

# MIL-C-22992, QWLD

## insert arrangements

Insert Arrangement		Service Rating	Total Contacts	Contact Size				
MS Approved	Industrial			0	4	8	12	16
12-5		D	1				1	
	12-48	A	3					3
	12-49	A	2					2
14-3		A	1			1		
	14-53	Inst.	6					6
16-2		E	1				1	
16-7		A	3			1		2
16-9		A	4				2	2
16-10		A	3				3	
16-11		A	2				2	
16-12		A	1	1				
16-13		A	2				2	
	16-61	A	7				7	
18-1		B, C, F, G = A; Bal. = Inst.	10					10
	18-3	D	2				2	
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
	18-19	A	10					10
	18-20	A	5					5
	18-22	D	3					3
	18-24	B, C, F, G = A; Bal. = Inst.	10					10
	18-29	A	5					5
	18-30	A	5					5
	18-31	A	5					5
20-2		D	1	1				
	20-3	D	3				3	
20-4		D	4				4	
	20-6	D	3					3
20-7		A, B, H, G = D; C, D, E, F = A	8					8
20-8		Inst.	6			2		4

Insert Arrangement		Service Rating	Total Contacts	Contact Size				
MS Approved	Industrial			0	4	8	12	16
20-9		H = D; Bal. = A	8				1	7
	20-11	Inst.	13					13
	20-12	A	2		1			1
20-14		A	5			2	3	
20-15		A	7				7	
20-16		A	9				2	7
20-17		A	6				5	1
20-18		A	9				3	6
	20-19	A	3			3		
	20-20	A	4		1		3	
20-21		A	9				1	8
20-22		A	6			3		3
	20-23	A	2			2		
20-24		A	4			2		2
	20-25	Inst.	13					13
20-27		A	14					14
20-29		A	17					17
	20-30	Inst.	13					13
20-33		A	11					11
	22-1	D	2			2		
22-2		D	3			3		
	22-4	A	4			2	2	
22-5		D	6				2	4
	22-6	D	3			2		1
22-7		E	1	1				
	22-8	E	2				2	
22-9		E	3				3	
22-10		E	4					4
22-11		B	2					2
22-12		D	5			2		3
	22-13	E = D; A, B, C, D = A	5				4	1
22-14		A	19					19
22-15		D = E; A, B, C, E, F = A	6				5	1
	22-16	A	9				3	6
22-17		A = D; Bal. = A	9				1	8
22-18		A, B, F, G, H = D; C, D, E = A	8					8
22-19		A	14					14
	22-20	A	9					9
22-21		A	3	1				2
22-22		A	4			4		
22-23		H = D; Bal. = A	8				8	
	22-24	C, D, E = D; A, B, F = A	6				2	4

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## insert arrangements

Insert Arrangement		Service Rating	Total Contacts	Contact Size				
MS Approved	Industrial			0	4	8	12	16
22-27		J = D; Bal. = A	9			1		8
	22-28	A	7				7	
	22-33	A, B, C, D = D; E, F, G = A	7					7
	22-34	D	5				3	2
22-36		H = D; Bal. = A	8				8	
24-2		D	7				7	
	24-3	D	7				2	5
	24-5	A	16					16
24-6		A, G, H = D; Bal. = A	8				8	
24-7		A	16				2	14
	24-9	A	2		2			
24-10		A	7			7		
24-11		A	9			3	6	
24-12		A	5		2		3	
24-16		A, B, F, G = D; C, D, E = A	7			1	3	3
	24-17	D	5				2	3
24-20		D	11				2	9
24-21		D	10			1		9
24-22		D	4			4		
24-27		E	7					7
24-28		Inst.	24					24
28-1		A, J, E = D; Bal. = A	9			3	6	
28-2		D	14				2	12
28-3		E	3			3		
28-4		G, P, S = E; Bal. = D	9				2	7
28-5		D	5		2		1	2
	28-6	D	3		3			
	28-7	D	2		2			
28-8		L, M = E; B = D; Bal. = A	12				2	10
28-9		D	12				6	6
28-10		G = D; Bal. = 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		R = B; M, N, P = D; A to L = A	15					15
28-18		M = C; G, H, J, K, L = D; A, B = H; Bal. = Inst.	12					12
28-19		H, M = B; A, B = D; Bal. = A	10				4	6
28-20		A	14				10	4

Insert Arrangement		Service Rating	Total Contacts	Contact Size				
MS Approved	Industrial			0	4	8	12	16
28-21		A	37					37
28-22		D	6			3		3
32-1		A = E; Bal. = D	5	2			3	
32-2		E	5			3		2
32-3		D	9	1	2		2	4
	32-4	F, J, K, N = A; Bal. = D	14				2	12
	32-5	D	2	2				
32-6		A	23		2	3	2	16
32-7		A, B, h, j = Inst.; Bal. = A	35				7	28
	32-8	A	30				6	24
32-9		D	14		2			12
	32-10	A, F = E; G = B; B, E = D; C, D = A	7		2	2		3
	32-12	C, D, E, F, G = A; Bal. = D	15				5	10
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			
32-73		A	46					46
	36-1	D	22				4	18
36-3		D	6	3			3	
	36-4	A = D; B, C = A	3	3				
36-5		A	4	4				
36-6		A	6	2	4			
36-7		A	47				7	40
36-8		A	47				1	46
36-9		A	31		1	2	14	14
36-10		A	48					48
	36-11	A	48					48
	36-12	A	48					48
	36-13	N, P, Q = E; Bal. = A	17				2	15
	36-14	D	16			5	5	6
36-15		M = D; Bal. = A	35					35
	36-16	A	47				7	40
	36-17	A	47				7	40
	36-18	A	31		1	2	14	14
	36-20	A	34			2	2	30
36-52		A	52					52
40-1		D	30				6	24
40-9		A	47			1	22	24
40-56		A	85					85
44-52		A	104					104

# QWLD special insert arrangements

Insert Arrangement	Service Rating	Total Con-acts	Contact Size																
			0	4	8	12	16	Coax**											
								0	4	8	12								
16-59	A	4				4													
20-51	A	3			3														
20-57	A	7				7*													
20-58	A	10				5	5												
20-59	A	3			3*														
20-66	A	6				5*	1												
20-79	A/D	8				1	7												
22-63	A	12				4	8												
22-65	A/D	8				8*													
22-70	A	13				8	5												
22-80	A	3			3*														
24-51	A	5			5														
24-52	Hi Volt.	1				1													
24-53	A	5			5														
24-58	A	13			3	3	7												
24-59	A	14				7	7												
24-60	A	7			7*														
24-65	A	15				11	4												
24-66	D	7				7													
24-67	Inst.	19				19													
24-71	A	7			7*														
24-75	A	7			7*														
24-79	A	5			5														
24-80	Inst.	23					23												
24-84	A	19				1													18
28-51	A	12				12													
28-59	A	17				7	10												
28-66	A	16			2	14													
28-72	Coax	3									3								
28-74	A	16			7*		9												
28-75	A	16			7*		9												
28-79	A	16			7		9												
28-82	D	6			2	4													
28-84	A	9			9														
32-52	D	8	2			6													
32-53	Inst./E	42				5	37												
32-56	A	30				6*	24												
32-57	Coax	8				6		2											
32-58	Coax	4								4									
32-60	A	23					15					8							
32-62	Coax	23		2	1	2	16						2						
32-64	Inst.	54					54												
32-68	A	16					12		4										
32-75	Coax	9				2				7									
32-76	A	19				19													
32-79	D	5		4	1														

Insert Arrangement	Service Rating	Total Con-acts	Contact Size																
			0	4	8	12	16	Coax**											
								0	4	8	12								
36-51	D	4	2	2															
36-54	A	39			8		31												
36-55	A	39			8*		31												
36-59	A	53					3*	50											
36-60	A	47					7*	40											
36-64	Coax	4									4								
36-65	Coax	4									4								
36-71	A	53					3	50											
36-73	Coax	7										7							
36-74	A	44									43							1	
36-75	A	48									48*								
36-76	A	47									47								
36-77	D	7		7															
36-78	A	14					12				2								
36-79	A	20						20											
36-80	A	20						20*											
36-83	Coax	7										7							
36-85	A/D	35									35*								
40-53	A	60									60								
40-57	E	4	4																
40-61	A	59				1	3	55											
40-62	A	60									60								
40-63	A	61									61*								
40-64	Coax	36					3	20										13	
40-66	Coax	4									4								
40-67	A	11						1				10							
40-68	A	21				21													
40-70	A	61									61								
40-72	A	11									1		10						
40-73	A	61									61								
40-74	A	6						1				4	1						
40-75	E	5	4					1											
40-80	A	11				10					1								
40-81	A	62									62*								
40-82	A	62									62								
40-85	A	60									60*								
40-86	E	4									4								
40-87	D	7				7													
44-53	A	36									18							18	
48-51†	A	56				10					42	4							
48-52†	A	61									56	5							
48-53†	D	37								37									
48-54†	A	56				10					42	4							
48-55†	A	78				6	2	2	68										
48-57†	A	56	4			10					42								
48-60†	A	56				10					42	4							

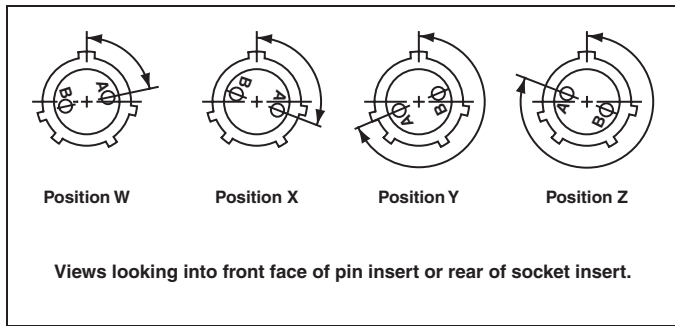
\* Crimp contacts accommodate wire the same size as the contact as well as wire of the next smaller, even size. Arrangements identified with an asterisk (\*) are exceptions. See insert arrangement drawings on pages 39-47 for application wire size.  
 \*\* Coaxial cable data can be found on insert arrangement drawings, pages 39-47. For further information on coaxial contacts and cable see catalog 12-130.  
 † Consult Sidney, NY for availability.

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## alternate insert rotations

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

As shown in the 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 counterclockwise the same number of degrees in respect to the normal shell key.



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	20-14	22-16	24-3	24-21	28-16	32-9
18-5	20-16	22-17	24-4	24-28	28-17	32-10
18-9	20-20	22-18	24-5	28-1	28-19	32-12
18-13	20-22	22-19	24-6	28-4	28-20	32-13
18-14	22-3	22-21	24-7	28-8	28-21	36-1
20-7	22-6	22-24	24-12	28-9	32-1	36-7
20-8	22-12	22-25	24-16	28-10	32-3	36-8
20-9	22-14	22-33	24-17	28-11	32-4	36-13
20-12	22-15	22-34	24-20	28-15	32-6	

Insert Arrangement	Degrees			
	W	X	Y	Z
16-9	35	110	250	325
16-10	90	180	270	-
16-11	35	110	250	325
16-13	35	110	250	325
16-61	80	-	-	280
18-1	70	145	215	290
18-3	35	110	250	325
18-4	35	110	250	325
18-8	70	-	-	290
18-10	-	120	240	-
18-11	-	170	265	-
18-12	80	-	-	280
18-15	-	120	240	-
18-19	-	120	240	-
18-20	90	180	270	-
18-22	70	145	215	290
18-29	90	180	270	-
20-3	70	145	215	290
20-4	45	110	250	-
20-5	35	110	250	325
20-6	70	145	215	290
20-15	80	-	-	280
20-17	90	180	270	-
20-18	35	110	250	325
20-19	90	180	270	-
20-21	35	110	250	325
20-23	35	110	250	325

Insert Arrangement	Degrees			
	W	X	Y	Z
20-24	35	110	250	325
20-27	35	110	250	325
20-29	80	-	-	280
22-1	35	110	250	325
22-2	70	145	215	290
22-4	35	110	250	325
22-5	35	110	250	325
22-8	35	110	250	325
22-9	70	145	215	290
22-10	35	110	250	325
22-11	35	110	250	325
22-13	35	110	250	325
22-20	35	110	250	325
22-22	-	110	250	-
22-23	35	-	250	-
22-27	80	-	250	280
22-28	80	-	-	280
22-36	90	-	270	-
24-2	80	-	-	280
24-9	35	110	250	325
24-10	80	-	-	280
24-11	35	110	250	325
24-22	45	110	250	-
24-27	80	-	-	280
28-2	35	110	250	325
28-3	70	145	215	290
28-5	35	110	250	325

Insert Arrangement	Degrees			
	W	X	Y	Z
28-6	70	145	215	290
28-7	35	110	250	325
28-12	90	180	270	-
28-18	70	145	215	290
28-22	70	145	215	290
32-2	70	145	215	290
32-5	35	110	250	325
32-7	80	125	235	280
32-8	80	125	235	280
32-15	35	110	250	280
32-17	45	110	250	-
32-73	36	-	-	-
36-3	70	145	215	290
36-4	70	145	215	290
36-5	-	120	240	-
36-6	35	110	250	325
36-9	80	125	235	280
36-10	80	125	235	280
36-14	90	180	270	-
36-15	60	125	245	305
36-52	72	144	216	288
40-1	65	130	235	300
40-9	65	125	225	310
40-56	72	144	216	288
44-52	72	135	225	288

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## contact arrangements

front face of pin insert or rear of socket insert illustrated

<b>Insert Arrangement</b>	12-5	12-48	12-49	14-3	14-53	16-2
<b>Service Rating</b>	D	A	A	A	Inst.	E
<b>Number of Contacts</b>	1	3	2	1	6	1
<b>Contact Size</b>	12	16	16	8	16	12

<b>Insert Arrangement</b>	16-7	16-9	16-10	16-11	16-12	16-13
<b>Service Rating</b>	A	A	A	A	A	A
<b>Number of Contacts</b>	1 2	2 2	3	2	1	2*
<b>Contact Size</b>	8 16	12 16	12	12	4	12

<b>Insert Arrangement</b>	16-61	18-1	18-3	18-4	18-5	18-6
<b>Service Rating</b>	A	B, C, F, G = A; Bal. = Inst.	D	D	D	D
<b>Number of Contacts</b>	7	10	2	4	2 1	1
<b>Contact Size</b>	16	16	12	16	12 16	4

<b>Insert Arrangement</b>	18-7	18-8	18-9	18-10	18-11	18-12
<b>Service Rating</b>	B	A	Inst.	A	A	A
<b>Number of Contacts</b>	1	1 7	2 5	4	5	6
<b>Contact Size</b>	8	12 16	12 16	12	12	16

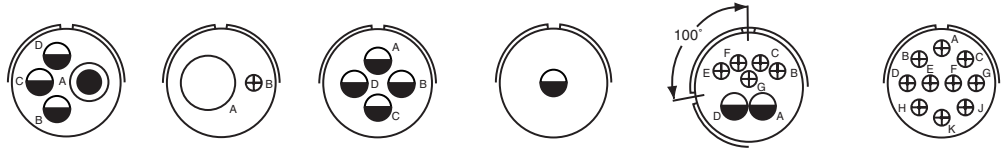
\*A = Iron; B = Constantan



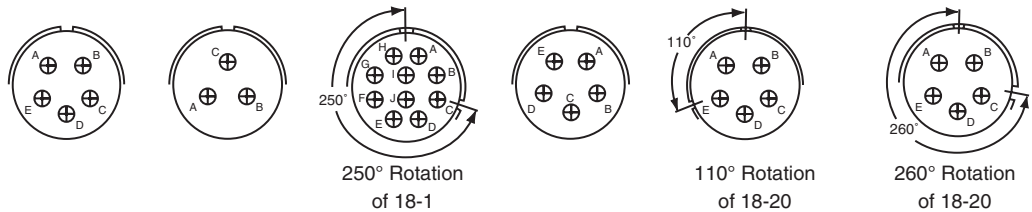
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## contact arrangements

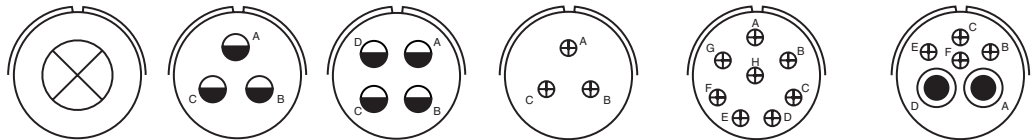
front face of pin insert or rear of socket insert illustrated



Insert Arrangement	18-13	18-14	18-15	18-16	18-17	18-19
Service Rating	A	A	A	C	Inst.	A
Number of Contacts	1 3	1 1	4**	1	2 5	10
Contact Size	8 12	4 16	12	12	12 16	16



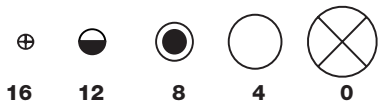
Insert Arrangement	18-20	18-22	18-24	18-29	18-30	18-31
Service Rating	A	D	B, C, F, G = A, Bal. = Inst.	A	A	A
Number of Contacts	5	3	10	5	5	5
Contact Size	16	16	16	16	16	16



Insert Arrangement	20-2	20-3	20-4	20-6	20-7	20-8
Service Rating	D	D	D	D	A, B, H, G = D; C, D, E, F = A	Inst.
Number of Contacts	1	3	4	3	8	2 4
Contact Size	0	12	12	16	16	8 16

\*\*A, C = Iron; B, D = Constantan

### CONTACT LEGEND



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## contact arrangements

front face of pin insert or rear of socket insert illustrated

<b>Insert Arrangement</b>	20-9	20-11	20-12	20-14	20-15	20-16
<b>Service Rating</b>	H = D; Bal. = A	Inst.	A	A	A	A
<b>Number of Contacts</b>	1 7	13	1 1	2 3	7	2 7
<b>Contact Size</b>	12 16	16	4 16	8 12	12	12 16

<b>Insert Arrangement</b>	20-17	20-18	20-19	20-20	20-21	20-22
<b>Service Rating</b>	A	A	A	A	A	A
<b>Number of Contacts</b>	5 1	3 6	3	1 3	1 8	3 3
<b>Contact Size</b>	12 16	12 16	8	4 12	12 16	8 16

			100° Rotation of 20-11			250° Rotation of 20-11
<b>Insert Arrangement</b>	20-23	20-24	20-25	20-27	20-29	20-30
<b>Service Rating</b>	A	A	Inst.	A	A	Inst.
<b>Number of Contacts</b>	2	2 2	13	14	17	13
<b>Contact Size</b>	8	8 16	16	16	16	16



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## contact arrangements

front face of pin insert or rear of socket insert illustrated

<b>Insert Arrangements</b>	<b>20-33</b>	<b>22-1</b>	<b>22-2</b>	<b>22-4</b>	<b>22-5</b>
<b>Service Rating</b>	<b>A</b>	<b>D</b>	<b>D</b>	<b>A</b>	<b>D</b>
<b>Number of Contacts</b>	<b>11</b>	<b>2</b>	<b>3</b>	<b>2 2</b>	<b>2 4</b>
<b>Contact Size</b>	<b>16</b>	<b>8</b>	<b>8</b>	<b>8 12</b>	<b>12 16</b>

<b>Insert Arrangement</b>	<b>22-6</b>	<b>22-7</b>	<b>22-8</b>	<b>22-9</b>	<b>22-10</b>
<b>Service Rating</b>	<b>D</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>
<b>Number of Contacts</b>	<b>2 1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Contact Size</b>	<b>8 16</b>	<b>0</b>	<b>12</b>	<b>12</b>	<b>16</b>

<b>Insert Arrangement</b>	<b>22-11</b>	<b>22-12</b>	<b>22-13</b>	<b>22-14</b>	<b>22-15</b>
<b>Service Rating</b>	<b>B</b>	<b>D</b>	<b>E = D; A, B, C, D = A</b>	<b>A</b>	<b>D = E; A, B, C, E, F = A</b>
<b>Number of Contacts</b>	<b>2</b>	<b>2 3</b>	<b>4 1</b>	<b>19</b>	<b>5 1</b>
<b>Contact Size</b>	<b>16</b>	<b>8 16</b>	<b>12 16</b>	<b>16</b>	<b>12 16</b>

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



# MIL-C-22992, QWLD

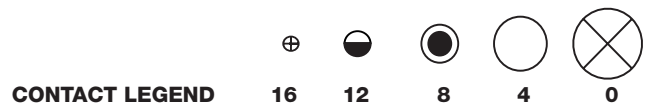
## contact arrangements

front face of pin insert or rear of socket insert illustrated

<b>Insert Arrangement</b>	<b>22-16</b>	<b>22-17</b>	<b>22-18</b>	<b>22-19</b>	<b>22-20</b>
<b>Service Rating</b>	<b>A</b>	<b>A = D; Bal. = A</b>	<b>A, B, F, G, H = D; C, D, E = A</b>	<b>A</b>	<b>A</b>
<b>Number of Contacts</b>	<b>3 6</b>	<b>1 8</b>	<b>8</b>	<b>14</b>	<b>9</b>
<b>Contact Size</b>	<b>12 16</b>	<b>12 16</b>	<b>16</b>	<b>16</b>	<b>16</b>

<b>Insert Arrangement</b>	<b>22-21</b>	<b>22-22</b>	<b>22-23</b>	<b>22-24</b>	<b>22-27</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>H = D; Bal. = A</b>	<b>C, D, E = D; A, B, F = A</b>	<b>J = D; Bal. = A</b>
<b>Number of Contacts</b>	<b>1 2</b>	<b>4</b>	<b>8</b>	<b>2 4</b>	<b>1 8</b>
<b>Contact Size</b>	<b>0 16</b>	<b>8</b>	<b>12</b>	<b>12 16</b>	<b>8 16</b>

<b>Insert Arrangement</b>	<b>22-28</b>	<b>22-33</b>	<b>22-34</b>	<b>22-36</b>	<b>24-2</b>
<b>Service Rating</b>	<b>A</b>	<b>A, B, C, D = D; E, F, G = A</b>	<b>D</b>	<b>H = D; Bal. = A</b>	<b>D</b>
<b>Number of Contacts</b>	<b>7</b>	<b>7</b>	<b>3 2</b>	<b>8</b>	<b>7</b>
<b>Contact Size</b>	<b>12</b>	<b>16</b>	<b>12 16</b>	<b>12</b>	<b>12</b>



# MIL-C-22992, QWLD

## contact arrangements

front face of pin insert or rear of socket insert illustrated

<b>Insert Arrangement</b>	<b>24-3</b>	<b>24-5</b>	<b>24-6</b>	<b>24-7</b>	<b>24-9</b>
<b>Service Rating</b>	<b>D</b>	<b>A</b>	<b>A, G, H = D; Bal. = A</b>	<b>A</b>	<b>A</b>
<b>Number of Contacts</b>	<b>2 5</b>	<b>16</b>	<b>8</b>	<b>2 14</b>	<b>2</b>
<b>Contact Size</b>	<b>12 16</b>	<b>16</b>	<b>12</b>	<b>12 16</b>	<b>4</b>

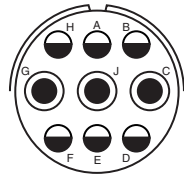
<b>Insert Arrangement</b>	<b>24-10</b>	<b>24-11</b>	<b>24-12</b>	<b>24-16</b>	<b>24-17</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A, B, F, G = D; C, D, E = A</b>	<b>D</b>
<b>Number of Contacts</b>	<b>7</b>	<b>3 6</b>	<b>2 3</b>	<b>1 3 3</b>	<b>2 3</b>
<b>Contact Size</b>	<b>8</b>	<b>8 12</b>	<b>4 12</b>	<b>8 12 16</b>	<b>12 16</b>

<b>Insert Arrangement</b>	<b>24-20</b>	<b>24-21</b>	<b>24-22</b>	<b>24-27</b>	<b>24-28</b>
<b>Service Rating</b>	<b>D</b>	<b>D</b>	<b>D</b>	<b>E</b>	<b>Inst.</b>
<b>Number of Contacts</b>	<b>2 9</b>	<b>1 9</b>	<b>4</b>	<b>7</b>	<b>24</b>
<b>Contact Size</b>	<b>12 16</b>	<b>8 16</b>	<b>8</b>	<b>16</b>	<b>16</b>

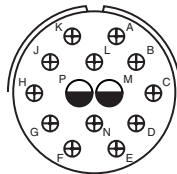
<b>CONTACT LEGEND</b>	<b>16</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>0</b>

# MIL-C-22992, QWLD contact arrangements

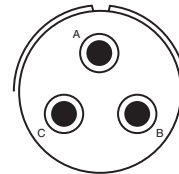
front face of pin insert or rear of socket insert illustrated



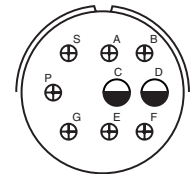
**28-1**  
A, J, E = D; Bal. = A  
3 6  
8 12



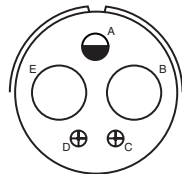
**28-2**  
D  
2 12  
12 16



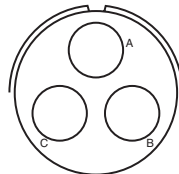
**28-3**  
E  
3  
8



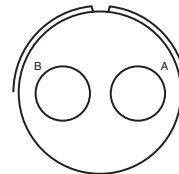
**28-4**  
G, P, S = E; Bal. = D  
2 7  
12 16



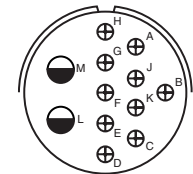
**28-5**  
D  
2 1 2  
4 12 16



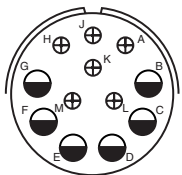
**28-6**  
D  
3  
4



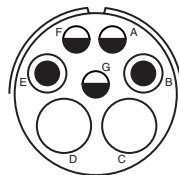
**28-7**  
D  
2  
4



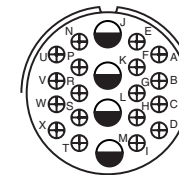
**28-8**  
L, M = E; B = D; Bal. = A  
2 10  
12 16



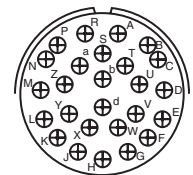
**28-9**  
D  
6 6  
12 16



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



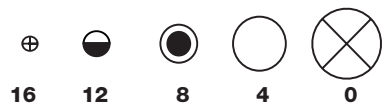
**28-11**  
A  
4 18  
12 16



**28-12**  
A  
26  
16

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

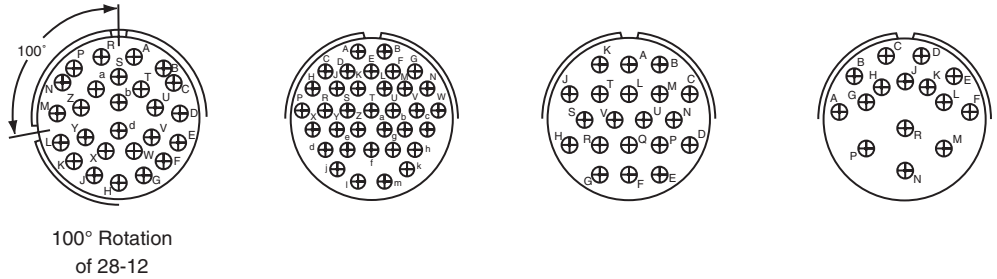
**CONTACT LEGEND**



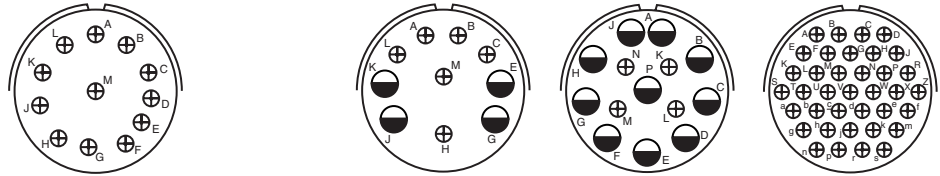
# MIL-C-22992, QWLD

## contact arrangements

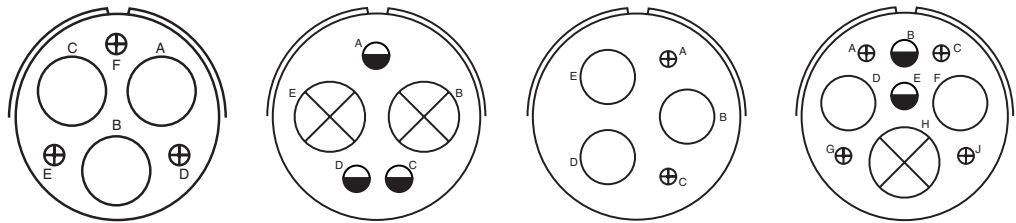
front face of pin insert or rear of socket insert illustrated



Insert Arrangement	28-13	28-15	28-16	28-17
Service Rating	A	A	A	R = B; M, N, P = D; A to L = A
Number of Contacts	26	35	20	15
Contact Size	16	16	16	16



Insert Arrangement	28-18	28-19	28-20	28-21
Service Rating	M = C; G, H, J, K, L = D; A, B = H; Bal. = Inst.	H, M = B; A = D; Bal = A	A	A
Number of Contacts	12	4 6	10 4	37
Contact Size	16	12 16	12 16	16

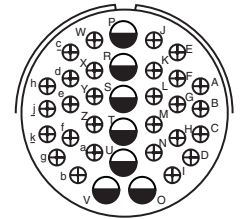
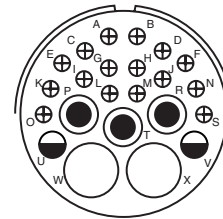
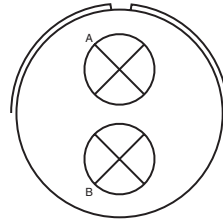
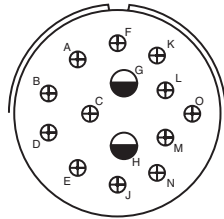


Insert Arrangement	28-22	32-1	32-2	32-3
Service Rating	D	A = E; Bal. = D	E	D
Number of Contacts	3 3	2 3	3 2	1 2 2 4
Contact Size	4 16	0 12	4 16	0 4 12 16



# MIL-C-22992, QWLD contact arrangements

front face of pin insert or rear of socket insert illustrated



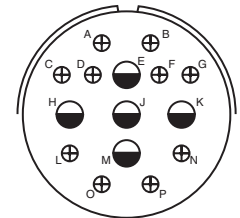
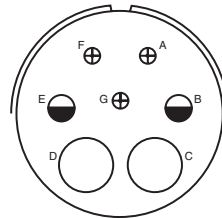
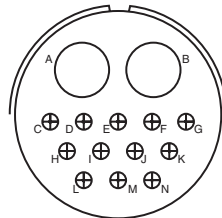
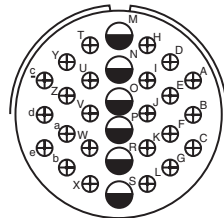
**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**32-4**  
F, J, K, N = A; Bal. = D  
2 12  
12 16

**32-5**  
D  
2  
0

**32-6**  
A  
2 3 2 16  
4 8 12 16

**32-7**  
A, B, h, j = Inst; Bal. = A  
7 28  
12 16



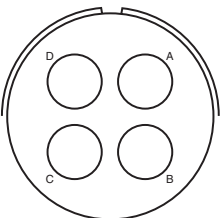
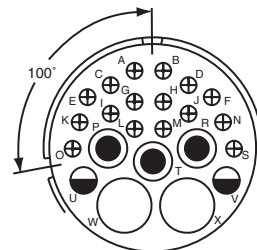
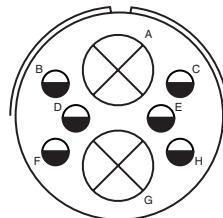
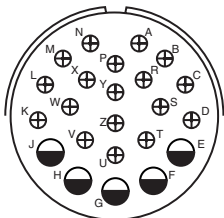
**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**32-8**  
A  
6 24  
12 16

**32-9**  
D  
2 12  
4 16

**32-10**  
A, F = E, G = B; B, E = D; C, D = A  
2 2 3  
4 8 16

**32-12**  
C, D, E, F, G = A; Bal. = D  
5 10  
12 16



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

**32-13**  
D  
5 18  
12 16

**32-15**  
D  
2 6  
0 12

**32-16**  
A  
2 3 2 16  
4 8 12 16

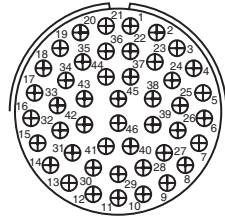
**32-17**  
D  
4  
4

100° Rotation  
of 32-6



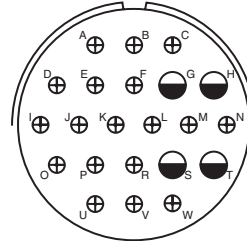
# MIL-C-22992, QWLD contact arrangements

front face of pin insert or rear of socket insert illustrated

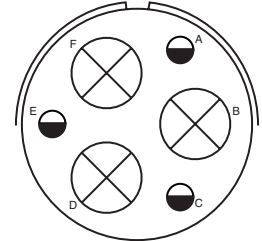


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

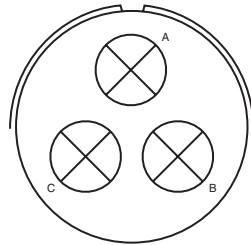
32-73  
A  
46  
16



36-1  
D  
4 18  
12 16

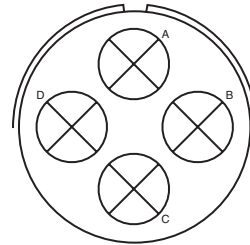


36-3  
D  
3 3  
0 12

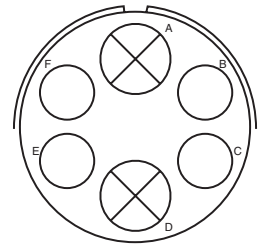


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

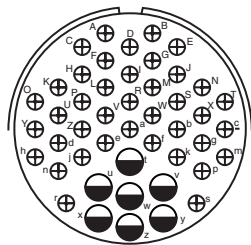
36-4  
A = D; B, C = A  
3  
0



36-5  
A  
4  
0

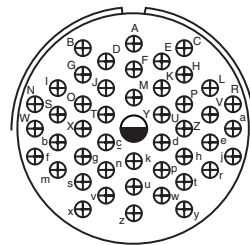


36-6  
A  
2 4  
0 4

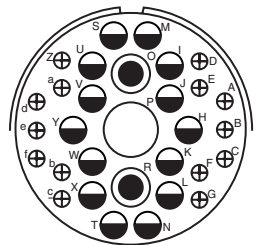


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

36-7  
A  
7 40  
12 16

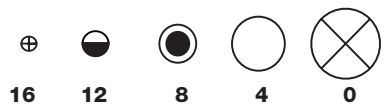


36-8  
A  
1 46  
12 16



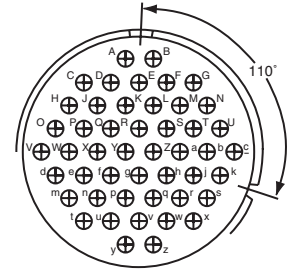
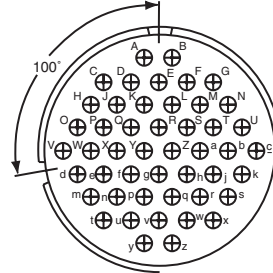
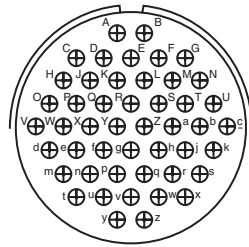
36-9  
A  
1 2 14 14  
4 8 12 16

## CONTACT LEGEND



# MIL-C-22992, QWLD contact arrangements

front face of pin insert or rear of socket insert illustrated



Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

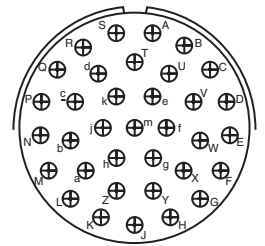
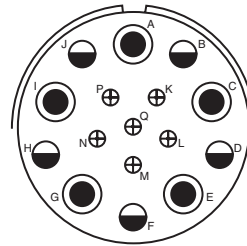
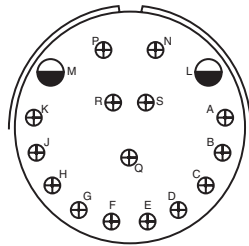
**36-10**  
**A**  
**48**  
**16**

100° Rotation  
of 36-10

**36-11**  
**A**  
**48**  
**16**

110° Rotation  
of 36-10

**36-12**  
**A**  
**48**  
**16**

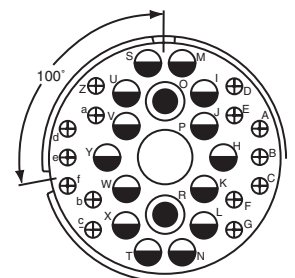
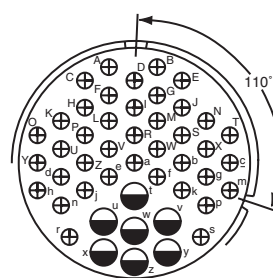
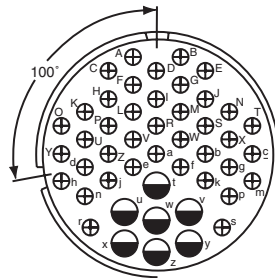


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

**36-13**  
**N, P, Q = E; Bal. = A**  
**2 15**  
**12 16**

**36-14**  
**D**  
**5 5 6**  
**8 12 16**

**36-15**  
**M = D; Bal. = A**  
**35**  
**16**



Insert Arrangements  
Service Rating  
Number of CContacts  
Contact Size

100° Rotation  
of 36-7

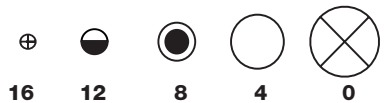
**36-16**  
**A**  
**7 40**  
**12 16**

110° Rotation  
of 36-7

**36-17**  
**A**  
**7 40**  
**12 16**

100° Rotation  
of 36-9

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



**CONTACT LEGEND**

**16**

**12**

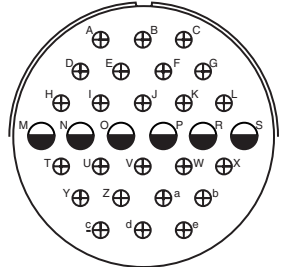
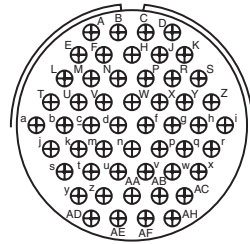
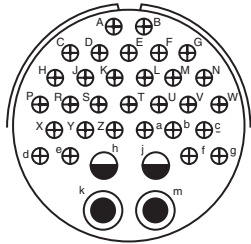
**8**

**4**

**0**

# MIL-C-22992, QWLD contact arrangements

front face of pin insert or rear of socket insert illustrated

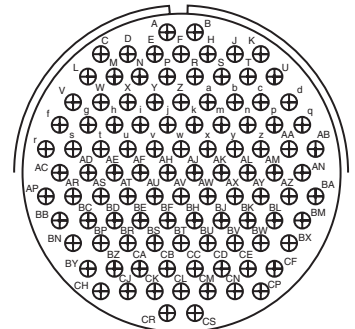
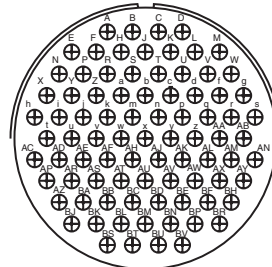
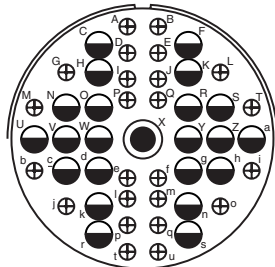


**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

**36-20**  
**A**  
**2 2 30**  
**8 12 16**

**36-52**  
**A**  
**52**  
**16**

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

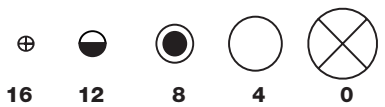


**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**

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

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

**44-52**  
**A**  
**104**  
**16**



**CONTACT LEGEND**

**16 12 8 4 0**





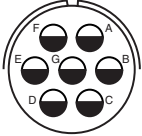
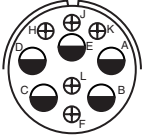

# QWLD

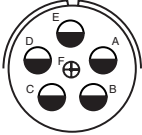
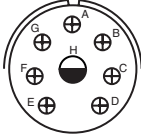
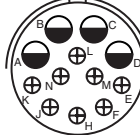
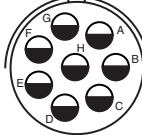
## special arrangements

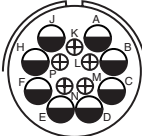
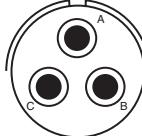


Ever expanding requirements for more complex circuits in ground equipment and elevated altitude applications has prompted Amphenol to provide inserts not covered by the MS drawings. Pictured here and on the following pages are insert layouts which have anywhere from one contact

(high tension) to the 78 contact insert in shell size 48. Many of these special inserts are also available in alternate keyway positions. Please contact Amphenol, Sidney, NY or your local Amphenol sales office for arrangements particular to your circuit application.




front face of pin insert or rear of socket insert illustrated

					
<b>Insert Arrangement</b>	16-59	20-51	20-57	20-58	20-59
<b>Service Rating</b>	A	A	A	A	A
<b>Number of Contacts</b>	4	3*	7*	5 5	3*
<b>Contact Size</b>	12	8	12 for #14 or 16 wire	12 16	8 for #10 or 12 wire

				
<b>Insert Arrangement</b>	20-66	20-79	22-63	22-65
<b>Service Rating</b>	A	H = D; Bal. = A	A	H = D; Bal. = A
<b>Number of Contacts</b>	1 5	7* 1*	4 8	8*
<b>Contact Size</b>	16 12 or #10 wire	16 12 for #16 wire	12 16	12 for #14 or 16 wire

				
<b>Insert Arrangement</b>	22-70	22-80	24-51	24-52
<b>Service Rating</b>	A	A	A	Hi-Volt
<b>Number of Contacts</b>	8 5	3*	5*	1
<b>Contact Size</b>	12 16	8 for #10 or 12 wire	B, E for AN #10 or 12 wire A, C, D for AN #8 wire	12

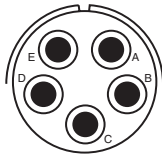
\*Solderless

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

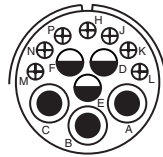
# QWLD

## special arrangements

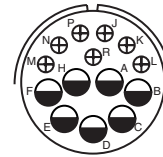
front face of pin insert or rear of socket insert illustrated



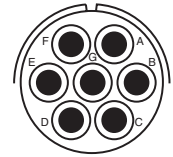
**24-53**  
**A**  
**5\***  
**8**



**24-58**  
**A**  
**3 3 7**  
**8 12 16**

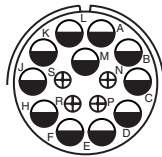


**24-59**  
**A**  
**7 7**  
**12 16**

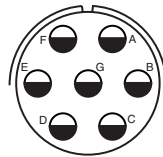


**24-60**  
**A**  
**7\***  
**8 for #10 or 12 wire**

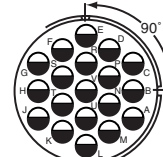
**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**



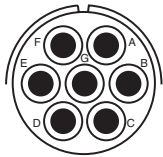
**24-65**  
**A**  
**11 4**  
**12 16**



**24-66**  
**D**  
**7**  
**12**

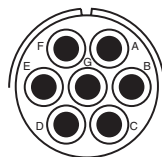


**24-67**  
**Inst.**  
**19**  
**12**

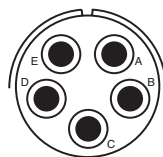


**24-71**  
**A**  
**2\* 5\***  
**8 8 for #10 or 12 wire**

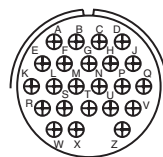
**Insert Arrangement**  
**Service Rating**  
**Number of Contacts**  
**Contact Size**



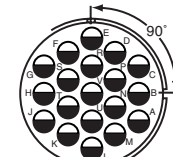
**24-75**  
**A**  
**5 2**  
**8 8 for #16 wire**



**24-79**  
**A**  
**5**  
**8**

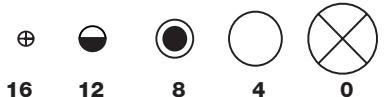


**24-80**  
**Inst.**  
**23**  
**16**



**24-84**  
**A**  
**1 18**  
**12 12 (Coax) RG-188/U**  
**or RG-174/U**

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



**CONTACT LEGEND**

**16**

**12**

**8**

**4**

**0**

\*Solderless

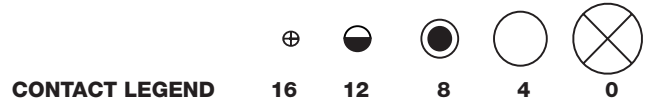
# QWLD

## special arrangements

front face of pin insert or rear of socket insert illustrated

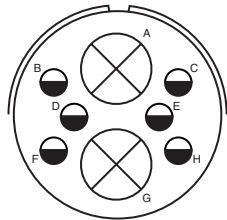
<b>Insert Arrangement</b>	<b>28-51</b>	<b>28-59</b>	<b>28-66</b>	<b>28-72</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>-</b>
<b>Number of Contacts</b>	<b>12</b>	<b>7 10</b>	<b>2 14</b>	<b>3</b>
<b>Contact Size</b>	<b>12</b>	<b>12 16</b>	<b>8 12</b>	<b>4 (Coax) RG-59A/U or RG-62A/U</b>
<b>Insert Arrangement</b>	<b>28-74</b>	<b>28-75</b>	<b>28-79</b>	<b>28-82</b>
<b>Service Rating</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>D</b>
<b>Number of Contacts</b>	<b>9* 4* 3*</b>	<b>9* 7*</b>	<b>7 9</b>	<b>2 4</b>
<b>Contact Size</b>	<b>16 8 8 for #10 wire (S, T, R)</b>	<b>16 8 for #10 wire</b>	<b>8 16</b>	<b>8 12</b>
<b>Insert Arrangement</b>	<b>28-84</b>	<b>32-52</b>	<b>32-53</b>	<b>32-56</b>
<b>Service Rating</b>	<b>A</b>	<b>D</b>	<b>t, u = E; Bal. = Inst.</b>	<b>A</b>
<b>Number of Contacts</b>	<b>9</b>	<b>6 2</b>	<b>5 37</b>	<b>24 6</b>
<b>Contact Size</b>	<b>8</b>	<b>12 0</b>	<b>12 16</b>	<b>16 12 for #10 wire</b>

\*Solderless



# QWLD special arrangements

front face of pin insert or rear of socket insert illustrated

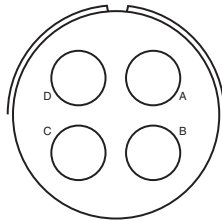


32-57

\*\*

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

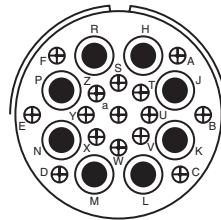
6 2  
12 0 (Coax) RG-71/U



32-58

-

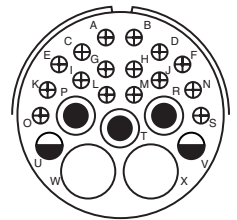
4 (Coax) RG-161U  
or RG-179/U



32-60

A

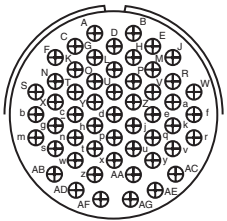
15 8  
16 8 (Coax) RG-124/U



32-62

\*\*

2 1 2 16 2  
4 8 12 16 8 (Coax)RG-124/U

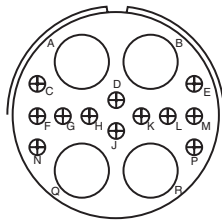


32-64

Inst.

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

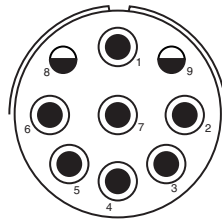
54  
16



32-68

A

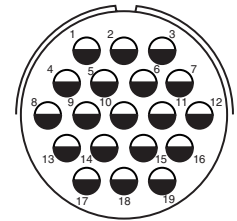
12 4  
16 4 (Coax) RG-58C/U



32-75

8, 9 = D

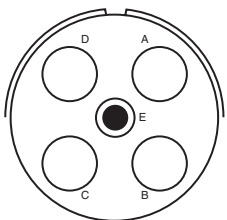
2 7  
12 8 (Coax) RG-180B/U



32-76

A

19  
12

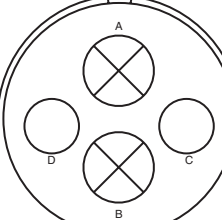


32-79

D

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

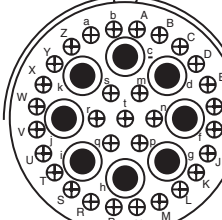
4 1  
4 8



36-51

D

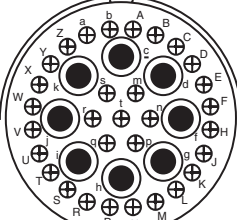
2 2  
0 4



36-54

A

8 31  
8 16



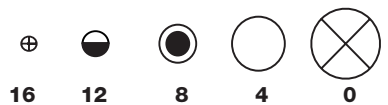
36-55

A

31 8  
16 8 for #6 wire

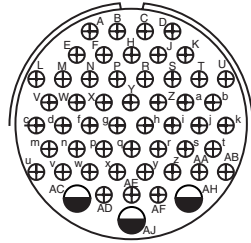
\*\*Consult Sidney, NY for service rating of power contacts.

## CONTACT LEGEND



# QWLD special arrangements

front face of pin insert or rear of socket insert illustrated

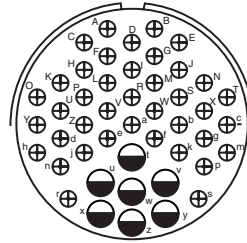


**36-59**

**A**

**50 3**

**16 12 for #10 wire**

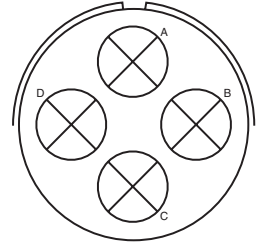


**36-60**

**\*\***

**40 7**

**16 12 for #10 wire**



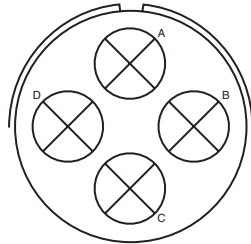
**36-64**

**-**

**4**

**0 (Coax) RG-11/U  
RG-12/U or RG-13/U**

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

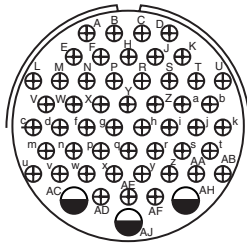


**36-65**

**-**

**4**

**0 (Coax) RG-59/U, RG-62/U  
or RG-71/U**

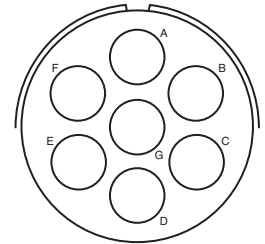


**36-71**

**A**

**3 50**

**12 16**



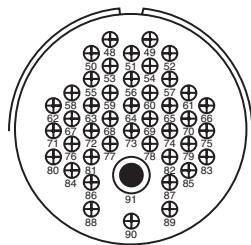
**36-73**

**-**

**7**

**4 (Coax) RG-62B/U**

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

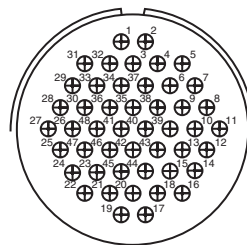


**36-74**

**A**

**43 1**

**16 8 (Coax) RG-187/U**

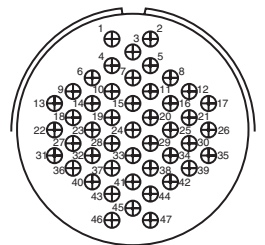


**36-75**

**A**

**48**

**16 for #14 wire**



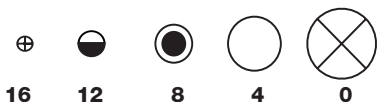
**36-76**

**A**

**47**

**16**

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



**CONTACT LEGEND**

**16**

**12**

**8**

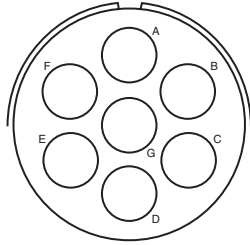
**4**

**0**

\*\*Consult Sidney, NY for service rating of power contacts.

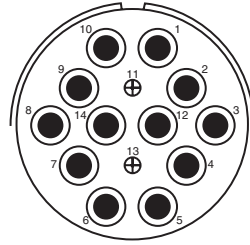
# QWLD special arrangements

front face of pin insert or rear of socket insert illustrated

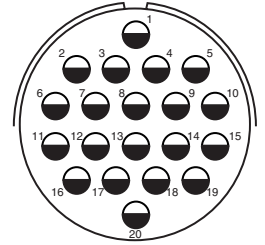


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

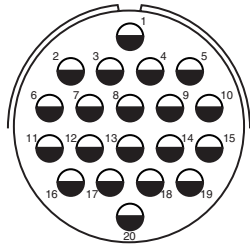
36-77  
D  
7  
4



36-78  
A  
2 12  
16 8

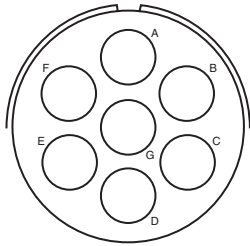


36-79  
A  
20  
12

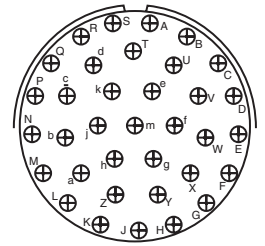


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

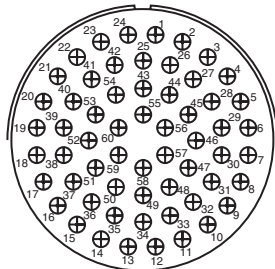
36-80  
A  
20  
12 for #10 wire



36-83  
-  
7  
4 (Coax) RG-58/U

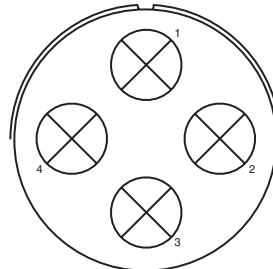


36-85  
M = D; Bal. = A  
35  
16 for #12 wire

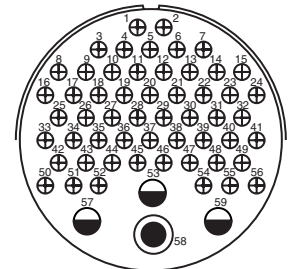


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

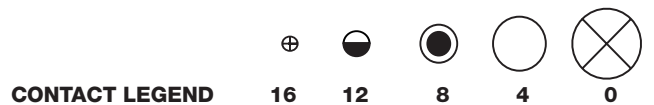
40-53  
A  
60  
16



40-57  
E  
4  
0

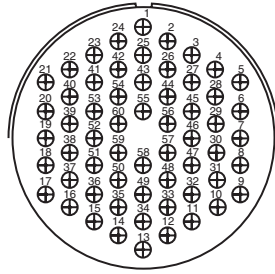


40-61  
A  
1 3 55  
8 12 16

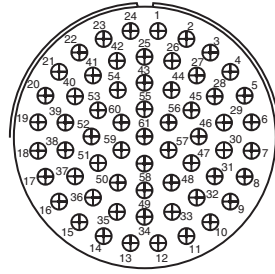


# QWLD special arrangements

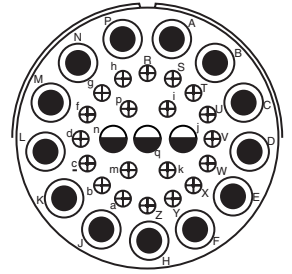
front face of pin insert or rear of socket insert illustrated



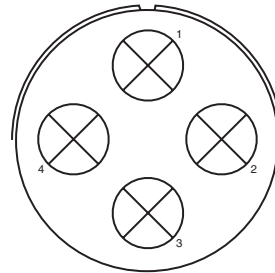
**40-62**  
A  
60  
16



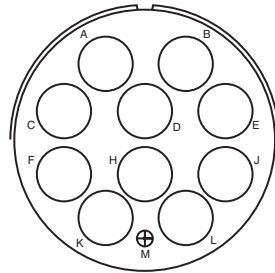
**40-63**  
A  
61  
16 for #14 wire



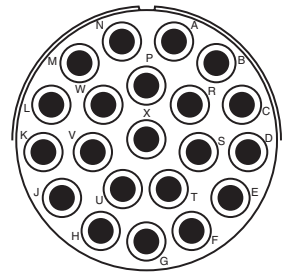
**40-64**  
-  
3 20 13  
12 16 8 (Coax) RG-124/U



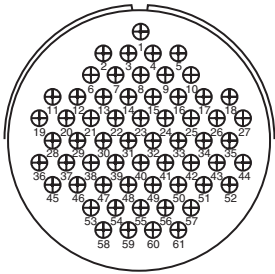
**40-66**  
-  
4  
0 (Coax) RG-63B/U



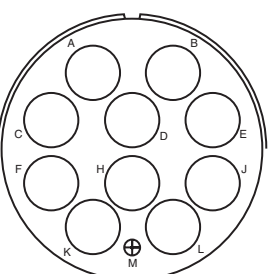
**40-67**  
A  
1 10  
16 4 (Coax) RG-59/U



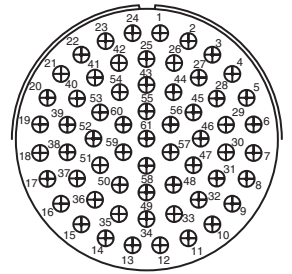
**40-68**  
A  
21  
8



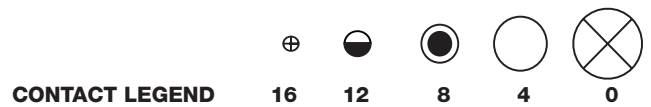
**40-70**  
A  
61  
16



**40-72**  
A  
1 10  
16 4 (Coax) RG-9B/U

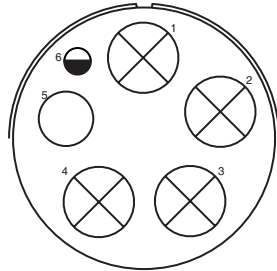


**40-73**  
A  
61  
16



# QWLD special arrangements

front face of pin insert or rear of socket insert illustrated

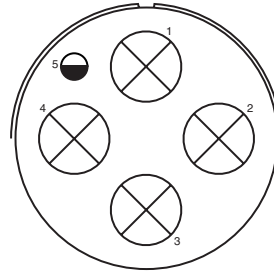


40-74

A

1 1 4  
12 4 (Coax) RG-62/U 0 (Coax) RG-9B/U  
or RG-214/U

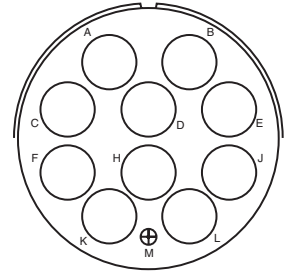
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



40-75

E

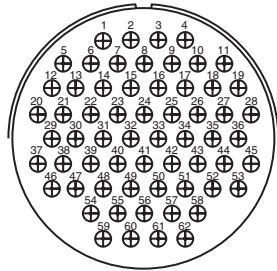
1 4  
12 0



40-80

A

1 10  
16 4

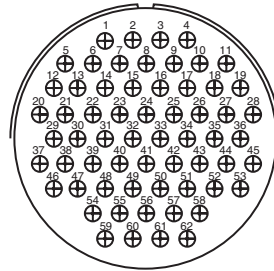


40-81

A

62  
16 for #14 wire

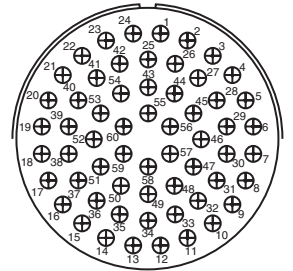
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



40-82

A

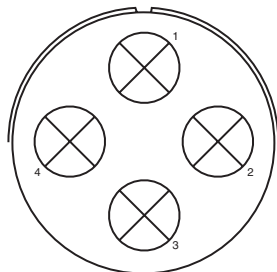
62  
16



40-85

A

60  
16 for #14 wire

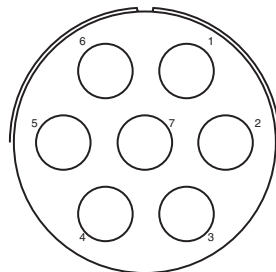


40-86

-

4  
0 (Coax) RG-115A/U

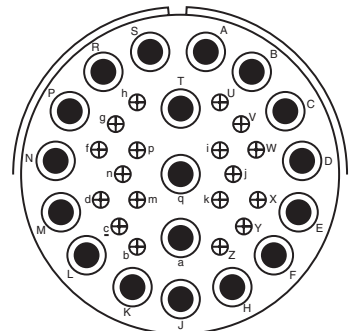
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



40-87

D

7  
4



44-53

A

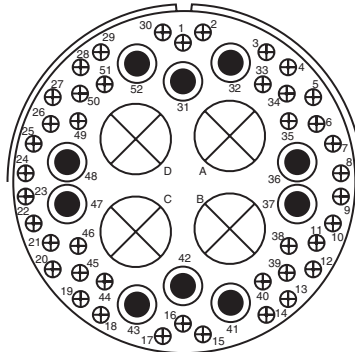
18 18  
16 8 (Coax) RG-124/U





# QWLD special arrangements

front face of pin insert or rear of socket insert illustrated

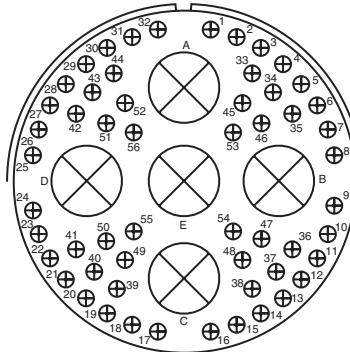


48-51†

A

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

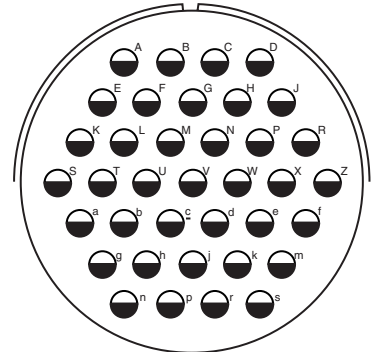
42 10 4  
16 8 0 (Coax) RG-41/U



48-52†

A

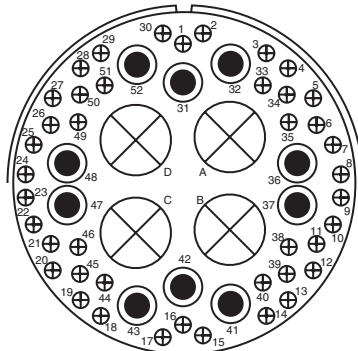
56 5  
16 0 (Coax) RG-41/U



48-53†

D

37  
12

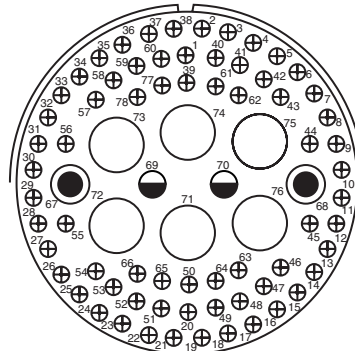


48-54†

A

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

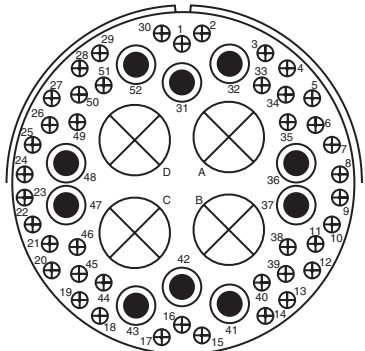
42 10 4  
16 8 0 (Coax) RG-59/U



48-55†

A

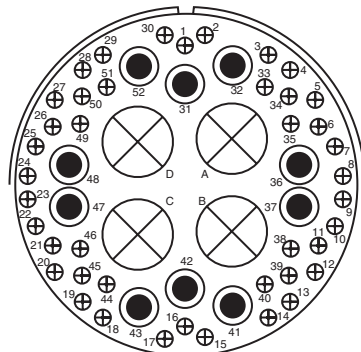
68 2 2 6  
16 12 8 4



48-57†

A

42 10 4  
16 8 0



48-60†

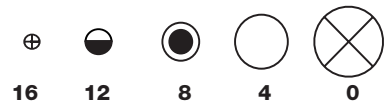
A

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

42 10 4  
16 8 0 (Coax) RG-214/U

†Consult Sidney, NY for availability

CONTACT LEGEND



16 12 8 4 0