

# MS/Standard insert arrangements

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

Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16
18-23	A/Inst.	10					10
18-24	A/Inst.	10					10
18-27	D	3				2	1
18-28	D	3				2	1
20-2	D	1	1				
20-4	D	4				4	
20-7	D/A	8					8
20-8	Inst.	6			2		4
20-9*	D/A	8				1	7
20-14	A	5			2	3	
20-15	A	7				7	
20-16	A	9				2	7
20-17	A	6				5	1
20-18	A	9				3	6
20-19	A	3			3		
20-21	A	9				1	8
20-22	A	6			3		3
20-24	A	4			2		2
20-27	A	14					14
20-29	A	17					17
20-32	D/A	8					8
20-33	A	11					11
22-2	D	3			3		
22-4**	A	4			2	2	
22-5	D	6				2	4
22-6*	D	3			2		1
22-7*	E	1	1				
22-9*	E	3				3	
22-10*	E	4					4
22-11*	B	2					2
22-12*	D	5			2		3
22-14	A	19					19
22-15*	E/A	6				5	1
22-17*	D/A	9				1	8
22-18*	D/A	8					8
22-19	A	14					14
22-21	A	3	1				2
22-22	A	4			4		
22-23	D/A	8				8	
22-27*	D/A	9			1		8
22-30	A	19					19
22-32	D	6				2	4
22-36*	D/A	8				8	
24-1**	D	2	1			1	
24-2	D	7				7	
24-4*	D	4	1				3
24-5**	A	16					16
24-6*	D/A	8				8	

\* Consult Amphenol, Sidney, NY for availability

\*\* Inactive for new design



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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
24-16*	D/A	7			1	3	3
24-20	D	11				2	9
24-21*	D	10			1		9
24-22	D	4			4		
24-24	A	16					16
24-27*	E	7					7
24-28	Inst.	24					24
24-80*	Inst.	23					23
28-1	D/A	9			3	6	
28-2	D	14				2	12
28-3*	E	3			3		
28-4*	E/D	9				2	7
28-5*	D	5		2		1	2
28-8*	E/D/A	12				2	10
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
28-16*	A	20					20
28-17	B/D/A	15					15
28-18*	C/D/A/Inst.	12					12
28-19*	B/D/A	10				4	6
28-20	A	14				10	4
28-21	A	37					37
28-22	D	6		3			3
32-1	E/D	5	2			3	
32-2*	E	5		3			2
32-3*	D	9	1	2		2	4
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	
32-20	A	23		2	3	2	16

Insert Arrangement	Service Rating	Total Contacts	Contact Size				
			0	4	8	12	16
32-22*	A	54					54
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
36-66*	A	56				4	52
40-1	D	30				6	24
40-2*	D	23					23
40-3*	D	23		1		4	18
40-4*	D	23		2	3	2	16
40-5*	A	15	3	2	4	6	
40-6*	D	26	1			1	24
40-7*	A/D	22	2			2	18
40-9	A	47			1	22	24
40-10*	A	29		4	9		16
40-11*	D	25	1	1	1	4	18
40-56*	A	85					85
40-62*	A	60					60

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\*\* Inactive for new design

# MS/Standard contact arrangements

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

					100° Rotation of 12S-3	250° Rotation of 12S-3	
<b>Insert Arrangement</b>	<b>8S-1</b>	<b>10S-2</b>	<b>10SL-3</b>	<b>10SL-4</b>	<b>12S-1</b>	<b>12S-2</b>	<b>12S-3</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>A***</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Number of Contacts</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Contact Size</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>

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

			100° Rotation of 14S-2	250° Rotation of 14S-2	100° Rotation of 14S-1	260° Rotation of 14S-1
<b>Insert Arrangement</b>	<b>14S-7</b>	<b>14S-9**</b>	<b>14S-10</b>	<b>14S-11</b>	<b>14S-12</b>	<b>14S-13</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>Inst.</b>	<b>Inst.</b>	<b>A</b>	<b>A</b>
<b>Number of Contacts</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>3</b>
<b>Contact Size</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>	<b>16</b>

<b>Insert Arrangement</b>	<b>16S-1</b>	<b>16-2*</b>	<b>16S-3*</b>	<b>16S-4*</b>	<b>16-7*</b>	<b>16S-8</b>
<b>Service Rating</b>	<b>A</b>	<b>E</b>	<b>B</b>	<b>D</b>	<b>A</b>	<b>A</b>
<b>Number of Contacts</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1 2</b>	<b>5</b>
<b>Contact Size</b>	<b>16</b>	<b>12</b>	<b>16</b>	<b>16</b>	<b>8 16</b>	<b>16</b>

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 \*\* Inactive for new design  
 \*\*\* Service rating Inst. Class K

**CONTACT LEGEND**

<b>16</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>0</b>

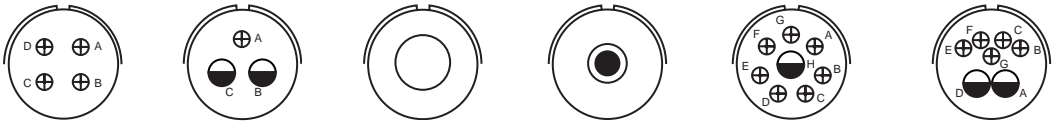


# MS/Standard contact arrangements

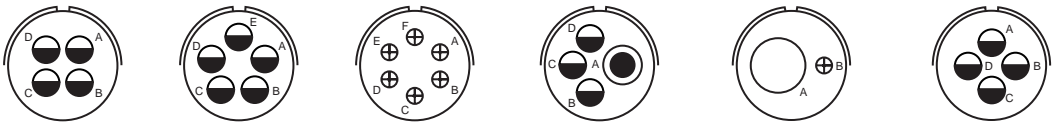
front face of pin insert or rear face of socket insert illustrated



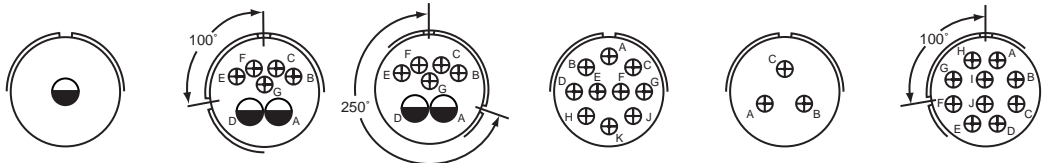
<b>Insert Arrangement</b>	<b>16-9</b>	<b>16-10</b>	<b>16-11</b>	<b>16-12</b>	<b>16-13</b>	<b>18-1</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>B, C, F, G = A; Bal. = Inst.</b>
<b>Number of Contacts</b>	<b>2 2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2††</b>	<b>10</b>
<b>Contact Size</b>	<b>12 16</b>	<b>12</b>	<b>12</b>	<b>4</b>	<b>12</b>	<b>16</b>



<b>Insert Arrangement</b>	<b>18-4</b>	<b>18-5</b>	<b>18-6*</b>	<b>18-7*</b>	<b>18-8</b>	<b>18-9</b>
<b>Service Rating</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>B</b>	<b>A</b>	<b>Inst.</b>
<b>Number of Contacts</b>	<b>4</b>	<b>2 1</b>	<b>1</b>	<b>1</b>	<b>1 7</b>	<b>2 5</b>
<b>Contact Size</b>	<b>16</b>	<b>12 16</b>	<b>4</b>	<b>8</b>	<b>12 16</b>	<b>12 16</b>

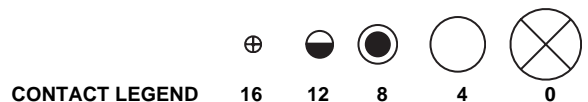


<b>Insert Arrangement</b>	<b>18-10**</b>	<b>18-11</b>	<b>18-12*</b>	<b>18-13</b>	<b>18-14*</b>	<b>18-15*</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Number of Contacts</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>1 3</b>	<b>1 1</b>	<b>4††</b>
<b>Contact Size</b>	<b>12</b>	<b>12</b>	<b>16</b>	<b>8 12</b>	<b>4 16</b>	<b>12</b>



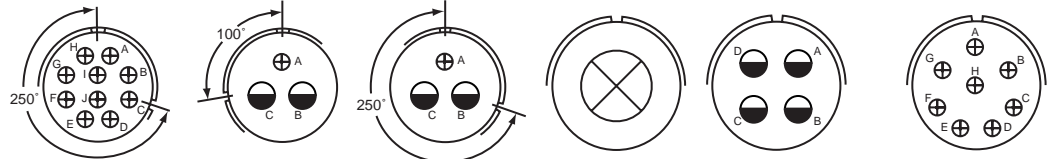
<b>Insert Arrangement</b>	<b>18-16*</b>	<b>18-17</b>	<b>18-18</b>	<b>18-19**</b>	<b>18-22**</b>	<b>18-23</b>
<b>Service Rating</b>	<b>C</b>	<b>Inst.</b>	<b>Inst.</b>	<b>A</b>	<b>D</b>	<b>B, C, F, G = A; Bal. = Inst.</b>
<b>Number of Contacts</b>	<b>1</b>	<b>2 5</b>	<b>2 5</b>	<b>10</b>	<b>3</b>	<b>10</b>
<b>Contact Size</b>	<b>12</b>	<b>12 16</b>	<b>12 16</b>	<b>16</b>	<b>16</b>	<b>16</b>

\* Consult Amphenol, Sidney, NY for availability.  
 \*\* Inactive for new design  
 † one alume contact and one chromel contact  
 †† A, C = Iron; B, D = Constantan

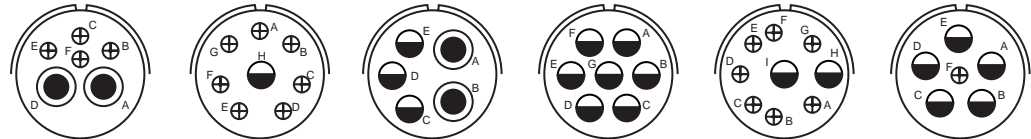


# MS/Standard contact arrangements

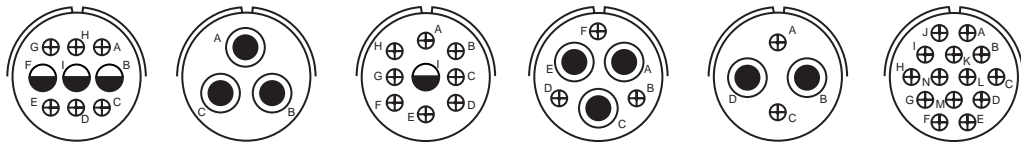
front face of pin insert or rear face of socket insert illustrated



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

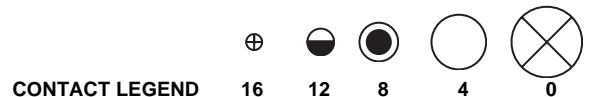


Insert Arrangement	20-8*	20-9*	20-14	20-15	20-16	20-17
Service Rating	Inst.	H = D; Bal. = A	A	A	A	A
Number of Contacts	2 4	1 7	2 3	7	2 7	5 1
Contact Size	8 16	12 16	8 12	12	12 16	12 16



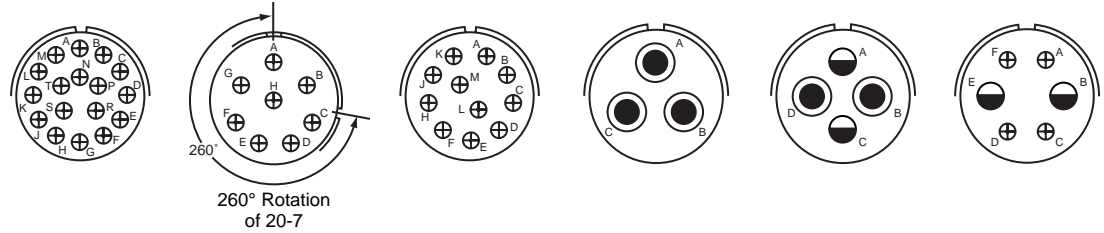
Insert Arrangement	20-18	20-19	20-21	20-22	20-24	20-27
Service Rating	A	A	A	A	A	A
Number of Contacts	3 6	3	1 8	3 3	2 2	14
Contact Size	12 16	8	12 16	8 16	8 16	16

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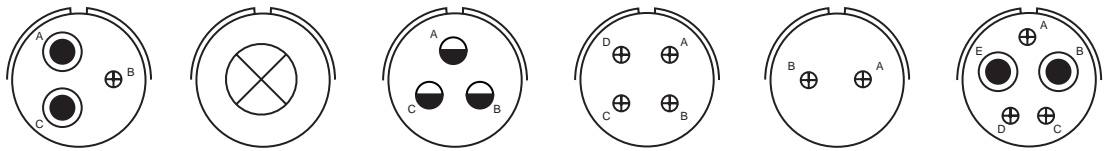


# MS/Standard contact arrangements

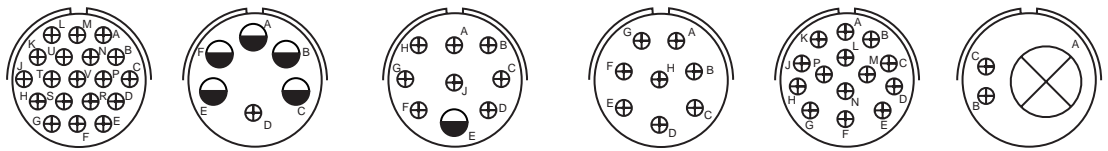
front face of pin insert or rear face of socket insert illustrated



Insert Arrangement	20-29	20-32	20-33	22-2	22-4**	22-5
Service Rating	A	A, B, G, H = D; Bal. = A	A	D	A	D
Number of Contacts	17	8	11	3	2 2	2 4
Contact Size	16	16	16	8	8 12	12 16



Insert Arrangement	22-6**	22-7*	22-9*	22-10*	22-11*	22-12*
Service Rating	D	E	E	E	B	D
Number of Contacts	2 1	1	3	4	2	2 3
Contact Size	8 16	0	12	16	16	8 16



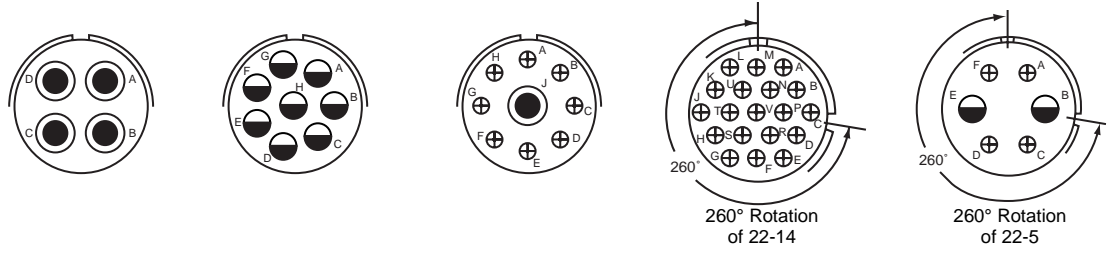
Insert Arrangement	22-14	22-15*	22-17*	22-18*	22-19	22-21
Service Rating	A	D = 3; Bal. = A	A = D; Bal. = A	C, D, E = A; Bal. = D	A	A
Number of Contacts	19	5 1	1 8	8	14	1 2
Contact Size	16	12 16	12 16	16	16	0 16

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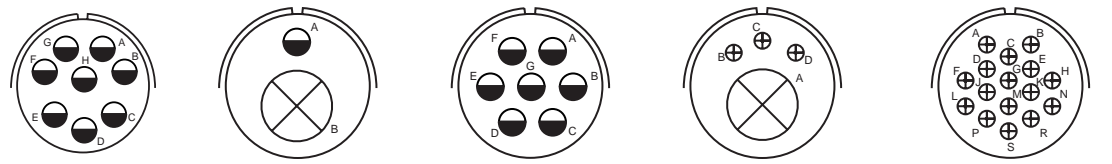


# MS/Standard contact arrangements

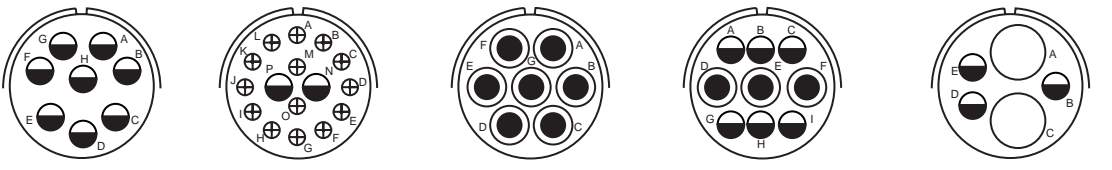
front face of pin insert or rear face of socket insert illustrated



<b>Insert Arrangement</b>	<b>22-22</b>	<b>22-23</b>	<b>22-27*</b>	<b>22-30</b>	<b>22-32</b>
<b>Service Rating</b>	<b>A</b>	<b>H = D; Bal. = A</b>	<b>J = D; Bal. = A</b>	<b>A</b>	<b>D</b>
<b>Number of Contacts</b>	<b>4</b>	<b>8</b>	<b>1 8</b>	<b>19</b>	<b>2 4</b>
<b>Contact Size</b>	<b>8</b>	<b>12</b>	<b>8 16</b>	<b>16</b>	<b>12 16</b>

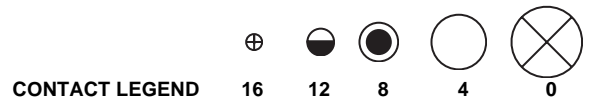


<b>Insert Arrangement</b>	<b>22-36*</b>	<b>24-1**</b>	<b>24-2</b>	<b>24-4*</b>	<b>24-5**</b>
<b>Service Rating</b>	<b>H = D; Bal. = A</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>A</b>
<b>Number of Contacts</b>	<b>8</b>	<b>1 1</b>	<b>7</b>	<b>1 3</b>	<b>16</b>
<b>Contact Size</b>	<b>12</b>	<b>0 12</b>	<b>12</b>	<b>0 16</b>	<b>16</b>



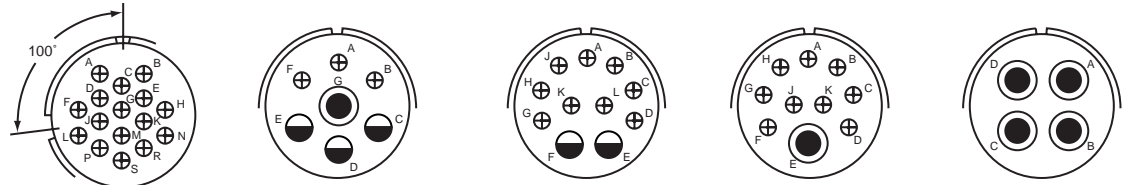
<b>Insert Arrangement</b>	<b>24-6*</b>	<b>24-7</b>	<b>24-10</b>	<b>24-11</b>	<b>24-12</b>
<b>Service Rating</b>	<b>A, G, H = D; Bal. = A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<b>Number of Contacts</b>	<b>8</b>	<b>2 14</b>	<b>7</b>	<b>3 6</b>	<b>2 3</b>
<b>Contact Size</b>	<b>12</b>	<b>12 16</b>	<b>8</b>	<b>8 12</b>	<b>4 12</b>

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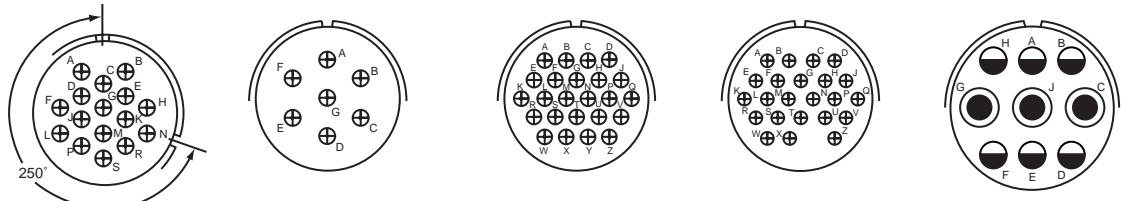


# MS/Standard contact arrangements

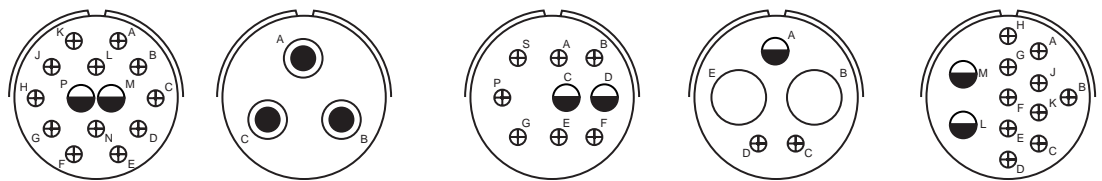
front face of pin insert or rear face of socket insert illustrated



Insert Arrangement	24-15	24-16*	24-20	24-21*	24-22
Service Rating	A	A, B, F, G = D; C, D, E = A	D	D	D
Number of Contacts	16	1 3 3	2 9	1 9	4
Contact Size	16	8 12 16	12 16	8 16	8

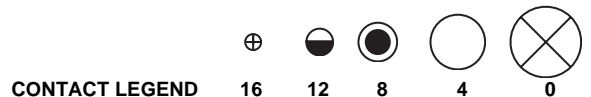


Insert Arrangement	24-24	24-27*	24-28	24-80*	28-1
Service Rating	A	E	Inst.	Inst.	A, J, E = D; Bal. = A
Number of Contacts	16	7	24	23	3 6
Contact Size	16	16	16	16	8 12



Insert Arrangement	28-2	28-3*	28-4*	28-5*	28-8*
Service Rating	D	E	G, P, S = E; Bal. = D	D	L, M = E; B = D; Bal. = A
Number of Contacts	2 12	3	2 7	2 1 2	2 10
Contact Size	12 16	8	12 16	4 12 16	12 16

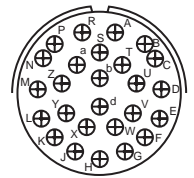
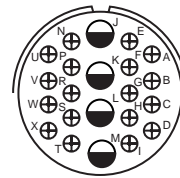
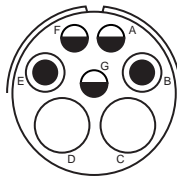
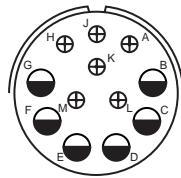
\* Consult Amphenol, Sidney, NY for availability.





# MS/Standard contact arrangements

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



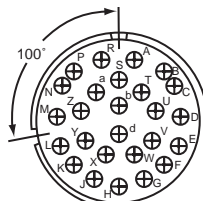
**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**28-9**  
**D**  
**6 6**  
**12 16**

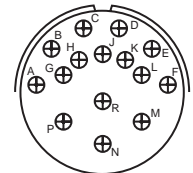
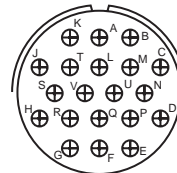
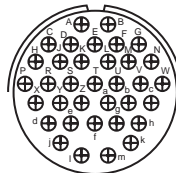
**28-10**  
**G = D, Bal. = A**  
**2 2 3**  
**4 8 12**

**28-11**  
**A**  
**4 18**  
**12 16**

**28-12**  
**A**  
**26**  
**16**



100° Rotation of 28-12



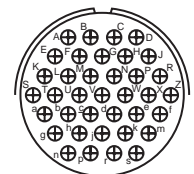
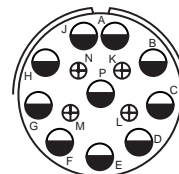
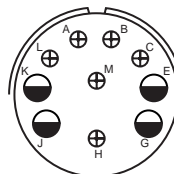
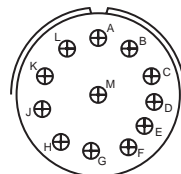
**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**28-13**  
**A**  
**26**  
**16**

**28-15**  
**A**  
**35**  
**16**

**28-16\*\***  
**A**  
**20**  
**16**

**28-17**  
**R = B; M, N, P = D; Bal. = A**  
**15**  
**16**



**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

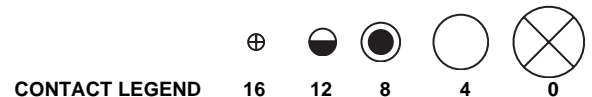
**28-18\***  
**M = C; G, H, J, K, L = D; A, B = A; Bal. = Inst.**  
**12**  
**16**

**28-19\***  
**H, M = B; A, B = D; Bal. = A**  
**4 6**  
**12 16**

**28-20**  
**A**  
**10 4**  
**12 16**

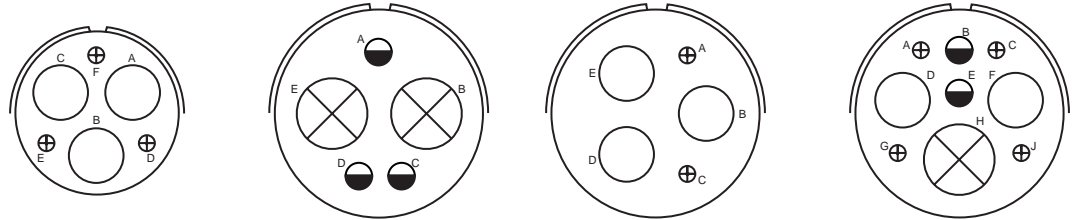
**28-21**  
**A**  
**37**  
**16**

\* Consult Amphenol, Sidney, NY for availability.  
\*\* Inactive for new design

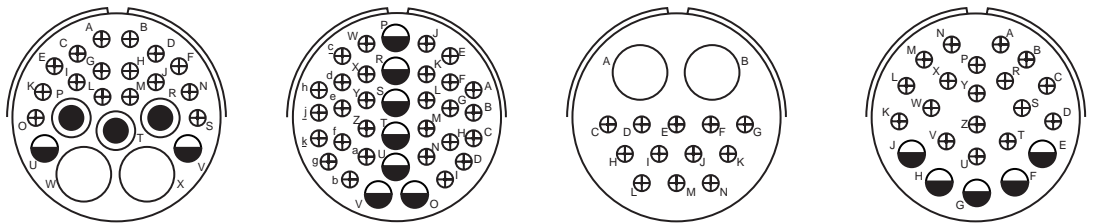


# MS/Standard contact arrangements

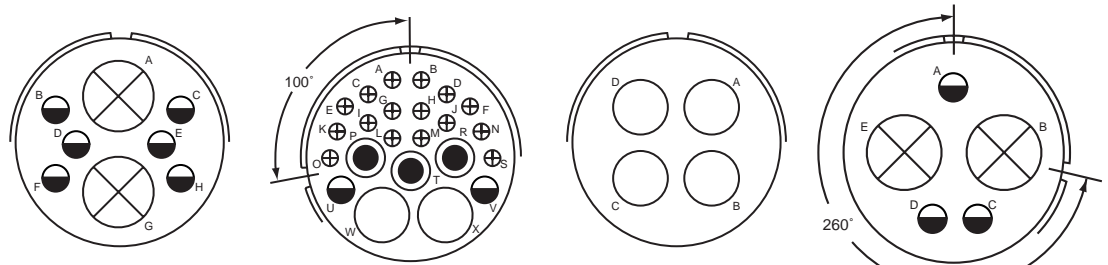
front face of pin insert or rear face of socket insert illustrated



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

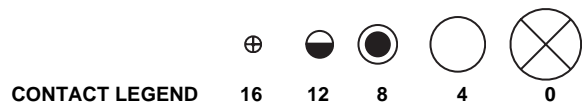


Insert Arrangement	32-6	32-7	32-9	32-13
Service Rating	A	A, B, h, j = Inst.; Bal. = A	D	D
Number of Contacts	2 3 2 16	7 28	2 12	5 18
Contact Size	4 8 12 16	12 16	4 16	12 16



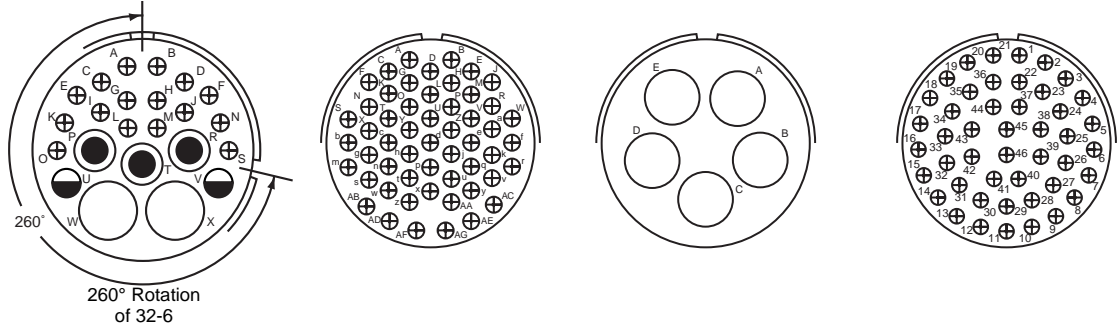
Insert Arrangement	32-15	32-16	32-17	32-19*
Service Rating	D	A	D	A = E, Bal. = D
Number of Contacts	2 6	2 3 2 16	4	2 3
Contact Size	0 12	4 8 12 16	4	0 12

\* Consult Amphenol, Sidney, NY for availability.

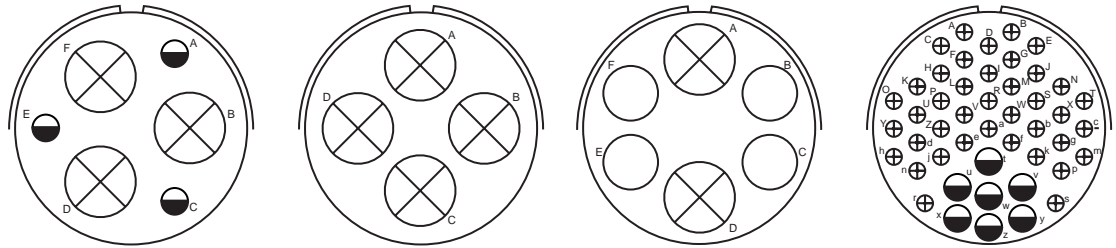


# MS/Standard contact arrangements

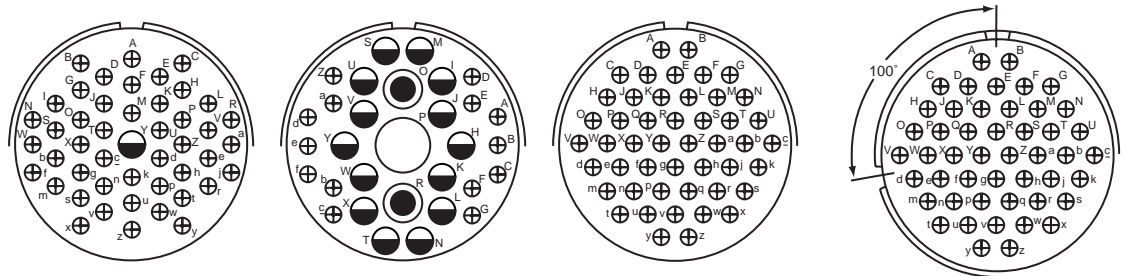
front face of pin insert or rear face of socket insert illustrated



Insert Arrangement	32-20	32-22*	32-63	32-73
Service Rating	A	A	D	A
Number of Contacts	2 3 2 16	54	5	46
Contact Size	4 8 12 16	16	4	16

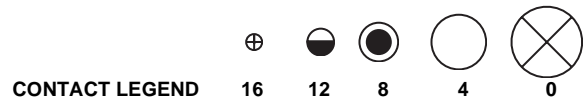


Insert Arrangement	36-3	36-5	36-6	36-7
Service Rating	D	A	A	A
Number of Contacts	3 3	4	2 4	7 40
Contact Size	0 12	0	0 4	12 16



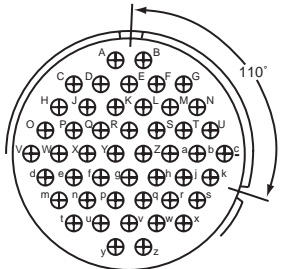
Insert Arrangement	36-8	36-9	36-10	36-11
Service Rating	A	A	A	A
Number of Contacts	1 46	1 2 14 14	48	48
Contact Size	12 16	4 8 12 16	16	16

\* Consult Amphenol, Sidney, NY for availability.

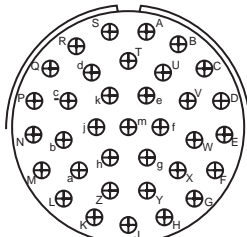


# MS/Standard contact arrangements

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

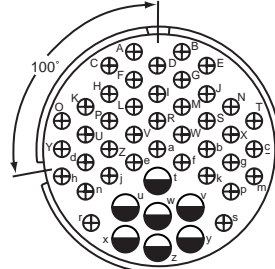


110° Rotation of 36-10



36-15

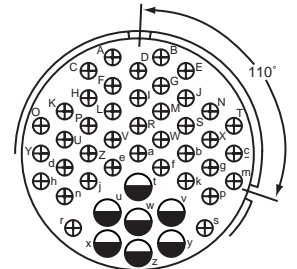
M = D, Bal. = A



100° Rotation of 36-7

36-16

A  
7 40  
12 16



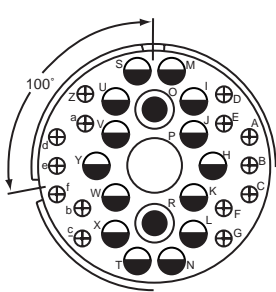
110° Rotation of 36-7

36-17

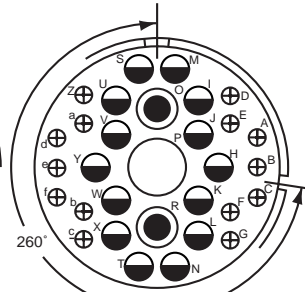
A  
7 40  
12 16

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

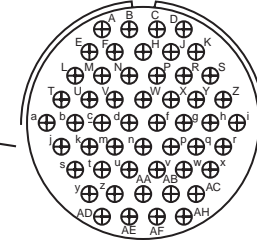
36-12  
A  
48  
16



100° Rotation of 36-9

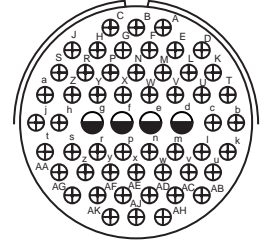


260° Rotation of 36-9



36-52

A  
52  
16



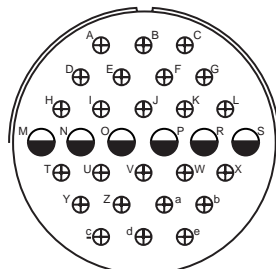
36-66\*

A  
4 52  
12 16

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

36-18  
A  
1 2 14 14  
4 8 12 16

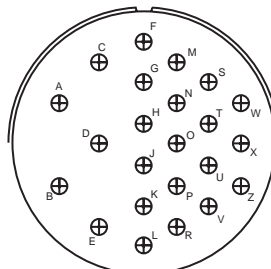
36-21  
A  
1 2 14 14  
4 8 12 16



40-1

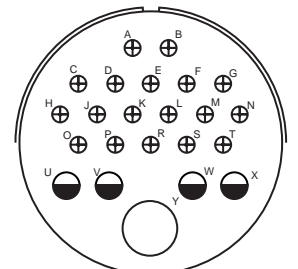
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

D  
6 24  
12 16



40-2\*

D  
23  
16



40-3\*

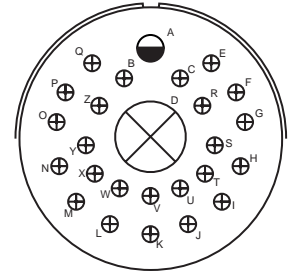
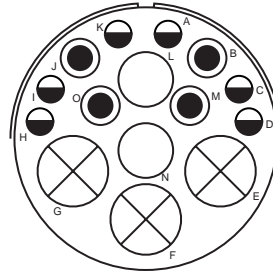
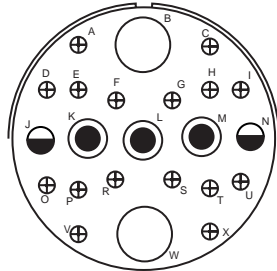
D  
1 4 18  
4 12 16

\* Consult Amphenol, Sidney, NY for availability.



# MS/Standard contact arrangements

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

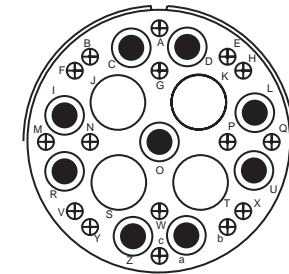
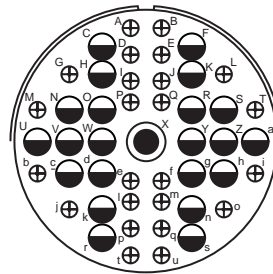
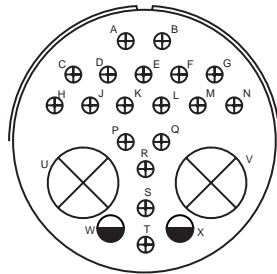


**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**40-4\***  
**D**  
2 3 2 16  
4 8 12 16

**40-5\***  
**A**  
3 2 4 6  
0 4 8 12

**40-6\***  
**D**  
1 1 24  
0 12 16

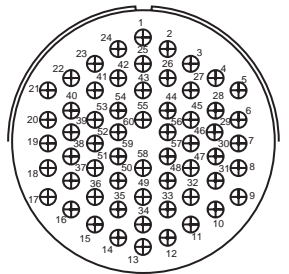
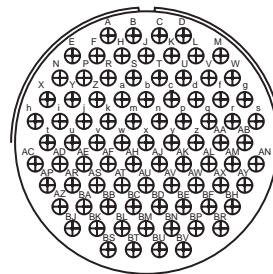
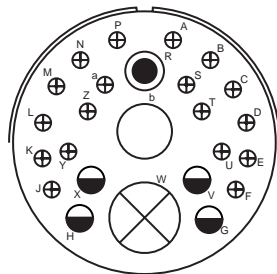


**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**40-7\***  
**P, Q, U, V, W, X = A; Bal. = D**  
2 2 18  
0 12 16

**40-9**  
**A**  
1 22 24  
8 12 16

**40-10\***  
**A**  
4 9 16  
4 8 16



**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**40-11\***  
**D**  
1 1 1 4 18  
0 4 8 12 16

**40-56\***  
**A**  
85  
16

**40-62\***  
**A**  
60  
16

\* Consult Amphenol, Sidney, NY for availability.



**CONTACT LEGEND**

