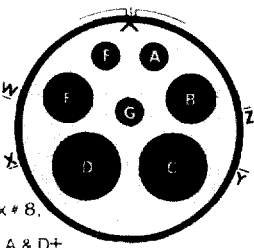
SHELL SIZE 28



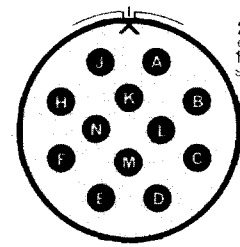
28-PD 2
CONTACTS
5 x #8
SERVICE RATING D



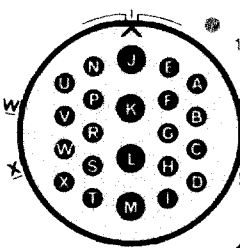
28-22
CONTACTS
3 x #16, 3 x #4
SERVICE RATING D



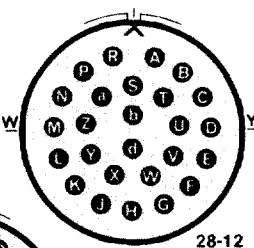
28-10
CONTACTS
3 x #12, 2 x #8,
2 x #4
SERVICE RATING A & D†



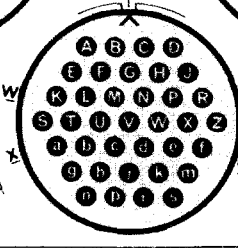
28-51
CONTACTS
12 x #12
SERVICE RATING A



28-11
CONTACTS
18 x #16,
4 x #12
SERVICE RATING A

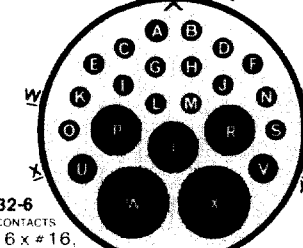


28-12
CONTACTS
26 x #16
SERVICE RATING INST

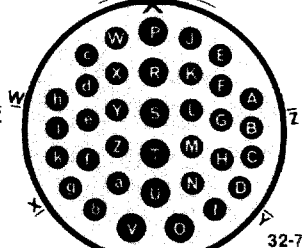


28-21
CONTACTS
37 x #16
SERVICE RATING A

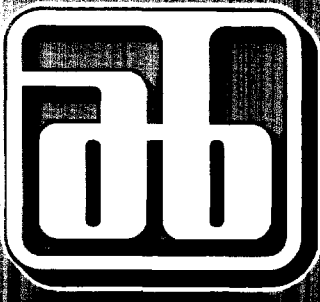
SHELL SIZE 32



32-6
CONTACTS
16 x #16,
2 x #12,
3 x #8, 2 x #4
SERVICE RATING A



32-7
CONTACTS
28 x #16, 7 x #12
SERVICE RATING A & INST



SB-MS

Selection Chart

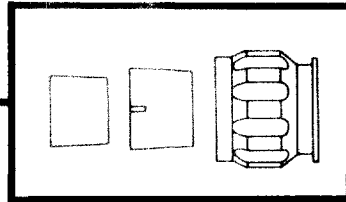
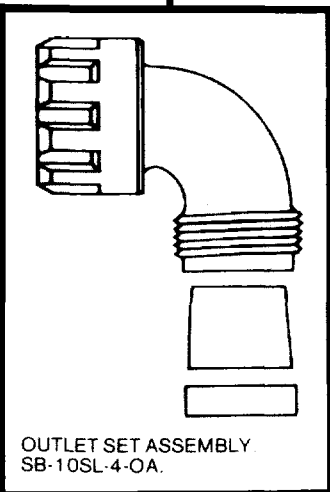
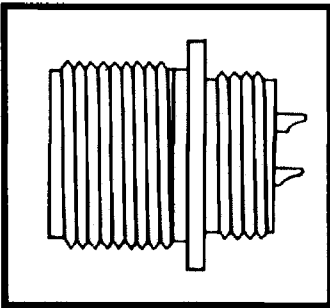
Shell Size	Contact Arrangement	No. of Contact	CONTACT SIZE AND CURRENT RATING (AMPS)				— AT 50°C AMBIENT	INSERT ORIENTATION	SERVICE RATING	Service Rating At Sea Level	VOLTAGE (DC or AC PEAK)	
			16	12	8	4					Working (V)	Proof (V)
10SL 10SL	4 3	2 3	2 x 18.5 Amps 3 x 15 Amps	— —	— —	— —	N N	A A	Inst. A	350 500	800 1400	
12S	3	2	2 x 18.5 Amps	—	—	—	N,W,X,Y,Z	A	D	750	2000	
14S 14S 14S 14S 14S	9 7 2 5 6	2 3 4 5 6	2 x 18.5 Amps 3 x 15 Amps 4 x 14 Amps 5 x 13 Amps 6 x 11.5 Amps	— — — — —	— — — — —	— — — — —	N,W,X,Y,Z N,W,X,Y N,X,Y N,X N	A A Inst. Inst. Inst.	† CONTACT ARRANGEMENT 18-1 Contacts B, F, C and G have service rating A. Balance has Inst. 22-18 Contacts C, D, and E have service rating A. Balance has D. 22-23 Contact H has service rating D. Balance has A. 28-10 Contact G has service rating D. Balance has A. 32-7 Contact A, B, H and J have service rating Inst. Balance has A.			
16S	1	7	7 x 11 Amps	—	—	—	N,W,Z	A				
16	10	3	—	3 x 29 Amps	—	—	N,W,X,Y	A				
18 18	11 1	5 10	— 10 x 7.5 Amps	5 x 24 Amps —	— —	— —	N,X,Y N,W,X,Y,Z	A A & Inst. †				
20 20 20 20 20	14 22 15 18 29	5 6 7 9 17	— 3 x 11 Amps — 6 x 11 Amps 17 x 7 Amps	3 x 23 Amps — 7 x 21 Amps 3 x 22 Amps —	2 x 50.5 Amps 3 x 48 Amps — — —	— — — — —	N,W,X,Y,Z N,W,X,Y,Z N,W,Z N,W,X,Y,Z N,W,Z	A A A A A				
22 22	2 22	3 4	— —	— —	3 x 56 Amps 4 x 56 Amps	— —	N,W,X,Y,Z N,X,Y	A A				
22 22 22 22	18 23 19 14	8 8 14 19	8 x 11 Amps — 14 x 7 Amps 19 x 5.5 Amps	— 8 x 20 Amps — —	— — — —	— — — —	N,W,X,Y N,W,Y N,W,X,Y,Z N,W,Z	A & D † A & D † A A				
24 24	12 28	5 24	— 24 x 5.5 Amps	3 x 11.5 Amps —	— —	2 x 92 Amps —	N,W,X,Y,Z N,W,X,Y,Z	A Inst.				
28 28 28 28	PD2 22 10 51	5 6 7 12	— 3 x 11.5 Amps — —	— — 3 x 13 Amps 12 x 35 Amps	5 x 56 Amps — 2 x 29 Amps —	— — 3 x 92 Amps 2 x 53 Amps	N,X,Y N,W,X,Y,Z N,W,X,Y,Z N	D D A & D † A				
28 28 28	11 12 21	22 26 37	18 x 5 Amps 26 x 5 Amps 37 x 5 Amps	4 x 10 Amps — —	— — —	— — —	N,W,X,Y,Z N,W,X,Y,Z N,W,X,Y,Z	A Inst. A				
32 32	6 7	23 35	16 x 5 Amps 28 x 4.5 Amps	2 x 10 Amps 7 x 9 Amps	3 x 23 Amps —	2 x 41 Amps —	N,W,X,Y,Z N,W,X,Y,Z	A A & Inst. †				

ELECTRICAL CONNECTORS

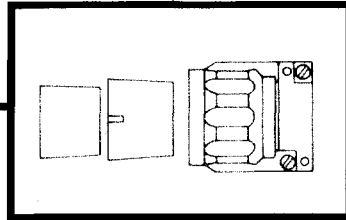
Connector Assemblies

The range of SB-MS connectors has been developed to reduce the number of unit assemblies to a minimum. The diagrams on this page clearly indicate that with the addition of accessory sets to the basic SB-MS 3102 receptacle a comprehensive range of assemblies is obtainable from a relatively small stock of components.

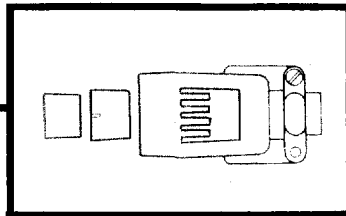
FIXED RECEPTACLE
 SB-MS 3102E — CONTACT
 ARRANGEMENT — PINS OR
 SOCKETS e.g.
 SB-MS 3102E-10SL-4P
 DIMENSIONS: See page 8



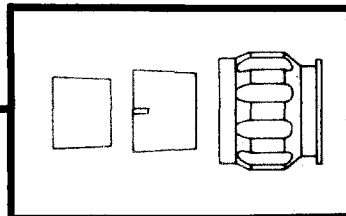
GROMMET ASSEMBLY.
 SB-10SL-4-A.



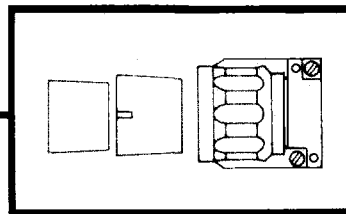
GROMMET CABLE CLAMP ASSEMBLY.
 SB-10SL-4-CCA.



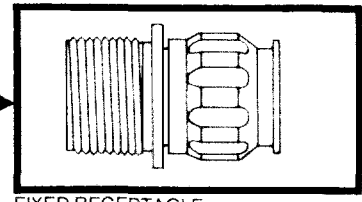
MULTICORE CABLE CLAMP ASSEMBLY.
 SB-10SL-4-MCA.



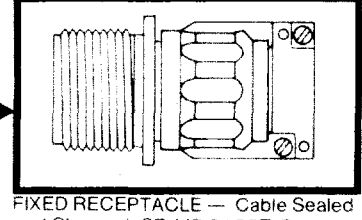
GROMMET ASSEMBLY.
 SB-10SL-4-A.



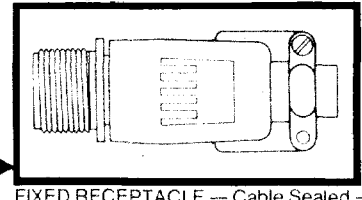
GROMMET CABLE CLAMP ASSEMBLY
 SB-10SL-4-CCA



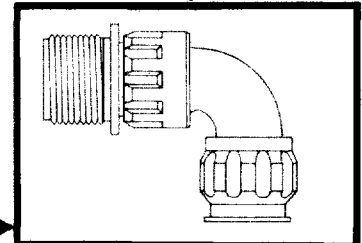
FIXED RECEPTACLE —
 Cable Sealed SB-MS 3100E —****—**
 See Page 9



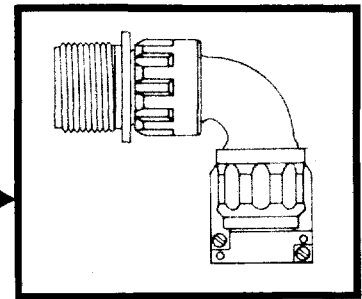
FIXED RECEPTACLE — Cable Sealed and Clamped SB-MS 3100E/C —****—**
 See Page 9



FIXED RECEPTACLE — Cable Sealed — Multicore Clamped SB-MS 3100E/MC —****—** See Page 9



FIXED RECEPTACLE — 90° Angle Cable Sealed SB-MS 3100E/A —****—** See Page 10



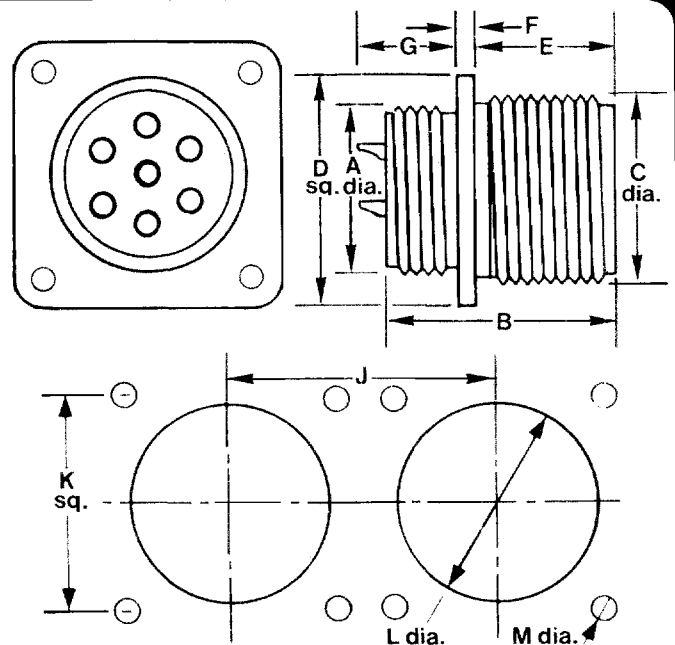
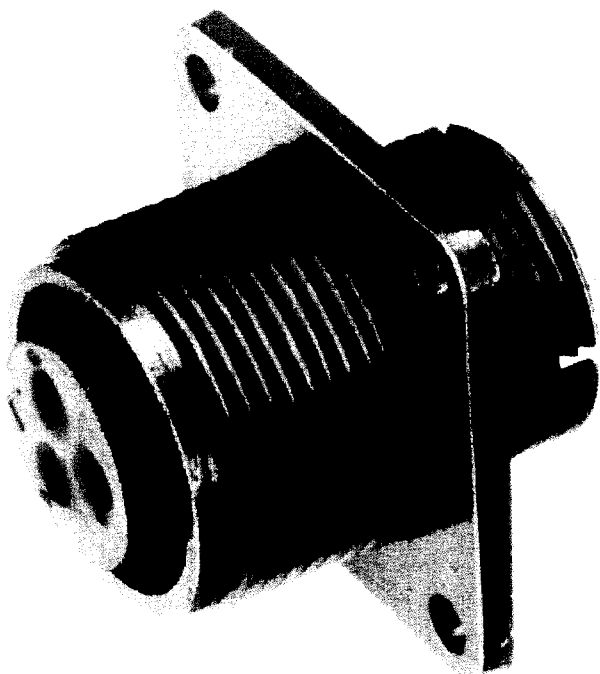
FIXED RECEPTACLE — 90° Angled Cable Sealed and Clamped SB-MS 3100E/AC —****—** See Page 10



SB-MS

SB-MS 3102E — Fixed Receptacle

PART NUMBER	SHELL SIZE	A DIA.	B	C DIA.	D SQ.	E	F	G	MOUNTING DIMENSIONS			
									J	K SQ.	L DIA.	M DIA.
SB-MS 3102E-10SL —***	10SL	15.87 (0.625)	26.92 (1.060)	15.87 (0.625)	25.40 (1.000)	14.27 (0.562)	1.78 (0.070)	14.22 (0.560)	25.40 (1.000)	18.26 (0.719)	16.26 (0.640)	3.05 (0.120)
SB-MS 3102E-12S —***	12S	15.87 (0.625)	26.92 (1.060)	19.05 (0.750)	27.79 (1.094)	14.27 (0.562)	2.29 (0.090)	14.22 (0.560)	27.80 (1.094)	20.62 (0.812)	16.26 (0.640)	3.05 (0.120)
SB-MS 3102E-14S —***	14S	19.05 (0.750)	26.92 (1.060)	22.23 (0.875)	30.18 (1.188)	14.27 (0.562)	2.29 (0.090)	14.22 (0.560)	30.17 (1.188)	23.01 (0.906)	19.43 (0.765)	3.05 (0.120)
SB-MS 3102E-16S —***	16S	22.22 (0.875)	26.92 (1.060)	25.40 (1.000)	32.53 (1.281)	14.27 (0.562)	2.29 (0.090)	14.22 (0.560)	32.54 (1.281)	24.61 (0.969)	22.60 (0.890)	3.05 (0.120)
SB-MS 3102E-16 —***	16	22.22 (0.875)	34.14 (1.344)	25.40 (1.000)	32.53 (1.281)	20.88 (0.822)	2.92 (0.115)	14.22 (0.560)	32.54 (1.281)	24.61 (0.969)	22.60 (0.890)	3.05 (0.120)
SB-MS 3102E-18 —***	18	25.40 (1.000)	34.14 (1.344)	25.58 (1.125)	34.92 (1.375)	20.88 (0.822)	2.92 (0.115)	14.22 (0.560)	34.92 (1.375)	26.97 (1.062)	25.78 (1.015)	3.05 (0.120)
SB-MS 3102E-20 —***	20	28.57 (1.125)	34.14 (1.344)	31.75 (1.250)	38.10 (1.500)	20.88 (0.822)	2.92 (0.115)	14.22 (0.560)	38.10 (1.500)	29.36 (1.156)	28.96 (1.140)	3.05 (0.120)
SB-MS 3102E-22 —***	22	31.75 (1.250)	34.14 (1.344)	34.92 (1.375)	41.28 (1.625)	20.88 (0.822)	2.92 (0.115)	14.22 (0.560)	41.27 (1.625)	31.80 (1.256)	32.13 (1.265)	3.05 (0.120)
SB-MS 3102E-24 —***	24	34.92 (1.375)	34.14 (1.344)	38.10 (1.500)	44.45 (1.750)	20.88 (0.822)	2.92 (0.115)	14.22 (0.560)	44.45 (1.750)	34.92 (1.375)	35.31 (1.390)	3.73 (0.147)
SB-MS 3102E-28 —***	28	41.27 (1.625)	34.14 (1.344)	44.45 (1.750)	50.80 (2.000)	20.88 (0.822)	2.92 (0.115)	14.22 (0.560)	50.80 (2.000)	39.67 (1.562)	41.66 (1.640)	3.73 (0.147)
SB-MS 3102E-32 —***	32	47.62 (1.875)	34.14 (1.344)	50.80 (2.000)	57.15 (2.250)	20.88 (0.822)	2.92 (0.115)	14.22 (0.560)	57.15 (2.250)	44.45 (1.750)	48.00 (1.890)	3.73 (0.173)



GASKETS — To ensure an adequate pressure seal between a square flanged receptacle and the panel the use of a sealing gasket is recommended. Gasket part numbers are detailed on page 16 and must be ordered separately.

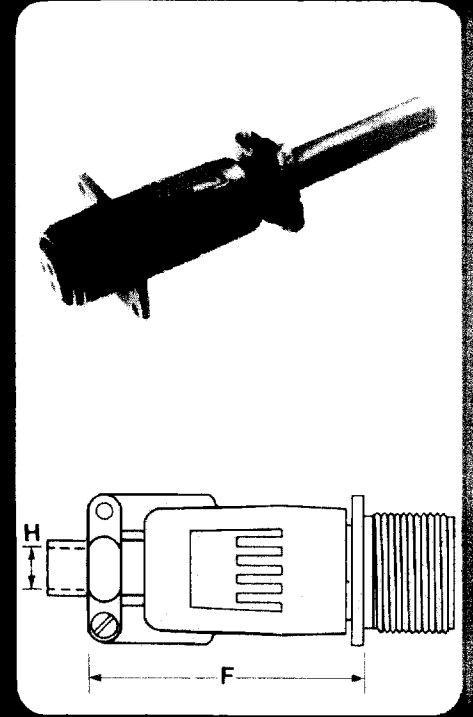
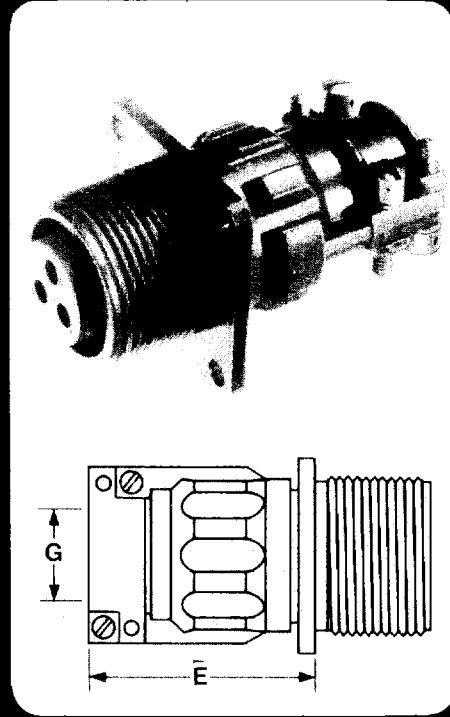
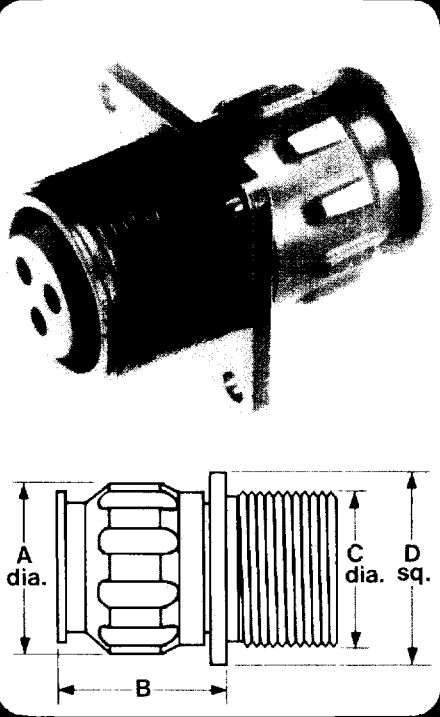


ELECTRICAL CONNECTORS

SB-MS 3100E – Fixed Receptacle – Cable Sealed

SB-MS 3100E/C – Fixed Receptacle – Cable Sealed and Clamped

SB-MS 3100E/MC – Fixed Receptacle – Cable Sealed – Multicore Clamped



PART NUMBER	SHELL SIZE	A DIA.	B	C DIA.	D SQ.	E	F	G Max. Cable Dia.	H Min. Internal Dia. Bushing
SB-MS 3100E-10SL—***	10SL	20.42 (0.840)	24.13 (0.950)	15.88 (0.625)	25.40 (1.000)	35.23 (1.387)	49.25 (1.939)	7.80 (0.307)	5.41 (0.213)
SB-MS 3100E-12S —***	12S	20.42 (0.840)	24.13 (0.950)	19.05 (0.750)	27.79 (1.094)	35.23 (1.387)	49.25 (1.939)	7.80 (0.307)	5.41 (0.213)
SB-MS 3100E-14S —***	14S	24.51 (0.965)	24.13 (0.950)	22.23 (0.875)	30.18 (1.188)	35.23 (1.387)	49.25 (1.939)	10.97 (0.432)	7.75 (0.305)
SB-MS 3100E-16S —***	16S	28.58 (1.125)	24.13 (0.950)	25.40 (1.000)	32.53 (1.281)	35.23 (1.387)	49.25 (1.939)	14.15 (0.557)	10.92 (0.430)
SB-MS 3100E-16 —***	16	28.58 (1.125)	24.13 (0.950)	25.40 (1.000)	32.53 (1.281)	35.23 (1.387)	49.86 (1.963)	14.15 (0.557)	10.92 (0.430)
SB-MS 3100E-18 —***	18	31.75 (1.250)	29.21 (1.150)	28.58 (1.125)	34.92 (1.375)	48.26 (1.900)	55.47 (2.184)	15.75 (0.620)	14.10 (0.555)
SB-MS 3100E-20 —***	20	34.92 (1.375)	29.21 (1.150)	31.75 (1.250)	38.10 (1.500)	48.26 (1.900)	54.64 (2.151)	20.50 (0.807)	14.10 (0.555)
SB-MS 3100E-22 —***	22	38.10 (1.500)	29.21 (1.150)	34.92 (1.375)	41.28 (1.625)	48.26 (1.900)	54.64 (2.151)	20.50 (0.807)	14.10 (0.555)
SB-MS 3100E-24 —***	24	41.28 (1.625)	29.21 (1.150)	38.10 (1.500)	44.45 (1.750)	48.26 (1.900)	54.64 (2.151)	23.67 (0.932)	18.87 (0.743)
SB-MS 3100E-28 —***	28	47.63 (1.875)	29.21 (1.150)	44.45 (1.750)	50.80 (2.000)	48.26 (1.900)	63.96 (2.518)	25.27 (0.995)	18.87 (0.743)
SB-MS 3100E-32 —***	32	53.98 (2.125)	29.21 (1.150)	50.80 (2.000)	57.15 (2.250)	48.26 (1.900)	63.96 (2.518)	31.62 (1.245)	23.62 (0.930)

***Insert contact arrangement details as required
NOTE: See drawing for dimensions of the parts.

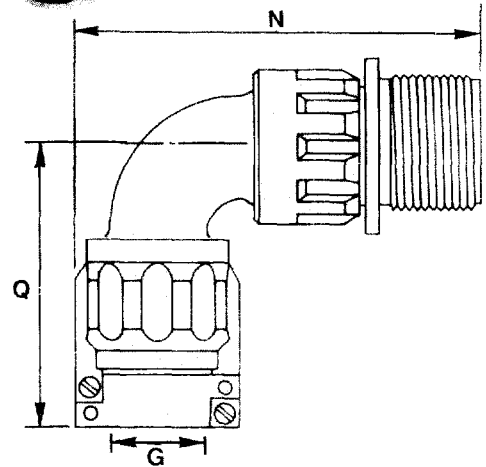
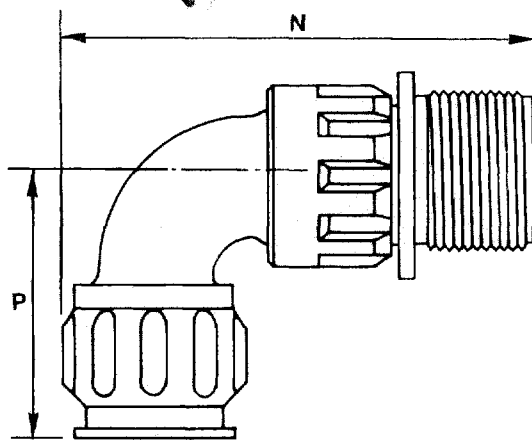
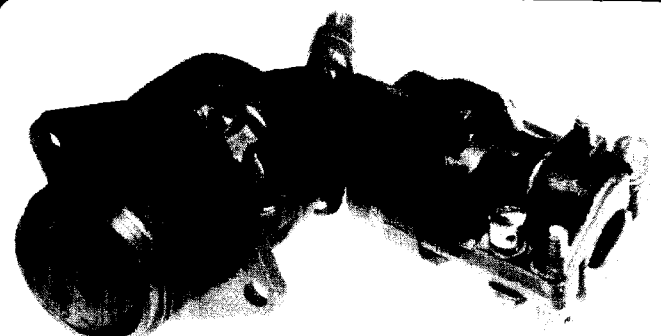
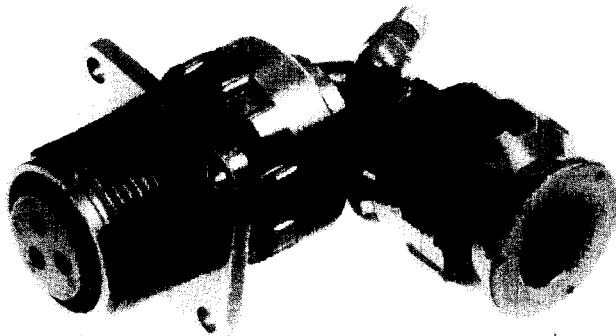
Mounting dimensions are identical to those listed on page 8, 3100 type.



SB-MS

SB-MS 3100E/A — Fixed receptacle — 90° angle cable sealed

SB-MS 3100E/AC — Fixed receptacle — 90° angle cable sealed and clamped



PART NUMBER	SHELL SIZE	N	P
SB-MS 3100E/A-10SL—***	10SL	56.67 (2.231)	33.30 (1.311)
SB-MS 3100E/A-12S —***	12S	56.67 (2.231)	33.30 (1.311)
SB-MS 3100E/A-14S —***	14S	59.11 (2.327)	39.27 (1.546)
SB-MS 3100E/A-16S —***	16S	62.41 (2.457)	40.69 (1.602)
SB-MS 3100E/A-16 —***	16	68.22 (2.686)	40.69 (1.602)
SB-MS 3100E/A-18 —***	18	79.93 (3.147)	46.10 (1.815)
SB-MS 3100E/A-20 —***	20	84.61 (3.331)	47.78 (1.881)
SB-MS 3100E/A-22 —***	22	86.18 (3.393)	50.77 (1.999)
SB-MS 3100E/A-24 —***	24	92.23 (3.631)	52.50 (2.067)
SB-MS 3100E/A-28 —***	28	95.02 (3.741)	55.35 (2.179)
SB-MS 3100E/A-32 —***	32	104.34 (4.108)	58.52 (2.304)

PART NUMBER	SHELL SIZE	Q	G Max. Cable Dia.
SB-MS 3100E/AC-10SL—***	10SL	44.40 (1.748)	7.80 (0.307)
SB-MS 3100E/AC-12S —***	12S	44.40 (1.748)	7.80 (0.307)
SB-MS 3100E/AC-14S —***	14S	50.37 (1.983)	10.97 (0.432)
SB-MS 3100E/AC-16S —***	16S	51.82 (2.040)	14.15 (0.557)
SB-MS 3100E/AC-16 —***	16	51.82 (2.040)	14.15 (0.557)
SB-MS 3100E/AC-18 —***	18	65.15 (2.565)	15.75 (0.620)
SB-MS 3100E/AC-20 —***	20	66.83 (2.631)	20.50 (0.807)
SB-MS 3100E/AC-22 —***	22	69.82 (2.749)	20.50 (0.807)
SB-MS 3100E/AC-24 —***	24	71.55 (2.817)	23.67 (0.932)
SB-MS 3100E/AC-28 —***	28	74.40 (2.929)	25.27 (0.995)
SB-MS 3100E/AC-32 —***	32	77.57 (3.054)	31.62 (1.245)

17
***Insert contact arrangement details as required.

NOTE: Refer to page 8 for any further dimensional information.

NOTE: For cable accommodation details and dimensional details see page 4.

ELECTRICAL CONNECTORS

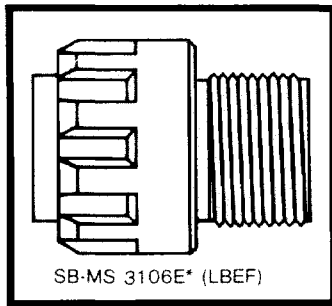
Connector Assemblies

The range of SB-MS connectors has been developed to reduce the number of unit assemblies to a minimum. The diagrams on this page clearly indicate that with the addition of accessory sets to the basic SB-MS 3106 plug a comprehensive range of assemblies is obtainable from a relatively small stock of components.

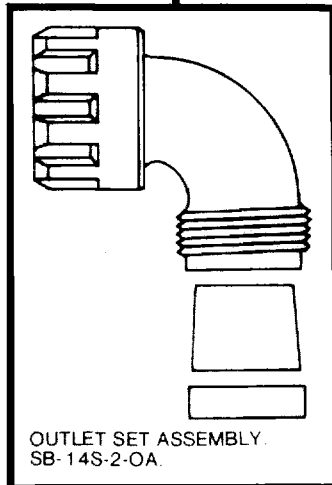
*The basic SB-MS 3106 plug can be supplied without accessories by the inclusion of LBEF as a suffix in the part number. See page 3 for part number details.

FREE PLUG

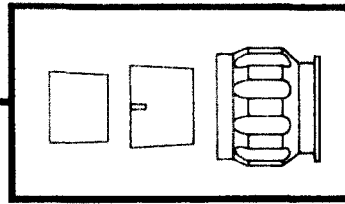
SB-MS 3106E — CONTACT ARRANGEMENT — PINS OR SOCKETS e.g. SB-MS 3106E-14S-2P.
DIMENSIONS: See page 12



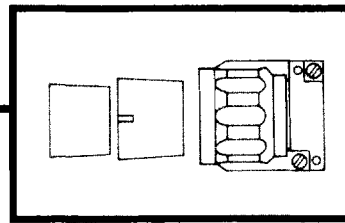
SB-MS 3106E* (LBEF)



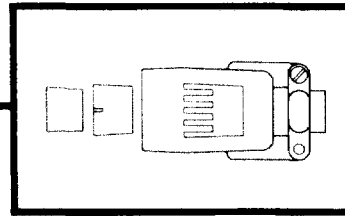
OUTLET SET ASSEMBLY
SB-14S-2-OA.



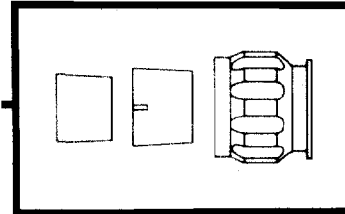
GROMMET ASSEMBLY
SB-14S-2-A.



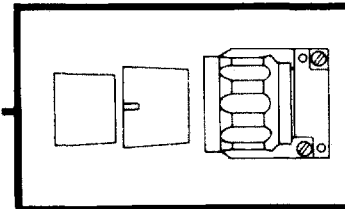
GROMMET CABLE CLAMP ASSEMBLY
SB-14S-2-CCA.



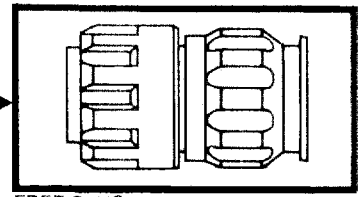
MULTICORE CABLE CLAMP ASSEMBLY
SB-14S-2-MCA.



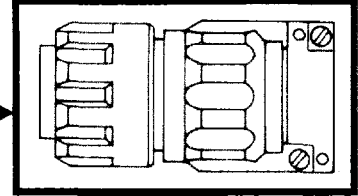
GROMMET ASSEMBLY
SB-14S-2-A.



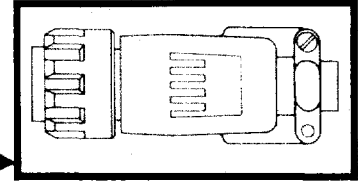
GROMMET CABLE CLAMP ASSEMBLY
SB-14S-2-CCA.



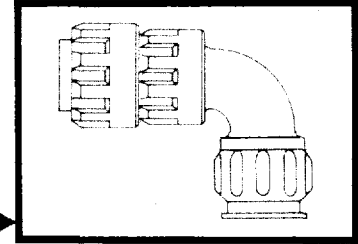
FREE PLUG — Cable Sealed SB-MS 3106E —****—**
See Page 12



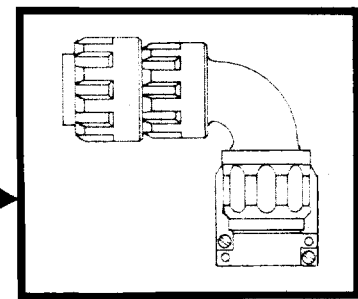
FREE PLUG — Cable Sealed and Clamped SB-MS 3106E C —****—**
See Page 12



FREE PLUG — Cable Sealed — Multicore Clamped SB-MS 3106E/MC —****—** See Page 12



FREE PLUG — 90° Angle Cable Sealed SB-MS 3108E —****—**
See Page 13



FREE PLUG — 90° Angle Cable Sealed and Clamped SB-MS 3108E/C
See page 13

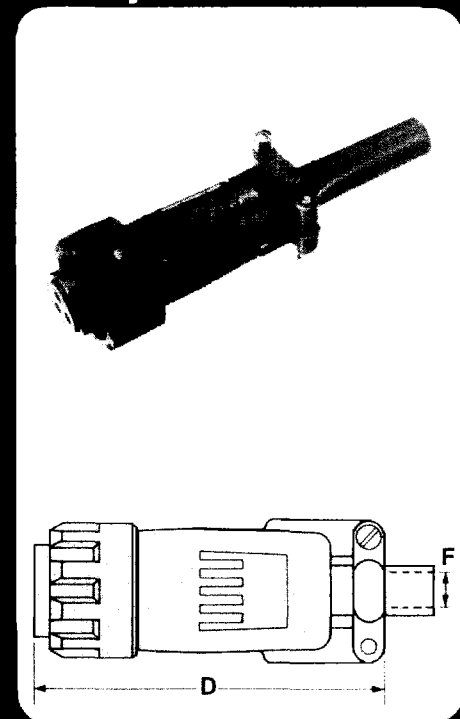
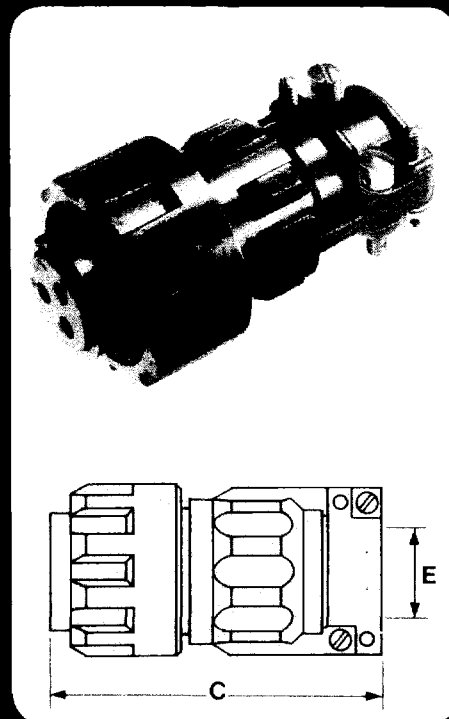
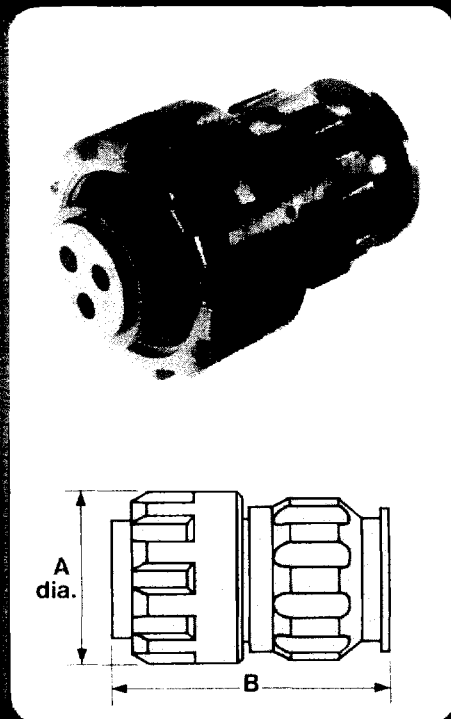


SB-MS

SB-MS 3106E —
Free plug cable
sealed

SB-MS 3106E/C —
Free plug cable
sealed and clamped

SB-MS 3106E/MC
— Free plug cable
sealed — Multicore
clamped



PART NUMBER	SHELL SIZE	A DIA.	B	C	D	E Max. Cable Dia.	F Min. Internal Dia. Bushing
SB-MS 3106E-10SL—***	10SL	24.61 (0.969)	43.54 (1.714)	54.79 (2.157)	64.54 (2.541)	7.80 (0.307)	5.41 (0.213)
SB-MS 3106E-12S —***	12S	26.97 (1.062)	43.54 (1.714)	54.79 (2.157)	64.54 (2.541)	7.80 (0.307)	5.41 (0.213)
SB-MS 3106E-14S —***	14S	29.36 (1.156)	43.54 (1.714)	54.79 (2.157)	64.54 (2.541)	10.97 (0.432)	7.75 (0.305)
SB-MS 3106E-16S —***	16S	31.75 (1.250)	43.54 (1.714)	54.79 (2.157)	64.54 (2.541)	14.15 (0.557)	10.92 (0.430)
SB-MS 3106E-16 —***	16	31.75 (1.250)	48.16 (1.896)	59.36 (2.337)	70.36 (2.770)	14.15 (0.557)	10.92 (0.430)
SB-MS 3106E-18 —***	18	34.14 (1.344)	52.91 (2.083)	72.14 (2.840)	75.97 (2.991)	15.75 (0.620)	14.10 (0.555)
SB-MS 3106E-20 —***	20	37.31 (1.469)	52.91 (2.083)	72.14 (2.840)	75.13 (2.958)	20.50 (0.807)	14.10 (0.555)
SB-MS 3106E-22 —***	22	40.49 (1.594)	52.91 (2.083)	72.14 (2.840)	75.13 (2.958)	20.50 (0.807)	14.10 (0.555)
SB-MS 3106E-24 —***	24	43.66 (1.719)	52.91 (2.083)	72.14 (2.840)	75.13 (2.958)	23.67 (0.932)	18.87 (0.743)
SB-MS 3106E-28 —***	28	50.01 (1.969)	52.91 (2.083)	72.14 (2.840)	84.46 (3.325)	25.27 (0.995)	18.87 (0.743)
SB-MS 3106E-32 —***	32	56.36 (2.219)	52.91 (2.083)	72.14 (2.840)	84.46 (3.325)	31.62 (1.245)	23.62 (0.930)

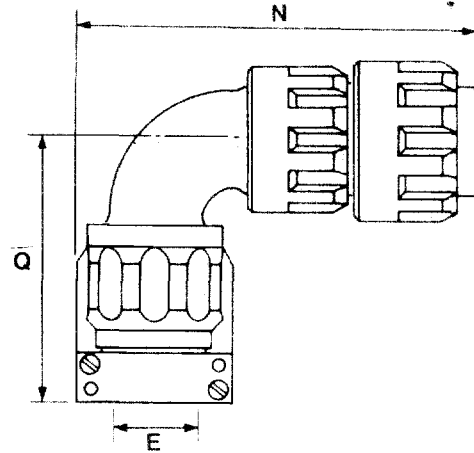
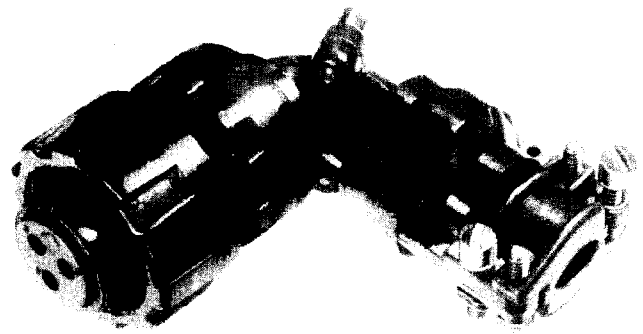
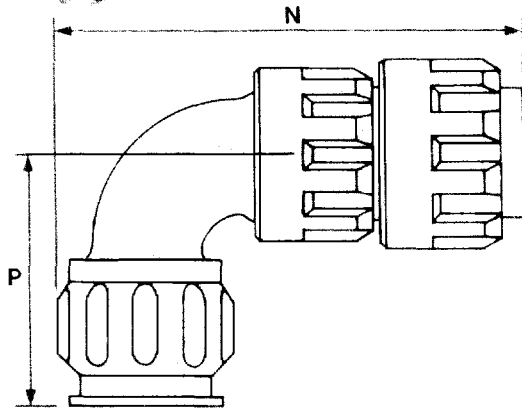
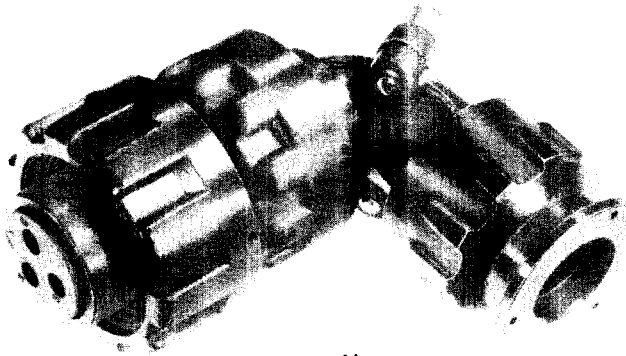
*** Insert contact arrangement details as required.

Maximum Cable Length is 100 ft. for SB-MS 3106E/C only.

ELECTRICAL CONNECTORS

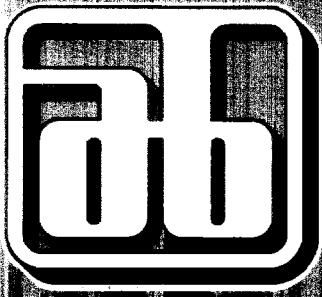
SB-MS 3108E — Free plug 90° angle cable sealed

SB-MS 3108E/C — Free plug cable sealed and clamped



PART NUMBER	SHELL SIZE	N	P
SB-MS 3108E-10SL—***	10SL	56.67 (2.231)	33.30 (1.311)
SB-MS 3108E-12S —***	12S	56.67 (2.231)	33.30 (1.311)
SB-MS 3108E-14S —***	14S	59.11 (2.327)	39.27 (1.546)
SB-MS 3108E-16S —***	16S	62.41 (2.457)	40.69 (1.602)
SB-MS 3108E-16 —***	16	68.22 (2.686)	40.69 (1.602)
SB-MS 3108E-18 —***	18	79.93 (3.147)	46.10 (1.815)
SB-MS 3108E-20 —***	20	84.61 (3.331)	47.78 (1.881)
SB-MS 3108E-22 —***	22	86.18 (3.393)	50.77 (1.999)
SB-MS 3108E-24 —***	24	92.23 (3.631)	52.50 (2.067)
SB-MS 3108E-28 —***	28	95.02 (3.741)	55.35 (2.179)
SB-MS 3108E-32 —***	32	104.34 (4.108)	58.52 (2.304)

PART NUMBER	SHELL SIZE	Q	E Max. Cable Dia.
SB-MS 3108E/C-10SL—***	10SL	44.40 (1.748)	7.80 (0.307)
SB-MS 3108E/C-12S —***	12S	44.40 (1.748)	7.80 (0.307)
SB-MS 3108E/C-14S —***	14S	50.37 (1.983)	10.97 (0.432)
SB-MS 3108E/C-16S —***	16S	51.82 (2.040)	14.15 (0.557)
SB-MS 3108E/C-16 —***	16	51.82 (2.040)	14.15 (0.557)
SB-MS 3108E/C-18 —***	18	65.15 (2.565)	15.75 (0.620)
SB-MS 3108E/C-20 —***	20	66.83 (2.631)	20.50 (0.807)
SB-MS 3108E/C-22 —***	22	69.82 (2.749)	20.50 (0.807)
SB-MS 3108E/C-24 —***	24	71.55 (2.817)	23.67 (0.932)
SB-MS 3108E/C-28 —***	28	74.40 (2.929)	25.27 (0.995)
SB-MS 3108E/C-32 —***	32	77.57 (3.054)	31.62 (1.245)

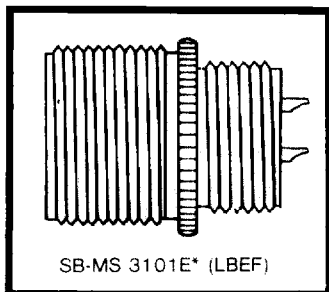


SB-MS

Connector Assemblies

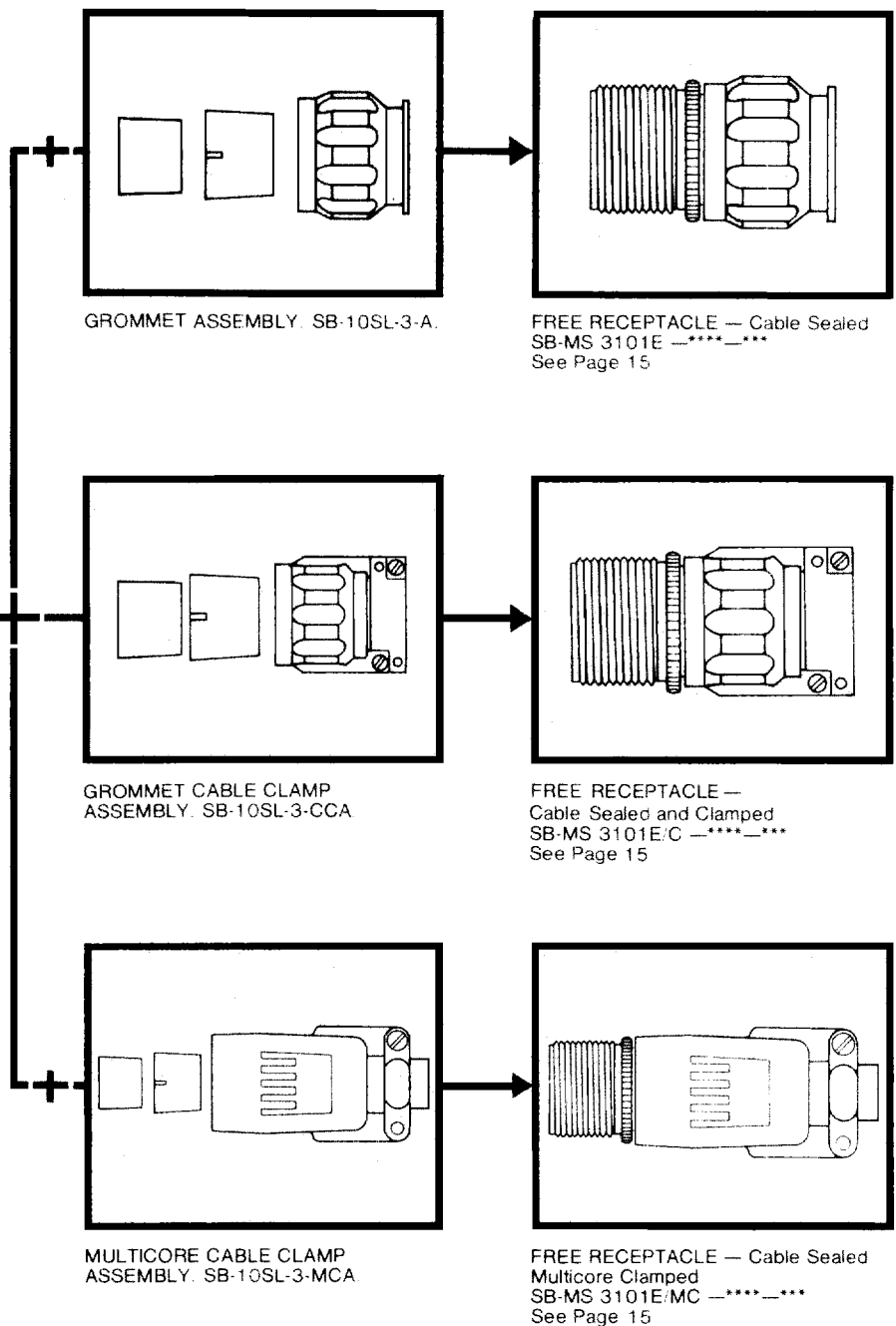
The range of SB-MS connectors has been developed to reduce the number of unit assemblies to a minimum. The diagrams on this page clearly indicate that with the addition of accessory sets to the basic SB-MS 3101 receptacle a comprehensive range of assemblies is obtainable from a relatively small stock of components.

FREE RECEPTACLE
SB-MS 3101E — CONTACT ARRANGEMENT — PINS OR SOCKETS e.g. SB-MS 3101E-10SL-3P. DIMENSIONS: See Page 15.



SB-MS 3101E* (LBEF)

*The basic SB-MS 3101 receptacle can be supplied without accessories by the inclusion of LBEF as a suffix in the part number. See page 3 for part number details.

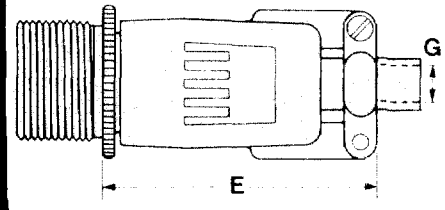
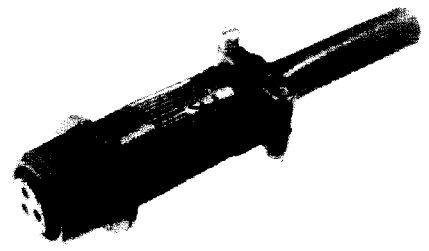
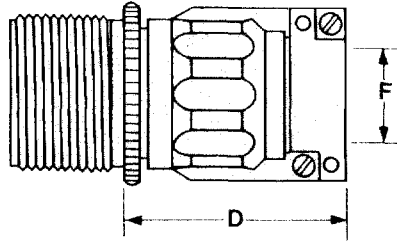
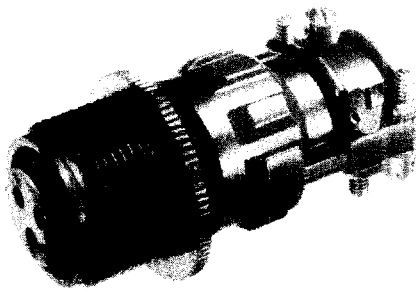
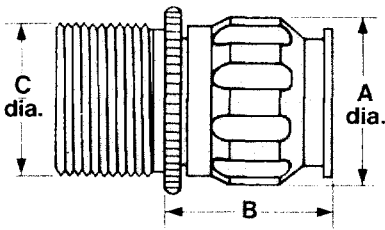
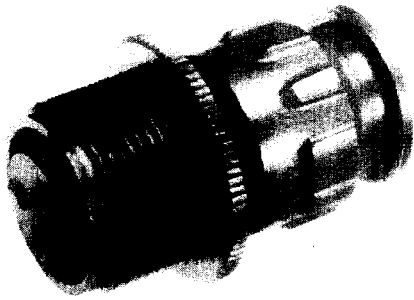


ELECTRICAL CONNECTORS

**SB-MS 3101E —
Free receptacle
cable sealed**

**SB-MS 3101E/C —
Free receptacle
cable sealed
and clamped**

**SB-MS 3101E/MC —
Free receptacle
cable sealed —
multicore clamped**



PART NUMBER	SHELL SIZE	DIMENSIONS					F Max. Cable Dia.	G Min. Internal Dia. Bushing
		A DIA.	B	C DIA.	D	E		
SB-MS 3101E-10SL—***	10SL	20.42 (0.840)	24.13 (0.950)	15.88 (0.625)	35.23 (1.387)	49.25 (1.939)	7.80 (0.307)	5.41 (0.213)
SB-MS 3101E-12S —***	12S	20.42 (0.840)	24.13 (0.950)	19.05 (0.750)	35.23 (1.387)	49.25 (1.939)	7.80 (0.307)	5.41 (0.213)
SB-MS 3101E-14S —***	14S	24.51 (0.965)	24.13 (0.950)	22.23 (0.875)	35.23 (1.387)	49.25 (1.939)	10.97 (0.432)	7.75 (0.305)
SB-MS 3101E-16S —***	16S	28.58 (1.125)	24.13 (0.950)	25.40 (1.000)	35.23 (1.387)	49.25 (1.939)	14.15 (0.557)	10.92 (0.430)
SB-MS 3101E-16 —***	16	28.58 (1.125)	24.13 (0.950)	25.40 (1.000)	35.23 (1.387)	49.86 (1.963)	14.15 (0.557)	10.92 (0.430)
SB-MS 3101E-18 —***	18	31.75 (1.250)	29.21 (1.150)	28.58 (1.125)	48.26 (1.900)	55.47 (2.184)	15.75 (0.620)	14.10 (0.555)
SB-MS 3101E-20 —***	20	34.92 (1.375)	29.21 (1.150)	31.75 (1.250)	48.26 (1.900)	54.64 (2.151)	20.50 (0.807)	14.10 (0.555)
SB-MS 3101E-22 —***	22	38.10 (1.500)	29.21 (1.150)	34.92 (1.375)	48.26 (1.900)	54.64 (2.151)	20.50 (0.807)	14.10 (0.555)
SB-MS 3101E-24 —***	24	41.28 (1.625)	29.21 (1.150)	38.10 (1.500)	48.26 (1.900)	54.64 (2.151)	23.67 (0.932)	18.87 (0.743)
SB-MS 3101E-28 —***	28	47.63 (1.875)	29.21 (1.150)	44.45 (1.750)	48.26 (1.900)	63.96 (2.518)	25.27 (0.995)	18.87 (0.743)
SB-MS 3101E-32 —***	32	53.98 (2.125)	29.21 (1.150)	50.80 (2.000)	48.26 (1.900)	63.96 (2.518)	31.62 (1.245)	23.62 (0.930)

Maximum Cable Diameter is applicable to SB-MS 3101E C only.

Insert contact arrangement details as required.



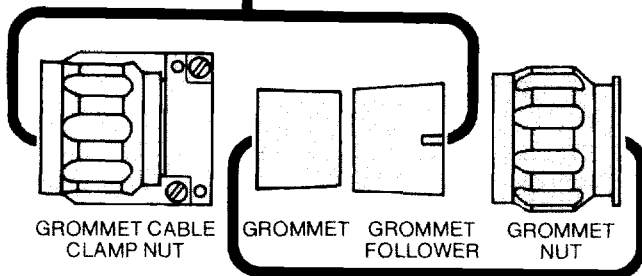
SB-MS

Accessory Sets

A full range of accessory sets for 5 MS and MS commercial connectors can be supplied as separate items to provide flexibility of connector styles dependent on design requirements. Individual components from these accessory sets can be supplied separately. Full ordering part numbers are on pages 16 to 19. It is essential when ordering accessory sets containing grommets to detail the full contact arrangement description e.g. SB-10SL-4-CCA. When ordering grommet followers, grommet nuts or grommet cable clamp nuts, the shell size must be specified e.g. SB-12S-N etc. Size 10SL and 12S are the ONLY accessory sets that use common components.

GROMMET CABLE CLAMP ASSEMBLY

e.g. SB-10SL-4-CCA
 GROMMET CABLE CLAMP NUT: e.g. SB-10S-NCC
 GROMMET: e.g. SB-10SL-4-G
 GROMMET FOLLOWER: e.g. SB-10S-F

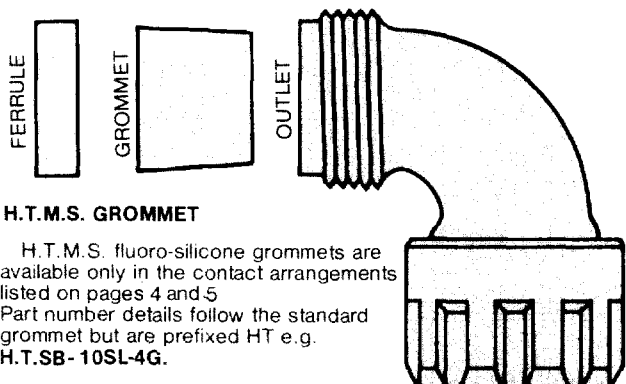


ASSESSORY SET

e.g. SB-10SL-4-A
 GROMMET: e.g. SB-10SL-4-G
 GROMMET FOLLOWER: e.g. SB-10S-F
 GROMMET NUT: e.g. SB-10S-N

OUTLET SET ASSEMBLY

e.g. SB-10SL-4-OA
 OUTLET: e.g. SB-10SL-0
 GROMMET: e.g. SB-10SL-4-G
 FERRULE: e.g. SB-10SL-0F



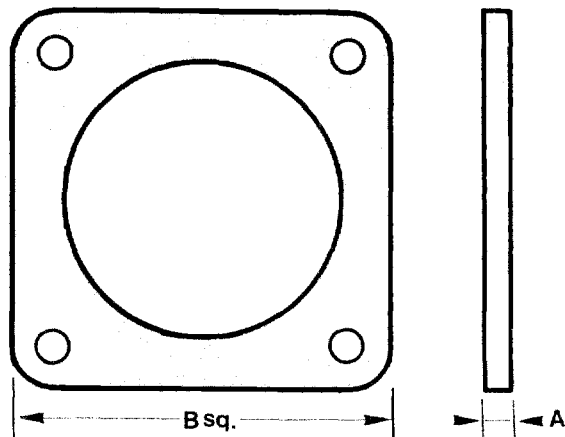
H.T.M.S. GROMMET

H.T.M.S. fluoro-silicone grommets are available only in the contact arrangements listed on pages 4 and 5. Part number details follow the standard grommet but are prefixed HT e.g. H.T.SB-10SL-4G.

Spares and Accessories

Dummy receptacles, sealing gaskets, metal protective caps, plastic dust caps, telescopic bushings, grommet bungs (wirehole fillers), coupling nuts and coupling nut circlips are available as replacement spares for damaged connectors or as accessories for applications demanding improved protection or sealing facilities.

GASKET



SHELL SIZE	PART NUMBER	DIMENSIONS	
		'A' +0.254 (+0.010) -0.127 (-0.005)	'B' SQUARE +0.38 (0.015) -0.00 (0.000)
10SL	SB-10SL-RPG	0.79 (0.031)	25.40 (1.000)
12S	SB-12S-RPG	0.79 (0.031)	27.80 (1.094)
14S	SB-14S-RPG	0.79 (0.031)	30.17 (1.188)
16S	SB-16-RPG	0.79 (0.031)	32.54 (1.281)
16	SB-16-RPG	0.79 (0.031)	32.54 (1.281)
18	SB-18-RPG	0.79 (0.031)	34.92 (1.375)
20	SB-20-RPG	0.79 (0.031)	38.10 (1.500)
22	SB-22-RPG	0.79 (0.031)	41.27 (1.625)
24	SB-24-RPG	0.79 (0.031)	44.45 (1.750)
28	SB-28-RPG	0.79 (0.031)	50.80 (2.000)
32	SB-32-RPG	0.79 (0.031)	57.15 (2.250)

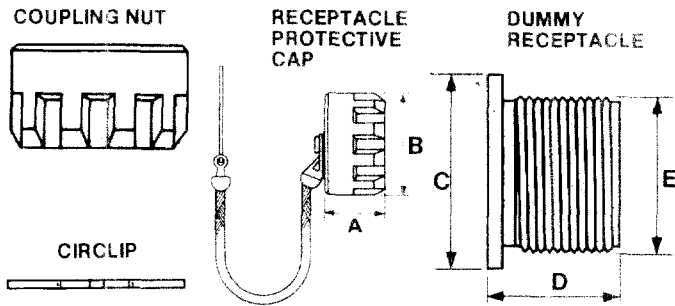
GASKETS

Sealing gaskets manufactured of neoprene are for use with square flanged receptacles for sealing between the shell and mounting panel.

To order high temperature gaskets in fluoro carbon material prefix the part number H.T. e.g. HT SB-10SL-RPG.

ELECTRICAL CONNECTORS

Spares and accessories



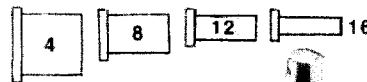
SHELL SIZE	COUPLING NUT PART No.	CIRCLIP PART No.	RECEPTACLE PROTECTIVE CAP PART No.	DUMMY RECEPTACLE PART No.
10SL	SB-10SL-CN	SB-10SL-C	SB-10SL-PC	SB-10SL-DR
12S	SB-12S-CN	SB-12S-C	SB-12S-PC	SB-12S-DR
14S	SB-14S-CN	SB-14S-C	SB-14S-PC	SB-14S-DR
16S	SB-16-CN	SB-16-C	SB-16-PC	SB-16-DR
16	SB-16-CN	SB-16-C	SB-16-PC	SB-16-DR
18	SB-18-CN	SB-18-C	SB-18-PC	SB-18-DR
20	SB-20-CN	SB-20-C	SB-20-PC	SB-20-DR
22	SB-22-CN	SB-22-C	SB-22-PC	SB-22-DR
24	SB-24-CN	SB-24-C	SB-24-PC	SB-24-DR
28	SB-28-CN	SB-28-C	SB-28-PC	SB-28-DR
32	SB-32-CN	SB-32-C	SB-32-PC	SB-32-DR

SHELL SIZE	DIMENSIONS				
	A MAX.	B DIA. MAX.	C SQ. MAX.	D MAX.	E
10SL	14.40 (0.567)	27.74 (0.974)	25.53 (1.005)	16.31 (0.642)	0.625x24 UNEF
12S	14.40 (0.567)	27.10 (1.067)	27.91 (1.099)	16.94 (0.667)	0.750x20 UNEF
14S	14.40 (0.567)	29.49 (1.161)	30.30 (1.193)	16.94 (0.667)	0.875x20 UNEF
16S	14.40 (0.567)	31.88 (1.255)	32.66 (1.286)	16.94 (0.667)	1.000x20 UNEF
16	21.54 (0.848)	31.88 (1.255)	32.66 (1.286)	24.18 (0.952)	1.000x20 UNEF
18	21.54 (0.848)	34.26 (1.349)	35.05 (1.380)	24.18 (0.952)	1.125x18 UNEF
20	21.54 (0.848)	37.44 (1.474)	38.23 (1.505)	24.18 (0.952)	1.250x18 UNEF
22	21.54 (0.848)	40.610 (1.599)	41.40 (1.630)	24.18 (0.952)	1.375x18 UNEF
24	21.54 (0.848)	43.79 (1.724)	44.58 (1.755)	24.18 (0.952)	1.500x18 UNEF
28	21.54 (0.848)	50.14 (1.974)	50.93 (2.005)	24.18 (0.952)	1.750x18 NS
32	21.54 (0.848)	56.49 (2.224)	57.23 (2.255)	24.18 (0.952)	2.000x18 NS

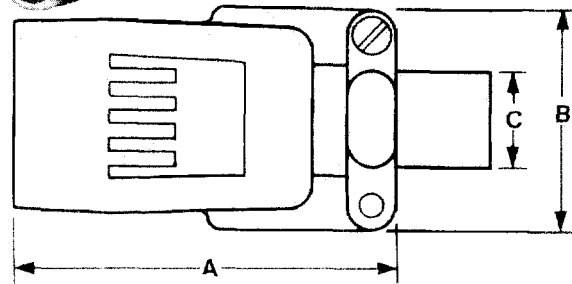
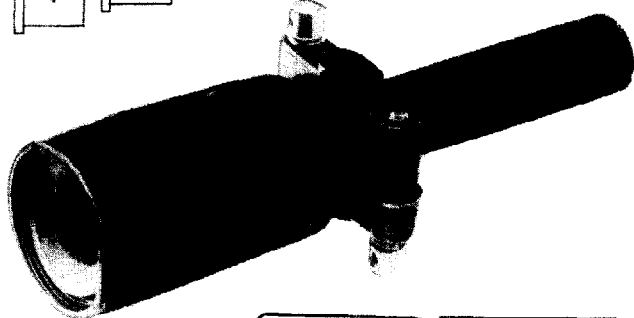
Multicore Cable Clamp

GROMMET BUNGS

To ensure adequate grommet sealing and prevent the ingress of moisture it is essential that on all unwired contacts, grommet bungs be used in the appropriate grommet sealing cavity.



CONTACT SIZE	GROMMET BUNG PART NO.
4	SB-4-B
8	SB-8-B
12	SB-12-B
16	SB-16-B



A nylon grommet follower and grommet are included in this accessory set.

SHELL SIZE	PART NO.	DIMENSIONS		
		A ± 0.13 (0.005)	B ± 0.13 (0.005)	C. Min. Int. Dia. Bushing
10SL	SB-10SI ---MCA	45.21 (1.780)	21.87 (0.861)	5.41 (0.213)
†12S	SB-12S---**MCA	45.21 (1.780)	21.87 (0.861)	5.41 (0.213)
14S	SB-14S---**MCA	45.21 (1.780)	25.93 (1.021)	7.75 (0.305)
16S	SB-16S---**MCA	45.21 (1.780)	28.58 (1.125)	10.92 (0.430)
16	SB-16---**MCA	45.21 (1.780)	28.58 (1.125)	10.92 (0.430)
18	SB-18---**MCA	49.99 (1.968)	31.75 (1.250)	14.10 (0.555)
20	SB-20---**MCA	49.99 (1.968)	36.58 (1.440)	14.10 (0.555)
22	SB-22---**MCA	49.99 (1.968)	36.58 (1.440)	14.10 (0.555)
†24	SB-24---**MCA	49.99 (1.968)	41.96 (1.652)	18.87 (0.743)
28	SB-28---**MCA	59.31 (2.335)	47.63 (1.875)	18.87 (0.743)
32	SB-32---**MCA	59.31 (2.335)	54.61 (2.150)	23.62 (0.930)

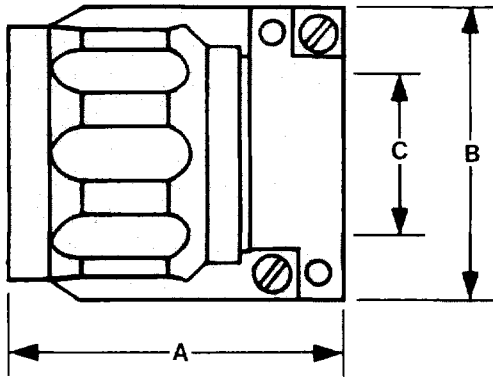
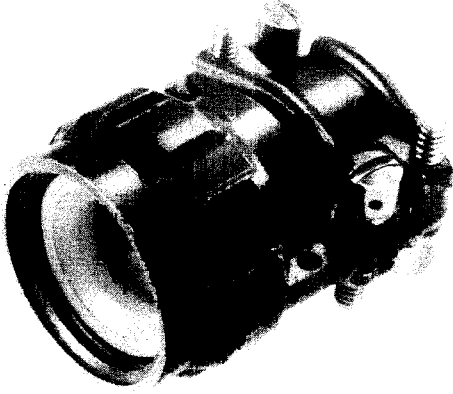
† For availability consult Factory.

Insert contact arrangement details as required.



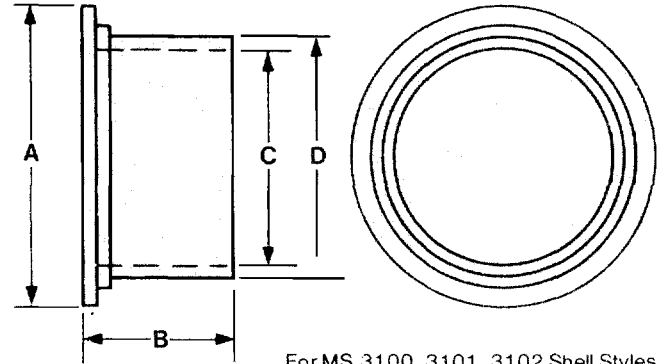
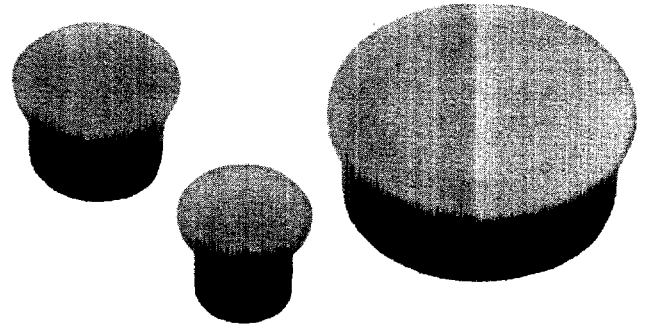
SB-MS

Grommet Cable Clamp



A nylon grommet follower and grommet are included in this accessory set.

Plastic Dust Cap — Fixed Receptacle



For MS 3100, 3101, 3102 Shell Styles.

SHELL SIZE	PART NO.	DIMENSIONS		
		A ± 0.13 (0.005)	B ± 0.13 (0.005)	C Dia. ± 0.13 (0.005)
10SL	SB-10SL—**—CCA	31.75 (1.250)	21.34 (0.840)	7.92 (0.312)
12S	SB-12S—**—CCA	31.75 (1.250)	21.34 (0.840)	7.92 (0.312)
14S	SB-14S—**—CCA	31.75 (1.250)	24.51 (0.965)	11.10 (0.437)
16S	SB-16S—**—CCA	31.75 (1.250)	28.58 (1.125)	14.27 (0.562)
16	SB-16—**—CCA	31.75 (1.250)	28.58 (1.125)	14.27 (0.562)
18	SB-18—**—CCA	44.45 (1.750)	31.75 (1.250)	15.88 (0.625)
20	SB-20—**—CCA	44.45 (1.750)	34.93 (1.375)	20.62 (0.812)
22	SB-22—**—CCA	44.45 (1.750)	38.10 (1.500)	20.62 (0.812)
24	SB-24—**—CCA	44.45 (1.750)	41.28 (1.625)	23.80 (0.937)
28	SB-28—**—CCA	44.45 (1.750)	47.63 (1.875)	25.40 (1.000)
32	SB-32—**—CCA	44.45 (1.750)	53.98 (2.125)	31.75 (1.250)

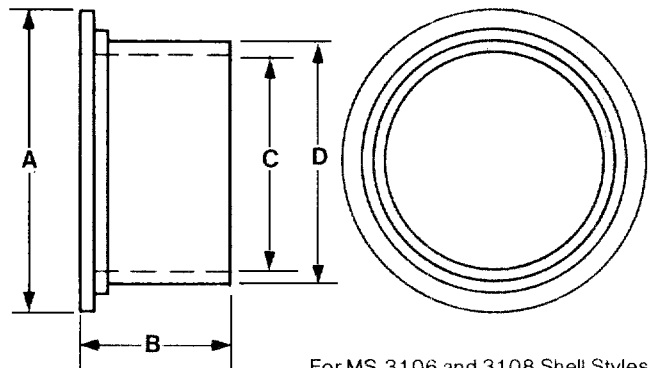
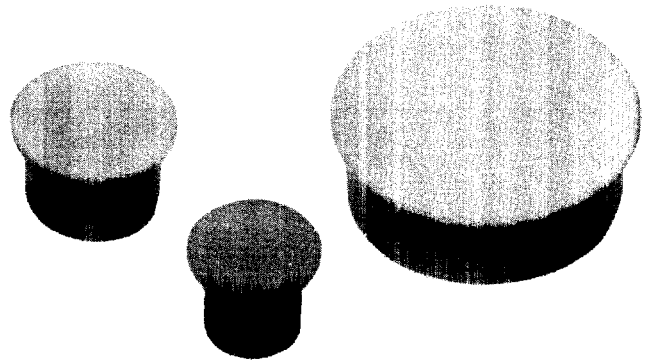
SHELL SIZE	PART NO.	DIMENSIONS			
		A MAX.	B MAX.	C ± 0.127 (±005)	D MAX.
10SL	SB-MSE-172/10SL	23.42 (0.922)	17.14 (0.675)	15.44 (0.608)	17.55 (0.691)
12S	SB-MSE-172/12S	26.59 (1.047)	17.14 (0.675)	18.62 (0.733)	20.73 (0.816)
14S	SB-MSE-172/14S	29.77 (1.172)	17.14 (0.675)	21.79 (0.858)	23.90 (0.941)
16S	SB-MSE-172/16	32.94 (1.297)	17.14 (0.675)	25.00 (0.984)	27.08 (1.066)
16	SB-MSE-172/16	32.94 (1.297)	17.14 (0.675)	25.00 (0.984)	27.08 (1.066)
18	SB-MSE-172/18	36.09 (1.421)	17.14 (0.675)	28.14 (1.108)	30.23 (1.190)
20	SB-MSE-172/20	39.27 (1.596)	17.14 (0.675)	31.32 (1.233)	33.40 (1.315)
22	SB-MSE-172/22	42.44 (1.671)	17.14 (0.675)	34.49 (1.358)	36.58 (1.440)
24	SB-MSE-172/24	45.62 (1.796)	17.14 (0.675)	37.67 (1.483)	39.75 (1.565)
28	SB-MSE-172/28	51.93 (2.045)	17.14 (0.675)	44.02 (1.733)	46.07 (1.814)
32	SB-MSE-172/32	58.29 (2.295)	17.14 (0.675)	50.37 (1.983)	52.42 (2.064)

* Refer to insert contact arrangement details as required.

PLASTIC DUST CAPS — Refer to the plastic dust cap assembly drawing for details. The dust cap is used to prevent dust from entering the receptacle. The dust cap is used to prevent dust from entering the receptacle.

ELECTRICAL CONNECTORS

Plastic Dust Cap — Free Plug



For MS 3106 and 3108 Shell Styles.

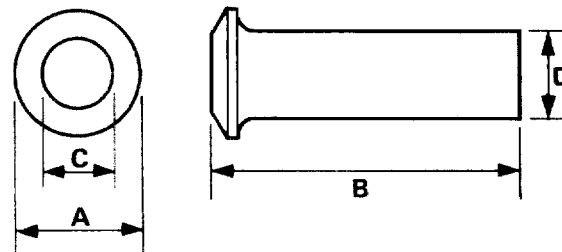
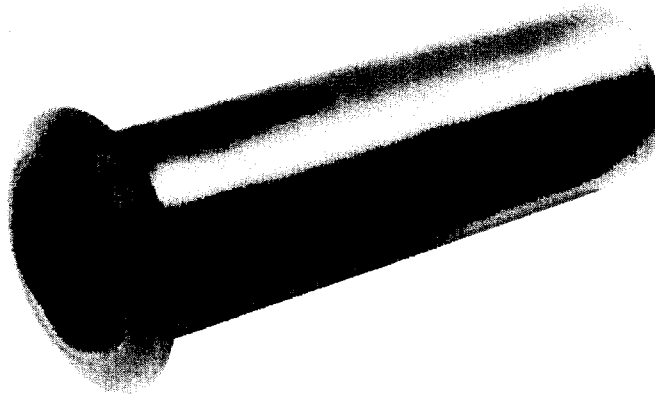
SHELL SIZE	PART NO.	DIMENSIONS			
		A MAX.	B MAX.	C ±0.127 (±0.005)	D MAX.
10SL	SB-MSE-173/10SL	20.93 (0.824)	17.14 (0.675)	13.39 (0.527)	15.29 (0.602)
12S	SB-MSE-173/12S	23.90 (0.941)	17.14 (0.675)	16.36 (0.644)	18.26 (0.719)
14S	SB-MSE-173/14S	27.08 (1.066)	17.14 (0.675)	19.53 (0.769)	21.44 (0.844)
16S	SB-MSE-173/16	30.25 (1.191)	17.14 (0.675)	22.71 (0.894)	24.61 (0.969)
16	SB-MSE-173/16	30.25 (1.191)	17.14 (0.675)	22.71 (0.894)	24.61 (0.969)
18	SB-MSE-173/18	33.30 (1.311)	17.14 (0.675)	25.78 (1.015)	27.68 (1.090)
20	SB-MSE-173/20	36.47 (1.436)	17.14 (0.675)	28.96 (1.140)	30.86 (1.215)
22	SB-MSE-173/22	39.65 (1.561)	17.14 (0.675)	32.13 (1.265)	34.03 (1.340)
24	SB-MSE-173/24	42.82 (1.686)	17.14 (0.675)	35.28 (1.389)	37.19 (1.464)
28	SB-MSE-173/28	48.97 (1.928)	17.14 (0.675)	41.66 (1.640)	43.56 (1.715)
32	SB-MSE-173/32	55.47 (2.184)	17.14 (0.675)	48.00 (1.890)	49.91 (1.965)

Telescopic Bushing

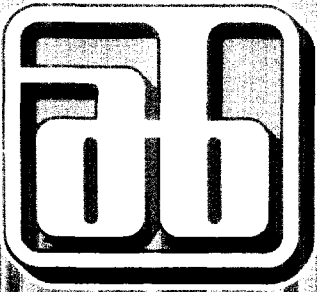
The bushing is used together with SE-MS 3100 3101 and 3106 E/MC shell styles. Taping or wrapping wires is eliminated since the bushing protects wires passing through the cable clamp.

Combinations of bushings may be used to decrease cable entry diameter to improve sealing.

Bushings are not available for H.T.M.S. connectors.



SHELL SIZE	PART NO.	DIMENSIONS			
		A ± 0.178 (0.007)	B ± 0.178 (0.007)	C ± 0.178 (0.007)	D ± 0.178 (0.007)
10SL	SB-MS 554/1	12.83 (0.505)	69.85 (2.750)	5.59 (0.220)	7.62 (0.300)
12S	SB-MS 554/1	12.83 (0.505)	69.85 (2.750)	5.59 (0.220)	7.62 (0.300)
14S	SB-MS 544/2	15.88 (0.625)	66.68 (2.625)	7.92 (0.312)	10.80 (0.425)
16S	SB-MS 544/3	19.05 (0.750)	63.50 (2.500)	11.10 (0.437)	13.97 (0.550)
16	SB-MS 554/3	19.05 (0.750)	63.50 (2.500)	11.10 (0.437)	13.97 (0.550)
18	SB-MS 544/4	22.23 (0.875)	60.33 (2.375)	14.27 (0.562)	15.67 (0.613)
20	SB-MS 554/5	25.40 (1.000)	57.15 (2.250)	15.88 (0.625)	18.75 (0.738)
22	SB-MS 554/6	28.58 (1.125)	57.15 (2.250)	15.88 (0.625)	18.75 (0.738)
†24	SB-MS 554/7	31.75 (1.250)	53.98 (2.125)	19.05 (0.750)	23.50 (0.925)
28	SB-MS 554/8	38.23 (1.505)	53.98 (2.125)	19.05 (0.750)	23.50 (0.925)
32	SB-MS 554/9	44.45 (1.750)	50.80 (2.000)	23.80 (0.937)	31.45 (1.238)



F.V. Cross Reference Numbers Notes

In accordance with the Military Vehicle Engineering Establishment and Ministry of Defence requirements all 5 MS connectors and accessories are coded with Fighting Vehicle (F.V.) service numbers.

To assist in the identification of F.V. numbers against AB part numbers the following cross reference is provided.

A complete FV/AB cross reference list is available on request.

F.V. SERVICE NO.	AB PART NO.	F.V. SERVICE NO.	AB PART NO.
FIXED CONNECTORS	SB-MS 3102E	FREE CONNECTORS	SB-MS 3106E
FV.585001 FV.585002	10SL.3P 10SL.4P	FV.585039 FV.585040	10SL.3S 10SL.4S
FV.585003 FV.585004 FV.585005 FV.585006 FV.585007 FV.585008 FV.585009 FV.585010 FV.585011 FV.585012	14S.2P 14S.2S 14S.5P 14S.5S 14S.7P 14S.7S 14S.9P 14S.9S 14S.4P 14S.4S	FV.585041 FV.585042 FV.585043 FV.585044 FV.585045 FV.585046 FV.585047 FV.585048 FV.585049 FV.585050	14S.2P 14S.2S 14S.5P 14S.5S 14S.7P 14S.7S 14S.9P 14S.9S 14S.4P 14S.4S
FV.585013 FV.585014	16S.1P 16S.1S	FV.585051 FV.585052	16S.1P 16S.1S
FV.585015 FV.585016 FV.585017 FV.585018	18.1P 18.1S 18.11P 18.11S	FV.585053 FV.585054 FV.585055 FV.585056	18.1P 18.1S 18.11P 18.11S
FV.585019 FV.585020 FV.585021 FV.585022 FV.585023 FV.585024 FV.585025 FV.585026	22.14P 22.14S 22.19P 22.19S 22.22P 22.22S 22.18P 22.18S	FV.585057 FV.585058 FV.585059 FV.585060 FV.585061 FV.585062 FV.585063 FV.585064	22.14P 22.14S 22.19P 22.19S 22.22P 22.22S 22.18P 22.18S
FV.585027 FV.585028	24.12P 24.12S	FV.585065 FV.585066	24.12P 24.12S
FV.585029 FV.585030 FV.585031 FV.585032 FV.585033 FV.585034 FV.585035 FV.585036	28.10P 28.10S 28.11P 28.11S 28.21P 28.21S 28.22P 28.22S	FV.585067 FV.585068 FV.585069 FV.585070 FV.585071 FV.585072 FV.585073 FV.585074	28.10P 28.10S 28.11P 28.11S 28.21P 28.21S 28.22P 28.22S
FV.585037 FV.585038	32.6P 32.6S	FV.585075 FV.585076	32.6P 32.6S

