

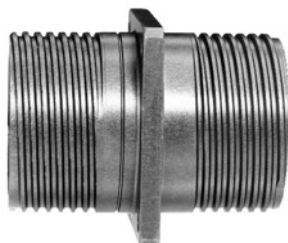
**Heavy Duty  
Cylindrical**  
MIL-C-22992  
QWLD

# 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 water-proof 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    |          |           |          |           |          |          |
|----------------|----------|-----------|----------|-----------|----------|----------|
| <u>MS17343</u> | <u>R</u> | <u>20</u> | <u>N</u> | <u>27</u> | <u>P</u> | <u>W</u> |
| 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        |
| <u>1</u>    |   | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> |

#### 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 Con-<br>tacts | Contact Size |   |   |    |    |
|--------------------|------------|-----------------------------------|---------------------|--------------|---|---|----|----|
| MS<br>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;<br>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;<br>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;<br>C, D, E, F = A | 8                   |              |   |   |    | 8  |
| 20-8               |            | Inst.                             | 6                   |              |   | 2 |    | 4  |

| Insert Arrangement |            | Service Rating                    | Total Con-<br>tacts | Contact Size |   |   |    |    |
|--------------------|------------|-----------------------------------|---------------------|--------------|---|---|----|----|
| MS<br>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;<br>A, B, C, D = A          | 5                   |              |   |   | 4  | 1  |
| 22-14              |            | A                                 | 19                  |              |   |   |    | 19 |
| 22-15              |            | D = E;<br>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;<br>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;<br>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;<br>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;<br>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;<br>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;<br>Bal. = A                               | 9              |              |   | 3 | 6  |    |
| 28-2               |            | D                                                      | 14             |              |   |   | 2  | 12 |
| 28-3               |            | E                                                      | 3              |              |   | 3 |    |    |
| 28-4               |            | G, P, S = E;<br>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;<br>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;<br>A to L = A                      | 15             |              |   |   |    | 15 |
| 28-18              |            | M = C; G, H, J, K,<br>L = D; A, B = H;<br>Bal. = Inst. | 12             |              |   |   |    | 12 |
| 28-19              |            | H, M = B; A, B = D;<br>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;<br>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.;<br>Bal. = A        | 35             |              |   |   | 7  | 28  |
|                    | 32-8       | A                                      | 30             |              |   |   | 6  | 24  |
| 32-9               |            | D                                      | 14             |              | 2 |   |    | 12  |
|                    | 32-10      | A, F = E; G = B;<br>B, E = D; C, D = A | 7              |              | 2 | 2 |    | 3   |
|                    | 32-12      | C, D, E, F, G = A;<br>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;<br>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<br>Arrange-<br>ment | Service<br>Rating | Total<br>Con-<br>tacts | Contact Size |   |    |    |    |        |   |   |    |    |
|----------------------------|-------------------|------------------------|--------------|---|----|----|----|--------|---|---|----|----|
|                            |                   |                        | 0            | 4 | 8  | 12 | 16 | Coax** |   |   |    |    |
|                            |                   |                        |              |   |    |    |    | 0      | 4 | 8 | 12 |    |
| 16-59                      | A                 | 4                      |              |   |    | 4  |    |        |   |   |    |    |
| 20-51                      | A                 | 3                      |              |   | 3  |    |    |        |   |   |    |    |
| 20-57                      | A                 | 7                      |              |   |    | 7* |    |        |   |   |    |    |
| 20-58                      | A                 | 10                     |              |   |    | 5  | 5  |        |   |   |    |    |
| 20-59                      | A                 | 3                      |              |   | 3* |    |    |        |   |   |    |    |
| 20-66                      | A                 | 6                      |              |   |    | 5* | 1  |        |   |   |    |    |
| 20-79                      | A/D               | 8                      |              |   |    | 1  | 7  |        |   |   |    |    |
| 22-63                      | A                 | 12                     |              |   |    | 4  | 8  |        |   |   |    |    |
| 22-65                      | A/D               | 8                      |              |   |    | 8* |    |        |   |   |    |    |
| 22-70                      | A                 | 13                     |              |   |    | 8  | 5  |        |   |   |    |    |
| 22-80                      | A                 | 3                      |              |   | 3* |    |    |        |   |   |    |    |
| 24-51                      | A                 | 5                      |              |   | 5  |    |    |        |   |   |    |    |
| 24-52                      | Hi Volt.          | 1                      |              |   |    | 1  |    |        |   |   |    |    |
| 24-53                      | A                 | 5                      |              |   | 5  |    |    |        |   |   |    |    |
| 24-58                      | A                 | 13                     |              |   | 3  | 3  | 7  |        |   |   |    |    |
| 24-59                      | A                 | 14                     |              |   |    | 7  | 7  |        |   |   |    |    |
| 24-60                      | A                 | 7                      |              |   | 7* |    |    |        |   |   |    |    |
| 24-65                      | A                 | 15                     |              |   |    | 11 | 4  |        |   |   |    |    |
| 24-66                      | D                 | 7                      |              |   |    | 7  |    |        |   |   |    |    |
| 24-67                      | Inst.             | 19                     |              |   |    | 19 |    |        |   |   |    |    |
| 24-71                      | A                 | 7                      |              |   | 7* |    |    |        |   |   |    |    |
| 24-75                      | A                 | 7                      |              |   | 7* |    |    |        |   |   |    |    |
| 24-79                      | A                 | 5                      |              |   | 5  |    |    |        |   |   |    |    |
| 24-80                      | Inst.             | 23                     |              |   |    |    | 23 |        |   |   |    |    |
| 24-84                      | A                 | 19                     |              |   |    | 1  |    |        |   |   |    | 18 |
| 28-51                      | A                 | 12                     |              |   |    | 12 |    |        |   |   |    |    |
| 28-59                      | A                 | 17                     |              |   |    | 7  | 10 |        |   |   |    |    |
| 28-66                      | A                 | 16                     |              |   | 2  | 14 |    |        |   |   |    |    |
| 28-72                      | Coax              | 3                      |              |   |    |    |    |        | 3 |   |    |    |
| 28-74                      | A                 | 16                     |              |   | 7* |    | 9  |        |   |   |    |    |
| 28-75                      | A                 | 16                     |              |   | 7* |    | 9  |        |   |   |    |    |
| 28-79                      | A                 | 16                     |              |   | 7  |    | 9  |        |   |   |    |    |
| 28-82                      | D                 | 6                      |              |   | 2  | 4  |    |        |   |   |    |    |
| 28-84                      | A                 | 9                      |              |   | 9  |    |    |        |   |   |    |    |
| 32-52                      | D                 | 8                      | 2            |   |    | 6  |    |        |   |   |    |    |
| 32-53                      | Inst./E           | 42                     |              |   |    | 5  | 37 |        |   |   |    |    |
| 32-56                      | A                 | 30                     |              |   |    | 6* | 24 |        |   |   |    |    |
| 32-57                      | Coax              | 8                      |              |   |    | 6  |    | 2      |   |   |    |    |
| 32-58                      | Coax              | 4                      |              |   |    |    |    |        | 4 |   |    |    |
| 32-60                      | A                 | 23                     |              |   |    |    | 15 |        |   | 8 |    |    |
| 32-62                      | Coax              | 23                     |              | 2 | 1  | 2  | 16 |        |   | 2 |    |    |
| 32-64                      | Inst.             | 54                     |              |   |    |    | 54 |        |   |   |    |    |
| 32-68                      | A                 | 16                     |              |   |    |    | 12 | 4      |   |   |    |    |
| 32-75                      | Coax              | 9                      |              |   |    | 2  |    |        |   | 7 |    |    |
| 32-76                      | A                 | 19                     |              |   |    | 19 |    |        |   |   |    |    |
| 32-79                      | D                 | 5                      |              | 4 | 1  |    |    |        |   |   |    |    |

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

\* Crimp contacts accommodate wire the same size as the contact as well as wire of the next smaller, even size. Arrangements identified with an asterisk (\*) are exceptions. See insert arrangement drawings on pages 39-47 for application wire size.

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

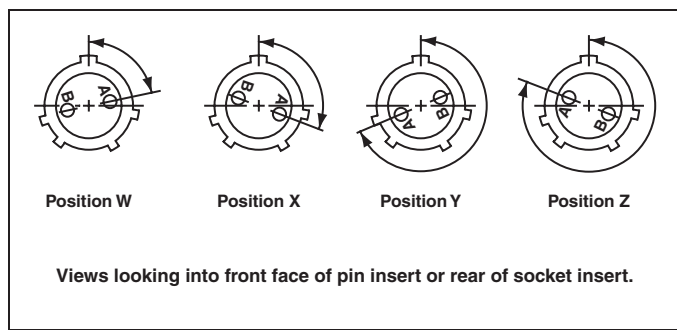
† Consult Sidney, NY for availability.

# MIL-C-22992, QWLD

## alternate insert rotations

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

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



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

| Degrees |     |     |     |
|---------|-----|-----|-----|
| W       | X   | Y   | Z   |
| 80      | 110 | 250 | 280 |

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

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

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

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

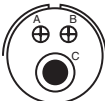
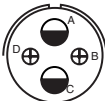
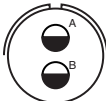
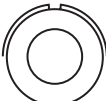
# MIL-C-22992, QWLD

## contact arrangements

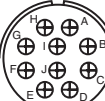
front face of pin insert or rear of socket insert illustrated

|                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
| 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                                                                                  |

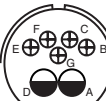
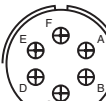
  

|                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
| 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  |

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

CONTACT LEGEND

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16

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# MIL-C-22992, QWLD

## contact arrangements

front face of pin insert or rear of socket insert illustrated

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

|                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|
|                 |       |       |       |       |       |
| 20-9            | 20-11 | 20-12 | 20-14 | 20-15 | 20-16 |
| H = D; Bal. = A | Inst. | A     | A     | A     | A     |
| 1 7             | 13    | 1 1   | 2 3   | 7     | 2 7   |
| 12 16           | 16    | 4 16  | 8 12  | 12    | 12 16 |

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
|       |       |       |       |       |       |
| 20-17 | 20-18 | 20-19 | 20-20 | 20-21 | 20-22 |
| A     | A     | A     | A     | A     | A     |
| 5 1   | 3 6   | 3     | 1 3   | 1 8   | 3 3   |
| 12 16 | 12 16 | 8     | 4 12  | 12 16 | 8 16  |

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
|       |       |       |       |       |       |
| 20-23 | 20-24 | 20-25 | 20-27 | 20-29 | 20-30 |
| A     | A     | Inst. | A     | A     | Inst. |
| 2     | 2 2   | 13    | 14    | 17    | 13    |
| 8     | 8 16  | 16    | 16    | 16    | 16    |

### CONTACT LEGEND

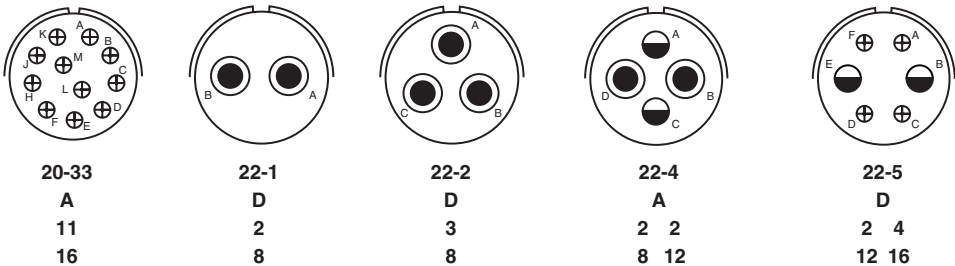
|    |    |   |   |   |
|----|----|---|---|---|
|    |    |   |   |   |
| 16 | 12 | 8 | 4 | 0 |

# MIL-C-22992, QWLD

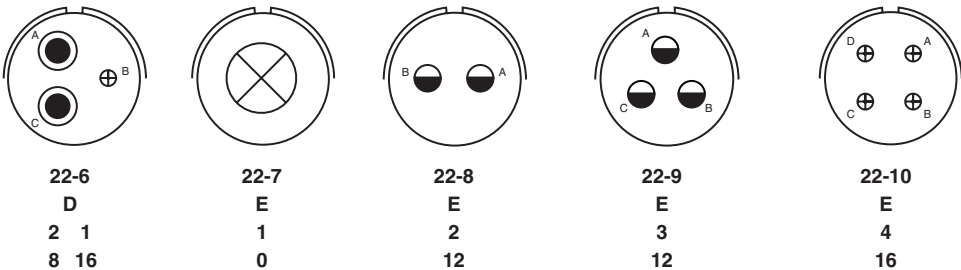
## contact arrangements

front face of pin insert or rear of socket insert illustrated

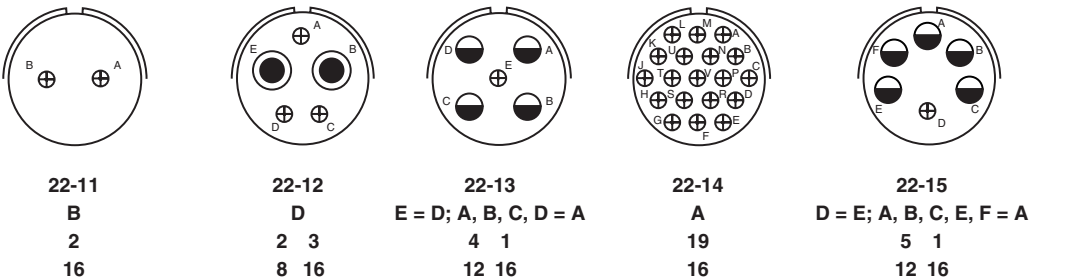
Insert Arrangements  
Service Rating  
Number of Contacts  
Contact Size



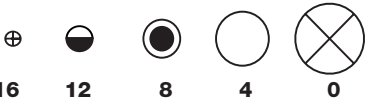
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



CONTACT LEGEND



# MIL-C-22992, QWLD

## contact arrangements

front face of pin insert or rear of socket insert illustrated

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

|       |                 |                                |       |       |
|-------|-----------------|--------------------------------|-------|-------|
|       |                 |                                |       |       |
| 22-16 | 22-17           | 22-18                          | 22-19 | 22-20 |
| A     | A = D; Bal. = A | A, B, F, G, H = D; C, D, E = A | A     | A     |
| 3 6   | 1 8             | 8                              | 14    | 9     |
| 12 16 | 12 16           | 16                             | 16    | 16    |

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

|       |       |                 |                          |                 |
|-------|-------|-----------------|--------------------------|-----------------|
|       |       |                 |                          |                 |
| 22-21 | 22-22 | 22-23           | 22-24                    | 22-27           |
| A     | A     | H = D; Bal. = A | C, D, E = D; A, B, F = A | J = D; Bal. = A |
| 1 2   | 4     | 8               | 2 4                      | 1 8             |
| 0 16  | 8     | 12              | 12 16                    | 8 16            |

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

|       |                             |       |                 |      |
|-------|-----------------------------|-------|-----------------|------|
|       |                             |       |                 |      |
| 22-28 | 22-33                       | 22-34 | 22-36           | 24-2 |
| A     | A, B, C, D = D; E, F, G = A | D     | H = D; Bal. = A | D    |
| 7     | 7                           | 3 2   | 8               | 7    |
| 12    | 16                          | 12 16 | 12              | 12   |

CONTACT LEGEND

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12

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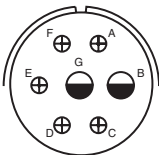
0

# MIL-C-22992, QWLD

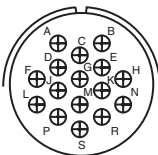
## contact arrangements

front face of pin insert or rear of socket insert illustrated

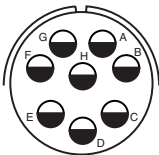
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



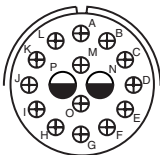
24-3  
D  
2 5  
12 16



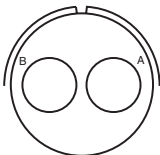
24-5  
A  
16  
16



24-6  
A, G, H = D; Bal. = A  
8  
12

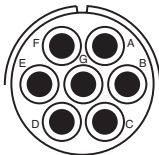


24-7  
A  
2 14  
12 16

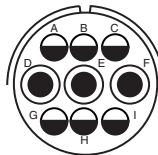


24-9  
A  
2  
4

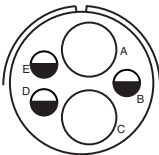
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



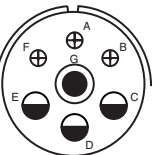
24-10  
A  
7  
8



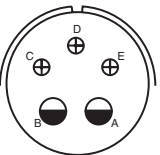
24-11  
A  
3 6  
8 12



24-12  
A  
2 3  
4 12

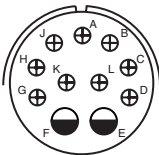


24-16  
A, B, F, G = D; C, D, E = A  
1 3 3  
8 12 16

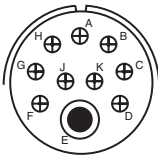


24-17  
D  
2 3  
12 16

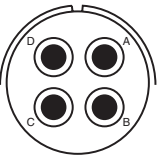
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



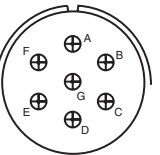
24-20  
D  
2 9  
12 16



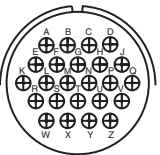
24-21  
D  
1 9  
8 16



24-22  
D  
4  
8

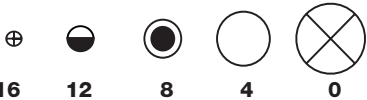


24-27  
E  
7  
16



24-28  
Inst.  
24  
16

### CONTACT LEGEND

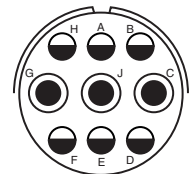


# MIL-C-22992, QWLD

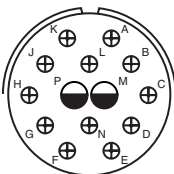
## contact arrangements

front face of pin insert or rear of socket insert illustrated

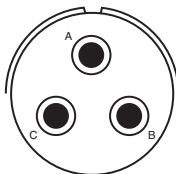
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



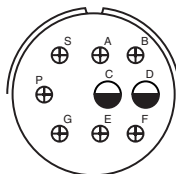
28-1  
A, J, E = D; Bal. = A  
3 6  
8 12



28-2  
D  
2 12  
12 16

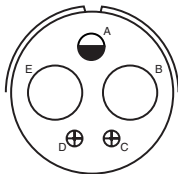


28-3  
E  
3  
8

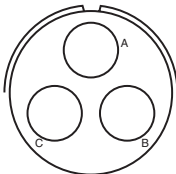


28-4  
G, P, S = E; Bal. = D  
2 7  
12 16

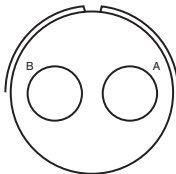
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



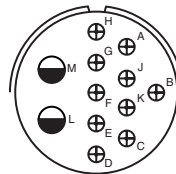
28-5  
D  
2 1 2  
4 12 16



28-6  
D  
3  
4

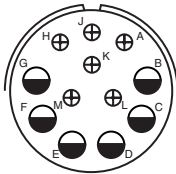


28-7  
D  
2  
4

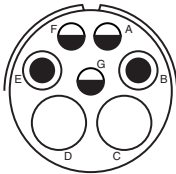


28-8  
L, M = E; B = D; Bal. = A  
2 10  
12 16

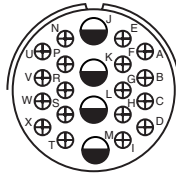
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



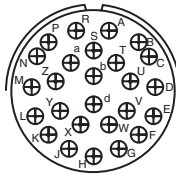
28-9  
D  
6 6  
12 16



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



28-11  
A  
4 18  
12 16



28-12  
A  
26  
16

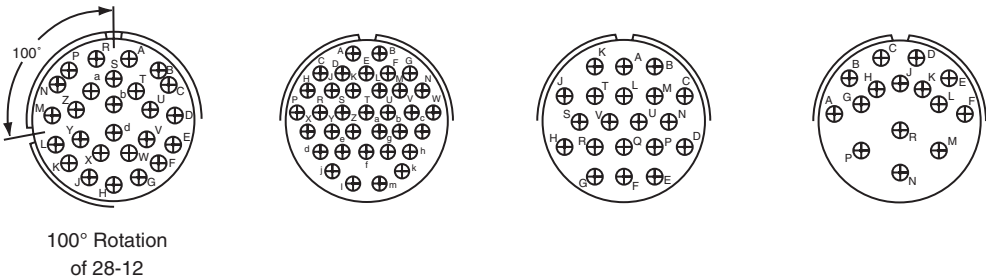
### CONTACT LEGEND



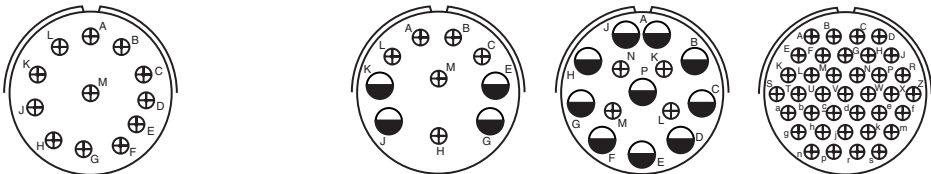
# MIL-C-22992, QWLD

## contact arrangements

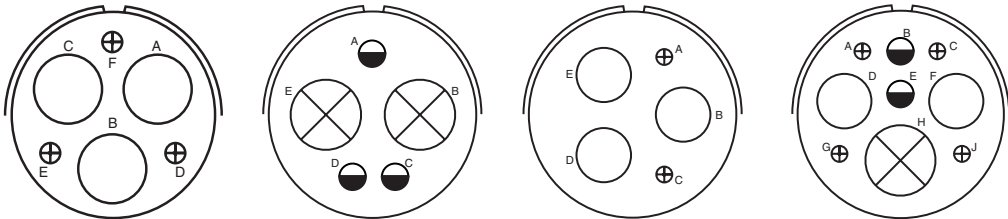
front face of pin insert or rear of socket insert illustrated



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



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



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

CONTACT LEGEND

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# MIL-C-22992, QWLD

## contact arrangements

front face of pin insert or rear of socket insert illustrated

|                                                                            |                          |              |                                     |                             |
|----------------------------------------------------------------------------|--------------------------|--------------|-------------------------------------|-----------------------------|
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size |                          |              |                                     |                             |
|                                                                            | 32-4                     | 32-5         | 32-6                                | 32-7                        |
|                                                                            | F, J, K, N = A; Bal. = D | D            | A                                   | A, B, h, j = Inst; Bal. = A |
|                                                                            | 2 12<br>12 16            | 2<br>0       | 2 3 2 16<br>4 8 12 16               | 7 28<br>12 16               |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size |                          |              |                                     |                             |
|                                                                            | 32-8                     | 32-9         | 32-10                               | 32-12                       |
|                                                                            | A                        | D            | A, F = E, G = B; B, E = D; C, D = A | C, D, E, F, G = A; Bal. = D |
|                                                                            | 6 24<br>12 16            | 2 12<br>4 16 | 2 2 3<br>4 8 16                     | 5 10<br>12 16               |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size |                          |              |                                     |                             |
|                                                                            | 32-13                    | 32-15        | 32-16                               | 32-17                       |
|                                                                            | D                        | D            | A                                   | D                           |
|                                                                            | 5 18<br>12 16            | 2 6<br>0 12  | 2 3 2 16<br>4 8 12 16               | 4<br>4                      |

CONTACT LEGEND

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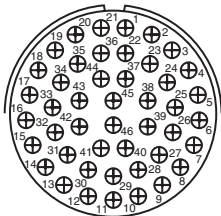
0

# MIL-C-22992, QWLD

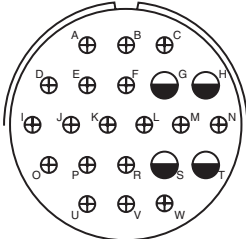
## contact arrangements

front face of pin insert or rear of socket insert illustrated

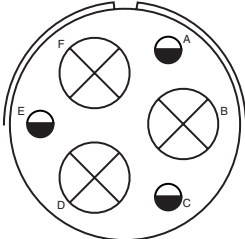
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



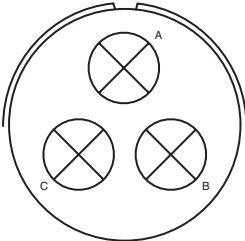
32-73  
A  
46  
16



36-1  
D  
4 18  
12 16

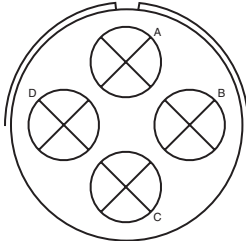


36-3  
D  
3 3  
0 12

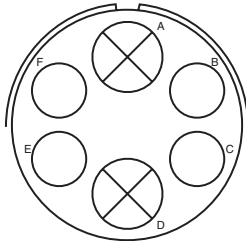


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

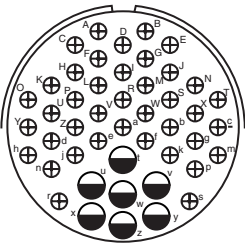
36-4  
A = D; B, C = A  
3  
0



36-5  
A  
4  
0

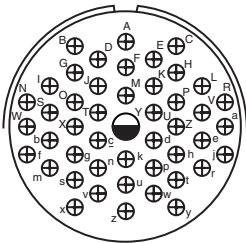


36-6  
A  
2 4  
0 4

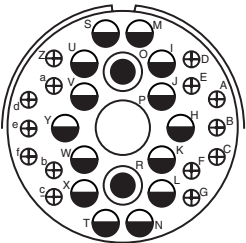


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

36-7  
A  
7 40  
12 16

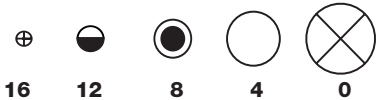


36-8  
A  
1 46  
12 16



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

### CONTACT LEGEND

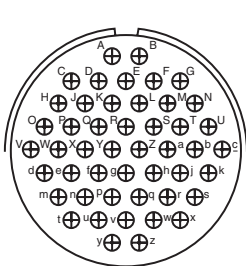


# MIL-C-22992, QWLD

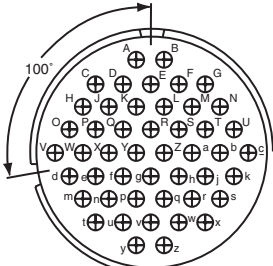
## contact arrangements

front face of pin insert or rear of socket insert illustrated

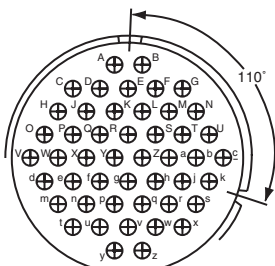
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



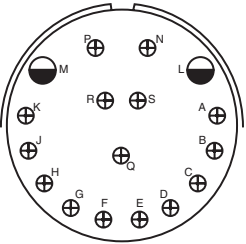
36-10  
A  
48  
16



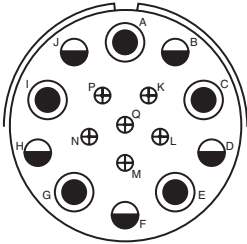
100° Rotation  
of 36-10  
36-11  
A  
48  
16



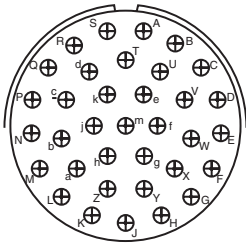
110° Rotation  
of 36-10  
36-12  
A  
48  
16



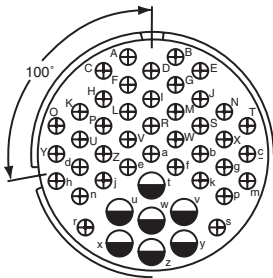
36-13  
N, P, Q = E; Bal. = A  
2 15  
12 16



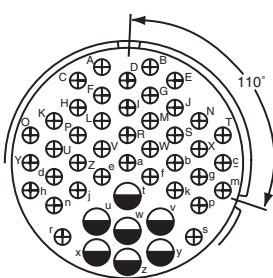
36-14  
D  
5 5 6  
8 12 16



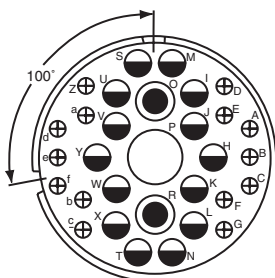
36-15  
M = D; Bal. = A  
35  
16



100° Rotation  
of 36-7  
36-16  
A  
7 40  
12 16



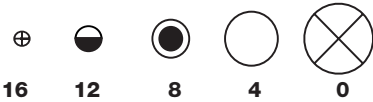
110° Rotation  
of 36-7  
36-17  
A  
7 40  
12 16



100° Rotation  
of 36-9  
36-18  
A  
1 2 14 14  
4 8 12 16

Insert Arrangements  
Service Rating  
Number of COnтакты  
Contact Size

### CONTACT LEGEND

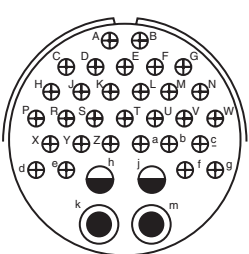


# MIL-C-22992, QWLD

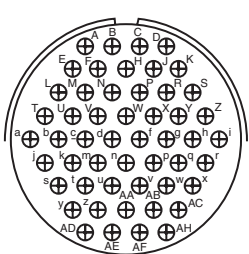
## contact arrangements

front face of pin insert or rear of socket insert illustrated

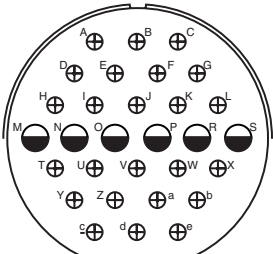
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



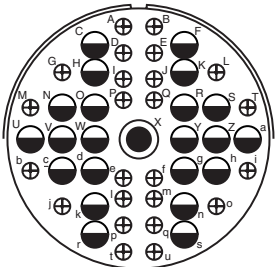
36-20  
A  
2 2 30  
8 12 16



36-52  
A  
52  
16

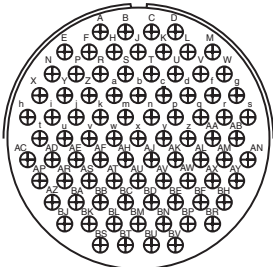


40-1  
D  
6 24  
12 16

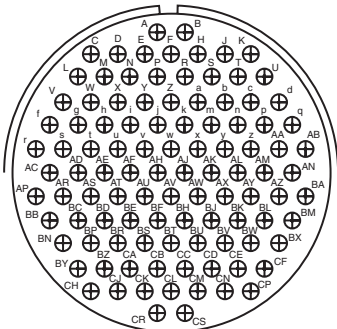


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

40-9  
A  
1 22 24  
8 12 16

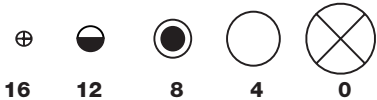


40-56  
A  
85  
16



44-52  
A  
104  
16

### CONTACT LEGEND



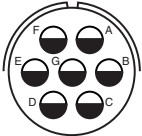
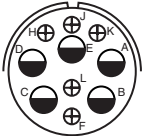
# QWLD

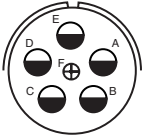
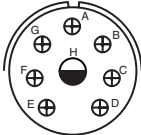
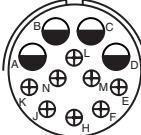
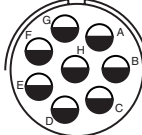
## special arrangements

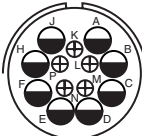
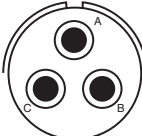
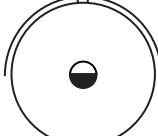
Ever expanding requirements for more complex circuits in ground equipment and elevated altitude applications has prompted Amphenol to provide inserts not covered by the MS drawings. Pictured here and on the following pages are insert layouts which have anywhere from one contact

(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<br>A, C, D for AN #8 wire                                  | 12                                                                                    |

\*Solderless

CONTACT LEGEND

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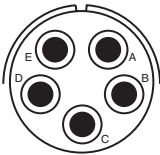
0

# QWLD

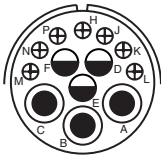
## special arrangements

front face of pin insert or rear of socket insert illustrated

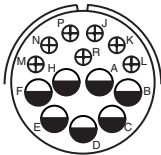
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



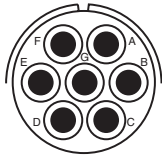
24-53  
A  
5\*  
8



24-58  
A  
3 3 7  
8 12 16

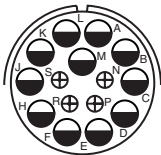


24-59  
A  
7 7  
12 16

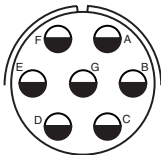


24-60  
A  
7\*  
8 for #10 or 12 wire

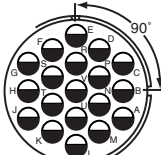
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



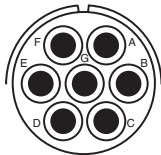
24-65  
A  
11 4  
12 16



24-66  
D  
7  
12

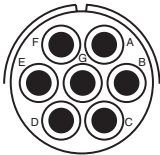


24-67  
Inst.  
19  
12

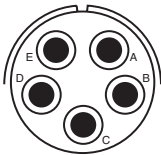


24-71  
A  
2\* 5\*  
8 8 for #10 or 12 wire

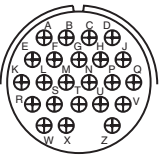
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



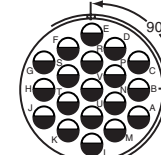
24-75  
A  
5 2  
8 8 for #16 wire



24-79  
A  
5  
8



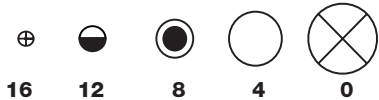
24-80  
Inst.  
23  
16



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

\*Solderless

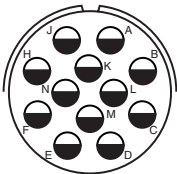
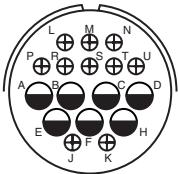
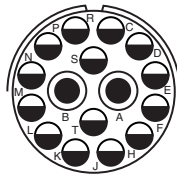
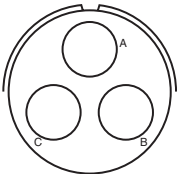
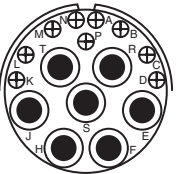
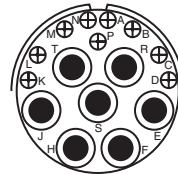
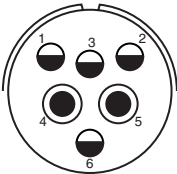
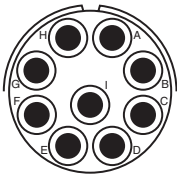
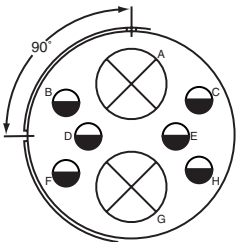
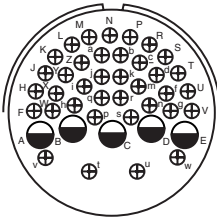
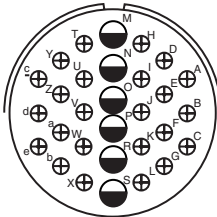
### CONTACT LEGEND



# QWLD

## special arrangements

front face of pin insert or rear of socket insert illustrated

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

\*Solderless

CONTACT LEGEND

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# QWLD

## special arrangements

front face of pin insert or rear of socket insert illustrated

|                    |                     |                              |                      |                            |
|--------------------|---------------------|------------------------------|----------------------|----------------------------|
|                    |                     |                              |                      |                            |
| Insert Arrangement | 32-57               | 32-58                        | 32-60                | 32-62                      |
| Service Rating     | **                  | —                            | A                    | **                         |
| Number of Contacts | 6 2                 | 4                            | 15 8                 | 2 1 2 16 2                 |
| Contact Size       | 12 0 (Coax) RG-71/U | 4 (Coax) RG-161U or RG-179/U | 16 8 (Coax) RG-124/U | 4 8 12 16 8 (Coax)RG-124/U |

|                    |       |                      |                       |       |
|--------------------|-------|----------------------|-----------------------|-------|
|                    |       |                      |                       |       |
| Insert Arrangement | 32-64 | 32-68                | 32-75                 | 32-76 |
| Service Rating     | Inst. | A                    | 8, 9 = D              | A     |
| Number of Contacts | 54    | 12 4                 | 2 7                   | 19    |
| Contact Size       | 16    | 16 4 (Coax) RG-58C/U | 12 8 (Coax) RG-180B/U | 12    |

|                    |       |       |       |                  |
|--------------------|-------|-------|-------|------------------|
|                    |       |       |       |                  |
| Insert Arrangement | 32-79 | 36-51 | 36-54 | 36-55            |
| Service Rating     | D     | D     | A     | A                |
| Number of Contacts | 4 1   | 2 2   | 8 31  | 31 8             |
| Contact Size       | 4 8   | 0 4   | 8 16  | 16 8 for #6 wire |

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

CONTACT LEGEND

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16

12

8

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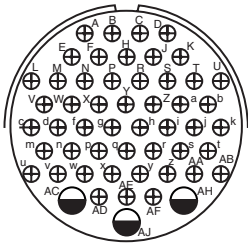
0

# QWLD

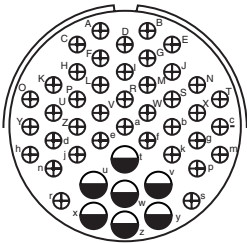
## special arrangements

front face of pin insert or rear of socket insert illustrated

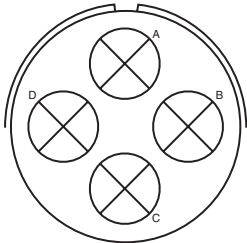
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



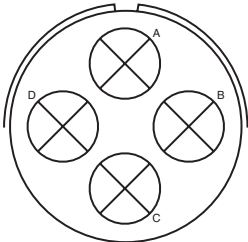
36-59  
A  
50 3  
16 12 for #10 wire



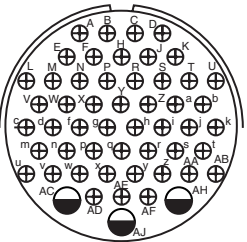
36-60  
\*\*  
40 7  
16 12 for #10 wire



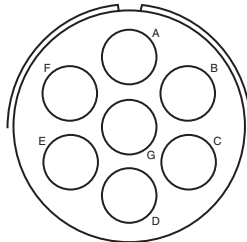
36-64  
—  
4  
0 (Coax) RG-11/U  
RG-12/U or RG-13/U



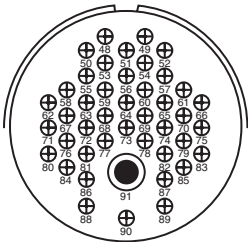
36-65  
—  
4  
0 (Coax) RG-59/U, RG-62/U  
or RG-71/U



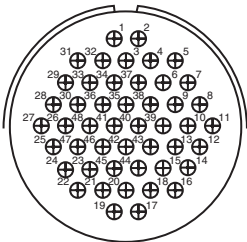
36-71  
A  
3 50  
12 16



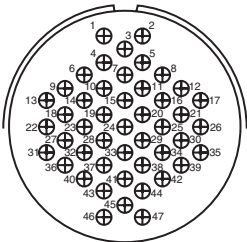
36-73  
—  
7  
4 (Coax) RG-62B/U



36-74  
A  
43 1  
16 8 (Coax) RG-187/U

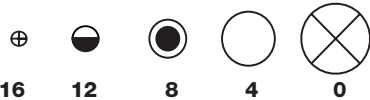


36-75  
A  
48  
16 for #14 wire



36-76  
A  
47  
16

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



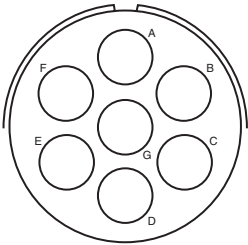
\*\*Consult Sidney, NY for service rating of power contacts.

# QWLD

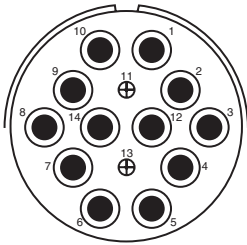
## special arrangements

front face of pin insert or rear of socket insert illustrated

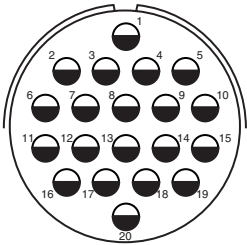
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



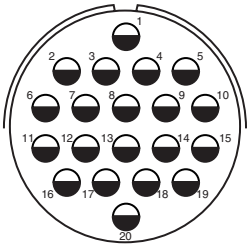
36-77  
D  
7  
4



36-78  
A  
2 12  
16 8

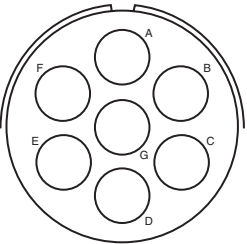


36-79  
A  
20  
12

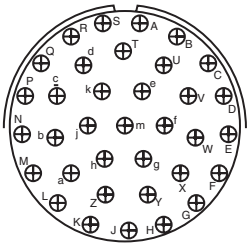


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

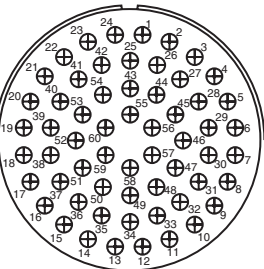
36-80  
A  
20  
12 for #10 wire



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

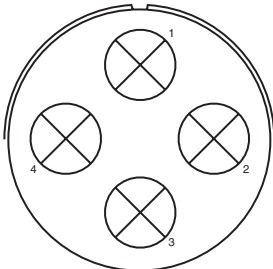


36-85  
M = D; Bal. = A  
35  
16 for #12 wire

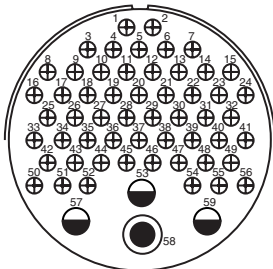


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

40-53  
A  
60  
16

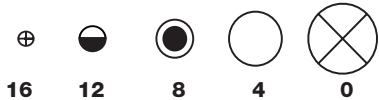


40-57  
E  
4  
0



40-61  
A  
1 3 55  
8 12 16

CONTACT LEGEND

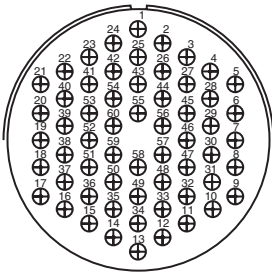


# QWLD

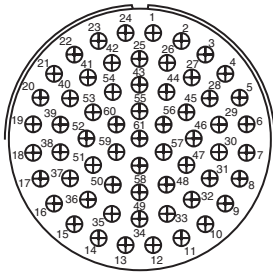
## special arrangements

front face of pin insert or rear of socket insert illustrated

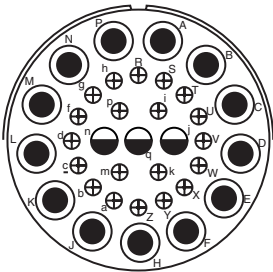
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



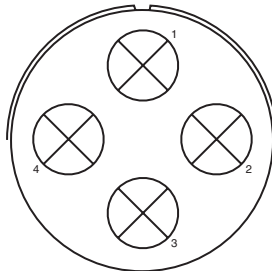
40-62  
A  
60  
16



40-63  
A  
61  
16 for #14 wire

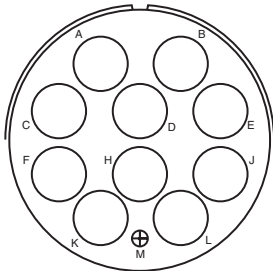


40-64  
—  
3 20 13  
12 16 8 (Coax) RG-124/U

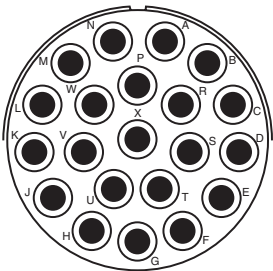


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

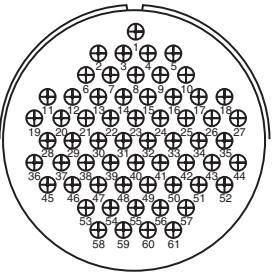
40-66  
—  
4  
0 (Coax) RG-63B/U



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

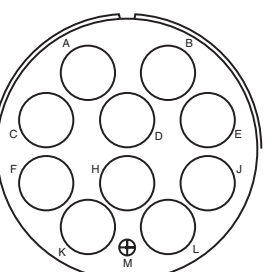


40-68  
A  
21  
8

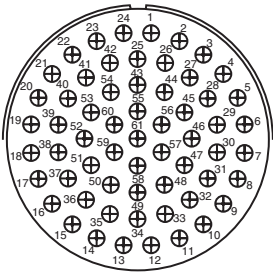


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

40-70  
A  
61  
16

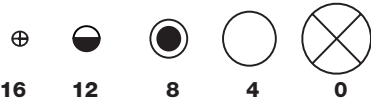


40-72  
A  
1 10  
16 4 (Coax) RG-9B/U



40-73  
A  
61  
16

CONTACT LEGEND

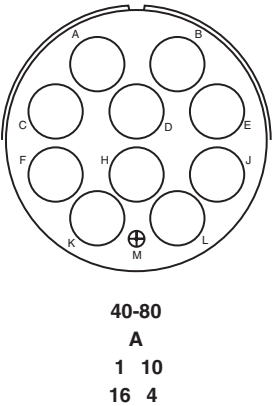
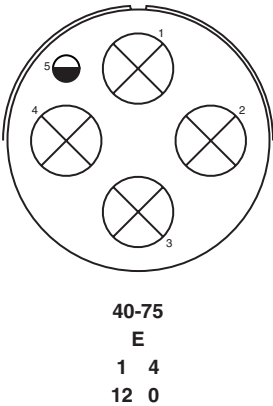
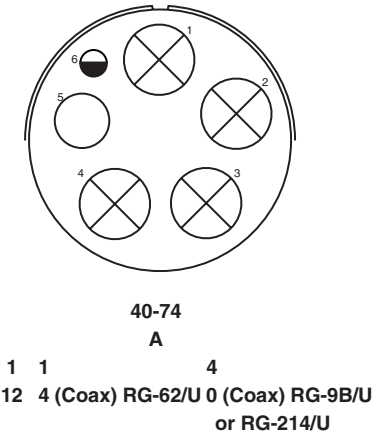


# QWLD

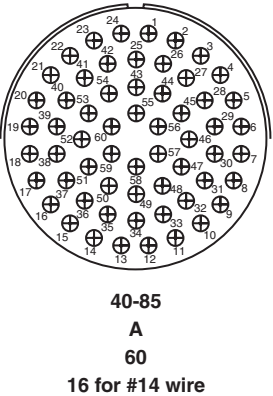
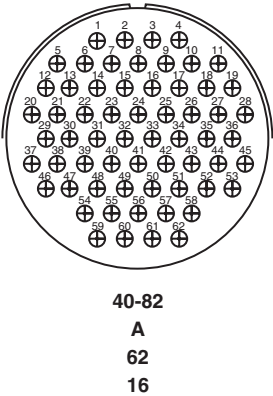
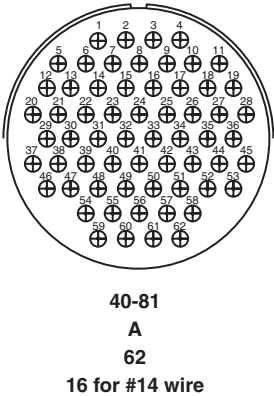
## special arrangements

front face of pin insert or rear of socket insert illustrated

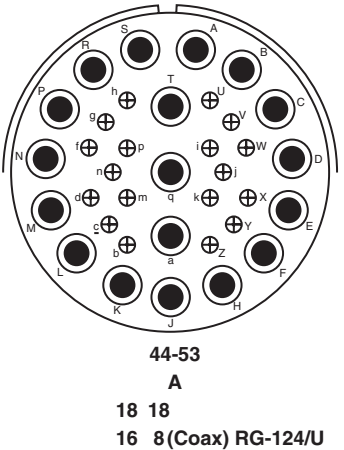
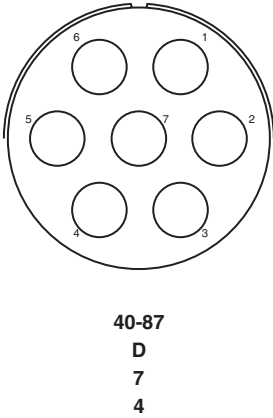
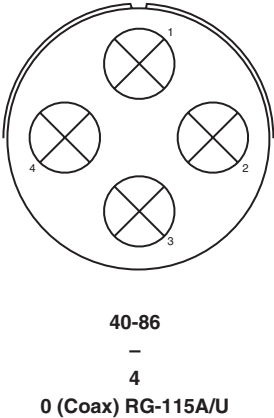
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



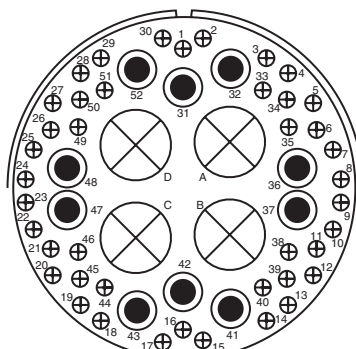
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size



# QWLD

## special arrangements

front face of pin insert or rear of socket insert illustrated



48-51†

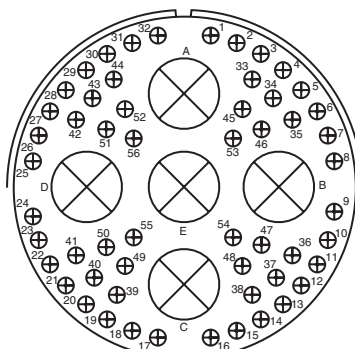
### Insert Arrangement

Service Rating

Number of Contacts

### Contact Size

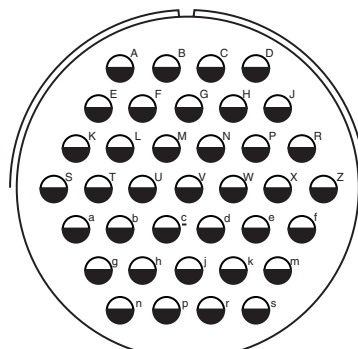
42 10 4  
16 8 0 (Coax) RG-41/U



48-52†

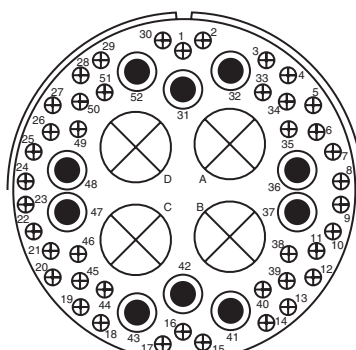
**A**

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



48-53†

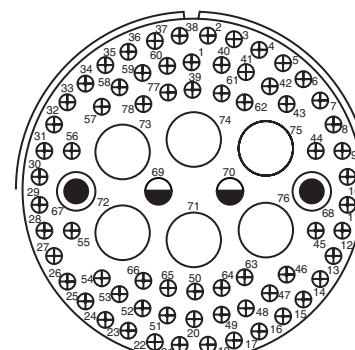
D

37  
12

48-54†

A

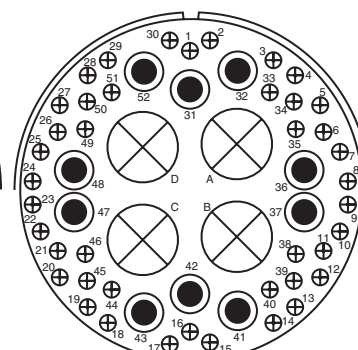
42 10 4  
16 8 0 (Coax) RG-59/U



48-55†

A

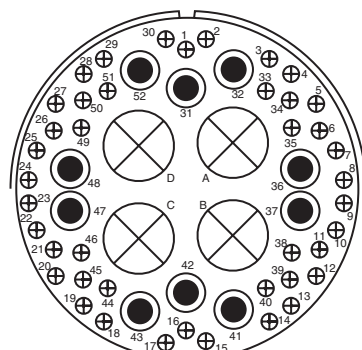
|    |    |   |   |
|----|----|---|---|
| 68 | 2  | 2 | 6 |
| 16 | 12 | 8 | 4 |



48-57†

A

|    |    |   |
|----|----|---|
| 42 | 10 | 4 |
| 16 | 8  | 0 |



48-60†

**A**

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

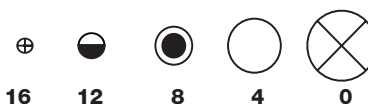
### Insert Arrangement

### Service Rating

### Number of Contacts

### Contact Size

†Consult Sidney, NY for availability



# 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.<br>+ .004<br>- .002 | Well Depth<br>+ .031<br>- .000 | Solder Well Barrel<br>Outside Dia. |
|--------------|--------------------------------------|--------------------------------|------------------------------------|
| 12           | .125                                 | .250                           | .166 ±.003                         |
| 16           | .094                                 | .188                           | .125 +.002<br>-.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

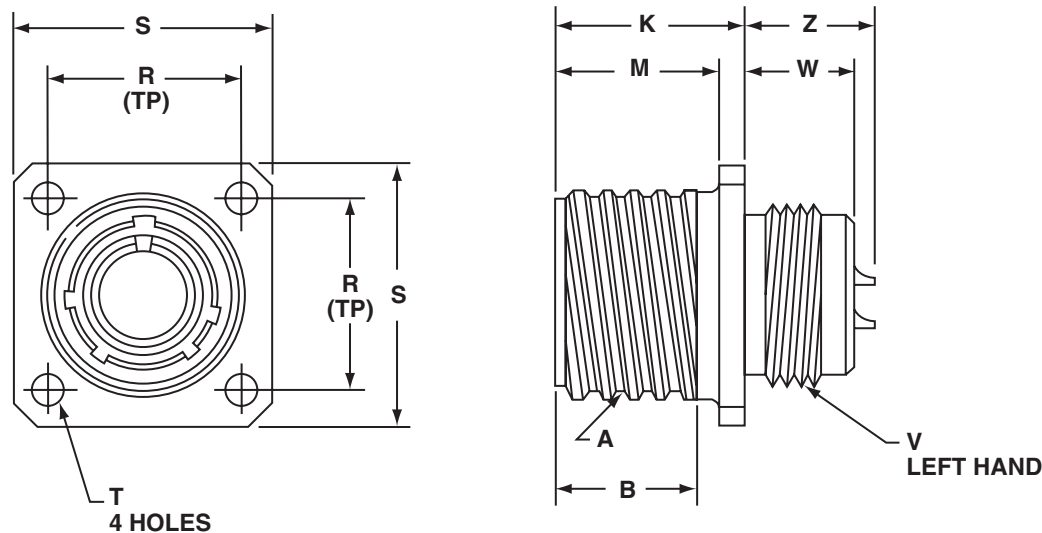
| Shell Size and Arrg. | Similar to MS Arrg. | Total Contacts | Contact Size |     | Pin Insert Rotation CW | Contact Material                                                                                                                                                                                                                                                                                                               |
|----------------------|---------------------|----------------|--------------|-----|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      |                     |                | 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

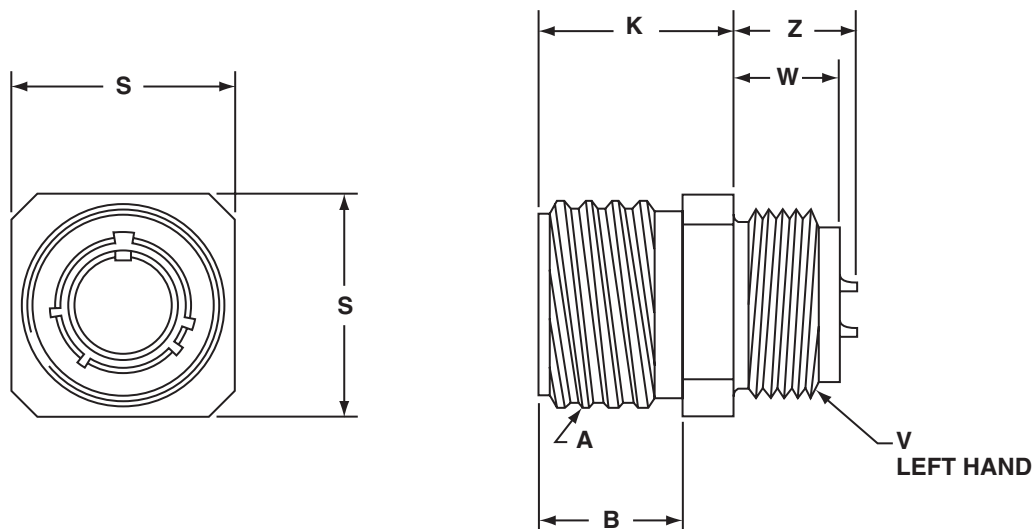


All dimensions for reference only.

| Part Number* | Shell Size | A Thread<br>Class 2A (Plated)<br>0.1P-0.2L<br>Double Stub | B Min<br>Full<br>Thd | K<br>+.021<br>-.020 | M<br>+.010<br>-.000 | R<br>(TP) | S<br>+.021<br>-.020 | T Dia<br>+.004<br>-.003 | V Thread<br>Class 2A-LH<br>(Plated) | W<br>±.010 | Z<br>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

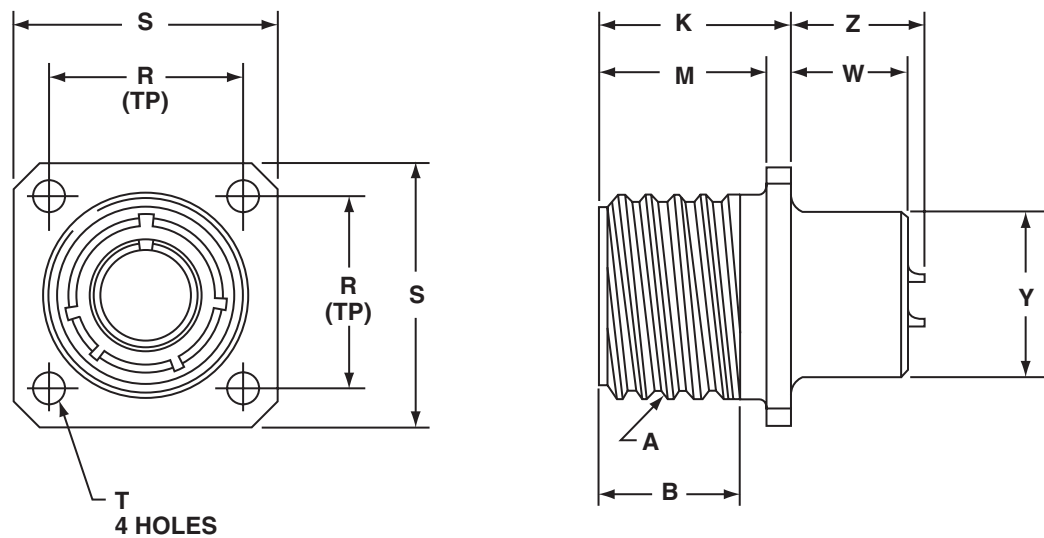


All dimensions for reference only.

| Part Number* | Shell Size | A Thread<br>Class 2A (Plated)<br>0.1P-0.2L<br>Double Stub | B<br>+.016<br>-.000 | K<br>+.021<br>-.020 | S<br>+.021<br>-.020 | V<br>Thread<br>Class 2A-LH<br>(Plated) | W<br>±.010 | Z<br>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



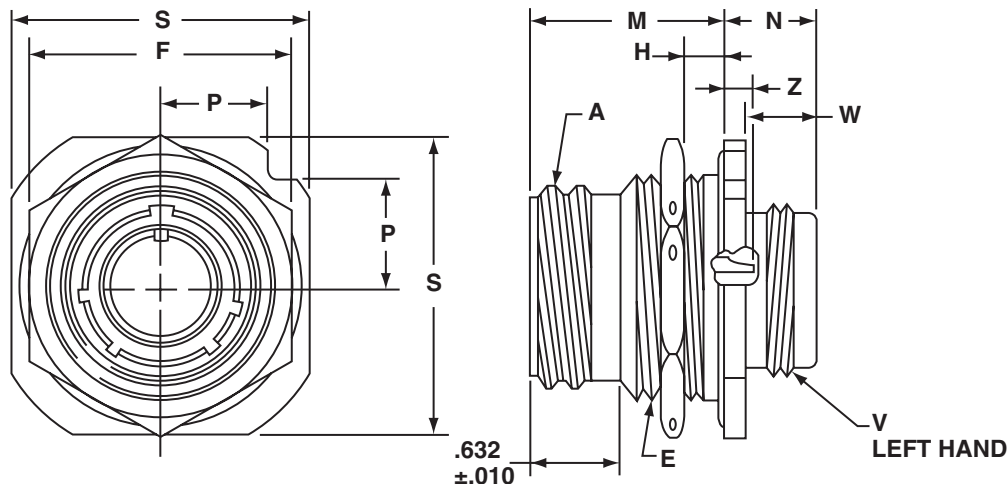
All dimensions for reference only.

| Part Number* | Shell Size | A Thread<br>Class 2A (Plated)<br>0.1P-0.2L<br>Double Stub | B<br>Min<br>Full<br>Thd | K<br>+.021<br>-.010 | M<br>+.010<br>-.000 | R<br>(TP) | S<br>+.021<br>-.020 | T<br>Dia<br>+.004<br>-.003 | W<br>+.020<br>-.030 | Y<br>+.011<br>-.010 | Z<br>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.

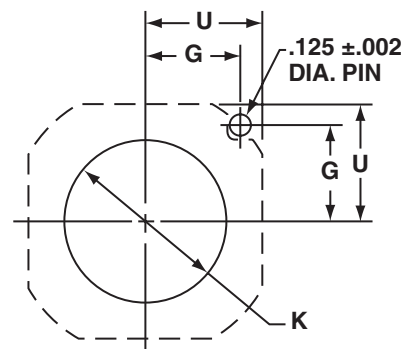
# MIL-C-22992, QWLD MS17347 or 10-1943XX

## jam nut receptacle (wall mount)



| Shell Size | K Dia.<br>+.005<br>-.000 | G<br>±.003 | U<br>±.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.

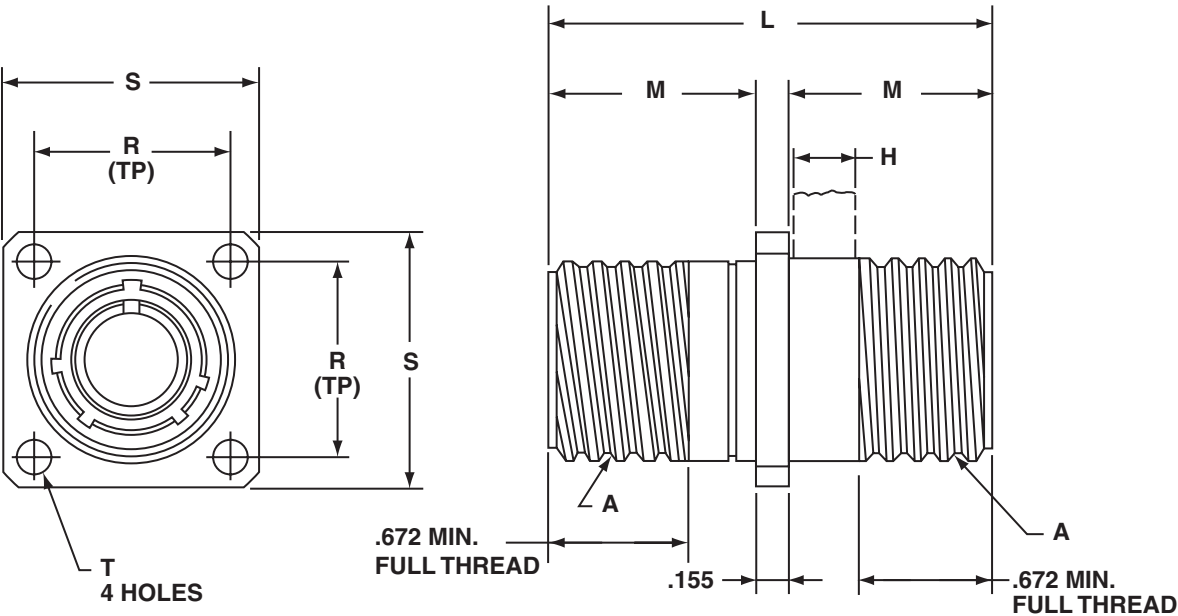
| Part Number* | Shell Size | A Thread<br>Class 2A (Plated)<br>0.1P-0.2L<br>Double Stud | E Thread<br>Class 2A<br>(Plated) | F Hex<br>+.017<br>-.016 | H Panel Thickness |      | M<br>±.010 | N<br>+.021<br>-.020 | P<br>±.010 | S<br>+.011<br>-.010 | V Thread<br>Class 2A-LH<br>(Plated) | W<br>±.010 | Z Max |
|--------------|------------|-----------------------------------------------------------|----------------------------------|-------------------------|-------------------|------|------------|---------------------|------------|---------------------|-------------------------------------|------------|-------|
|              |            |                                                           |                                  |                         | Min               | 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

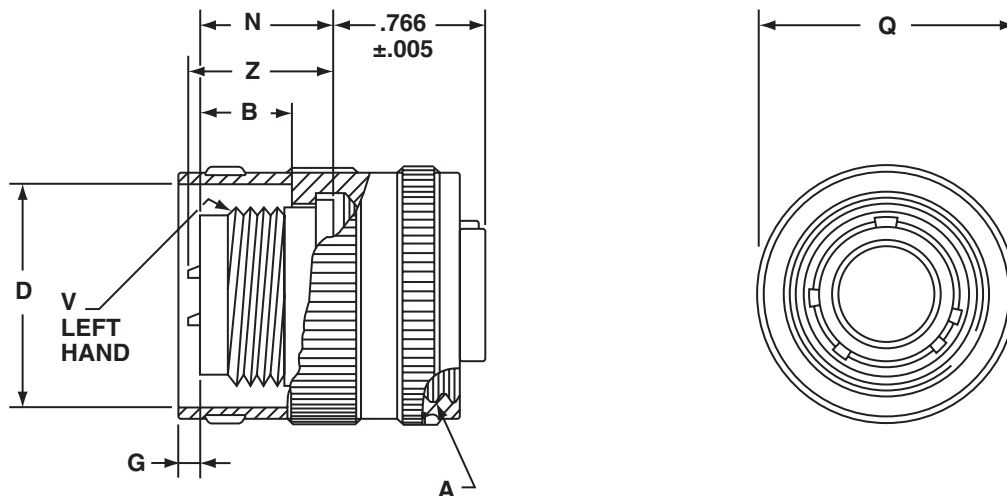


All dimensions for reference only.

| Part Number* | Shell Size | A Thread<br>Class 2A (Plated)<br>0.1P-0.2L<br>Double Stub | H<br>Max | L<br>±.015 | M<br>+.000<br>-.010 | R<br>(TP) | S<br>+.021<br>-.020 | T<br>Dia<br>+.004<br>-.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.

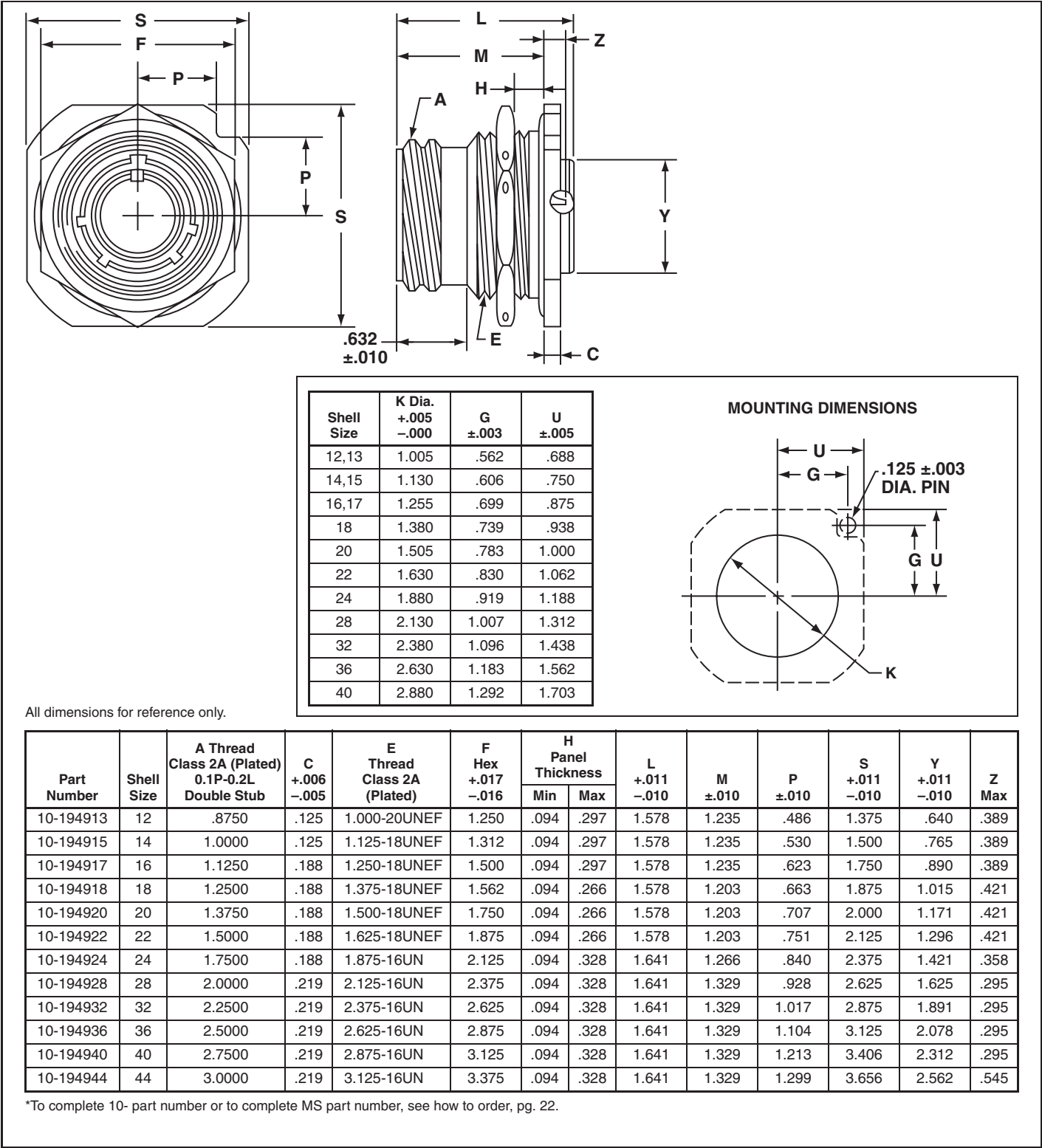
| Part Number* | Shell Size | A Thread Class 2B 0.1P-0.2L Double Stub | B         | D +.010 - .001 | G         | N +.011 - .010 | Q Dia Max | V Thread Class 2A-LH (Plated) | Z Max |
|--------------|------------|-----------------------------------------|-----------|----------------|-----------|----------------|-----------|-------------------------------|-------|
| 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

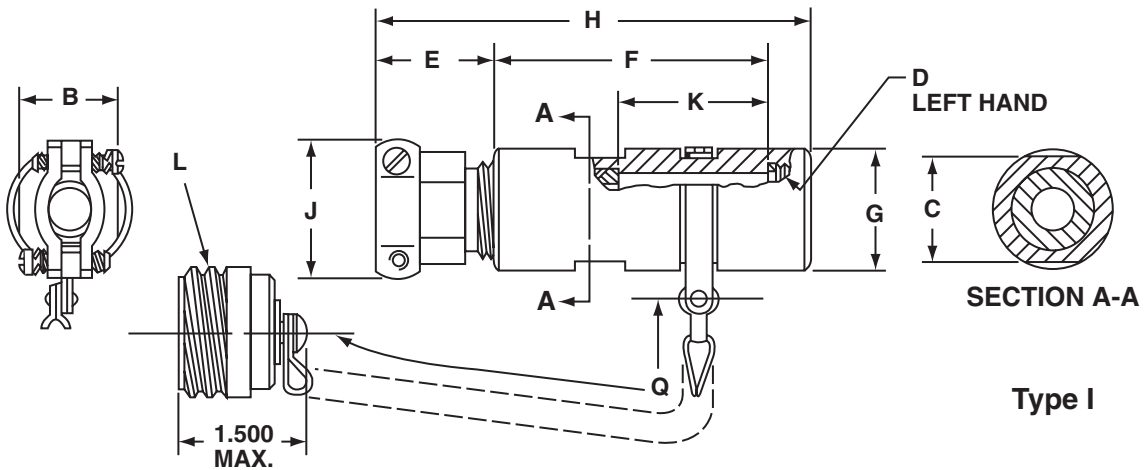
### jam nut receptacle (box mount)



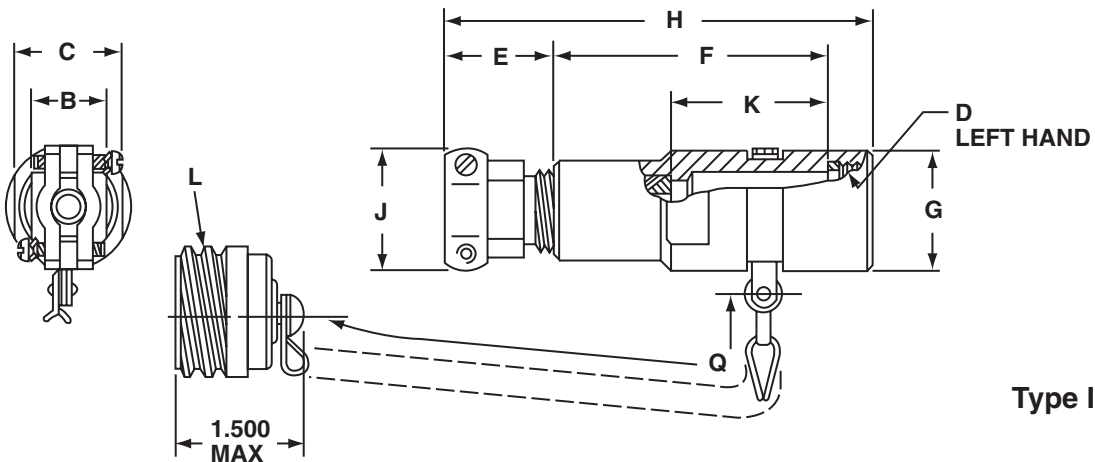
# MIL-C-22992, QWLD Accessories

## M85049 or 10-522958

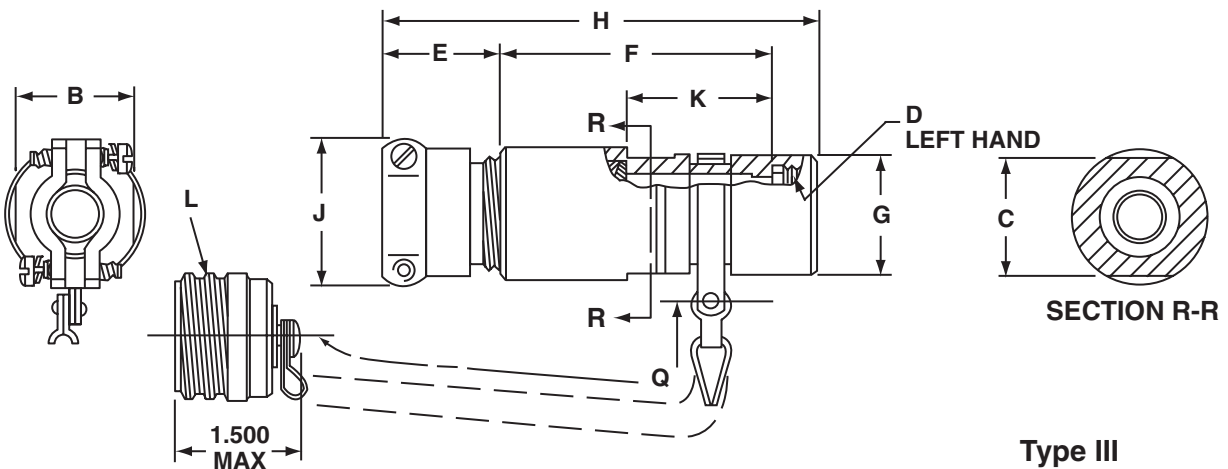
### cable sealing adapters (plug)



Type I



Type II



Type III

# MIL-C-22992, QWLD Accessories

## M85049 or 10-522958

### cable sealing adapters (plug)

All dimensions for reference only.

| MS Part Number* | Superseded MS Part Number | Proprietary Part Number* | Used With Shell Size | Cable Range |         | B<br>+.000<br>-.010 | C<br>+.000<br>-.010 | D<br>Thread<br>Class 2B-LH | E<br>Free Length<br>Max | F<br>+.010<br>-.020 | G<br>Dia<br>+.010<br>-.020 | H<br>Max | J<br>±.031 | K<br>+.015<br>-.025 | L Thread Class 2A (Plated)<br>0.1P-0.2L<br>Double Stub | Q<br>Approx. | Type |
|-----------------|---------------------------|--------------------------|----------------------|-------------|---------|---------------------|---------------------|----------------------------|-------------------------|---------------------|----------------------------|----------|------------|---------------------|--------------------------------------------------------|--------------|------|
|                 |                           |                          |                      | Max Dia     | Min Dia |                     |                     |                            |                         |                     |                            |          |            |                     |                                                        |              |      |
| M85049/4A1A1    | MS17342N1A1               | 10-522958-131            | 12                   | .530        | .436    | 1.000               | .812                | .750-20UNEF                | 1.062                   | 2.719               | .938                       | 4.275    | 1.375      | 1.219               | .8750                                                  | 5.000        | III  |
| M85049/4A2A1    | MS17342N2A1               | 10-522958-132            | 12                   | .500        | .406    | .875                | .938                | .750-20UNEF                | .969                    | 2.215               | .938                       | 3.678    | 1.125      | .871                | .8750                                                  | 5.000        | III  |
| M85049/4A3A1    | MS17342N3A1               | 10-522958-133            | 12                   | .405        | .311    | 1.000               | .812                | .750-20UNEF                | 1.062                   | 2.719               | .938                       | 4.275    | 1.375      | 1.219               | .8750                                                  | 5.000        | III  |
| M85049/3A1A1    | MS17340N1A1               | 10-522958-134            | 12                   | .375        | .281    | .750                | .812                | .750-20UNEF                | .969                    | 1.902               | .938                       | 3.365    | 1.062      | .621                | .8750                                                  | 5.000        | I    |
| M85049/3A2A1    | MS17340N2A1               | 10-522958-135            | 12                   | .281        | .188    | .750                | .812                | .750-20UNEF                | .969                    | 1.902               | .938                       | 3.365    | 1.062      | .621                | .8750                                                  | 5.000        | I    |
| M85049/5A1A1    | MS17341N1A1               | 10-522958-136            | 12                   | .250        | .156    | .825                | .812                | .750-20UNEF                | .906                    | 1.782               | .938                       | 3.182    | .938       | .563                | .8750                                                  | 5.000        | II   |
| M85049/4A5A1    | MS17342N5A1               | 10-522958-151            | 14                   | .625        | .531    | 1.062               | 1.125               | .875-20UNEF                | 1.062                   | 2.933               | 1.062                      | 4.489    | 1.562      | 1.371               | 1.0000                                                 | 5.000        | III  |
| M85049/4A4A1    | MS17342N4A1               | 10-522958-152            | 14                   | .605        | .511    | 1.000               | 1.062               | .875-20UNEF                | 1.062                   | 2.621               | 1.062                      | 4.177    | 1.375      | 1.121               | 1.0000                                                 | 5.000        | III  |
| M85049/4A6A1    | MS17342N6A1               | 10-522958-153            | 14                   | .530        | .436    | 1.000               | 1.062               | .875-20UNEF                | 1.062                   | 2.621               | 1.062                      | 4.177    | 1.375      | 1.121               | 1.0000                                                 | 5.000        | III  |
| M85049/3A3A1    | MS17340N3A1               | 10-522958-154            | 14                   | .438        | .344    | .875                | .938                | .875-20UNEF                | .969                    | 2.215               | 1.062                      | 3.678    | 1.125      | .871                | 1.0000                                                 | 5.000        | I    |
| M85049/4A7A1    | MS17342N7A1               | 10-522958-155            | 14                   | .405        | .311    | 1.000               | 1.062               | .875-20UNEF                | 1.062                   | 2.621               | 1.062                      | 4.177    | 1.375      | 1.121               | 1.0000                                                 | 5.000        | III  |
| M85049/3A4A1    | MS17340N4A1               | 10-522958-171            | 16                   | .605        | .511    | 1.000               | 1.062               | 1.000-20UNEF               | 1.062                   | 2.621               | 1.188                      | 4.177    | 1.375      | 1.121               | 1.1250                                                 | 5.000        | I    |
| M85049/3A5A1    | MS17340N5A1               | 10-522958-172            | 16                   | .530        | .436    | 1.000               | 1.062               | 1.000-20UNEF               | 1.062                   | 2.621               | 1.188                      | 4.177    | 1.375      | 1.121               | 1.1250                                                 | 5.000        | I    |
| M85049/3A6A1    | MS17340N6A1               | 10-522958-173            | 16                   | .405        | .311    | 1.000               | 1.062               | 1.000-20UNEF               | 1.062                   | 2.621               | 1.188                      | 4.177    | 1.375      | 1.121               | 1.1250                                                 | 5.000        | I    |
| M85049/4A8A1    | MS17342N8A1               | 10-522958-181            | 18                   | .828        | .715    | 1.188               | 1.250               | 1.125-18UNEF               | 1.094                   | 2.996               | 1.312                      | 4.584    | 1.688      | 1.343               | 1.2500                                                 | 5.000        | III  |
| M85049/3A8A1    | MS17340N8A1               | 10-522958-182            | 18                   | .699        | .605    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                                 | 5.000        | I    |
| M85049/3A7A1    | MS17340N7A1               | 10-522958-183            | 18                   | .625        | .531    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                                 | 5.000        | I    |
| M85049/5A5A1    | MS17341N5A1               | 10-522958-184            | 18                   | .605        | .511    | 1.000               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.621               | 1.312                      | 4.177    | 1.375      | 1.121               | 1.2500                                                 | 5.000        | II   |
| M85049/5A6A1    | MS17341N6A1               | 10-522958-185            | 18                   | .530        | .436    | 1.000               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.621               | 1.312                      | 4.177    | 1.375      | 1.121               | 1.2500                                                 | 5.000        | II   |
| M85049/3A9A1    | MS17340N9A1               | 10-522958-186            | 18                   | .500        | .406    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                                 | 5.000        | I    |
| M85049/3A10A1   | MS17340N10A1              | 10-522958-187            | 18                   | .455        | .361    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                                 | 5.000        | I    |
| M85049/5A2A1    | MS17341N2A1               | 10-522958-188            | 18                   | .375        | .281    | .750                | 1.125               | 1.125-18UNEF               | .969                    | 2.438               | 1.312                      | 3.901    | 1.062      | 1.157               | 1.2500                                                 | 5.000        | II   |
| M85049/5A3A1    | MS17341N3A1               | 10-522958-189            | 18                   | .375        | .281    | .875                | 1.125               | 1.125-18UNEF               | .969                    | 2.469               | 1.312                      | 3.932    | 1.125      | 1.125               | 1.2500                                                 | 5.000        | II   |
| M85049/5A4A1    | MS17341N4A1               | 10-522958-190            | 18                   | .281        | .188    | .750                | 1.125               | 1.125-18UNEF               | .969                    | 2.438               | 1.312                      | 3.901    | 1.062      | 1.157               | 1.2500                                                 | 5.000        | II   |
| M85049/4A12A1   | MS17342N12A1              | 10-522958-201            | 20                   | 1.055       | .930    | 1.546               | 1.375               | 1.250-18UNEF               | 1.281                   | 3.121               | 1.438                      | 4.896    | 2.125      | 1.371               | 1.3750                                                 | 5.000        | III  |
| M85049/4A10A1   | MS17342N10A1              | 10-522958-202            | 20                   | 1.000       | .875    | 1.546               | 1.375               | 1.250-18UNEF               | 1.281                   | 3.121               | 1.438                      | 4.896    | 2.125      | 1.371               | 1.3750                                                 | 5.000        | III  |
| M85049/4A11A1   | MS17342N11A1              | 10-522958-203            | 20                   | .900        | .787    | 1.312               | 1.375               | 1.250-18UNEF               | 1.094                   | 3.059               | 1.438                      | 4.647    | 1.812      | 1.371               | 1.3750                                                 | 5.000        | III  |
| M85049/3A11A1   | MS17340N11A1              | 10-522958-204            | 20                   | .828        | .715    | 1.188               | 1.250               | 1.250-18UNEF               | 1.125                   | 2.996               | 1.438                      | 4.615    | 1.688      | 1.371               | 1.3750                                                 | 5.000        | I    |
| M85049/4A9A1    | MS17342N9A1               | 10-522958-205            | 20                   | .750        | .637    | 1.312               | 1.375               | 1.250-18UNEF               | 1.094                   | 3.059               | 1.438                      | 4.647    | 1.812      | 1.371               | 1.3750                                                 | 5.000        | III  |
| M85049/5A7A1    | MS17341N7A1               | 10-522958-206            | 20                   | .699        | .605    | 1.062               | 1.250               | 1.250-18UNEF               | 1.062                   | 2.933               | 1.438                      | 4.489    | 1.562      | 1.371               | 1.3750                                                 | 5.000        | II   |
| M85049/5A9A1    | MS17341N9A1               | 10-522958-207            | 20                   | .605        | .511    | 1.000               | 1.250               | 1.250-18UNEF               | 1.062                   | 2.750               | 1.438                      | 4.308    | 1.375      | 1.250               | 1.3750                                                 | 5.000        | II   |
| M85049/3A12A1   | MS17340N12A1              | 10-522958-208            | 20                   | .562        | .449    | 1.188               | 1.250               | 1.250-18UNEF               | 1.125                   | 2.996               | 1.438                      | 4.615    | 1.688      | 1.371               | 1.3750                                                 | 5.000        | I    |
| M85049/5A8A1    | MS17341N8A1               | 10-522958-209            | 20                   | .455        | .361    | 1.062               | 1.250               | 1.250-18UNEF               | 1.062                   | 2.933               | 1.438                      | 4.489    | 1.562      | 1.371               | 1.3750                                                 | 5.000        | II   |
| M85049/4A14A1   | MS17342N14A1              | 10-522958-221            | 22                   | 1.109       | .984    | 1.546               | 1.625               | 1.375-18UNEF               | 1.281                   | 3.121               | 1.562                      | 4.896    | 2.125      | 1.371               | 1.5000                                                 | 6.000        | III  |
| M85049/4A13A1   | MS17342N13A1              | 10-522958-222            | 22                   | 1.000       | .875    | 1.546               | 1.625               | 1.375-18UNEF               | 1.281                   | 3.121               | 1.562                      | 4.896    | 2.125      | 1.371               | 1.5000                                                 | 6.000        | III  |
| M85049/3A14A1   | MS17340N14A1              | 10-522958-223            | 22                   | .900        | .787    | 1.312               | 1.375               | 1.375-18UNEF               | 1.094                   | 3.059               | 1.562                      | 4.647    | 1.812      | 1.371               | 1.5000                                                 | 6.000        | I    |
| M85049/5A14A1   | MS17341N14A1              | 10-522958-224            | 22                   | .828        | .715    | 1.188               | 1.406               | 1.375-18UNEF               | 1.094                   | 2.996               | 1.562                      | 4.306    | 1.375      | 1.250               | 1.5000                                                 | 6.000        | II   |
| M85049/3A15A1   | MS17340N15A1              | 10-522958-225            | 22                   | .805        | .692    | 1.312               | 1.375               | 1.375-18UNEF               | 1.094                   | 3.059               | 1.562                      | 4.647    | 1.812      | 1.371               | 1.5000                                                 | 6.000        | I    |
| M85049/3A13A1   | MS17340N13A1              | 10-522958-226            | 22                   | .750        | .637    | 1.312               | 1.375               | 1.375-18UNEF               | 1.094                   | 3.059               | 1.562                      | 4.647    | 1.812      | 1.371               | 1.5000                                                 | 6.000        | I    |
| M85049/5A10A1   | MS17341N10A1              | 10-522958-227            | 22                   | .562        | .449    | 1.188               | 1.406               | 1.375-18UNEF               | 1.094                   | 3.059               | 1.562                      | 4.647    | 1.812      | 1.371               | 1.5000                                                 | 6.000        | II   |
| M85049/5A11A1   | MS17341N11A1              | 10-522958-228            | 22                   | .405        | .311    | 1.000               | 1.375               | 1.375-18UNEF               | 1.062                   | 2.750               | 1.562                      | 4.306    | 1.375      | 1.250               | 1.5000                                                 | 6.000        | II   |

\* Ordering procedure: Locate shell size needed (Column 4); select cable diameter range to be accommodated within the shell size (column 5); order by either MS part number (column 1) or Proprietary part number (column 3).

MS numbers shown are non-conductive finish. To order conductive finish, substitute "W" for "A" in the part number listed.

10- numbers shown are non-conductive finish. To order conductive finish, substitute prefix 88-.

# MIL-C-22992, QWLD Accessories

## M85049 or 10-522958

### cable sealing adapters (plug)

All dimensions for reference only.

| MS Part Number* | Superseded MS Part Number | Proprietary Part Number* | Used With Shell Size | Cable Range |         | B<br>+ .000<br>- .010 | C<br>+ .000<br>- .010 | D<br>Thread<br>Class 2B-LH | E<br>Free Length<br>Max | F<br>+ .010<br>- .020 | G<br>Dia<br>+ .010<br>- .020 | H<br>Max | J<br>± .031 | K<br>+ .015<br>- .025 | L Thread<br>Class 2A (Plated)<br>0.1P-0.2L<br>Double Stub | Q<br>Approx. | Type |
|-----------------|---------------------------|--------------------------|----------------------|-------------|---------|-----------------------|-----------------------|----------------------------|-------------------------|-----------------------|------------------------------|----------|-------------|-----------------------|-----------------------------------------------------------|--------------|------|
|                 |                           |                          |                      | Max Dia     | Min Dia |                       |                       |                            |                         |                       |                              |          |             |                       |                                                           |              |      |
| M85049/4A18A1   | MS17342N18A1              | 10-522958-241            | 24                   | 1.375       | 1.250   | 2.000                 | 1.875                 | 1.625-18UNEF               | 1.281                   | 3.184                 | 1.812                        | 4.959    | 2.625       | 1.309                 | 1.7500                                                    | 6.000        | III  |
| M85049/4A16A1   | MS17342N16A1              | 10-522958-242            | 24                   | 1.310       | 1.185   | 1.780                 | 1.875                 | 1.625-18UNEF               | 1.281                   | 3.184                 | 1.812                        | 4.959    | 2.469       | 1.372                 | 1.7500                                                    | 6.000        | III  |
| M85049/4A17A1   | MS17342N17A1              | 10-522958-243            | 24                   | 1.230       | 1.105   | 1.780                 | 1.875                 | 1.625-18UNEF               | 1.281                   | 3.184                 | 1.812                        | 4.959    | 2.469       | 1.372                 | 1.7500                                                    | 6.000        | III  |
| M85049/4A15A1   | MS17342N15A1              | 10-522958-244            | 24                   | 1.180       | 1.055   | 1.780                 | 1.875                 | 1.625-18UNEF               | 1.281                   | 3.184                 | 1.812                        | 4.959    | 2.469       | 1.372                 | 1.7500                                                    | 6.000        | III  |
| M85049/3A18A1   | MS17340N18A1              | 10-522958-245            | 24                   | 1.109       | .984    | 1.546                 | 1.625                 | 1.625-18UNEF               | 1.281                   | 3.121                 | 1.812                        | 4.896    | 2.125       | 1.371                 | 1.7500                                                    | 6.000        | I    |
| M85049/3A16A1   | MS17340N16A1              | 10-522958-246            | 24                   | 1.055       | .930    | 1.546                 | 1.625                 | 1.625-18UNEF               | 1.281                   | 3.121                 | 1.812                        | 4.896    | 2.125       | 1.371                 | 1.7500                                                    | 6.000        | I    |
| M85049/3A17A1   | MS17340N17A1              | 10-522958-247            | 24                   | 1.000       | .675    | 1.546                 | 1.625                 | 1.625-18UNEF               | 1.281                   | 3.121                 | 1.812                        | 4.896    | 2.125       | 1.371                 | 1.7500                                                    | 6.000        | I    |
| M85049/5A16A1   | MS17341N16A1              | 10-522958-248            | 24                   | .970        | .857    | 1.312                 | 1.625                 | 1.625-18UNEF               | 1.094                   | 3.059                 | 1.812                        | 4.647    | 1.812       | 1.371                 | 1.7500                                                    | 6.000        | II   |
| M85049/5A13A1   | MS17341N13A1              | 10-522958-249            | 24                   | .900        | .787    | 1.312                 | 1.625                 | 1.625-18UNEF               | 1.094                   | 3.059                 | 1.812                        | 4.647    | 1.812       | 1.371                 | 1.7500                                                    | 6.000        | II   |
| M85049/5A19A1   | MS17340N19A1              | 10-522958-250            | 24                   | .880        | .755    | 1.546                 | 1.625                 | 1.625-18UNEF               | 1.281                   | 3.121                 | 1.812                        | 4.896    | 2.125       | 1.371                 | 1.7500                                                    | 6.000        | I    |
| M85049/5A17A1   | MS17341N17A1              | 10-522958-251            | 24                   | .828        | .715    | 1.188                 | 1.625                 | 1.625-18UNEF               | 1.094                   | 2.954                 | 1.812                        | 4.542    | 1.688       | 1.301                 | 1.7500                                                    | 6.000        | II   |
| M85049/5A18A1   | MS17341N18A1              | 10-522958-252            | 24                   | .805        | .692    | 1.312                 | 1.625                 | 1.625-18UNEF               | 1.094                   | 3.059                 | 1.812                        | 4.647    | 1.812       | 1.371                 | 1.7500                                                    | 6.000        | II   |
| M85049/5A15A1   | MS17341N15A1              | 10-522958-253            | 24                   | .750        | .637    | 1.312                 | 1.625                 | 1.625-18UNEF               | 1.094                   | 3.059                 | 1.812                        | 4.647    | 1.812       | 1.371                 | 1.7500                                                    | 6.000        | II   |
| M85049/5A14A1   | MS17341N14A1              | 10-522958-254            | 24                   | .630        | .517    | 1.312                 | 1.625                 | 1.625-18UNEF               | 1.094                   | 3.059                 | 1.812                        | 4.647    | 1.812       | 1.371                 | 1.7500                                                    | 6.000        | II   |
| M85049/4A20A1   | MS17342N20A1              | 10-522958-281            | 28                   | 1.531       | 1.406   | 2.000                 | 2.062                 | 1.875-16UN                 | 1.281                   | 3.246                 | 2.062                        | 5.021    | 2.625       | 1.371                 | 2.000                                                     | 6.000        | III  |
| M85049/4A19A1   | MS17342N19A1              | 10-522958-282            | 28                   | 1.445       | 1.320   | 2.000                 | 2.062                 | 1.875-16UN                 | 1.281                   | 3.246                 | 2.062                        | 5.021    | 2.625       | 1.371                 | 2.000                                                     | 6.000        | III  |
| M85049/4A21A1   | MS17342N21A1              | 10-522958-283            | 28                   | 1.375       | 1.250   | 2.000                 | 2.062                 | 1.875-16UN                 | 1.281                   | 3.246                 | 2.062                        | 5.021    | 2.625       | 1.371                 | 2.000                                                     | 6.000        | III  |
| M85049/4A22A1   | MS17340N22A1              | 10-522958-284            | 28                   | 1.310       | 1.185   | 1.780                 | 1.875                 | 1.875-16UN                 | 1.281                   | 3.184                 | 2.062                        | 4.959    | 2.469       | 1.372                 | 2.000                                                     | 6.000        | I    |
| M85049/3A21A1   | MS17340N21A1              | 10-522958-285            | 28                   | 1.230       | 1.105   | 1.780                 | 1.875                 | 1.875-16UN                 | 1.281                   | 3.184                 | 2.062                        | 4.959    | 2.469       | 1.372                 | 2.000                                                     | 6.000        | I    |
| M85049/3A20A1   | MS17340N20A1              | 10-522958-286            | 28                   | 1.180       | 1.055   | 1.780                 | 1.875                 | 1.875-16UN                 | 1.281                   | 3.184                 | 2.062                        | 4.959    | 2.469       | 1.372                 | 2.000                                                     | 6.000        | I    |
| M85049/5A20A1   | MS17341N20A1              | 10-522958-287            | 28                   | 1.109       | .984    | 1.546                 | 1.875                 | 1.875-16UN                 | 1.281                   | 3.121                 | 2.062                        | 4.896    | 2.125       | 1.371                 | 2.000                                                     | 6.000        | II   |
| M85049/5A24A1   | MS17341N24A1              | 10-522958-288            | 28                   | 1.100       | .875    | 1.546                 | 1.875                 | 1.875-16UN                 | 1.281                   | 3.121                 | 2.062                        | 4.896    | 2.125       | 1.371                 | 2.000                                                     | 6.000        | II   |
| M85049/5A23A1   | MS17341N23A1              | 10-522958-289            | 28                   | .970        | .857    | 1.312                 | 1.875                 | 1.875-16UN                 | 1.094                   | 3.059                 | 2.062                        | 4.647    | 1.812       | 1.371                 | 2.000                                                     | 6.000        | II   |
| M85049/5A19A1   | MS17341N19A1              | 10-522958-290            | 28                   | .880        | .755    | 1.546                 | 1.875                 | 1.875-16UN                 | 1.281                   | 3.121                 | 2.062                        | 4.896    | 2.125       | 1.371                 | 2.000                                                     | 6.000        | II   |
| M85049/5A21A1   | MS17341N21A1              | 10-522958-291            | 28                   | .750        | .637    | 1.312                 | 1.875                 | 1.875-16UN                 | 1.094                   | 3.059                 | 2.062                        | 4.647    | 1.812       | 1.371                 | 2.000                                                     | 6.000        | II   |
| M85049/5A26A1   | MS17341N26A1              | 10-522958-292            | 28                   | .680        | .567    | 1.312                 | 1.875                 | 1.875-16UN                 | 1.094                   | 3.059                 | 2.062                        | 4.647    | 1.812       | 1.371                 | 2.000                                                     | 6.000        | II   |
| M85049/5A25A1   | MS17341N25A1              | 10-522958-293            | 28                   | .530        | .436    | 1.000                 | 1.812                 | 1.875-16UN                 | 1.062                   | 2.875                 | 2.062                        | 4.431    | 1.375       | 1.375                 | 2.000                                                     | 6.000        | II   |
| M85049/5A22A1   | MS17341N22A1              | 10-522958-294            | 28                   | .375        | .281    | .875                  | 1.875                 | 1.875-16UN                 | .969                    | 2.766                 | 2.062                        | 4.229    | 1.125       | 1.422                 | 2.000                                                     | 6.000        | II   |
| M85049/4A23A1   | MS17342N23A1              | 10-522958-321            | 32                   | 1.828       | 1.700   | 2.438                 | 2.312                 | 2.0625-16UN                | 1.391                   | 3.500                 | 2.312                        | 5.385    | 3.171       | 1.375                 | 2.2500                                                    | 6.000        | III  |
| M85049/4A25A1   | MS17342N25A1              | 10-522958-322            | 32                   | 1.730       | 1.605   | 2.438                 | 2.312                 | 2.0625-16UN                | 1.391                   | 3.500                 | 2.312                        | 5.385    | 3.171       | 1.375                 | 2.2500                                                    | 6.000        | III  |
| M85049/4A22A1   | MS17342N22A1              | 10-522958-323            | 32                   | 1.656       | 1.531   | 2.250                 | 2.312                 | 2.0625-16UN                | 1.281                   | 3.308                 | 2.312                        | 5.083    | 2.953       | 1.370                 | 2.2500                                                    | 6.000        | III  |
| M85049/4A24A1   | MS17342N24A1              | 10-522958-324            | 32                   | 1.562       | 1.437   | 2.250                 | 2.312                 | 2.0625-16UN                | 1.281                   | 3.308                 | 2.312                        | 5.083    | 2.953       | 1.370                 | 2.2500                                                    | 6.000        | III  |
| M85049/3A24A1   | MS17340N24A1              | 10-522958-325            | 32                   | 1.531       | 1.406   | 2.000                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.246                 | 2.312                        | 5.021    | 2.625       | 1.371                 | 2.2500                                                    | 6.000        | I    |
| M85049/3A23A1   | MS17340N23A1              | 10-522958-326            | 32                   | 1.445       | 1.320   | 2.000                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.246                 | 2.312                        | 5.021    | 2.625       | 1.371                 | 2.2500                                                    | 6.000        | I    |
| M85049/3A25A1   | MS17340N25A1              | 10-522958-327            | 32                   | 1.375       | 1.250   | 2.000                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.246                 | 2.312                        | 5.021    | 2.625       | 1.371                 | 2.2500                                                    | 6.000        | I    |
| M85049/5A28A1   | MS17341N28A1              | 10-522958-328            | 32                   | 1.230       | 1.150   | 1.780                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.184                 | 2.312                        | 4.959    | 2.469       | 1.372                 | 2.2500                                                    | 6.000        | II   |
| M85049/5A35A1   | MS17341N35A1              | 10-522958-329            | 32                   | 1.130       | 1.005   | 1.780                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.184                 | 2.312                        | 4.959    | 2.469       | 1.372                 | 2.2500                                                    | 6.000        | II   |
| M85049/5A31A1   | MS17341N31A1              | 10-522958-330            | 32                   | 1.109       | .984    | 1.546                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.121                 | 2.312                        | 4.896    | 2.125       | 1.371                 | 2.2500                                                    | 6.000        | II   |
| M85049/5A27A1   | MS17341N27A1              | 10-522958-331            | 32                   | 1.055       | .930    | 1.546                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.121                 | 2.312                        | 4.896    | 2.125       | 1.371                 | 2.2500                                                    | 6.000        | II   |
| M85049/5A32A1   | MS17341N32A1              | 10-522958-332            | 32                   | .970        | .857    | 1.312                 | 2.062                 | 2.0625-16UN                | 1.094                   | 3.059                 | 2.312                        | 4.647    | 1.812       | 1.371                 | 2.2500                                                    | 6.000        | II   |
| M85049/5A30A1   | MS17341N30A1              | 10-522958-333            | 32                   | .880        | .755    | 1.546                 | 2.062                 | 2.0625-16UN                | 1.281                   | 3.121                 | 2.312                        | 4.896    | 2.125       | 1.371                 | 2.2500                                                    | 6.000        | II   |
| M85049/5A29A1   | MS17341N29A1              | 10-522958-334            | 32                   | .750        | .637    | 1.312                 | 2.062                 | 2.0625-16UN                | 1.094                   | 3.059                 | 2.312                        | 4.647    | 1.812       | 1.371                 | 2.2500                                                    | 6.000        | II   |

\* Ordering procedure: Locate shell size needed (Column 4); select cable diameter range to be accommodated within the shell size (column 5); order by either MS part number (column 1) or Proprietary part number (column 3).

MS numbers shown are non-conductive finish. To order conductive finish, substitute "W" for "A" in the part number listed.

10- numbers shown are non-conductive finish. To order conductive finish, substitute prefix 88-.

# MIL-C-22992, QWLD Accessories

## M85049 or 10-522958

### cable sealing adapters (plug)

All dimensions for reference only.

| MS Part Number* | Superseded MS Part Number | Proprietary Part Number* | Used With Shell Size | Cable Range |         | B<br>+.000<br>-.010 | C<br>+.000<br>-.010 | D<br>Thread<br>Class 2B-LH | E<br>Free Length<br>Max | F<br>+.010<br>-.020 | G<br>Dia<br>+.010<br>-.020 | H<br>Max | J<br>±.031 | K<br>+.015<br>-.025 | L Thread<br>Class 2A (Plated)<br>0.1P-0.2L<br>Double Stub | Q<br>Approx. | Type |
|-----------------|---------------------------|--------------------------|----------------------|-------------|---------|---------------------|---------------------|----------------------------|-------------------------|---------------------|----------------------------|----------|------------|---------------------|-----------------------------------------------------------|--------------|------|
|                 |                           |                          |                      | Max Dia     | Min Dia |                     |                     |                            |                         |                     |                            |          |            |                     |                                                           |              |      |
| M85049/5A34A1   | MS17341N34A1              | 10-522958-335            | 32                   | .530        | .436    | 1.000               | 2.000               | 2.0625-16UN                | 1.062                   | 2.875               | 2.312                      | 4.431    | 1.375      | 1.375               | 2.2500                                                    | 6.000        | II   |
| M85049/5A33A1   | MS17341N33A1              | 10-522958-336            | 32                   | .375        | .281    | .875                | 2.062               | 2.0625-16UN                | .969                    | 2.813               | 2.312                      | 4.276    | 1.125      | 1.469               | 2.2500                                                    | 6.000        | II   |
| M85049/4A30A1   | MS17342N30A1              | 10-522958-361            | 36                   | 2.062       | 1.917   | 2.750               | 2.500               | 2.3125-16UN                | 1.391                   | 3.500               | 2.562                      | 5.385    | 3.375      | 1.375               | 2.5000                                                    | 6.000        | III  |
| M85049/4A29A1   | MS17342N29A1              | 10-522958-362            | 36                   | 1.984       | 1.859   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                                    | 6.000        | III  |
| M85049/4A26A1   | MS17342N26A1              | 10-522958-363            | 36                   | 1.900       | 1.775   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                                    | 6.000        | III  |
| M85049/4A28A1   | MS17342N28A1              | 10-522958-364            | 36                   | 1.825       | 1.799   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                                    | 6.000        | III  |
| M85049/4A27A1   | MS17342N27A1              | 10-522958-365            | 36                   | 1.730       | 1.605   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                                    | 6.000        | III  |
| M85049/3A26A1   | MS17340N26A1              | 10-522958-366            | 36                   | 1.656       | 1.531   | 2.250               | 2.312               | 2.3125-16UN                | 1.281                   | 3.308               | 2.562                      | 5.083    | 2.953      | 1.370               | 2.5000                                                    | 6.000        | I    |
| M85049/3A27A1   | MS17340N27A1              | 10-522958-367            | 36                   | 1.562       | 1.437   | 2.250               | 2.312               | 2.3125-16UN                | 1.281                   | 3.308               | 2.562                      | 5.083    | 2.953      | 1.370               | 2.5000                                                    | 6.000        | I    |
| M85049/5A40A1   | MS17341N40A1              | 10-522958-368            | 36                   | 1.445       | 1.320   | 2.000               | 2.312               | 2.3125-16UN                | 1.281                   | 3.246               | 2.562                      | 5.021    | 2.625      | 1.371               | 2.5000                                                    | 6.000        | II   |
| M85049/5A38A1   | MS17341N38A1              | 10-522958-369            | 36                   | 1.375       | 1.250   | 2.000               | 2.312               | 2.3125-16UN                | 1.281                   | 3.246               | 2.562                      | 5.021    | 2.625      | 1.371               | 2.5000                                                    | 6.000        | II   |
| M85049/5A36A1   | MS17341N36A1              | 10-522958-370            | 36                   | 1.310       | 1.185   | 1.780               | 2.312               | 2.3125-16UN                | 1.281                   | 3.184               | 2.562                      | 4.959    | 2.469      | 1.372               | 2.5000                                                    | 6.000        | II   |
| M85049/5A42A1   | MS17341N42A1              | 10-522958-371            | 36                   | 1.230       | 1.105   | 1.780               | 2.312               | 2.3125-16UN                | 1.281                   | 3.184               | 2.562                      | 4.959    | 2.469      | 1.372               | 2.5000                                                    | 6.000        | II   |
| M85049/5A39A1   | MS17341N39A1              | 10-522958-372            | 36                   | 1.180       | 1.055   | 1.780               | 2.312               | 2.3125-16UN                | 1.281                   | 3.184               | 2.562                      | 4.959    | 2.469      | 1.372               | 2.5000                                                    | 6.000        | II   |
| M85049/5A37A1   | MS17341N37A1              | 10-522958-373            | 36                   | 1.109       | .984    | 1.546               | 2.312               | 2.3125-16UN                | 1.281                   | 3.121               | 2.562                      | 4.896    | 2.125      | 1.371               | 2.5000                                                    | 6.000        | II   |
| M85049/5A41A1   | MS17341N41A1              | 10-522958-374            | 36                   | .970        | .857    | 1.312               | 2.250               | 2.3125-16UN                | 1.094                   | 3.063               | 2.562                      | 4.651    | 1.812      | 1.375               | 2.5000                                                    | 6.000        | II   |
| M85049/4A31A1   | MS17342N31A1              | 10-522958-401            | 40                   | 2.375       | 2.230   | 3.000               | 2.812               | 2.625-16UN                 | 1.391                   | 3.609               | 2.875                      | 5.682    | 3.625      | 1.421               | 2.7500                                                    | 6.000        | III  |
| M85049/4A32A1   | MS17342N32A1              | 10-522958-402            | 40                   | 2.250       | 2.105   | 2.875               | 2.625               | 2.625-16UN                 | 1.391                   | 3.609               | 2.875                      | 5.682    | 3.500      | 1.421               | 2.7500                                                    | 6.000        | III  |
| M85049/4A33A1   | MS17342N33A1              | 10-522958-403            | 40                   | 2.145       | 2.000   | 2.750               | 2.625               | 2.625-16UN                 | 1.391                   | 3.547               | 2.875                      | 5.620    | 3.375      | 1.422               | 2.7500                                                    | 6.000        | III  |
| M85049/4A34A1   | MS17342N34A1              | 10-522958-404            | 40                   | 2.062       | 1.917   | 2.750               | 2.625               | 2.625-16UN                 | 1.391                   | 3.547               | 2.875                      | 5.620    | 3.375      | 1.422               | 2.7500                                                    | 6.000        | III  |
| M85049/5A43A1   | MS17341N43A1              | 10-522958-405            | 40                   | 1.940       | 1.815   | 2.438               | 2.750               | 2.625-16UN                 | 1.391                   | 4.281               | 2.875                      | 6.354    | 3.171      | 2.156               | 2.7500                                                    | 6.000        | II   |
| M85049/5A44A1   | MS17341N44A1              | 10-522958-406            | 40                   | 1.825       | 1.700   | 2.438               | 2.750               | 2.625-16UN                 | 1.391                   | 4.281               | 2.875                      | 6.354    | 3.171      | 2.156               | 2.7500                                                    | 6.000        | II   |
| M85049/5A45A1   | MS17341N45A1              | 10-522958-407            | 40                   | 1.730       | 1.605   | 2.438               | 2.750               | 2.625-16UN                 | 1.391                   | 4.281               | 2.875                      | 6.354    | 3.171      | 2.156               | 2.7500                                                    | 6.000        | II   |
| M85049/5A46A1   | MS17341N46A1              | 10-522958-408            | 40                   | 1.656       | 1.531   | 2.250               | 2.750               | 2.625-16UN                 | 1.281                   | 4.094               | 2.875                      | 6.037    | 2.953      | 2.156               | 2.7500                                                    | 6.000        | II   |

\* Ordering procedure: Locate shell size needed (Column 4); select cable diameter range to be accommodated within the shell size (column 5); order by either MS part number (column 1) or Proprietary part number (column 3).

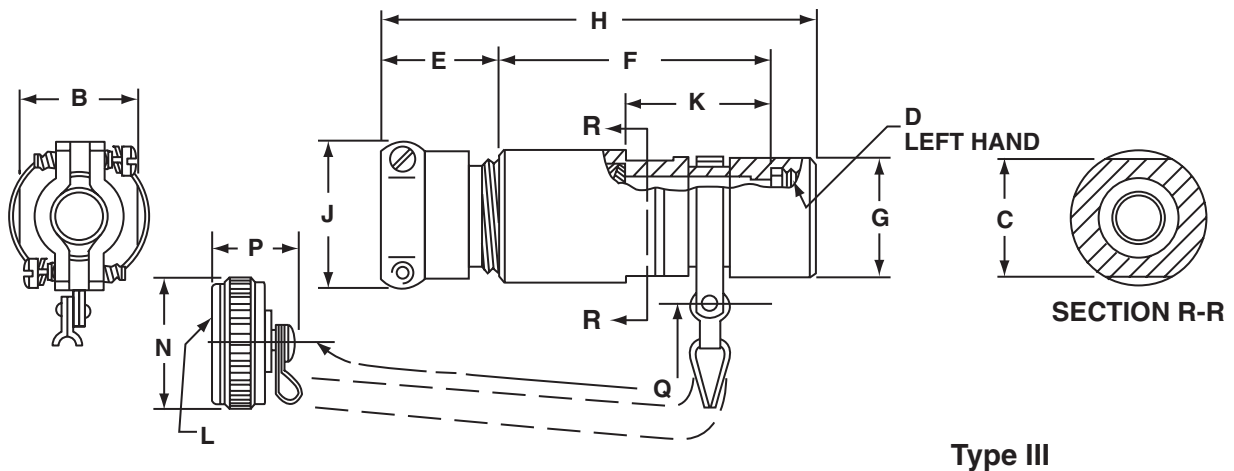
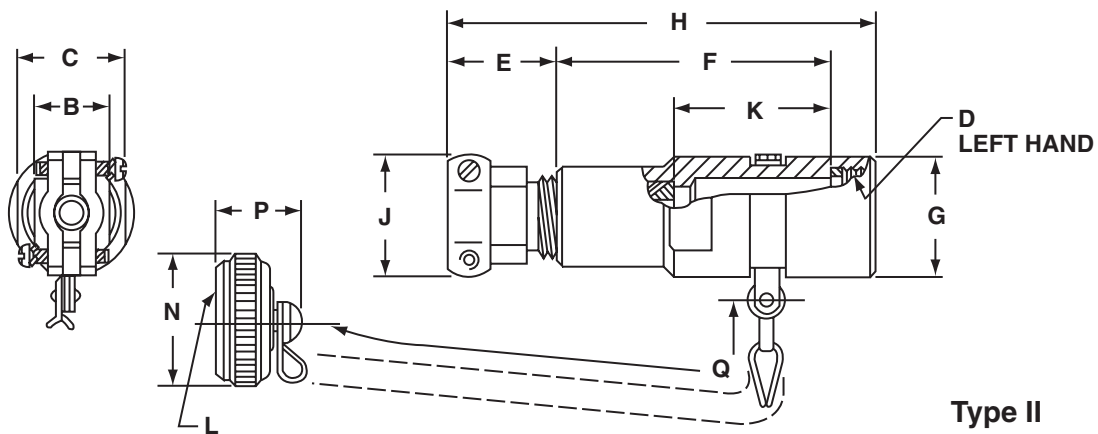
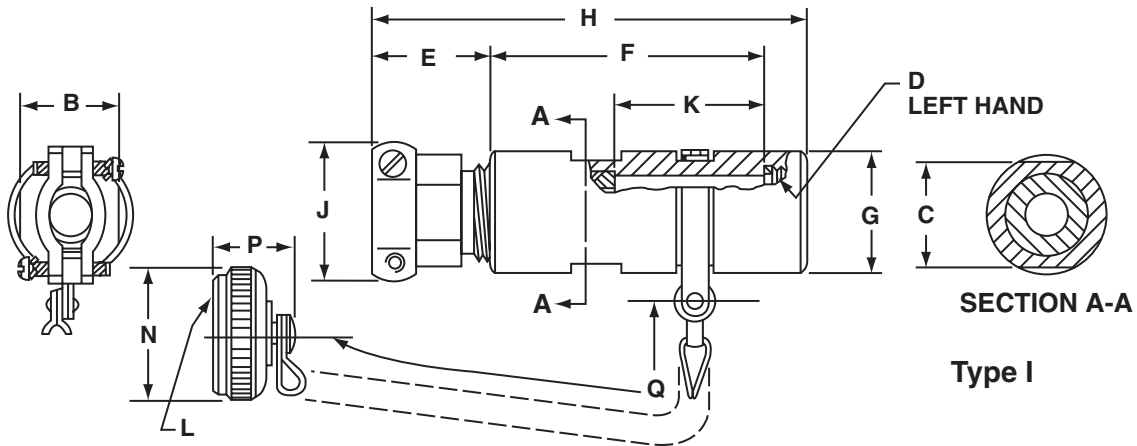
MS numbers shown are non-conductive finish. To order conductive finish, substitute "W" for "A" in the part number listed.

10- numbers shown are non-conductive finish. To order conductive finish, substitute prefix 88-.

# MIL-C-22992, QWLD Accessories

## M85049 or 10-524959

cable sealing adapters (receptacle)



# MIL-C-22992, QWLD Accessories

## M85049 or 10-524959

### cable sealing adapters (receptacle)

All dimensions for reference only.

| MS Part Number* | Superseded MS Part Number | Proprietary Part Number* | Used With Shell Size | Cable Range |         | B<br>+.000<br>-.010 | C<br>+.000<br>-.010 | D<br>Thread<br>Class 2B-LH | E<br>Free Length<br>Max | F<br>+.010<br>-.020 | G<br>Dia<br>+.010<br>-.020 | H<br>Max | J<br>±.031 | K<br>+.015<br>-.025 | L Thread Class 2A 0.1P-0.2L Double Stub | N<br>Dia<br>Max | P<br>Max | Q<br>Approx. | Type |
|-----------------|---------------------------|--------------------------|----------------------|-------------|---------|---------------------|---------------------|----------------------------|-------------------------|---------------------|----------------------------|----------|------------|---------------------|-----------------------------------------|-----------------|----------|--------------|------|
|                 |                           |                          |                      | Max Dia     | Min Dia |                     |                     |                            |                         |                     |                            |          |            |                     |                                         |                 |          |              |      |
| M85049/4A1B1    | MS17342N1B1               | 10-524959-131            | 12                   | .530        | .436    | 1.000               | .812                | .750-20UNEF                | 1.062                   | 2.719               | .938                       | 4.275    | 1.375      | 1.219               | .8750                                   | 2.719           | .765     | 5.000        | III  |
| M85049/4A2B1    | MS17342N2B1               | 10-524959-132            | 12                   | .500        | .406    | .875                | .938                | .750-20UNEF                | .969                    | 2.215               | .938                       | 3.678    | 1.125      | .871                | .8750                                   | 2.719           | .765     | 5.000        | III  |
| M85049/4A3B1    | MS17342N3B1               | 10-524959-133            | 12                   | .405        | .311    | 1.000               | .812                | .750-20UNEF                | 1.062                   | 2.719               | .938                       | 4.275    | 1.375      | 1.219               | .8750                                   | 1.094           | .765     | 5.000        | III  |
| M85049/3A1B1    | MS17340N1B1               | 10-524959-134            | 12                   | .375        | .281    | .750                | .812                | .750-20UNEF                | .969                    | 1.902               | .938                       | 3.365    | 1.062      | .621                | .8750                                   | 1.094           | .765     | 5.000        | I    |
| M85049/3A2B1    | MS17340N2B1               | 10-524959-135            | 12                   | .281        | .188    | .750                | .812                | .750-20UNEF                | .969                    | 1.902               | .938                       | 3.365    | 1.062      | .621                | .8750                                   | 1.094           | .765     | 5.000        | I    |
| M85049/5A1B1    | MS17341N1B1               | 10-524959-136            | 12                   | .250        | .156    | .625                | .812                | .750-20UNEF                | .906                    | 1.782               | .938                       | 3.182    | .938       | .563                | .8750                                   | 1.094           | .765     | 5.000        | II   |
| M85049/4A5B1    | MS17342N5B1               | 10-524959-151            | 14                   | .625        | .531    | 1.062               | 1.125               | .875-20UNEF                | 1.062                   | 2.933               | 1.062                      | 4.489    | 1.562      | 1.371               | 1.0000                                  | 1.094           | .765     | 5.000        | III  |
| M85049/4A4B1    | MS17342N4B1               | 10-524959-152            | 14                   | .605        | .511    | 1.000               | 1.062               | .875-20UNEF                | 1.062                   | 2.621               | 1.062                      | 4.177    | 1.375      | 1.121               | 1.0000                                  | 1.094           | .765     | 5.000        | III  |
| M85049/4A6B1    | MS17342N6B1               | 10-524959-153            | 14                   | .530        | .436    | 1.000               | 1.062               | .875-20UNEF                | 1.062                   | 2.621               | 1.062                      | 4.177    | 1.375      | 1.121               | 1.0000                                  | 1.094           | .765     | 5.000        | III  |
| M85049/3A3B1    | MS17340N3B1               | 10-524959-154            | 14                   | .438        | .344    | .875                | .938                | .875-20UNEF                | .969                    | 2.215               | 1.062                      | 3.678    | 1.125      | .871                | 1.0000                                  | 1.219           | .765     | 5.000        | I    |
| M85049/4A7B1    | MS17342N7B1               | 10-524959-155            | 14                   | .405        | .311    | 1.000               | 1.062               | .875-20UNEF                | 1.062                   | 2.621               | 1.188                      | 4.177    | 1.375      | 1.121               | 1.0000                                  | 1.344           | .765     | 5.000        | III  |
| M85049/3A4B1    | MS17340N4B1               | 10-524959-171            | 16                   | .605        | .511    | 1.000               | 1.062               | 1.000-20UNEF               | 1.062                   | 2.621               | 1.188                      | 4.177    | 1.375      | 1.121               | 1.1250                                  | 1.344           | .980     | 5.000        | I    |
| M85049/3A5B1    | MS17340N5B1               | 10-524959-172            | 16                   | .530        | .436    | 1.000               | 1.062               | 1.000-20UNEF               | 1.062                   | 2.621               | 1.188                      | 4.177    | 1.375      | 1.121               | 1.1250                                  | 1.344           | .980     | 5.000        | I    |
| M85049/3A6B1    | MS17340N6B1               | 10-524959-173            | 16                   | .405        | .311    | 1.000               | 1.062               | 1.000-20UNEF               | 1.062                   | 2.621               | 1.312                      | 4.177    | 1.375      | 1.121               | 1.1250                                  | 1.344           | .980     | 5.000        | I    |
| M85049/4A8B1    | MS17342N8B1               | 10-524959-181            | 18                   | .828        | .715    | 1.188               | 1.250               | 1.125-18UNEF               | 1.094                   | 2.996               | 1.312                      | 4.584    | 1.688      | 1.343               | 1.2500                                  | 1.469           | .980     | 5.000        | III  |
| M85049/3A8B1    | MS17340N8B1               | 10-524959-182            | 18                   | .699        | .605    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                  | 1.469           | .980     | 5.000        | I    |
| M85049/3A7B1    | MS17340N7B1               | 10-524959-183            | 18                   | .625        | .531    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                  | 1.469           | .980     | 5.000        | I    |
| M85049/5A5B1    | MS17341N5B1               | 10-524959-184            | 18                   | .605        | .511    | 1.000               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.621               | 1.312                      | 4.177    | 1.375      | 1.121               | 1.2500                                  | 2.719           | .980     | 5.000        | II   |
| M85049/5A6B1    | MS17341N6B1               | 10-524959-185            | 18                   | .530        | .436    | 1.000               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.621               | 1.312                      | 4.177    | 1.375      | 1.121               | 1.2500                                  | 2.719           | .980     | 5.000        | II   |
| M85049/3A9B1    | MS17340N9B1               | 10-524959-186            | 18                   | .500        | .406    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                  | 1.469           | .980     | 5.000        | I    |
| M85049/3A10B1   | MS17340N10B1              | 10-524959-187            | 18                   | .455        | .361    | 1.062               | 1.125               | 1.125-18UNEF               | 1.062                   | 2.933               | 1.312                      | 4.489    | 1.562      | 1.371               | 1.2500                                  | 1.469           | .980     | 5.000        | I    |
| M85049/5A2B1    | MS17341N2B1               | 10-524959-188            | 18                   | .375        | .281    | .750                | 1.125               | 1.125-18UNEF               | .969                    | 2.438               | 1.312                      | 4.901    | 1.062      | 1.157               | 1.2500                                  | 2.719           | .980     | 5.000        | II   |
| M85049/5A3B1    | MS17341N3B1               | 10-524959-189            | 18                   | .375        | .281    | .875                | 1.125               | 1.125-18UNEF               | .969                    | 2.469               | 1.312                      | 4.932    | 1.125      | 1.125               | 1.2500                                  | 2.719           | .980     | 5.000        | II   |
| M85049/5A4B1    | MS17341N4B1               | 10-524959-190            | 18                   | .281        | .188    | .750                | 1.125               | 1.125-18UNEF               | .969                    | 2.438               | 1.312                      | 4.901    | 1.062      | 1.157               | 1.2500                                  | 2.719           | .980     | 5.000        | II   |
| M85049/4A12B1   | MS17342N12B1              | 10-524959-201            | 20                   | 1.055       | .930    | 1.546               | 1.375               | 1.250-18UNEF               | 1.281                   | 3.121               | 1.438                      | 4.896    | 2.125      | 1.371               | 1.3750                                  | 2.719           | .980     | 5.000        | III  |
| M85049/4A10B1   | MS17342N10B1              | 10-524959-202            | 20                   | 1.000       | .875    | 1.546               | 1.375               | 1.250-18UNEF               | 1.281                   | 3.121               | 1.438                      | 4.896    | 2.125      | 1.371               | 1.3750                                  | 2.719           | .980     | 6.000        | III  |
| M85049/4A11B1   | MS17342N11B1              | 10-524959-203            | 20                   | .900        | .787    | 1.312               | 1.375               | 1.250-18UNEF               | 1.094                   | 3.059               | 1.438                      | 4.647    | 1.812      | 1.371               | 1.3750                                  | 2.719           | .980     | 5.000        | III  |
| M85049/3A11B1   | MS17340N11B1              | 10-524959-204            | 20                   | .828        | .715    | 1.188               | 1.250               | 1.250-18UNEF               | 1.125                   | 2.996               | 1.438                      | 4.615    | 1.688      | 1.371               | 1.3750                                  | 1.562           | .980     | 5.000        | I    |
| M85049/4A9B1    | MS17342N9B1               | 10-524959-205            | 20                   | .750        | .637    | 1.312               | 1.375               | 1.250-18UNEF               | 1.094                   | 3.059               | 1.438                      | 4.647    | 1.812      | 1.371               | 1.3750                                  | 2.719           | .980     | 5.000        | III  |
| M85049/5A7B1    | MS17341N7B1               | 10-524959-206            | 20                   | .699        | .605    | 1.062               | 1.250               | 1.250-18UNEF               | 1.062                   | 2.933               | 1.438                      | 4.489    | 1.562      | 1.250               | 1.3750                                  | 2.719           | .980     | 5.000        | II   |
| M85049/5A9B1    | MS17341N9B1               | 10-524959-207            | 20                   | .605        | .511    | 1.000               | 1.250               | 1.250-18UNEF               | 1.062                   | 2.750               | 1.438                      | 4.306    | 1.375      | 1.371               | 1.3750                                  | 1.562           | .980     | 5.000        | II   |
| M85049/3A12B1   | MS17340N12B1              | 10-524959-208            | 20                   | .562        | .449    | 1.188               | 1.250               | 1.250-18UNEF               | 1.125                   | 2.996               | 1.438                      | 4.615    | 1.688      | 1.371               | 1.3750                                  | 1.562           | .980     | 5.000        | I    |
| M85049/5A8B1    | MS17341N8B1               | 10-524959-209            | 20                   | .455        | .361    | 1.062               | 1.250               | 1.250-18UNEF               | 1.062                   | 2.933               | 1.438                      | 4.489    | 1.562      | 1.371               | 1.3750                                  | 1.562           | .980     | 5.000        | II   |
| M85049/4A14B1   | MS17342N14B1              | 10-524959-221            | 22                   | 1.109       | .984    | 1.546               | 1.625               | 1.375-18UNEF               | 1.281                   | 3.121               | 1.562                      | 4.896    | 2.125      | 1.371               | 1.5000                                  | 1.562           | .980     | 6.000        | III  |
| M85049/4A13B1   | MS17342N13B1              | 10-524959-222            | 22                   | 1.000       | .875    | 1.546               | 1.625               | 1.375-18UNEF               | 1.281                   | 3.121               | 1.562                      | 4.896    | 2.125      | 1.371               | 1.5000                                  | 1.562           | .980     | 6.000        | III  |
| M85049/3A14B1   | MS17340N14B1              | 10-524959-223            | 22                   | .900        | .787    | 1.312               | 1.375               | 1.375-18UNEF               | 1.094                   | 3.059               | 1.562                      | 4.647    | 1.812      | 1.371               | 1.5000                                  | 1.688           | .980     | 6.000        | I    |
| M85049/5A12B1   | MS17341N12B1              | 10-524959-224            | 22                   | .828        | .715    | 1.188               | 1.406               | 1.375-18UNEF               | 1.094                   | 2.996               | 1.562                      | 4.306    | 1.375      | 1.250               | 1.5000                                  | 1.688           | .980     | 6.000        | II   |
| M85049/3A15B1   | MS17340N15B1              | 10-524959-225            | 22                   | .805        | .692    | 1.312               | 1.375               | 1.375-18UNEF               | 1.094                   | 3.059               | 1.562                      | 4.647    | 1.812      | 1.371               | 1.5000                                  | 1.688           | .980     | 6.000        | I    |
| M85049/3A13B1   | MS17340N13B1              | 10-524959-226            | 22                   | .750        | .637    | 1.312               | 1.375               | 1.375-18UNEF               | 1.094                   | 3.059               | 1.562                      | 4.647    | 1.812      | 1.371               | 1.5000                                  | 1.688           | .980     | 6.000        | I    |
| M85049/5A10B1   | MS17341N10B1              | 10-524959-227            | 22                   | .562        | .449    | 1.188               | 1.406               | 1.375-18UNEF               | 1.094                   | 2.996               | 1.562                      | 4.584    | 1.688      | 1.343               | 1.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/5A11B1   | MS17341N11B1              | 10-524959-228            | 22                   | .405        | .311    | 1.000               | 1.375               | 1.375-18UNEF               | 1.062                   | 2.750               | 1.562                      | 4.306    | 1.375      | 1.250               | 1.5000                                  | 2.719           | .980     | 6.000        | II   |

\* Ordering procedure: Locate shell size needed (Column 4); select cable diameter range to be accommodated within the shell size (column 5); order by either MS part number (column 1) or Proprietary part number (column 3).

MS numbers shown are non-conductive finish. To order conductive finish, substitute "W" for "A" in the part number listed.

10- numbers shown are non-conductive finish. To order conductive finish, substitute prefix 88-.

# MIL-C-22992, QWLD Accessories

## M85049 or 10-524959

### cable sealing adapters (receptacle)

All dimensions for reference only.

| MS Part Number* | Superseded MS Part Number | Proprietary Part Number* | Used With Shell Size | Cable Range |         | B<br>+.000<br>-.010 | C<br>+.000<br>-.010 | D<br>Thread<br>Class 2B-LH | E<br>Free Length<br>Max | F<br>+.010<br>-.020 | G<br>Dia<br>+.010<br>-.020 | H<br>Max | J<br>±.031 | K<br>+.015<br>-.025 | L Thread Class 2A 0.1P-0.2L Double Stub | N<br>Dia<br>Max | P<br>Max | Q<br>Approx. | Type |
|-----------------|---------------------------|--------------------------|----------------------|-------------|---------|---------------------|---------------------|----------------------------|-------------------------|---------------------|----------------------------|----------|------------|---------------------|-----------------------------------------|-----------------|----------|--------------|------|
|                 |                           |                          |                      | Max Dia     | Min Dia |                     |                     |                            |                         |                     |                            |          |            |                     |                                         |                 |          |              |      |
| MS85049/4A18B1  | MS17342N18B1              | 10-524959-241            | 24                   | 1.375       | 1.250   | 2.000               | 1.875               | 1.625-18UNEF               | 1.281                   | 3.184               | 1.812                      | 4.959    | 2.625      | 1.309               | 1.7500                                  | 2.719           | .980     | 6.000        | III  |
| MS85049/4A16B1  | MS17342N16B1              | 10-524959-242            | 24                   | 1.310       | 1.185   | 1.780               | 1.875               | 1.625-18UNEF               | 1.281                   | 3.184               | 1.812                      | 4.959    | 2.469      | 1.372               | 1.7500                                  | 2.719           | .980     | 6.000        | III  |
| MS85049/4A17B1  | MS17342N17B1              | 10-524959-243            | 24                   | 1.230       | 1.105   | 1.780               | 1.875               | 1.625-18UNEF               | 1.281                   | 3.184               | 1.812                      | 4.959    | 2.469      | 1.372               | 1.7500                                  | 2.719           | .980     | 6.000        | III  |
| MS85049/4A15B1  | MS17342N15B1              | 10-524959-244            | 24                   | 1.180       | 1.055   | 1.780               | 1.875               | 1.625-18UNEF               | 1.281                   | 3.184               | 1.812                      | 4.959    | 2.469      | 1.372               | 1.7500                                  | 2.719           | .980     | 6.000        | III  |
| MS85049/3A18B1  | MS17340N18B1              | 10-524959-245            | 24                   | 1.109       | .984    | 1.546               | 1.625               | 1.625-18UNEF               | 1.281                   | 3.121               | 1.812                      | 4.896    | 2.125      | 1.371               | 1.7500                                  | 1.938           | .980     | 6.000        | I    |
| MS85049/3A16B1  | MS17340N16B1              | 10-524959-246            | 24                   | 1.055       | .930    | 1.546               | 1.625               | 1.625-18UNEF               | 1.281                   | 3.121               | 1.812                      | 4.896    | 2.125      | 1.371               | 1.7500                                  | 1.938           | .980     | 6.000        | I    |
| MS85049/3A17B1  | MS17340N17B1              | 10-524959-247            | 24                   | 1.000       | .675    | 1.546               | 1.625               | 1.625-18UNEF               | 1.281                   | 3.121               | 1.812                      | 4.896    | 2.125      | 1.371               | 1.7500                                  | 1.938           | .980     | 6.000        | I    |
| MS85049/5A16B1  | MS17341N16B1              | 10-524959-248            | 24                   | .970        | .857    | 1.312               | 1.625               | 1.625-18UNEF               | 1.094                   | 3.059               | 1.812                      | 4.647    | 1.812      | 1.371               | 1.7500                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/5A13B1  | MS17341N13B1              | 10-524959-249            | 24                   | .900        | .787    | 1.312               | 1.625               | 1.625-18UNEF               | 1.094                   | 3.059               | 1.812                      | 4.647    | 1.812      | 1.371               | 1.7500                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/3A19B1  | MS17340N19B1              | 10-524959-250            | 24                   | .880        | .755    | 1.546               | 1.625               | 1.625-18UNEF               | 1.281                   | 3.121               | 1.812                      | 4.896    | 2.125      | 1.371               | 1.7500                                  | 1.938           | .980     | 6.000        | I    |
| MS85049/5A17B1  | MS17341N17B1              | 10-524959-251            | 24                   | .828        | .715    | 1.188               | 1.625               | 1.625-18UNEF               | 1.094                   | 2.954               | 1.812                      | 4.542    | 1.688      | 1.301               | 1.7500                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/5A18B1  | MS17341N18B1              | 10-524959-252            | 24                   | .805        | .692    | 1.312               | 1.625               | 1.625-18UNEF               | 1.094                   | 3.059               | 1.812                      | 4.647    | 1.812      | 1.371               | 1.7500                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/5A15B1  | MS17341N15B1              | 10-524959-253            | 24                   | .750        | .637    | 1.312               | 1.625               | 1.625-18UNEF               | 1.094                   | 3.059               | 1.812                      | 4.647    | 1.812      | 1.371               | 1.7500                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/5A14B1  | MS17341N14B1              | 10-524959-254            | 24                   | .630        | .517    | 1.312               | 1.625               | 1.625-18UNEF               | 1.094                   | 3.059               | 1.812                      | 4.647    | 1.812      | 1.371               | 1.7500                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/4A20B1  | MS17342N20B1              | 10-524959-281            | 28                   | 1.531       | 1.406   | 2.000               | 2.062               | 1.875-16UN                 | 1.281                   | 3.246               | 2.062                      | 5.021    | 2.625      | 1.371               | 2.0000                                  | 2.719           | .980     | 6.000        | III  |
| MS85049/4A19B1  | MS17342N19B1              | 10-524959-282            | 28                   | 1.445       | 1.320   | 2.000               | 2.062               | 1.875-16UN                 | 1.281                   | 3.246               | 2.062                      | 5.021    | 2.625      | 1.371               | 2.0000                                  | 2.719           | .980     | 6.000        | III  |
| MS85049/4A21B1  | MS17342N21B1              | 10-524959-283            | 28                   | 1.375       | 1.250   | 2.000               | 2.062               | 1.875-16UN                 | 1.281                   | 3.246               | 2.062                      | 5.021    | 2.625      | 1.371               | 2.0000                                  | 2.719           | .980     | 6.000        | III  |
| MS85049/3A22B1  | MS17340N22B1              | 10-524959-284            | 28                   | 1.310       | 1.185   | 1.780               | 1.875               | 1.875-16UN                 | 1.281                   | 3.184               | 2.062                      | 4.959    | 2.469      | 1.372               | 2.0000                                  | 2.219           | .980     | 6.000        | I    |
| MS85049/3A21B1  | MS17340N21B1              | 10-524959-285            | 28                   | 1.230       | 1.105   | 1.780               | 1.875               | 1.875-16UN                 | 1.281                   | 3.184               | 2.062                      | 4.959    | 2.469      | 1.372               | 2.0000                                  | 2.219           | .980     | 6.000        | I    |
| MS85049/3A20B1  | MS17340N20B1              | 10-524959-286            | 28                   | 1.180       | 1.055   | 1.780               | 1.875               | 1.875-16UN                 | 1.281                   | 3.184               | 2.062                      | 4.959    | 2.469      | 1.372               | 2.0000                                  | 2.219           | .980     | 6.000        | I    |
| MS85049/5A20B1  | MS17341N20B1              | 10-524959-287            | 28                   | 1.109       | .984    | 1.546               | 1.875               | 1.875-16UN                 | 1.281                   | 3.121               | 2.062                      | 4.896    | 2.125      | 1.371               | 2.0000                                  | 2.279           | .980     | 6.000        | II   |
| MS85049/5A24B1  | MS17341N24B1              | 10-524959-288            | 28                   | 1.000       | .875    | 1.546               | 1.875               | 1.875-16UN                 | 1.281                   | 3.121               | 2.062                      | 4.896    | 2.125      | 1.371               | 2.0000                                  | 2.279           | .980     | 6.000        | II   |
| MS85049/5A23B1  | MS17341N23B1              | 10-524959-289            | 28                   | .970        | .857    | 1.312               | 1.875               | 1.875-16UN                 | 1.094                   | 3.059               | 2.062                      | 4.647    | 1.812      | 1.371               | 2.0000                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/5A19B1  | MS17341N19B1              | 10-524959-290            | 28                   | .880        | .755    | 1.546               | 1.875               | 1.875-16UN                 | 1.281                   | 3.121               | 2.062                      | 4.896    | 2.125      | 1.371               | 2.0000                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/5A19B1  | MS17341N21B1              | 10-524959-291            | 28                   | .750        | .637    | 1.312               | 1.875               | 1.875-16UN                 | 1.094                   | 3.059               | 2.062                      | 4.647    | 1.812      | 1.371               | 2.0000                                  | 2.719           | .980     | 6.000        | II   |
| MS85049/5A26B1  | MS17341N26B1              | 10-524959-292            | 28                   | .680        | .567    | 1.312               | 1.875               | 1.875-16UN                 | 1.094                   | 3.059               | 2.062                      | 4.647    | 1.812      | 1.371               | 2.0000                                  | 2.219           | .980     | 6.000        | II   |
| MS85049/5A25B1  | MS17341N25B1              | 10-524959-293            | 28                   | .530        | .436    | 1.000               | 1.812               | 1.875-16UN                 | 1.062                   | 2.875               | 2.062                      | 4.431    | 1.375      | 1.375               | 2.0000                                  | 2.219           | .980     | 6.000        | II   |
| MS85049/5A22B1  | MS17341N22B1              | 10-524959-294            | 28                   | .375        | .281    | .875                | 1.875               | 1.875-16UN                 | .969                    | 2.766               | 2.062                      | 4.229    | 1.125      | 1.422               | 2.0000                                  | 2.219           | .980     | 6.000        | II   |
| MS85049/4A23B1  | MS17342N23B1              | 10-524959-321            | 32                   | 1.828       | 1.700   | 2.438               | 2.312               | 2.0625-16UN                | 1.391                   | 3.500               | 2.312                      | 5.385    | 3.171      | 1.375               | 2.2500                                  | 2.469           | .980     | 6.000        | III  |
| MS85049/4A25B1  | MS17342N25B1              | 10-524959-322            | 32                   | 1.730       | 1.605   | 2.438               | 2.312               | 2.0625-16UN                | 1.391                   | 3.500               | 2.312                      | 5.385    | 3.171      | 1.375               | 2.2500                                  | 2.469           | .980     | 6.000        | III  |
| MS85049/4A22B1  | MS17342N22B1              | 10-524959-323            | 32                   | 1.656       | 1.531   | 2.250               | 2.312               | 2.0625-16UN                | 1.281                   | 3.308               | 2.312                      | 5.083    | 2.953      | 1.370               | 2.2500                                  | 2.469           | .980     | 6.000        | III  |
| MS85049/4A24B1  | MS17342N24B1              | 10-524959-324            | 32                   | 1.562       | 1.437   | 2.250               | 2.312               | 2.0625-16UN                | 1.281                   | 3.308               | 2.312                      | 5.083    | 2.953      | 1.370               | 2.2500                                  | 2.469           | .980     | 6.000        | III  |
| MS85049/3A24B1  | MS17340N24B1              | 10-524959-325            | 32                   | 1.531       | 1.406   | 2.000               | 2.062               | 2.0625-16UN                | 1.281                   | 3.246               | 2.312                      | 5.021    | 2.625      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | I    |
| MS85049/3A23B1  | MS17340N23B1              | 10-524959-326            | 32                   | 1.445       | 1.320   | 2.000               | 2.062               | 2.0625-16UN                | 1.281                   | 3.246               | 2.312                      | 5.021    | 2.625      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | I    |
| MS85049/3A25B1  | MS17340N25B1              | 10-524959-327            | 32                   | 1.375       | 1.250   | 2.000               | 2.062               | 2.0625-16UN                | 1.281                   | 3.246               | 2.312                      | 5.021    | 2.625      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | I    |
| MS85049/5A28B1  | MS17341N28B1              | 10-524959-328            | 32                   | 1.230       | 1.150   | 1.780               | 2.062               | 2.0625-16UN                | 1.281                   | 3.184               | 2.312                      | 4.959    | 2.469      | 1.372               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| MS85049/5A35B1  | MS17341N35B1              | 10-524959-329            | 32                   | 1.130       | 1.005   | 1.780               | 2.062               | 2.0625-16UN                | 1.281                   | 3.184               | 2.312                      | 4.959    | 2.469      | 1.372               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| MS85049/5A31B1  | MS17341N31B1              | 10-524959-330            | 32                   | 1.109       | .984    | 1.546               | 2.062               | 2.0625-16UN                | 1.281                   | 3.121               | 2.312                      | 4.896    | 2.125      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| MS85049/5A27B1  | MS17341N27B1              | 10-524959-331            | 32                   | 1.055       | .930    | 1.546               | 2.062               | 2.0625-16UN                | 1.281                   | 3.121               | 2.312                      | 4.896    | 2.125      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| MS85049/5A32B1  | MS17341N32B1              | 10-524959-332            | 32                   | .970        | .858    | 1.312               | 2.062               | 2.0625-16UN                | 1.094                   | 3.059               | 2.312                      | 4.647    | 1.812      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| MS85049/5A30B1  | MS17341N30B1              | 10-524959-333            | 32                   | .880        | .755    | 1.546               | 2.062               | 2.0625-16UN                | 1.281                   | 3.121               | 2.312                      | 4.896    | 2.125      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |

\* Ordering procedure: Locate shell size needed (Column 4); select cable diameter range to be accommodated within the shell size (column 5); order by either MS part number (column 1) or Proprietary part number (column 3).

MS numbers shown are non-conductive finish. To order conductive finish, substitute "W" for "A" in the part number listed.

10- numbers shown are non-conductive finish. To order conductive finish, substitute prefix 88-.

# MIL-C-22992, QWLD Accessories

## M85049 or 10-524959

### cable sealing adapters (receptacle)

All dimensions for reference only.

| MS Part Number* | Superseded MS Part Number | Proprietary Part Number* | Used With Shell Size | Cable Range |         | B<br>+.000<br>-.010 | C<br>+.000<br>-.010 | D<br>Thread<br>Class 2B-LH | E<br>Free Length<br>Max | F<br>+.010<br>-.020 | G<br>Dia<br>+.010<br>-.020 | H<br>Max | J<br>±.031 | K<br>+.015<br>-.025 | L Thread Class 2A 0.1P-0.2L Double Stub | N<br>Dia<br>Max | P<br>Max | Q<br>Approx. | Type |
|-----------------|---------------------------|--------------------------|----------------------|-------------|---------|---------------------|---------------------|----------------------------|-------------------------|---------------------|----------------------------|----------|------------|---------------------|-----------------------------------------|-----------------|----------|--------------|------|
|                 |                           |                          |                      | Max Dia     | Min Dia |                     |                     |                            |                         |                     |                            |          |            |                     |                                         |                 |          |              |      |
| M85049/5A29B1   | MS17341N29B1              | 10-524959-334            | 32                   | .750        | .637    | 1.312               | 2.062               | 2.0625-16UN                | 1.094                   | 3.059               | 2.312                      | 4.647    | 1.612      | 1.371               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| M85049/5A34B1   | MS17341N34B1              | 10-524959-335            | 32                   | .530        | .436    | 1.000               | 2.000               | 2.0625-16UN                | 1.062                   | 2.875               | 2.312                      | 4.431    | 1.375      | 1.375               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| M85049/5A53B1   | MS17341N33B1              | 10-524959-336            | 32                   | .375        | .281    | .875                | 2.062               | 2.0625-16UN                | .969                    | 2.813               | 2.312                      | 4.276    | 1.125      | 1.469               | 2.2500                                  | 2.469           | .980     | 6.000        | II   |
| M85049/4A30A1   | MS17342N30B1              | 10-524959-361            | 36                   | 2.062       | 1.917   | 2.750               | 2.500               | 2.3125-16UN                | 1.391                   | 3.500               | 2.562                      | 5.385    | 3.375      | 1.375               | 2.5000                                  | 2.719           | .980     | 6.000        | III  |
| M85049/4A29B1   | MS17342N29B1              | 10-524959-362            | 36                   | 1.984       | 1.859   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                  | 2.719           | .980     | 6.000        | III  |
| M85049/4A26B1   | MS17342N26B1              | 10-524959-363            | 36                   | 1.900       | 1.775   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                  | 2.719           | .980     | 6.000        | III  |
| M85049/4A28B1   | MS17342N28B1              | 10-524959-364            | 36                   | 1.825       | 1.700   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                  | 2.719           | .980     | 6.000        | III  |
| M85049/4A27B1   | MS17342N27B1              | 10-524959-365            | 36                   | 1.730       | 1.605   | 2.438               | 2.500               | 2.3125-16UN                | 1.391                   | 3.469               | 2.562                      | 5.354    | 3.171      | 1.344               | 2.5000                                  | 2.719           | .980     | 6.000        | III  |
| M85049/3A26B1   | MS17340N26B1              | 10-524959-366            | 36                   | 1.656       | 1.531   | 2.250               | 2.312               | 2.3125-16UN                | 1.281                   | 3.308               | 2.562                      | 5.083    | 2.953      | 1.370               | 2.5000                                  | 2.719           | .980     | 6.000        | I    |
| M85049/3A27B1   | MS17340N27B1              | 10-524959-367            | 36                   | 1.562       | 1.437   | 2.250               | 2.312               | 2.3125-16UN                | 1.281                   | 3.308               | 2.562                      | 5.083    | 2.953      | 1.370               | 2.5000                                  | 2.719           | .980     | 6.000        | I    |
| M85049/5A40B1   | MS17341N40B1              | 10-524959-368            | 36                   | 1.445       | 1.320   | 2.000               | 2.312               | 2.3125-16UN                | 1.281                   | 3.246               | 2.562                      | 5.021    | 2.625      | 1.371               | 2.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/5A38B1   | MS17341N38B1              | 10-524959-369            | 36                   | 1.375       | 1.250   | 2.000               | 2.312               | 2.3125-16UN                | 1.281                   | 3.246               | 2.562                      | 5.021    | 2.625      | 1.371               | 2.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/5A36B1   | MS17341N36B1              | 10-524959-370            | 36                   | 1.310       | 1.185   | 1.780               | 2.312               | 2.3125-16UN                | 1.281                   | 3.184               | 2.562                      | 4.959    | 2.469      | 1.372               | 2.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/5A42B1   | MS17341N42B1              | 10-524959-371            | 36                   | 1.230       | 1.105   | 1.780               | 2.312               | 2.3125-16UN                | 1.281                   | 3.184               | 2.562                      | 4.959    | 2.469      | 1.372               | 2.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/5A39B1   | MS17341N39B1              | 10-524959-372            | 36                   | 1.180       | 1.055   | 1.780               | 2.312               | 2.3125-16UN                | 1.281                   | 3.184               | 2.562                      | 4.959    | 2.469      | 1.372               | 2.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/5A37B1   | MS17341N37B1              | 10-524959-373            | 36                   | 1.109       | .984    | 1.546               | 2.312               | 2.3125-16UN                | 1.281                   | 3.121               | 2.562                      | 4.896    | 2.125      | 1.371               | 2.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/5A41B1   | MS17341N41B1              | 10-524959-374            | 36                   | .970        | .857    | 1.312               | 2.250               | 2.3125-16UN                | 1.094                   | 3.063               | 2.562                      | 4.651    | 1.812      | 1.375               | 2.5000                                  | 2.719           | .980     | 6.000        | II   |
| M85049/4A31B1   | MS17342N31B1              | 10-524959-401            | 40                   | 2.375       | 2.230   | 3.000               | 2.812               | 2.625-16UN                 | 1.391                   | 3.609               | 2.875                      | 5.682    | 3.625      | 1.421               | 2.7500                                  | 2.969           | .980     | 6.000        | III  |
| M85049/4A32B1   | MS17342N32B1              | 10-524959-402            | 40                   | 2.250       | 2.105   | 2.875               | 2.625               | 2.625-16UN                 | 1.391                   | 3.609               | 2.875                      | 5.682    | 3.500      | 1.421               | 2.7500                                  | 2.969           | .980     | 6.000        | III  |
| M85049/4A33B1   | MS17342N33B1              | 10-524959-403            | 40                   | 2.145       | 2.000   | 2.750               | 2.625               | 2.625-16UN                 | 1.391                   | 3.547               | 2.875                      | 5.620    | 3.375      | 1.422               | 2.7500                                  | 2.969           | .980     | 6.000        | III  |
| M85049/4A34B1   | MS17342N34B1              | 10-524959-404            | 40                   | 2.062       | 1.917   | 2.750               | 2.625               | 2.625-16UN                 | 1.391                   | 3.547               | 2.875                      | 5.620    | 3.375      | 1.422               | 2.7500                                  | 2.969           | .980     | 6.000        | III  |
| M85049/5A43B1   | MS17341N43B1              | 10-524959-405            | 40                   | 1.940       | 1.815   | 2.438               | 2.750               | 2.625-16UN                 | 1.391                   | 4.281               | 2.875                      | 6.334    | 3.171      | 2.156               | 2.7500                                  | 2.969           | .980     | 6.000        | II   |
| M85049/5A44B1   | MS17341N44B1              | 10-524959-406            | 40                   | 1.825       | 1.700   | 2.438               | 2.750               | 2.625-16UN                 | 1.391                   | 4.281               | 2.875                      | 6.334    | 3.171      | 2.156               | 2.7500                                  | 2.969           | .980     | 6.000        | II   |
| M85049/5A45B1   | MS17341N45B1              | 10-524959-407            | 40                   | 1.730       | 1.605   | 2.438               | 2.750               | 2.625-16UN                 | 1.391                   | 4.281               | 2.875                      | 6.334    | 3.171      | 2.156               | 2.7500                                  | 2.969           | .980     | 6.000        | II   |
| M85049/5A46B1   | MS17341N46B1              | 10-524959-408            | 40                   | 1.656       | 1.531   | 2.250               | 2.625               | 2.625-16UN                 | 1.281                   | 4.094               | 2.875                      | 6.057    | 2.953      | 2.156               | 2.7500                                  | 2.969           | .980     | 6.000        | II   |

\* Ordering procedure: Locate shell size needed (Column 4); select cable diameter range to be accommodated within the shell size (column 5); order by either MS part number (column 1) or Proprietary part number (column 3).

MS numbers shown are non-conductive finish. To order conductive finish, substitute "W" for "A" in the part number listed.

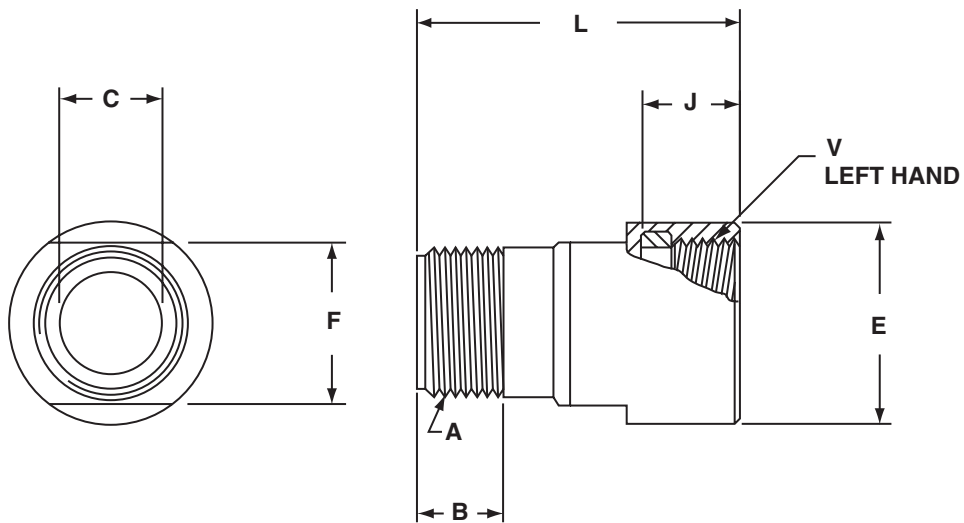
10- numbers shown are non-conductive finish. To order conductive finish, substitute prefix 88-.

# MIL-C-22992, QWLD Accessories

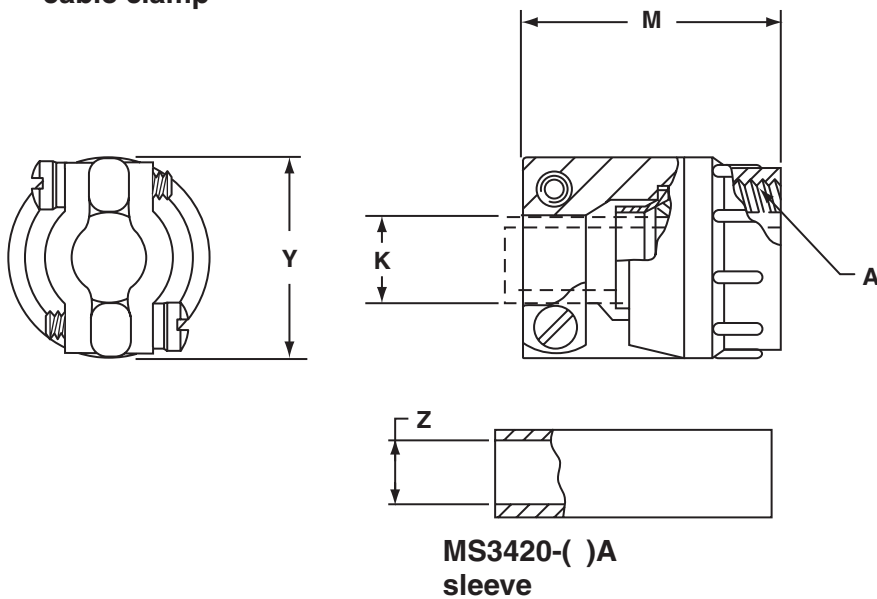
## 10-350695 adapter,

## 10-350349 cable clamp

10-350695-XX( )  
adapter



10-350349-( )3  
cable clamp



# MIL-C-22992, QWLD Accessories

## 10-350695 adapter,

## 10-350349 cable clamp

All dimensions for reference only.

| Shell Size | Proprietary Adapter Part Number* | Clamp Part Number** | Superseded MS Part Number | A Thread Class 2A (Plated) | B Min Full Thd | C Dia +.000 - .010 | E +.010 - .020 | F ±.010 | J +.010 - .000 | K Dia |        | L ±.010 | M Max | V Thread Class 2B-LH | Y Max |
|------------|----------------------------------|---------------------|---------------------------|----------------------------|----------------|--------------------|----------------|---------|----------------|-------|--------|---------|-------|----------------------|-------|
|            |                                  |                     |                           |                            |                |                    |                |         |                | Free  | Closed |         |       |                      |       |
| 12         | 10-350695-13( )                  | 10-350349-12( )     | MS3057-4C                 | .625-24UNEF                | .422           | .386               | .875           | .688    | .484           | .302  | .094   | 1.609   | 1.375 | .750-20UNEF          | .906  |
| 14         | 10-350695-15( )                  | 10-350349-14( )     | MS3057-6C                 | .750-20UNEF                | .422           | .500               | 1.000          | .812    | .484           | .428  | .230   | 1.609   | 1.375 | .875-20UNEF          | 1.031 |
| 16         | 10-350695-17( )                  | 10-350349-16( )     | MS3057-8C                 | .875-20UNEF                | .422           | .625               | 1.188          | .938    | .481           | .515  | .316   | 1.609   | 1.375 | 1.000-20UNEF         | 1.125 |
| 18         | 10-350695-18( )                  | 10-350349-18( )     | MS3057-10C                | 1.000-20UNEF               | .422           | .752               | 1.312          | 1.062   | .481           | .614  | .378   | 1.609   | 1.437 | 1.125-18UNEF         | 1.234 |
| 20         | 10-350695-20( )                  | 10-350349-20( )     | MS3057-12C                | 1.1875-18UNEF              | .422           | .891               | 1.438          | 1.250   | .481           | .738  | .445   | 1.609   | 1.437 | 1.250-18UNEF         | 1.484 |
| 22         | 10-350695-22( )                  | 10-350349-20( )     | MS3057-12C                | 1.1875-18UNEF              | .422           | .891               | 1.562          | 1.250   | .481           | .738  | .445   | 1.609   | 1.437 | 1.375-18UNEF         | 1.484 |
| 24         | 10-350695-24( )                  | 10-350349-24( )     | MS3057-16C                | 1.4375-18UNEF              | .422           | 1.111              | 1.812          | 1.500   | .481           | .926  | .611   | 1.609   | 1.562 | 1.625-18UNEF         | 1.671 |
| 28         | 10-350695-28( )                  | 10-350349-24( )     | MS3057-16C                | 1.4375-18UNEF              | .422           | 1.111              | 2.062          | 1.500   | .481           | .926  | .611   | 1.781   | 1.562 | 1.875-16UN           | 1.671 |
| 32         | 10-350695-32( )                  | 10-350349-32( )     | MS3057-20C                | 1.750-18UNS                | .484           | 1.422              | 2.250          | 1.875   | .481           | 1.200 | .922   | 1.781   | 1.812 | 2.0625-16UNS         | 2.188 |
| 36         | 10-350695-36( )                  | 10-350349-36( )     | MS3057-24C                | 2.000-18UNS                | .562           | 1.672              | 2.500          | 2.125   | .481           | 1.363 | .922   | 1.781   | 2.062 | 2.3125-16UNS         | 2.344 |
| 40         | 10-350695-40( )                  | 10-350349-40( )     | MS3057-28C                | 2.250-16UN                 | .562           | 1.914              | 2.812          | 2.375   | .672           | 1.611 | 1.180  | 2.032   | 2.062 | 2.625-16UN           | 2.594 |

\* To attach the cable clamp to the left hand accessory threads of QWLD connectors, adapter 10-350695-XX is needed. Order this proprietary adapter from column 2 and suffix the part number with the finish desired, listed in the finish chart below.

\*\* Order MS clamp (column 3) to accommodate the cable type being used. Standard finish on the clamp is olive drab, cadmium plate.

| Shell Size | Sleeve† MS Part Number | Z Dia      |        |
|------------|------------------------|------------|--------|
|            |                        | Free ±.016 | Closed |
| 12         | MS3420-4A              | .219       | .010   |
| 14         | MS3420-4A              | .219       | .020   |
|            | MS3420-6A              | .312       | .114   |
| 16         | MS3420-6A              | .312       | .085   |
|            | MS3420-8A              | .438       | .222   |
| 18         | MS3420-6A              | .312       | .085   |
|            | MS3420-10A             | .438       | .200   |
| 20         | MS3420-8A              | .438       | .177   |
|            | MS3420-12A             | .541       | .270   |
| 22         | MS3420-8A              | .438       | .177   |
|            | MS3420-12A             | .541       | .270   |
| 24         | MS3420-8A              | .438       | .186   |
|            | MS3420-12A             | .541       | .260   |
|            | MS3420-16A             | .750       | .433   |
| 28         | MS3420-8A              | .438       | .186   |
|            | MS3420-12A             | .541       | .260   |
|            | MS3420-16A             | .750       | .433   |
| 32         | MS3420-12A             | .541       | .273   |
|            | MS3420-16A             | .750       | .442   |
|            | MS3420-20A             | .938       | .620   |
| 36         | MS3420-16A             | .750       | .358   |
|            | MS3420-18A             | .938       | .504   |
|            | MS3420-24A             | 1.125      | .682   |
| 40         | MS3420-16A             | .750       | .368   |
|            | MS3420-20A             | .938       | .514   |
|            | MS3420-28A             | 1.250      | .816   |

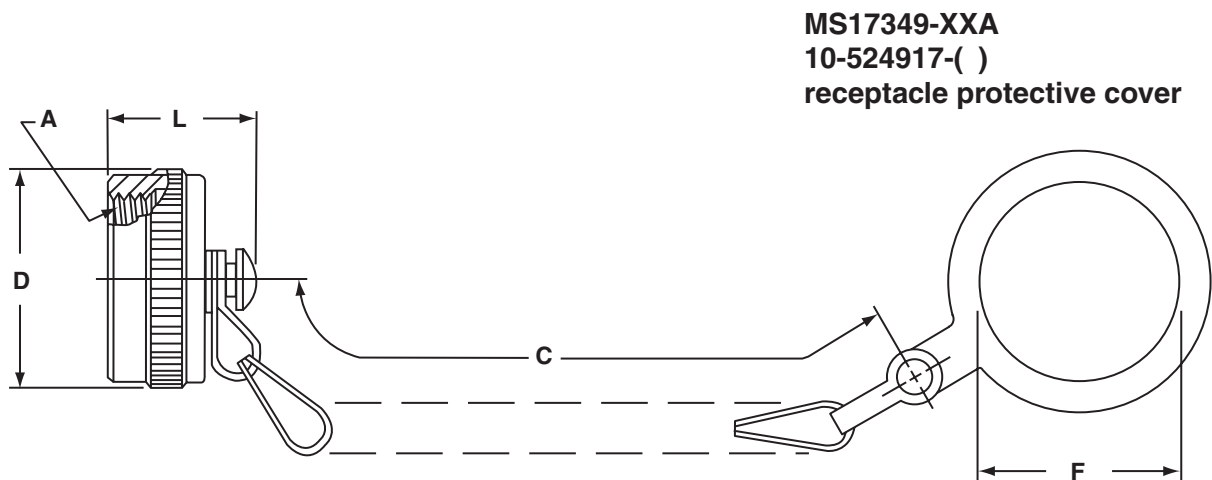
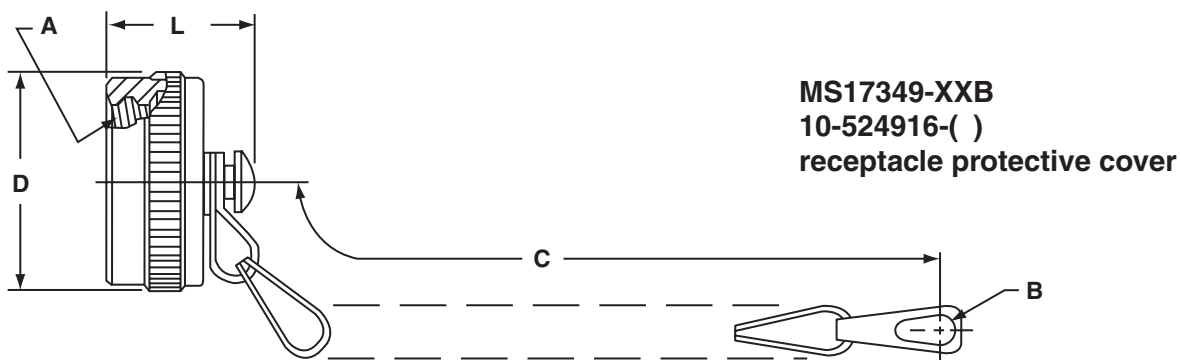
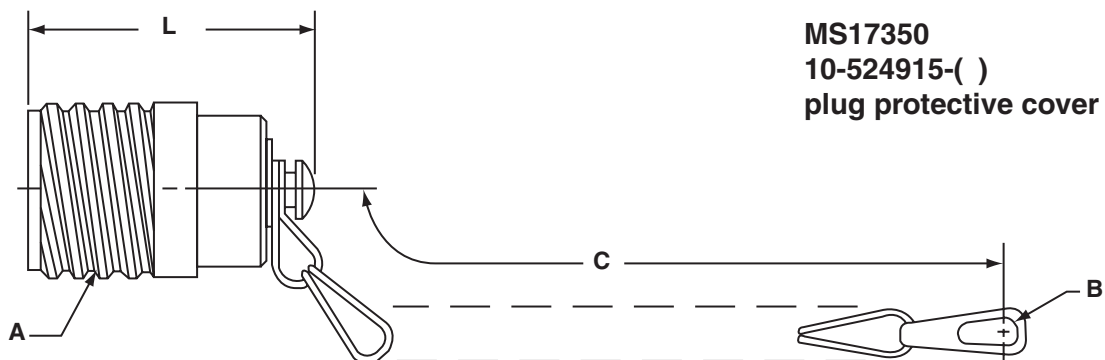
†Sleeve not supplied as part of assembly.  
Order separately by part number shown

| Finish Chart for Adapter & Clamp      | Suffix |
|---------------------------------------|--------|
| Bright Cadmium Plate                  | -XX1   |
| Black Anodize                         | -XX2   |
| Olive Drab, Cadmium Plate             | -XX3   |
| Gray Anodize                          | -XX4   |
| Anodic Coating                        | -XX*   |
| Olive Drab Cadmium Plate, Nickel Base | -XX9   |

\* No third digit required for 10-350695 and not available for 10-350349.

# MIL-C-22992, QWLD Accessories

## protective covers



# MIL-C-22992, QWLD Accessories

## protective covers

All dimensions for reference only.

| Shell Size | Plug Protective Cover MS Part Number* | Plug Protective Cover Proprietary Part Number** | A Thread Class 2A (Plated) 0.1P-0.2L Double Stub | B Dia +.010 - .005 | C Approx. | L Max |
|------------|---------------------------------------|-------------------------------------------------|--------------------------------------------------|--------------------|-----------|-------|
| 12         | MS17350-( )                           | 10-524915-12( )                                 | .8750                                            | .156               | 5.000     | 1.500 |
| 14         | MS17350-( )                           | 10-524915-14( )                                 | 1.0000                                           | .156               | 5.000     | 1.500 |
| 16         | MS17350-( )                           | 10-524915-16( )                                 | 1.1250                                           | .156               | 5.000     | 1.500 |
| 18         | MS17350-( )                           | 10-524915-18( )                                 | 1.2500                                           | .180               | 5.000     | 1.500 |
| 20         | MS17350-( )                           | 10-524915-20( )                                 | 1.3750                                           | .180               | 5.000     | 1.500 |
| 22         | MS17350-( )                           | 10-524915-22( )                                 | 1.5000                                           | .180               | 6.000     | 1.500 |
| 24         | MS17350-( )                           | 10-524915-24( )                                 | 1.7500                                           | .180               | 6.000     | 1.500 |
| 28         | MS17350-( )                           | 10-524915-28( )                                 | 2.0000                                           | .180               | 6.000     | 1.500 |
| 32         | MS17350-( )                           | 10-524915-32( )                                 | 2.2500                                           | .209               | 6.000     | 1.500 |
| 36         | MS17350-( )                           | 10-524915-36( )                                 | 2.5000                                           | .209               | 6.000     | 1.500 |
| 40         | MS17350-( )                           | 10-524915-40( )                                 | 2.7500                                           | .209               | 6.000     | 1.500 |

\*Order MS-approved covers as per coded part number example:

| PART NUMBER    |          |           |          |
|----------------|----------|-----------|----------|
| <u>MS17350</u> | <u>C</u> | <u>28</u> | <u>A</u> |
| 1              | 2        | 3         | 4        |

- MS Number -**  
MS17350 designated plug protective cover  
MS17349 designated receptacle protect cover
- Cover Finish - C** for conductive, N for non-conductive.
- Cover Size -** Shell size of connector with which cover is used.
- Cover Type - (MS17349 only) -**  
A - Washer Termination, used with:  
MS17345 line (cable connecting) plug  
MS17347 jam nut receptacle  
MS17348 jam nut receptacle  
B - Eyelet Termination - used with:  
MS17343 wall mount receptacle  
MS17346 box mount receptacle

\*\*Order Proprietary covers as per coded part number example:

| PART NUMBER      |   |           |          |
|------------------|---|-----------|----------|
| <u>10-524915</u> | - | <u>28</u> | <u>5</u> |
| 1                |   | 2         | 3        |

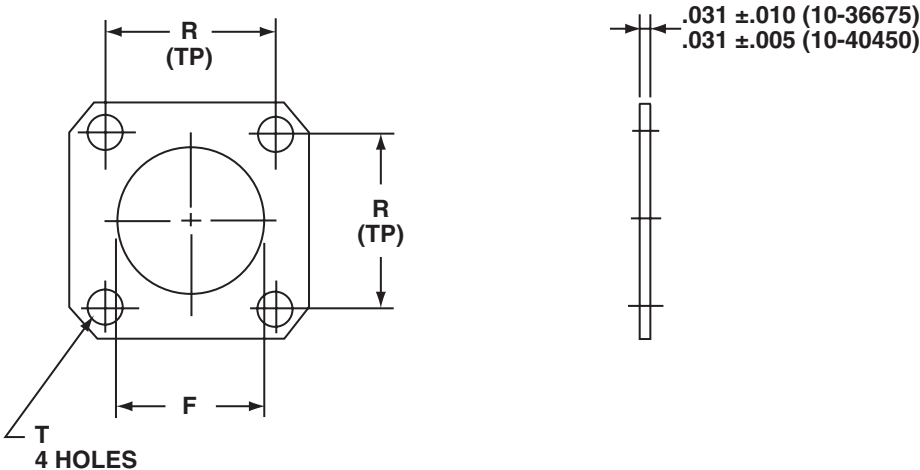
| Shell Size | Receptacle Protective Cover MS Part Number* | Receptacle Protective Cover Proprietary Part Number** | A Thread Class 2B 0.1P-0.2L Double Stub | B +.010 - .005 | C Approx. | D Dia. Max | F +.010 - .000 | L Max |
|------------|---------------------------------------------|-------------------------------------------------------|-----------------------------------------|----------------|-----------|------------|----------------|-------|
| 12         | MS17349-( )B<br>MS17349-( )A                | 10-524916-12( )<br>10-524917-12( )                    | .8750                                   | .156           | 5.000     | 1.094      | 1.016          | .765  |
| 14         | MS17349-( )B<br>MS17349-( )A                | 10-524916-14( )<br>10-524917-14( )                    | 1.0000                                  | .156           | 5.000     | 1.219      | 1.141          | .765  |
| 16         | MS17349-( )B<br>MS17349-( )A                | 10-524916-16( )<br>10-524917-16( )                    | 1.1250                                  | .156           | 5.000     | 1.344      | 1.266          | .980  |
| 18         | MS17349-( )B<br>MS17349-( )A                | 10-524916-18( )<br>10-524917-18( )                    | 1.2500                                  | .180           | 5.000     | 1.469      | 1.391          | .980  |
| 20         | MS17349-( )B<br>MS17349-( )A                | 10-524916-20( )<br>10-524917-20( )                    | 1.3750                                  | .180           | 5.000     | 1.562      | 1.516          | .980  |
| 22         | MS17349-( )B<br>MS17349-( )A                | 10-524916-22( )<br>10-524917-22( )                    | 1.5000                                  | .180           | 6.000     | 1.688      | 1.641          | .980  |
| 24         | MS17349-( )B<br>MS17349-( )A                | 10-524916-24( )<br>10-524917-24( )                    | 1.7500                                  | .180           | 6.000     | 1.938      | 1.891          | .980  |
| 28         | MS17349-( )B<br>MS17349-( )A                | 10-524916-28( )<br>10-524917-28( )                    | 2.0000                                  | .180           | 6.000     | 2.219      | 2.141          | .980  |
| 32         | MS17349-( )B<br>MS17349-( )A                | 10-524916-32( )<br>10-524917-32( )                    | 2.2500                                  | .209           | 6.000     | 2.469      | 2.391          | .980  |
| 36         | MS17349-( )B<br>MS17349-( )A                | 10-524916-36( )<br>10-524917-36( )                    | 2.5000                                  | .209           | 6.000     | 2.719      | 2.641          | .980  |
| 40         | MS17349-( )B<br>MS17349-( )A                | 10-524916-40( )<br>10-524917-40( )                    | 2.7500                                  | .209           | 6.000     | 2.969      | 2.891          | .980  |

- Base Number -**  
10-524915 designates plug cover with chain  
10-524916 designates receptacle cover with chain  
10-524917 designates receptacle cover with chain and attaching ring
- Cover Size -** Shell size of connector with which cover is used.
- Finish -**  
5 - Non-conductive Alumilite finish  
9 - Conductive olive drab cadmium plate over nickel finish

**Note:**  
Protective covers are supplied with all M85049 style cable sealing adapters.

# QWLD Accessories

## sealing gaskets



All dimensions for reference only.

| Part Number* | Shell Size | F Dia<br>+.016<br>-.000 | R<br>±.010 | T Dia<br>±.010 |
|--------------|------------|-------------------------|------------|----------------|
| 10-36675-14  | 12         | .875                    | .906       | .172           |
| 10-36675-16  | 14         | 1.000                   | .969       | .172           |
| 10-36675-18  | 16         | 1.125                   | 1.063      | .203           |
| 10-36675-20  | 18         | 1.250                   | 1.156      | .203           |
| 10-36675-22  | 20         | 1.375                   | 1.250      | .203           |
| 10-36675-24  | 22         | 1.500                   | 1.375      | .203           |
| 10-36675-28  | 24         | 1.750                   | 1.563      | .203           |
| 10-36675-32  | 28         | 2.000                   | 1.750      | .219           |
| 10-36675-36  | 32         | 2.188                   | 1.938      | .219           |
| 10-36675-40  | 36         | 2.438                   | 2.188      | .219           |
| 10-36675-44  | 40         | 2.688                   | 2.375      | .219           |
| 10-36675-48  | 44         | 2.938                   | 2.625      | .219           |

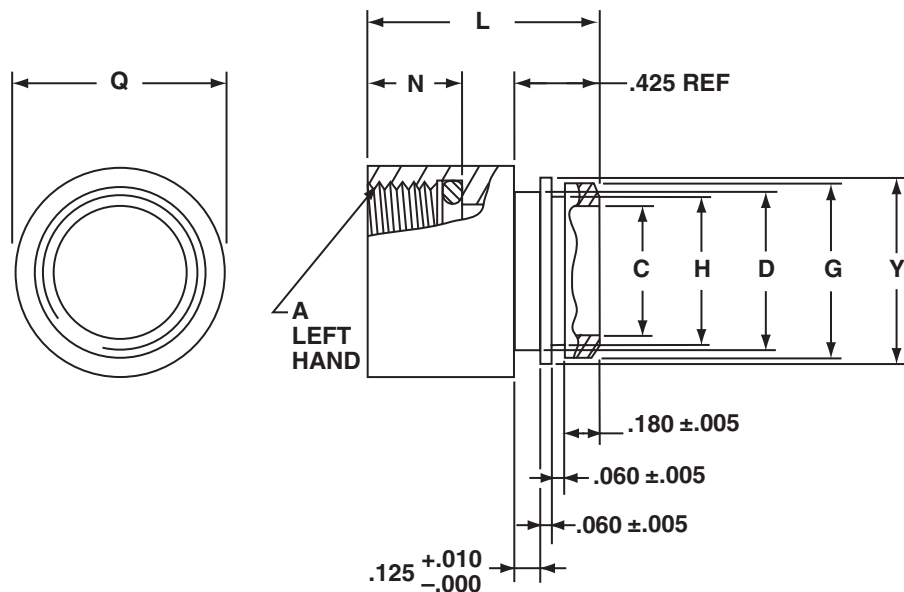
\*10-36675-( ) for operating temperature range – 67° to + 275°F.  
Order by part number listed to accommodate shell size being used.

| Part Number** | Shell Size | F Dia<br>+.016<br>-.000 | R<br>±.010 | T Dia<br>±.010 |
|---------------|------------|-------------------------|------------|----------------|
| 10-40450-14   | 12         | .875                    | .906       | .172           |
| 10-40450-16   | 14         | 1.000                   | .969       | .172           |
| 10-40450-18   | 16         | 1.125                   | 1.063      | .203           |
| 10-40450-20   | 18         | 1.250                   | 1.156      | .203           |
| 10-40450-22   | 20         | 1.375                   | 1.250      | .203           |
| 10-40450-24   | 22         | 1.500                   | 1.375      | .203           |
| 10-40450-28   | 24         | 1.750                   | 1.563      | .203           |
| 10-40450-32   | 28         | 2.000                   | 1.750      | .219           |
| 10-40450-36   | 32         | 2.188                   | 1.938      | .219           |
| 10-40450-40   | 36         | 2.437                   | 2.188      | .219           |
| 10-40450-44   | 40         | 2.688                   | 2.375      | .219           |
| 10-40450-48   | 44         | 2.938                   | 2.625      | .219           |

\*\*10-40450-( ) for operating temperature range 0° to + 275°F.  
Order by part number listed to accommodate shell size being used.

# QWLD Accessories

## encapsulation adapter



All dimensions for reference only.

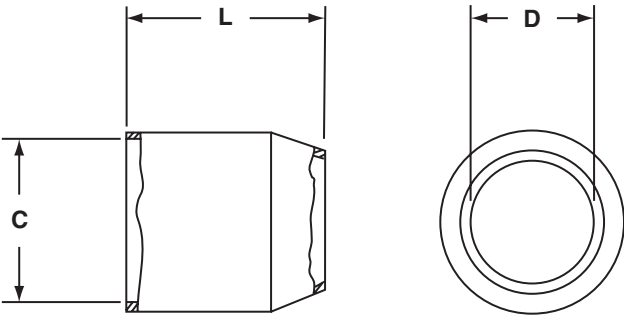
| Part Number*    | Shell Size | A Thread Class 2B-LH | C Dia ±.031 | D Dia ±.005 | G +.010 - .000 | H Dia ±.005 | L ±.031 | N ±.016 | Q ±.010 | Y Dia |
|-----------------|------------|----------------------|-------------|-------------|----------------|-------------|---------|---------|---------|-------|
| 10-242067-13( ) | 12         | .750-20UNEF          | .500        | .673        | .766           | .673        | 1.175   | .479    | .923    | .798  |
| 10-242067-15( ) | 14         | .875-20UNEF          | .656        | .797        | .844           | .797        | 1.175   | .479    | 1.047   | .922  |
| 10-242067-17( ) | 16         | 1.000-20UNEF         | .813        | .923        | .969           | .923        | 1.175   | .479    | 1.172   | 1.048 |
| 10-242067-18( ) | 18         | 1.125-18UNEF         | .938        | 1.047       | 1.094          | 1.047       | 1.175   | .479    | 1.297   | 1.172 |
| 10-242067-20( ) | 20         | 1.250-18UNEF         | 1.063       | 1.172       | 1.219          | 1.172       | 1.175   | .479    | 1.422   | 1.297 |
| 10-242067-22( ) | 22         | 1.375-18UNEF         | 1.188       | 1.297       | 1.344          | 1.297       | 1.175   | .479    | 1.547   | 1.423 |
| 10-242067-24( ) | 24         | 1.625-18UNEF         | 1.312       | 1.537       | 1.469          | 1.422       | 1.175   | .479    | 1.787   | 1.662 |
| 10-242067-28( ) | 28         | 1.875-16UN           | 1.500       | 1.797       | 1.719          | 1.679       | 1.175   | .479    | 2.047   | 1.922 |
| 10-242067-32( ) | 32         | 2.0625-16UN          | 1.800       | 2.047       | 2.000          | 1.960       | 1.175   | .479    | 2.297   | 2.172 |
| 10-242067-36( ) | 36         | 2.3125-16UN          | 2.000       | 2.297       | 2.219          | 2.179       | 1.175   | .479    | 2.547   | 2.422 |
| 10-242067-40( ) | 40         | 2.625-16UN           | 2.250       | 2.609       | 2.469          | 2.429       | 1.375   | .667    | 2.859   | 2.734 |
| 10-242067-44( ) | 44         | 2.875-16UN           | 2.459       | 2.857       | 2.782          | 2.742       | 1.375   | .667    | 3.110   | 2.982 |
| 10-242067-48( ) | 48         | 3.125-16UN           | 2.719       | 3.107       | 3.046          | 3.004       | 1.375   | .667    | 3.360   | 3.244 |

\*Order by part number listed to accommodate shell size being used. To complete part number add suffix for finish desired from table below.

| Finish                    | Suffix |
|---------------------------|--------|
| Bright Cadmium Plate      | -XX1   |
| Black Anodize             | -XX2   |
| Cadmium Plate, Olive Drab | -XX3   |
| Gray Anodize              | -XX4   |
| Anodic Coating            | -XX5   |
| Cadmium Plate Nickel Base | -XX7   |

# QWLD Accessories

## encapsulation end bell



All dimensions are for reference only.

| Part Number* | C Dia                                      | D Dia<br>±.010 | L<br>±.010 |
|--------------|--------------------------------------------|----------------|------------|
| 10-130999-13 | .766 <sup>+0.000</sup> / <sub>-.010</sub>  | .484           | 1.273      |
| 10-130999-15 | .844 <sup>+0.000</sup> / <sub>-.010</sub>  | .609           | 1.273      |
| 10-130999-17 | .969 <sup>+0.000</sup> / <sub>-.010</sub>  | .734           | 1.273      |
| 10-130999-18 | 1.094 <sup>+0.000</sup> / <sub>-.010</sub> | .859           | 1.242      |
| 10-130999-20 | 1.219 <sup>+0.000</sup> / <sub>-.015</sub> | .984           | 1.242      |
| 10-130999-22 | 1.344 <sup>+0.000</sup> / <sub>-.015</sub> | 1.109          | 1.242      |
| 10-130999-24 | 1.469 <sup>+0.000</sup> / <sub>-.015</sub> | 1.234          | 1.179      |
| 10-130999-28 | 1.719 <sup>+0.000</sup> / <sub>-.015</sub> | 1.427          | 1.179      |
| 10-130999-32 | 2.000 <sup>+0.000</sup> / <sub>-.020</sub> | 1.708          | 1.101      |
| 10-130999-36 | 2.219 <sup>+0.000</sup> / <sub>-.020</sub> | 1.895          | 1.101      |
| 10-130999-40 | 2.469 <sup>+0.000</sup> / <sub>-.020</sub> | 2.130          | 1.101      |
| 10-130999-44 | 2.782 <sup>+0.000</sup> / <sub>-.020</sub> | 2.443          | 1.101      |
| 10-130999-48 | 3.046 <sup>+0.000</sup> / <sub>-.020</sub> | 2.707          | 1.101      |

\*Order by part number listed to accommodate shell size being used.

# MIL-C-22992, QWLD

## MS solder contacts

Machine copper alloy contacts in a full range of sizes, with closed entry socket design in the size 12 and 16 contacts. A heavy silver-plated finish is deposited on all MS style solder contacts for maximum corrosion resistance, maximum current carrying capacity and low millivolt drop. Gold plated contacts are also available (See how to order, page 22).

### SOLDER CONTACTS\*

| Part Number                | Pin/Socket    | Mating End Size | Wire Barrel Size | Allowable Wire Size  | Test Current** Amps  |
|----------------------------|---------------|-----------------|------------------|----------------------|----------------------|
| 10-36982-3<br>10-36983-3   | Pin<br>Socket | 16 Long         | 16               | 16<br>18<br>20<br>22 | 13<br>10<br>7.5<br>5 |
| 10-36982-5<br>10-36983-5   | Pin<br>Socket | 12              | 12               | 12<br>10             | 23<br>17             |
| 10-407028-8<br>10-407029-8 | Pin<br>Socket | 8               | 8                | 8<br>10              | 46<br>33             |
| 10-407028-4<br>10-407029-4 | Pin<br>Socket | 4               | 4                | 4<br>6               | 80<br>60             |
| 10-407028-3<br>10-407029-3 | Pin<br>Socket | 0               | 0                | 0<br>1<br>2          | 150<br>125<br>100    |

\* Solder Wells Unfilled

\*\* Contact ratings as stated are test ratings only. The connector could not withstand full rated current through all contacts continuously. Please note that the electrical data given is not an establishment of electrical safety factors. This is left entirely in the designer's hands as he can best determine which peak voltage, switching surges, transients, etc. can be expected in a particular circuit.

**Table I**  
**CONTACT ARRANGEMENT**  
**SERVICE RATING**

| MS Service Rating | Recommended Operating Voltage* at Sea Level |         | Effective Creepage Distance Nom. | Mechanical Spacing Nom. |
|-------------------|---------------------------------------------|---------|----------------------------------|-------------------------|
|                   | DC                                          | AC(RMS) |                                  |                         |
| Inst.             | 250                                         | 200     | 1/16                             |                         |
| A                 | 700                                         | 500     | 1/8                              | 1/16                    |
| D                 | 1250                                        | 900     | 3/16                             | 1/8                     |
| E                 | 1750                                        | 1250    | 1/4                              | 3/16                    |
| B                 | 2450                                        | 1750    | 5/16                             | 1/4                     |
| C                 | 4200                                        | 3000    | 1                                | 5/16                    |

\* The values listed in Table I represent operating values which include a generous safety factor. It may be necessary for some applications to exceed the operating voltages listed here. If this is necessary, designers will find Table II useful for determining the degree to which the recommended values of Table I can be exceeded.

**Table II**  
**ALTITUDE VOLTAGE**  
**DERATING\*\* CHART**

| MS Service Rating | Nominal Distance |          | Standard Sea Level Conditions     |                      | Pressure Altitude† 50,000 Feet    |                      | Pressure Altitude† 70,000 Feet    |                      |
|-------------------|------------------|----------|-----------------------------------|----------------------|-----------------------------------|----------------------|-----------------------------------|----------------------|
|                   | Airspace         | Creepage | Minimum Flashover Voltage AC(RMS) | Test Voltage AC(RMS) | Minimum Flashover Voltage AC(RMS) | Test Voltage AC(RMS) | Minimum Flashover Voltage AC(RMS) | Test Voltage AC(RMS) |
| Inst.             | 1/32             | 1/16     | 1400                              | 1000                 | 550                               | 400                  | 325                               | 260                  |
| A                 | 1/16             | 1/8      | 2800                              | 2000                 | 800                               | 600                  | 450                               | 360                  |
| D                 | 1/8              | 3/16     | 3600                              | 2800                 | 900                               | 675                  | 500                               | 400                  |
| E                 | 3/16             | 1/4      | 4500                              | 3500                 | 1000                              | 750                  | 550                               | 440                  |
| B                 | 1/4              | 5/16     | 5700                              | 4500                 | 1100                              | 825                  | 600                               | 480                  |
| C                 | 5/16             | 1        | 8500                              | 7000                 | 1300                              | 975                  | 700                               | 560                  |

† Not corrected for changes in density due to variations in temperature.

\*\*No attempt has been made to recommend operating voltages. The designer must determine his own operating voltage by the application of a safety factor to the above derating chart to compensate for circuit transients, surges, etc.

# QWLD

## solderless (crimp) contacts

Machined from copper alloys and silver-plated for maximum corrosion resistance, with a minimum millivolt drop and a maximum current carrying capacity, the size 16 and 12 socket contacts are of the closed entry design. Crimp contacts are available for all MS insert arrangements and are identified with an Amphenol® proprietary number. Gold plated contacts are also available (See how to order, page 22).

**CRIMP CONTACTS\***

| Part Number               | Pin/Socket | Mating End Size | Wire Barrel Size | Allowable Wire Size | Required Wire Adapter Sleeve | Test Current** Amps |
|---------------------------|------------|-----------------|------------------|---------------------|------------------------------|---------------------|
| 10-40557                  | Pin        | 16 Long         | 16               | 16                  | —                            | 13                  |
| 10-40556 or 10-597109-171 | Socket     |                 |                  | 18                  | —                            | 10                  |
|                           |            |                 |                  | 20                  | —                            | 7.5                 |
|                           |            |                 |                  | 22*                 | 10-74696-6                   | 5                   |
| 10-40561                  | Pin        | 12              | 12               | 12                  | —                            | 23                  |
| 10-40560 or 10-597109-131 | Socket     |                 |                  | 14                  | —                            | 17                  |
| 10-40792                  | Pin        | 8               | 8                | 8                   | —                            | 46                  |
| 10-40793                  | Socket     |                 |                  | 10*                 | 10-74696-1                   | 33                  |
| 10-40564                  | Pin        | 4               | 4                | 4                   | —                            | 80                  |
| 10-40565                  | Socket     |                 |                  | 6*                  | 10-74696-2                   | 60                  |
| 10-40562                  | Pin        | 0               | 0                | 0                   | —                            | 150                 |
| 10-40563                  | Socket     |                 |                  | 2*                  | 10-74696-7                   | 100                 |

\* When using wire adapter sleeve shown.

\*\* Contact ratings as stated are test ratings only. The connector could not withstand full rated current through all contacts continuously. Please note that the electrical data given is not an establishment of electrical safety factors. This is left entirely in the designer's hands as he can best determine which peak voltage, switching surges, transients, etc. can be expected in a particular circuit.

**Table I**  
**CONTACT ARRANGEMENT**  
**SERVICE RATING**

| MS Service Rating | Recommended Operating Voltage* at Sea Level |          | Effective Creepage Distance Nom. | Mechanical Spacing Nom. |
|-------------------|---------------------------------------------|----------|----------------------------------|-------------------------|
|                   | DC                                          | AC (RMS) |                                  |                         |
| Inst.             | 250                                         | 200      | 1/16                             |                         |
| A                 | 700                                         | 500      | 1/8                              | 1/16                    |
| D                 | 1250                                        | 900      | 3/16                             | 1/8                     |
| E                 | 1750                                        | 1250     | 1/4                              | 3/16                    |
| B                 | 2450                                        | 1750     | 5/16                             | 1/4                     |
| C                 | 4200                                        | 3000     | 1                                | 5/16                    |

\* The values listed in Table I represent operating values which include a generous safety factor. It may be necessary for some applications to exceed the operating voltages listed here. If this is necessary, designers will find Table II useful for determining the degree to which the recommended values of Table I can be exceeded.

**Table II**  
**ALTITUDE VOLTAGE**  
**DERATING\*\***

| MS Service Rating | Nominal Distance |          | Standard Sea Level Conditions      |                       | Pressure Altitude† 50,000 feet     |                       | Pressure Altitude† 70,000 feet     |                       |
|-------------------|------------------|----------|------------------------------------|-----------------------|------------------------------------|-----------------------|------------------------------------|-----------------------|
|                   | Airspace         | Creepage | Minimum Flashover Voltage AC (RMS) | Test Voltage AC (RMS) | Minimum Flashover Voltage AC (RMS) | Test Voltage AC (RMS) | Minimum Flashover Voltage AC (RMS) | Test Voltage AC (RMS) |
| Inst.             | 1/32             | 1/16     | 1400                               | 1000                  | 550                                | 400                   | 325                                | 260                   |
| A                 | 1/16             | 1/8      | 2800                               | 2000                  | 800                                | 600                   | 450                                | 360                   |
| D                 | 1/8              | 3/16     | 3600                               | 2800                  | 900                                | 675                   | 500                                | 400                   |
| E                 | 3/16             | 1/4      | 4500                               | 3500                  | 1000                               | 750                   | 550                                | 440                   |
| B                 | 1/4              | 5/16     | 5700                               | 4500                  | 1100                               | 825                   | 600                                | 480                   |
| C                 | 5/16             | 1        | 8500                               | 7000                  | 1300                               | 975                   | 700                                | 560                   |

† Not corrected for changes in density due to variations in temperature.

\*\* No attempt has been made to recommend operating voltages. The designer must determine his own operating voltage by the application of a safety factor to the above derating chart to compensate for circuit transients, surges, etc.

# QWLD

## application tools

Complete installation instructions (L-615) for Amphenol® QWLD Series Connectors are available on request.

The following data includes information pertaining to the application tools which have been established for crimping, inserting and removing crimp contacts used in QWLD Series Connectors.

### Contact Crimping, Insertion & Removal Tools

| Crimping Tool | Positioner/<br>Turret | Contact Size | Contact Style | Insertion Tool | Removal Tool                        |
|---------------|-----------------------|--------------|---------------|----------------|-------------------------------------|
| M22520/1-01   | *                     | 16           | Pin & Socket  | 11-7345        | 11-8250 Kit                         |
| M22520/1-01   | *                     | 12           | Pin & Socket  | 11-7082        | 11-8250 Kit                         |
| **            | **                    | 8            | Pin & Socket  | 11-8220        | 11-8250 Kit                         |
| **            | **                    | 4            | Pin & Socket  | 11-7365-4†     | Pin 11-7370-4†<br>Socket 11-7674-2† |
| **            | **                    | 0            | Pin & Socket  | 11-7365-5†     | Pin 11-7370-5†<br>Socket 11-7674-3† |

\* Use Daniels Turret TH29-1 or Astro Tool Co. Turret 616266

\*\* For appropriate crimp tool and positioner refer to Pico Crimping Tool Co.

† Tool used with Arbor press 11-7364.

# Amphenol® Heavy Duty Cylindrical Connectors

## QWL Series



wall mount receptacle



thru bulkhead receptacle



cable connecting plug



straight plug



box mount receptacle



flange mount plug



jam nut receptacle  
(wall mount)



jam nut receptacle  
(box mount)

**Amphenol® QWL Series Connectors** are tailor made for compact, heavy duty industrial use.

The outstanding performance of this series makes it well suited for ship-board installations and ground support power distribution applications where physical strength and dependability are key requirements.

**The QWL Series are a versatile, economical alternative to military qualified designs.**

Equivalent MS shell sizes and insert arrangements offer compatibility with all standard cable types. MIL-C-22992 environmental connector requirements (see page 1) are used as a performance criteria base for this series to assure reliability under the most severe conditions.

**The design features of this connector series provide:**

- **Exceptional Service** - high strength aluminum shells with Aluminite 225\* hard anodic finish and shock resistant resilient inserts.
- **Foolproof Operation** - rugged double stub coupling threads, left hand accessory threads and simple single keyway mating.
- **Versatility** - both MS and custom insert patterns available for a wide variety of multiconductor cables.

A complete line of accessories is available for use with QWL Series connectors, including cable sealing and clamp adapters, protective covers, flange gaskets and banding clamps.

For further information concerning Amphenol® QWL Series connectors, request catalog 12-053 or contact your local sales office.

\* Registered trademark of Aluminum Company of America