



仁昊伟业
RENHOTEC

MIL-C-5015 Connectors

MS General Information, Class Designations



DESIGN CHARACTERISTICS

- Medium to heavy weight cylindrical
- Durable, field-proven design
- Environmental resistant
- Resilient inserts
- Operating voltage to 3000 VAC (RMS) at sea level
- Threaded couplings
- Single key / keyway shell polarization
- Cost effective



CUSTOMER OPTIONS

- Five shell styles
- Fourteen shell sizes
- Five class designations
- Alternate insert positioning
- Zinc alloy plating (cadmium-free) available



MS connectors meet the latest performance requirements of MIL-C-5015.

These connectors represent well proven electrical capability at an acceptable cost for most equipment where durability is important.

MIL-C-5015 features threaded couplings and single key/ keyway polarization, representing maximum simplicity in design.

Applications include military ground support equipment, ordnance and shipboard installations.



MIL-C-5015 Connectors MS-A Class



Wall Mounting Receptacle



Cable connecting Receptacle



Box Mounting Receptacle



Straight Plug



Right Angle Plug

MS-A

MS-A class connectors perform many of the virtual functions in powering, testing and ground support system. Class A applications include communication equipment, computers and shipboard installation where mechanical forces and physical parameters are not subject to extreme or rapid environmental changes.

Shells:

Shell components are fabricated from high grade aluminum alloy.

Electrically Zinc plate finish with an olive drab chromate after treatment offers corrosion resistance.

Contacts:

Pins and sockets are machined from copper alloy with silver plated finish.

Size 16 and 12 socket contacts incorporate a closed entry design.

Inserts:

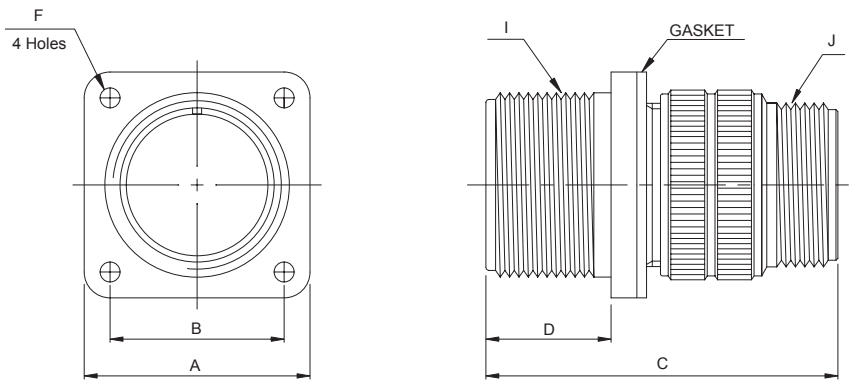
Inserts are resilient synthetic rubber, offering high dielectric strength, high arc resistance to vibration.

Proprietary design permits pressurization of either pin or socket insert.



MIL-C-5015 Connectors MS3100A

Wall mounting receptacle



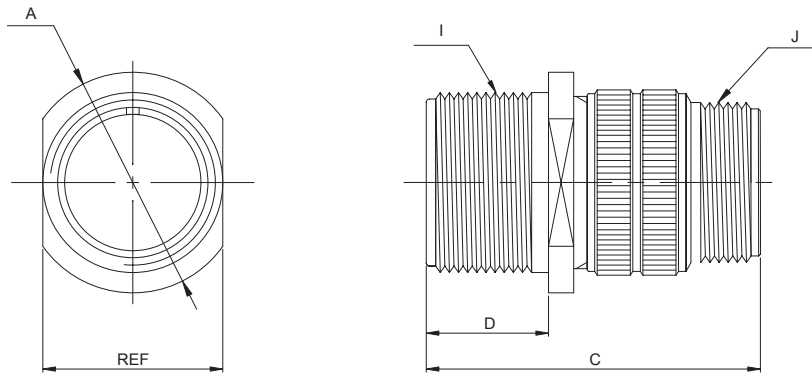
MS3100A wall mounting receptacles are used with the MS3057 cable clamp or with conduit to eliminate need for the conduit box in applications where wires are carried thru walls or bulkheads.

(mm)

Shell Size	□A ±0.79	□B ±0.12	C Max	D +0.79 -0.00	ØF +0.25 -0.12	I Thread-2A (UNEF)	J Thread-2A (UNEF)
10SL	25.40	18.26	38.88	14.28	3.20	5/8-24 NEF	5/8-24 NEF
12S	27.79	20.62	42.87	14.28	3.20	3/4-20 NEF	5/8-24 NEF
12	27.79	20.62	52.37	19.05	3.20	3/4-20 NEF	5/8-24 NEF
14S	30.18	23.01	42.87	14.28	3.20	7/8-20 NEF	3/4-20 NEF
14	30.18	23.01	52.37	19.05	3.20	7/8-20 NEF	3/4-20 NEF
16S	32.54	24.61	42.87	14.28	3.20	1-20 NEF	7/8-20 NEF
16	32.54	24.61	52.37	19.05	3.20	1-20 NEF	7/8-20 NEF
18	34.93	26.97	52.37	19.05	3.20	1 1/8-18 NEF	1-20 NEF
20	38.10	29.36	55.57	19.05	3.20	1 1/4-18 NEF	1 3/16-18 NEF
22	41.28	31.75	55.57	19.05	3.20	1 3/8-18 NEF	1 3/16-18 NEF
24	44.45	34.93	58.72	20.63	3.73	1 1/2-18 NEF	1 7/16-18 NEF
28	50.80	39.67	58.72	20.63	3.73	1 3/4-18 NS	1 7/16-18 NEF
32	57.15	44.45	67.92	22.23	4.39	2-18 NS	1 3/4-18 NS
36	63.50	49.23	67.92	22.23	4.39	2 1/4-16 UN	2-18 NS

MIL-C-5015 Connectors MS3101A

Cable Connecting Receptacle



MS3101A solid endbell cable connecting receptacles are used for cable extension requirements where mounting provisions are unnecessary.

(mm)

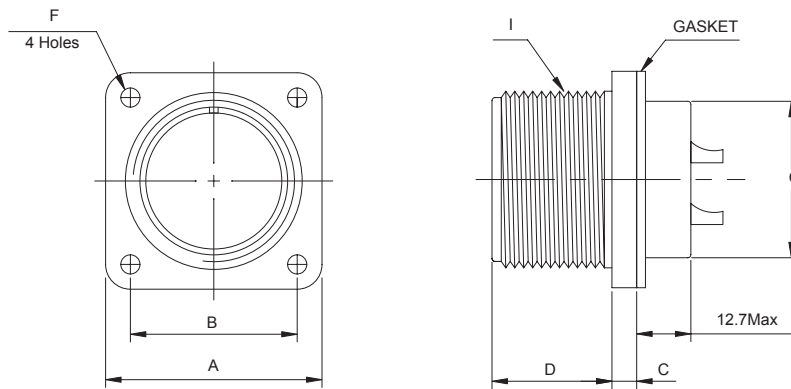
Shell Size	Ø A Max	C Max	D +0.79 -0.00	I Thread-2A (UNEF)	J Thread-2A (UNEF)
10SL	24.61	38.88	14.28	5/8-24 NEF	5/8-24 NEF
12S	26.97	42.87	14.28	3/4-20 NEF	5/8-24 NEF
12	26.97	52.37	19.05	3/4-20 NEF	5/8-24 NEF
14S	29.36	42.87	14.28	7/8-20 NEF	3/4-20 NEF
14	29.36	52.37	19.05	7/8-20 NEF	3/4-20 NEF
16S	31.75	42.87	14.28	1-20 NEF	7/8-20 NEF
16	31.75	52.37	19.05	1-20 NEF	7/8-20 NEF
18	34.13	52.37	19.05	1 1/8-18 NEF	1-20 NEF
20	37.31	55.57	19.05	1 1/4-18 NEF	1 3/16-18 NEF
22	40.48	55.57	19.05	1 3/8-18 NEF	1 3/16-18 NEF
24	43.66	58.72	20.63	1 1/2-18 NEF	1 7/16-18 NEF
28	50.01	58.72	20.63	1 3/4-18 NS	1 7/16-18 NEF
32	56.36	67.92	22.23	2-18 NS	1 3/4-18 NS
36	62.71	67.92	22.23	2 1/4-16 UN	2-18 NS



MIL-C-5015 Connectors MS3102A

BOX Mounting Receptacle

(Available with Plastic or Rubber insulators)



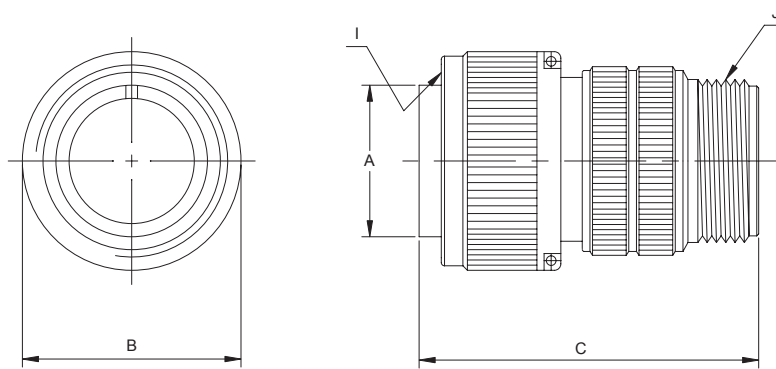
MS3102A box mounting receptacles are used on boxes and equipment cases where no cable support is required.

(mm)

Shell Size	□A ±0.79	□B ±0.12	C ±0.50	D +0.79 -0.00	ØF +0.25 -0.12	ØG Max	I Thread-2A (UNEF)
10SL	25.40	18.26	3.00	14.28	3.05	16.00	5/8-24 NEF
12S	27.80	20.62	3.00	14.28	3.05	16.50	3/4-20 NEF
12	27.80	20.62	3.00	19.05	3.05	16.50	3/4-20 NEF
14S	30.20	23.01	3.00	14.28	3.05	20.00	7/8-20 NEF
14	30.20	23.01	3.00	19.05	3.05	20.00	7/8-20 NEF
16S	32.50	24.61	3.00	14.28	3.05	23.00	1-20 NEF
16	32.50	24.61	3.00	19.05	3.05	23.00	1-20 NEF
18	34.90	26.97	4.00	19.05	3.05	26.00	1 1/8-18 NEF
20	38.10	29.36	4.00	19.05	3.05	29.00	1 1/4-18 NEF
22	41.30	31.75	4.00	19.05	3.05	32.50	1 3/8-18 NEF
24	44.50	34.93	4.00	20.63	3.73	35.50	1 1/2-18 NEF
28	50.80	39.67	4.00	20.63	3.73	42.00	1 3/4-18 NEF
32	57.20	44.45	4.00	22.23	4.39	48.00	2-18 NS
36	63.50	49.23	4.00	22.23	4.39	54.50	2 1/4-16 UN

MIL-C-5015 Connectors MS3106A

Straight Plug



MS3106A straight plugs are used with 3100, 3101 and 3102 receptacles.

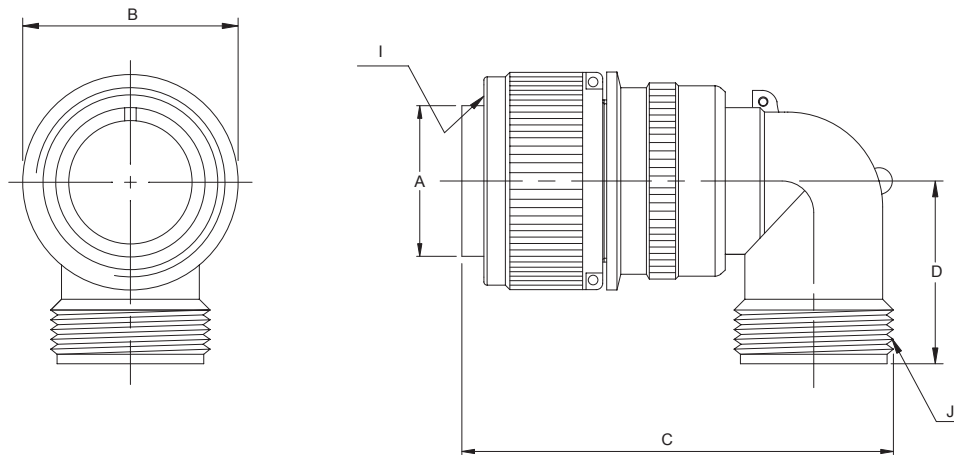
(mm)

Shell Size	Ø A +0.00 -0.38	Ø B Max	C Max	I Thread-2B (UNEF)	J Thread-2A (UNEF)
10SL	11.33	24.61	38.88	5/8-24 NEF	5/8-24 NEF
12S	14.10	26.97	42.87	3/4-20 NEF	5/8-24 NEF
12	14.10	26.97	52.37	3/4-20 NEF	5/8-24 NEF
14S	17.15	29.36	42.87	7/8-20 NEF	3/4-20 NEF
14	17.15	29.36	52.37	7/8-20 NEF	3/4-20 NEF
16S	20.45	31.75	42.87	1-20 NEF	7/8-20 NEF
16	20.45	31.75	52.37	1-20 NEF	7/8-20 NEF
18	23.62	34.13	52.37	1 1/8-18 NEF	1-20 NEF
20	26.67	37.31	55.57	1 1/4-18 NEF	1 3/16-18 NEF
22	29.85	40.48	55.57	1 3/8-18 NEF	1 3/16-18 NEF
24	33.02	43.66	58.72	1 1/2-18 NEF	1 7/16-18 NEF
28	38.61	50.01	58.72	1 3/4-18 NS	1 7/16-18 NEF
32	44.96	56.36	67.92	2-18 NS	1 3/4-18 NS
36	50.29	62.71	67.92	2 1/4-16 UN	2-18 NS



MIL-C-5015 Connectors MS3108A

Right Angle Plug



MS3108A Right Angle plugs, have a solid endbell and are used where wire must be brought at an abrupt angle. Either the split or solid endbells on the 3108 are capable of being rotated and locked.

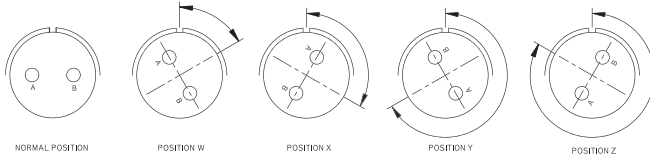
(mm)

Shell Size	Ø A +0.00 -0.38	Ø B Max	C Max	D Max	I Thread-2B (UNEF)	J Thread-2A (UNEF)
10SL	11.33	24.61	46.02	25.40	5/8-24 NEF	5/8-24 NEF
12S*	14.10	26.97	50.80	26.90	3/4-20 NEF	5/8-24 NEF
12	14.10	26.97	57.15	26.90	3/4-20 NEF	5/8-24 NEF
14S	17.15	29.36	53.97	28.50	7/8-20 NEF	3/4-20 NEF
14	17.15	29.36	58.72	28.50	7/8-20 NEF	3/4-20 NEF
16S	20.45	31.75	60.32	30.10	1-20 NEF	7/8-20 NEF
16	20.45	31.75	65.07	30.10	1-20 NEF	7/8-20 NEF
18	23.62	34.13	68.27	33.30	1 1/8-18 NEF	1-20 NEF
20	26.67	37.71	76.98	34.90	1 1/4-18 NEF	1 3/16-18 NEF
22	29.85	40.48	76.98	34.90	1 3/8-18 NEF	1 3/16-18 NEF
24	33.02	43.66	86.51	39.60	1 1/2-18 NEF	1 7/16-18 NEF
28	38.61	50.01	86.51	39.60	1 3/4-18 NS	1 7/16-18 NEF
32	44.96	56.36	95.25	47.60	2-18 NS	1 3/4-18 NS
36	50.29	62.71	100.02	52.30	2 1/4-16 UN	2-18 NS

* No Tooling

MIL-C-5015 Connectors MS- A Class

Insert Arrangements & Alternate Positioning

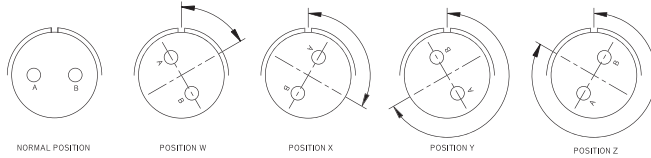


Contact Arrangement	Service Rating	Total Contacts	Contact Size					Alternate Position-Degrees			
			0	4	8	12	16	W	X	Y	Z
10SL-2	A	1					1	-	-	-	-
10SL-3	A	3					3	-	-	-	-
10SL-4	A	2					2	63	-	-	-
12S-1	A	2					2	-	-	-	-
12S-3	A	2					2	70	145	215	290
12S-5	D	1				1		-	-	-	-
14S-1	A	3					3	-	-	-	-
14S-2	Inst	4					4	-	120	240	-
14S-5	Inst	5					5	-	110	-	-
14S-6	Inst	6					6	-	-	-	-
14S-7	A	3					3	90	180	270	-
14S-9	A	2					2	70	145	215	290
14S-07	A	7					7	-	-	-	-
16S-1	A	7					7	80	-	-	280
16S-4	D	2					2	35	110	250	325
16S-5	A	3					3	70	145	215	290
16S-8	A	5					5	-	170	265	-
16-9	A	4				2	2	35	110	250	325
16-10	A	3				3		90	180	270	-
16-11	A	2				2		35	110	250	325
16-12	A	1		1				-	-	-	-
16-13	A	2				2		35	110	250	325
18-1	A/Inst	10					10	70	145	215	290
18-3	D	2				2		35	110	250	325
18-4	D	4					4	35	110	250	325
18-5	D	3				2	1	80	110	250	280
18-8	A	8				1	7	70	-	-	290
18-9	Inst.	7				2	5	80	110	250	280
18-10	A	4				4		-	120	240	-
18-11	A	5				5		-	170	265	
18-12	A	6					6	80	-	-	280
18-13	A	4			1	3		80	110	250	280
18-15	A	4				4		-	120	240	-

Contact Arrangement	Service Rating	Total Contacts	Contact Size					Alternate Position-Degrees			
			0	4	8	12	16	W	X	Y	Z
18-19	A	10					10	-	120	240	-
18-20	A	5					5	90	180	270	-
18-21	A	3				3		-	-	-	-
18-22	D	3					3	70	145	215	290
18-32	A	8					8	-	-	-	-
20-2	D	1	1					-	-	-	-
20-3	D	3				3		40	145	215	290
20-4	D	4				4		45	110	250	-
20-7	D/A	8					8	80	110	250	280
20-8	Inst.	6			2		4	80	110	250	280
20-11	Inst.	13					13	-	-	-	-
20-15	A	7				7		80	-	-	280
20-16	A	9				2	7	80	110	250	280
20-17	A	6				5	1	90	180	270	-
20-18	A	9				3	6	35	110	250	325
20-19	A	3			3			90	180	270	-
20-22	A	6			3		3	80	110	250	280
20-23	A	2			2			35	110	250	325
20-27	A	14					14	35	110	250	325
20-29	A	17					17	80	-	-	20
20-33	A	11					11	-	-	-	-
20-01	A	10					10	-	-	-	-
22-1	D	2			2			35	110	250	325
22-2	D	3			3			70	145	215	290
22-4	A	4			2	2		35	110	250	325
22-7	E	1	1					-	-	-	-
22-8	E	2				2		35	110	250	325
22-9	E	3				3		70	145	215	290
22-10	E	4					4	35	110	250	325
22-11	B	2					2	35	110	250	325
22-12	D	5			2		3	80	110	250	280
22-13	D/A	5				4	1	34	110	250	325
22-14	A	19					19	80	110	250	280

MIL-C-5015 Connectors MS- A Class

Insert Arrangements & Alternate Positioning



Contact Arrange-ment	Service Rating	Total Contacts	Contact Size					Alternate Position-Degrees				
			0	4	8	12	16	W	X	Y	Z	
22-15	E/A	6				5	1	80	110	250	280	
22-18	A/D	8					8	80	110	250	280	
22-19	A	14					14	80	110	250	280	
22-20	A	9					9	35	110	250	325	
22-21	A	3	1				2	-	-	-	-	
22-22	A	4			4			-	110	250	-	
22-23	D/A	8				8		35	-	250	-	
22-27	D/A	9			1		8	80	-	250	280	
22-28	A	7				7		80	-	-	280	
24-2	D	7				7		80	-	-	28	
24-5	A	16					16	80	110	250	280	
24-6	D/A	8				8		80	110	250	280	
24-7	A	16				2	14	80	110	250	280	
24-9	A	2		2				35	110	250	325	
24-10	A	7			7			80	-	-	280	
24-11	A	9			3	6		35	110	250	32	
24-12	A	5		2		3		80	110	250	280	
24-20	D	11				2	9	80	110	250	280	
24-22	D	4			4			45	110	250	-	
24-28	Inst	24					24	80	110	250	280	
24-02	A	9				9		-	-	-	-	
24-03	A	12					12	-	-	-	-	
28-1	D/A	9			3	6		80	110	250	280	
28-3	E	3			3			70	145	215	290	
28-6	D	3		3				70	145	215	290	
28-7	D	2		2				35	110	250	325	
28-9	D	12				6	6	80	110	250	280	
28-10	D/A	7		2	2	3		80	110	250	280	
28-11	A	22				4	18	80	110	250	280	
28-12	A	26					26	90	180	270	-	
28-15	A	35					35	80	110	250	280	
28-16	A	20					20	80	110	250	280	
28-17	B/D/A	15					15	-	-	-	-	

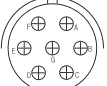
Contact Arrange-ment	Service Rating	Total Contacts	Contact Size					Alternate Position-Degrees				
			0	4	8	12	16	W	X	Y	Z	
28-18	A	12					12	-	-	-	-	
28-19	B/D/A	10				4	6	80	110	250	280	
28-20	A	14				10	4	80	110	250	280	
28-21	A	37					37	80	110	250	280	
28-22	D	6		3			3	70	145	215	290	
28-05	A	5			5			-	-	-	-	
28-51	A	12				12		-	-	-	-	
32-1	E/D	5	2			3		80	110	250	280	
32-5	D	2	2					35	110	250	325	
32-6	A	23		2	3	2	16	80	110	250	325	
32-7	INST/A	35				7	28	80	125	235	280	
32-8	A	30				6	24	80	125	235	280	
32-9	D	14		2			12	80	110	250	280	
32-15	D	8	2			6		35	110	250	280	
32-17	D	4		4				45	110	250	280	
32-22	A	54					54	80	110	250	280	
32-03	A	3		3				-	-	-	-	
32-59	A	42			2		40	-	-	-	-	
36-1	D	22				4	18	80	110	250	280	
36-3	D	6	3			3		70	145	215	290	
36-4	D/A	3	3					70	145	215	290	
36-5	A	4	4					-	120	240	-	
36-7	A	47				7	40	80	110	250	280	
36-8	A	47				1	46	80	110	250	280	
36-9	A	31		1	2	14	14	80	125	235	280	
36-10	A	48					48	80	125	235	280	
36-15	D/A	35					35	60	125	245	305	
36-30	A	30				30		-	-	-	-	
36-40	A	40				22	18	-	-	-	-	
36-52	A	52					52	72	144	216	288	
36-02	A	27				27		-	-	-	-	
36-03	A	20				20		-	-	-	-	
36-04	A	22				22		-	-	-	-	

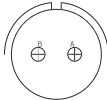
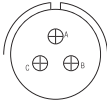
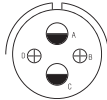
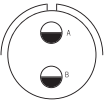
MIL-C-5015 Connectors MS- A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

							
		Front of Socket Insert	Front of Socket Insert				
Insert Arrangement	10SL-2	10SL-3	10SL-4	12S-1	12S-3	12S-5	14S-1
Service Rating	A	A	A	A	A	D	A
Number of Contacts	1	3	2	2	2	1	3
Contact Size	16	16	16	16	16	12	16

							
Insert Arrangement	14S-2	14S-5	14S-6	14S-7	14S-9	14S-07	16S-1
Service Rating	Inst.	Inst.	Inst.	A	A	A	A
Number of Contacts	4	5	6	3	2	7	7
Contact Size	16	16	16	16	16	16	16

						
Insert Arrangement	16S-4	16S-5	16S-8	16-9	16-10	16-11
Service Rating	D	A	A	A	A	A
Number of Contacts	2	3	5	2 2	3	2
Contact Size	16	16	16	12 16	12	12





MIL-C-5015 Connectors MS- A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

Insert Arrangement	16-12	16-13	18-1	18-3	18-4
Service Rating	A	A	B, C, F, G=A; Bal.=Inst	D	D
Number of Contacts	1	2	10	2	4
Contact Size	4	12	16	12	16
Insert Arrangement	18-5	18-8	18-9	18-10	18-11
Service Rating	D	A	Inst.	A	A
Number of Contacts	2 1	1 7	2 5	4	5
Contact Size	12 16	12 16	12 16	12	12
Insert Arrangement	18-12	18-13	18-15	18-19	18-20
Service Rating	A	A	A	A	A
Number of Contacts	6	1 3	4	10	5
Contact Size	16	8 12	12	16	16
 CONTACT LEGEND 16 12 8 4 0					

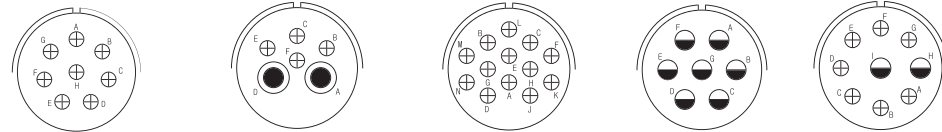
MIL-C-5015 Connectors MS- A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated



Insert Arrangement	18-21	18-22	18-32	20-2	20-3	20-4
Service Rating	A	D	A	D	D	D
Number of Contacts	3	3	8	1	3	4
Contact Size	12	16	16	0	12	12



Insert Arrangement	20-7	20-8	20-11	20-15	20-16
Service Rating	H, G=D: C, D, E, F=A	Inst.	Inst.	A	A
Number of Contacts	8	2 4	13	7	2 7
Contact Size	16	8 16	16	12	12 16



Insert Arrangement	20-17	20-18	20-19	20-22
Service Rating	A	A	A	A
Number of Contacts	5 1	3 6	3	3 3
Contact Size	12 16	12 16	8	8 16

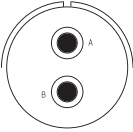
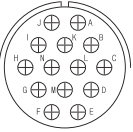
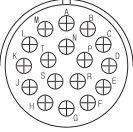
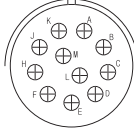
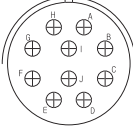


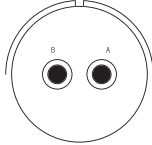
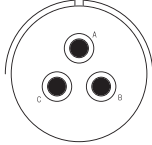
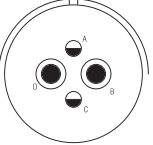
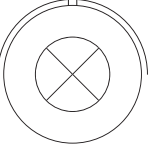
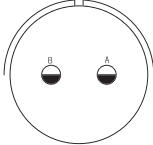
CONTACT LEGEND 16 12 8 4 0

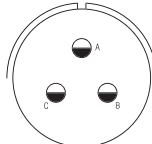
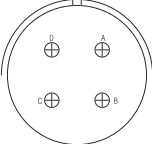
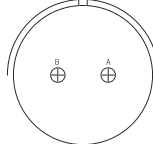
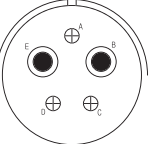
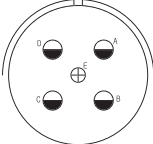
MIL-C-5015 Connectors MS- A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

					
Insert Arrangement	20-23	20-27	20-29	20-33	20-01
Service Rating	A	A	A	A	A
Number of Contacts	2	14	17	11	10
Contact Size	8	16	16	16	16

					
Insert Arrangement	22-1	22-2	22-4	22-7	22-8
Service Rating	D	D	A	E	E
Number of Contacts	2	3	2 2	1	2
Contact Size	8	8	8 12	0	12

					
Insert Arrangement	22-9	22-10	22-11	22-12	22-13
Service Rating	E	E	B	D	E=D; A, B, C, D=A
Number of Contacts	3	4	2	2 3	4 1
Contact Size	12	16	16	8 16	12 16

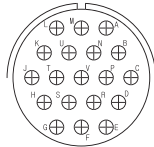


CONTACT LEGEND 16 12 8 4 0

MIL-C-5015 Connectors MS- A Class

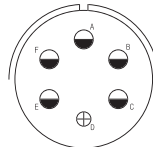
Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

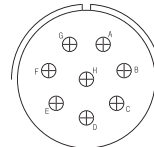


Insert Arrangement
Service Rating
Number of Contacts
Contact Size

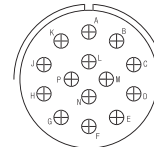
22-14
A
19
16



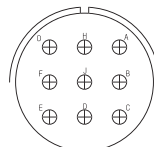
22-15
D=E; A, B, C, E, F=A
5 1
12 16



22-18
A,B,F,G,H=D; C,D,E=A
8
16

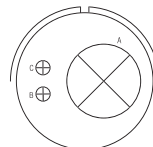


22-19
A
14
16

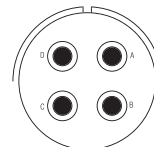


Insert Arrangement
Service Rating
Number of Contacts
Contact Size

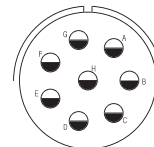
22-20
A
9
16



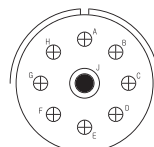
22-21
A
1 2
0 16



22-22
A
4
8

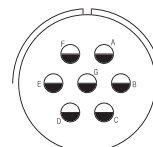


22-23
H=D; Bal.=A
8
12

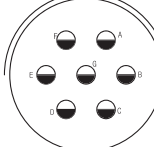


Insert Arrangement
Service Rating
Number of Contacts
Contact Size

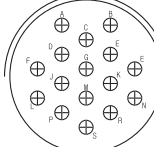
22-27
J=D; Bal.=A
1 8
8 16



22-28
A
7
12



24-2
D
7
12



24-5
A
16
16



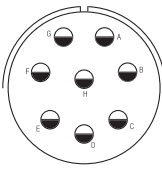
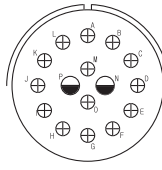
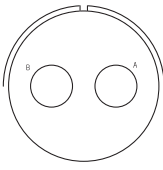
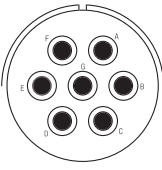
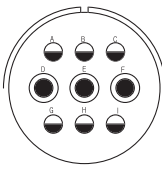
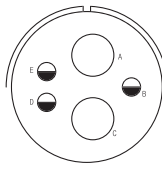
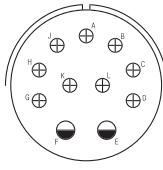
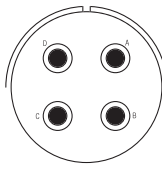
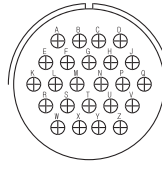
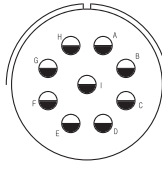
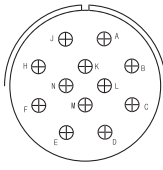
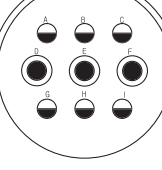
CONTACT LEGEND

16 12 8 4 0

MIL-C-5015 Connectors MS- A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

Insert Arrangement Service Rating Number of Contacts Contact Size				
	24-6	24-7	24-9	24-10
	A, G, H=D; Bal.=A	A	A	A
	8 12	2 14 12 16	2 4	7 8
Insert Arrangement Service Rating Number of Contacts Contact Size				
	24-11	24-12	24-20	24-22
	A	A	D	D
	3 6 8 12	2 3 4 12	2 9 1 16	4 8
Insert Arrangement Service Rating Number of Contacts Contact Size				
	24-28	24-02	24-03	28-1
	Inst.	A	A	A,J,E=D; Bal.=A
	24 16	9 12	12 16	3 6 8 12

CONTACT LEGEND





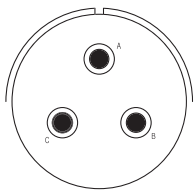
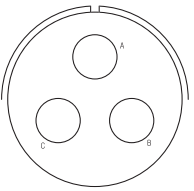
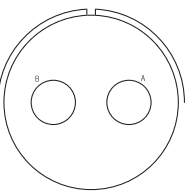
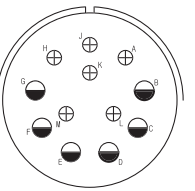
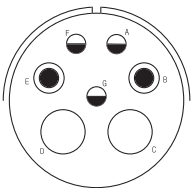
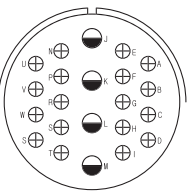
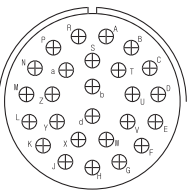
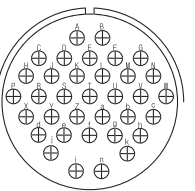
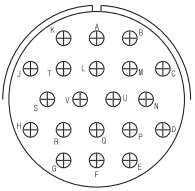
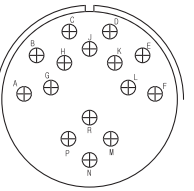
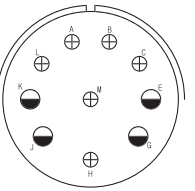
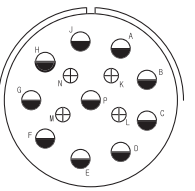
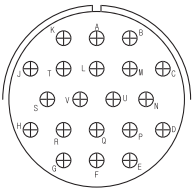
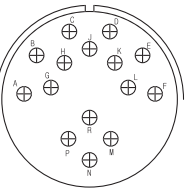
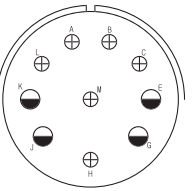
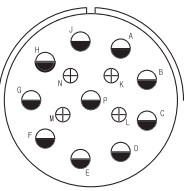
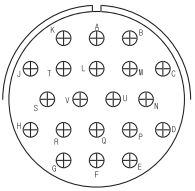
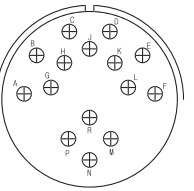
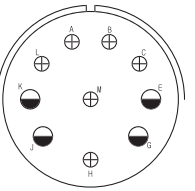
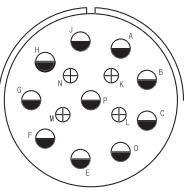


16 12 8 4 0

MIL-C-5015 Connectors MS- A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

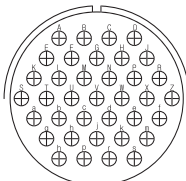
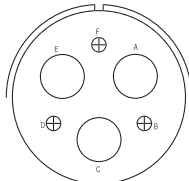
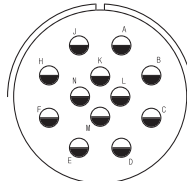
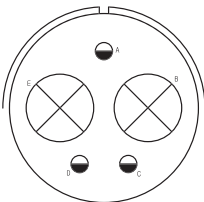
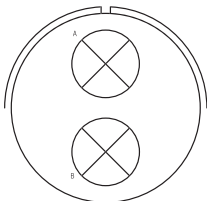
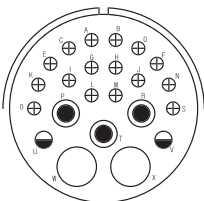
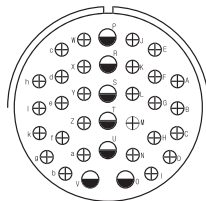
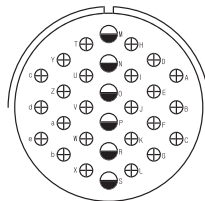
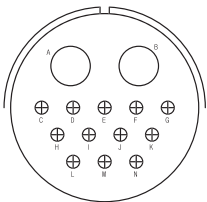
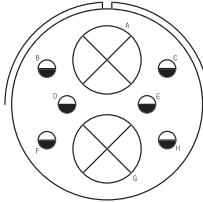
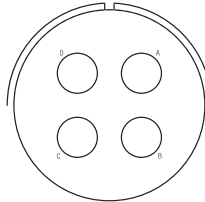
Insert Arrangement Service Rating Number of Contacts Contact Size				
	28-3	28-6	28-7	28-9
	E	D	D	D
	3	3	2	6 6
Insert Arrangement Service Rating Number of Contacts Contact Size				
	28-10	28-11	28-12	28-15
	G=D; Bal. A	A	A	A
	2 2 3	4 18	26	35
Insert Arrangement Service Rating Number of Contacts Contact Size				
	28-16	28-17	28-19	28-20
	A	R=B;M,N,P=D;A to L=A	H,M=B;A,B=D;Bal.=A	A
	20	15	4 6	10 4
Insert Arrangement Service Rating Number of Contacts Contact Size				
	28-16	28-17	28-19	28-20
	A	R=B;M,N,P=D;A to L=A	H,M=B;A,B=D;Bal.=A	A
	20	15	4 6	10 4
Insert Arrangement Service Rating Number of Contacts Contact Size				
	28-16	28-17	28-19	28-20
	A	R=B;M,N,P=D;A to L=A	H,M=B;A,B=D;Bal.=A	A
	20	15	4 6	10 4



MIL-C-5015 Connectors MS- A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

		28-21			28-22			28-51			32-1
Insert Arrangement		A		D		A		A=E; B, C, D, E=D			
Service Rating		37		3	3	12		2	3		
Number of Contacts		16		4	16	12		0	12		
Contact Size											
		32-5			32-6			32-7			32-8
Insert Arrangement		D		A		A, B, h, j=Inst.; Bal.=A		A			
Service Rating		2		2	3	2	16	7	28	6	24
Number of Contacts		0		4	8	12	16	12	16	12	16
Contact Size											
		32-9			32-15			32-17			
Insert Arrangement		D		D				D			
Service Rating		2	12	2	6			4			
Number of Contacts		4	16	0	12			4			
Contact Size											



CONTACT LEGEND

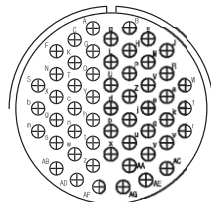
16 12 8 4 0

MIL-C-5015 Connectors MS Series A Class

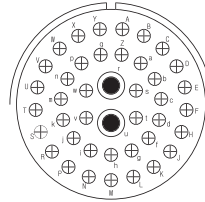
Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

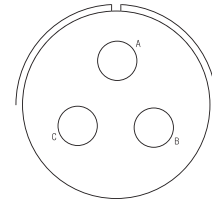
Insert Arrangement
Service Rating
Number of Contacts
Contact Size



32-22
A
54
16

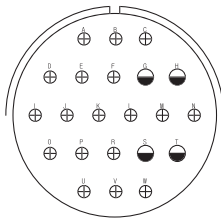


32-59
A
2 40
8 16

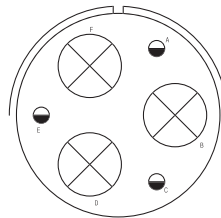


32-03
A
3
4

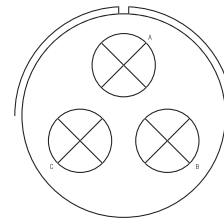
Insert Arrangement
Service Rating
Number of Contacts
Contact Size



36-1
D
4 18
12 16

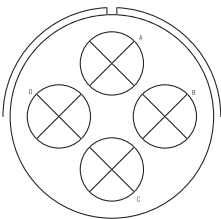


36-3
D
3 3
0 12

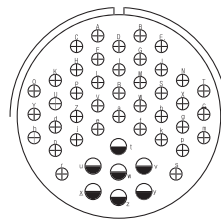


36-4
A=D; B, C=A
3
0

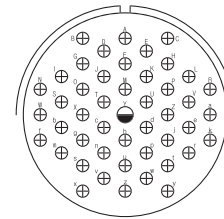
Insert Arrangement
Service Rating
Number of Contacts
Contact Size



36-5
A
4
0



36-7
A
7 40
12 16



36-8
A
1 46
12 16



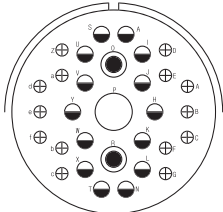
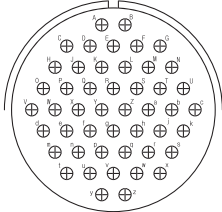
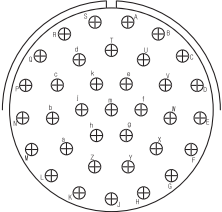
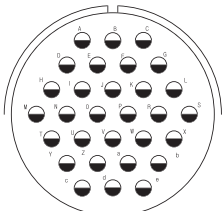
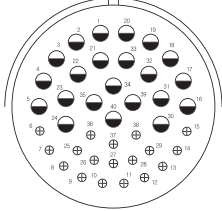
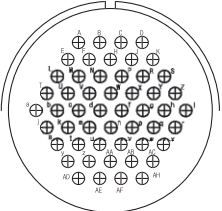
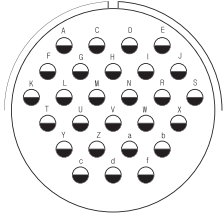
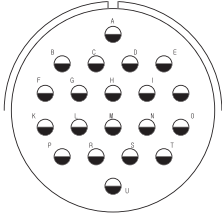
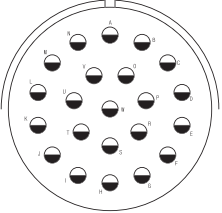
CONTACT LEGEND 16 12 8 4 0



MIL-C-5015 Connectors MS Series A Class

Contact Arrangements

Front face of pin insert or rear face of socket insert illustrated

Insert Arrangement Service Rating Number of Contacts Contact Size			
	36-9	36-10	36-15
	A	A	M=D; Bal.=A
	1 2 14 14	48	35
	4 8 12 16	16	16
Insert Arrangement Service Rating Number of Contacts Contact Size			
	36-30	36-40	36-52
	A	A	A
	30	22 18	52
	12	12 16	16
Insert Arrangement Service Rating Number of Contacts Contact Size			
	36-02	36-03	36-04
	A	A	A
	27	20	22
	12	12	12



CONTACT LEGEND 16 12 8 4 0

MIL-C-5015 Connectors MS Series

Accessories



Plug Protection Cap



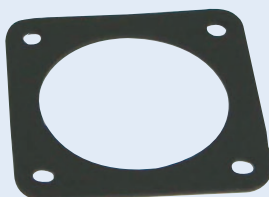
Receptacle Protection Cap



Cable Clamp



Telescoping Bushing



Sealing Gasket

Protection Caps

These metal dust caps are used to protect the plugs and receptacles.

They are furnished with sash chains and are available with bead chains.

MS3057 Cable Clamp

MS3057 style cable clamp was designed for use with jacketed cable or wire protected by tubing. Both clamping halves float maximum strain relief. For unjacketed cable or wires, Use corresponding MS3420 telescoping bushing. Telescoping bushings keep dirt, oil and moisture out of end bell.

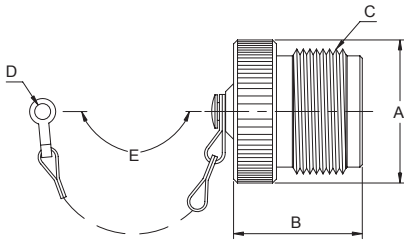
Sealing Gasket

Sealing Gasket is being supplied separately

MIL-C-5015 Connectors MS Series

Accessories Dimension

Plug Protection Cap MS25042



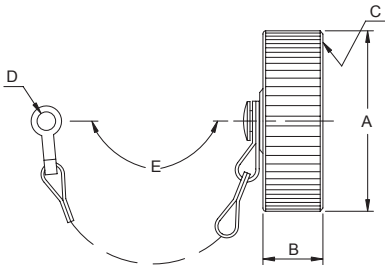
Part Number	Size	Ø A Max	Ø B Max	C Thread 2A	Ø D -0.3	E Approx
MS25042-10D	10S,10SL	18.5	17.2	5/8-24 NEF	4.2	102
MS25042-12D	12S,12	20.4	21.4	3/4-20 NEF	4.2	114
MS25042-14D	14S,14	23.6	21.4	7/8-20 NEF	4.2	114
MS25042-16D	16S,16	26.0	21.4	1-20 NEF	4.2	114
MS25042-18D	18	29.9	21.4	1/8-18 NEF	4.2	114
MS25042-20D	20	33.1	21.4	1/4-18 NEF	4.2*	127
MS25042-22D	22	36.2	21.4	3/8-18 NEF	4.2*	127
MS25042-24D	24	39.4	21.4	1/2-18 NEF	4.2*	140
MS25042-28D	28	45.7	21.4	3/4-18 NS	4.2*	197
MS25042-32D	32	52.0	21.4	2-18 NS	4.2**	197
MS25042-36D	36	59.0	21.4	1/4-16 UN	4.2**	197

These externally threaded metal dust caps are used to protect the MS3106 and MS3108 plugs.

Material is aluminum alloy. They are furnished with sash chains and are available with bead chains.

Optional termination holes are also available. (*5.0) (**5.8)

Receptacle Protection Cap MS25043



Part Number	Size	Ø A Max	Ø B Max	C Thread 2A	Ø D -0.3	E Approx
MS25043-10D	10S,10SL	20.2	15.8	5/8-24 NEF	4.2	102
MS25043-12D	12S,12	23.4	15.8	3/4-20 NEF	4.2	114
MS25043-14D	14S,14	27.9	15.8	7/8-20 NEF	4.2	114
MS25043-16D	16S,16	29.8	15.8	1-20 NEF	4.2	114
MS25043-18D	18	32.2	15.8	1 1/8-18 NEF	4.2	114
MS25043-20D	20	36.3	15.8	1 1/4-18 NEF	4.2	127
MS25043-22D	22	39.9	15.8	1 3/8-18 NEF	4.2	127
MS25043-24D	24	43.7	15.8	1 1/2-18 NEF	4.2*	140
MS25043-28D	28	50.0	15.8	1 3/4-18 NS	4.2*	197
MS25043-32D	32	56.5	15.8	?2-18 NS	4.2**	197
MS25043-36D	36	61.5	15.8	2 1/4-16 UN	4.2**	197

These internally threaded metal dust caps are used to protect MS3100, MS3101 and MS3102 receptacles.

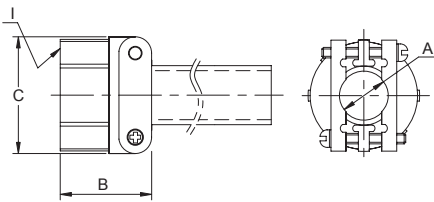
Metal is aluminum alloy. They are furnished with sash chains and are available with bead chains.

Optional termination holes are also available. (*4.58) (**5.00)

MIL-C-5015 Connectors MS/DS Series

Accessories Dimension

Cable Clamp MS3057

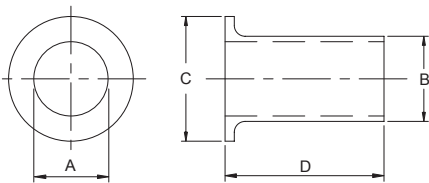


Part Number	Size	Ø A ±0.4	B ±0.8	Ø C ±0.8	I Thread-2B
MS3057-4A	10SL,12S	5.6	20.3	23.3	5/8-24 NEF
MS3057-6A	14S,14	7.9	22.5	25.9	3/4-20 NEF
MS3057-8A	16S,16	11.1	24.4	28.9	7/8-20 NEF
MS3057-10A	18	14.3	23.6	32.2	1-20 NEF
MS3057-12A	20,22	15.9	23.6	37.8	1 3/16-18 NEF
MS3057-16A	24,28	19.1	26.0	43.4	1 7/16-18 NEF
MS3057-20A	32	23.8	27.7	52.1	1 3/4-18 NS
MS3057-24A	36	31.8	29.2	57.3	2-18 NS

MS3057 style cable clamp was designed for use with jacketed cable or wire protected by tubing.

Both clamping halves float maximum strain relief. for unjacketed cable or wires, use corresponding MS3420 telescoping bushing. To order clamp without bushing, add-1 to the P/N.

Telescoping Bushing MS3420



Part Number	Size	Ø A Max	Ø B Max	Ø C	D
MS3420-4	10SL,12S	5.6	7.7	12.8	69.9
MS3420-6	14S,14	7.9	10.9	15.7	66.7
MS3420-8	16S,16	11.1	14.0	18.9	63.5
MS3420-10	18	14.3	15.6	22.6	60.3
MS3420-12	20,22	15.9	18.8	27.5	57.2
MS3420-16	24,28	19.1	23.6	33.4	54.0
MS3420-20	32	23.8	31.5	40.6	50.8
MS3420-24	36	31.8	34.7	46.9	47.6

Telescoping grand bushings (used with 3057 clamp) keep dirt, oil and moisture out of endbell.

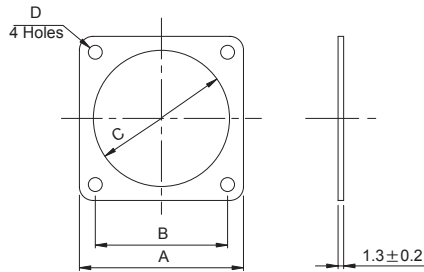
Taping or wrapping wires is eliminated since bushing protects wires going thru clamp.

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

MIL-C-5015 Connectors MS-A Class

Accessories Dimension

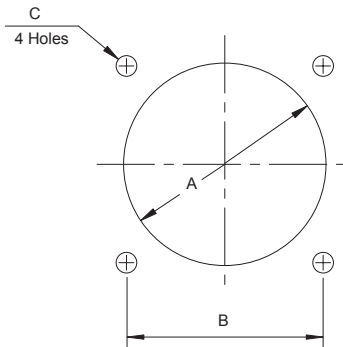
Sealing Gasket BMA 31



Part Number	Shell Size	□ A	□ B	∅ C	D +0.2
BMA31-10	10S,10SL	25.40	18.26	14.9	3.2
BMA31-12	12S,12	27.79	20.62	16.4	3.2
BMA31-14	14S,14	30.18	23.01	20.4	3.2
BMA31-16	16S,16	32.54	24.61	23.0	3.2
BMA31-18	18	34.94	26.97	25.9	3.2
BMA31-20	20	38.10	29.36	29.1	3.2
BMA31-22	22	41.28	31.75	32.0	3.2
BMA31-24	24	44.45	34.93	35.3	3.8
BMA31-28	28	50.80	39.67	41.5	3.8
BMA31-32	32	57.15	44.45	47.5	4.6
BMA31-36	36	63.50	49.23	54.7	4.6

The flat gasket of synthetic rubber material is provided to take complete advantage of waterproof and pressure sealing features. It is use with the flange mounted receptacle.

Panel Mounting Hole(Reference)



Shell Size	∅ A ±0.5	□ B ±0.12	C +0.2
10SL	17.5	18.26	3.2
12S	18.5	20.62	3.2
12	18.5	20.62	3.2
14S	22.0	23.01	3.2
14	22.0	23.01	3.2
16S	25.0	24.61	3.2
16	25.0	24.61	3.2
18	30.0	26.97	3.2
20	33.0	29.36	3.2
22	35.0	31.75	3.2
24	39.0	34.93	3.8
28	45.0	39.67	3.8
32	52.0	44.45	4.6
36	59.0	49.23	4.6

MIL-C-5015 Connectors

MS Basic Construction

MIL-C-5015 connectors meet the latest performance requirements of MIL-C-5015.

These connectors represent well-proven electrical capability at an acceptable cost for most equipment where durability is important. MIL-C-5015 features threaded coupling & single key & keyway polarization representing maximum simplicity in design. Applications include industrial machines, military ground support equipment, ordnance & shipboard installation. MIL-C-5015 connectors are available in classes A, B, E/F, R, and also offer a range of pre-earth connectors.

Therefore, you will always find the right connector in Renhotec, with us, for conditions & performance requirements you may have.

1. Characteristic

Insulation resistance.	5,000 Mega ohms minimum(at 25 °C)
Temperature range	-55°C to 125°C
Durability	500 Cycle connection/Disconnection

2. Dielectric with standing voltage

Service rating	Test voltage AC(rms)	Operating voltage	
		AC	DC
Inst	1,000	200	250
A	2,000	500	700
D	2,800	900	1,250
E	3,500	1,250	1,750
B	4,500	1,750	2,450
C	7,000	3,000	4,200

3. Contact engagement and seperation forces

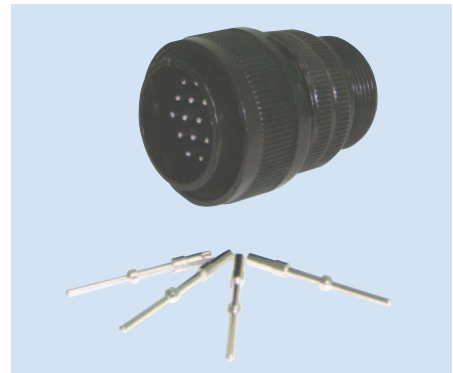
Contact mating end size	Minimum separation force(ounce)	Maximum average engagement force (ounce)	Maximum average engagement force (ounce)
#16	2	24	30
#12	3	24	30
#8	5	-	160
#4	10	-	240
#0	15	-	320

4. Electrical data

Contact size	Pin contact Diam,	Solder Pot Diam,	Rated Current (Mated with insulators)	Contact resistance	
				Test current DC A	Potential Drop(Max) mV
#16	1.6	1.9	13A	13A	49
#12	2.4	3.0	23A	23A	42
#8	3.6	5.4	46A	46A	26
#4	5.7	8.4	80A	80A	23
#0	9.1	12.2	150A	150A	21

5. Wire range accommodations

Size	A.W.G	Wire normal square size(mm²)	Dielectric material outer diam.
#16	#22~#16	≤1.3	1.7~3.3
#12	#14~#12	≤3.5	2.9~4.3
#8	#10~#8	≤8.0	4.2~6.4
#4	#6~#4	≤22.0	7.0~9.4
#0	#2~#0	≤50.0	10.6~14.0



MIL-C-5015 Connectors MS/DS Series

How to order

MIL-C-5015 (Solder Contacts)

<u>MS</u>	<u>3102</u>	<u>A</u>	<u>18 - 10</u>	<u>P</u>	<u>W</u>	<u>XXX</u>
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
						<u>8</u>

- Connector Type
MS - designates Military Standard
DS - MIL- C-5015 Europe use
- Connector Style
3100- wall mounting receptacle
3101- cable connecting plug
3102- box mounting receptacle
3106- straight plug
3108- 90° Right angle plug
- Service Class
A - General purpose, Solid Endbell
E - Environmental resisting, with grommet seal & strain relief back shell
F - Environmental resisting with grommet seal & strain relief back shell
3106F and 3108E style include a front 'O' ring seal
R - Environmental resisting with grommet seal, light weight and shorter
Overall length 310R style include a front 'O' ring seal
5. Shell size and insert arrangement - see tables, page 26.27
- Contact Types
P- designates pin contact, (+) Male
S- designates socket contact, (-) Female
- Insert Rotation
No suffix-Normal
"W", "X", "Y", or "Z" - See page 26.27
- Plating information
No suffix - Olive Drab Zinc
CD - Cadmium
C1 - Cobalt (Without +6 Cr)
621 - Black Zinc
689 - Electro-less Nickel
426 - Electro-less Nickel & gold flash contacts

MIL-C-5015 (Crimp Contacts)

<u>MS</u>	<u>4102</u>	<u>A</u>	<u>18 - 10</u>	<u>P</u>	<u>W</u>	<u>XXX</u>
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
						<u>8</u>

- Connector Type
MS - designates Military Standard
- Connector Style
4100 - wall mounting receptacle
4101 - cable connecting plug
4102 - box mounting receptacle
4106 - straight plug
4108 - 90° Right angle plug
- Service Class
A - General purpose, Solid Endbell
E - Environmental resisting, with grommet seal & strain relief back shell
F - Environmental resisting with grommet seal & strain relief back shell
3106F and 3108E style include a front 'O' ring seal
R - Environmental resisting with grommet seal, light weight and shorter
Overall length 310R style include a front 'O' ring seal
5. Shell size and insert arrangement - see tables, page 26.27
- Contact Types
P- designates pin contact, (+) Male
S- designates socket contact, (-) Female
- Insert Rotation
No suffix - Normal
"W", "X", "Y", or "Z" - See page 26.27
- Plating information
No suffix - Olive Drab Zinc
CD - Cadmium
C1 - Cobalt (Without +6 Cr)
621 - Black Zinc
689 - Electro-less Nickel
426 - Electro-less Nickel & gold flash contacts