Amphenol

ACAMS02 04 18

Amphenol

Introduction

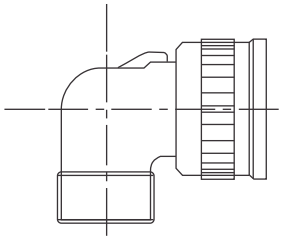
Amphenol MS series connectors are threaded coupling mechanism connectors designed to meet operating requirements of MIL-C-5015 specification. These connector are designed considering the various Industrial applications needs. But due to its features such as low cost environmental sealed connectors they are used in other applications such as Automotive, Mass transportation, Entertainment and Geophysical.

These connectors have various combination of power and signal contacts from 1-85 numbers, which allows current capacity from 13A to 150A per contact.

Class F

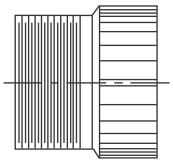
MS-3108
MS-4108

Class A=R



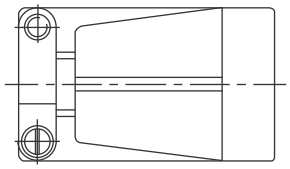
MS-3106
MS-4106

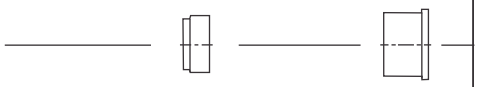
Class A



MS-3100
MS-4100

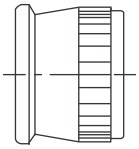
Class E and F





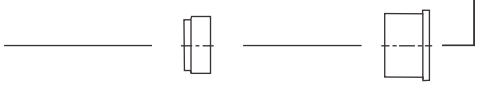
MS-3101
MS-4101

Class R



cable clamp

back shell



grommet sleeve

grommet

MS-3102
MS-4102

These electrical connectors are designated MS because the interchangeability and operating characteristics are determined by U.S. Military Specifications. These specifications are revised from time to time to incorporate performance requirements dictated by design advances and more stringent requirements of allied equipment. The several designations of MS and 97B connectors meet different requirements of MIL-C-5015. These designations and general descriptions are as follows :

Shell

Shell constructions include solid back shell (A) and environmental resistant (E, F & R). Environmental resistant connectors provide a moisture barrier and assure a positive seal. Shell styles consist of wall type receptacles (3100), cable receptacles (3101), box receptacles (3102), straight plugs (3106) and angle plugs (3108). Shell hardware is manufactured from aluminium alloy and cadmium plated with olive drab chromate finish. This finish has excellent conductivity; it is non-reflecting and corrosion resistant. Black anodised finish and cadmium-free zinc plating with olive drab chromate finish are also available. For details, contact factory.

Contacts

Pin and socket contacts are of brass and generally silver plated. Gold plating is also available. For details contact factory. These contacts are available for solder or crimp termination. Special arrangements of contacts for pre-mating and pre-earth are also available.

Inserts and grommet

Synthetic inserts and grommet manufactured according to MIL-R-3065, offer high dielectric strength and are resistant to oils, gasoline and low temperature. DAP is dimensionally stable, has high arc resistance and high insulation resistance under both humidity and thermal stress.

General description

Plugs are available in A, F and R types. Receptacles are available in A, E, F and R types.

A Solid back shell

Intended for general service usage to provide convenient means of connecting and disconnecting electrical circuits in industrial and military applications.

Environmental resisting

Intended for use where the connector will be subject to heavy condensation and rapid changes in temperature or pressure and/or where the connector is subjected to high vibratory conditions.

E Environmental resisting with grommet seal and strain relief backshell except for 3102 type.

F Environmental resisting with grommet seal, strain relief backshell and front gasket seal for plug type.

R Environmental resisting with grommet seal, shorter and lightweight.

Dielectric Strength

Service rating	Test Voltage Vac rms
Inst.	1000V
A	2000V
D	2800V
E	3500V
B	4500V
C	7000V

Contact rating

Contact Size	Rated Current	Contact Resistance miliohms
16	13A	3.46
12	23A	1.83
8	46A	0.52
4	80A	0.26
0	150A	0.14

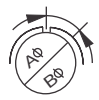
Service rating

Service rating	Operating Voltage DC at Sea Level	Operating Voltage AC at Sea Level
Inst.	250V	200V
A	700V	500V
D	1250V	900V
E	1750V	1250V
B	2450V	1750V
C	4200V	3000V

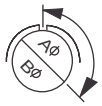
Insert Orientation

To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate insert rotations are available as indicated in the accompanying chart.

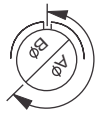
As shown in the daigram below, the front face of the pin insert is rotated within the shell in a clockwise direction from the normal shell key. The socket insert would be rotated counterclockwise the same number of degrees with respect to the normal shell key.



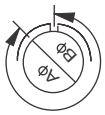
Position W



Position X



Position Y



Position Z

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

The following insert arrangements have the same alternate insert rotations for W, X, Y and Z which are as below :

Degree			
W	X	Y	Z
80	110	250	280

16-7	20-16	22-18	24-6	28-8	32-1
18-5	20-20	22-19	24-7	28-9	32-3
18-9	20-22	22-21	24-12	28-10	32-4
18-13	22-3	22-24	24-16	28-11	32-6
18-14	22-6	22-25	24-17	28-15	36-1
20-7	22-12	22-29	24-20	28-16	36-7
20-8	22-14	22-34	24-21	28-17	36-8
20-9	22-15	24-3	24-28	28-19	36-13
20-12	22-16	24-4	28-1	28-20	
20-14	22-17	24-5	28-4	28-21	

Insert Arrang-ement	Degrees			
	W	X	Y	Z
12S-3	70	145	215	290
14S-2	-	120	240	-
14S-5	-	110	-	-
14S-7	90	180	270	-
14S-9	70	145	215	290
16-9	35	110	250	325
16-10	90	180	270	-
16-11	35	110	250	325
16-13	35	110	250	325
16S-1	80	-	-	280
16S-4	35	110	250	325
16S-5	70	145	215	290
16S-6	90	180	270	-
16S-8	-	170	265	-
18-1	70	145	215	290
18-3	35	110	250	325
18-4	35	110	250	325
18-8	70	-	-	290
18-10	-	120	240	-
18-11	-	170	265	-
18-12	80	-	-	280
18-15	-	120	240	-
18-20	90	180	270	-
18-19	-	120	240	-
18-22	70	145	215	290
18-29	90	180	270	-
20-3	70	145	215	290
20-4	45	110	250	-

Insert Arrang-ement	Degrees			
	W	X	Y	Z
20-6	70	145	215	290
20-15	80	-	-	280
20-17	90	180	270	-
20-18	35	110	250	325
20-19	90	180	270	-
20-21	35	110	250	325
20-23	35	110	250	325
20-24	35	110	250	325
20-27	35	110	250	325
20-29	80	-	-	280
22-1	35	110	250	325
22-2	70	145	215	290
22-4	35	110	250	325
22-5	35	110	250	325
22-8	35	110	250	325
22-9	70	145	215	290
22-10	35	110	250	325
22-11	35	110	250	325
22-13	35	110	250	325
22-20	35	110	250	325
22-22	-	110	250	-
22-23	35	-	250	-
22-27	80	-	250	280
22-28	80	-	-	280
24-2	80	-	-	280
24-9	35	110	250	325
24-10	80	-	-	280
24-11	35	110	250	325

Insert Arrang-ement	Degrees			
	W	X	Y	Z
24-22	45	110	250	-
24-27	80	-	-	280
28-2	35	110	250	325
28-3	70	145	215	290
28-5	35	110	250	325
28-6	70	145	215	290
28-7	35	110	250	325
28-12	90	180	270	-
28-18	70	145	215	290
28-22	70	145	215	290
32-7	80	125	235	280
32-8	80	125	235	280
36-3	70	145	215	290
36-4	70	145	215	290
36-5	-	120	240	-
36-6	35	110	250	325
36-9	80	125	235	280
36-10	80	125	235	280
36-14	90	180	270	-
36-15	60	125	245	305
40-56	72	144	216	288
36-52	72	216	235	258
32-5	35	110	250	325
32-17	45	110	250	-
40-56	72	144	216	288

Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16
10S-2	A	1					1
10SL-3	A	3					3
10SL-4	A	2					2
12S-3	A	2					2
12S-4	D	1					1
12-5	D	1				1	
14S-1	A	3					3
14S-2	Inst	4					4
14S-4	D	1					1
14S-5	Inst	5					5
14S-6	Inst	6					6
14S-7	A	3					3
14S-9	A	2					2
14S-10	Inst	4					4
14S-12	A	3					3
14-3	A	1			1		
14S-A7	A	19	19				
16S-1	A	7					7
16S-3	B	1					1
16S-4	D	2					2
16S-5	A	3					3
16S-6	A	3					3
16S-8	A	5					5
16-2	E	1				1	
16-7	A	3			1		2
16-9	A	4				2	2
16-10	A	3				3	
16-11	A	2				2	
16-12	A	1		1			
16-13	A	2				2	
18-1	A/Inst	10					10
18-3	D	2				2	
18-4	D	4					4
18-5	D	3				2	1
18-06		6				4	2
18-6	D	1		1			
18-7	B	1			1		
18-8	A	8				1	7
18-9	Inst	7				2	5
18-10	A	4				4	
18-11	A	5				5	
18-12	A	6					6
18-13	A	4			1	3	
18-14	A	2		1			1
18-15	A	4				4	
18-16	C	1				1	
18-17	Inst	7				2	5
18-19	A	10					10
18-20	A	5					5
18-22	D	3					3
18-24	A/Inst	10					10
18-29	A	5					5
18-30	A	5					5
18-31	A	5					5
20-2	D	1	1				
20-3	D	3				3	
20-4	D	4				4	
20-6	D	3					3
20-7	D/A	8					8

Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16
20-8	Inst	6			2		4
20-9	D/A	8				1	7
20-11	Inst	13					13
20-12	A	2		1			1
20-14	A	5			2	3	
20-15	A	7				7	
20-16	A	9				2	7
20-17	A	6				5	1
20-18	A	9				3	6
20-19	A	3			3		
20-20	A	4		1		3	
20-21	A	9				1	8
20-22	A	6			3		3
20-23	A	2			2		
20-24	A	4			2		2
20-25	Inst	13					13
20-27	A	14					14
20-29	A	17					17
20-30	Inst	13					13
20-33	A	11					11
20-A48	A	19					
22-1	D	2			2		
22-2	D	3			3		
22-4	A	4			2	2	
22-5	D	6				2	4
22-6	D	3			2		1
22-7	E	1	1				
22-8	E	2				2	
22-9	E	3				3	
22-10	E	4					4
22-11	B	2					2
22-12	D	5			2		3
22-13	D/A	5				4	1
22-14	A	19					19
22-15	E/A	6				5	1
22-16	A	9				3	6
22-17	D/A	9				1	8
22-18	D/A	8					8
22-19	A	14					14
22-20	A	9					9
22-21	A	3	1				2
22-22	A	4			4		
22-23	D/A	8				8	
22-24	D/A	6				2	4
22-27	D/A	9			1		8
22-28	A	7				7	
22-34	D	5				3	2
24-2	D	7				7	
24-3	D	7				2	5
24-4	D	4	1				3
24-5	A	16					16
24-6	D/A	8				8	
24-06	A	6		4			2
24-7	A	16				2	14
24-9	A	2		2			
24-10	A	7			7		

Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16
24-11	A	9			2	3	
24-12	A	5		2		3	
24-16	D/A	7			1	3	3
24-17	D	5				2	3
24-20	D	11				2	9
24-21	D	10			1		9
24-22	D	4			4		
24-27	E	7					7
24-28	Inst	24					24
28-1	D/A	9			3	6	
28-2	D	14				2	12
28-3	E	3			3		
28-4	E/D	9				2	7
28-5	D	5		2		1	2
28-6	D	3		3			
28-7	D	2		2			
28-8	E/D/A	12				2	10
28-9	D	12				6	6
28-09	A	9		4			5
28-10	D/A	7		2	2	3	
28-11	A	22				4	18
28-12	A	26					26
28-13	A	26					26
28-15	A	35					35
28-16	A	20					20
28-17	B/D/A	15					15
28-18	C/D/A/Inst	12					12
28-19	B/D/A	10				4	6
28-20	A	14				10	4
28-21	A	37					37
28-22	D	6		3			3
28-51	D	12					12
32-1	D/A	5	2			3	
32-3	D	9	1	2		2	4
32-4	D/A/D	14				2	12
32-5	D	2	2				
32-6	A	23		2	3	2	16
32-7	INST,A	35				7	28
32-8	A	30				6	24
32B-13	D	13			13		
32-17	D	4		4			
32-22	A	54					54
36-1	D	22				4	18
36-3	D	6	3			3	
36-4	D/A	3	3				
36-5	A	4	4				
36-6	A	6	2	4			
36-7	A	47				7	40
36-8	A	47				1	46
36-9	A	31		1	2	14	14
36-10	A	48					48
36-11	A	48					48
36-12	A	48					48
36-13	E/A	17				2	15
36-14	D	16			5	5	6
36-15	D/A	35					35
36-16	A	47				7	40
36-17	A	47				7	40
36-18	A	31		1	2	14	14
36-20	A	34			2	2	30
36-46	A	27					27
36-52	A	52					52
40-56	A	85					85
40-63	A	61					

Front face of pin insert or rear of socket insert illustrated

		Front of socket insert	Front of socket insert			
Insert arrangement	10S-2	10SL-3	10SL-4	12S-3	12S-4	12-5
Service rating	A	A	A	A	A	D
Number of contacts	1	3	2	2	1	1
Contact size	16	16	16	16	16	12
Premating contact	–	C	–	–	–	–

Insert arrangement	14S-A7	14S-1	14S-2	14S-4	14S-5	14S-6
Service rating	A	A	Inst.	D	Inst.	Inst.
Number of contacts	7	3	4	1	5	6
Contact size	16	16	16	16	16	16
Premating contact	–	–	–	–	–	–

			100° rotation of 14S-2	100° rotation of 14S-7		
Insert arrangement	14S-7	14S-9	*14S-10	*14S-12	*14-3	16S-1
Service rating	A	A	Inst.	A	A	A
Number of contacts	3	2	4	3	1	7
Contact size	16	16	16	16	8	16
Premating contact	B	–	–	B	–	G

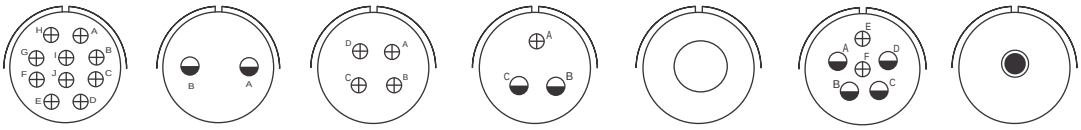
Insert arrangement	*16S-3	16S-4	16S-5	16S-6	16S-8	*16-2
Service rating	B	D	A	A	A	E
Number of contacts	1	2	3	3	5	1
Contact size	16	16	16	16	16	12
Premating contact	–	–	A	B	E	–

*Not tooled up, can be tooled up on request. Contact Factory.

Insert Arrangements

Front face of pin insert or rear of socket insert illustrated

Insert arrangement	16-7	16-9	16-10	16-11	16-12	*16-13
Service rating	A	A	A	A	A	A
Number of contacts	1 2 8 16	2 2 12 16	3 12	2 12	1 4	2 12
Contact size	C	–	B	–	–	–
Premating contact						



Insert arrangement	18-1	18-3	18-4	18-5	*18-6	18-06	18-7
Service rating	B,C,F,G=A;Bal.=Inst.	D	D	D	D	A	B
Number of contacts	10	2	4	2 1 12 16	1 4	2 4 16 12	1 8
Contact size	16	12	16	C	–	–	–
Premating contact	–	–	A				

Insert arrangement	18-8	18-9	18-10	18-11	18-12	*18-13
Service rating	A	Inst.	A	A	A	A
Number of contacts	1 7 12 16	2 5 12 16	4 12	5 12	6 16	1 3 8 12
Contact size	H	–	D	E	C or D	A
Premating contact						

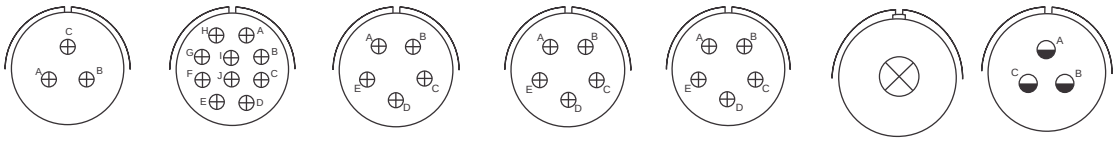
100° rotation of 18-9

Insert arrangement	*18-14	18-15	18-16	*18-17	18-19	18-20
Service rating	A	A	C	Inst.	A	A
Number of contacts	1 1 4 16	4 12	1 12	2 5 12 16	10 16	5 16
Contact size	–	–	–	–	K	D
Premating contact						

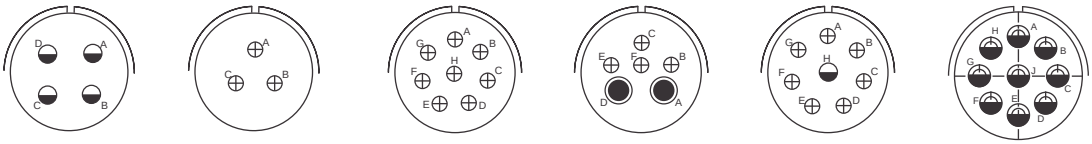
*Not tooled up, can be tooled up on request. Contact Factory.

Insert Arrangements

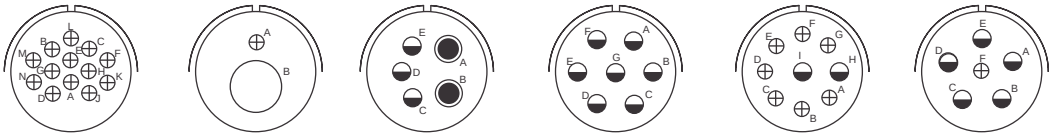
Front face of pin insert or rear of socket insert illustrated



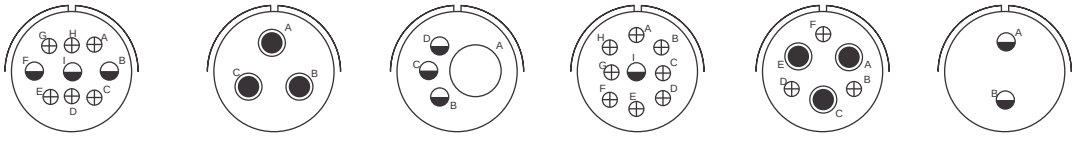
Insert arrangement	18-22	250° rotation of 18-1 *18-24	*18-29	110° rotation of 18-20 *18-30	260° rotation of 18-20 *18-31	20-2	20-3
Service rating	D	B,C,F,G=A;Bal.=Inst.	A	A	A	D	D
Number of contacts	3	10	5	5	5	1	4
Contact size	16	16	16	16	16	0	12
Premating contact	C	–	D	C	C	-	A



Insert arrangement	20-4	*20-6	20-7	20-8	20-9	20A - 9
Service rating	D	D	A,B,H,G=D;C,D,E,F=A	Inst.	H=D;Bal.=A	A
Number of contacts	4	3	8	2 4	1 7	9
Contact size	12	16	16	8 16	12 16	12
Premating contact	C or D	A	A	–	H	–



Insert arrangement	20-11	*20-12	20-14	20-15	20-16	20-17
Service rating	Inst.	A	A	A	A	A
Number of contacts	13	1 1	2 3	7	2 7	5 1
Contact size	16	4 16	8 12	12	12 16	12 16
Premating contact	–	–	D	A or D	E	E or F



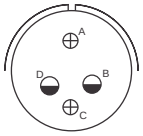
Insert arrangement	20-18	20-19	20-20	*20-21	20-22	20-23
Service rating	A	A	A	A	A	A
Number of contacts	3 6	3	1 3	1 8	3 3	2
Contact size	12 16	8	4 12	12 16	8 16	8
Premating contact	D	C	A	1	–	–

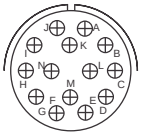
*Not tooled up, can be tooled up on request. Contact Factory.

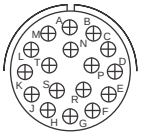
Insert Arrangements

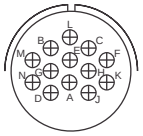
Front face of pin insert or rear of socket insert illustrated

CONTACT LEGEND	16	12	8	4	0

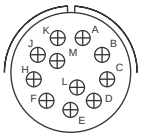


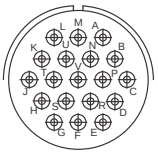


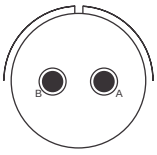


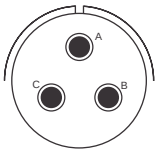


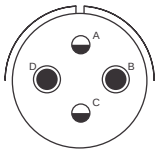
		100° rotation of 20-11			250° rotation of 20-11
Insert arrangement	20-24	*20-25	20-27	20-29	*20-30
Service rating	A	Inst.	A	A	Inst.
Number of contacts	2 2	13	14	17	13
Contact size	8 16	16	16	16	16
Premating contact	–	–	M	G	–



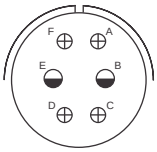


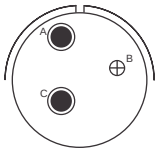


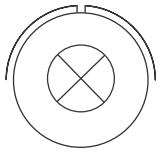


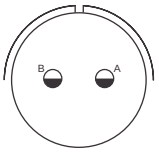


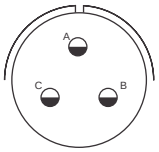
Insert arrangement	20-33	20 A - 48	22-1	22-2	*22-4
Service rating	A	A	D	D	A
Number of contacts	11	19	2	3	2 2
Contact size	16	16	8	8	8 12
Premating contact	E	–	–	A	C



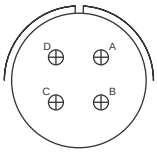


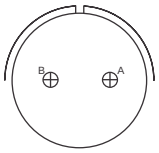


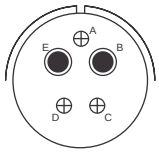


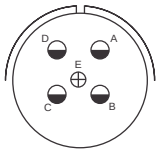


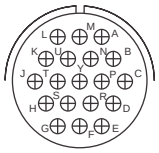
Insert arrangement	22-5	*22-6	22-7	*22-8	22-9
Service rating	D	D	E	E	E
Number of contacts	2 4	2 1	1	2	3
Contact size	12 16	8 16	0	12	12
Premating contact	D	B	–	–	A







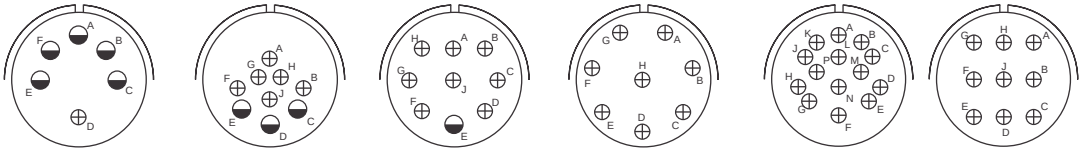




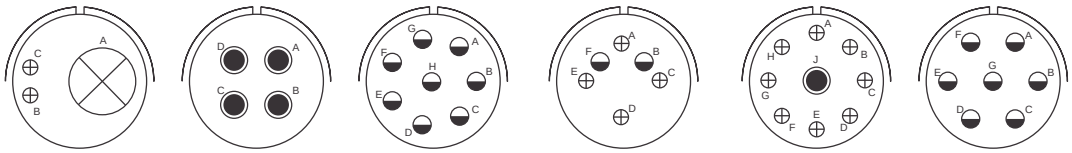
Insert arrangement	22-10	22-11	22-12	22-13	22-14
Service rating	E	B	D	E=D;A,B,C,D=A	A
Number of contacts	4	2	2 3	4 1	19
Contact size	16	16	8 16	12 16	16
Premating contact	C	–	A	E	A

*Not tooled up, can be tooled up on request. Contact Factory.

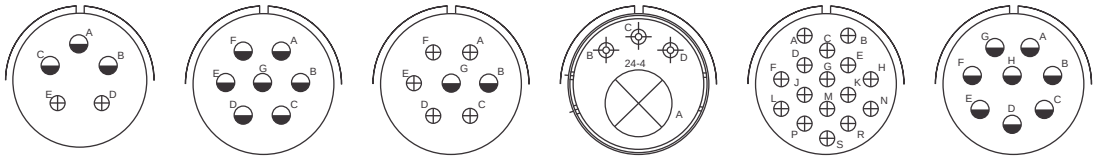
Front face of pin insert or rear of socket insert illustrated



Insert arrangement	22-15	22-16	*22-17	22-18	22-19	22-20
Service rating	D=E;A,B,C,E,F=A	A	A=D;Bal.=A	A,B,F,G,H=D;C,D,E=A	A	A
Number of contacts	5 1	3 6	1 8	8	14	9
Contact size	12 16	12 16	12 16	16	16	16
Premating contact	D	D	E	D	F	D



Insert arrangement	*22-21	22-22	22-23	22-24	22-27	22-28
Service rating	A	A	H=D;Bal.=A	C,D,E=D;A,B,F=A	J=D;Bal.=A	A
Number of contacts	1 2	4	8	2 4	1 8	7
Contact size	0 16	8	12	12 16	8 16	12
Premating contact	–	C or D	A or D	D	–	G

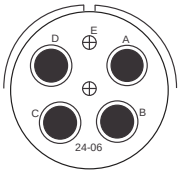


Insert arrangement	*22-34	24-2	*24-3	24-4	24-5	24-6
Service rating	D	D	D	A	A	A,G,H=D;Bal.=A
Number of contacts	3 2	7	2 5	3 1	16	8
Contact size	12 16	12	12 16	16 0	16	12
Premating contact	E	A	D	-	S	D

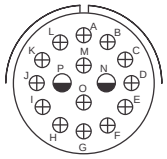
*Not tooled up, can be tooled up on request. Contact Factory.

Front face of pin insert or rear of socket insert illustrated

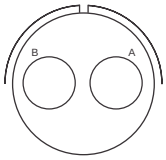
CONTACT LEGEND	⊕ 16	◒ 12	● 8	○ 4	⊗ 0



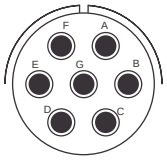
Insert arrangement	24-06
Service rating	A
Number of contacts	2 4
Contact size	16 8
Premating contact	–



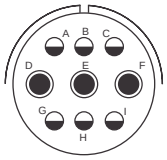
Insert arrangement	24-7
Service rating	A
Number of contacts	2 14
Contact size	12 16
Premating contact	G



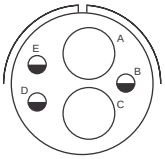
Insert arrangement	24-9
Service rating	A
Number of contacts	2
Contact size	4
Premating contact	–



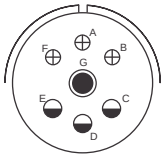
Insert arrangement	24-10
Service rating	A
Number of contacts	7
Contact size	8
Premating contact	D or E or G



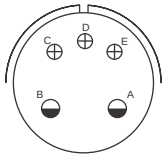
Insert arrangement	24-11
Service rating	A
Number of contacts	3 6
Contact size	8 12
Premating contact	E



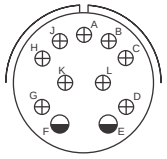
Insert arrangement	24-12
Service rating	A
Number of contacts	2 3
Contact size	4 12
Premating contact	–



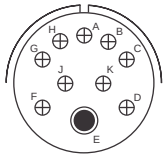
Insert arrangement	*24-16
Service rating	A,B,F,G=D;C,D,E=A
Number of contacts	1 3 3
Contact size	8 12 16
Premating contact	G



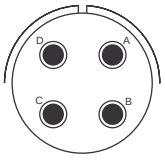
Insert arrangement	*24-17
Service rating	D
Number of contacts	2 3
Contact size	12 16
Premating contact	D



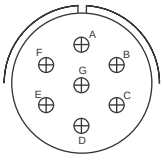
Insert arrangement	24-20
Service rating	D
Number of contacts	2 9
Contact size	12 16
Premating contact	A



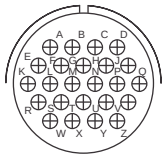
Insert arrangement	24-21
Service rating	D
Number of contacts	1 9
Contact size	8 16
Premating contact	E



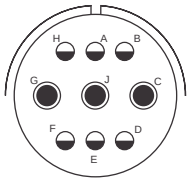
Insert arrangement	24-22
Service rating	D
Number of contacts	4
Contact size	8
Premating contact	D



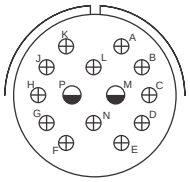
Insert arrangement	*24-27
Service rating	E
Number of contacts	7
Contact size	16
Premating contact	D



Insert arrangement	24-28
Service rating	Inst.
Number of contacts	24
Contact size	16
Premating contact	–



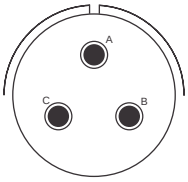
Insert arrangement	28-1
Service rating	A,J,E=D;Bal.=A
Number of contacts	3 6
Contact size	8 12
Premating contact	E

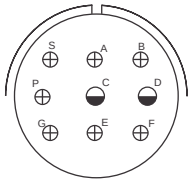


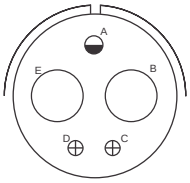
Insert arrangement	*28-2
Service rating	D
Number of contacts	2 12
Contact size	12 16
Premating contact	E

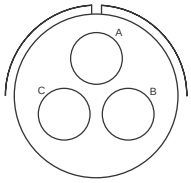
*Not tooled up, can be tooled up on request. Contact Factory.

Front face of pin insert or rear of socket insert illustrated

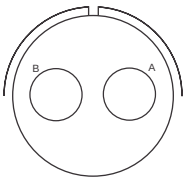


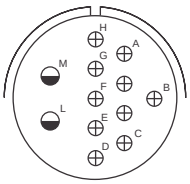


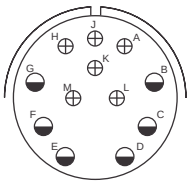


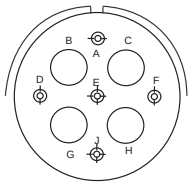


Insert arrangement	28-3	*28-4	*28-5	28-6
Service rating	E	G,S,P=E;Bal.=D	D	D
Number of contacts	3	2 7	2 1 2	3
Contact size	8	12 16	4 12 16	4
Premating contact	A	E	–	A

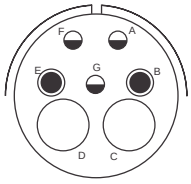


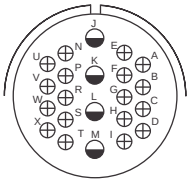


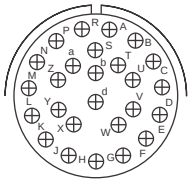


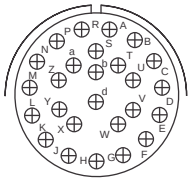


Insert arrangement	28-7	28-8	28-9	28-09
Service rating	D	L,M=E;B=D;Bal.=A	D	A
Number of contacts	2	2 10	6 6	5 4
Contact size	4	12 16	12 16	16 4
Premating contact	–	D	E	–









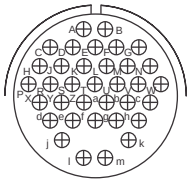
100° rotation of 28-12

Insert arrangement	28-10	28-11	28-12	*28-13
Service rating	G=D;Bal.=A	A	A	A
Number of contacts	2 2 3	4 18	26	26
Contact size	4 8 12	12 16	16	16
Premating contact	G	M	H	H

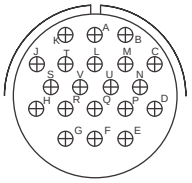
*Not tooled up, can be tooled up on request. Contact Factory.

Front face of pin insert or rear of socket insert illustrated

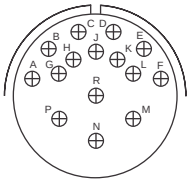
CONTACT LEGEND	⊕	◒	●	○	⊗
	16	12	8	4	0



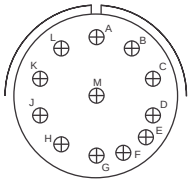
Insert arrangement	28-15
Service rating	A
Number of contacts	35
Contact size	16
Premating contact	M



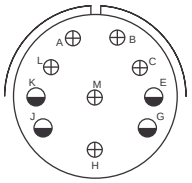
Insert arrangement	28-16
Service rating	A
Number of contacts	20
Contact size	16
Premating contact	F



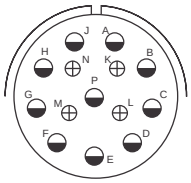
Insert arrangement	*28-17
Service rating	R=B;M,N,P=D;A to L=A
Number of contacts	15
Contact size	16
Premating contact	N



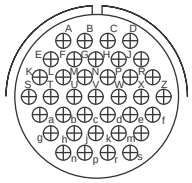
Insert arrangement	28-18
Service rating	M=C;G,H,J,K,L=D;A,B=ABal.=Inst.
Number of contacts	12
Contact size	16
Premating contact	–



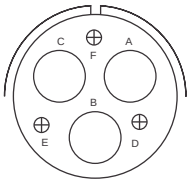
Insert arrangement	28-19
Service rating	H,M=B;A,B=D;Bal.=A
Number of contacts	4 6
Contact size	12 16
Premating contact	H



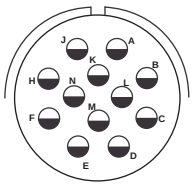
Insert arrangement	28-20
Service rating	A
Number of contacts	10 4
Contact size	12 16
Premating contact	E



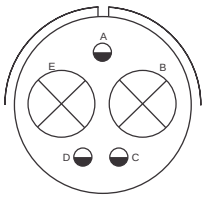
Insert arrangement	28-21
Service rating	A
Number of contacts	37
Contact size	16
Premating contact	A



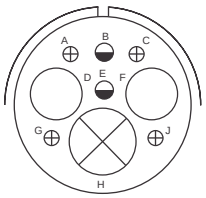
Insert arrangement	28-22
Service rating	D
Number of contacts	3 3
Contact size	4 16
Premating contact	–



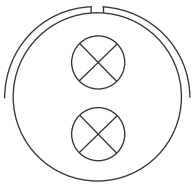
Insert arrangement	28-51
Service rating	D
Number of contacts	12
Contact size	12
Premating contact	



Insert arrangement	32-1
Service rating	A=E;B,C,D,E=A
Number of contacts	2 3
Contact size	0 12
Premating contact	–



Insert arrangement	*32-3
Service rating	D
Number of contacts	1 2 2 4
Contact size	0 4 12 16
Premating contact	–

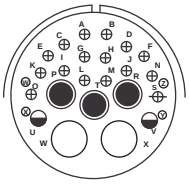


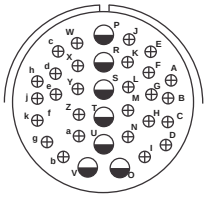
Insert arrangement	32-5
Service rating	D
Number of contacts	2
Contact size	0
Premating contact	

*Not tooled up, can be tooled up on request. Contact Factory.

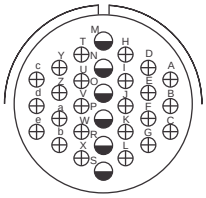
Front face of pin insert or rear of socket insert illustrated

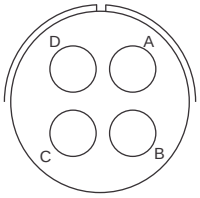
CONTACT LEGEND	⊕ 16	◒ 12	● 8	○ 4	⊗ 0

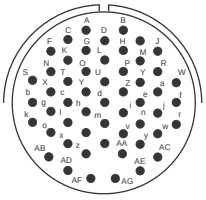




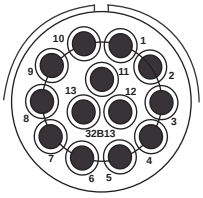
Insert arrangement	32-6	32-7
Service rating	A	INST , A
Number of contacts	16 2 3 2	4 24 7
Contact size	16 12 8 4	16 12
Premating contact	–	–

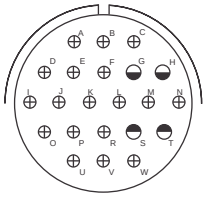


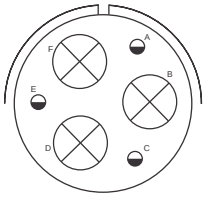




Insert arrangement	32-8	32-17	32-22
Service rating	A	D	A
Number of contacts	6 24	4	54
Contact size	12 16	4	16
Premating contact	S	–	–





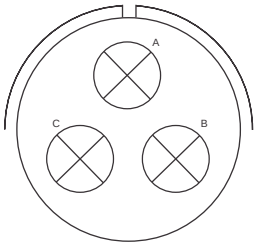


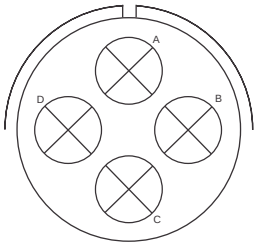
Insert arrangement	32B-13	*36-1	36-3
Service rating	D	D	D
Number of contacts	13	4 18	3 3
Contact size	8	12 16	0 12
Premating contact	–	–	–

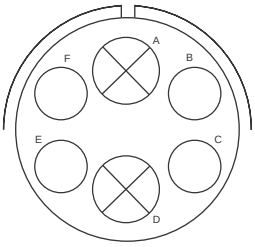
*Not tooled up, can be tooled up on request. Contact Factory.

Front face of pin insert or rear of socket insert illustrated

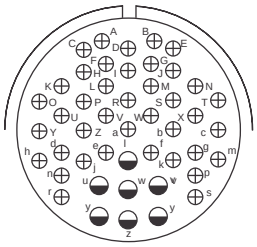
CONTACT LEGEND	⊕	◒	◉	○	⊗
	16	12	8	4	0

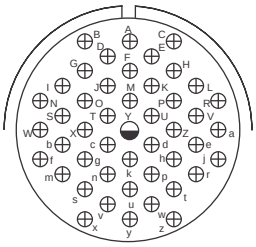


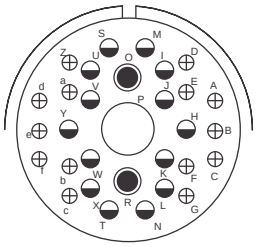




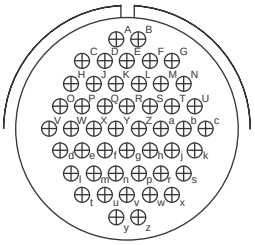
Insert arrangement	36-4	36-5	36-6
Service rating	A=D;B,C=A	A	A
Number of contacts	3	4	2 4
Contact size	0	0	0 4
Premating contact	–	–	–

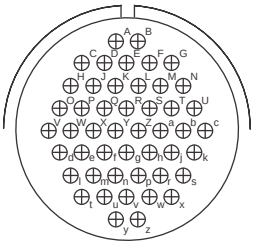


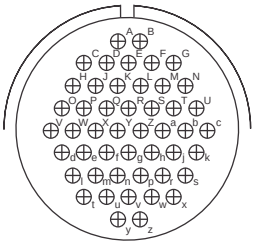




Insert arrangement	*36-7	*36-8	*36-9
Service rating	A	A	A
Number of contacts	7 40	1 46	1 2 14 14
Contact size	12 16	12 16	4 8 12 16
Premating contact	x or y	Y	P





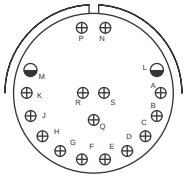


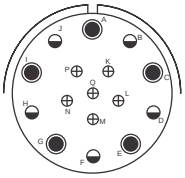
		100°rotation of 36-10	250°rotation of 36-10
Insert arrangement	36-10	*36-11	*36-12
Service rating	A	A	A
Number of contacts	48	48	48
Contact size	16	16	16
Premating contact	A	A	A

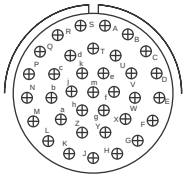
*Not tooled up, can be tooled up on request. Contact Factory.

Front face of pin insert or rear of socket insert illustrated

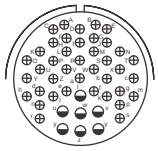
CONTACT LEGEND	⊕	◒	●	○	⊗
	16	12	8	4	0

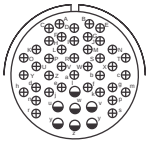


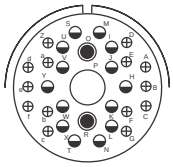




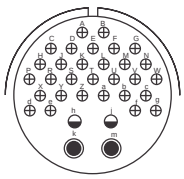
Insert arrangement	*36-13	*36-14	*36-15
Service rating	N,P,Q=E;Bal.=A	D	M=D;Bal=A
Number of contacts	2 15	5 5 6	35
Contact size	12 16	8 12 16	16
Premating contact	–	–	J

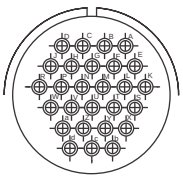


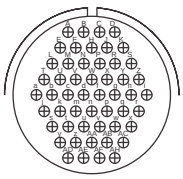


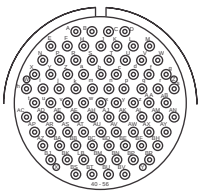


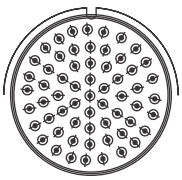
	100°rotation of 36-7	250°rotation of 36-7	100°rotation of 36-9
Insert arrangement	*36-16	*36-17	*36-18
Service rating	A	A	A
Number of contacts	7 40	7 40	1 2 14 16
Contact size	12 16	12 16	4 8 12 16
Premating contact	x or y	x or y	–







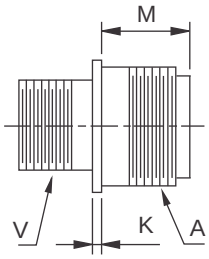


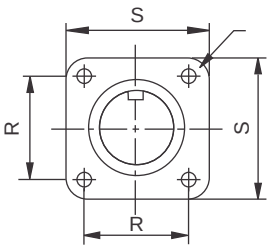


Insert arrangement	*36-20	36-46	36-52	40-56	40-63
Service rating	A	A	A	A	A
Number of contacts	2 2 30	27	52	85	61
Contact size	8 12 16	16	16	16	16
Premating contact	k	–	–	–	–

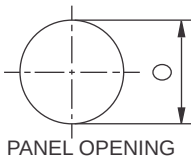
*Not tooled up, can be tooled up on request. Contact Factory.

Wall Mounting Receptacle
MS3100/MS4100





MOUNTING HOLES
4.39 DIA. FOR SIZE 32 AND 36
3.73 DIA. FOR SIZE 24 AND 28
3.05 DIA. FOR ALL OTHER SIZES
4.55 DIA. FOR 40 SIZE

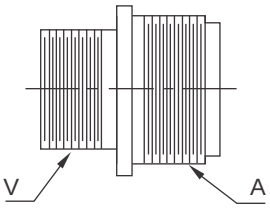


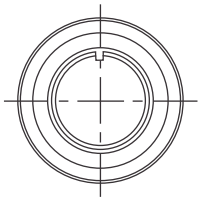
PANEL OPENING

All dimensions are in mm

Connector Size	A Thread in inches	K	M	O	R	S	V Thread in inches
10SL	5/8-24 UNEF	1.98	14.29	20.62	18.25	25.68	5/8-24 NEF
12S	3/4-20 UNEF	1.98	14.29	20.62	20.64	27.76	11/16-24NEF
12	3/4-20 UNEF	1.98	19.05	20.62	20.64	27.76	11/16-24NEF
14S	7/8-20 UNEF	1.98	14.29	23.82	23.02	30.43	3/4-20 UNEF
14	7/8-20 UNEF	1.98	19.05	23.82	23.02	30.43	3/4-20 UNEF
16S	1-20 UNEF	1.98	14.29	26.97	24.61	32.82	7/8-20 UNEF
16	1-20 UNEF	3.17	19.05	26.97	24.61	32.82	7/8-20 UNEF
18	1 1/8-18 UNEF	3.17	19.05	30.17	26.99	35.07	1-20 UNEF
20	1 1/4-18 UNEF	3.17	19.05	33.32	29.37	38.38	1 1/8-18 NS
22	1 3/8-18 UNEF	3.17	19.05	36.52	31.75	41.55	1 1/4-18 NEF
24	1 1/2-18 UNEF	3.17	20.64	39.67	34.92	44.70	1 3/8-18 NEF
28	1 3/4-18 UNS	3.17	20.64	46.02	39.69	51.08	1 5/8-18 NEF
32	2.00-18 UNS	3.17	22.25	53.0	44.45	57.15	1 7/8-16UN
36	2 1/4-16 UN	3.17	22.22	58.72	49.21	63.78	2 1/16-16UN
40	2 1/2-16 UN	3.45	22.22	62.00	55.58	69.85	2 5/16-16 UN

Cable Connecting Receptacle
MS3101/MS4101

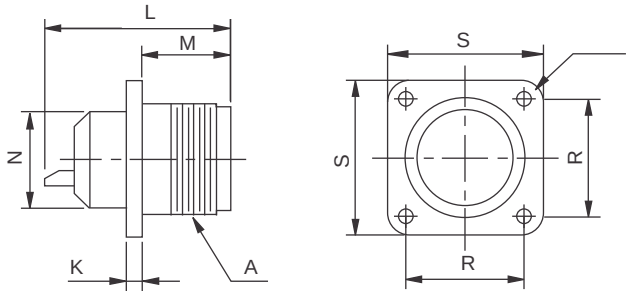




All dimensions are in mm

Connector Size	A Thread in inches	V Thread in inches
10SL	5/8-24 UNEF	5/8-24 NEF
12S	3/4-20 UNEF	11/16-24 NEF
12	3/4-20 UNEF	11/16-24 NEF
14S	7/8-20 UNEF	3/4-20 UNEF
14	7/8-20 UNEF	3/4-20 UNEF
16S	1-20 UNEF	7/8-20 UNEF
16	1-20 UNEF	7/8-20 UNEF
18	1 1/8-18 UNEF	1-20 UNEF
20	1 1/4-18 UNEF	1 1/8-18 NS
22	1 3/8-18 UNEF	1 1/4-18 NEF
24	1 1/2-18 UNEF	1 3/8-18 NEF
28	1 3/4-18 UNS	1 5/8-18 NEF
32	2-18 UNS	1 7/8-16UN
36	2 1/4-16 UN	2 1/16-16UN
40	2 1/2-16 UN	2 5/16-16 UN

Box Mounting Receptacle
MS3102/MS4102

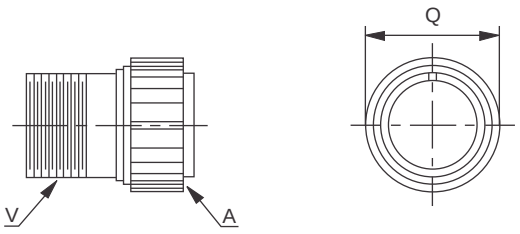


MOUNTING HOLES
4.39 DIA. FOR SIZE 32 AND 36
3.73 DIA. FOR SIZE 24 AND 28
3.05 DIA. FOR ALL OTHER SIZES
4.55 FOR 40 SIZE

All dimensions are in mm

Connector Size	A Thread in inches	K	L	M	N	R	S
10SL	5/8-24 UNEF	1.98	30.18	13.89	15.87	18.25	25.68
12S	3/4-20 UNEF	1.98	30.18	14.28	17.46	20.64	28.04
12	3/4-20 UNEF	1.98	41.28	19.05	17.46	20.64	28.04
14S	7/8-20 UNEF	1.98	30.18	14.28	19.05	23.02	30.43
14	7/8-20 UNEF	1.98	41.28	19.05	19.05	23.02	30.43
16S	1-20 UNEF	1.98	30.18	14.28	22.22	24.61	32.82
16	1-20 UNEF	3.17	41.28	19.05	22.22	24.61	32.82
18	1 1/8-18 UNEF	3.17	49.28	19.05	25.40	26.99	35.08
20	1 1/4-18 UNEF	3.17	49.28	19.05	28.57	29.37	38.38
22	1 3/8-18 UNEF	3.17	49.28	19.05	31.75	31.75	41.55
24	1 1/2-18 UNEF	3.17	49.28	20.64	34.92	34.92	44.73
28	1 3/4-18 UNS	3.17	49.28	20.64	41.27	39.69	51.08
32	2-18 UNS	3.17	49.28	22.22	48.26	44.45	57.15
36	2 1/4-16 UN	3.17	49.28	22.22	53.97	49.21	63.78
40	2 1/2-16 UN	3.45	49.28	22.22	58.25	55.58	69.85

Straight Plug
MS3106T/MS4106T

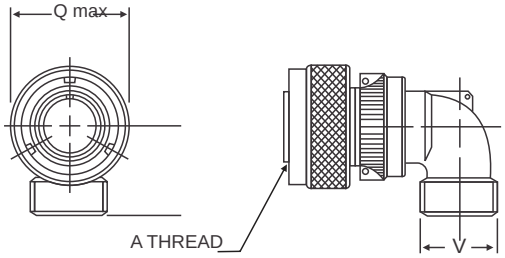


All dimensions are in mm

Connector Size	A Thread in inches	Q max	V Thread in inches
10SL	5/8-24 UNEF	19.05	5/8-24 NEF
12S	3/4-20 UNEF	19.84	11/16-24NEF
12	3/4-20 UNEF	19.84	11/16-24NEF
14S	7/8-20 UNEF	22.22	3/4-20 UNEF
14	7/8-20 UNEF	22.22	3/4-20 UNEF
16S	1-20 UNEF	25.40	7/8-20 UNEF
16	1-20 UNEF	25.40	7/8-20 UNEF
18	1 1/8-18 UNEF	28.57	1-20 UNEF
20	1 1/4-18 UNEF	31.75	1 1/8-18 NS
22	1 3/8-18 UNEF	34.92	1 1/4-18 NEF
24	1 1/2-18 UNEF	38.10	1 3/8-18 NEF
28	1 3/4-18 UNS	44.45	1 5/8-18 NEF
32	2-18 UNS	51.75	1 7/8-16UN
36	2 1/4-16 UN	57.15	2 1/16-16UN
40	2 1/2-16 UN	63.50	2 5/16-20 UN

Note - Both versions, straight and diamond knurling available on coupling ring. For details, contact factory.

MS3108A/MS4108A Supplied Without Grommet
MS3108R/4108R Supplied With Grommet

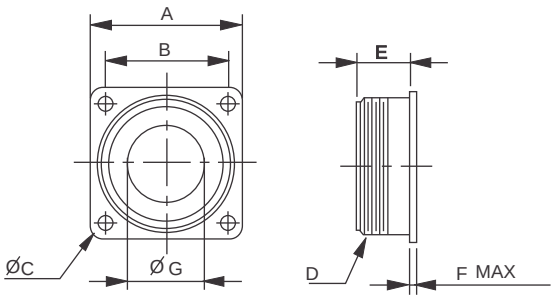


All dimensions are in mm

Connector Size	A Thread in inches	Q max	V Thread in inches
10SL	5/8-24 UNEF	19.05	5/8-24 NEF
12S	3/4-20 UNEF	19.84	11/16-24 NEF
12	3/4-20 UNEF	19.84	11/16-24 NEF
14S	7/8-20 UNEF	22.22	3/4-20 UNEF
14	7/8-20 UNEF	22.22	3/4-20 UNEF
16S	1-20 UNEF	25.40	7/8-20 UNEF
16	1-20 UNEF	25.40	7/8-20 UNEF
18	1 1/8-18 UNEF	28.57	1-20 UNEF
20	1 1/4-18 UNEF	31.75	1 1/8-18 NS
22	1 3/8-18 UNEF	34.92	1 1/4-18 NEF
24	1 1/2-18 UNEF	38.10	1 3/8-18 NEF
28	1 3/4-18 UNS	44.45	1 5/8-18 NEF
32	2-18 UNS	51.75	1 29/32-18 NS
36	2 1/4-16 NS	57.15	2 1/16-20 UNS
40	2 1/2-16 UN	63.50	2 5/16-16 UN

Note - Both versions, straight and diamond knurling available on coupling ring. For details, contact factory.

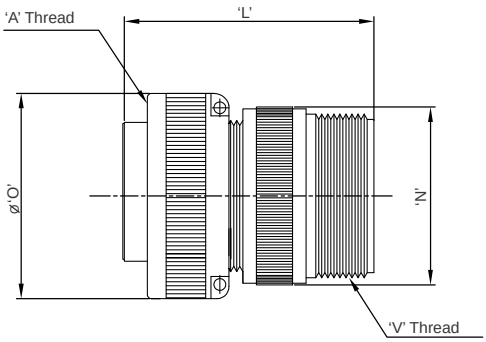
Other Accessories
Dummy receptacle
MS3105

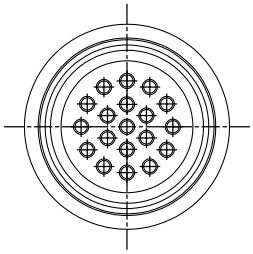


All dimensions are in mm

Part number (see note)	A	B	C	D Thread in inches	E	F max.	G
MS-3105-10S	25.4	18.26	3.05	5/8-24	14.27	3.96	8.20
MS-3105-12S	27.79	20.62	3.05	3/4-20	14.27	3.96	11.43
MS-3105-12	27.79	20.62	3.05	3/4-20	19.05	3.96	11.43
MS-3105-14S	30.17	23.01	3.05	7/8-20	14.27	3.96	13.36
MS-3105-14	30.17	23.01	3.05	7/8-20	19.05	3.96	13.36
MS-3105-16S	32.54	24.61	3.05	1-20	14.27	3.96	16.41
MS-3105-16	32.54	24.61	3.05	1-20	19.05	3.96	16.41
MS-3105-18	34.92	26.97	3.05	1 1/8-18	19.05	5.16	18.03
MS-3105-20	38.10	29.36	3.05	1 1/4-18	19.05	5.16	23.54
MS-3105-22	41.27	31.75	3.05	1 3/8-18	19.05	5.16	25.93
MS-3105-24	44.45	34.92	3.73	1 1/2-18	20.62	5.16	29.21
MS-3105-28	50.8	39.67	3.73	1 3/4-18	20.62	5.16	34.67
MS-3105-36	63.5	49.22	4.39	2 1/4-16	22.2	9.11	46.56

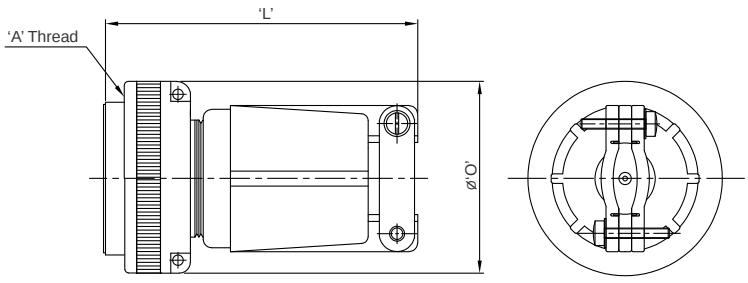
Note: The dash number also indicates shell size.



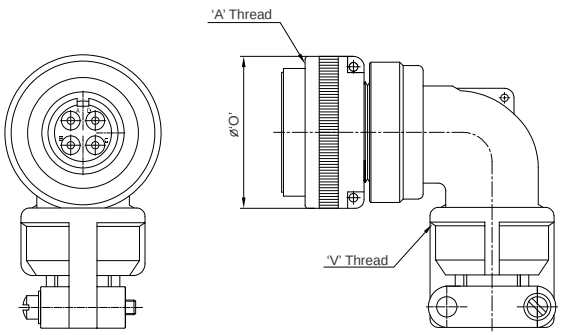


SIZE	'O'	'L'	'N'	'A'–THD	'V'–THD
10SL	22.23	38.89	19.13	5/8-24UNEF	5/8-24UNEF
12S	25.40	42.88	19.84	3/4-20UNEF	5/8-24UNEF
12	26.46	52.37	19.84	3/4-20UNEF	5/8-24UNEF
14S	28.30	42.88	22.70	7/8-20UNEF	3/4-20UNEF
16S	31.40	42.88	26.10	1-20UNEF	7/8-20UNEF
16	31.40	52.37	26.10	1-20UNEF	7/8-20UNEF
18	33.70	52.37	29.30	1 1/8-18NEF	1-20UNEF
20	36.80	55.57	33.00	1 1/4-18NEF	1 3/16-18UNEF
22	40.00	55.57	36.00	1 3/8-18NEF	1 3/16-18UNEF
24	43.50	58.72	38.10	1 1/2-18NEF	1 7/16-18UNEF
28	49.80	58.72	44.53	1 3/4-18NS	1 7/16-18UNEF
32	56.00	61.93	51.24	2-18UNS	1 3/4-18UNEF
36	62.50	61.93	57.23	2 1/4-16UN	2-18UN

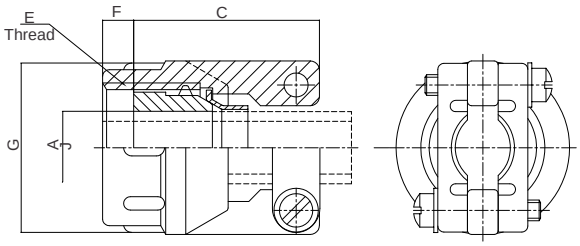
3106F/4106F



SHELL SIZE	'O'	'L'	'A' THREAD
10SL	22.23	58.72	5/8-24UNEF
12S	25.40	58.72	3/4-20UNEF
12	26.49	67.46	3/4-20UNEF
14S	28.30	58.72	7/8-20UNEF
16S	31.40	58.72	1-20UNEF
16	31.40	67.46	1-20UNEF
18	33.70	70.63	1 1/8-18NEF
20	36.80	70.63	1 1/4-18NEF
22	40.00	70.63	1 3/8-18NEF
24	43.50	75.41	1 1/2-18NEF
28	49.80	76.98	1 3/4-18NS
32	56.00	82.55	2-18 UNS
36	62.50	83.33	2 1/4-16UN



SHELL SIZE	'O'	'A' THREAD	'V' THREAD
10SL	22.23	5/8-24UNEF	5/8-24UNEF
12S	25.40	3/4-20UNEF	5/8-24UNEF
12	26.49	3/4-20UNEF	5/8-24UNEF
14S	28.30	7/8-20UNEF	3/4-20UNEF
16S	31.40	1-20UNEF	7/8-20UNEF
16	31.40	1-20UNEF	7/8-20UNEF
18	33.70	1 1/8-18NEF	1-20UNEF
20	36.80	1 1/4-18NEF	1 3/16-18UNEF
22	40.00	1 3/8-18NEF	1 3/16-18UNEF
24	43.50	1 1/2-18NEF	1 7/16-18UNEF
28	49.80	1 3/4-18NS	1 7/16-18UNEF
32	56.00	2-18UNS	1 3/4-18UNEF
36	62.50	2 1/4-16UN	2-18UN



Part Number Development

MS3057 - 4A - 622

Basic Part Number

Dash Number

Finish Table II

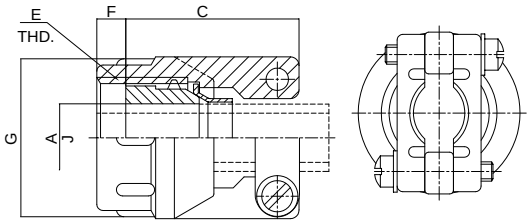
TABLE II

FINISH CODE	FINISH (BODY & CLAMP)	FINISH (SCREW & WASHER)	REMARK
—	CD OLIVE DRAB	CD OLIVE DRAB	—
-622	ZN CO GREEN	ZN CO GREEN	ROHS COMPLAINT
-624	ZN CO BLACK	ZN CO BLACK	ROHS COMPLAINT
-A23	ELECTROLESS NICKEL	ELECTROLESS NICKEL	ROHS COMPLAINT
-626	ZN NICKEL BLACK	ZN NICKEL BLACK	ROHS COMPLAINT

TABLE I

PART NO.	SHELL SIZE	'A' ±0.2	'B' ±0.2	'C'	'V'–THD
MS3057-3A	8	20.80	20.60	6.35	1/2-28
MS3057-4A	10	20.30	23.30	7.93	5/8-24
MS3057-6A	14	22.50	27.00	11.12	3/4-20
MS3057-8A	16	24.40	28.90	14.27	7/8-20
MS3057-10A	18	23.70	32.20	15.87	1-20
MS3057-12A	20, 22	23.60	37.80	19.05	1 3/16-18
MS3057-16A	24,28	26.00	43.40	23.82	1 7/16-18
MS3057-20A	32	27.70	52.10	31.75	1 3/4-18
MS3057-24A	36	29.20	57.30	34.92	2-18
MS3057-28A	40	42.70	68.30	41.27	2 1/4-16

MS3057/C STYLE



CONN. SIZE	MS. P/NO.	Ø'A' MAX. CABLE	Ø 'J' CLOSED	'C' MAX.	'E' THREAD CLASS 2B	'F' MIN.	Ø 'G' ±0.41	'H' MAX.	
10SL 12, 12S	MS3057-4C	7.67	2.39	23.82	0.625-24UNEF	9.52	21.44	23.01	
14, 14S	MS3057-6C	10.87	5.84	23.82	0.750-20UNEF	↓	24.61	26.19	
16, 16S	MS3057-8C	13.08	8.02	23.82	0.875-20UNEF		27.79	28.57	
18	MS3057-10C	15.60	9.60	25.81	1.000-20UNEF		30.96	31.34	
20, 22	MS3057-12C	18.74	11.30	26.19	1.1875-18UNEF		35.71	37.69	
24, 28	MS3057-16C	23.52	15.52	28.98	1.4375-18UNEF	9.52	42.06	42.44	
32	MS3057-20C	30.48	23.42	33.73	1.750-18UNS	11.12	50.8	55.57	
36	MS3057-24C	34.62	23.42	38.89	2.000-18UNS	12.70	57.15	59.54	
40	MS3057-28C	40.92	29.97	38.89	2.250-16UN	12.70	63.50	65.89	

HOW TO ORDER			
Military #	**MS25042**	**-10**	**D**
Amphenol #	**A25042**	**-10**	**D**
	BASIC NO.	**DASH NO.**	**FINISH**
		REFER TABLE-1	**REFER TABLE-2**

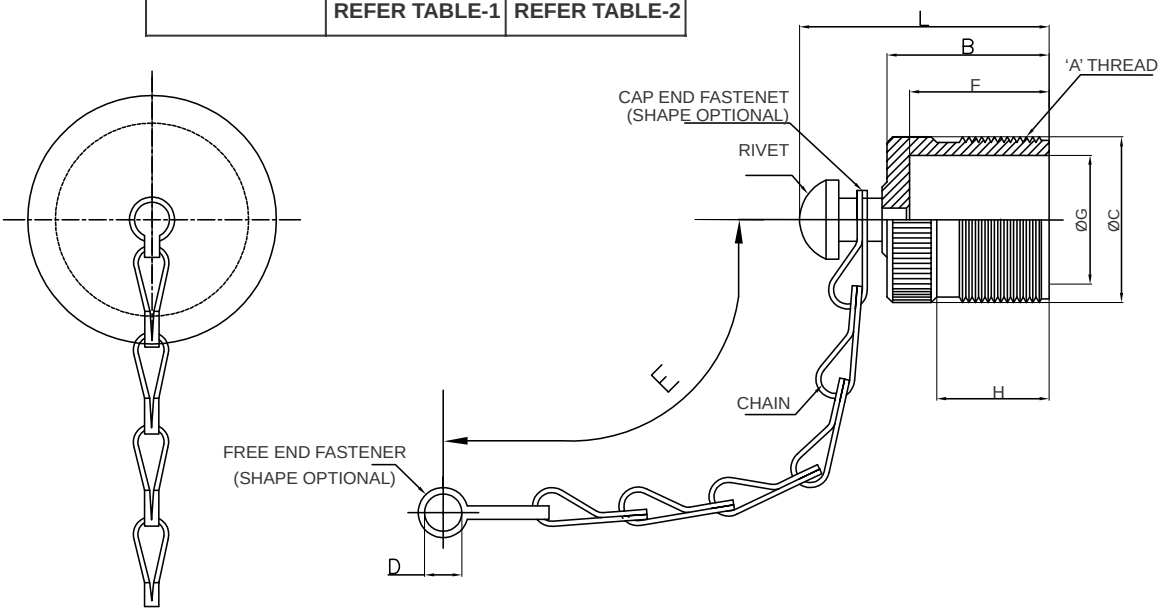


Table-1

Dash No. (-)	Coupling Shell Size Ref.	A Thread	'B' Max.	'C' Max. Dia.	⌀D +.010 (0.27) -.005 (012)	E ±1 Link	F	G Dia	H Min	L Max
8	8S	.500-28 UNEF-2A	.656 (16.7)	.562 (14.3)	.156 (4.0)	4.000 (101.6)	.562 (14.3)	.375 (9.5)	.380 (9.7)	.969 (24.6)
10	10S,10SL	.625-24 UNEF-2A	.844 (21.4)	.687 (17.4)		4.500 (114.3)	.750 (19.1)	.469 (11.9)	.530 (13.5)	1.156 (29.4)
12	12,12SL	.750-20 UNEF-2A		.812 (20.6)				.562 (14.3)		
14	14,14SL	.875-20 UNEF-2A		.937 (23.8)				.688 (17.5)		
16	16,16SL	1.000-20 UNEF-2A		1.062 (27.0)				.812 (20.5)		
18	18	1.125-20 UNEF-2A		1.187 (30.1)				.938 (23.8)		
20	20	1.250-18 UNEF-2A		1.312 (33.3)	.187 (4.7)	5.000 (127.0)		1.062 (27.0)		
22	22	1.375-18 UNEF-2A		1.437 (36.5)				1.188 (30.2)		
24	24	1.500-18 UNEF-2A		1.562 (39.7)		5.500 (139.7)		1.312 (33.3)		
28	28	1.750-18 UNS-2A		1.812 (46.0)		7.750 (196.9)		1.531 (38.9)		
32	32	2.000-18 UN-2A		2.062 (52.4)	.218 (5.5)			1.781 (45.2)		
36	36	2.250-16 UN-2A		2.312 (58.7)				2.000 (50.8)		
40	40	2.500-16 UN-2A		2.562 (65.1)				2.250 (57.2)		
44	44	2.750-16 UN-2A		2.812 (71.4)				2.500 (63.5)	.590 (15.0)	
48	48	3.000-16 UN-2A		3.062 (77.8)				2.750 (69.9)		

Table-3 Material

Cover -Aluminum Alloy Chain - Stainless Steel Sash Chain Passivated

Table-2 Finish

Finish Code	Finish Description
D	Cadmium Olive Drab Over Electroless Nickel
DA	Black Anodize

HOW TO ORDER			
Military #	MS25043	-10	D
Amphenol #	A25043	-10	D
	BASIC NO.	DASH NO.	FINISH
		REFER TABLE-1	REFER TABLE-2

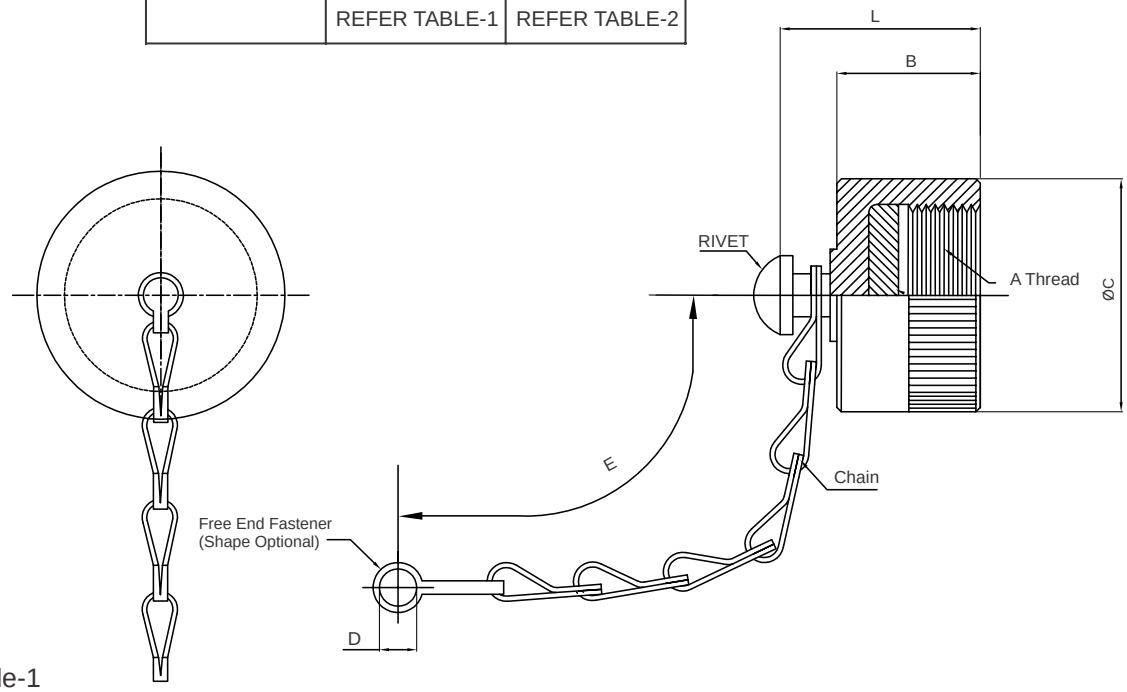


Table-1

Dash No. (-)	Coupling Shell Size Ref.	A Thread	'B' Max.	'C' Max. Dia.	øD +.010 (0.27) -.005 (012)	E ±1 Link	L Max
8	8S	.500-28 UNEF-2B		.688 (17.5)		4.000 (101.6)	
10	10S,10SL	.625-24 UNEF-2B		.813 (20.7)			
12	12,12SL	.750-20 UNEF-2B		1.000 (25.4)			
14	14,14SL	.875-20 UNEF-2B		1.125 (28.6)	.140 (3.6)	4.500 (114.3)	.750 (19.1)
16	16,16SL	1.000-20 UNEF-2B	4.69 (11.9)	1.188 (30.2)			
18	18	1.125-20 UNEF-2B		1.344 (34.1)			
20	20	1.250-18 UNEF-2B		1.469 (37.3)		5.000 (127.0)	
22	22	1.375-18 UNEF-2B		1.594 (40.5)			
24	24	1.500-18 UNEF-2B		1.719 (43.7)	.171 (4.5)	5.500 (139.7)	
28	28	1.750-18 UNS-2B		1.969 (50.0)		7.750 (196.9)	
32	32	2.000-18 UN-2B		2.219 (56.4)			
36	36	2.250-16 UN-2B		2.469 (62.7)			
40	40	2.500-16 UN-2B	.531 (13.5)	2.718 (69.0)	.187 (4.7)		.812 (20.6)
44	44	2.750-16 UN-2B		2.969 (75.4)			
48	48	3.000-16 UN-2B		3.188 (81.0)			

Table-3 Material

Cover -Aluminum Alloy
Chain - Stainless Steel Sash Chain Passivated
Gasket - Silicon Elastomer Disk

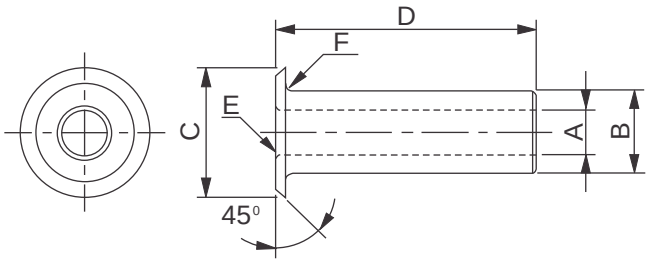
Table-2 Finish

Finish Code	Finish Description
D	Cadmium Olive Drab Over Electroless Nickel
DA	Black Anodize

Neoprene Sleeve

MS3420

Rubber bushing. Protects wire bundles and unjacketed cables from possible damage by cable clamp.

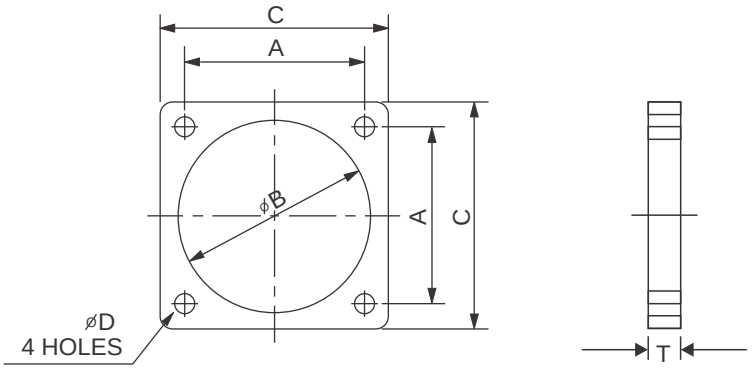


All dimensions are in mm

Part number	A	B	C	D	E Rad in inches	F Rad in inches
MS-3420-3	3.30	5.33	9.50	73.02	0.79	0.79
MS-3420-4	5.59	7.67	12.70	69.85	0.79	0.79
MS-3420-6	7.92	10.84	15.59	66.67	0.79	1.59
MS-3420-8	11.10	14.02	18.77	63.50	1.59	1.59
MS-3420-10	14.27	15.62	21.94	60.32	1.59	1.59
MS-3420-12	15.87	18.80	26.23	56.20	1.59	1.59
MS-3420-16	19.05	23.54	26.39	53.97	1.59	1.59
MS-3420-20	23.80	31.50	40.41	50.80	1.59	1.59
MS-3420-24	31.75	34.67	46.79	47.62	1.59	1.59

Plain Flat Gasket

For MS and 97B flange mounted receptacles



All dimensions are in mm

Part number	Shell size	A max	B	C	D	T
MS-101000	10SL	18.26	15.90	25.40	4.35	1.5
MS-108686	12S & 12	20.62	19.05	27.80	4.35	1.5
MS-101001	14S & 14	23.01	22.20	30.15	4.35	1.5
MS-101002	16S & 16	24.61	25.40	32.50	4.35	1.5
MS-101003	18	27.00	28.57	34.90	5.15	1.5
MS-101004	20	29.36	31.75	38.10	5.15	1.5
MS-101005	22	31.75	34.90	41.20	5.15	1.5
MS-108687	24	34.90	38.10	44.45	5.15	1.5
MS-101006	28	39.70	44.45	50.80	5.15	1.5
MS-108688	32	44.45	50.80	57.15	5.55	1.5
MS-101007	36	49.22	55.57	63.50	5.55	1.5
MS-110831	40	55.77	61.92	69.85	5.55	1.5

Crimp Contact

Contacts for connectors are machined from copper alloys and silver plated for maximum corrosion resistance, with a minimum millivolt drop and a maximum current carrying capacity; the size 16 and 12 socket contacts are of the closed entry design. Gold plated contacts are also available.

Part Number For Crimp Contacts only*	Pin/ Socket	Mating End Size	Wire Barrel Size	Allowable Wire size	Test Current*** Amps	Insertion/Removal Tool
MS-106433 MS-108456	Pin Socket	16 Short†	16	16 18 60 22**	13 10 7.5 5	97B-IR-16
MS-108295 MS-108457	Pin Socket	16 Long	16	16 18 20 22**	13 10 7.5 5	97B-IR-16
MS-108388 MS-110262	Pin Socket	12	12	12 14	23 17	97B-IR-12
MS-108386 MS-108387	Pin Socket	8	8	8 10**	46 33	97B-IR-8
MS-108384 MS-111878	Pin Socket	4	4	4 6**	80 60	97B-IR-4
MS-112067 MS-112068	Pin Socket	0	0	0 1 2**	150 125	97B-IR-0

* Solder contacts are not sold as separate items. Part numbers shown here are for crimp contacts only.

** When using wire adapter sleeve shown.

*** Contact rating as stated are test ratings only. The connecter may not withstand full rated current through all contacts continuously. Please note that the electrical data given is not an establishment of electrical safety factors. This is left entirely in the designer's hands as he can best determine which peak voltage, switching surges, transients, etc. can be expected in a particular circuit.

MS Connectors Application tools

When proprietary crimp contacts are employed rather than the standard MS approved solder contacts, the following application tools are recommended for use.
There is a possibility of additional crimping tools other than those included being available at present or in the future for this specific application.

TOOLING CHART

Crimping Tool	Positioner/ Turret
M22520/1-01	*
M22520/1-01	*
**	**
**	**
**	**

* Use Daniels Turret TH29-1 or Astro Tool Co. Turret 616266
** For appropriate crimp tool and positioner refer to Pico Crimping Tool Co.
† Tools used with Arbor Press 11-7364

Ordering MS Series

To obtain the specific connector required, write down the connector number from the typical example below. Only inserts shown in the availability chart shown on page 7 can be specified. Connectors are delivered with protective plastic dust covers. Include premating contact designation only if premating contact is required. The second letter in the premating contact designation stands for the actual contact position.

1	3	4	5	6	7	8	9	10	11	12
MS -	4	103	SQ-	XX-	YY-	P -	W-	PTC9-	563-	624-

1.Series Designation

MS - Threaded Version

3. Contact Style

3 - Solder
4 - Crimp

4. Shell Style

100 - Wall mounting receptacle(Without serration, without accessory)
100T - Wall mounting receptacle(With thread & serration, without accessory)
100X - Wall mounting receptacle(With accessory)

1001- Cable Connecting receptacle(Without serration, without accessory)
101T - Cable Connecting receptacle(With thread & serration, without accessory)
101X - Cable Connecting receptacle(With accessory)

102E- Box mounting Receptacle (Do not accept accessory)

106 - Straight Plug (Without serration, without accessory)
106T - Straight Plug(With thread & serration, without accessory)
106X - Straight Plug (To accept accessory)

108A -Right Angle Plug Connector without grommet
108R -Right Angle Plug Connector with grommet
108X -Right Angle Plug Connector (Except connector class G, SQ & R1)

5. Connector Class (Accessory/Backshell)

A -Solid Backshell suitable for straight Plug
F - Strain relief Backshell with Enviromental sealing Grommet
R- Shorter length Backshell with Environmental sealing grommet
G- Backshell suitable for heat shrink tubing with Environmental sealing Grommet
AG - Solid Backshell with Enviromental sealing Grommet
RT- Right angle Backshell suitable for 100,101,103 Style
SQ- Backshell suitable for heat shrink tubing & shielding with Environmental sealing Grommet
EGM- Backshell with Metal ferrule suitable for shielded cable to suit variable cable sizes
PHM- Backshell with out Metal ferrule suitable for shielded cable to suit variable cable sizes
PGXX - Backshell to accept PG Threaded glands
PMXX - Backshell to accept Metric Threaded glands
PGXX - Backshell to accept PG Threaded glands with PG glands

6.Shell Size

10S, 12S, 14S, 16S, 16, 18, 20, 22, 24, 28, 32, 36, 40

7. Insert Arrangement

See pages 7 to 18

8. Contact Type

P- Pin Contact (Male)
S - Socket (Female)

9. Alternate Positioning

W - Y - Z (Standard: Normal) See page no. 6

10. Modification

PTC9- PC Tail Contact
PCX- Premating Contact with location
SQG- Square flange gasket for Receptacle
CXX- Crimp contact suitable to XX AWG size
B - Telescopic Bushing
SR- Strain Relief Backshell
SRC- Strain Relief Backshell with shielded sleeve
RFI- Plug Connector with grounding finger
HD- Heavy Duty Coupling ring
LC/FD- Less Contact
TX- Metric Threaded holes in flange
(T4: size 10SL to 24. T5: size 28 to 40)
Applicable only for 100, 102, & 103 style

11. Contact Plating

Omit for - Silver Plated
563 - Gold Plated

12. Connector Finish

Omit for - Cad. OD. Green
A23- Electroless Nickel
608 - Hard anodize black
622 - Cad. Free Zinc Cobalt OD
624 - Cad. Free Zinc Cobalt Black
726 - Electropheratic Black

Notice : All information, including illustrations given herein is believed to be accurate at the time of printing. In lieu of design advances, Amphenol reserves the right to change specifications without notice. This publication ACAMS02 04/18 MS Series Connectors supercedes all existing Amphenol literature on MS Series Connectors.

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