Amphenol® Heavy Duty Cylindrical Connectors

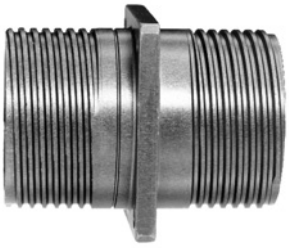
12-052-9

Amphenol

Heavy Duty Cylindrical
MIL-C-22992
QWLD

Amphenol® Heavy Duty Cylindrical Connectors
MIL-C-22992, QWLD

wall mount receptacle



thru bulkhead receptacle

cable connecting plug

straight plug

box mount receptacle

jam nut receptacle (box mount)

jam nut receptacle (wall mount)

Amphenol® QWLD Series heavy duty cylindrical connectors provide reliable power and control functions in hostile environments where ordinary connectors cannot survive.

Design features of this connector series provide:

- **High Durability -** water and explosion proof, resistant to abrasion, corrosion, vibration and shock
- **Quick, Positive Mating -** double stub threads per MIL-STD-1373 for fast coupling, easily cleaned
- **Selection -** over 300 industrial and MS-approved insert patterns available, including coaxial and thermocouple

On the drilling platform in the North Sea, pump and motor generator controls run smoothly, although constantly exposed to salt spray.

At Prudhoe Bay where the nights are six months long, portable lighting systems permit operation regardless of temperature plummeting to 50° below zero.

The circus ferris wheel runs continuously despite the fact that it has rained for five days and all power connections are lying in six inches of mud.

These situations are typical of the extreme conditions under which thousands of Amphenol QWLD connectors are operating daily. Outstanding design features that make these cylindricals a necessity for difficult applications include:

- Alumilite 225* hard anodic finish for abrasion and corrosion resistance or conductive cadmium plate
- Resilient inserts for moisture sealing, positive proof against shock and vibration
- Sealing gaskets at every joint for waterproof assembly
- Cable strain relief provided by clamp bar type accessories
- Left hand accessory threads to prevent damage from disconnect torque applied in the wrong direction
- Closed entry socket contact design in solder or replaceable crimp contacts

* Registered trademark of Aluminum Company of America

MIL-C-22992, QWLD
how to order

MS-APPROVED CONNECTORS
To illustrate the ordering procedure, part number MS17343R20N27PW is shown as follows:

PART NUMBER

MS17343	R	20	N	27	P	W
1	2	3	4	5	6	7

1. **MS Number -**
   MS17343 designates wall mount receptacle
   MS17344 designates straight plug
   MS17345 designates cable connecting plug
   MS17346 designates box mount receptacle
   MS17347 designates jam nut receptacle with rear accessory threads (wall mount)
   MS17348 designates jam nut receptacle (box mount)
2. **Class -**
   C designates pressurized - used where circuit integrity is protected by a pressure differential
   R designates environmental - see table, page 1
3. **Shell Size -** available in shell sizes 12 through 44. Refer to pages 53 through 59 for dimensional data.
4. **Shell Finish -** C for conductive or N for non-conductive
5. **Insert Arrangement -** current MS insert arrangements are shown in black in the QWLD insert arrangements section of this catalog. Only these arrangements are available in MS-approved connectors.
6. **Contact Type -** P for pin, S for socket
7. **Alternate Insert Rotation -** used to prevent cross-mating of connectors. Absence of a letter in this space indicates normal (0°) position of the insert. Refer to page 26 for alternate insert rotation illustrations.

QWLD INDUSTRIAL VERSIONS
These heavy duty connectors are identical to MS-approved types except for the added flexibility of connector shell and contact type and finish options, plus added insert arrangements. To illustrate the ordering procedure, part number 10-194622-14S is shown as follows:

PART NUMBER

10	–	194	6	22-14	S
1		2	3	4	5

1. **Base Number Prefix -** used to define connector shell finish and contact type and finish
   10 - Solder type contacts, silver plated
   75- Crimp type contacts, silver plated
   81- Crimp type contacts, plated .0001 gold over silver
   82- Crimp type contacts for MIL-C-13777 cable, silver plated
   83- Crimp type contacts for MIL-C-13777 cable, plated .0001 gold over silver
   85- Crimp type contacts, plated .00005 gold over silver
   All above prefix numbers utilize connector shells with Alumilite non-conductive finish*
   88- Solder type contacts, silver plated. Connector shell utilizes olive drab cadmium plate over nickel conductive finish.
2. **Base Number -** QWLD Series Heavy Duty Cylindrical Connector
3. **Shell Style -**
   0 designates wall mount receptacle
   1 designates cable connecting plug
   2 designates box mount receptacle
   3 designates jam nut receptacle with rear accessory threads (wall mount)
   4 designates thru bulkhead receptacle
   6 designates straight plug
   9 designates jam nut receptacle (box mount)
4. **Shell Size/Insert Arrangement -** Amphenol® QWLD connectors are available in equivalent MS shell sizes with all current MS insert arrangements as well as a large selection of special arrangements for power and signal circuits. Select the required insert arrangement number from those shown in black (MS arrangements) or red (industrial arrangements).
5. **Contact Type/Alternate Insert Rotation -** P for pin, S for socket. When an alternate position of the connector insert is required to prevent cross-mating of connectors, a different letter (other than P or S) is used. Select from the table below the Amphenol® letter which indicates both type of contact and insert rotation desired. Refer to page 26 for alternate insert rotation illustrations.

Pin Contacts		Socket Contacts	
MS Letters	**Amphenol® Letters**	**MS Letters**	**Amphenol® Letters**
P	P (normal)	S	S (normal)
PW	G	SW	H
PX	I	SX	J
PY	K	SY	L
PZ	M	SZ	N

Alumilite is a registered trademark of Aluminum Co. of America

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

MIL-C-22992, QWLD
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 Contacts	Contact Size								
								Coax**			
			0	4	8	12	16	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 Contacts	Contact Size								
								Coax**			
			0	4	8	12	16	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.

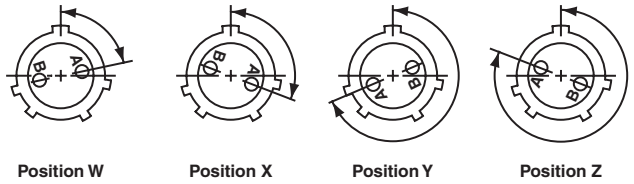
** Coaxial cable data can be found on insert arrangement drawings, pages 39-47. For further information on coaxial contacts and cable see catalog 12-130.

† Consult Sidney, NY for availability.

MIL-C-22992, QWLD
alternate insert rotations

To avoid cross-plugging problems in applications requiring the use of more than one connectror 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.



Position W **Position X** **Position Y** **Position Z**

Views 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	20-14	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

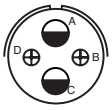
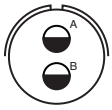
Insert Arrangement	Degrees			
	W	X	Y	Z
20-24	35	110	250	325
20-27	35	110	250	325
20-29	80	–	–	280
22-1	35	110	250	325
22-2	70	145	215	290
22-4	35	110	250	325
22-5	35	110	250	325
22-8	35	110	250	325
22-9	70	145	215	290
22-10	35	110	250	325
22-11	35	110	250	325
22-13	35	110	250	325
22-20	35	110	250	325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

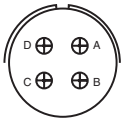
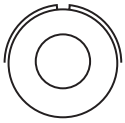
Insert Arrangement	Degrees			
	W	X	Y	Z
28-6	70	145	215	290
28-7	35	110	250	325
28-12	90	180	270	–
28-18	70	145	215	290
28-22	70	145	215	290
32-2	70	145	215	290
32-5	35	110	250	325
32-7	80	125	235	280
32-8	80	125	235	280
32-15	35	110	250	280
32-17	45	110	250	–
32-73	36	–	–	–
36-3	70	145	215	290
36-4	70	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

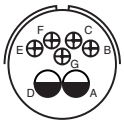
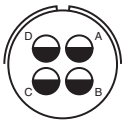
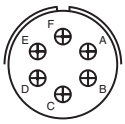
MIL-C-22992, QWLD
contact arrangements

front face of pin insert or rear of socket insert illustrated

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

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

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

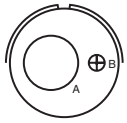
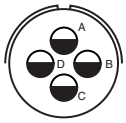
						
Insert Arrangement	**18-7**	**18-8**	**18-9**	**18-10**	**18-11**	**18-12**
Service Rating	**B**	**A**	**Inst.**	**A**	**A**	**A**
Number of Contacts	**1**	**1 7**	**2 5**	**4**	**5**	**6**
Contact Size	**8**	**12 16**	**12 16**	**12**	**12**	**16**

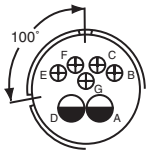
CONTACT LEGEND **16** **12** **8** **4** **0**

*A = Iron; B = Constantan

MIL-C-22992, QWLD
contact arrangements

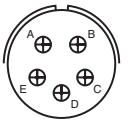
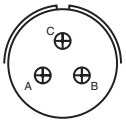
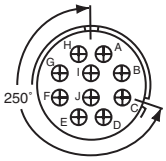
front face of pin insert or rear of socket insert illustrated

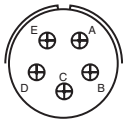
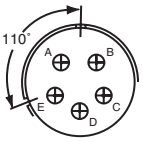



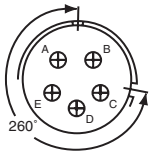


100° Rotation of 18-9

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

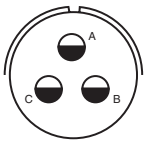
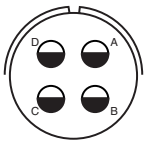
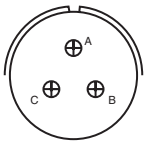
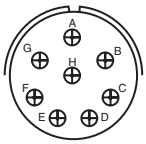
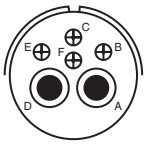


250° Rotation of 18-1

110° Rotation of 18-20

260° Rotation of 18-20

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

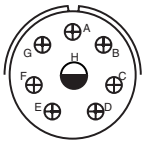
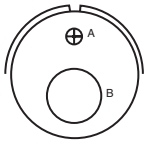
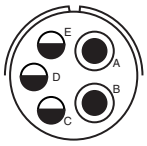
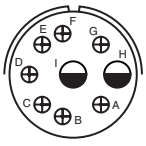
Insert Arrangement	20-2	20-3	20-4	20-6	20-7	20-8
Service Rating	D	D	D	D	A, B, H, G = D; C, D, E, F = A	Inst.
Number of Contacts	1	3	4	3	8	2 4
Contact Size	0	12	12	16	16	8 16

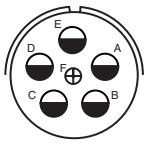
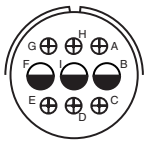
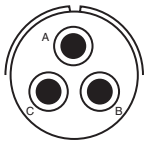
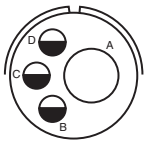
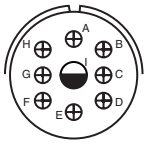
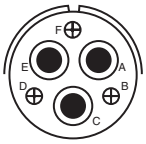
CONTACT LEGEND	16	12	8	4	0

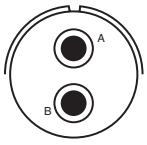
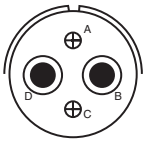
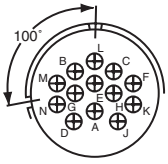
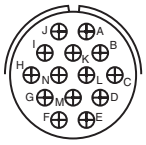
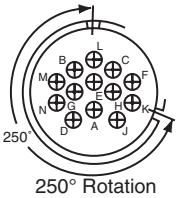
**A, C = Iron; B, D = Constantan

MIL-C-22992, QWLD
contact arrangements

front face of pin insert or rear of socket insert illustrated

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

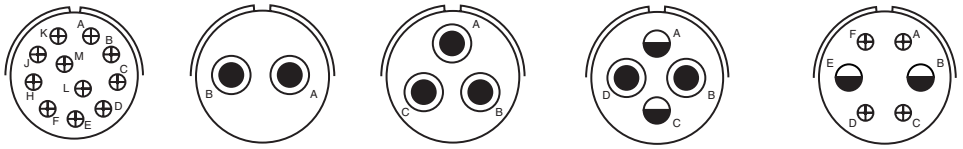
						
Insert Arrangement	**20-17**	**20-18**	**20-19**	**20-20**	**20-21**	**20-22**
Service Rating	**A**	**A**	**A**	**A**	**A**	**A**
Number of Contacts	**5 1**	**3 6**	**3**	**1 3**	**1 8**	**3 3**
Contact Size	**12 16**	**12 16**	**8**	**4 12**	**12 16**	**8 16**

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

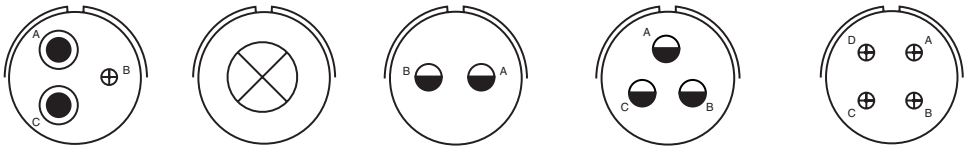
CONTACT LEGEND **16** **12** **8** **4** **0**

MIL-C-22992, QWLD
contact arrangements

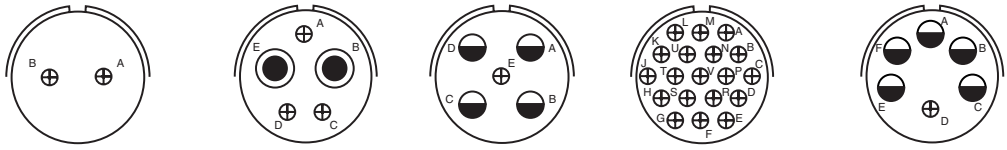
front face of pin insert or rear of socket insert illustrated



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



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

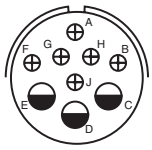
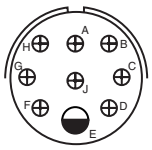
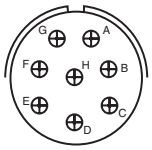
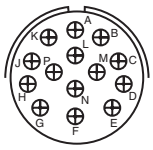
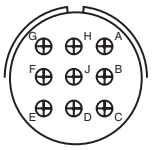


Insert Arrangement	22-11	22-12	22-13	22-14	22-15
Service Rating	B	D	E = D; A, B, C, D = A	A	D = E; A, B, C, E, F = A
Number of Contacts	2	2 3	4 1	19	5 1
Contact Size	16	8 16	12 16	16	12 16

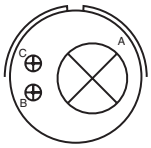
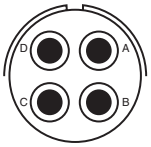
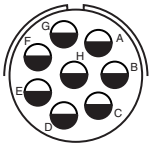
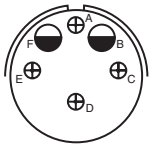
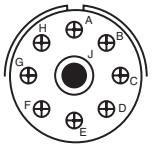
CONTACT LEGEND	16	12	8	4	0

MIL-C-22992, QWLD
contact arrangements

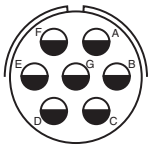
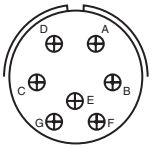
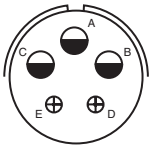
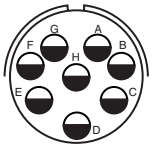
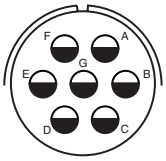
front face of pin insert or rear of socket insert illustrated

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

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

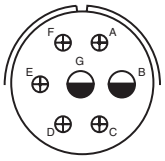
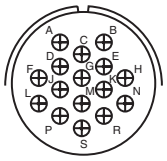
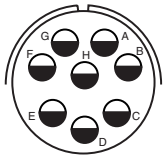
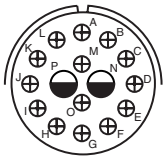
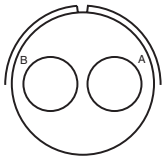






Insert Arrangement	22-28	22-33	22-34	22-36	24-2
Service Rating	A	A, B, C, D = D; E, F, G = A	D	H = D; Bal. = A	D
Number of Contacts	7	7	3 2	8	7
Contact Size	12	16	12 16	12	12

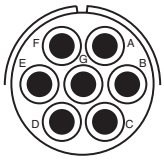
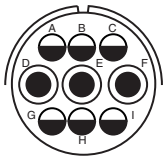
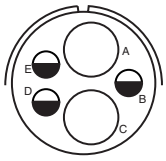
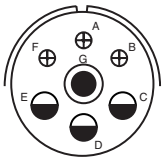
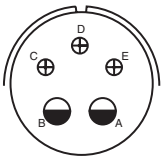
CONTACT LEGEND	16	12	8	4	0

MIL-C-22992, QWLD
contact arrangements

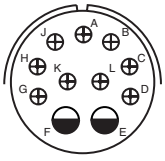
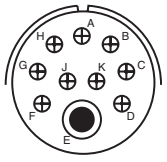
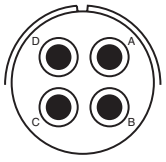
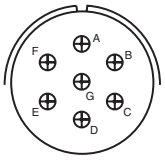
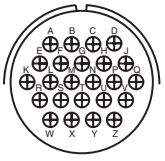
front face of pin insert or rear of socket insert illustrated

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

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

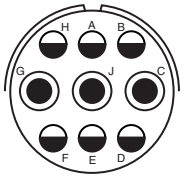






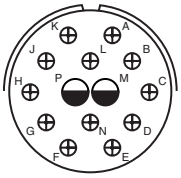
Insert Arrangement	**24-20**	**24-21**	**24-22**	**24-27**	**24-28**
Service Rating	**D**	**D**	**D**	**E**	**Inst.**
Number of Contacts	**2 9**	**1 9**	**4**	**7**	**24**
Contact Size	**12 16**	**8 16**	**8**	**16**	**16**

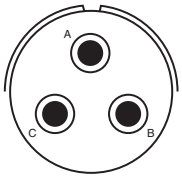
CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

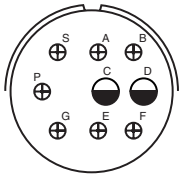
MIL-C-22992, QWLD
contact arrangements

front face of pin insert or rear of socket insert illustrated

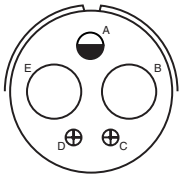


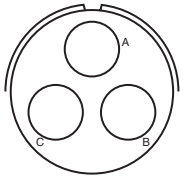


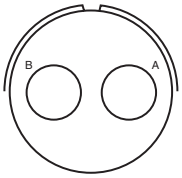


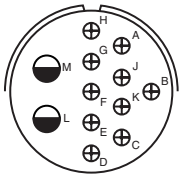


Insert Arrangement	**28-1**	**28-2**	**28-3**	**28-4**
Service Rating	**A, J, E = D; Bal. = A**	**D**	**E**	**G, P, S = E; Bal. = D**
Number of Contacts	**3 6**	**2 12**	**3**	**2 7**
Contact Size	**8 12**	**12 16**	**8**	**12 16**

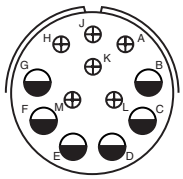


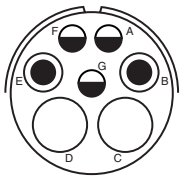


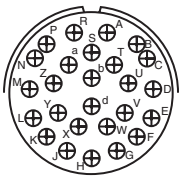




Insert Arrangement	**28-5**	**28-6**	**28-7**	**28-8**
Service Rating	**D**	**D**	**D**	**L, M = E; B = D; Bal. = A**
Number of Contacts	**2 1 2**	**3**	**2**	**2 10**
Contact Size	**4 12 16**	**4**	**4**	**12 16**







Insert Arrangement	**28-9**	**28-10**	**28-11**	**28-12**
Service Rating	**D**	**G = D; Bal. = A**	**A**	**A**
Number of Contacts	**6 6**	**2 2 3**	**4 18**	**26**
Contact Size	**12 16**	**4 8 12**	**12 16**	**16**

CONTACT LEGEND **16 12 8 4 0**

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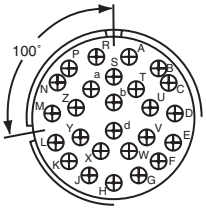
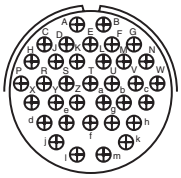
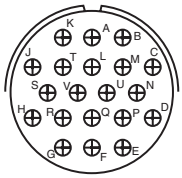
contact arrangements

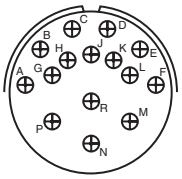
front face of pin insert or rear of socket insert illustrated



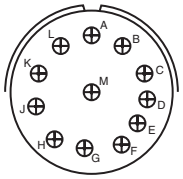
100° Rotation
of 28-12

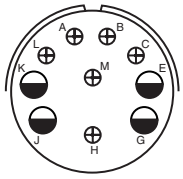


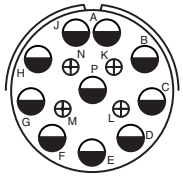


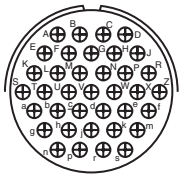


Insert Arrangement	28-13	28-15	28-16	28-17
Service Rating	A	A	A	R = B; M, N, P = D; A to L = A
Number of Contacts	26	35	20	15
Contact Size	16	16	16	16

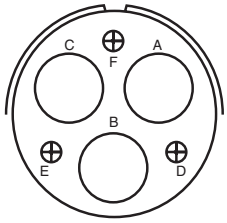


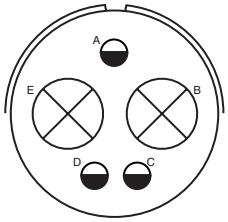


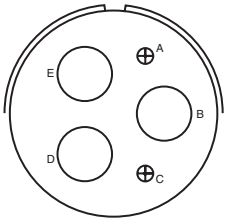


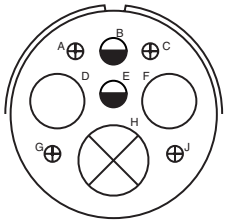


Insert Arrangement	28-18	28-19	28-20	28-21
Service Rating	M = C; G, H, J, K, L = D; A, B = H; Bal. = Inst.	H, M = B; A = D; Bal = A	A	A
Number of Contacts	12	4 6	10 4	37
Contact Size	16	12 16	12 16	16









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

CONTACT LEGEND	16	12	8	4	0

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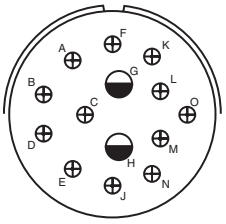
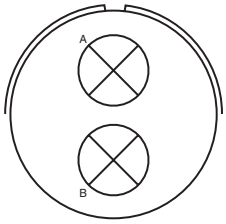
contact arrangements

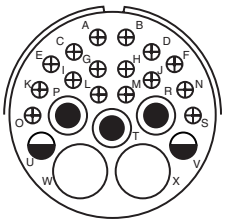
front face of pin insert or rear of socket insert illustrated



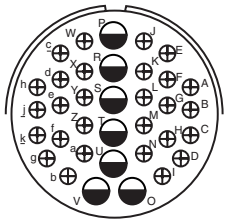
Insert Arrangement	**32-4**
Service Rating	**F, J, K, N = A; Bal. = D**
Number of Contacts	**2 12**
Contact Size	**12 16**



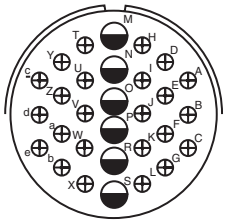
Insert Arrangement	**32-5**
Service Rating	**D**
Number of Contacts	**2**
Contact Size	**0**



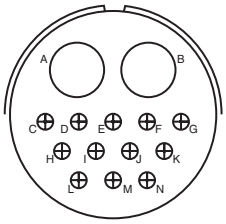
Insert Arrangement	**32-6**
Service Rating	**A**
Number of Contacts	**2 3 2 16**
Contact Size	**4 8 12 16**



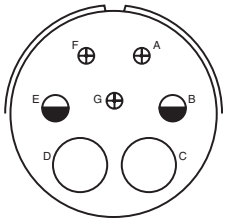
Insert Arrangement	**32-7**
Service Rating	**A, B,h , j = Inst; Bal. = A**
Number of Contacts	**7 28**
Contact Size	**12 16**



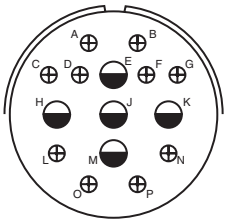
Insert Arrangement	**32-8**
Service Rating	**A**
Number of Contacts	**6 24**
Contact Size	**12 16**



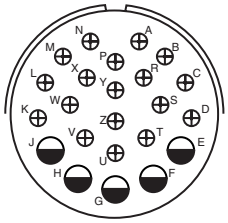
Insert Arrangement	**32-9**
Service Rating	**D**
Number of Contacts	**2 12**
Contact Size	**4 16**



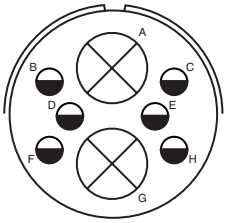
Insert Arrangement	**32-10**
Service Rating	**A, F = E, G = B; B, E = D; C, D = A**
Number of Contacts	**2 2 3**
Contact Size	**4 8 16**



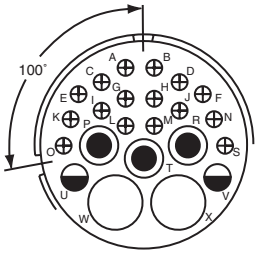
Insert Arrangement	**32-12**
Service Rating	**C, D, E, F, G = A; Bal. = D**
Number of Contacts	**5 10**
Contact Size	**12 16**



Insert Arrangement	**32-13**
Service Rating	**D**
Number of Contacts	**5 18**
Contact Size	**12 16**

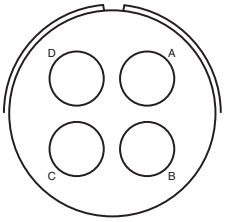


Insert Arrangement	**32-15**
Service Rating	**D**
Number of Contacts	**2 6**
Contact Size	**0 12**



100° Rotation
of 32-6

Insert Arrangement	**32-16**
Service Rating	**A**
Number of Contacts	**2 3 2 16**
Contact Size	**4 8 12 16**

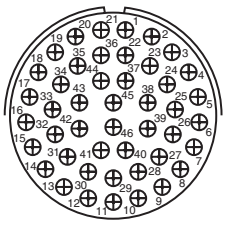


Insert Arrangement	**32-17**
Service Rating	**D**
Number of Contacts	**4**
Contact Size	**4**

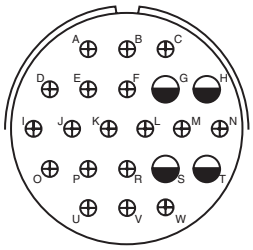
CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

MIL-C-22992, QWLD
contact arrangements

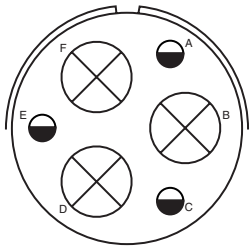
front face of pin insert or rear of socket insert illustrated



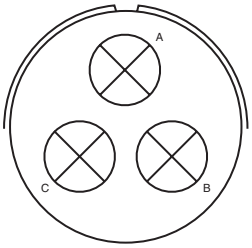
Insert Arrangement	**32-73**
Service Rating	**A**
Number of Contacts	**46**
Contact Size	**16**



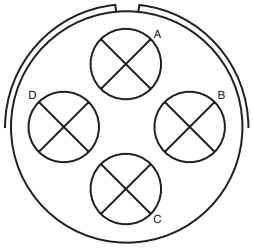
Insert Arrangement	**36-1**
Service Rating	**D**
Number of Contacts	**4 18**
Contact Size	**12 16**



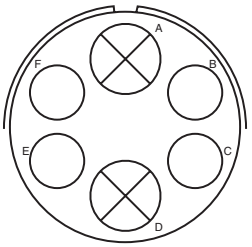
Insert Arrangement	**36-3**
Service Rating	**D**
Number of Contacts	**3 3**
Contact Size	**0 12**



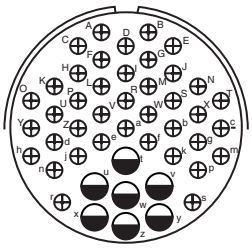
Insert Arrangement	**36-4**
Service Rating	**A = D; B, C = A**
Number of Contacts	**3**
Contact Size	**0**



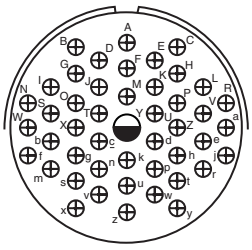
Insert Arrangement	**36-5**
Service Rating	**A**
Number of Contacts	**4**
Contact Size	**0**



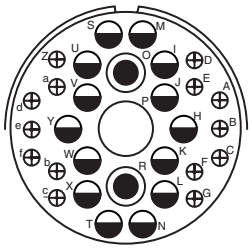
Insert Arrangement	**36-6**
Service Rating	**A**
Number of Contacts	**2 4**
Contact Size	**0 4**



Insert Arrangement	**36-7**
Service Rating	**A**
Number of Contacts	**7 40**
Contact Size	**12 16**



Insert Arrangement	**36-8**
Service Rating	**A**
Number of Contacts	**1 46**
Contact Size	**12 16**

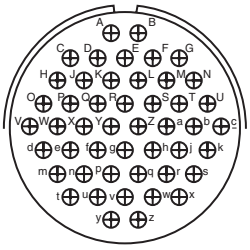


Insert Arrangement	**36-9**
Service Rating	**A**
Number of Contacts	**1 2 14 14**
Contact Size	**4 8 12 16**

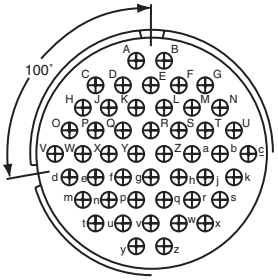
CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

MIL-C-22992, QWLD
contact arrangements

front face of pin insert or rear of socket insert illustrated

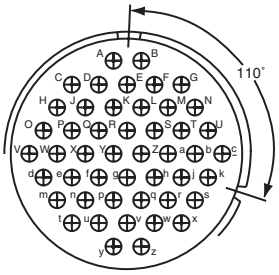


Insert Arrangement	**36-10**
Service Rating	**A**
Number of Contacts	**48**
Contact Size	**16**



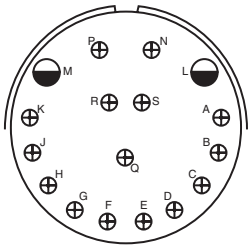
100° Rotation
of 36-10

Insert Arrangement	**36-11**
Service Rating	**A**
Number of Contacts	**48**
Contact Size	**16**

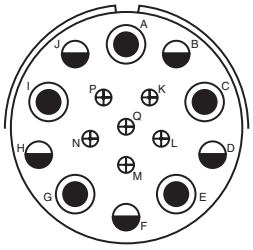


110° Rotation
of 36-10

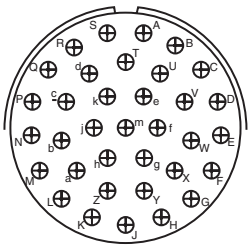
Insert Arrangement	**36-12**
Service Rating	**A**
Number of Contacts	**48**
Contact Size	**16**



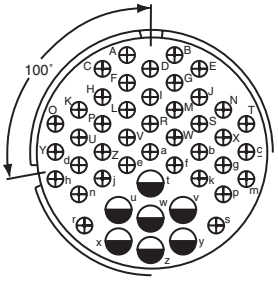
Insert Arrangement	**36-13**
Service Rating	**N, P, Q = E; Bal. = A**
Number of Contacts	**2 15**
Contact Size	**12 16**



Insert Arrangement	**36-14**
Service Rating	**D**
Number of Contacts	**5 5 6**
Contact Size	**8 12 16**

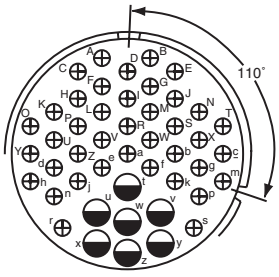


Insert Arrangement	**36-15**
Service Rating	**M = D; Bal. = A**
Number of Contacts	**35**
Contact Size	**16**



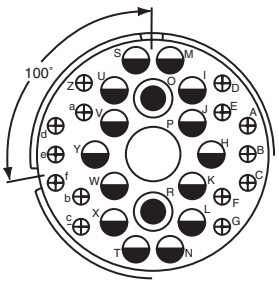
100° Rotation
of 36-7

Insert Arrangements	**36-16**
Service Rating	**A**
Number of COntacts	**7 40**
Contact Size	**12 16**



110° Rotation
of 36-7

Insert Arrangements	**36-17**
Service Rating	**A**
Number of COntacts	**7 40**
Contact Size	**12 16**



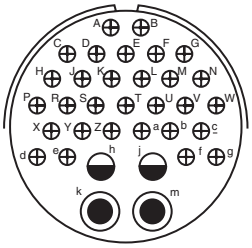
100° Rotation
of 36-9

Insert Arrangements	**36-18**
Service Rating	**A**
Number of COntacts	**1 2 14 14**
Contact Size	**4 8 12 16**

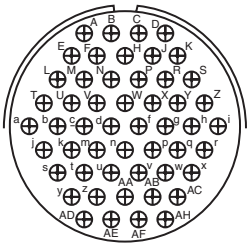
CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

MIL-C-22992, QWLD
contact arrangements

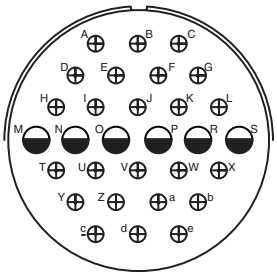
front face of pin insert or rear of socket insert illustrated



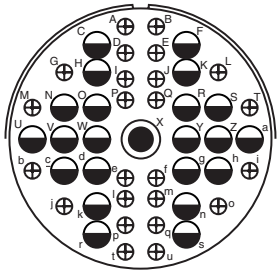
Insert Arrangement	**36-20**
Service Rating	**A**
Number of Contacts	**2 2 30**
Contact Size	**8 12 16**



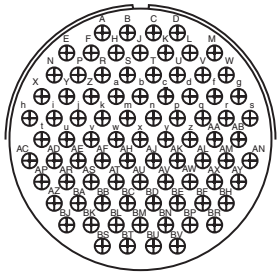
Insert Arrangement	**36-52**
Service Rating	**A**
Number of Contacts	**52**
Contact Size	**16**



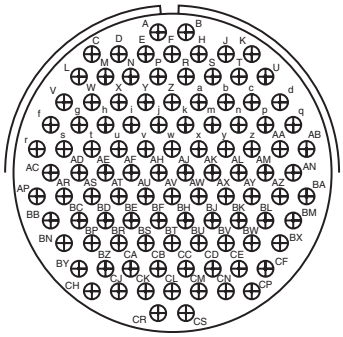
Insert Arrangement	**40-1**
Service Rating	**D**
Number of Contacts	**6 24**
Contact Size	**12 16**



Insert Arrangement	**40-9**
Service Rating	**A**
Number of Contacts	**1 22 24**
Contact Size	**8 12 16**



Insert Arrangement	**40-56**
Service Rating	**A**
Number of Contacts	**85**
Contact Size	**16**



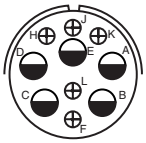
Insert Arrangement	**44-52**
Service Rating	**A**
Number of Contacts	**104**
Contact Size	**16**

CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

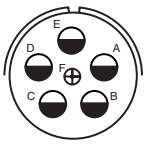
QWLD
special arrangements

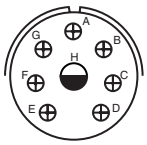
Ever expanding requirements for more complex circuits in ground equipment and elevated altitude applications has prompted Amphenol to provide inserts not covered by the MS drawings. Pictured here and on the following pages are insert layouts which have anywhere from one contact (high tension) to the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

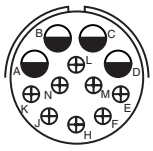
front face of pin insert or rear of socket insert illustrated

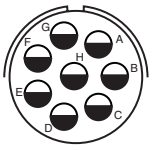


Insert Arrangement	**16-59**	**20-51**	**20-57**	**20-58**	**20-59**
Service Rating	**A**	**A**	**A**	**A**	**A**
Number of Contacts	**4**	**3***	**7***	**5 5**	**3***
Contact Size	**12**	**8**	**12 for #14 or 16 wire**	**12 16**	**8 for #10 or 12 wire**

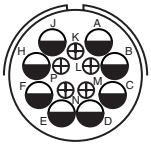


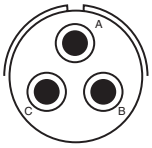


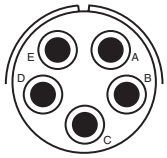


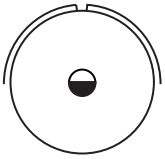


Insert Arrangement	**20-66**	**20-79**	**22-63**	**22-65**
Service Rating	**A**	**H = D; Bal. = A**	**A**	**H = D; Bal. = A**
Number of Contacts	**1 5**	**7* 1***	**4 8**	**8***
Contact Size	**16 12 or #10 wire**	**16 12 for #16 wire**	**12 16**	**12 for #14 or 16 wire**







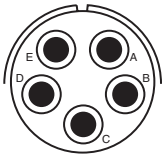


Insert Arrangement	**22-70**	**22-80**	**24-51**	**24-52**
Service Rating	**A**	**A**	**A**	**Hi-Volt**
Number of Contacts	**8 5**	**3***	**5***	**1**
Contact Size	**12 16**	**8 for #10 or 12 wire**	**B, E for AN #10 or 12 wire A, C, D for AN #8 wire**	**12**

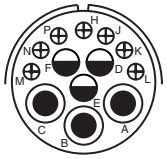
*Solderless

QWLD
special arrangements

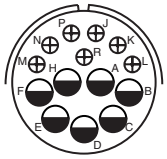
front face of pin insert or rear of socket insert illustrated



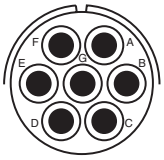
Insert Arrangement	**24-53**
Service Rating	**A**
Number of Contacts	**5***
Contact Size	**8**



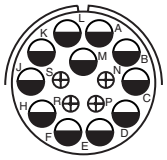
Insert Arrangement	**24-58**
Service Rating	**A**
Number of Contacts	**3 3 7**
Contact Size	**8 12 16**



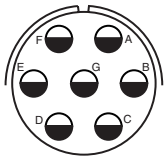
Insert Arrangement	**24-59**
Service Rating	**A**
Number of Contacts	**7 7**
Contact Size	**12 16**



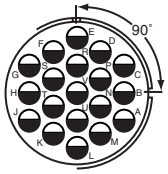
Insert Arrangement	**24-60**
Service Rating	**A**
Number of Contacts	**7***
Contact Size	**8 for #10 or 12 wire**



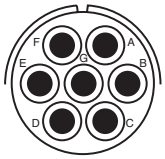
Insert Arrangement	**24-65**
Service Rating	**A**
Number of Contacts	**11 4**
Contact Size	**12 16**



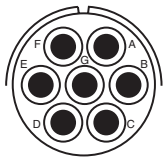
Insert Arrangement	**24-66**
Service Rating	**D**
Number of Contacts	**7**
Contact Size	**12**



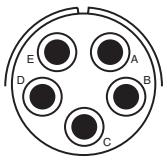
Insert Arrangement	**24-67**
Service Rating	**Inst.**
Number of Contacts	**19**
Contact Size	**12**



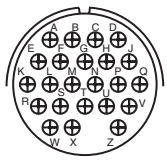
Insert Arrangement	**24-71**
Service Rating	**A**
Number of Contacts	**2* 5***
Contact Size	**8 8 for #10 or 12 wire**



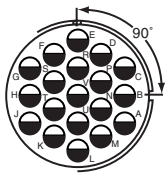
Insert Arrangement	**24-75**
Service Rating	**A**
Number of Contacts	**5 2**
Contact Size	**8 8 for #16 wire**



Insert Arrangement	**24-79**
Service Rating	**A**
Number of Contacts	**5**
Contact Size	**8**



Insert Arrangement	**24-80**
Service Rating	**Inst.**
Number of Contacts	**23**
Contact Size	**16**



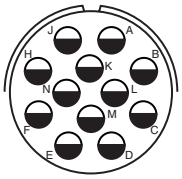
Insert Arrangement	**24-84**
Service Rating	**A**
Number of Contacts	**1 18**
Contact Size	**12 12 (Coax) RG-188/U or RG-174/U**

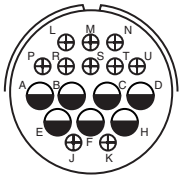
CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

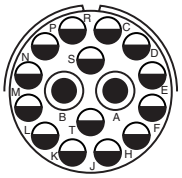
*Solderless

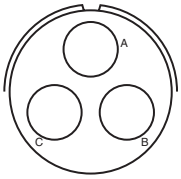
QWLD
special arrangements

front face of pin insert or rear of socket insert illustrated

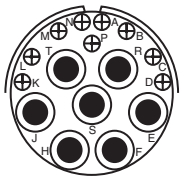


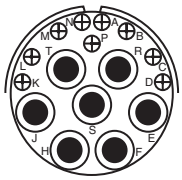


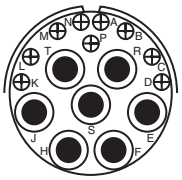


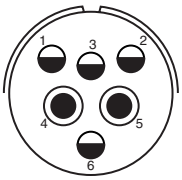


Insert Arrangement	**28-51**	**28-59**	**28-66**	**28-72**
Service Rating	**A**	**A**	**A**	**–**
Number of Contacts	**12**	**7 10**	**2 14**	**3**
Contact Size	**12**	**12 16**	**8 12**	**4 (Coax) RG-59A/U or RG-62A/U**

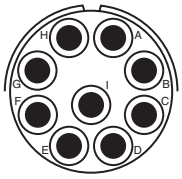


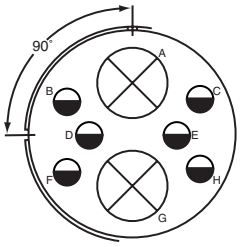




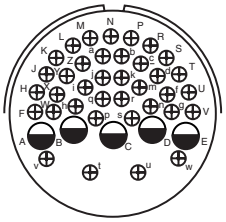


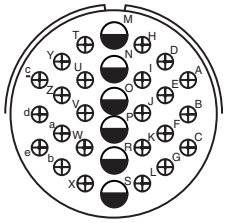
Insert Arrangement	**28-74**	**28-75**	**28-79**	**28-82**
Service Rating	**A**	**A**	**A**	**D**
Number of Contacts	**9* 4* 3***	**9* 7***	**7 9**	**2 4**
Contact Size	**16 8 8 for #10 wire (S, T, R)**	**16 8for #10 wire**	**8 16**	**8 12**





90° CW Rotation of 32-15





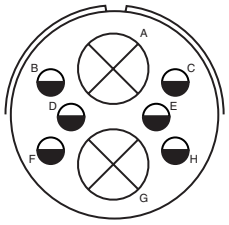
Insert Arrangement	**28-84**	**32-52**	**32-53**	**32-56**
Service Rating	**A**	**D**	**t, u = E; Bal. = Inst.**	**A**
Number of Contacts	**9**	**6 2**	**5 37**	**24 6**
Contact Size	**8**	**12 0**	**12 16**	**16 12 for #10 wire**

CONTACT LEGEND ⊕ **16** ◒ **12** ◉ **8** ○ **4** ⊗ **0**

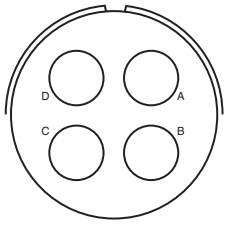
*Solderless

QWLD
special arrangements

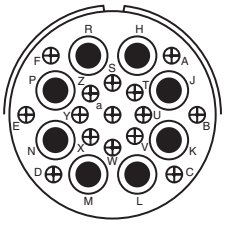
front face of pin insert or rear of socket insert illustrated



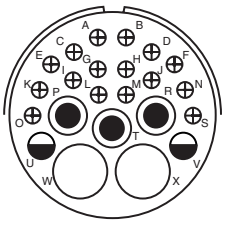
Insert Arrangement	**32-57**
Service Rating	**
Number of Contacts	6 2
Contact Size	12 0 (Coax) RG-71/U



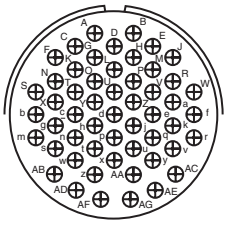
Insert Arrangement	**32-58**
Service Rating	–
Number of Contacts	4
Contact Size	4 (Coax) RG-161U or RG-179/U



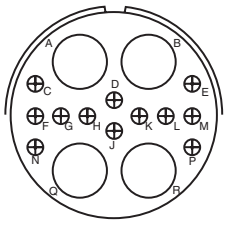
Insert Arrangement	**32-60**
Service Rating	A
Number of Contacts	15 8
Contact Size	16 8 (Coax) RG-124/U



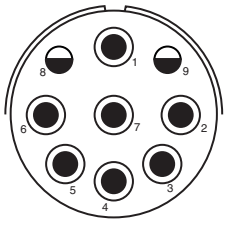
Insert Arrangement	**32-62**
Service Rating	**
Number of Contacts	2 1 2 16 2
Contact Size	4 8 12 16 8 (Coax)RG-124/U



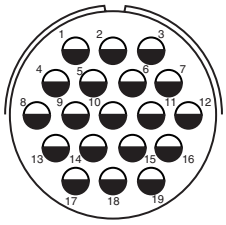
Insert Arrangement	**32-64**
Service Rating	Inst.
Number of Contacts	54
Contact Size	16



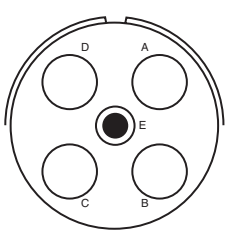
Insert Arrangement	**32-68**
Service Rating	A
Number of Contacts	12 4
Contact Size	16 4 (Coax) RG-58C/U



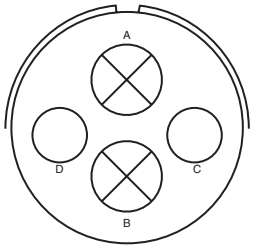
Insert Arrangement	**32-75**
Service Rating	8, 9 = D
Number of Contacts	2 7
Contact Size	12 8 (Coax) RG-180B/U



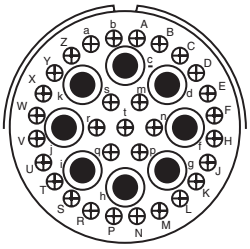
Insert Arrangement	**32-76**
Service Rating	A
Number of Contacts	19
Contact Size	12



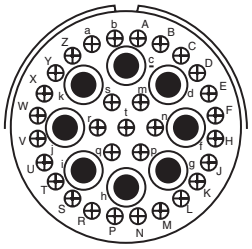
Insert Arrangement	**32-79**
Service Rating	D
Number of Contacts	4 1
Contact Size	4 8



Insert Arrangement	**36-51**
Service Rating	D
Number of Contacts	2 2
Contact Size	0 4



Insert Arrangement	**36-54**
Service Rating	A
Number of Contacts	8 31
Contact Size	8 16

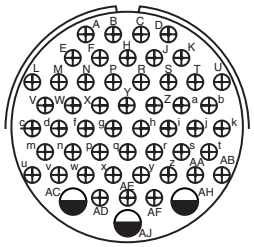


Insert Arrangement	**36-55**
Service Rating	A
Number of Contacts	31 8
Contact Size	16 8 for #6 wire

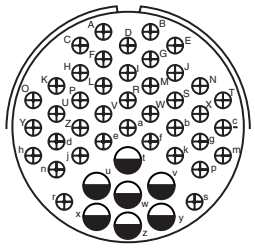
**Consult Sidney, NY for service rating of power contacts.

QWLD
special arrangements

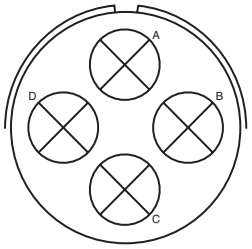
front face of pin insert or rear of socket insert illustrated



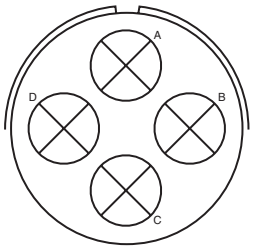
Insert Arrangement	**36-59**
Service Rating	**A**
Number of Contacts	**50 3**
Contact Size	**16 12 for #10 wire**



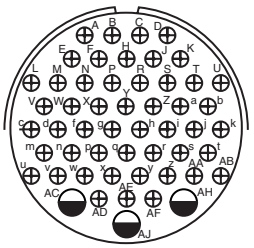
Insert Arrangement	**36-60**
Service Rating	******
Number of Contacts	**40 7**
Contact Size	**16 12 for #10 wire**



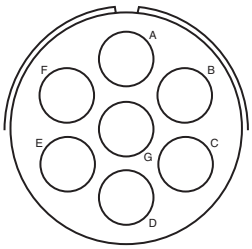
Insert Arrangement	**36-64**
Service Rating	**–**
Number of Contacts	**4**
Contact Size	**0 (Coax) RG-11/U RG-12/U or RG-13/U**



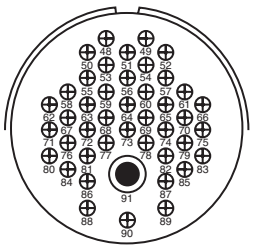
Insert Arrangement	**36-65**
Service Rating	**–**
Number of Contacts	**4**
Contact Size	**0 (Coax) RG-59/U, RG-62/U or RG-71/U**



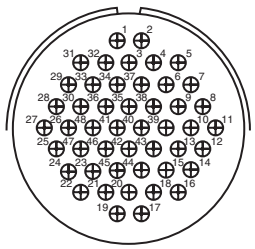
Insert Arrangement	**36-71**
Service Rating	**A**
Number of Contacts	**3 50**
Contact Size	**12 16**



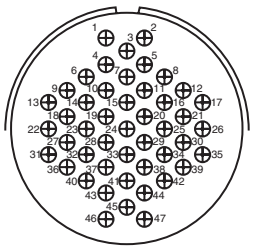
Insert Arrangement	**36-73**
Service Rating	**–**
Number of Contacts	**7**
Contact Size	**4 (Coax) RG-62B/U**



Insert Arrangement	**36-74**
Service Rating	**A**
Number of Contacts	**43 1**
Contact Size	**16 8 (Coax) RG-187/U**



Insert Arrangement	**36-75**
Service Rating	**A**
Number of Contacts	**48**
Contact Size	**16 for #14 wire**

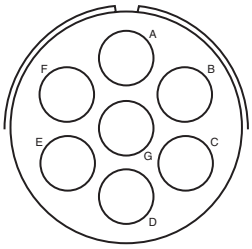


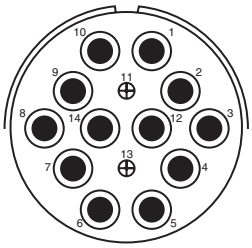
Insert Arrangement	**36-76**
Service Rating	**A**
Number of Contacts	**47**
Contact Size	**16**

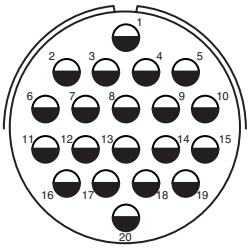
**Consult Sidney, NY for service rating of power contacts.

QWLD
special arrangements

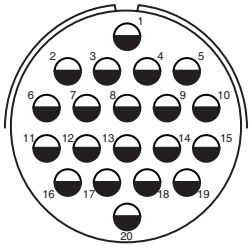
front face of pin insert or rear of socket insert illustrated

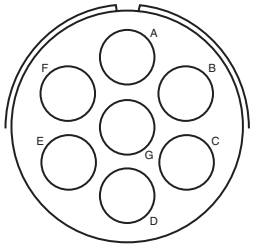


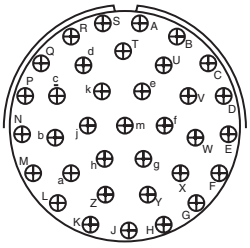




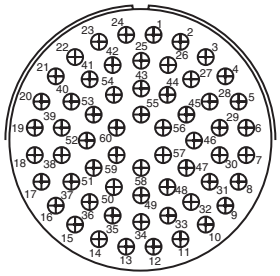
Insert Arrangement	**36-77**	**36-78**	**36-79**
Service Rating	**D**	**A**	**A**
Number of Contacts	**7**	**2 12**	**20**
Contact Size	**4**	**16 8**	**12**

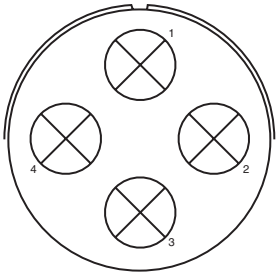


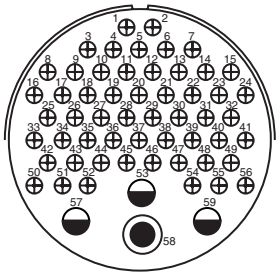




Insert Arrangement	**36-80**	**36-83**	**36-85**
Service Rating	**A**	**–**	**M = D; Bal. = A**
Number of Contacts	**20**	**7**	**35**
Contact Size	**12 for #10 wire**	**4 (Coax) RG-58/U**	**16 for #12 wire**





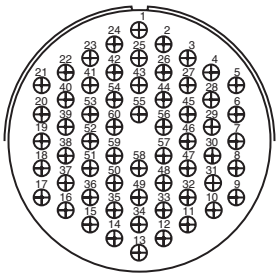


Insert Arrangement	**40-53**	**40-57**	**40-61**
Service Rating	**A**	**E**	**A**
Number of Contacts	**60**	**4**	**1 3 55**
Contact Size	**16**	**0**	**8 12 16**

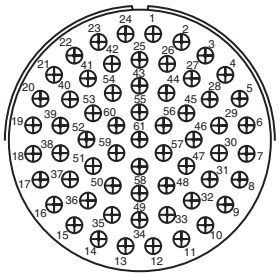
CONTACT LEGEND

QWLD
special arrangements

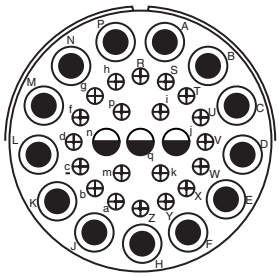
front face of pin insert or rear of socket insert illustrated



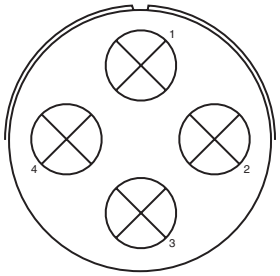
Insert Arrangement	**40-62**
Service Rating	**A**
Number of Contacts	**60**
Contact Size	**16**



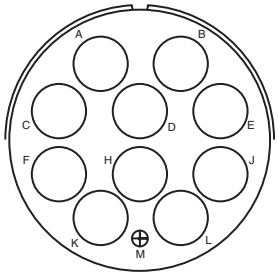
Insert Arrangement	**40-63**
Service Rating	**A**
Number of Contacts	**61**
Contact Size	**16 for #14 wire**



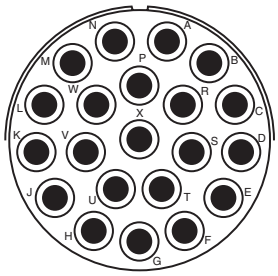
Insert Arrangement	**40-64**
Service Rating	**–**
Number of Contacts	**3 20 13**
Contact Size	**12 16 8 (Coax) RG-124/U**



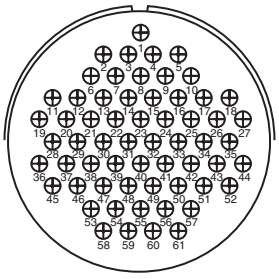
Insert Arrangement	**40-66**
Service Rating	**–**
Number of Contacts	**4**
Contact Size	**0 (Coax) RG-63B/U**



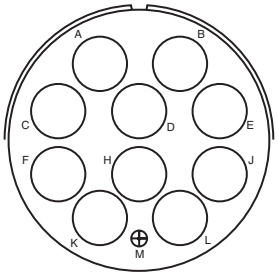
Insert Arrangement	**40-67**
Service Rating	**A**
Number of Contacts	**1 10**
Contact Size	**16 4 (Coax) RG-59/U**



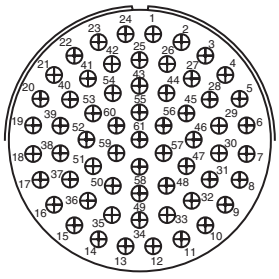
Insert Arrangement	**40-68**
Service Rating	**A**
Number of Contacts	**21**
Contact Size	**8**



Insert Arrangement	**40-70**
Service Rating	**A**
Number of Contacts	**61**
Contact Size	**16**



Insert Arrangement	**40-72**
Service Rating	**A**
Number of Contacts	**1 10**
Contact Size	**16 4 (Coax) RG-9B/U**

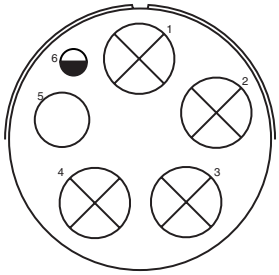


Insert Arrangement	**40-73**
Service Rating	**A**
Number of Contacts	**61**
Contact Size	**16**

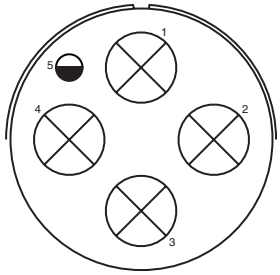
CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

QWLD
special arrangements

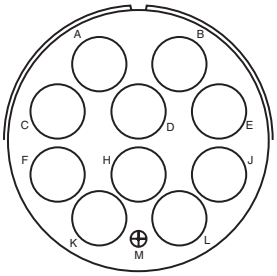
front face of pin insert or rear of socket insert illustrated



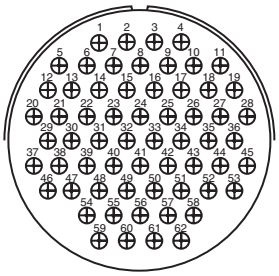
Insert Arrangement	**40-74**
Service Rating	**A**
Number of Contacts	**1 1 4**
Contact Size	**12 4 (Coax) RG-62/U 0 (Coax) RG-9B/U or RG-214/U**



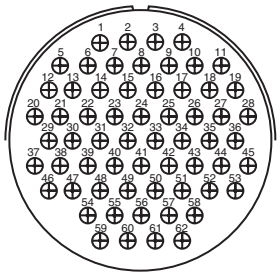
Insert Arrangement	**40-75**
Service Rating	**E**
Number of Contacts	**1 4**
Contact Size	**12 0**



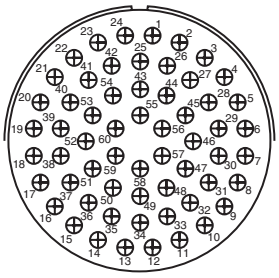
Insert Arrangement	**40-80**
Service Rating	**A**
Number of Contacts	**1 10**
Contact Size	**16 4**



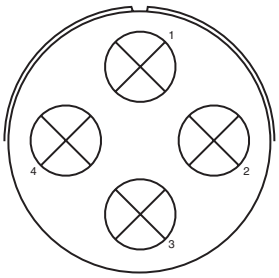
Insert Arrangement	**40-81**
Service Rating	**A**
Number of Contacts	**62**
Contact Size	**16 for #14 wire**



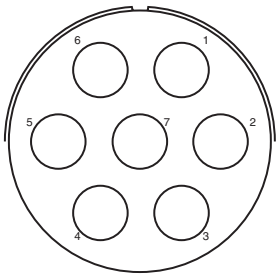
Insert Arrangement	**40-82**
Service Rating	**A**
Number of Contacts	**62**
Contact Size	**16**



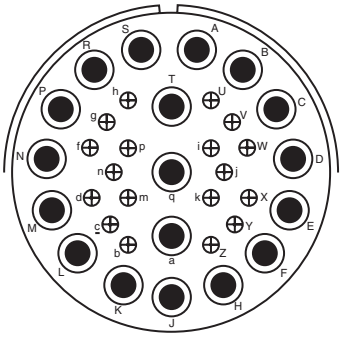
Insert Arrangement	**40-85**
Service Rating	**A**
Number of Contacts	**60**
Contact Size	**16 for #14 wire**



Insert Arrangement	**40-86**
Service Rating	**–**
Number of Contacts	**4**
Contact Size	**0 (Coax) RG-115A/U**



Insert Arrangement	**40-87**
Service Rating	**D**
Number of Contacts	**7**
Contact Size	**4**

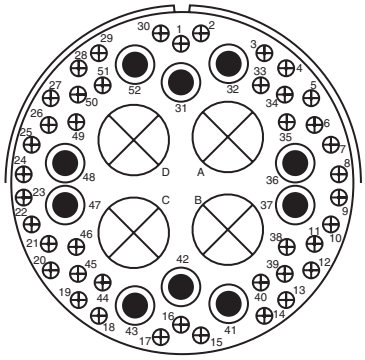


Insert Arrangement	**44-53**
Service Rating	**A**
Number of Contacts	**18 18**
Contact Size	**16 8 (Coax) RG-124/U**

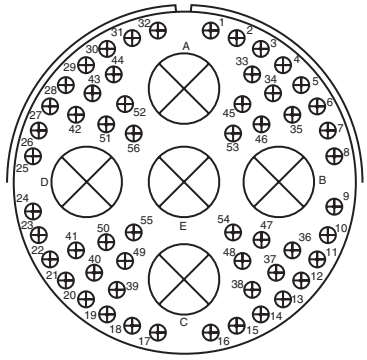
CONTACT LEGEND	⊕ **16**	**12**	**8**	**4**	**0**

QWLD
special arrangements

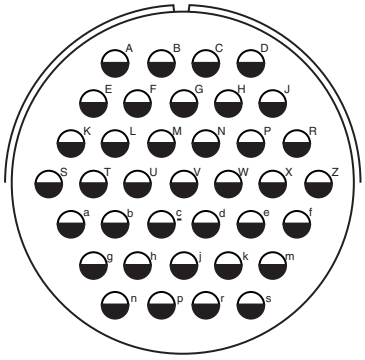
front face of pin insert or rear of socket insert illustrated



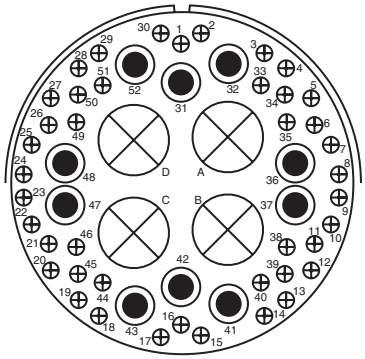
Insert Arrangement	**48-51†**
Service Rating	**A**
Number of Contacts	**42 10 4**
Contact Size	**16 8 0 (Coax) RG-41/U**



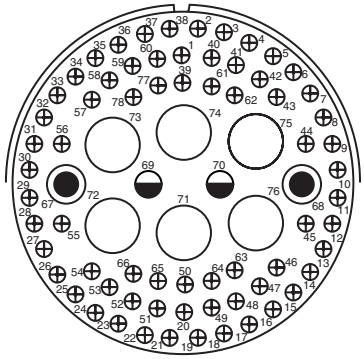
Insert Arrangement	**48-52†**
Service Rating	**A**
Number of Contacts	**56 5**
Contact Size	**16 0 (Coax) RG-41/U**



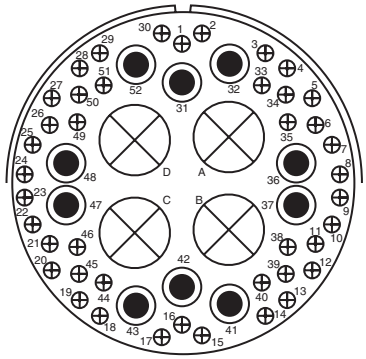
Insert Arrangement	**48-53†**
Service Rating	**D**
Number of Contacts	**37**
Contact Size	**12**



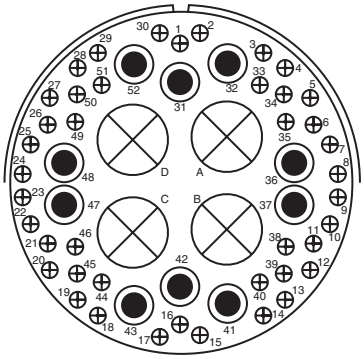
Insert Arrangement	**48-54†**
Service Rating	**A**
Number of Contacts	**42 10 4**
Contact Size	**16 8 0 (Coax) RG-59/U**



Insert Arrangement	**48-55†**
Service Rating	**A**
Number of Contacts	**68 2 2 6**
Contact Size	**16 12 8 4**



Insert Arrangement	**48-57†**
Service Rating	**A**
Number of Contacts	**42 10 4**
Contact Size	**16 8 0**



Insert Arrangement	**48-60†**
Service Rating	**A**
Number of Contacts	**42 10 4**
Contact Size	**16 8 0 (Coax) RG-214/U**

†Consult Sidney, NY for availablity

CONTACT LEGEND	**16**	**12**	**8**	**4**	**0**

QWLD
thermocouple contact availability

A complete line of cylindrical connectors containing thermocouple insert arrangements is available. The contact layout for a particular arrangement will be found in either the MIL-C-22992, QWLD contact arrangement section, pages 27-38, or the Special contact arrangement section, pages 39-47. All thermocouple contact layouts may contain either iron, alumel, chromel, constantan, standard (copper) or brass (dummy) contacts. See the thermocouple tabulations on the following pages.

The following abbreviations are used in the contact material column in the charts that follow. Also, thermocouple contacts are color coded as shown. (This identification is made by means of small dots of stain on solder well end of the contact.)

Abbreviation	Material	Color Code
Ir.	Iron	Black
Con	Constantan	Yellow
Cu.	Copper Alloy	N/A
Ch.	Chromel	White
Al.	Alumel	Green
Dummy	Brass	N/A

WIRE WELL DATA

Contact Size	Well Inside Dia. + .004 – .002	Well Depth + .031 – .000	Solder Well Barrel Outside Dia.
12	.125	.250	.166 ±.003
16	.094	.188	.125 +.002 –.004

RECOMMENDED WIRE

I Chromel-Alumel	Use wire in accordance with MIL-W-5848
II Iron-Constantan	Use wire in accordance with MIL-W-5845

QWLD
thermocouple arrangements

Shell Size and Arrg.	Similar to MS Arrg.	Total Contacts	Contact Size		Pin Insert Rotation CW	Contact Material
			12	16		
14-59	14-53	6		6	None	A = Al.; B = Ch.; C = Ir.; D = Con.; E,F = Cu.
16-52	16-11	2	2		90°	A = Al.; B = Ch.
16-53	16-9	4	2	2	70°	A = Al.; C = Ch.; B, D = Cu.
16-55	16-10	3	3		45°	A = Al.; B = Ch.; C = Cu.
16-56	16-13	2	2		90°	A = Con.; B = Cu.
16-57	16-10	3	3		None	A = Al.; B = Cu.; C = Ch.
16-58	16-10	3	3		None	A = Con.; B, C = Cu.
16-60	16-13	2	2		None	A = Al,; B = Ch.
16-62	16-11	2	2		None	A = Con.; B = Cu.
16-67	16-11	2	2		None	A = Al.; B = Ch.
16-68	16-9	4	2	2	None	A, B, C = Ch.; D = Al.
18-51	18-12	6		6	None	A = Ir.; B, E = Con.; D = Cu.; C, F = Dummy
18-52	18-11	5	5		None	A = Ir.; B = Con.; C = Ch.; D = Al.; E = Dummy
18-53	18-12	6		6	None	A, D = Ir.; B, E = Con.; C, F, = Dummy
18-54	18-15	4	4		None	A, C = Al.; B, D = Ch.
18-56	18-1	10		10	45°	A, C, E, G, I = Ir.; B, D, F, H, J = Con
18-57	18-12	6		6	45°	A, C, E = Al.; B, D, F = Ch.
18-59	18-12	6		6	45°	A, C = Ir,; B, E, F, = Con.; D = Cu.
18-60	18-11	5	5		45°	A, D = Al.; B, C = Ch.; E = Al.
18-61	18-12	6		6	None	A, C = Ir.; B, D = Con.; E = Ch.; F = Al.
18-62	18-12	6		6	None	A, B, D = Ir.; D, E, F = Con.
18-63	18-15	4	4		None	A, C = Con.; B, D = Cu.
18-65	18-12	6		6	None	A = Ir.; B = Con.; Balance = Cu.
18-66	18-1	10		10	None	A, C, E, G, I = Cu.; B, D, F, H, J = Con.
18-67	18-12	6		6	None	A, C, E = Cu.; B, D, F = Con.
18-68	18-11	5	5		None	A, D = Al.; B, C = Ch.; E = Cu.
18-69	18-1	10		10	None	A = Al.; B = Ch.; Balance = Cu.
18-70	18-11	5	5		None	A = Ir.; B = Con.; C = Ch.; D = Al.; E = Cu.
18-71	18-15	4	4		None	A = Con.; Balance = Cu.
18-72	18-15	4	4		None	D = Con.; Balance = Cu.
18-73	18-9	7	2	5	None	A = Al.; D = Ch; Balance = Cu.
18-74	18-12	6		6	None	A = Ch.; B = Al.; D = Ir.; E = Cu.; C, F = Con.
18-76	18-1	10		10	None	A, C, E, G, I = Al.; B, D, F, H, J = Ch.
18-77	18-1	10		10	None	A, C, E, G = Al.; B, D, F, H = Ch.; Bal. = Cu.
18-78	18-1	10		10	None	A = Al.; B = Ch.; D, F, H, J = Con.; Bal. = Cu.
18-79	18-12	6		6	None	A, F, = Ir.; B, E = Con.; C, D, = Cu.
18-80	18-15	4	4		None	A, C = Cu.; B, D = Con.
18-81	18-1	10		10	None	E, G = Con.; Bal. = Cu.
18-82	18-1	10		10	None	E, G = Con.; F, H = Ir.; Bal = Cu.
20-52	20-4	4	4		315°	A= Ir.; B = Con.; C = Ch.; D = Al
20-56	20-7	8		8	45°	A, B, G, H = Ir.; C, D, E, F = Con.
20-60	20-7	8		8	45°	D = Ch.; E = Al.; Balance = Cu.
20-61	20-29	17		17	45°	A, B, M = Cu.; Balance = Con.
20-62	20-15	7	7		80°	A, C, E, = Al.; B, D, F, = Ch.; G = Cu.

QWLD
thermocouple arrangements

Shell Size and Arrg.	Similar to MS Arrg.	Total Contacts	Contact Size		Pin Insert Rotation CW	Contact Material
			12	16		
20-64	20-27	14		14	None	A = Al.; C = Ch.; Balance = Cu.
20-65	20-27	14		14	None	A, B, C, D, E, F, G = Ir.; H, I, J, K, L, M, N = Con.
20-67	20-16	9	2	7	None	H = Al.; I = Ch.; Balance = Cu.
20-68	20-7	8		8	None	A, B, G, H = Con.; C, D, E, F, = Cu.
20-69	20-27	14		14	None	A, B, C, D, E, F, G = Cu.; H, I, J, K, L, M, N = Con.
20-70	20-29	17		17	None	A, C, E, G, J, L, N, R, T = Ir.; B, D, F, H, K, M, P, S = Con.
20-71	20-29	17		17	None	S = Al.; R = Ch.; Balance = Cu.
20-74	20-29	17		17	None	A, C, E, G, J, L, N, R = Ir.; B, D, F, H, K, M, P, S = Con.; T = Cu.
20-75	20-15	7	7		None	G = Al.; Balance = Ch.
20-77	20-16	9	2	7	None	A = Con.; Balance = Std.
20-80	20-27	14		14	None	A, C, E, G, I, K, M = Cu.; B, D, F, H, J, L, N = Con.
20-81	20-27	14		14	None	A, C, E, G, I, K, M = Ch.; B, D, F, H, J, L, N = Al
20-82	20-29	17		17	None	A, C, E, G, J, L, N, R = Al.; B, D, F, H, K, M, P, S = Ch.; T = Cu.
20-85	20-33	11		11	None	K, L, = Al.; Bal. = Ch.
20-87	20-29	17		17	None	A, C, E, G, J, L, N, R = Con.; Bal. = Cu.
20-88	20-27	14		14	None	A, C, E = Al.; B, D, F, = Ch.; G, H, K, N = Con.; Bal. = Cu.
20-89	20-27	14		14	None	B, D, F, H, J, L = Al,; A, C, E, G, I, K = Ch., M, N = Cu.
20-90	20-27	14		14	None	C, G, I = Ch.; K, L, M = Al.; Bal. = Cu.
20-91	20-27	14		14	None	I = Ch.; K = Al.; Bal. = Cu.
20-92	20-7	8		8	None	A = Al.; H = Cu.; Bal. = Ch.
20-93	20-27	14		14	None	A = Ch.; B = Al.; Bal. = Cu.
20-94	20-15	7	7		None	A, C, E = Al.; B, D, F = Ch.; G = Cu.
20-99	20-33	11		11	None	A = Al.; Bal. = Ch.
22-57	22-14	19		19	45°	A, C, E, G, J, L, N, R = Ir.; B, D, F, H, K, M, P, S = Con.; T, U, V, = Cu.
22-60	22-14	19		19	45°	U = Al.; N = Ch.; Bal. = Cu.
22-62	22-23	8	8		60°	A, B, F, G = Al.; C, D, E, H = Ch.
22-68	22-19	14		14	45°	A, C, E, G, J, L, M = Ir.; B, D, F, H, K, P, N = Con.
22-69	22-19	14		14	45°	A, C, E, G, J, L, M = Cu.; B, D, F, H, K, P, N = Con.
22-71	22-14	19		19	None	V = Al.; U = Ch.; Balance = Cu.
22-72	22-5	6	2	4	None	B = Al.; E = Ch.; Balance = Cu.
22-73	22-5	6	2	4	None	E = Al.; B = Ch.; Balance = Cu.
22-74	22-23	8	8		None	A, C, E, G = Ir.; B, D, F, H = Con.
22-75	22-23	8	8		None	A = Al.; B, D, G, H = Cu.; C = Ch.; E = Ir.; F = Con
22-76		21		21	None	W = Con.; Balance = Cu.
22-77	22-19	14		14	None	B, D, F, H, J, K, M, P = Cu.; A, E, L = Ir.; C, G, N = Con.
22-78	22-14	19		19	None	A, C, E, G, H, K, M, P, R, T = Con.; Balance = Cu.
22-79	22-10	4		4	None	A, C = Con.; B, D = Cu.
22-82	22-14	19		19	None	A, C, E, G, J, L, N, R, T = Ir.; B, D, F, H, K, M, P, S, U = Con.; V = Cu.
22-83	22-18	8		8	None	A, C, E, G = Al.; B, D, F, H, = Ch.
22-84	22-14	19		19	None	A, C, S, = Ch.; B, D, T = Al.; Bal. = Cu.
22-85	22-19	14		14	None	A, C, E, G, J, L, N = Al.; B, D, F, H, K, M, P = Ch.
22-89	22-88	7	7		None	A, C, E = Ir.; B, D, F = Con.; G = Cu.
24-56	24-20	11	2	9	45°	E = Al.; F = Ch.; Balance = Cu.
24-57	24-26	24		24	45°	A, C, J, V, Y, W, K, E, H, U, S, M = Ch.; Balance = Al
24-62	24-28	24		24	None	A, C, E, G = Ir.; B, D, F, H = Con.; R, T = Ch.; S, U = Al.; Balance = Cu.

QWLD
thermocouple arrangements

Shell Size and Arrg.	Similar to MS Arrg.	Total Contacts	Contact Size		Pin Insert Rotation CW	Contact Material
			12	16		
24-63	24-28	24		24	None	A, C, E, G, J, L, K, N, S, U, W, Y = Cu.; B, D, F, H, Q, R, M, P, T, V, X, Z = Con.
24-64	24-5	16		16	None	A, B, C, D, E, F, G, H = Ir.; J, K, L, M, N, P, R, S = Con.
24-68	24-28	24		24	None	D = Con.; Balance = Cu.
24-81	24-7	16	2	14	None	A, C, E, G, I, K, M, N, P = Cu.; B, D, F, H, J, L, O = Con.
24-88	24-28	24		24	None	A, B, C, D, E, F, G, H, J, K, L, M = Con.; Bal. = Ir.
24-91	24-5	16		16	None	A, B, C, D, E, F, G, H = Al.; J, K, L, M, N, P, R, S = Ch.
28-53	28-11	22	4	18	45°	J, L = Al.; K, M = Ch.; Balance = Cu.
28-58	28-20	14	10	4	45°	A, C, E, G, K, M = Al.; B, D, F, H, L, N = Ch.; J, P = Cu.
28-61	28-21	37		37	45°	A, C, J, Z, m, r, n, a, K, F, H, X, k, h, T, M, N, d = Ir.; Balance = Con.
28-63	28-20	14	10	4	45°	A, C, E, G, J = Al.; B, D, F, H, P = Ch.; Balance = Cu.
28-64	28-15	35		35	None	A, d = Al.; B, j = Ch.; C, D, E, F, G, N, P, R, S, H, J, K, L, M, W, X, Y, Z = Con.; Balance = Cu.
28-65	28-12	26		26	None	A, C, E, G, J, L, N, R, T, V = Ir.; X, Z = Al.; B, D, F, H, K, M, P, S, U, W = Con; Y, a = Ch.; b, d = Cu.
28-67	28-16	20		20	None	U = Con.; Balance = Cu.
28-68	28-15	35		35	45°	T = Al.; U = Ch.; Balance = Cu.
28-69	28-11	22	4	18	None	G = Al.; R = Ch.; Balance = Cu.
28-70	28-11	22	4	18	None	A = Al.; B = Ch.; Balance = Cu.
28-77	28-11	22	4	18	None	J = Con.; Balance = Cu.
28-81	28-21	37		37	None	A, D, S, Z, n, s = Ir.; B, J, K, f, g, r = Con.; G, L, P, b, e, j = Al.; F, H, T, X, h, k = Ch.; Balance = Cu.
28-85	28-11	22	4	18	45°	K, M = Al.; J, L = Ch.; Bal. = Cu.
28-91	28-9	12	6	6	None	M = Ir.; L = Con.; Bal. = Cu.
28-94	28-12	26		26	None	B, D, F, H, K, M, P, S, U, W, Y, a, d = Al.; Bal. = Ch.
28-98	28-21	37		37	None	M = Al.; F = Ch.; Bal. = Cu.
28-99	28-12	26		26	None	B, D, F, H, K, M, P, S, U, W, Y, a = Con.; Bal. = Cu.
28-AC	28-16	20		20	None	A, C, E, G, J, L = Ir.; B, D, F, N, K, M = Con.; Bal. = Cu.
28-AD	28-21	37		37	45°	A, C, F, H, J, K, M, N, T, X, Z, a, d, h, k, m, n, r = Cu.; Bal. = Cu.
28-AE	28-21	37		37	None	A, C, E, G, J, L, N, R, T, V, X, a, c, e, g, j, m, p. s = Cu.; Bal. = Con.
28-AF	28-18	12		12	None	A, C, E, G, J, L = Ch.; Bal. = Al.
28-AG	28-12	26		26	None	A, C, E, G, J, L, N, R = Al.; B, D, F, H, K, M, P, S = Ch.; Bal. = Cu.
28-AK	28-21	37		37	45°	A, B, C, D, J, K, L, M, N, P, a, b, c, d, e, m, p = Ch.; n = Cu.; Bal. = Al.
32-51	32-8	30	6	24	90°	M = Ch.; N = Al.; Balance = Cu.
32-55	32-8	30	6	24	125°	M, N = Ch.; O, P = Al.; Balance = Cu.
32-91	32-64	54		54	None	A, C, E, G, J, L, N, P, S, U, W, Y, a, c, e, g, j, m = Ir.; B, D, F, H, K, M, O, R, T, V, X, Z, b, d, f, h, k, n = Con.; Bal. = Cu.
36-53	36-7	47	7	40	45°	u, v, w = Al.; x, y, z = Ch.; Balance = Cu.
36-56	36-10	48		48	None	A, C, E, G, L, J, H, P, R, T, V, X, Z, b, d, f, h, k, q, n, m, u, w, y = Con.; Bal. = Cu.
36-57	36-8	47	1	46	None	W = Al.; f = Ch.; Balance = Cu.
36-58	36-15	35		35	None	H = Al.; G = Ch.; Balance = Cu.
36-61	36-15	35		35	None	A, C, E, J, K, L, M, N, P, R, T, V, f, X, Y, h, j, c = Con.; Balance = Cu.
36-62	36-10	48		48	None	A, C, E = Al.; B, D, F = Ch.; Balance = Cu.
36-82	36-52*	52		52	None	v, g = Ir.; p, y, c = Con.; x = Ch.; Balance = Cu.

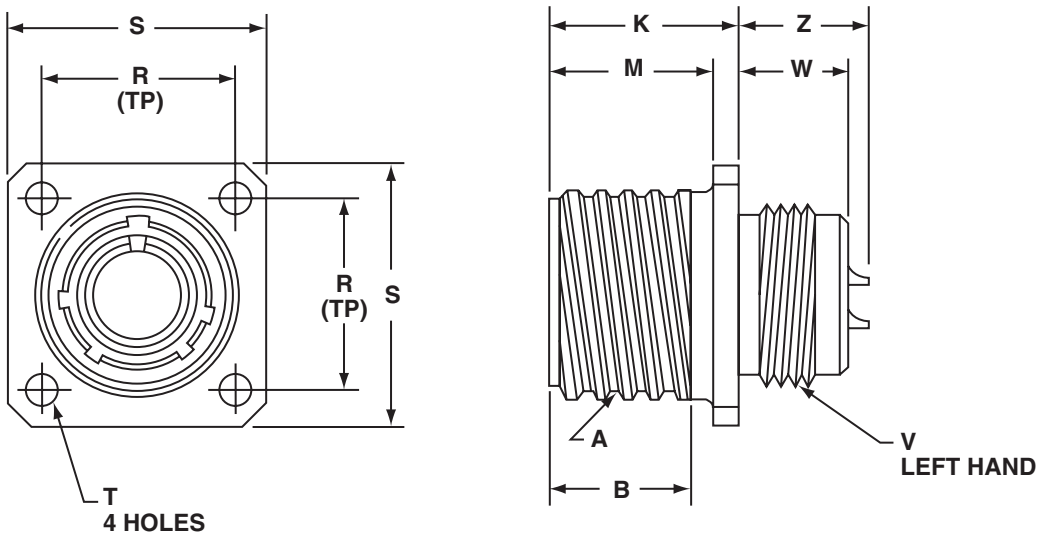
* Amphenol arrangement

QWLD
thermocouple arrangements

Shell Size and Arrg.	Similar to MS Arrg.	Total Contacts	Contact Size		Pin Insert Rotation CW	Contact Material
			12	16		
36-86	36-10	48		48	None	A, C, E, G, J, L, N, P, R, T, V, X = Al.; B, D, F, H, K, M, O, Q, S, U, W, Y = Ch.; z, b, d, f, h, k, n, q, s, u, w, y = Con.; a, c, e, g, j, m, p, r, t, v, x, z = Cu.
36-88	36-52	52		52	None	A, C, E, H, K, M, P, S, U, W, Y, a, c, f, h, j, m, p, r, t, v, x, z, AB, AD, AF = Cu.; Bal. = Con.
40-58	40-56*	85		85	None	A, C, E, H, K, M, P, S, U, W, Y, a, c, f, h, j, m, p, r, t, v, x, z, AB, AD, AF, AJ, AL, AN, AP, AS, AU, AW, AY, BA, BC, BE, BH, BK, BM, BP, BS, BU = Ir.; Balance = Con.
40-59	40-56*	85		85	None	B = Ch.; C = Con.; Balance = Cu.
40-77	40-53*	60		60	None	55, 60 = Ir.; 57, 58, 59 = Con.; 56 = Ch.; Balance = Cu.
40-78	40-53*	60		60	None	50, 51 = Ir.; 27, 28, 29, 31, 32, 34, 36, 37 = Con.; 25, 39, 40, 41 = Al.; 43, 44, 45, 46, 47, 48, 49, 52, 53, 54 = Ch.; Balance = Cu.
40-88	40-53	60		60	None	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59 = Con.; Bal. = Cu.
40-AA	40-56	85		85	None	A, C, E, H, K, M, P, S, U, W, Y, a, c, f, h, j, m, p, r, t, v, x, z, AB, AD, AF, AJ, AL, AN, AR, AT = Cu.; B, D, F, J, L, N, R, T, V, X, Z, b, d, g, i, k, n, q, s, u, w, y, AA, AC, AE, AH, AK, AM, AP, AS = Con.; AU, AW, AY, BA, BC, BE, BH, BK, BM, BP, BS, BU = Cu.; AV, AX, AZ, BB, BD, BF, BJ, BL, BN, BR, BT, BV = Al.
44-57	44-52	104		104	None	A, C, E, G, J, L, etc. = Cu.; B, D, F, H, K, M, etc. = Con.
44-59	44-52	104		104	None	34 = Con.; 70 = Cu.
44-60	44-52	104		104	None	A, C, E, etc. = Ch., (52); B, D, F, etc. = Al., (52)
44-62	44-52	104		104	None	BY, BZ, CA, CB, CC, CD, CE, CR = Al.; CH, CJ, CK, CL, CM, CN, CP, CS = Ch.; Bal. = Cu.

* Amphenol arrangement

MIL-C-22992, QWLD
MS17343 or 10-1940XX
wall mount receptacle

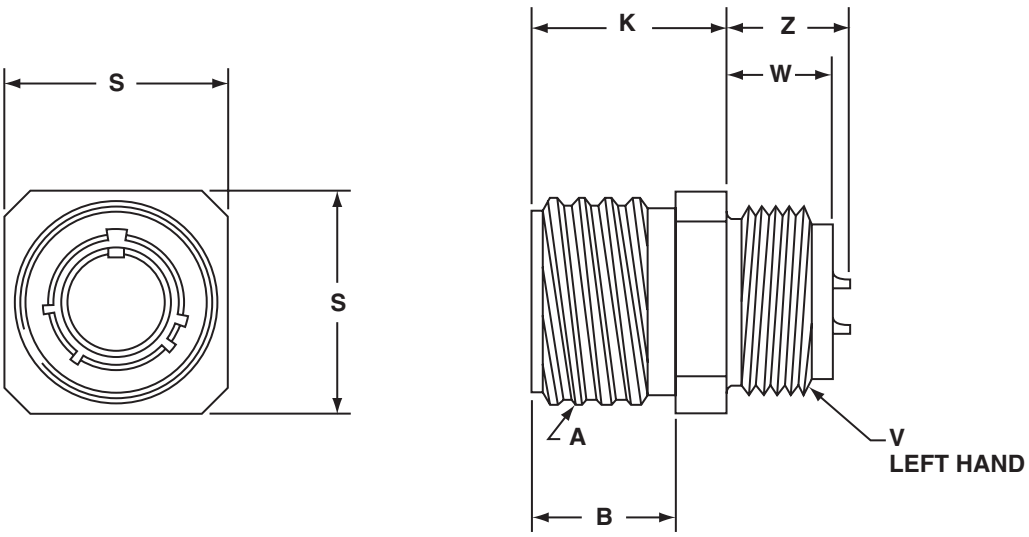


All dimensions for reference only.

Part Number*	Shell Size	A Thread Class 2A (Plated) 0.1P-0.2L Double Stub	B Min Full Thd	K +.021 –.020	M +.010 –.000	R (TP)	S +.021 –.020	T Dia +.004 –.003	V Thread Class 2A-LH (Plated)	W ±.010	Z Max
10-194013	12	.8750	.672	.937	.797	.906	1.188	.150	.750-20UNEF	.640	.700
10-194015	14	1.0000	.672	.937	.797	.969	1.281	.150	.875-20UNEF	.640	.700
10-194017	16	1.1250	.672	.937	.797	1.062	1.375	.150	1.000-20UNEF	.640	.700
10-194018	18	1.2500	.672	.953	.797	1.156	1.500	.177	1.125-18UNEF	.625	.686
10-194020	20	1.3750	.672	.953	.797	1.250	1.625	.177	1.250-18UNEF	.625	.686
10-194022	22	1.5000	.672	.953	.797	1.375	1.750	.177	1.375-18UNEF	.625	.686
10-194024	24	1.7500	.672	1.047	.859	1.562	2.000	.177	1.625-18UNEF	.594	.585
10-194028	28	2.0000	.672	1.047	.859	1.750	2.250	.177	1.875-16UN	.594	.591
10-194032	32	2.2500	.672	1.109	.922	1.938	2.500	.209	2.0625-16UNS	.530	.528
10-194036	36	2.5000	.672	1.109	.922	2.188	2.750	.209	2.3125-16UNS	.530	.528
10-194040	40	2.7500	.672	1.109	.922	2.375	3.000	.209	2.625-16UN	.703	.528
10-194044	44	3.0000	.672	1.109	.922	2.625	3.250	.209	2.875-16UN	.703	.770
10-194048†	48†	3.2500	.672	1.109	.922	2.875	3.500	.209	3.125-16UN	.703	.770

*To complete 10- part number or to complete MS part number, see how to order, pg. 22.
†Shell size 48 available in proprietary versions only. Consult Sidney, NY for availability and ordering information.

MIL-C-22992, QWLD
MS17345 or 10-1941XX
cable connecting plug

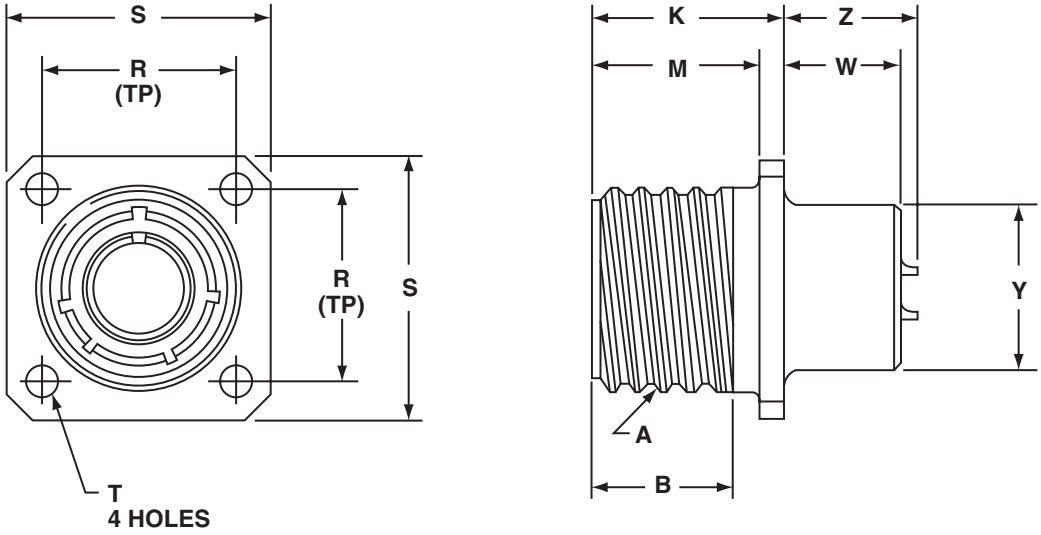


All dimensions for reference only.

Part Number*	Shell Size	A Thread Class 2A (Plated) 0.1P-0.2L Double Stub	B +.016 –.000	K +.021 –.020	S +.021 –.020	V Thread Class 2A-LH (Plated)	W ±.010	Z Max
10-194113	12	.8750	.688	.938	1.000	.750-20UNEF	.641	.696
10-194115	14	1.0000	.688	.938	1.094	.875-20UNEF	.641	.696
10-194117	16	1.1250	.688	.938	1.281	1.000-20UNEF	.641	.696
10-194118	18	1.2500	.703	.957	1.375	1.125-18UNEF	.625	.680
10-194120	20	1.3750	.703	.957	1.500	1.250-18UNEF	.625	.680
10-194122	22	1.5000	.703	.957	1.625	1.375-18UNEF	.625	.680
10-194124	24	1.7500	.766	1.016	1.875	1.625-18UNEF	.625	.617
10-194128	28	2.0000	.766	1.016	2.125	1.875-16UN	.625	.617
10-194132	32	2.2500	.703	1.078	2.375	2.0625-16UN	.563	.555
10-194136	36	2.5000	.703	1.078	2.625	2.3125-16UN	.563	.555
10-194140	40	2.7500	.703	1.078	3.000	2.625-16UN	.703	.555
10-194144	44	3.0000	.703	1.078	3.250	2.875-16UN	.703	.805

*To complete 10- part number or to complete MS part number, see how to order, pg. 22.

MIL-C-22992, QWLD
MS17346 or 10-1942XX
box mount receptacle

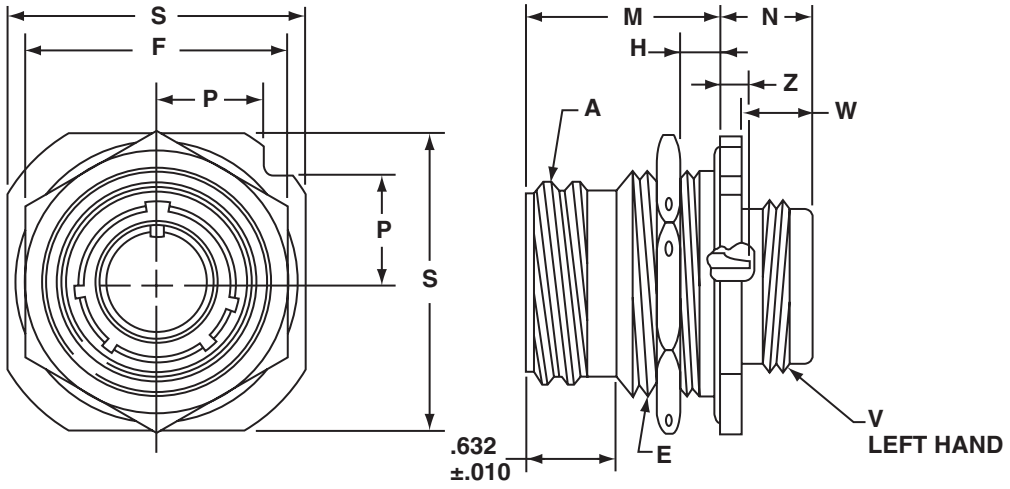


All dimensions for reference only.

Part Number*	Shell Size	A Thread Class 2A (Plated) 0.1P-0.2L Double Stub	B Min Full Thd	K +.021 –.010	M +.010 –.000	R (TP)	S +.021 –.020	T Dia +.004 –.003	W +.020 –.030	Y +.011 –.010	Z Max
10-194213	12	.8750	.672	.938	.797	.906	1.188	.150	.640	.640	.700
10-194215	14	1.0000	.672	.938	.797	.969	1.281	.150	.640	.765	.700
10-194217	16	1.1250	.672	.938	.797	1.062	1.375	.150	.640	.890	.700
10-194218	18	1.2500	.672	.953	.797	1.156	1.500	.177	.625	1.015	.686
10-194220	20	1.3750	.672	.953	.797	1.250	1.625	.177	.625	1.171	.686
10-194222	22	1.5000	.672	.953	.797	1.375	1.750	.177	.625	1.296	.686
10-194224	24	1.7500	.672	1.047	.859	1.562	2.000	.177	.594	1.421	.585
10-194228	28	2.0000	.672	1.047	.859	1.750	2.250	.177	.594	1.625	.591
10-194232	32	2.2500	.672	1.110	.922	1.938	2.500	.209	.531	1.891	.528
10-194236	36	2.5000	.672	1.110	.922	2.188	2.750	.209	.531	2.078	.528
10-194240	40	2.7500	.672	1.110	.922	2.375	3.000	.209	.531	2.312	.528
10-194244	44	3.0000	.672	1.110	.922	2.625	3.250	.209	.531	2.562	.778

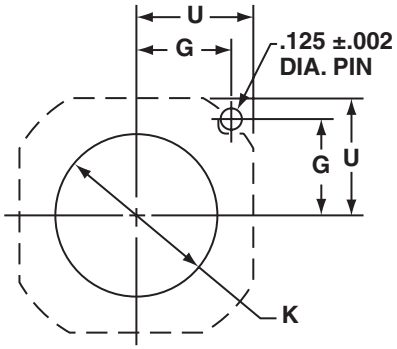
*To complete 10- part number or to complete MS part number, see how to order, pg. 22.

MIL-C-22992, QWLD
MS17347 or 10-1943XX
jam nut receptacle (wall mount)



Shell Size	K Dia. +.005 –.000	G ±.003	U ±.005
12,13	1.005	.562	.688
14,15	1.130	.606	.750
16,17	1.255	.699	.875
18	1.380	.739	.938
20	1.505	.783	1.000
22	1.630	.830	1.062
24	1.880	.919	1.188
28	2.130	1.007	1.312
32	2.380	1.096	1.438
36	2.630	1.183	1.562
40	2.880	1.292	1.703

MOUNTING DIMENSIONS

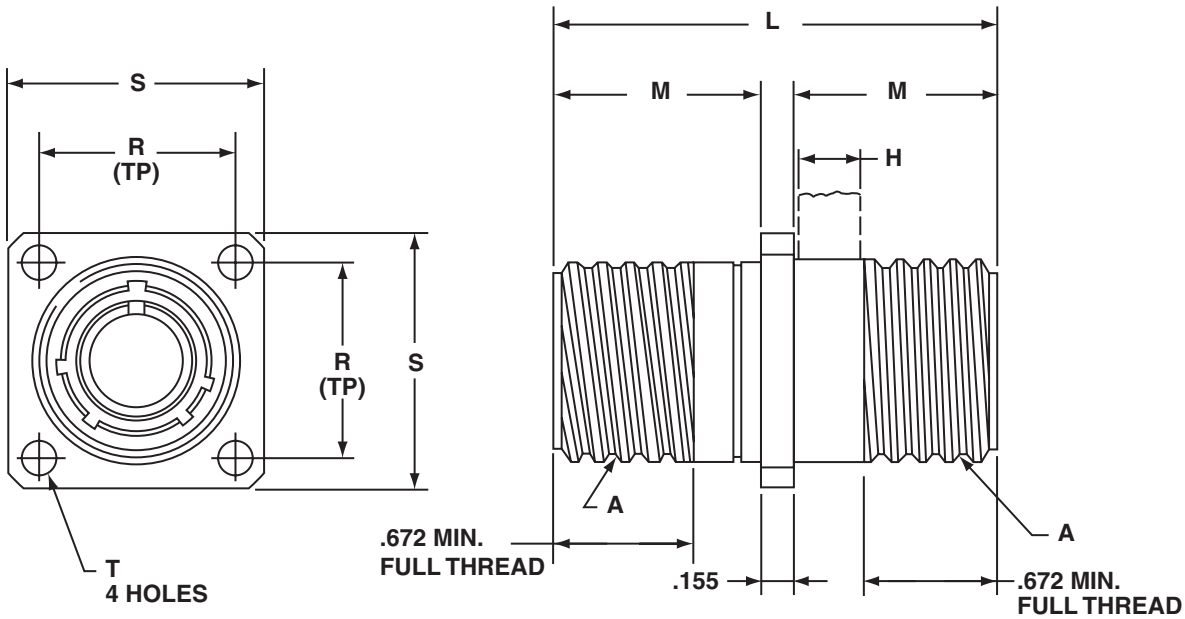


All dimensions for reference only.

Part Number*	Shell Size	A Thread Class 2A (Plated) 0.1P-0.2L Double Stud	E Thread Class 2A (Plated)	F Hex +.017 –.016	H Panel Thickness Min	H Panel Thickness Max	M ±.010	N +.021 –.020	P ±.010	S +.011 –.010	V Thread Class 2A-LH (Plated)	W ±.010	Z Max
10-194313	12	.8750	1.000-20UNEF	1.250	.094	.188	1.141	.641	.486	1.375	.750-20UNEF	.516	.483
10-194315	14	1.0000	1.125-18UNEF	1.312	.094	.188	1.141	.641	.530	1.500	.875-20UNEF	.516	.483
10-194317	16	1.1250	1.250-18UNEF	1.500	.094	.188	1.141	.703	.623	1.750	1.000-20UNEF	.516	.483
10-194318	18	1.2500	1.375-18UNEF	1.562	.094	.203	1.156	.703	.663	1.875	1.125-18UNEF	.516	.467
10-194320	20	1.3750	1.500-18UNEF	1.750	.094	.203	1.156	.703	.707	2.000	1.250-18UNEF	.516	.467
10-194322	22	1.5000	1.625-18UNEF	1.875	.094	.203	1.156	.703	.751	2.125	1.375-18UNEF	.516	.467
10-194324	24	1.7500	1.875-16UN	2.125	.094	.265	1.219	.703	.840	2.375	1.625-18UNEF	.516	.404
10-194328	28	2.0000	2.125-16UN	2.375	.094	.277	1.231	.785	.928	2.625	1.875-16UN	.516	.392
10-194332	32	2.2500	2.375-16UN	2.625	.094	.215	1.231	.785	1.017	2.875	2.0625-16UN	.516	.392
10-194336	36	2.5000	2.625-16UN	2.875	.094	.215	1.231	.785	1.104	3.125	2.3125-16UN	.516	.392
10-194340	40	2.7500	2.875-16UN	3.125	.094	.215	1.231	.972	1.213	3.406	2.625-16UN	.703	.392
10-194344	44	3.0000	3.125-16UN	3.375	.094	.215	1.231	.972	1.299	3.656	2.875-16UN	.703	.642

*To complete 10- part number or to complete MS part number, see how to order, pg. 22.

QWLD
10-1944XX
thru bulkhead receptacle

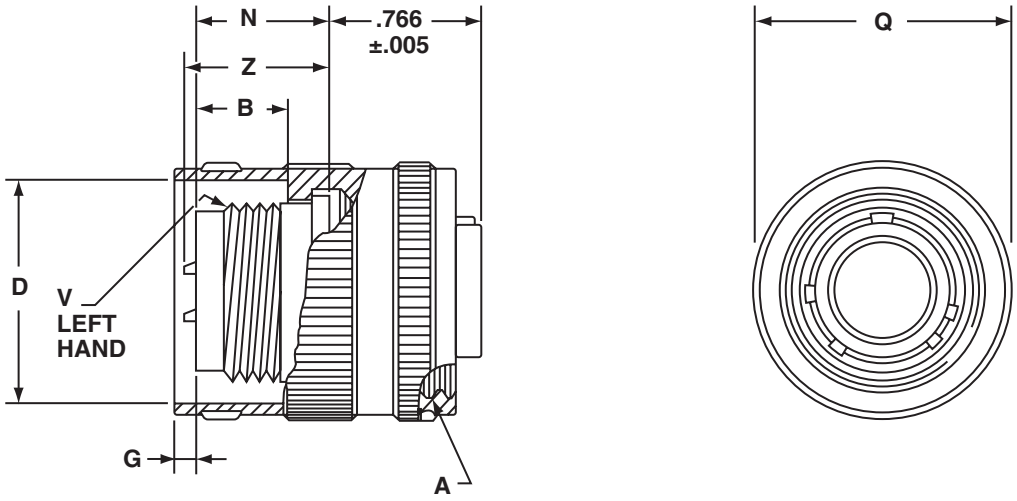


All dimensions for reference only.

Part Number*	Shell Size	A Thread Class 2A (Plated) 0.1P-0.2L Double Stub	H Max	L ±.015	M +.000 –.010	R (TP)	S +.021 –.020	T Dia +.004 –.003
10-194413	12	.8750	.312	2.219	1.032	.906	1.188	.150
10-194415	14	1.0000	.312	2.219	1.032	.969	1.281	.150
10-194417	16	1.1250	.312	2.219	1.032	1.062	1.375	.150
10-194418	18	1.2500	.312	2.219	1.032	1.156	1.500	.177
10-194420	20	1.3750	.312	2.219	1.032	1.250	1.625	.177
10-194422	22	1.5000	.312	2.219	1.032	1.375	1.750	.177
10-194424	24	1.7500	.312	2.219	1.032	1.562	2.000	.177
10-194428	28	2.0000	.312	2.219	1.032	1.750	2.250	.177
10-194432	32	2.2500	.312	2.219	1.032	1.938	2.500	.209
10-194436	36	2.5000	.312	2.219	1.032	2.188	2.750	.209
10-194440	40	2.7500	.312	2.219	1.032	2.375	3.000	.209
10-194444	44	3.0000	.447	2.469	1.157	2.625	3.250	.209
10-194448†	48†	3.2500	.447	2.469	1.157	2.875	3.500	.209

*To complete 10- part number or to complete MS part number, see how to order, pg. 22.
†Shell size 48 available in proprietary versions only. Consult Sidney, NY for availability and ordering information.

MIL-C-22992, QWLD
MS17344 or 10-1946XX
straight plug

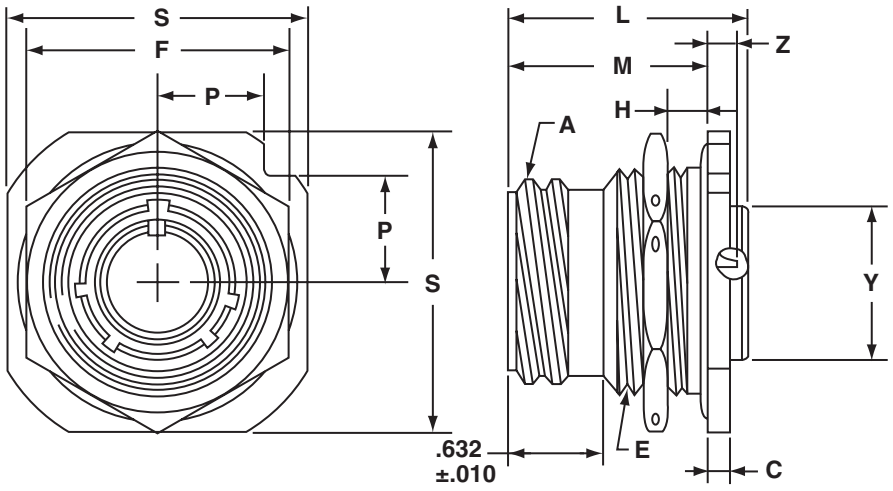


All dimensions for reference only.

Part Number*	Shell Size	A Thread Class 2B 0.1P-0.2L Double Stub	B	D +.010 –.001	G	N +.011 –.010	Q Dia Max	V Thread Class 2A-LH (Plated)	Z Max
10-194613	12	.8750	.519±.020	.985	.030±.030	.738	1.156	.750-20UNEF	.807
10-194615	14	1.0000	.519±.020	1.109	.013±.030	.738	1.281	.875-20UNEF	.807
10-194617	16	1.1250	.519±.020	1.235	.091±.030	.738	1.469	1.000-20UNEF	.807
10-194618	18	1.2500	.519±.020	1.359	.216±.030	.738	1.563	1.125-18UNEF	.807
10-194620	20	1.3750	.519±.020	1.485	.216±.030	.738	1.688	1.250-18UNEF	.807
10-194622	22	1.5000	.519±.020	1.609	.216±.030	.738	1.844	1.375-18UNEF	.807
10-194624	24	1.7500	.519±.020	1.859	.184±.030	.800	2.094	1.625-18UNEF	.807
10-194628	28	2.0000	.519±.020	2.109	.184±.030	.800	2.344	1.875-16UN	.807
10-194632	32	2.2500	.525±.026	2.359	.190±.033	.875	2.594	2.0625-16UNS	.807
10-194636	36	2.5000	.525±.026	2.609	.234±.033	.875	2.844	2.3125-16UNS	.807
10-194640	40	2.7500	.710±.023	2.922	.049±.030	1.041	3.156	2.625-16UN	.807
10-194644	44	3.0000	.710±.023	3.172	.049±.030	1.041	3.406	2.875-16UN	.957

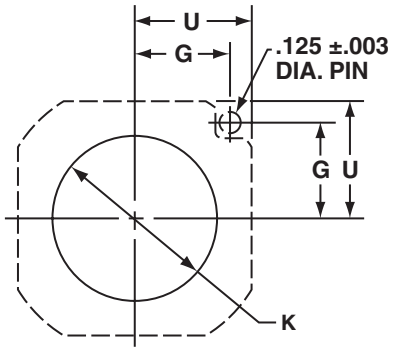
*To complete 10- part number or to complete MS part number, see how to order, pg. 22.

MIL-C-22992, QWLD
MS17348 or 10-1949XX
jam nut receptacle (box mount)



Shell Size	K Dia. +.005 −.000	G ±.003	U ±.005
12,13	1.005	.562	.688
14,15	1.130	.606	.750
16,17	1.255	.699	.875
18	1.380	.739	.938
20	1.505	.783	1.000
22	1.630	.830	1.062
24	1.880	.919	1.188
28	2.130	1.007	1.312
32	2.380	1.096	1.438
36	2.630	1.183	1.562
40	2.880	1.292	1.703

MOUNTING DIMENSIONS



All dimensions for reference only.

Part Number	Shell Size	A Thread Class 2A (Plated) 0.1P-0.2L Double Stub	C +.006 −.005	E Thread Class 2A (Plated)	F Hex +.017 −.016	H Panel Thickness Min	H Panel Thickness Max	L +.011 −.010	M ±.010	P ±.010	S +.011 −.010	Y +.011 −.010	Z Max
10-194913	12	.8750	.125	1.000-20UNEF	1.250	.094	.297	1.578	1.235	.486	1.375	.640	.389
10-194915	14	1.0000	.125	1.125-18UNEF	1.312	.094	.297	1.578	1.235	.530	1.500	.765	.389
10-194917	16	1.1250	.188	1.250-18UNEF	1.500	.094	.297	1.578	1.235	.623	1.750	.890	.389
10-194918	18	1.2500	.188	1.375-18UNEF	1.562	.094	.266	1.578	1.203	.663	1.875	1.015	.421
10-194920	20	1.3750	.188	1.500-18UNEF	1.750	.094	.266	1.578	1.203	.707	2.000	1.171	.421
10-194922	22	1.5000	.188	1.625-18UNEF	1.875	.094	.266	1.578	1.203	.751	2.125	1.296	.421
10-194924	24	1.7500	.188	1.875-16UN	2.125	.094	.328	1.641	1.266	.840	2.375	1.421	.358
10-194928	28	2.0000	.219	2.125-16UN	2.375	.094	.328	1.641	1.329	.928	2.625	1.625	.295
10-194932	32	2.2500	.219	2.375-16UN	2.625	.094	.328	1.641	1.329	1.017	2.875	1.891	.295
10-194936	36	2.5000	.219	2.625-16UN	2.875	.094	.328	1.641	1.329	1.104	3.125	2.078	.295
10-194940	40	2.7500	.219	2.875-16UN	3.125	.094	.328	1.641	1.329	1.213	3.406	2.312	.295
10-194944	44	3.0000	.219	3.125-16UN	3.375	.094	.328	1.641	1.329	1.299	3.656	2.562	.545

*To complete 10- part number or to complete MS part number, see how to order, pg. 22.

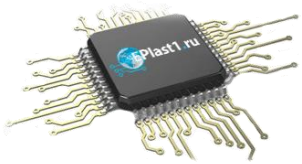
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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