

Amphenol

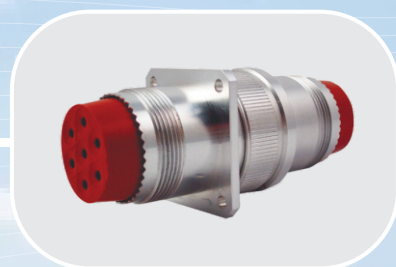
MIL-DTL-5015

Crimp Rear Release Contacts Series

01 Rev. 05/25

Amphenol

MIL-DTL-5015, CRIMP REAR RELEASE CONTACTS SERIES III



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Introduction

AMPHENOL BROADENS THEIR MS/STANDARD FAMILY OF CONNECTORS WITH THE MIL-DTL-5015 CRIMP REAR RELEASE SERIES.

This series provides an improved alternative to the older MIL-C-5015 solder type. It bridges the gap between an old connector standard and the environmental and high performance needs of current technologies. Thus, it provides for a minimum effort and high economy upgrade for existing applications.

These connectors are recommended for a wide range of applications, from Commercial/Industrial and Mass Transportation systems to the most stringent high reliability Military Vehicles, Heavy Equipment, Military Aircraft, Power Generation.

These connectors are available in wide range of shell materials and finishes. Aluminum shells are offered in both electroless nickel and olive drab cadmium to both commercial and MS callouts. In addition, we offer passivated stainless steel shells with both standard and firewall-rated inserts and carbon steel shells with firewall inserts.

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**MS3450
WALL MOUNTING
RECEPTACLE**

**MS3451
CABLE CONNECTING
RECEPTACLE**

**MS3452
BOX MOUNTING
RECEPTACLE**



**MS3454
JAM NUT RECEPTACLE**



**MS3456
PLUG WITH
THREADED COUPLING**



**MS3459
PLUG WITH
SELF-LOCKING
COUPLING NUT**



**COMMERCIAL QUICK
DISCONNECT PLUG
WITH/WITHOUT
LANYARD**

DESIGN CHARACTERISTICS

- Medium to heavy weight environmental cylindrical
- MS345() series intermateable with existing MIL-DTL-5015 solder or crimp versions on existing equipment
- Captive coupling nut mechanism, utilizes retaining rings in combination with "L" washers to prevent inadvertent disassembly
- Multiple interlock systems ensure permanent insert retention
- Positive control of dielectric separation with guaranteed ease of contact insertion
- Positive contact retention provided by a closely toleranced damage-proof metal retention clip
- Completely sealed against environmental extremes with:
 - Individual contact seals (conical risers on pin interface)
 - Interfacial seals between contacts
 - Peripheral gasket shell-to-shell seals
 - Redundant rear wire seals and insert-to-shell seals

CUSTOMER OPTIONS

- Seven mounting styles, in shell sizes 8 to 40
- Threaded coupling or self-locking plug (MS3459) with an internal ratcheting mechanism to prevent unmating due to vibration and shock, eliminating the need for safety wiring
- Proprietary quick disconnect plug, with or without lanyard available
- Classes include aluminum or stainless steel shells, or firewall capability
- MIL-Spec and custom proprietary versions available. Some styles are supplied to McDonnell Douglas. Specification BAN 7025, DC60 Series
- Accommodation of contact sizes 0 to 16
- Over 100 insert arrangement patterns available, accommodating from a minimum of 1 to a maximum of 85 circuits
- Alternate positioning available
- High power RADSOK socket contacts available

NOTE: MIL-C-5015 is superseded to MIL-DTL-5015 for all Amphenol rear release crimp type contacts.

Insert Arrangement	Service Rating	Total Contacts	Contact Size					Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16				0	4	8	12	16
8S-1	A	1					1	18-24	A/Inst.	10					10
10S-2	A	1					1	18-27	D	3				2	1
10SL-3	A	3					3	18-28	D	3				2	1
10SL-4	A	2					2	20-2	D	1	1				
12S-1	A	2					2	20-4	D	4				4	
12S-2	A	2					2	20-7	D/A	8					8
12S-3	A	2					2	20-8	Inst.	6			2		4
12S-4	D	1					1	20-14	A	5			2	3	
12-5	D	1				1		20-15	A	7				7	
14S-2	Inst.	4					4	20-16	A	9				2	7
14-3	A	1			1			20-17	A	6				5	1
14S-5	Inst.	5					5	20-18	A	9				3	6
14S-6	Inst.	6					6	20-19	A	3			3		
14S-7	A	3					3	20-21	A	9				1	8
14S-9**	A	2					2	20-22	A	6			3		3
14S-10	Inst.	4					4	20-24	A	4			2		2
14S-11	Inst.	4					4	20-27	A	14					14
14S-12	A	3					3	20-29	A	17					17
14S-13	A	3					3	20-32	D/A	8					8
16S-1	A	7					7	20-33	A	11					11
16-2*	E	1				1		22-2	D	3			3		
16S-8	A	5					5	22-5	D	6				2	4
16-9	A	4				2	2	22-6*	D	3			2		1
16-10	A	3				3		22-7*	E	1	1				
16-11	A	2				2		22-10*	E	4					4
16-12	A	1		1				22-11*	B	2					2
16-13	A	2				2		22-14	A	19					19
18-1	A/Inst.	10					10	22-19	A	14					14
18-4	D	4					4	22-21	A	3	1				2
18-5	D	3				2	1	22-22	A	4			4		
18-6*	D	1		1				22-23	D/A	8				8	
18-8	A	8				1	7	22-30	A	19					19
18-9	Inst.	7				2	5	22-32	D	6				2	4
18-10**	A	4				4		24-2	D	7				7	
18-11	A	5				5		24-5**	A	16					16
18-12	A	6					6								
18-13	A	4			1	3									
18-15	A	4				4									
18-17	Inst.	7				2	5								
18-18	Inst.	7				2	5								
18-19**	A	10					10								
18-22**	D	3					3								
18-23	A/Inst.	10					10								

* Consult Amphenol for availability

** Inactive for new design

Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16
24-7	A	16				2	14
24-10	A	7			7		
24-11	A	9			3	6	
24-12	A	5		2		3	
24-15	A	16					16
24-20	D	11				2	9
24-22	D	4			4		
24-24	A	16					16
24-28	Inst.	24					24
28-1	D/A	9			3	6	
28-2	D	14				2	12
28-9	D	12				6	6
28-10	D/A	7		2	2	3	
28-11	A	22				4	18
28-12	A	26					26
28-13	A	26					26
28-15	A	35					35
28-17	B/D/A	15					15
28-19*	B/D/A	10				4	6
28-20	A	14				10	4
28-21	A	37					37
28-22	D	6		3			3
32-1	E/D	5	2			3	
32-6	A	23		2	3	2	16
32-7	Inst./A	35				7	28
32-9	D	14		2			12
32-13	D	23				5	18
32-15	D	8	2			6	
32-16	A	23		2	3	2	16
32-17	D	4		4			
32-19	E/D	5	2			3	

Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16
32-63	D	5		5			
32-73	A	46					46
36-3	D	6	3			3	
36-5	A	4	4				
36-6	A	6	2	4			
36-7	A	47				7	40
36-8	A	47				1	46
36-9	A	31		1	2	14	14
36-10	A	48					48
36-11	A	48					48
36-12	A	48					48
36-15	D/A	35					35
36-16	A	47				7	40
36-17	A	47				7	40
36-18	A	31		1	2	14	14
36-21	A	31		1	2	14	14
36-52	A	52					52
40-1	D	30				6	24
40-9	A	47			1	22	24
40-56	A	85					85

* Consult Amphenol for availability

** Inactive for new design

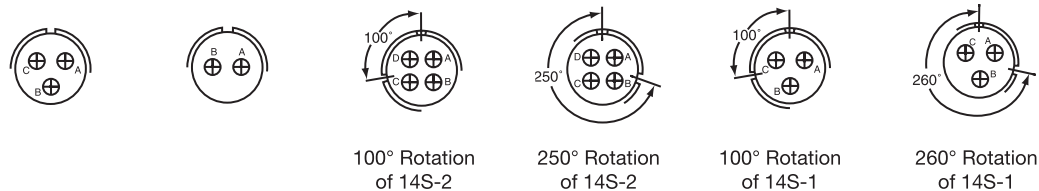
Front Face of Pin Insert or Rear Face of Socket Insert Illustrated



Insert Arrangement	8S-1	10S-2	10SL-3	10SL-4	12S-1	12S-2	12S-3
Service Rating	A	A	A***	A	A	A	A
Number of Contacts	1	1	3	2	2	2	2
Contact Size	16	16	16	16	16	16	16



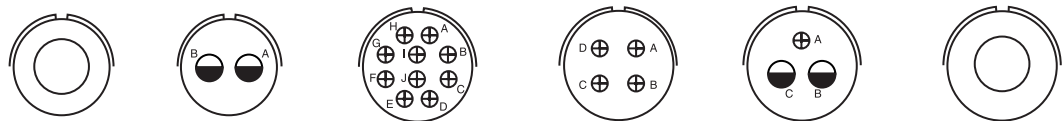
Insert Arrangement	12S-4	12-5	14S-2	14-3	14S-5	14S-6
Service Rating	D	D	Inst.	A	Inst.	Inst.
Number of Contacts	1	1	4	1	5	6
Contact Size	16	12	16	8	16	16



Insert Arrangement	14S-7	14S-9**	14S-10	14S-11	14S-12	14S-13
Service Rating	A	A	Inst.	Inst.	A	A
Number of Contacts	3	2	4	4	3	3
Contact Size	16	16	16	16	16	16



Insert Arrangement	16S-1	16-2*	16S-8	16-9	16-10	16-11
Service Rating	A	E	A	A	A	A
Number of Contacts	7	1	5	2	3	2
Contact Size	16	12	16	12	12	12



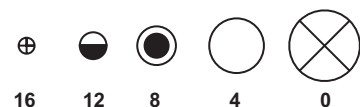
Insert Arrangement	16-12	16-13	18-1	18-4	18-5	18-6*
Service Rating	A	A	B, C, F, G = A; Bal. = Inst.	D	D	D
Number of Contacts	1	2†	10	4	2	1
Contact Size	4	12	16	16	12	4

* Consult Amphenol for availability.

** Inactive for new design

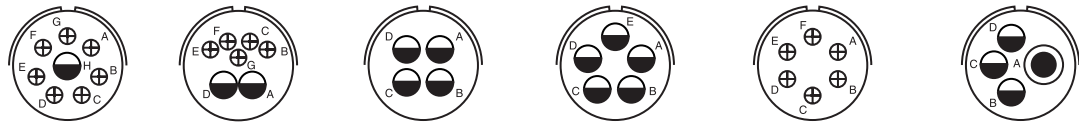
*** Service rating Inst. Class K

† One Iron contact and one Constantan contact

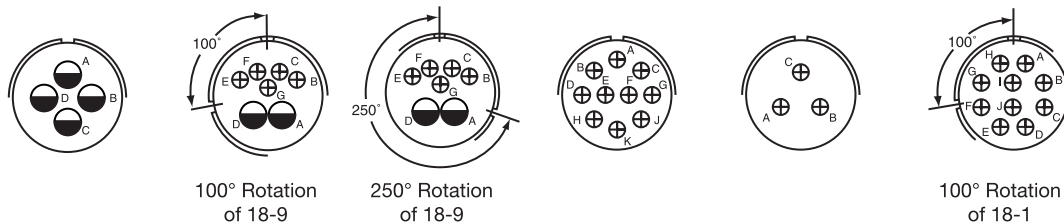


CONTACT LEGEND

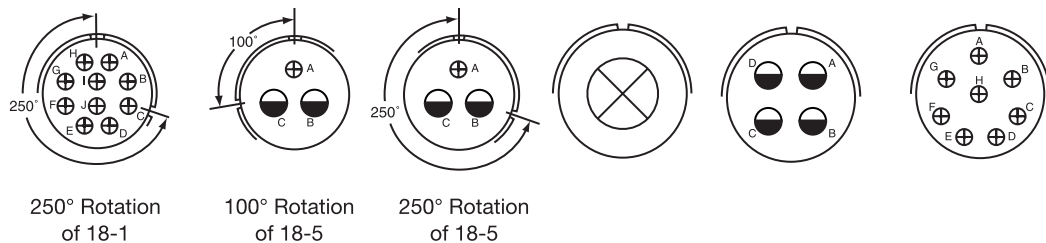
Front Face of Pin Insert or Rear Face of Socket Insert Illustrated



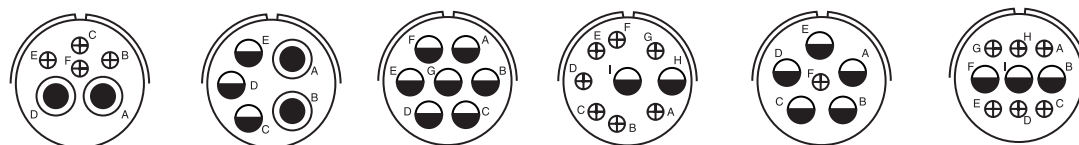
Insert Arrangement	18-8*		18-9		18-10**		18-11		18-12		18-13	
Service Rating	A		Inst.		A		A		A		A	
Number of Contacts	1	7	2	5	4		5		6		1	3
Contact Size	12	16	12	16	12		12		16		8	12



Insert Arrangement	18-15		18-17		18-18		18-19**		18-22**		18-23	
Service Rating	A		Inst.		Inst.		A		D		B, C, F, G = A; Bal. = Inst.	
Number of Contacts	4††		2	5	2	5	10		3		10	
Contact Size	12		12	16	12	16	16		16		16	



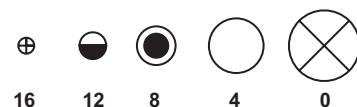
Insert Arrangement	18-24		18-27		18-28		20-2		20-4		20-7	
Service Rating	B, C, F, G = A; Bal. = Inst.		D		D		D		D		A, B, G, H = D; C, D, E, F = A	
Number of Contacts	10		2	1	2	1	1		4		8	
Contact Size	16		12	16	12	16	0		12		16	



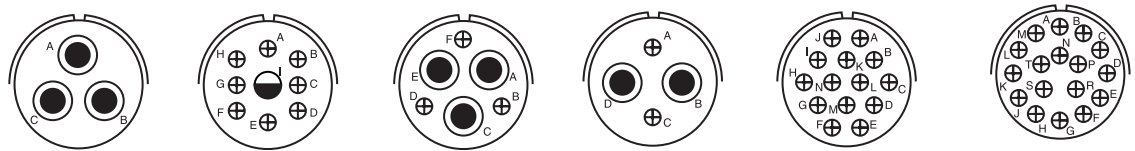
Insert Arrangement	20-8*		20-14		20-15		20-16		20-17		20-18	
Service Rating	Inst.		A		A		A		A		A	
Number of Contacts	2	4	2	3	7		2	7	5	1	3	6
Contact Size	8	16	8	12	12		12	16	12	16	12	16

* Consult Amphenol for availability.
 ** Inactive for new design
 †† A, C = Iron; B, D = Constantan

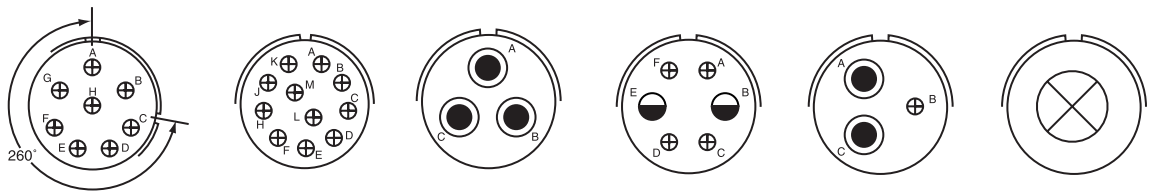
CONTACT LEGEND



Front Face of Pin Insert or Rear Face of Socket Insert Illustrated

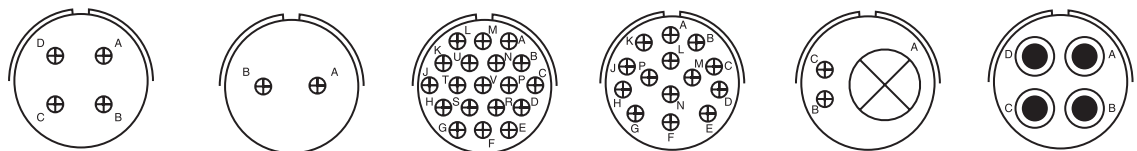


Insert Arrangement	20-19	20-21	20-22	20-24	20-27	20-29
Service Rating	A	A	A	A	A	A
Number of Contacts	3	1	8	3	2	2
Contact Size	8	12	16	8	16	16

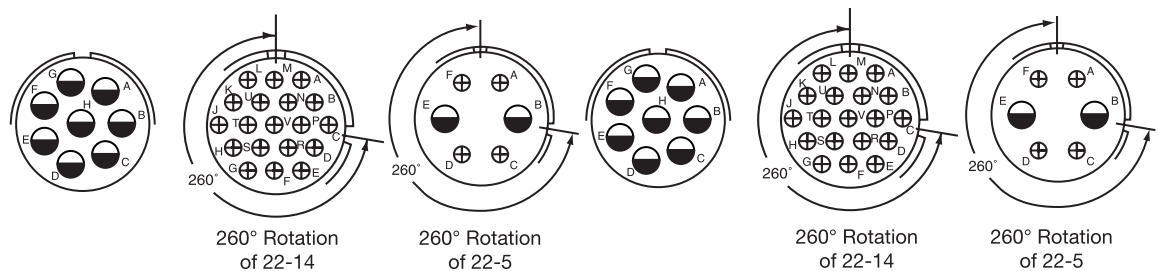


260° Rotation of 20-7

Insert Arrangement	20-32	20-33	22-2	22-5	22-6**	22-7*
Service Rating	A, B, G, H = D; Bal. = A	A	D	D	D	E
Number of Contacts	8	11	3	2	4	2
Contact Size	16	16	8	12	16	8



Insert Arrangement	22-10*	22-11*	22-14	22-19	22-21	22-22
Service Rating	E	B	A	A	A	A
Number of Contacts	4	2	19	14	1	2
Contact Size	16	16	16	16	0	16



260° Rotation of 22-14

260° Rotation of 22-5

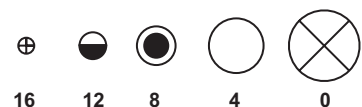
260° Rotation of 22-14

260° Rotation of 22-5

Insert Arrangement	22-23	22-30	22-32	22-33	22-34	22-35
Service Rating	H = D; Bal. = A	A	D	H = D; Bal. = A	A	D
Number of Contacts	8	19	2	4	8	19
Contact Size	12	16	12	16	12	16

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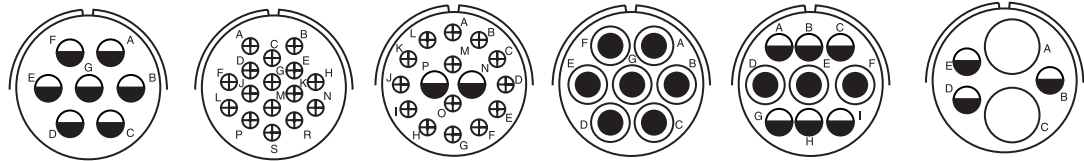
** Inactive for new design



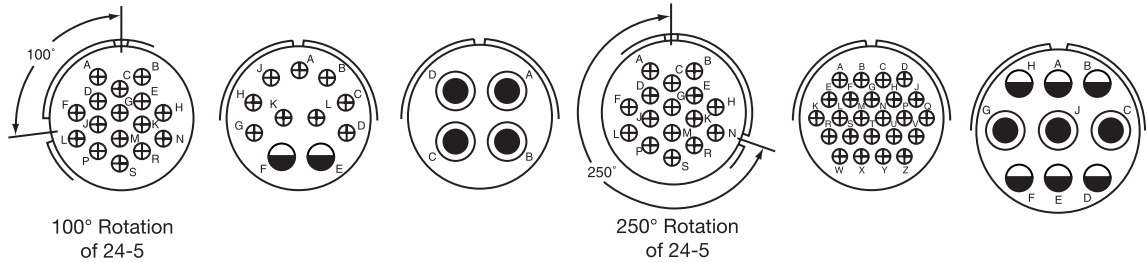
CONTACT LEGEND

Insert Arrangements

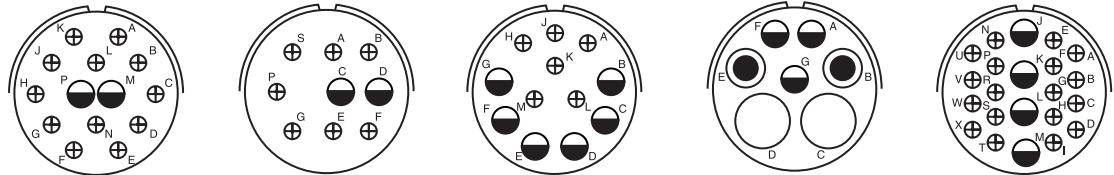
Front Face of Pin Insert or Rear Face of Socket Insert Illustrated



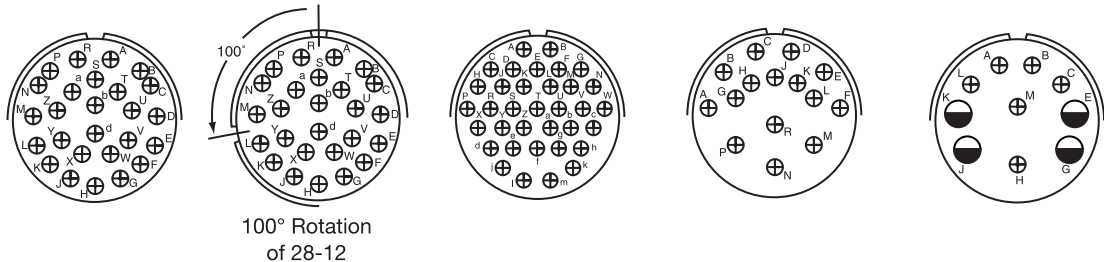
Insert Arrangement	24-2	24-5**	24-7	24-10	24-11	24-12
Service Rating	D	A	A	A	A	A
Number of Contacts	7	16	2 14	7	3 6	2 3
Contact Size	12	16	12 16	8	8 12	4 12



Insert Arrangement	24-15	24-20	24-22	24-24	24-28	28-1
Service Rating	A	D	D	A	Inst.	A, J, E = D; Bal. = A
Number of Contacts	16 1	9	4	16	24	2 7
Contact Size	16 8	16	8	16	16	12 6



Insert Arrangement	28-2	28-4*	28-9	28-10	28-11
Service Rating	D	G, P, S = E; Bal. = D	D	G = D, Bal. = A	A
Number of Contacts	2 12	2 7	6 6	2 2 3	4 18
Contact Size	12 16	12 16	12 16	4 8 12	12 16

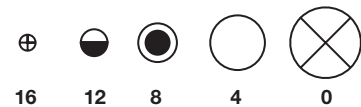


Insert Arrangement	28-12	28-13	28-15	28-17	28-19*
Service Rating	A	A	A	R = B; M, N, P = D; Bal. = A	H, M = B; A, B = D; Bal. = A
Number of Contacts	26	26	35	15	4 6
Contact Size	16	16	16	16	12 16

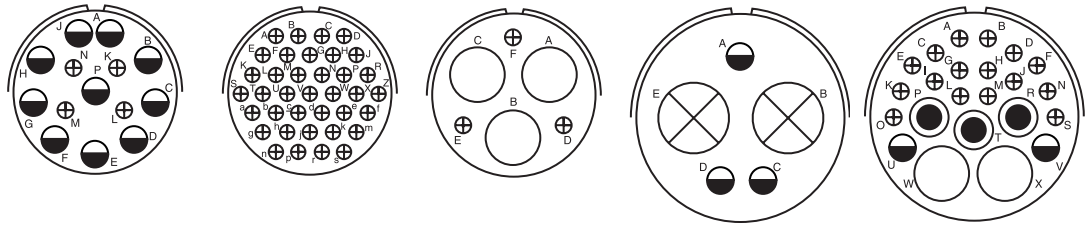
* Consult Amphenol for availability.

** Inactive for new design

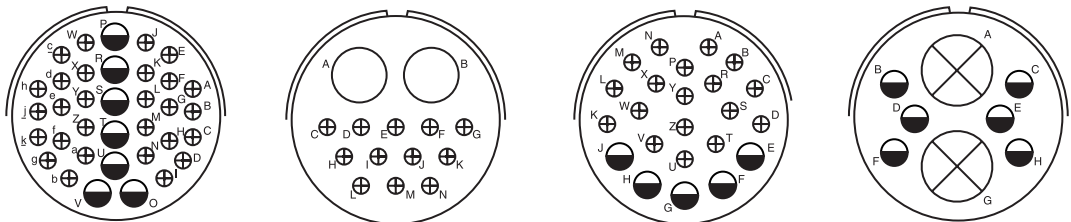
CONTACT LEGEND



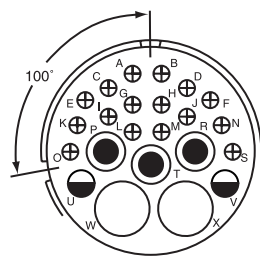
Front Face of Pin Insert or Rear Face of Socket Insert Illustrated



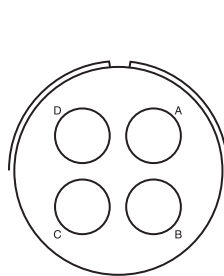
Insert Arrangement	28-20		28-21		28-22		32-1		32-6			
Service Rating	A		A		D		A = E; B, C, D, E = D		A			
Number of Contacts	10	4	37		3	3	2	3	2	3	2	16
Contact Size	12	16	16		4	16	0	12	4	8	12	16



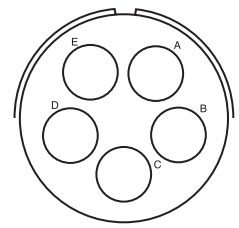
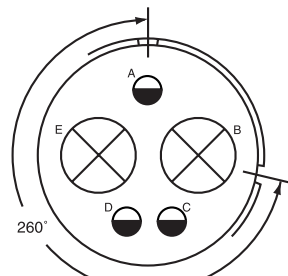
Insert Arrangement	32-7		32-9		32-13		32-15	
Service Rating	A, B, h, j = Inst.; Bal. = A		D		D		D	
Number of Contacts	7	28	2	12	5	18	2	6
Contact Size	12	16	4	16	12	16	0	12



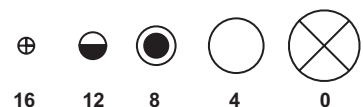
100° Rotation
of 32-6



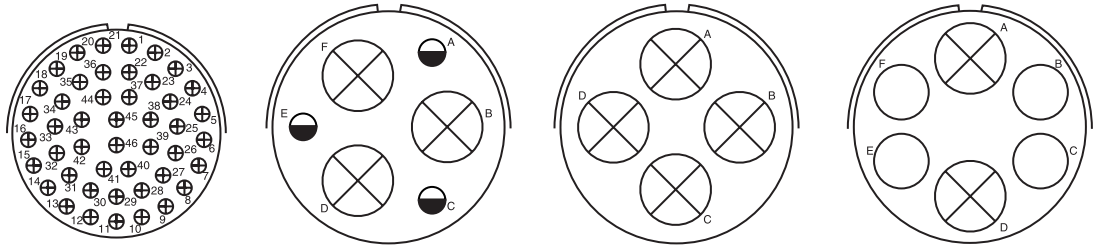
260° Rotation
of 32-1



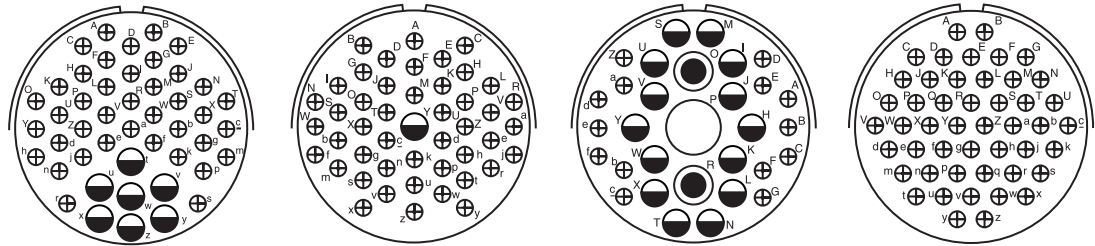
Insert Arrangement	32-16				32-17		32-19		32-63	
Service Rating	A				D		A = E, Bal. = D		D	
Number of Contacts	2	3	2	16	4		2	3	5	
Contact Size	4	8	12	16	4		0	12	4	



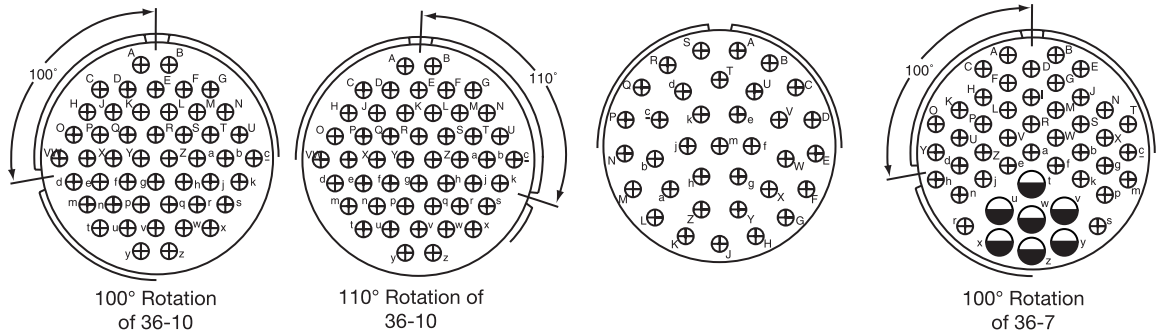
Front Face of Pin Insert or Rear Face of Socket Insert Illustrated



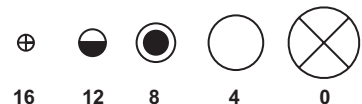
Insert Arrangement	32-73	36-3		36-5	36-6	
Service Rating	A	D		A	A	
Number of Contacts	46	3	3	4	2	4
Contact Size	16	0	12	0	0	4



Insert Arrangement	36-7		36-8		36-9				36-10
Service Rating	A		A		A				A
Number of Contacts	7	40	1	46	1	2	14	14	48
Contact Size	12	16	12	16	4	8	12	16	16

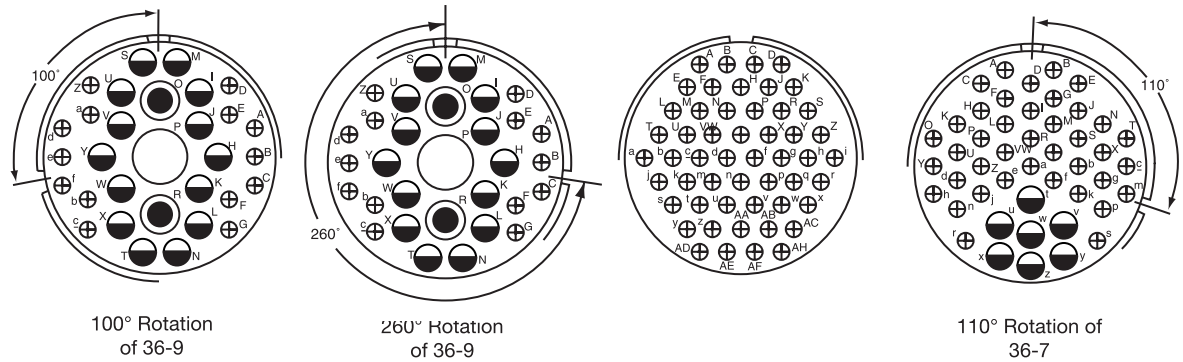


Insert Arrangement	36-11	36-12	36-15	36-16	
Service Rating	A	A	M = D, Bal. = A	A	
Number of Contacts	48	48	35	7	40
Contact Size	16	16	16	12	16

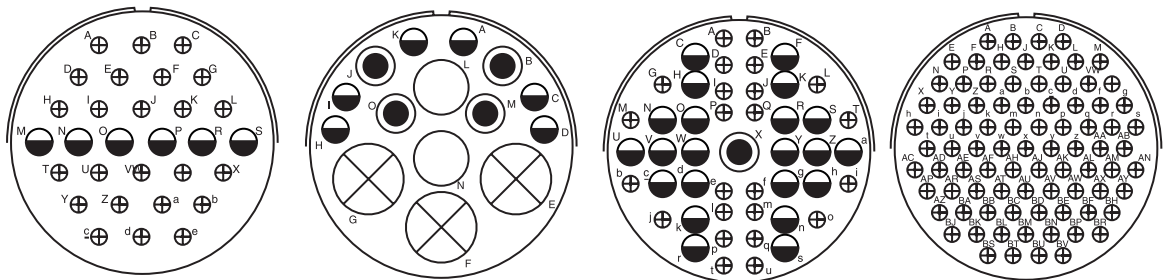


CONTACT LEGEND

Front Face of Pin Insert or Rear Face of Socket Insert Illustrated



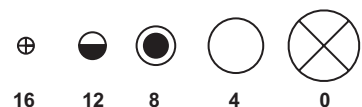
Insert Arrangement	36-18				36-21				36-52				36-17	
Service Rating	A				A				A				A	
Number of Contacts	1	2	14	14	1	2	14	14	52				7	40
Contact Size	4	8	12	16	4	8	12	16	16				12	16



Insert Arrangement	40-1		40-5*				40-9			40-56	
Service Rating	D		A				A			A	
Number of Contacts	6	24	3	2	4	6	1	22	24	85	
Contact Size	12	16	0	4	8	2	6	12	16	16	

* Consult Amphenol for availability.

CONTACT LEGEND



CLASS DESCRIPTIONS

MILITARY MIL-DTL-5015		AMPHENOL	
Class L*	Aluminum shell, electroless nickel finish, fluid resistant insert	Class A	Aluminum shell, black anodize finish, fluid resistant insert
Class W	Aluminum shell, cadmium olive drab finish, fluid resistant insert	Class F	Aluminum shell, electroless nickel finish, fluid resistant insert
Class LS	Stainless steel shell, passivated, fluid resistant insert	Class W	Aluminum shell, cadmium/olive drab finish, fluid resistant insert
Class KT**	Firewall, steel shell, cadmium olive drab finish, non-flammable hard dielectric and fluid resistant insert	Class FS	Stainless steel shell, passivated, fluid resistant insert
Class KS	Firewall, stainless steel shell, passivated, non-flammable hard dielectric and fluid resistant insert	Class KT	Firewall, steel shell, cadmium olive drab finish, non-flammable hard dielectric and fluid resistant insert
		Class KS	Firewall, stainless steel shell, passivated, non-flammable hard dielectric and fluid resistant insert
		Class DT	Aluminum shell, Durmalon (Nickle PTFE)
		Class DZ	Aluminum shell, Black Zinc Nickel*

* Class L inactivates older Class U (aluminum, electroless nickel)

** Class KT (ferrous alloy, cadmium/olive drab) inactivates older Class K (ferrous alloy, electroless nickel)

* Not available in size 36 or 40

PERFORMANCE SPECIFICATIONS

VOLTAGE RATING						
Altitude	Inst.	A	D	E	B	C
Sea Level	1000	2000	2800	3500	4500	7000
50,000 ft.	400	600	675	750	825	975
70,000 ft.	260	360	400	440	480	560
110,000 ft.	200	200	200	200	200	200

SHOCK

Wired, mated connectors are subjected to one shock in each of three mutually perpendicular axes with pulse of an approximate half sine wave of 50g magnitude for a duration of 11 milliseconds. All contacts wired in series circuit with 100 ±10 Milliampere of current flow.

OPERATING TEMPERATURE RANGE

Classes L, LS and KS have temperature range of -55°C (-75°F) to 200°C (392°F)

Classes W and KT have temperature range of -55°C (-75°F) to 175°C (347°F)

ENVIRONMENTAL SEAL

Wired, mated connectors with the specified accessory attached will meet the altitude immersion test specified in MIL-DTL-5015.

DURABILITY

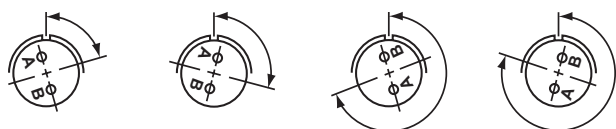
Minimum of 100 mating cycles.

I nsert Alternate Positioning

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

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

The charts give the W, X, Y, Z positions for the alternate rotations available for the insert arrangements of the rear release MIL-DTL-5015 series of connectors. If an insert arrangement number is not given, then there is no available alternate rotation for that pattern.



Position W Position X Position Y Position Z
View looking into front face of pin insert or rear of socket insert.

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

Degrees			
W	X	Y	Z
80	110	250	280

16-7	20-22	24-4	28-4	28-21	40-3
18-5	22-6	24-5	28-8	32-1	40-4
18-9	22-12	24-6	28-9	32-3	40-5
18-13	22-14	24-7	28-10	32-6	40-6
18-14	22-15	24-12	28-11	32-9	40-7
20-7	22-17	24-16	28-15	32-13	40-11
20-8	22-18	24-20	28-16	32-22	
20-9	22-19	24-21	28-17	36-7	
20-14	22-21	24-28	28-19	36-8	
20-16	24-1	28-1	28-20	40-2	

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

Insert Arrangement	Degrees			
	W	X	Y	Z
20-17	90	180	270	—
20-18	35	110	250	325
20-19	90	180	270	—
20-21	35	110	250	325
20-24	35	110	250	325
20-27	35	110	250	325
20-29	80	—	—	280
22-2	70	145	215	290
22-4	35	110	250	325
22-5	35	110	250	325
22-9	70	145	215	290
22-10	35	110	250	325
22-11	35	110	250	325
22-22	—	110	250	—
22-23	35	—	250	—
22-27	80	—	250	280
22-36	90	—	270	—
24-2	80	—	—	280
24-10	80	—	—	280
24-11	35	110	250	325
24-22	45	110	250	—
24-27	80	—	—	280
24-80	35	145	240	300

Insert Arrangement	Degrees			
	W	X	Y	Z
28-2	35	110	250	325
28-3	70	145	215	290
28-5	35	110	250	325
28-12	90	180	270	—
28-18	70	145	215	290
28-22	70	145	215	290
32-2	70	145	215	290
32-7	80	125	235	280
32-15	35	110	250	280
32-17	45	110	250	—
32-73	36	—	—	—
36-3	70	145	215	290
36-5	—	120	240	—
36-6	35	110	250	325
36-9	80	125	235	280
36-10	80	125	235	280
36-15	60	125	245	305
36-52	72	144	216	288
36-66	110	250	260	280
40-1	65	130	235	300
40-9	65	125	255	310
40-10	65	125	255	310
40-56	72	144	216	288
40-62	30	130	220	290

	1.	2.	3.	4.	5.	6.
MIL-DTL-5015 with rear release crimp contacts	Connector Type	Shell Style	Service class	Shell Size– Insert Arrangement	Contact Types	Alternate Positions
MILITARY	MS	3456	L	16S–8	P	W
COMMERCIAL	1944	6	F	16S–8	P	W

1. MILITARY CONNECTORY TYPE

MS Designates Military Standard

2. SHELL STYLE - THREADED COUPLING

3450	Wall mounting receptacle
3451	Cable connecting receptacle
3452	Box mounting receptacle
3454	Jam nut receptacle
3456	Straight plug
3459	Straight plug with self-locking coupling nut

3. SERVICE CLASS

L	Aluminum shell, electroless nickel finish, fluid resistant insert
W	Aluminum shell, cadmium olive drab finish, fluid resistant insert
LS	Stainless steel shell, passivated, fluid resistant insert

FIREWALL STYLES ONLY AVAILABLE FOR 3450, 3456, 3459 PER MIL SPEC:

KT	Firewall, steel shell, cadmium/olive drab finish, non-flammable hard dielectric and fluid resistant insert
KS	Firewall, stainless steel shell, passivated, non-flammable hard dielectric and fluid resistant insert

Note: Class L inactivates older Class U.
Class K is inactive and has been replaced by Class KT for all applications.

4. SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 3-11

First number represents Shell Size, second number is the Insert Arrangement.

5. CONTACT TYPE

P	Pin
S	Socket
A	Less pins
B	Less sockets

6. ALTERNATE POSITIONS

“W”, “X”, “Y”, “Z” designate that insert is rotated in its shell from normal position. No letter required for normal (no rotation) position. See page 13 for description of alternate positions.

1. COMMERCIAL CONNECTOR TYPE

1944 Designates Amphenol Commercial Series
1981 Designates self locking/Quick disconnect (+)(-) lanyard

2. SHELL STYLE - THREADED COUPLING

0	Wall mounting receptacle
1	Cable connecting receptacle
2	Box mounting receptacle
4	Jam nut receptacle
6	Straight plug

3. ELF LOCKING/QUICK DISCONNECT (981)

6	Straight plug with self-locking coupling nut
7	Quick disconnect plug with lanyard
8	Quick disconnect plug without lanyard

4. SERVICE CLASS

A	Aluminum shell, black anodize finish, fluid resistant insert (not MIL-Spec)
F	Aluminum shell, electroless nickel finish, fluid resistant insert
FS	Stainless steel shell, passivated, fluid resistant insert
RS	Fluid resistant insert
KT	Firewall, steel shell, cadmium/olive drab finish, non-flammable hard dielectric and fluid resistant insert
KS	Firewall, stainless steel shell, passivated, non-flammable hard dielectric and fluid resistant insert
DT	Aluminum shell, Durmalon (Nickle PTFE)
DZ	Aluminum shell, Black Zinc Nickel*

* Not available in size 36 or 40

4. SHELL SIZE & INSERT ARRANGEMENT SEE PAGES 3-11

First number represents Shell Size, second number is the Insert Arrangement.

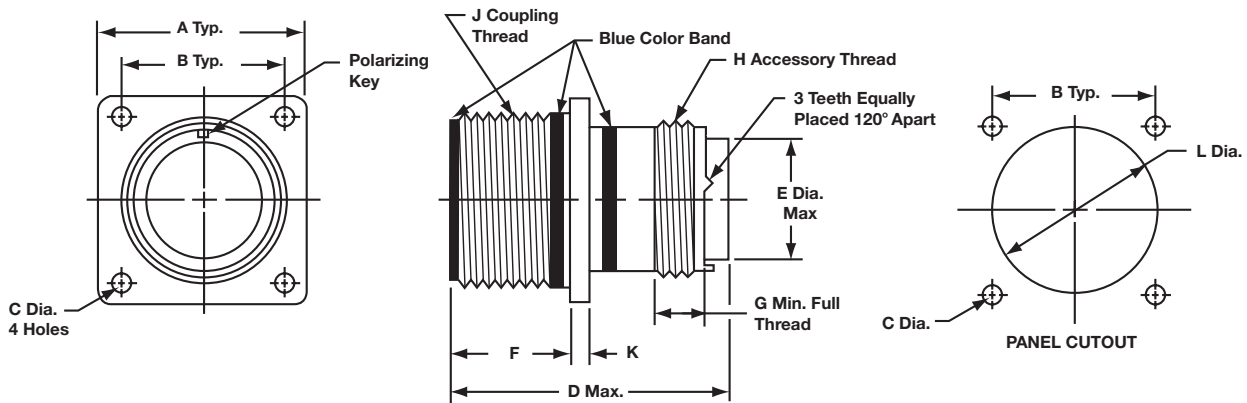
5. CONTACT TYPE

P	Pin
S	Socket

6. ALTERNATE POSITIONS

“W”, “X”, “Y”, “Z” designate that insert is rotated in its shell from normal position. No letter required for normal (no rotation) position. See page 13 for description of alternate positions.

Military (MS3450), Commercial (I9440)
PART NUMBER BUILDER PAGE NO. 14



Dimensions are in INCHES

Shell Size*	A ±.031	B	Cdia. +.010 -.005		D Max.		E Dia. Max.	F	G Min.	H Thread Class 2A	J Thread Class 2A	K	L Dia. ±.010
			Class L, LS, W	Class KS, KT	Size 16 & 12 Contacts	Size 8, 4, 0 Contacts							
8S	.875	.594	.120	.150	2.031	—	.305	.593/.562	.290	.5000-20 UNEF	.5000-28 UNEF	.083	.562
10S	1.000	.719	.120	.150	2.031	—	.405	.593/.562	.290	.6250-24 UNEF	.6250-24 UNEF	.083	.688
10SL	1.000	.719	.120	.150	2.031	—	.405	.593/.562	.290	.6250-24 UNEF	.6250-24 UNEF	.083	.688
12	1.094	.812	.120	.150	2.125	—	.549	.781/.750	.290	.7500-20 UNEF	.7500-20 UNEF	.083	.812
12S	1.094	.812	.120	.150	2.031	—	.549	.593/.562	.290	.7500-20 UNEF	.7500-20 UNEF	.083	.812
14	1.188	.906	.120	.150	2.125	—	.665	.781/.750	.290	.8750-20 UNEF	.8750-20 UNEF	.083	.938
14S	1.188	.906	.120	.150	2.031	—	.665	.593/.562	.290	.8750-20 UNEF	.8750-20 UNEF	.083	.938
16	1.281	.969	.120	.150	2.125	2.500	.790	.781/.750	.290	1.0000-20 UNEF	1.0000-20 UNEF	.083	1.062
16S	1.281	.969	.120	.150	2.031	—	.790	.593/.562	.290	1.0000-20 UNEF	1.0000-20 UNEF	.083	1.062
18	1.375	1.062	.120	.177	2.125	2.500	.869	.781/.750	.290	1.0625-18 UNEF	1.1250-18 UNEF	.125	1.188
20	1.500	1.156	.120	.177	2.125	2.500	.994	.781/.750	.290	1.1875-18 UNEF	1.2500-18 UNEF	.125	1.312
22	1.625	1.250	.120	.177	2.125	2.500	1.119	.781/.750	.290	1.3125-18 UNEF	1.3750-18 UNEF	.125	1.438
24	1.750	1.375	.147	.177	2.125	2.500	1.244	.843/.812	.290	1.4375-18 UNEF	1.5000-18 UNEF	.125	1.562
28	2.000	1.562	.147	.177	2.125	2.500	1.465	.843/.812	.467	1.7500-18 UNS	1.7500-18 UNS	.125	1.812
32	2.250	1.750	.173	.209	2.125	2.500	1.715	.906/.875	.467	2.0000-18 UNS	2.0000-18 UNS	.125	2.062
36	2.500	1.938	.173	.209	2.125	2.500	1.930	.906/.875	.467	2.2500-16 UN	2.2500-16 UN	.125	2.312
40	2.750	2.188	.173	.209	2.125	2.500	2.145	.906/.875	.467	2.5000-16 UN	2.5000-16 UN	.125	2.562

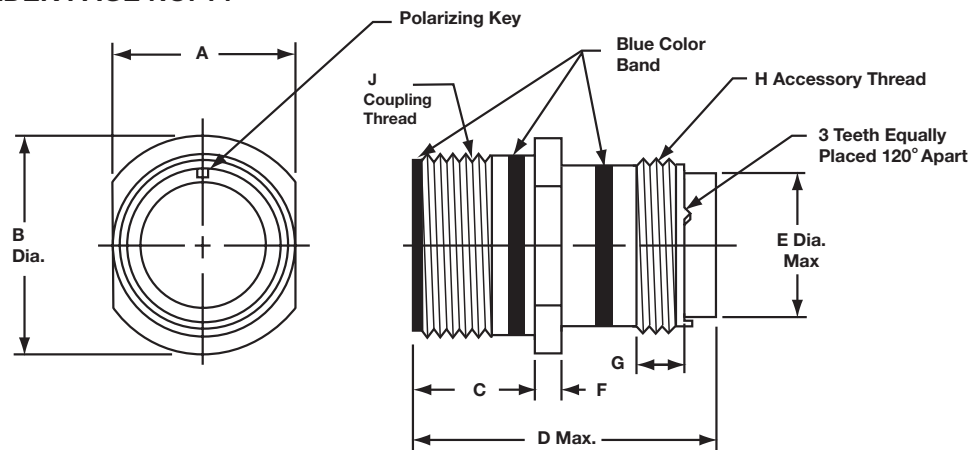
Dimensions are in MM

Shell Size*	A ±.079	B	ØC +.025 -.013		D Max.		ØE Max.	F	G Min.	H Thread Class 2A	J Thread Class 2A	K	ØL ±0.25
			Class L, LS, W	Class KS, KT	Size 16 & 12 Contacts	Size 8, 4, 0 Contacts							
8S	22.23	15.09	3.05	3.81	51.59	—	7.75	15.06/14.27	7.37	.5000-20 UNEF	.5000-28 UNEF	2.11	14.27
10S	25.40	18.26	3.05	3.81	51.59	—	10.29	15.06/14.27	7.37	.6250-24 UNEF	.6250-24 UNEF	2.11	17.48
10SL	25.40	18.26	3.05	3.81	51.59	—	10.29	15.06/14.27	7.37	.6250-24 UNEF	.6250-24 UNEF	2.11	17.48
12	27.79	20.62	3.05	3.81	53.98	—	13.94	19.84/19.05	7.37	.7500-20 UNEF	.7500-20 UNEF	2.11	20.62
12S	27.79	20.62	3.05	3.81	51.59	—	13.94	15.06/14.27	7.37	.7500-20 UNEF	.7500-20 UNEF	2.11	20.62
14	30.18	23.01	3.05	3.81	53.98	—	16.89	19.84/19.05	7.37	.8750-20 UNEF	.8750-20 UNEF	2.11	23.83
14S	30.18	23.01	3.05	3.81	51.59	—	16.89	15.06/14.27	7.37	.8750-20 UNEF	.8750-20 UNEF	2.11	23.83
16	32.54	24.61	3.05	3.81	53.98	63.50	20.07	19.84/19.05	7.37	1.0000-20 UNEF	1.0000-20 UNEF	2.11	26.97
16S	32.54	24.61	3.05	3.81	51.59	—	20.07	15.06/14.27	7.37	1.0000-20 UNEF	1.0000-20 UNEF	2.11	26.97
18	34.93	26.97	3.05	4.50	53.98	63.50	22.07	19.84/19.05	7.37	1.0625-18 UNEF	1.1250-18 UNEF	3.18	30.18
20	38.10	29.36	3.05	4.50	53.98	63.50	25.25	19.84/19.05	7.37	1.1875-18 UNEF	1.2500-18 UNEF	3.18	33.32
22	41.28	31.75	3.05	4.50	53.98	63.50	28.42	19.84/19.05	7.37	1.3125-18 UNEF	1.3750-18 UNEF	3.18	36.53
24	44.45	34.93	3.73	4.50	53.98	63.50	31.60	21.41/20.62	7.37	1.4375-18 UNEF	1.5000-18 UNEF	3.18	39.67
28	50.80	39.67	3.73	4.50	53.98	63.50	37.21	21.41/20.62	11.86	1.7500-18 UNS	1.7500-18 UNS	3.18	46.02
32	57.15	44.45	4.39	5.31	53.98	63.50	43.56	23.01/22.23	11.86	2.0000-18 UNS	2.0000-18 UNS	3.18	52.37
36	63.50	49.23	4.39	5.31	53.98	63.50	49.02	23.01/22.23	11.86	2.2500-16 UN	2.2500-16 UN	3.18	58.72
40	69.85	55.58	4.39	5.31	53.98	63.50	54.48	23.01/22.23	11.86	2.5000-16 UN	2.5000-16 UN	3.18	65.07

* Consult Amphenol for availability of shell sizes 44 and 48.



Military (MS3451), Commercial (19441) PART NUMBER BUILDER PAGE NO. 14



Dimensions are in INCHES

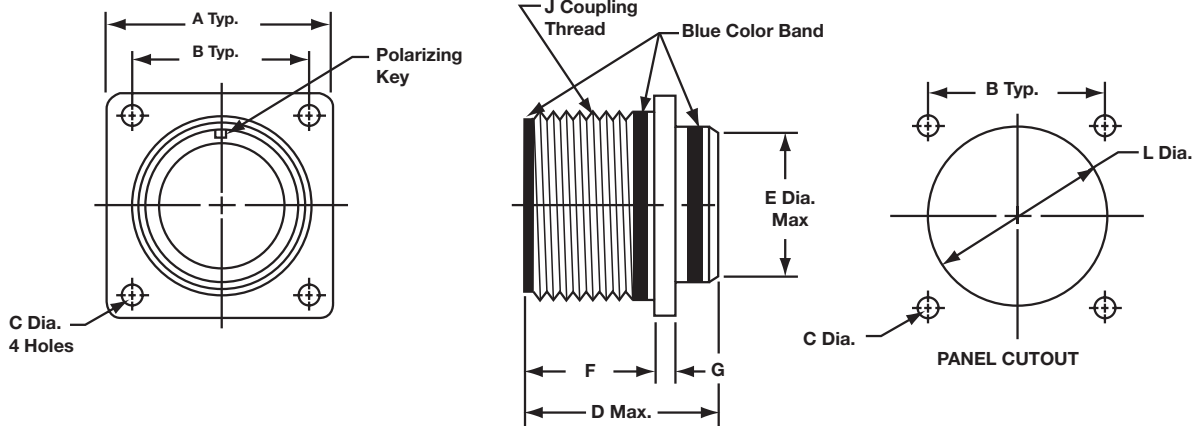
Shell Size	A	B Dia. ±.031	C	D Max.		E Dia. Max.	F ±.015	G Min.	H Thread Class 2A	J Thread Class 2A
				Size 16 & 12 Contacts	Size 8, 4, 0 Contacts					
8S	.504/.496	.729	.577/.562	2.031	—	.305	.083	.290	.5000-20 UNEF	.5000-28 UNEF
10S	.629/.621	.854	.577/.562	2.031	—	.405	.083	.290	.6250-24 UNEF	.6250-24 UNEF
10SL	.629/.621	.854	.577/.562	2.031	—	.405	.083	.290	.6250-24 UNEF	.6250-24 UNEF
12	.754/.746	.974	.765/.750	2.125	—	.549	.083	.290	.7500-20 UNEF	.7500-20 UNEF
12S	.754/.746	.974	.577/.562	2.031	—	.549	.083	.290	.7500-20 UNEF	.7500-20 UNEF
14	.879/.871	1.099	.765/.750	2.125	—	.665	.083	.290	.8750-20 UNEF	.8750-20 UNEF
14S	.879/.871	1.099	.577/.562	2.031	—	.665	.083	.290	.8750-20 UNEF	.8750-20 UNEF
16	1.005/.996	1.224	.765/.750	2.125	2.500	.790	.083	.290	1.0000-20 UNEF	1.0000-20 UNEF
16S	1.005/.996	1.224	.577/.562	2.031	—	.790	.083	.290	1.0000-20 UNEF	1.0000-20 UNEF
18	1.131/1.121	1.349	.765/.750	2.125	2.500	.869	.125	.290	1.0625-18 UNEF	1.1250-18 UNEF
20	1.256/1.246	1.474	.765/.750	2.125	2.500	.994	.125	.290	1.1875-18 UNEF	1.2500-18 UNEF
22	1.381/1.371	1.599	.765/.750	2.125	2.500	1.119	.125	.290	1.3125-18 UNEF	1.3750-18 UNEF
24	1.506/1.496	1.715	.827/.812	2.125	2.500	1.244	.125	.290	1.4375-18 UNEF	1.5000-18 UNEF
28	1.756/1.746	1.974	.827/.812	2.125	2.500	1.465	.125	.467	1.7500-18 UNS	1.7500-18 UNS
32	2.007/1.996	2.224	.890/.870	2.125	2.500	1.715	.125	.467	2.0000-18 UNS	2.0000-18 UNS
36	2.257/2.246	2.474	.890/.870	2.125	2.500	1.930	.125	.467	2.2500-16 UN	2.2500-16 UN
40	2.511/2.456	2.724	.890/.870	2.125	2.500	2.145	.125	.467	2.5000-16 UN	2.5000-16 UN

Dimensions are in MM

Shell Size	A	B ±.079	C	D Max.		ØE Max.	F ±0.38	G Min.c	H Thread Class 2A	J Thread Class 2A
				Size 16 & 12 Contacts	Size 8, 4, 0 Contacts					
8S	12.80/12.60	18.52	14.66/14.27	51.59	—	7.75	2.11	7.37	.5000-20 UNEF	.5000-28 UNEF
10S	15.98/15.77	21.69	14.66/14.27	51.59	—	10.29	2.11	7.37	.6250-24 UNEF	.6250-24 UNEF
10SL	15.98/15.77	21.69	14.66/14.27	51.59	—	10.29	2.11	7.37	.6250-24 UNEF	.6250-24 UNEF
12	19.15/18.95	24.74	19.43/19.05	53.98	—	13.94	2.11	7.37	.7500-20 UNEF	.7500-20 UNEF
12S	19.15/18.95	24.74	14.66/14.27	51.59	—	13.94	2.11	7.37	.7500-20 UNEF	.7500-20 UNEF
14	22.33/22.12	27.91	19.43/19.05	53.98	—	16.89	2.11	7.37	.8750-20 UNEF	.8750-20 UNEF
14S	22.33/22.12	27.91	14.66/14.27	51.59	—	16.89	2.11	7.37	.8750-20 UNEF	.8750-20 UNEF
16	25.53/25.30	31.09	19.43/19.05	53.98	63.50	20.07	2.11	7.37	1.0000-20 UNEF	1.0000-20 UNEF
16S	25.53/25.30	31.09	14.66/14.27	51.59	—	22.07	2.11	7.37	1.0000-20 UNEF	1.0000-20 UNEF
18	28.73/28.47	34.26	19.43/19.05	53.98	63.50	25.25	3.18	7.37	1.0625-18 UNEF	1.1250-18 UNEF
20	31.90/31.65	37.44	19.43/19.05	53.98	63.50	28.42	3.18	7.37	1.1875-18 UNEF	1.2500-18 UNEF
22	35.08/34.82	40.61	19.43/19.05	53.98	63.50	31.60	3.18	7.37	1.3125-18 UNEF	1.3750-18 UNEF
24	38.25/38.00	43.56	21.01/20.62	53.98	63.50	37.21	3.18	7.37	1.4375-18 UNEF	1.5000-18 UNEF
28	44.60/44.35	50.14	21.01/20.62	53.98	63.50	43.56	3.18	11.86	1.7500-18 UNS	1.7500-18 UNS
32	50.98/50.70	56.49	22.61/22.10	53.98	63.50	49.02	3.18	11.86	2.0000-18 UNS	2.0000-18 UNS
36	57.33/57.05	62.84	22.61/22.10	53.98	63.50	54.48	3.18	11.86	2.2500-16 UN	2.2500-16 UN
40	63.78/62.38	69.19	22.61/22.10	53.98	63.50		3.18	11.86	2.5000-16 UN	2.5000-16 UN

* Consult Amphenol for availability of shell sizes 44 and 48.

Military (MS3452), Commercial (I9442) PART NUMBER BUILDER PAGE NO. 14



Dimensions are in INCHES

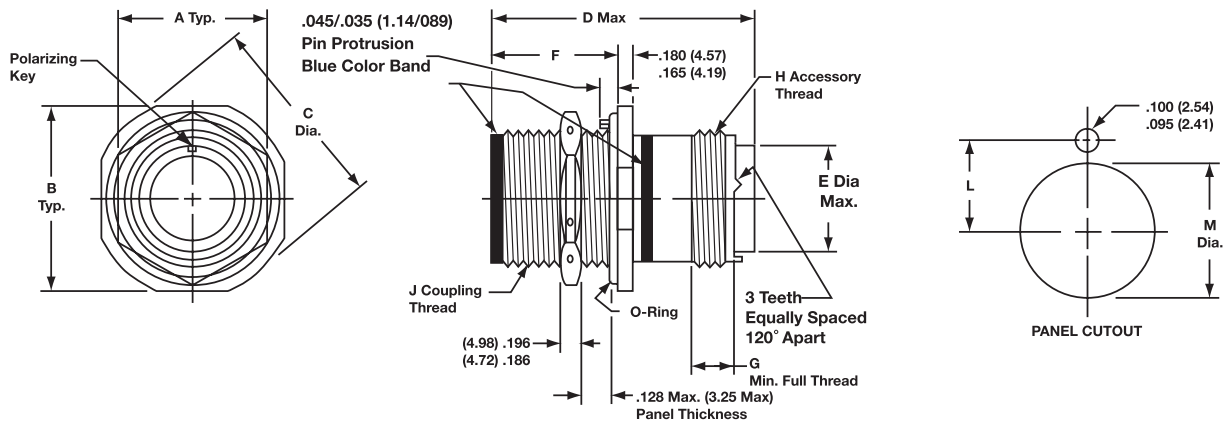
Shell Size*	A ±.031	B	C Dia.	D Max.		E Dia. ±.016	F	G ±.015	J Thread Class 2A	L Dia. ±.010
				Size 16 & 12 Contacts	Size 8, 4, 0 Contacts					
8S	.875	.594	.130/.115	1.662	—	.500	.578/.562	.083	.5000-28 UNEF	.562
10S	1.000	.719	.130/.115	1.662	—	.625	.578/.562	.083	.6250-24 UNEF	.688
10SL	1.000	.719	.130/.115	1.662	—	.625	.578/.562	.083	.6250-24 UNEF	.688
12	1.094	.812	.130/.115	1.662	—	.750	.765/.750	.083	.7500-20 UNEF	.812
12S	1.094	.812	.130/.115	1.662	—	.750	.578/.562	.083	.7500-20 UNEF	.812
14	1.188	.906	.130/.115	1.662	—	.875	.765/.750	.083	.8750-20 UNEF	.938
14S	1.188	.906	.130/.115	1.662	—	.875	.577/.562	.083	.8750-20 UNEF	.938
16	1.281	.969	.130/.115	1.662	1.937	1.000	.765/.750	.083	1.0000-20 UNEF	1.062
16S	1.281	.969	.130/.115	1.662	—	1.000	.577/.562	.083	1.0000-20 UNEF	1.062
18	1.375	1.062	.130/.115	1.662	1.937	1.062	.765/.750	.125	1.1250-18 UNEF	1.188
20	1.500	1.156	.130/.115	1.662	1.937	1.187	.765/.750	.125	1.2500-18 UNEF	1.312
22	1.625	1.250	.130/.115	1.662	1.937	1.312	.765/.750	.125	1.3750-18 UNEF	1.438
24	1.750	1.375	.157/.142	1.662	1.937	1.437	.827/.812	.125	1.5000-18 UNEF	1.562
28	2.000	1.562	.157/.142	1.662	1.937	1.750	.827/.812	.125	1.7500-18 UNS	1.812
32	2.250	1.750	.183/.168	1.662	1.937	2.000	.988/.875	.125	2.0000-18 UNS	2.062
36	2.500	1.938	.183/.168	1.662	1.937	2.250	.988/.875	.125	2.2500-16 UN	2.312
40	2.750	2.188	.183/.168	1.662	1.937	2.500	.988/.875	.125	2.5000-16 UN	2.562

Dimensions are in MM

Shell Size*	A ±0.79	B	C Dia.	D Max.		ØE ±0.41	F	G ±0.38	J Thread Class 2A	ØL ±0.25
				Size 16 & 12 Contacts	Size 8, 4, 0 Contacts					
8S	22.23	15.09	3.30/2.92	42.21	—	12.70	14.68/14.27	2.11	.5000-28 UNEF	14.27
10S	25.40	18.26	3.30/2.92	42.21	—	15.88	14.68/14.27	2.11	.6250-24 UNEF	17.48
10SL	25.40	18.26	3.30/2.92	42.21	—	15.88	14.68/14.27	2.11	.6250-24 UNEF	17.48
12	27.79	20.62	3.30/2.92	42.21	—	19.05	19.43/19.05	2.11	.7500-20 UNEF	20.62
12S	27.79	20.62	3.30/2.92	42.21	—	19.05	14.68/14.27	2.11	.7500-20 UNEF	20.62
14	30.18	23.01	3.30/2.92	42.21	—	22.23	19.43/19.05	2.11	.8750-20 UNEF	23.83
14S	30.18	23.01	3.30/2.92	42.21	—	22.23	14.66/14.27	2.11	.8750-20 UNEF	23.83
16	32.54	24.61	3.30/2.92	42.21	49.20	25.40	19.43/19.05	2.11	1.0000-20 UNEF	26.97
16S	32.54	24.61	3.30/2.92	42.21	—	25.40	14.66/14.27	3.18	1.0000-20 UNEF	26.97
18	34.93	26.97	3.30/2.92	42.21	49.20	26.97	19.43/19.05	3.18	1.1250-18 UNEF	30.18
20	38.10	29.36	3.30/2.92	42.21	49.20	30.15	19.43/19.05	3.18	1.2500-18 UNEF	33.32
22	41.28	31.75	3.30/2.92	42.21	49.20	33.32	19.43/19.05	3.18	1.3750-18 UNEF	36.53
24	44.45	34.93	3.99/3.61	42.21	49.20	36.50	21.01/20.62	3.18	1.5000-18 UNEF	39.67
28	50.80	39.67	3.99/3.61	42.21	49.20	44.45	21.01/20.62	3.18	1.7500-18 UNS	46.02
32	57.15	44.45	4.65/4.27	42.21	49.20	50.80	25.10/22.23	3.18	2.0000-18 UNS	52.37
36	63.50	49.23	4.65/4.27	42.21	49.20	57.15	25.10/22.23		2.2500-16 UN	58.72
40	69.85	55.58	4.65/4.27	42.21	49.20	63.50	25.10/22.23		2.5000-16 UN	65.07

* Consult Amphenol for availability of shell sizes 44 and 48.

Military (MS3454), Commercial (I9444) PART NUMBER BUILDER PAGE NO. 14



Dimensions are in INCHES

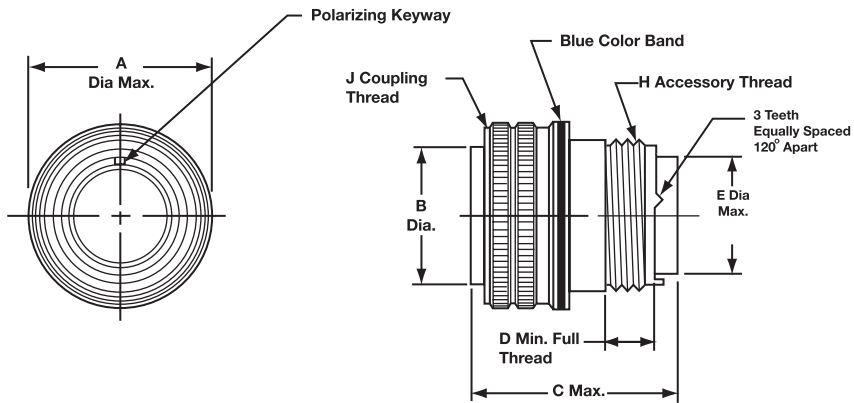
Shell Size*	A ±.010	B ±.005	C Dia. ±.005	D Max.		E Dia. Max.	F ±.005	G Min.	H Thread Class 2A	J Thread Class 2A	Panel Cutout Dimensions	
				Size 16 & 12 Contacts	Size 8, 4, 0 Contacts						L ±.005	M Dia. +.015 -.000
8S	.687	1.187	1.272	2.031	—	.305	.720	.290	.5000-20 UNEF	.5000-28 UNEF	.323	.505
10S	.812	1.312	1.397	2.031	—	.405	.720	.290	.6250-24 UNEF	.6250-24 UNEF	.385	.630
10SL	.812	1.312	1.397	2.031	—	.405	.720	.290	.6250-24 UNEF	.6250-24 UNEF	.385	.630
12	.937	1.437	1.522	2.125	—	.549	.970	.290	.7500-20 UNEF	.7500-20 UNEF	.448	.755
12S	.937	1.437	1.522	2.031	—	.549	.720	.290	.7500-20 UNEF	.7500-20 UNEF	.448	.755
14	1.125	1.562	1.647	2.125	—	.665	.970	.290	.8750-20 UNEF	.8750-20 UNEF	.510	.880
14S	1.125	1.562	1.647	2.031	—	.665	.720	.290	.8750-20 UNEF	.8750-20 UNEF	.510	.880
16	1.250	1.687	1.772	2.125	2.500	.790	.970	.290	1.0000-20 UNEF	1.0000-20 UNEF	.573	1.005
16S	1.250	1.687	1.772	2.031	—	.790	.720	.290	1.0000-20 UNEF	1.0000-20 UNEF	.573	1.005
18	1.375	1.812	1.897	2.125	2.500	.869	.970	.290	1.0625-18 UNEF	1.1250-18 UNEF	.635	1.130
20	1.500	1.937	2.022	2.125	2.500	.994	.970	.290	1.1875-18 UNEF	1.2500-18 UNEF	.698	1.255
22	1.625	2.156	2.241	2.125	2.500	1.119	.970	.290	1.3125-18 UNEF	1.3750-18 UNEF	.760	1.380
24	1.750	2.281	2.366	2.125	2.500	1.244	.970	.290	1.4375-18 UNEF	1.5000-18 UNEF	.823	1.505
28	2.000	2.531	2.616	2.125	2.500	1.465	.970	.467	1.7500-18 UNS	1.7500-18 UNS	.948	1.755
32	2.375	2.781	2.866	2.125	2.500	1.715	.970	.467	2.0000-18 UNS	2.0000-18 UNS	1.073	2.005
36	2.625	3.031	3.116	2.125	2.500	1.930	.970	.467	2.2500-16 UN	2.2500-16 UN	1.198	2.255
40	2.875	3.281	3.366	2.125	2.500	2.145	.970	.467	2.5000-16 UN	2.5000-16 UN	1.323	2.505

Dimensions are in MM

Shell Size*	A ±0.25	B ±0.13	C Dia. ±0.13	D Max.		E Dia. Max.	F ±0.13	G Min.	H Thread Class 2A	J Thread Class 2A	Panel Cutout Dimensions	
				Size 16 & 12 Contacts	Size 8, 4, 0 Contacts						L ±0.13	ØM +0.38 -0.00
8S	17.45	30.15	32.31	51.59	—	7.75	18.29	7.37	.5000-20 UNEF	.5000-28 UNEF	8.20	12.83
10S	20.62	33.32	35.48	51.59	—	10.29	18.29	7.37	.6250-24 UNEF	.6250-24 UNEF	9.78	16.00
10SL	20.62	33.32	35.48	51.59	—	10.29	18.29	7.37	.6250-24 UNEF	.6250-24 UNEF	9.78	16.00
12	23.80	36.50	38.66	53.98	—	13.94	24.64	7.37	.7500-20 UNEF	.7500-20 UNEF	11.38	19.18
12S	23.80	36.50	38.66	51.59	—	13.94	18.29	7.37	.7500-20 UNEF	.7500-20 UNEF	11.38	19.18
14	28.58	39.67	41.83	53.98	—	16.89	24.64	7.37	.8750-20 UNEF	.8750-20 UNEF	12.95	22.35
14S	28.58	39.67	41.83	51.59	—	16.89	18.29	7.37	.8750-20 UNEF	.8750-20 UNEF	12.95	22.35
16	31.75	42.85	45.01	53.98	63.50	20.07	24.64	7.37	1.0000-20 UNEF	1.0000-20 UNEF	14.55	25.53
16S	31.75	42.85	45.01	51.59	—	20.07	18.29	7.37	1.0000-20 UNEF	1.0000-20 UNEF	14.55	25.53
18	34.93	46.02	48.18	53.98	63.50	22.07	24.64	7.37	1.0625-18 UNEF	1.1250-18 UNEF	16.13	28.70
20	38.10	49.20	51.36	53.98	63.50	25.25	24.64	7.37	1.1875-18 UNEF	1.2500-18 UNEF	17.73	31.88
22	41.28	54.76	56.92	53.98	63.50	28.42	24.64	7.37	1.3125-18 UNEF	1.3750-18 UNEF	19.30	35.05
24	44.45	57.94	60.10	53.98	63.50	31.60	24.64	7.37	1.4375-18 UNEF	1.5000-18 UNEF	20.90	38.23
28	50.80	64.29	66.45	53.98	63.50	37.21	24.64	11.86	1.7500-18 UNS	1.7500-18 UNS	24.08	44.58
32	60.33	70.64	72.80	53.98	63.50	43.56	24.64	11.86	2.0000-18 UNS	2.0000-18 UNS	27.25	50.93
36	66.68	76.99	79.15	53.98	63.50	49.02	24.64	11.86	2.2500-16 UN	2.2500-16 UN	30.43	57.28
40	73.03	83.34	85.50	53.98	63.50	54.48	24.64	11.86	2.5000-16 UN	2.5000-16 UN	33.60	63.63

* Consult Amphenol for availability of shell sizes 44 and 48.

Military (MS3456), Commercial (I9446) PART NUMBER BUILDER PAGE NO. 14



Dimensions are in INCHES

Shell Size*	A Dia. Max.	B Dia. ±.005	C Max.		D Min.	E Dia. Max.	H Thread Class 2A	J Thread Class 2B
			Size 16 & 12 Contacts	Size 8, 4, 0 Contacts				
8S	.844	.360	2.031	—	.290	.305	.5000-20 UNEF	.5000-28 UNEF
10S	.969	.435	2.031	—	.290	.405	.6250-24 UNEF	.6250-24 UNEF
10SL	.969	.441**	2.031	—	.290	.405	.6250-24 UNEF	.6250-24 UNEF
12	1.062	.550	2.125	—	.290	.549	.7500-20 UNEF	.7500-20 UNEF
12S	1.062	.550	2.031	—	.290	.549	.7500-20 UNEF	.7500-20 UNEF
14	1.156	.670	2.125	—	.290	.665	.8750-20 UNEF	.8750-20 UNEF
14S	1.156	.670	2.031	—	.290	.665	.8750-20 UNEF	.8750-20 UNEF
16	1.250	.800	2.125	2.500	.290	.790	1.0000-20 UNEF	1.0000-20 UNEF
16S	1.250	.800	2.031	—	.290	.790	1.0000-20 UNEF	1.0000-20 UNEF
18	1.344	.925	2.125	2.500	.290	.869	1.0625-18 UNEF	1.1250-18 UNEF
20	1.469	1.045	2.125	2.500	.290	.994	1.1875-18 UNEF	1.2500-18 UNEF
22	1.594	1.170	2.125	2.500	.290	1.119	1.3125-18 UNEF	1.3750-18 UNEF
24	1.719	1.295	2.125	2.500	.290	1.244	1.4375-18 UNEF	1.5000-18 UNEF
28	1.969	1.515	2.125	2.500	.467	1.465	1.7500-18 UNS	1.7500-18 UNS
32	2.219	1.765	2.125	2.500	.467	1.715	2.0000-18 UNS	2.0000-18 UNS
36	2.469	1.975	2.125	2.500	.467	1.930	2.2500-16 UN	2.2500-16 UN
40	2.719	2.225	2.125	2.500	.467	2.145	2.5000-16 UN	2.5000-16 UN

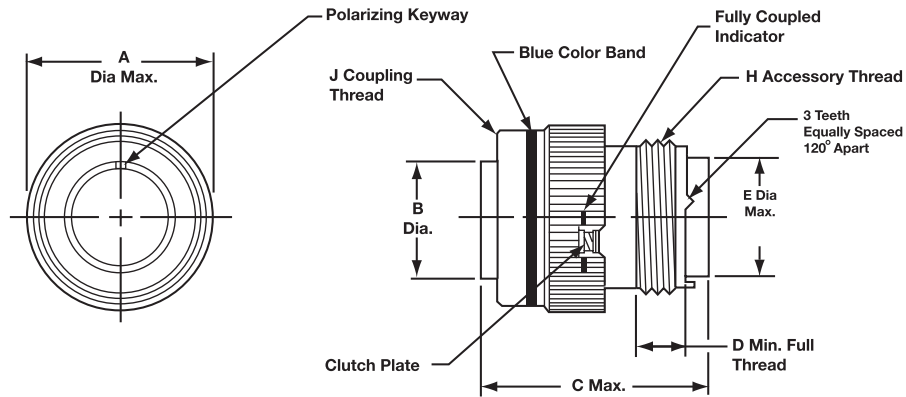
Dimensions are in MM

Shell Size*	ØA Max.	ØB ±.13	C Max.		D Min.	ØE Max.	H Thread Class 2A	J Thread Class 2B
			Size 16 & 12 Contacts	Size 8, 4, 0 Contacts				
8S	21.44	9.14	51.59	—	7.37	7.75	.5000-20 UNEF	.5000-28 UNEF
10S	24.61	11.05	51.59	—	7.37	10.29	.6250-24 UNEF	.6250-24 UNEF
10SL	24.61	11.20**	51.59	—	7.37	10.29	.6250-24 UNEF	.6250-24 UNEF
12	26.97	13.97	53.98	—	7.37	13.94	.7500-20 UNEF	.7500-20 UNEF
12S	26.97	13.97	51.59	—	7.37	13.94	.7500-20 UNEF	.7500-20 UNEF
14	29.36	17.02	53.98	—	7.37	16.89	.8750-20 UNEF	.8750-20 UNEF
14S	29.36	17.02	51.59	—	7.37	16.89	.8750-20 UNEF	.8750-20 UNEF
16	31.75	20.32	53.98	63.50	7.37	20.07	1.0000-20 UNEF	1.0000-20 UNEF
16S	31.75	20.32	51.59	—	7.37	20.07	1.0000-20 UNEF	1.0000-20 UNEF
18	34.14	23.50	53.98	63.50	7.37	22.07	1.0625-18 UNEF	1.1250-18 UNEF
20	37.31	26.54	53.98	63.50	7.37	25.25	1.1875-18 UNEF	1.2500-18 UNEF
22	40.49	29.72	53.98	63.50	7.37	28.42	1.3125-18 UNEF	1.3750-18 UNEF
24	43.66	32.89	53.98	63.50	7.37	31.60	1.4375-18 UNEF	1.5000-18 UNEF
28	50.01	38.48	53.98	63.50	11.86	37.21	1.7500-18 UNS	1.7500-18 UNS
32	56.36	44.83	53.98	63.50	11.86	43.56	2.0000-18 UNS	2.0000-18 UNS
36	62.71	50.17	53.98	63.50	11.86	49.02	2.2500-16 UN	2.2500-16 UN
40	69.06	56.52	53.98	63.50	11.86	54.48	2.5000-16 UN	2.5000-16 UN

* Consult Amphenol for availability of shell sizes 44 and 48.

** Tolerance on this dimension is +.000 –.006 (+0.0, -0.152)

Military (MS3459), Commercial (I9816)
PART NUMBER BUILDER PAGE NO. 14



Dimensions are in INCHES

Shell Size*	A Dia. Max.	B Dia. ±.005	C Max.		D Min.	E Dia. Max.	H Thread Class 2A	J Thread Class 2B
			Size 16 & 12 Contacts	Size 8, 4, 0 Contacts				
8S	.963	.360	1.510	—	.290	.305	.5000-20 UNEF	.5000-28 UNEF
10S	1.088	.435	1.510	—	.290	.405	.6250-24 UNEF	.6250-24 UNEF
10SL	1.088	.441**	1.510	—	.290	.405	.6250-24 UNEF	.6250-24 UNEF
12	1.213	.550	1.780	—	.290	.549	.7500-20 UNEF	.7500-20 UNEF
12S	1.213	.550	1.510	—	.290	.549	.7500-20 UNEF	.7500-20 UNEF
14	1.358	.670	1.780	—	.290	.665	.8750-20 UNEF	.8750-20 UNEF
14S	1.358	.670	1.510	—	.290	.665	.8750-20 UNEF	.8750-20 UNEF
16	1.463	.800	1.780	2.500	.290	.790	1.0000-20 UNEF	1.0000-20 UNEF
16S	1.463	.800	1.510	—	.290	.790	1.0000-20 UNEF	1.0000-20 UNEF
18	1.588	.925	1.850	2.500	.290	.869	1.0625-18 UNEF	1.1250-18 UNEF
20	1.713	1.045	1.850	2.500	.290	.994	1.1875-18 UNEF	1.2500-18 UNEF
22	1.788	1.170	1.850	2.500	.290	1.119	1.3125-18 UNEF	1.3750-18 UNEF
24	1.963	1.295	1.850	2.500	.290	1.244	1.4375-18 UNEF	1.5000-18 UNEF
28	2.213	1.515	1.850	2.500	.467	1.465	1.7500-18 UNS	1.7500-18 UNS
32	2.463	1.765	1.850	2.500	.467	1.715	2.0000-18 UNS	2.0000-18 UNS
36	2.713	1.975	1.850	2.500	.467	1.930	2.2500-16 UN	2.2500-16 UN
40	2.963	2.225	1.850	2.500	.467	2.145	2.5000-16 UN	2.5000-16 UN

Dimensions are in MM

Shell Size*	ØA Max.	ØB ±0.13	C Max.		D Min.	E Dia. Max.	H Thread Class 2A	J Thread Class 2B
			Size 16 & 12 Contacts	Size 8, 4, 0 Contacts				
8S	24.46	9.14	38.35	—	7.37	7.75	.5000-20 UNEF	.5000-28 UNEF
10S	27.64	11.05	38.35	—	7.37	10.29	.6250-24 UNEF	.6250-24 UNEF
10SL	27.64	11.20**	38.35	—	7.37	10.29	.6250-24 UNEF	.6250-24 UNEF
12	30.81	13.97	45.21	—	7.37	13.94	.7500-20 UNEF	.7500-20 UNEF
12S	30.81	13.97	38.35	—	7.37	13.94	.7500-20 UNEF	.7500-20 UNEF
14	34.49	17.02	45.21	—	7.37	16.89	.8750-20 UNEF	.8750-20 UNEF
14S	34.49	17.02	38.35	—	7.37	16.89	.8750-20 UNEF	.8750-20 UNEF
16	37.16	20.32	45.21	63.50	7.37	20.07	1.0000-20 UNEF	1.0000-20 UNEF
16S	37.16	20.32	38.35	—	7.37	20.07	1.0000-20 UNEF	1.0000-20 UNEF
18	40.34	23.50	46.99	63.50	7.37	22.07	1.0625-18 UNEF	1.1250-18 UNEF
20	43.51	26.54	46.99	63.50	7.37	25.25	1.1875-18 UNEF	1.2500-18 UNEF
22	45.42	29.72	46.99	63.50	7.37	28.42	1.3125-18 UNEF	1.3750-18 UNEF
24	49.86	32.89	46.99	63.50	7.37	31.60	1.4375-18 UNEF	1.5000-18 UNEF
28	56.21	38.48	46.99	63.50	11.86	37.21	1.7500-18 UNS	1.7500-18 UNS
32	62.56	44.83	46.99	63.50	11.86	43.56	2.0000-18 UNS	2.0000-18 UNS
36	68.91	50.17	46.99	63.50	11.86	49.02	2.2500-16 UN	2.2500-16 UN
40	75.26	56.52	46.99	63.50	11.86	54.48	2.5000-16 UN	2.5000-16 UN

* Consult Amphenol for availability of shell sizes 44 and 48.

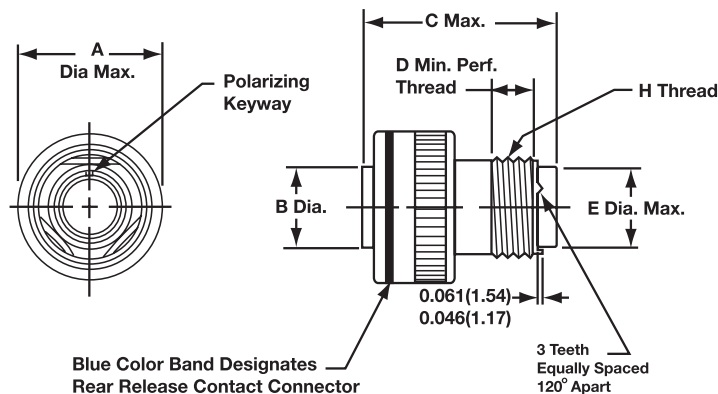
** Tolerance on this dimension is +.000 –.006 (+0.0/0.15)



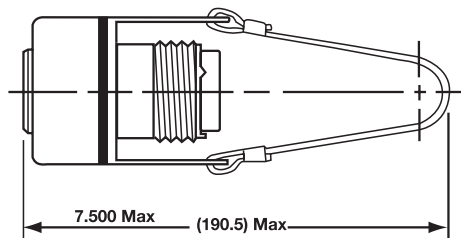
Quick Disconnect Plug, With / Without Lanyard

Commercial (I9817) and (I9818)

PART NUMBER BUILDER PAGE NO. 14



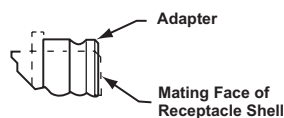
19818 CONNECTOR



19817 CONNECTOR WITH LANYARD

Required to mate the quick disconnect plug with receptacle. Not furnished with the quick disconnect plug and must be ordered separately.
Note: Use Locktite Material on the threads

for a permanent installation to the shell. How to Order Adapter Ring



Part Number
I2500-008-0 X XX

Finish
0 - Electroless Nickel
1 - Black Anodize
2 - Cadmium/Olive Drab
3 - Stainless Steel, Passivated

Shell Size (varies from connector shell size designation, see last column of table at left)

Dimensions are in MM

Shell Size*	ØA Max.	ØB	C Max.		D Min.	ØE Max.	H Thread Class 2A	Part Number for Adapter Ring
			Size 16 & 12 Contacts	Size 8, 4, 0 Contacts				
8S	27.61	9.14	51.59	—	7.37	7.75	.5000-20 UNF	I2500-008-0X08
10S	31.09	11.05	51.59	—	7.37	10.29	.6250-24 UNEF	I2500-008-0X10
10SL	31.09	11.20	51.59	—	7.37	10.29	.6250-24 UNEF	I2500-008-0X10
12	34.42	13.97	53.98	—	7.37	13.94	.7500-20 UNEF	I2500-008-0X12
12S	34.42	13.97	51.59	—	7.37	13.94	.7500-20 UNEF	I2500-008-0X13
14	37.64	17.02	53.98	—	7.37	16.89	.8750-20 UNEF	I2500-008-0X14
14S	37.64	17.02	51.59	—	7.37	16.89	.8750-20 UNEF	I2500-008-0X15
16	40.87	20.32	53.98	63.50	7.37	20.07	1.0000-20 UNEF	I2500-008-0X16
16S	40.87	20.32	51.59	—	7.37	20.07	1.0000-20 UNEF	I2500-008-0X17
18	46.15	23.50	53.98	63.50	7.37	22.07	1.0625-18 UNEF	I2500-008-0X18
20	49.33	26.54	53.98	63.50	7.37	25.25	1.1875-18 UNEF	I2500-008-0X20
22	52.71	29.72	53.98	63.50	7.37	28.42	1.3125-18 UNEF	I2500-008-0X22
24	55.96	32.89	53.98	63.50	7.37	31.60	1.4375-18 UNEF	I2500-008-0X24
28	63.91	38.48	53.98	63.50	11.86	37.21	1.7500-18 UNS	I2500-008-0X28
32	69.47	44.83	53.98	63.50	11.86	43.56	2.0000-18 UNS	I2500-008-0X32
36	76.58	50.17	53.98	63.50	11.86	49.02	2.2500-16 UN	I2500-008-0X36
40	83.97	56.52	53.98	63.50	11.86	54.48	2.5000-16 UN	I2500-008-0X40

Dimensions are in INCHES

Shell Size*	A Dia. Max.	B Dia.	C Max.		D Min.	E Dia. Max.	H Thread Class 2A	Amphenol Part Number for Adapter Ring
			Size 16 & 12 Contacts	Size 8, 4, 0 Contacts				
8S	1.087	.360	2.031	—	.290	.305	.5000-20 UNF	I2500-008-0X08
10S	1.224	.435	2.031	—	.290	.405	.6250-24 UNEF	I2500-008-0X10
10SL	1.224	.441	2.031	—	.290	.405	.6250-24 UNEF	I2500-008-0X10
12	1.355	.550	2.125	—	.290	.549	.7500-20 UNEF	I2500-008-0X12
12S	1.355	.550	2.031	—	.290	.549	.7500-20 UNEF	I2500-008-0X13
14	1.482	.670	2.125	—	.290	.665	.8750-20 UNEF	I2500-008-0X14
14S	1.482	.670	2.031	—	.290	.665	.8750-20 UNEF	I2500-008-0X15
16	1.609	.800	2.125	2.500	.290	.790	1.0000-20 UNEF	I2500-008-0X16
16S	1.609	.800	2.031	—	.290	.790	1.0000-20 UNEF	I2500-008-0X17
18	1.817	.925	2.125	2.500	.290	.869	1.0625-18 UNEF	I2500-008-0X18
20	1.942	1.045	2.125	2.500	.290	.994	1.1875-18 UNEF	I2500-008-0X20
22	2.075	1.170	2.125	2.500	.290	1.119	1.3125-18 UNEF	I2500-008-0X22
24	2.203	1.295	2.125	2.500	.290	1.244	1.4375-18 UNEF	I2500-008-0X24
28	2.516	1.515	2.125	2.500	.467	1.465	1.7500-18 UNS	I2500-008-0X28
32	2.735	1.765	2.125	2.500	.467	1.715	2.0000-18 UNS	I2500-008-0X32
36	3.015	1.975	2.125	2.500	.467	1.930	2.2500-16 UN	I2500-008-0X36
40	3.306	2.225	2.125	2.500	.467	2.145	2.5000-16 UN	I2500-008-0X40

* Consult Amphenol for availability of shell sizes 44 and 48.
Receptacle Adapter Ring



MS/STANDARD CRIMP REAR RELEASE CONTACTS

Contact Size	Wire Range		Socket Contacts		Pin Contacts	
	AWG	mm ²	Military Part Number	Amphenol Part Number	Military Part Number	Amphenol Part Number
16S*	20–16	0.5–1.4	M39029/30-217	IM5100-033-1601L	M39029/29-212	IM5000-029-0016L
16	20–16	0.5–1.4	M39029/30-218	IM5100-033-1602L	M39029/29-212	IM5000-029-0016L
12	14–12	2–3	M39029/30-219	IM5100-033-0012	M39029/29-213	IM5000-029-0012
8	10–8†	5–8.5	M39029/30-220	IM5100-033-0008	M39029/29-214	IM5000-029-0008
4	6–4†	13–21	M39029/30-221	IM5100-033-0004	M39029/29-215	IM5000-029-0004
0	2–0†	34–60	M39029/30-222	IM5100-033-0000	M39029/29-216	IM5000-029-0000

* Shorter wire barrel

Note: For information on thermocouple contacts, consult Amphenol

† Use MS3348 bushing kit to accommodate smaller wire.

CONTACT CURRENT RATING AND RETENTION

Contact Size**	Current Rating			Contact Retention	
	Amperes Max.	RADSOX Amps Max.	Voltage Drops Millivolts	Axial Load	
				lb.	N
16	13	N/A	50	25	111.2
12	23	N/A	50	30	133.4
8	46	70	25	50	222.4
4	80	120	14	60	266.9
0	150	150	12	75	333.6

** Organize individual circuits to maintain heat rise within operating temperature requirements.

SEALING PLUGS

Contact Size	Sealing Plugs	
	Military Part Number	Amphenol Part Number
16S	MS27488-16-3	I10-405996-163
16	MS27488-16-3	I10-405996-163
12	MS27488-12-3	I10-405996-123
8	MS27488-8-3	I10-405996-083
4	MS27488-4-3	I10-405996-043
0	MS27488-0-3	I10-405996-003

CRIMPING TOOLS

Contact Size	Wire Range		Finished Wire Dia. Range		Color Code	Crimping Tool Part Number	Turret or Positioner Part Number
	AWG	mm ²	Inch	mm			
16S	20–16	0.5–1.4	.053–.103	1.34–2.62	Red/White	M22520/1-01	M22520/1-02
16	20–16	0.5–1.4	.053–.103	1.34–2.62	Blue/White	M22520/1-01	M22520/1-02
12	14–12	2–3	.085–.158	2.15–4.01	Yell./White	M22520/1-01	M22520/1-02
8	10–8	5–8.5	.132–.255	3.35–6.48	White/Red	M22520/23-01	M22520/23-02
4	6–4	13–21	.237–.370	6.01–9.40	White/Blue	M22520/23-01	M22520/23-04
0	2–0	34–60	.360–.550	9.14–13.97	White/Yell.	M22520/23-01	M22520/23-05

INSERTION/REMOVAL TOOLS

Contact Size	Color Code	Military Part Number	Amphenol Part Number
16	Blue/White	M81969/14-03	I10-538988-016
12	Yellow/White	M81969/14-04	I10-538988-012
8	Red	M81969/14-06	I6500-018-0008
4	Blue	M81969/14-07	I6500-018-0004
0	Yellow	M81969/14-08	I6500-018-0000

Amphenol

A Global Company



Pune Operations



Bangalore Operations

Amphenol

Interconnect India Pvt. Ltd.

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Bangalore Factory
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Bangalore - 560 102.
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Fax.: 91-80-2852 0418

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