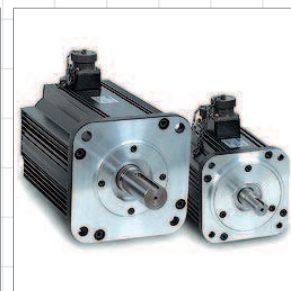


# Amphenol®

Military standard connectors

Bayonet coupling connectors

High tension connectors



Amphenol Daeshin Korea



# Amphenol 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.

Amphenol Industrial Operations manufactures five classes of connectors to meet different requirements.

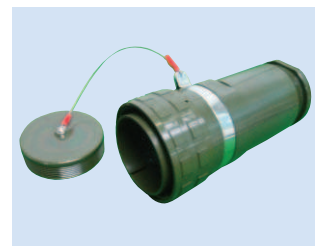
Class designations and brief descriptions are listed below.

**A** - Solid Shell - for general, non-environmental applications.

**B** - Split end bell, for general, non-environmental applications.

**E/F** - Environmental Resisting with Strain Relief-designed for applications where the connector will be exposed to moisture, vibration, and rapid changes in pressure and temperature.

**R** - Lightweight Environmental Resisting-shorter in length and lighter in weight than the E and F classes, the MS-R offers a high degree of reliability under adverse conditions: recommended for new design applications.



## Amphenol 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.

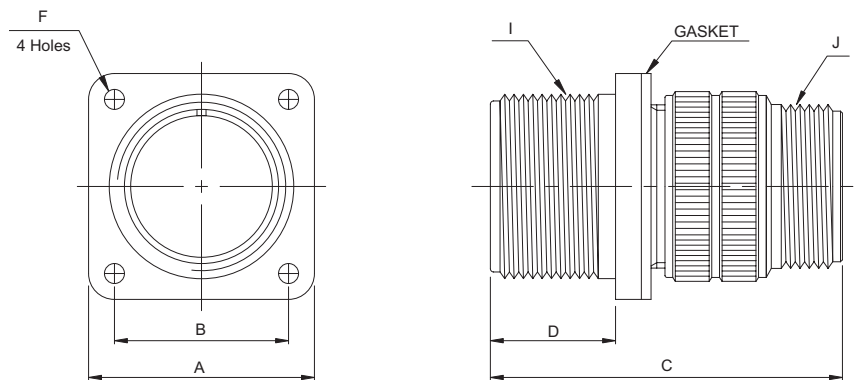
### Inserts:

Inserts are resilient synthetic rubber, offering high dielectric strength, high arc resistance to vibration. Proprietary design permits pressurization of either pin or socket insert.

# Amphenol 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.

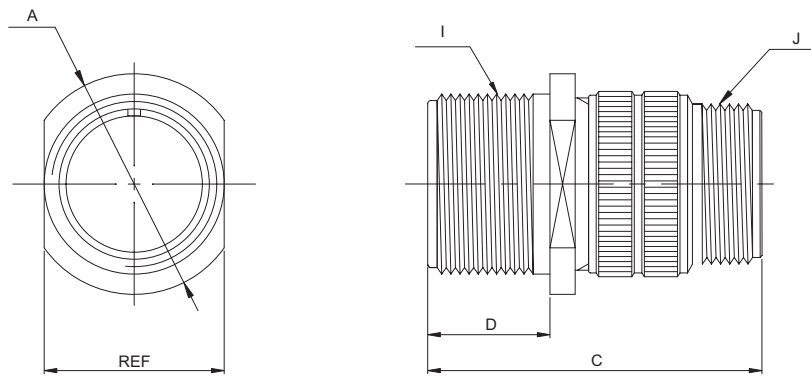
(mm)

Shell Size	□A ±0.79	□B ±0.12	C Max	D +0.79 -0.00	∅F +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

# Amphenol 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)

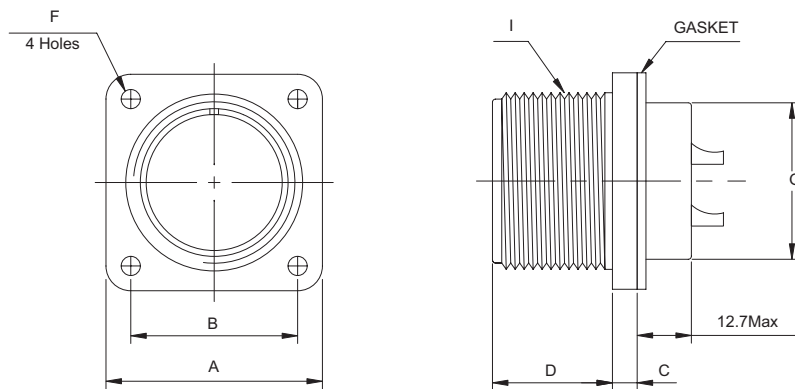
Shell Size	∅ A Max	C Max	D +0.79 -0.00	I Thread-2A (UNEF)	J Thread-2A (UNEF)
10SL	24.61	38.88	14.28	5/8-24 NEF	5/8-24 NEF
12S	26.97	42.87	14.28	3/4-20 NEF	5/8-24 NEF
12	26.97	52.37	19.05	3/4-20 NEF	5/8-24 NEF
14S	29.36	42.87	14.28	7/8-20 NEF	3/4-20 NEF
14	29.36	52.37	19.05	7/8-20 NEF	3/4-20 NEF
16S	31.75	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

# Amphenol 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.

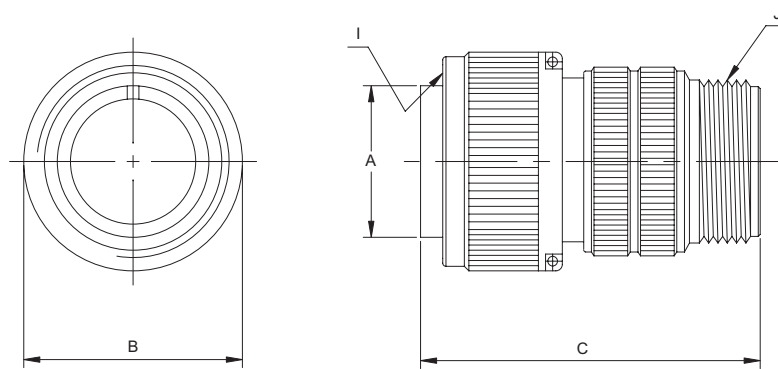
(mm)

Shell Size	□A ±0.79	□B ±0.12	C ±0.50	D +0.79 -0.00	∅F +0.25 -0.12	∅G 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

# Amphenol MIL-C-5015 Connectors

## MS3106A

### Straight Plug



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

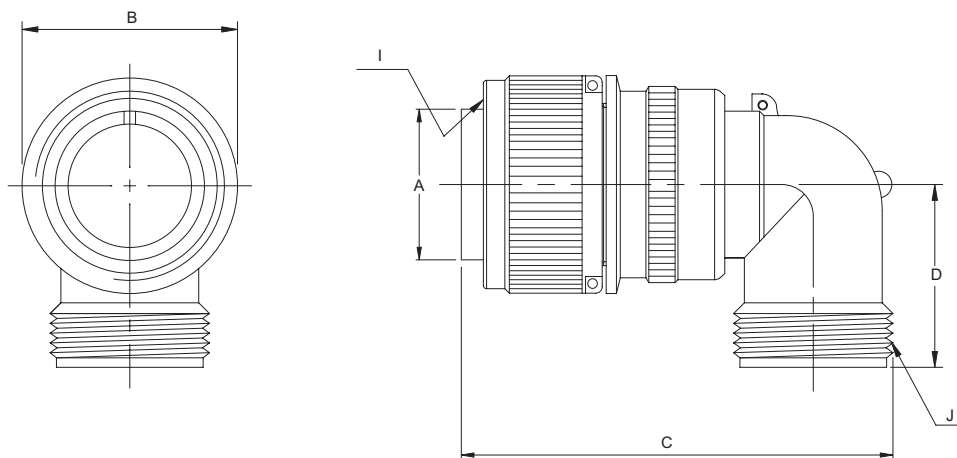
(mm)

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

# Amphenol 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



## Amphenol MIL-C-5015 Connectors MS/DS-E/F Class



Wall Mounting Receptacle



Cable connecting Receptacle



Box Mounting Receptacle



Straight Plug



Right Angle Plug

These MS connectors satisfy all the performance requirements of MIL-C-5015 and are recommended for conditions where vibration, moisture, pressure and/ or temperature and extreme. Strain relief is supplied on most shell sizes.

### Shells:

Shell components are fabricated from high grade aluminum alloy.

The standard hardware plating is electrically zinc plated finish with an olive drab chromate after treatment for corrosion resistance.

Consult Amphenol Daeshin for other plating options.

### Contacts:

Contacts are silver plated copper alloy for maximum corrosion resistance, maximum current carrying capacity and low millivolt drop.

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

### Inserts:

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

Proprietary design permits pressurization of either pin or socket insert.

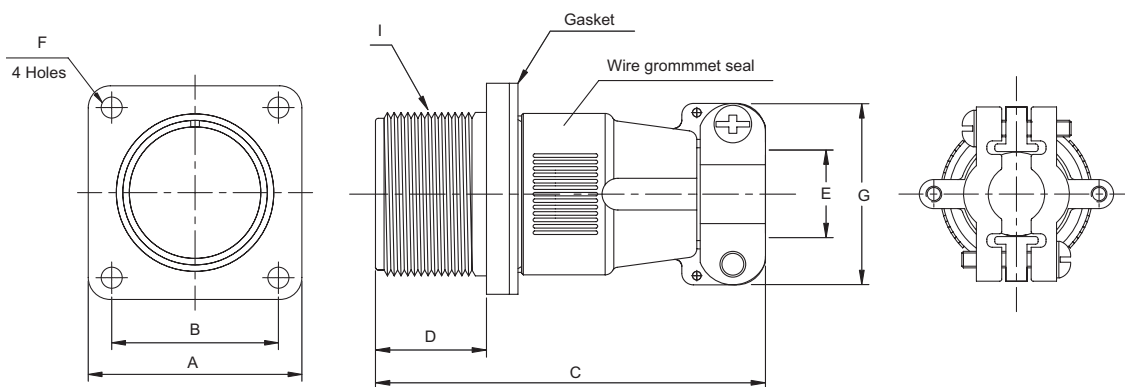
### Strain relief clamp:

Strain relief clamp minimizes tension at the solder well connection and provides a positive mechanical moisture seal.

Complete field serviceability is possible with the strain relief clamp.

# Amphenol MIL-C-5015 Connectors MS3100E(F)

## Wall Mounting Receptacle Integral Cable Clamp



MS3100E/F wall mounting receptacles are used to carry wires thru walls or bulkheads, or to provide a means of disconnection at a bulkhead MS 3100E/F receptacles mate with 3106 and 3108 plugs.

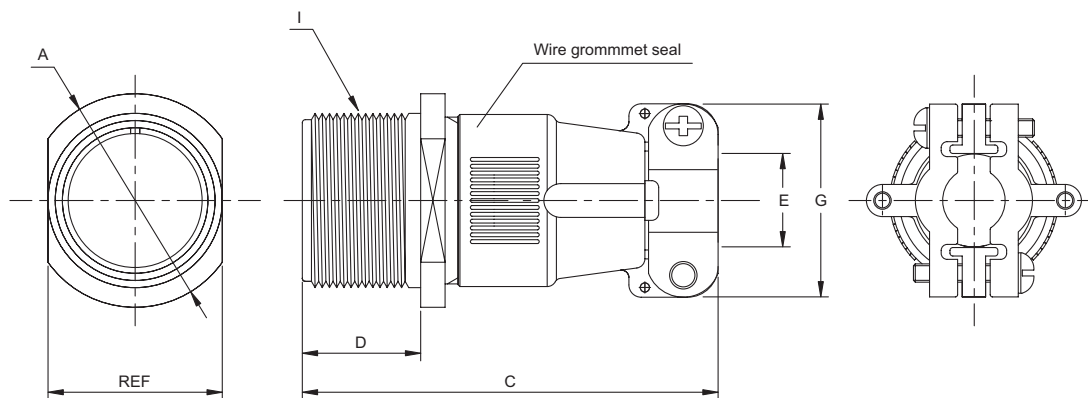
(mm)

Shell Size	□A ±0.79	□B ±0.12	C Max	D +0.79 -0.00	∅E Max	∅F +0.25 -0.12	∅G Max	I Thread-2A (UNEF)
10SL	25.40	18.26	57.15	14.28	7.90	3.05	23.0	5/8-24 NEF
12S	27.79	20.62	57.15	14.28	7.90	3.05	23.0	3/4-20 NEF
12	27.79	20.62	66.67	19.05	7.90	3.05	23.0	3/4-20 NEF
14S	30.18	23.01	57.15	14.28	11.2	3.05	26.0	7/8-20 NEF
14	30.18	23.01	66.67	19.05	11.2	3.05	26.0	7/8-20 NEF
16S	32.54	24.61	57.15	14.28	14.2	3.05	29.0	1-20 NEF
16	32.54	24.61	66.67	19.05	14.2	3.05	29.0	1-20 NEF
18	34.93	26.97	68.27	19.05	16.0	3.05	31.6	1 1/8-18 NEF
20	38.10	29.36	69.85	19.05	19.1	3.05	37.5	1 1/4-18 NEF
22	41.28	31.75	69.85	19.05	19.1	3.05	37.5	1 3/8-18 NEF
24	44.45	34.93	75.41	20.63	23.8	3.73	43.0	1 1/2-18 NEF
28	50.80	39.67	76.98	20.63	23.8	3.73	43.0	1 3/4-18 NS
32	57.15	44.45	76.98	22.23	32.0	4.39	52.0	2-18 NS
36	63.50	49.23	83.33	22.23	35.0	4.39	58.0	2 1/4-16 UN

# Amphenol MIL-C-5015 Connectors

## MS3101E(F)

### Cable Connecting Receptacle Integral Cable Clamp



MS3101E/F cable connecting receptacles are used for cable extension requirements, where mounting provisions are unnecessary. MS3101E/F receptacles mate with 3106 and 3108 plugs.

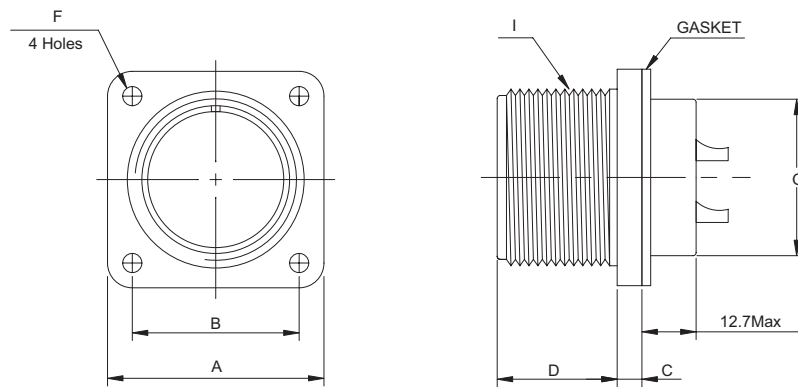
(mm)

Shell Size	A Max	C Max	D +0.79 -0.00	Ø E Max	Ø G Max	I Thread-2A (UNEF)
10SL	25.40	57.15	14.28	7.9	23.0	5/8-24 NEF
12S	27.79	57.15	14.28	7.9	23.0	3/4-20 NEF
12	27.79	66.67	19.05	7.9	23.0	3/4-20 NEF
14S	30.18	57.15	14.28	11.2	26.0	7/8-20 NEF
14	30.18	66.67	19.05	11.2	26.0	7/8-20 NEF
16S	32.54	57.15	14.28	14.2	29.0	1-20 NEF
16	32.54	66.67	19.05	14.2	29.0	1-20 NE
18	34.93	68.27	19.05	16.0	31.6	1 1/8-18 NEF
20	38.10	69.85	19.05	19.1	37.5	1 1/4-18 NEF
22	41.28	69.85	19.05	19.1	37.5	1 3/8-18 NEF
24	44.45	75.41	20.63	23.8	43.0	1 1/2-18 NEF
28	50.80	76.98	20.63	23.8	43.0	1 3/4-18 NS
32	57.15	76.98	22.23	32.0	52.0	2-18 NS
36	63.50	83.33	22.23	35.0	58.0	2 1/4-16 UN

# Amphenol MIL-C-5015 Connectors

## MS3102E

### Box Mounting Receptacle



MS3102E box mounting receptacles are used in junction boxes or as an integral part of equipment. These connectors are identical with 3102A in construction.

(mm)

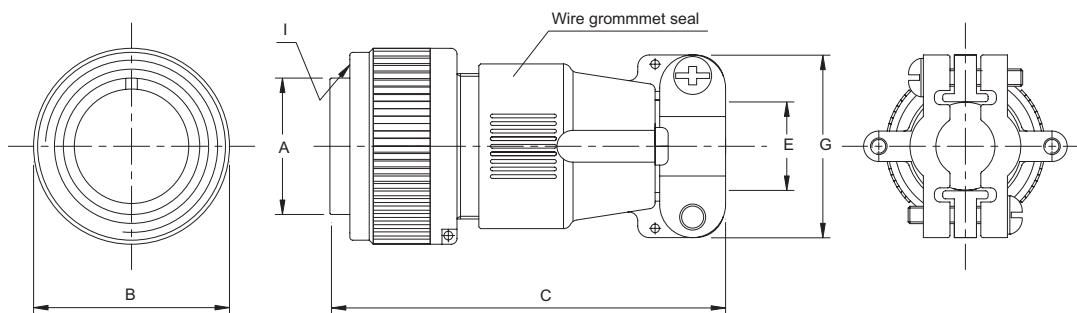
Shell Size	□A ±0.79	□B ±0.12	C ±0.5	D +0.79 -0.00	∅F +0.25 -0.12	∅G Max	I Thread-2A (UNEF)
10SL	25.40	18.26	3.0	14.28	3.05	16.0	5/8-24 NEF
12S	27.79	20.62	3.0	14.28	3.05	16.5	3/4-20 NEF
12	27.79	20.62	3.0	19.05	3.05	16.5	3/4-20 NEF
14S	30.18	23.01	3.0	14.28	3.05	20.0	7/8-20 NEF
14	30.18	23.01	3.0	19.05	3.05	20.0	7/8-20 NEF
16S	32.54	24.61	3.0	14.28	3.05	23.0	1-20 NEF
16	32.54	24.61	3.0	19.05	3.05	23.0	1-20 NEF
18	34.93	26.97	4.0	19.05	3.05	26.0	1 1/8-18 NEF
20	38.10	29.36	4.0	19.05	3.05	29.0	1 1/4-18 NEF
22	41.28	31.75	4.0	19.05	3.05	32.5	1 3/8-18 NEF
24	44.45	34.93	4.0	20.63	3.73	35.5	1 1/2-18 NEF
28	50.80	39.67	4.0	20.63	3.73	42.0	1 3/4-18 NS
32	57.15	44.45	4.0	22.23	4.39	48.0	2-18 NS
36	63.50	49.23	4.0	22.23	4.39	54.5	2 1/4-16 UN

# Amphenol MIL-C-5015 Connectors

## MS3106E(F)

### Straight Plug

### Integral Cable Clamp



MS3106E/F straight plugs mate with 3100,3101 and 3102 receptacles

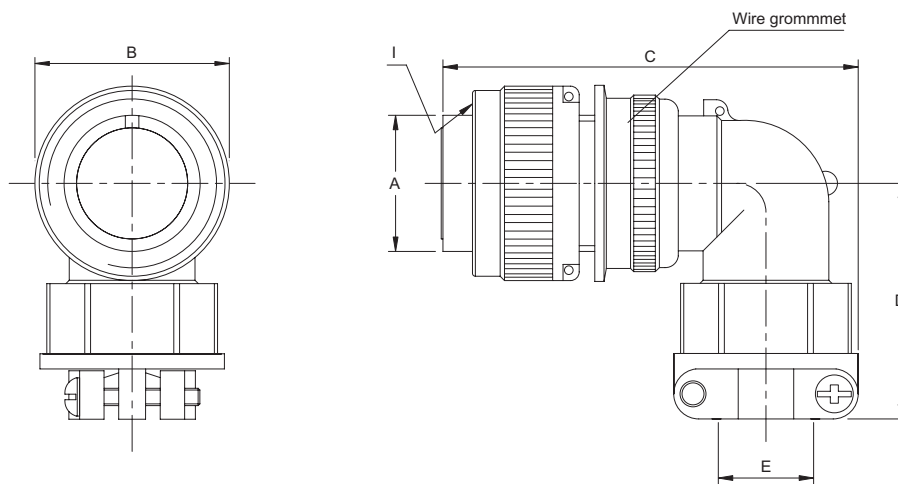
(mm)

Shell Size	A +0.00 -0.38	B Max	C Max	Ø E Max	Ø G Max	I Thread-2B (UNEF)
10SL	11.33	24.61	57.15	7.9	23.0	5/8-24 NEF
12S	14.10	26.97	57.15	7.9	23.0	3/4-20 NEF
12	14.10	26.97	66.67	7.9	23.0	3/4-20 NEF
14S	17.15	29.36	57.15	11.2	26.0	7/8-20 NEF
14	17.15	29.36	66.67	11.2	26.0	7/8-20 NEF
16S	20.45	31.75	57.15	14.2	29.0	1-20 NEF
16	20.45	31.75	66.67	14.2	29.0	1-20 NEF
18	23.62	34.13	68.27	16.0	31.6	1 1/8-18 NEF
20	26.67	37.31	69.85	19.1	37.5	1 1/4-18 NEF
22	29.85	40.48	69.85	19.1	37.5	1 3/8-18 NEF
24	33.02	43.66	75.41	23.8	43.0	1 1/2-18 NEF
28	38.61	50.01	76.98	23.8	43.0	1 3/4-18 NS
32	44.96	56.36	76.98	32.0	52.0	2-18 NS
36	50.29	62.71	83.33	35.0	58.0	2 1/4-16 UN

# Amphenol MIL-C-5015 Connectors

## MS3108E

### Right Angle Plug



MS3108E Right angle plugs are used where there is limited space and where wires must be brought at abrupt angles. This plug mates with 3100, 3101 and 3102 receptacles

(mm)

Shell Size	A +0.00 -0.38	B Max	C Max	D Max	Ø E Max	I Thread-2B (UNEF)
10SL	11.33	24.61	55.57	38.1	7.9	5/8-24 NEF
12S*	14.10	26.97	55.57	38.1	7.9	3/4-20 NEF
12*	14.10	26.97	64.28	38.1	7.9	3/4-20 NEF
14S	17.15	29.36	58.72	40.4	11.2	7/8-20 NEF
14	17.15	29.36	68.27	40.4	11.2	7/8-20 NEF
16S	20.45	31.75	61.11	42.8	14.2	1-20 NEF
16	20.45	31.75	70.63	42.8	14.2	1-20 NEF
18	23.62	34.13	72.23	45.2	16.0	1 1/8-18 NEF
20	26.67	37.31	82.55	50.0	19.1	1 1/4-18 NEF
22	29.85	40.48	82.55	50.8	19.1	1 3/8-18 NEF
24	33.02	43.66	94.46	53.9	23.8	1 1/2-18 NEF
28	38.61	50.01	94.46	55.5	23.8	1 3/4-18 NS
32	44.96	56.36	106.37	65.8	32.0	2-18 NS
36	50.29	62.71	109.14	69.0	35.0	2 1/4-16 UN

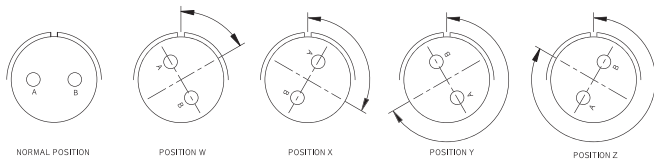
\* No Tooling



# Amphenol MIL-C-5015 Connectors

## MS- A,E/F,R Class

### Insert Arrangements & Alternate Positioning



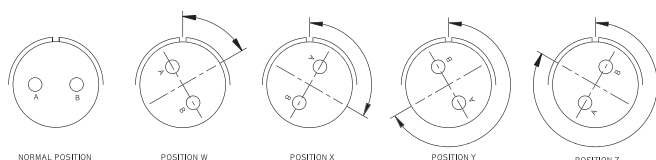
Contact Arrangement	Service Rating	Total Contacts	Contact Size					Alternate Position-Degrees			
			0	4	8	12	16	W	X	Y	Z
10SL-2	A	1					1	-	-	-	-
10SL-3	A	3					3	-	-	-	-
10SL-4	A	2					2	63	-	-	-
12S-1	A	2					2	-	-	-	-
12S-3	A	2					2	70	145	215	290
12S-5	D	1				1		-	-	-	-
14S-1	A	3					3	-	-	-	-
14S-2	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						-	-	-	-
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

## Amphenol MIL-C-5015 Connectors

### MS- A,E/F,R 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
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 Arrangement	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		-	-	-	-	















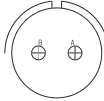
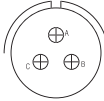

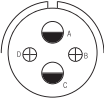

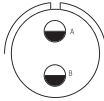


## Amphenol MIL-C-5015 Connectors

### MS- A,E/F,R 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	3	2	
Contact Size	16	16	16	12	12	12	

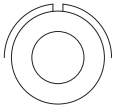

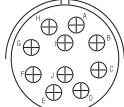
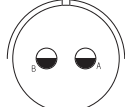
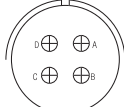
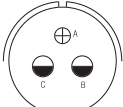

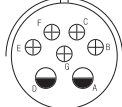
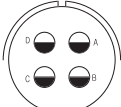
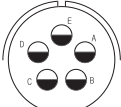
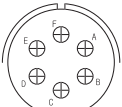
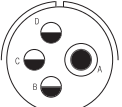
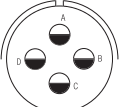
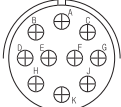
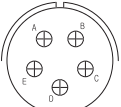



## Amphenol MIL-C-5015 Connectors

### MS- A,E/F,R Class

### Contact Arrangements

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

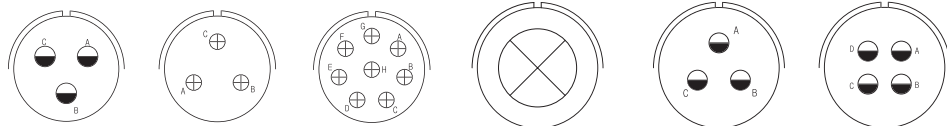
					
Insert Arrangement	16-12	16-13	18-1	18-3	18-4
Service Rating	A	A	B, C, F, G=A; Bal.=Inst	D	D
Number of Contacts	1	2	10	2	4
Contact Size	4	12	16	12	16
					
Insert Arrangement	18-5	18-8	18-9	18-10	18-11
Service Rating	D	A	Inst.	A	A
Number of Contacts	2 1	1 7	2 5	4	5
Contact Size	12 16	12 16	12 16	12	12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

## Amphenol MIL-C-5015 Connectors

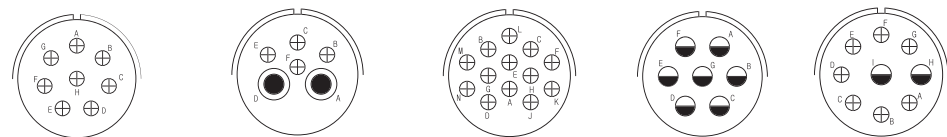
### MS- A,E/F,R Class

### 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



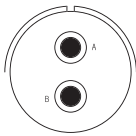
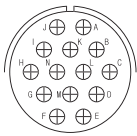
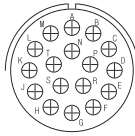
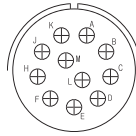
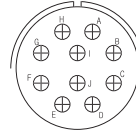
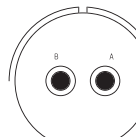
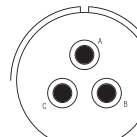
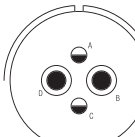
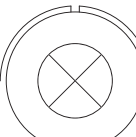
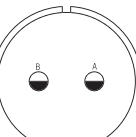
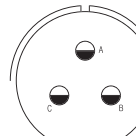
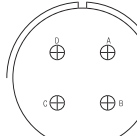
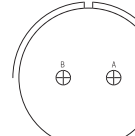
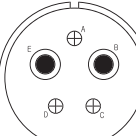
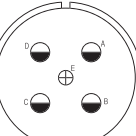

CONTACT LEGEND 16 12 8 4 0

# Amphenol MIL-C-5015 Connectors

## MS- A,E/F,R 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				

## Amphenol MIL-C-5015 Connectors

### MS- A,E/F,R Class

### Contact Arrangements

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

Insert Arrangement	22-14	22-15	22-18	22-19
Service Rating	A	D=E; A, B, C, E, F=A	A,B,F,G,H=D;C,D,E=A	A
Number of Contacts	19	5 1	8	14
Contact Size	16	12 16	16	16
Insert Arrangement	22-20	22-21	22-22	22-23
Service Rating	A	A	A	H=D; Bal.=A
Number of Contacts	9	1 2	4	8
Contact Size	16	0 16	8	12
Insert Arrangement	22-27	22-28	24-2	24-5
Service Rating	J=D; Bal.=A	A	D	A
Number of Contacts	1 8	7	7	16
Contact Size	8 16	12	12	16



CONTACT LEGEND

16 12 8 4 0

## Amphenol MIL-C-5015 Connectors

### MS- A,E/F,R Class

### Contact Arrangements

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

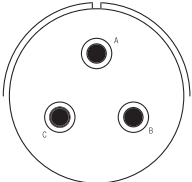
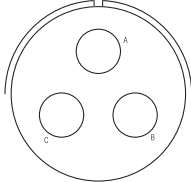
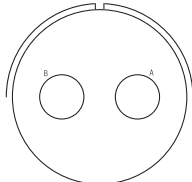
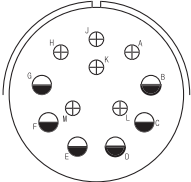
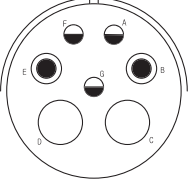
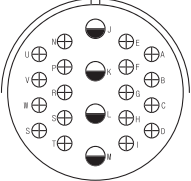
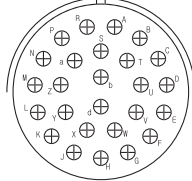
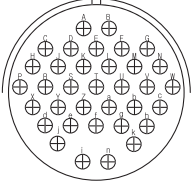
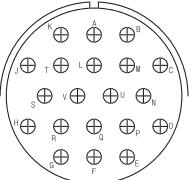
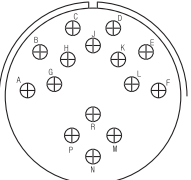
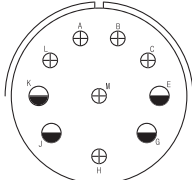
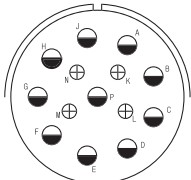

Insert Arrangement	24-6	24-7	24-9	24-10
Service Rating	A, G, H=D; Bal.=A	A	A	A
Number of Contacts	8	2 14	2	7
Contact Size	12	12 16	4	8
Insert Arrangement	24-11	24-12	24-20	24-22
Service Rating	A	A	D	D
Number of Contacts	3 6	2 3	2 9	4
Contact Size	8 12	4 12	1 16	8
Insert Arrangement	24-28	24-02	24-03	28-1
Service Rating	Inst.	A	A	A,J,E=D; Bal.=A
Number of Contacts	24	9	12	3 6
Contact Size	16	12	16	8 12
	CONTACT LEGEND 16 12 8 4 0			

## Amphenol MIL-C-5015 Connectors

### MS- A,E/F,R Class

### Contact Arrangements

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

				
Insert Arrangement	28-3	28-6	28-7	28-9
Service Rating	E	D	D	D
Number of Contacts	3	3	2	6 6
Contact Size	8	4	4	12 16
				
Insert Arrangement	28-10	28-11	28-12	28-15
Service Rating	G=D; Bal. A	A	A	A
Number of Contacts	2 2 3	4 18	26	35
Contact Size	4 8 12	12 16	16	16
				
Insert Arrangement	28-16	28-17	28-19	28-20
Service Rating	A	R=B;M,N,P=D;A to L=A	H,M=B;A,B=D;Bal.=A	A
Number of Contacts	20	15	4 6	10 4
Contact Size	16	16	12 16	12 16
				
	CONTACT LEGEND 16 12 8 4 0			

# Amphenol MIL-C-5015 Connectors

## MS- A,E/F,R Class

### Contact Arrangements

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

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

CONTACT LEGEND 16 12 8 4 0

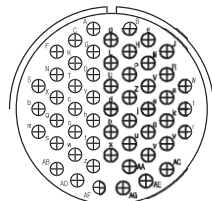


## Amphenol MIL-C-5015 Connectors

### MS Series A,E/F,R Class

### Contact Arrangements

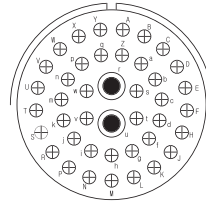
Front face of pin insert or rear face of socket insert illustrated



32-22

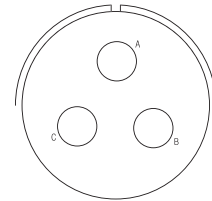
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

A  
54  
16



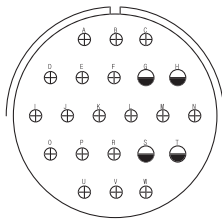
32-59

A  
2 40  
8 16



32-03

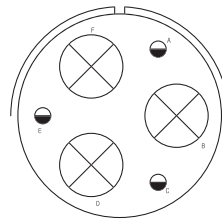
A  
3  
4



36-1

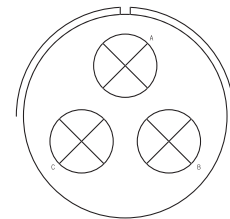
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

D  
4 18  
12 16



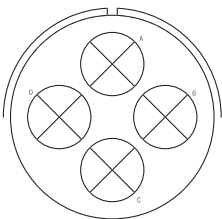
36-3

D  
3 3  
0 12



36-4

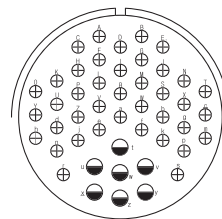
A=D; B, C=A  
3  
0



36-5

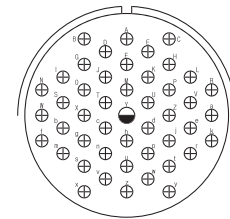
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

A  
4  
0



36-7

A  
7 40  
12 16



36-8

A  
1 46  
12 16



CONTACT LEGEND

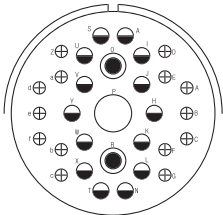
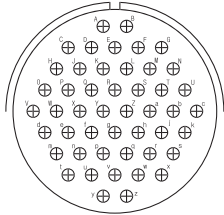
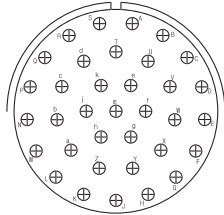
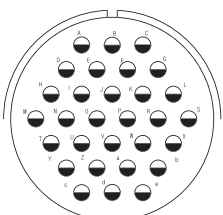
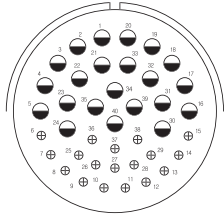
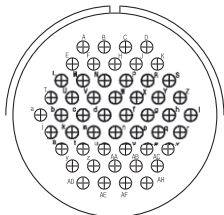
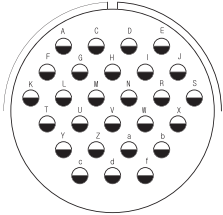
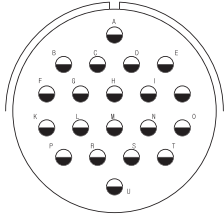
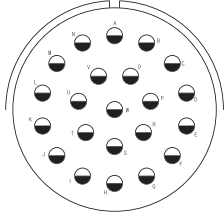

16 12 8 4 0

# Amphenol MIL-C-5015 Connectors

## MS Series A,E/F,R Class

### Contact Arrangements

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

			
Insert Arrangement	36-9	36-10	36-15
Service Rating	A	A	M=D; Bal.=A
Number of Contacts	1 2 14 14	48	35
Contact Size	4 8 12 16	16	16
			
Insert Arrangement	36-30	36-40	36-52
Service Rating	A	A	A
Number of Contacts	30	22 18	52
Contact Size	12	12 16	16
			
Insert Arrangement	36-02	36-03	36-04
Service Rating	A	A	A
Number of Contacts	27	20	22
Contact Size	12	12	12
			
	CONTACT LEGEND 16 12 8 4 0		



# Amphenol MIL-C-5015 Connectors

## MS Basic Construction

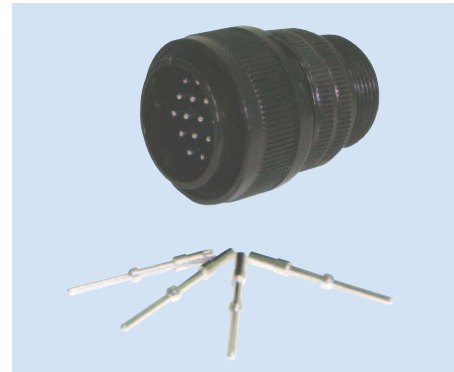
Amphenol MIL-C-5015 connectors meet the latest performance requirements of MIL-C-5015. These connectors represent well-proven electrical capability at an acceptable cost for most equipment where durability is important. MIL-C-5015 features threaded coupling & single key & keyway polarization representing maximum simplicity in design. Applications include industrial machines, military ground support equipment, ordnance & shipboard installation. Amphenol 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 Amphenol, with us, for conditions & performance requirements you may have.

### 1. Characteristics

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 separation 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(mm <sup>2</sup> )	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

## Amphenol MIL-C-5015 Connectors

### MS/DS Series

#### How to order

MIL-C-5015 (Solder Contacts)

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

1. Connector Type  
 MS - designates Military Standard  
 DS - Amphenol MIL- C-5015 Europe use
2. Connector Style  
 3100- wall mounting receptacle  
 3101- cable connecting plug  
 3102- box mounting receptacle  
 3106- straight plug  
 3108- 90° Right angle plug
3. 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
- 4, 5. Shell size and insert arrangement - see tables, page 26.27
6. Contact Types  
 P- designates pin contact, (+) Male  
 S- designates socket contact, (-) Female
7. Insert Rotation  
 No suffix-Normal  
 "W", "X", "Y", or "Z" - See page 26.27
8. 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)

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

1. Connector Type  
 MS - designates Military Standard
2. Connector Style  
 4100 - wall mounting receptacle  
 4101 - cable connecting plug  
 4102 - box mounting receptacle  
 4106 - straight plug  
 4108 - 90° Right angle plug
3. 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
- 4, 5. Shell size and insert arrangement - see tables, page 26.27
6. Contact Types  
 P- designates pin contact, (+) Male  
 S- designates socket contact, (-) Female
7. Insert Rotation  
 No suffix - Normal  
 "W", "X", "Y", or "Z" - See page 26.27
8. 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