

# Amphenol®



## **AC and SAE AS50151** Threaded Standard Cylindrical Connectors

**Amphenol® AC Series Connectors**

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**Amphenol® SAE AS50151 Standard Cylindrical Connectors**

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For additional information on AC Series or SAE AS50151 Connectors for special application requirements, contact your local sales office or –

**Amphenol Corporation****Amphenol Industrial Operations**

191 Delaware Avenue

Sidney, New York 13838-1395

Telephone: 888-364-9011 Fax: 520-397-7169

www.amphenol-industrial.com

Ask for the Amphenol Industrial North American Product Overview for additional connectors offered.

For specific questions about RoHS compliance, consult Amphenol Industrial Operations, or call the RoHS Product Compliance and Technical Support line: 1-866-315-8559

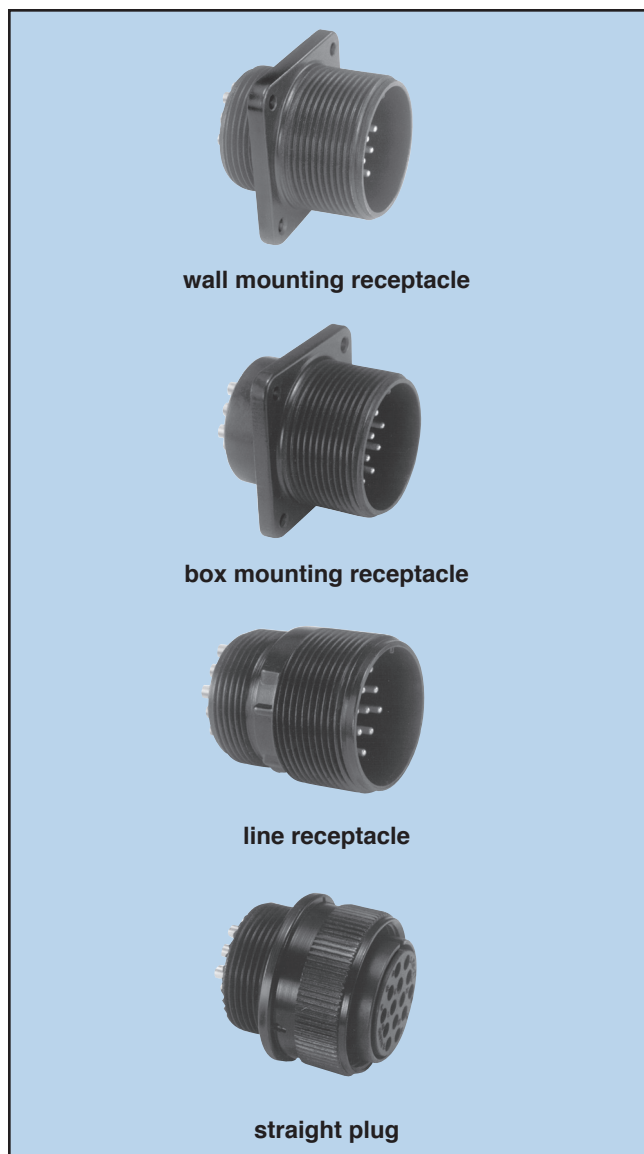
This catalog can be viewed, printed and saved from website: **www.amphenol-industrial.com**.

Amphenol Industrial is a Certified ISO 9001 Manufacturer.

# Amphenol® AC Series

## industrial application threaded style connector

### AC Threaded Series



### AC Threaded Connectors with RADSOK® High Amperage Contacts



Designed with the industrial user in mind, for widely diverse applications such as mass transportation, automotive, heavy equipment and geophysical industries, and for the entertainment/ lighting industries, the new AC Series of Connectors offer the following features:

- Rugged aluminum shells
- Durability and reliability
- Environmentally acceptable shell plating options -
  - Conductive and non-conductive
- Single key/keyway shell polarization
- Five shell styles in sizes 10SL to 40
- Threaded coupling
- Various backshells
- Resilient inserts -
  - Outstanding moisture barrier
  - High dielectric strength
  - High resistance to vibration
- Over 275 insert patterns available
- Alternate insert positioning
- Machined contacts -
  - Maximum corrosion resistance
  - Maximum current capacity
  - Low millivolt drop
- Solder and crimp contacts - silver plated or optional gold plating
- General duty and environmental versions
- -55° C to +125° C operating temp. range
- Standard application tools

**Amphe-Power™ Connectors - AC Threaded Connectors with RADSOK® contacts are also available. These are high amperage capability connectors designed for the most demanding industrial and transportation applications.**

- The RADSOK contact will handle 50% to 150% higher amperages than standard contacts (size dependent).
- Current Amphe-Power lines support from 35A to 500A continuous duty.
- RADSOK contacts are available in size 12 (35 amps), size 8 (70 amps), size 4 (120 amps), and size 0 (250 amps).

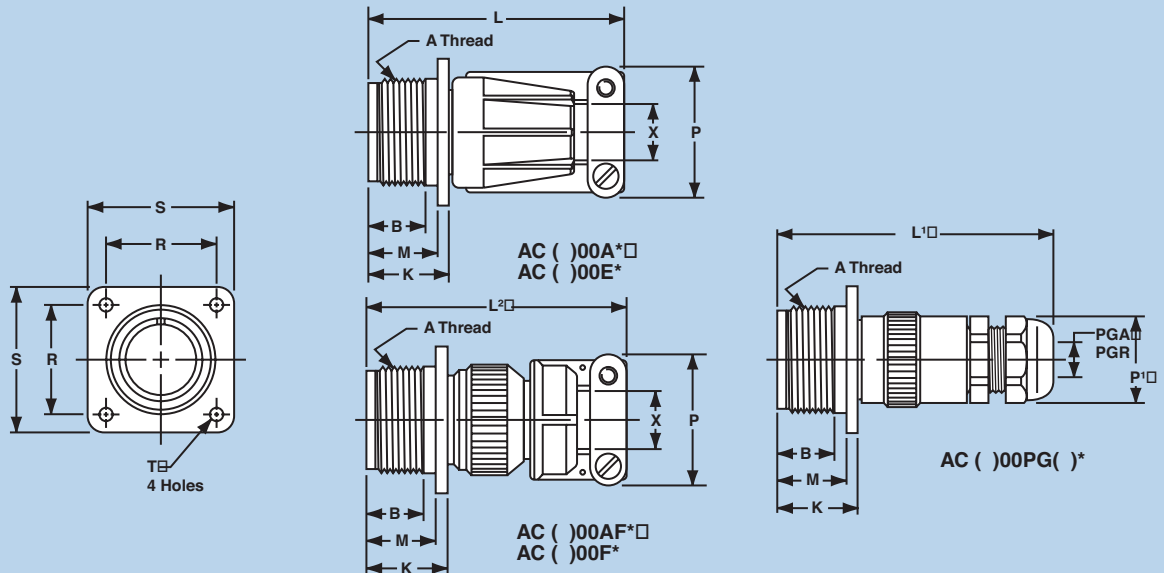
See page 31 for more information.

**Note:** The previous AC-B Bayonet series is replaced by the newer ACA-B Reverse Bayonet series. For availability of the AC-B, consult Amphenol Industrial Operations. For information on ACA-B Reverse Bayonet series connectors see Amphenol catalog IC-4.



RoHS Compliant options available.

# AC Threaded wall mounting receptacle



\* To complete order number, see how to order, page 59.

Inches

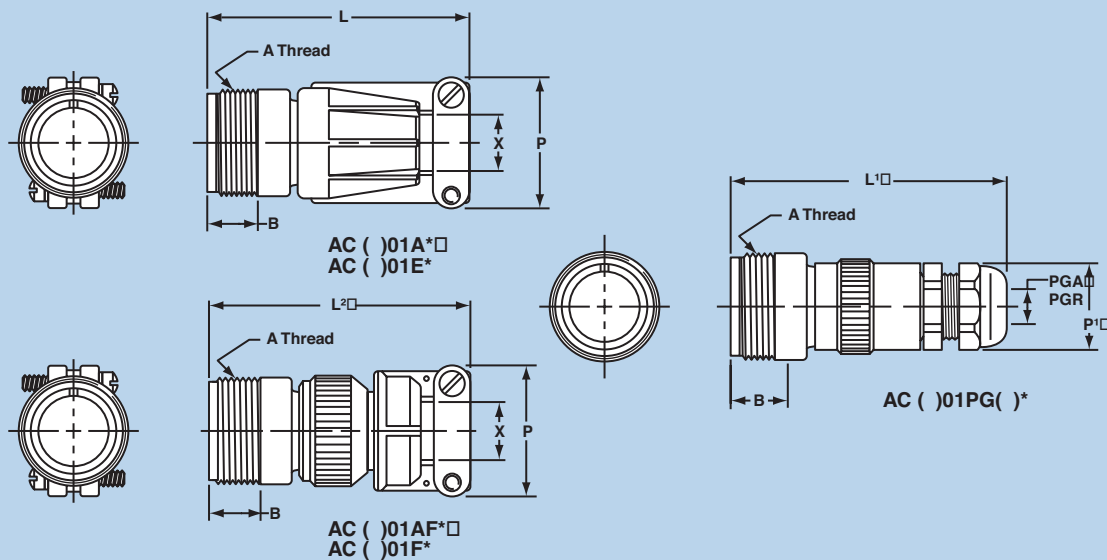
| Shell Size | A Thread Class 2A | B Min Full Thread | K +.020 - .010 | L Max | L <sup>1</sup> Max | L <sup>2</sup> Max | M +.010 - .000 | P Max | P <sup>1</sup> Hex Flats Ref | PGA Ref   | PGR Ref   | R ±.005 | S ±.010 | T Dia +.004 - .002 | X Max O.D. Cable |
|------------|-------------------|-------------------|----------------|-------|--------------------|--------------------|----------------|-------|------------------------------|-----------|-----------|---------|---------|--------------------|------------------|
| 10SL       | .6250-24UNEF      | .391              | .672           | 2.129 | 3.010              | 2.189              | .562           | .894  | .750                         | .150/.320 | .070/.240 | .719    | 1.000   | .120               | .312             |
| 12S        | .7500-20UNEF      | .450              | .672           | 2.129 | 3.010              | 2.261              | .562           | .894  | .750                         | .150/.320 | .070/.240 | .812    | 1.094   | .120               | .312             |
| 12         | .7500-20UNEF      | .625              | .860           | 2.524 | 3.500              | 2.644              | .750           | .894  | .750                         | .150/.320 | .070/.240 | .812    | 1.094   | .120               | .312             |
| 14S        | .8750-20UNEF      | .450              | .672           | 2.201 | 3.188              | 2.261              | .562           | 1.083 | .880                         | .190/.390 | .110/.280 | .906    | 1.188   | .120               | .438             |
| 14         | .8750-20UNEF      | .625              | .860           | 2.524 | 3.641              | 2.644              | .750           | 1.083 | .880                         | .190/.390 | .110/.280 | .906    | 1.188   | .120               | .438             |
| 16S        | 1.0000-20UNEF     | .450              | .672           | 2.201 | 3.265              | 2.266              | .562           | 1.181 | .940                         | .230/.470 | .190/.350 | .969    | 1.281   | .120               | .531             |
| 16         | 1.0000-20UNEF     | .625              | .860           | 2.524 | 3.718              | 2.644              | .750           | 1.181 | .940                         | .230/.470 | .190/.350 | .969    | 1.281   | .120               | .531             |
| 18         | 1.1250-18UNEF     | .625              | .891           | 2.596 | 3.718              | 2.716              | .750           | 1.300 | .940                         | .230/.470 | .190/.350 | 1.063   | 1.375   | .120               | .625             |
| 20         | 1.2500-18UNEF     | .625              | .891           | 2.654 | 3.798              | 2.774              | .750           | 1.487 | 1.060                        | .390/.560 | .270/.470 | 1.156   | 1.500   | .120               | .750             |
| 22         | 1.3750-18UNEF     | .625              | .891           | 2.654 | 4.080              | 2.916              | .750           | 1.487 | 1.060                        | .390/.560 | .270/.470 | 1.250   | 1.625   | .120               | .750             |
| 24         | 1.5000-18UNEF     | .625              | .953           | 2.885 | 4.142              | 3.051              | .812           | 1.712 | 1.060                        | .390/.560 | .270/.470 | 1.375   | 1.750   | .147               | .938             |
| 28         | 1.7500-18UNS      | .625              | .953           | 2.885 | 4.291              | 3.140              | .812           | 1.712 | 1.300                        | .510/.710 | .350/.630 | 1.562   | 2.000   | .147               | .938             |
| 32         | 2.0000-18UNS      | .625              | 1.031          | 2.943 | 4.643              | 3.184              | .875           | 2.063 | 1.650                        | .700/.980 | .510/.790 | 1.750   | 2.250   | .173               | 1.250            |
| 36         | 2.2500-16UN       | .625              | 1.031          | 2.943 | 4.643              | 3.245              | .875           | 2.283 | 1.650                        | .700/.980 | .510/.790 | 1.938   | 2.500   | .173               | 1.375            |
| 40         | 2.5000-16UN       | .625              | 1.031          | 3.068 | 5.635              | 3.670              | .875           | 2.688 | 1.650                        | .700/.980 | .510/.790 | 2.188   | 2.750   | .173               | 1.625            |

Millimeters

| Shell Size | B Min Full Thread | K +.51 - .25 | L Max | L <sup>1</sup> Max | L <sup>2</sup> Max | M +.25 - .00 | P Max | P <sup>1</sup> Hex Flats Ref | PGA Ref     | PGR Ref     | R ±.13 | S ±.25 | T Dia +.10 - .05 | X Max O.D. Cable |
|------------|-------------------|--------------|-------|--------------------|--------------------|--------------|-------|------------------------------|-------------|-------------|--------|--------|------------------|------------------|
| 10SL       | 9.93              | 17.07        | 54.08 | 76.45              | 55.60              | 14.28        | 22.71 | 19.05                        | 3.81/8.13   | 1.78/6.10   | 18.26  | 25.40  | 3.05             | 7.93             |
| 12S        | 11.43             | 17.07        | 54.08 | 76.45              | 57.43              | 14.28        | 22.71 | 19.05                        | 3.81/8.13   | 1.78/6.10   | 20.63  | 27.79  | 3.05             | 7.93             |
| 12         | 15.88             | 21.84        | 64.11 | 88.90              | 67.16              | 19.05        | 22.71 | 19.05                        | 3.81/8.13   | 1.78/6.10   | 20.63  | 27.79  | 3.05             | 7.93             |
| 14S        | 11.43             | 17.07        | 55.91 | 80.98              | 57.43              | 14.28        | 27.51 | 22.35                        | 4.83/9.91   | 2.79/7.11   | 23.01  | 30.18  | 3.05             | 11.13            |
| 14         | 15.88             | 21.84        | 64.11 | 92.48              | 67.16              | 19.05        | 27.51 | 22.35                        | 4.83/9.91   | 2.79/7.11   | 23.01  | 30.18  | 3.05             | 11.13            |
| 16S        | 11.43             | 17.07        | 55.91 | 82.93              | 57.56              | 14.28        | 30.00 | 23.88                        | 5.84/11.94  | 4.83/8.89   | 24.61  | 32.54  | 3.05             | 13.49            |
| 16         | 15.88             | 21.84        | 64.11 | 94.44              | 67.16              | 19.05        | 30.00 | 23.88                        | 5.84/11.94  | 4.83/8.89   | 24.61  | 32.54  | 3.05             | 13.49            |
| 18         | 15.88             | 22.63        | 65.94 | 94.44              | 68.99              | 19.05        | 33.02 | 23.88                        | 5.84/11.94  | 4.83/8.89   | 27.00  | 34.93  | 3.05             | 15.88            |
| 20         | 15.88             | 22.63        | 67.41 | 96.47              | 70.46              | 19.05        | 37.77 | 26.92                        | 9.91/14.22  | 6.86/11.94  | 29.36  | 38.10  | 3.05             | 19.05            |
| 22         | 15.88             | 22.63        | 67.41 | 103.63             | 74.07              | 19.05        | 37.77 | 26.92                        | 9.91/14.22  | 6.86/11.94  | 31.75  | 41.28  | 3.05             | 19.05            |
| 24         | 15.88             | 24.21        | 73.28 | 105.21             | 77.50              | 20.63        | 43.49 | 26.92                        | 9.91/14.22  | 6.86/11.94  | 34.93  | 44.45  | 3.73             | 23.83            |
| 28         | 15.88             | 24.21        | 73.28 | 108.99             | 79.76              | 20.63        | 43.49 | 33.02                        | 12.95/18.03 | 8.89/16.00  | 39.68  | 50.80  | 3.73             | 23.83            |
| 32         | 15.88             | 26.19        | 74.75 | 117.93             | 80.87              | 22.23        | 52.40 | 41.91                        | 17.78/24.89 | 12.95/20.07 | 44.45  | 57.15  | 4.39             | 31.75            |
| 36         | 15.88             | 26.19        | 74.75 | 117.93             | 82.42              | 22.23        | 57.99 | 41.91                        | 17.78/24.89 | 12.95/20.07 | 49.23  | 63.50  | 4.39             | 34.93            |
| 40         | 15.88             | 26.19        | 77.93 | 143.13             | 93.22              | 22.23        | 68.28 | 41.91                        | 17.78/24.89 | 12.95/20.07 | 55.58  | 69.85  | 4.39             | 41.28            |

All dimensions for reference only.

# AC Threaded line receptacle



\* To complete order number, see how to order, page 59.

Inches

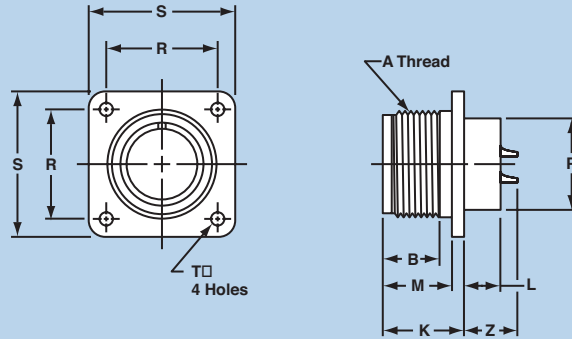
| Shell Size | A Thread<br>Class 2 A | B Min<br>Full Thread | L Max | L <sup>1</sup> Max | L <sup>2</sup> Max | P Max | P <sup>1</sup> Hex Flats<br>Ref | PGA Ref   | PGR Ref   | X Max<br>O.D. Cable |
|------------|-----------------------|----------------------|-------|--------------------|--------------------|-------|---------------------------------|-----------|-----------|---------------------|
| 10SL       | .6250-24UNEF          | .406                 | 2.129 | 3.010              | 2.189              | .894  | .750                            | .150/.320 | .070/.240 | .312                |
| 12S        | .7500-20UNEF          | .422                 | 2.129 | 3.010              | 2.261              | .894  | .750                            | .150/.320 | .070/.240 | .312                |
| 12         | .7500-20UNEF          | .656                 | 2.524 | 3.500              | 2.644              | .894  | .750                            | .150/.320 | .070/.240 | .312                |
| 14S        | .8750-20UNEF          | .391                 | 2.201 | 3.188              | 2.261              | 1.083 | .880                            | .190/.390 | .110/.280 | .438                |
| 14         | .8750-20UNEF          | .625                 | 2.524 | 3.641              | 2.644              | 1.083 | .880                            | .190/.390 | .110/.280 | .438                |
| 16S        | 1.0000-20UNEF         | .391                 | 2.201 | 3.265              | 2.266              | 1.181 | .940                            | .230/.470 | .190/.350 | .531                |
| 16         | 1.0000-20UNEF         | .625                 | 2.524 | 3.718              | 2.644              | 1.181 | .940                            | .230/.470 | .190/.350 | .531                |
| 18         | 1.1250-18UNEF         | .625                 | 2.596 | 3.718              | 2.716              | 1.300 | .940                            | .230/.470 | .190/.350 | .625                |
| 20         | 1.2500-18UNEF         | .625                 | 2.654 | 3.798              | 2.774              | 1.487 | 1.060                           | .390/.560 | .270/.470 | .750                |
| 22         | 1.3750-18UNEF         | .625                 | 2.654 | 4.080              | 2.916              | 1.487 | 1.060                           | .390/.560 | .270/.470 | .750                |
| 24         | 1.5000-18UNEF         | .625                 | 2.885 | 4.142              | 3.051              | 1.712 | 1.060                           | .390/.560 | .270/.470 | .938                |
| 28         | 1.7500-18UNS          | .625                 | 2.885 | 4.291              | 3.140              | 1.712 | 1.300                           | .510/.710 | .350/.630 | .938                |
| 32         | 2.0000-18UNS          | .625                 | 2.943 | 4.643              | 3.184              | 2.063 | 1.650                           | .700/.980 | .510/.790 | 1.250               |
| 36         | 2.2500-16UN           | .625                 | 2.943 | 4.643              | 3.245              | 2.283 | 1.650                           | .700/.980 | .510/.790 | 1.375               |
| 40         | 2.5000-16UN           | .625                 | 3.068 | 5.635              | 3.670              | 2.688 | 1.650                           | .700/.980 | .510/.790 | 1.625               |

Millimeters

| Shell Size | B Min<br>Full Thread | L Max | L <sup>1</sup> Max | L <sup>2</sup> Max | P Max | P <sup>1</sup> Hex Flats<br>Ref | PGA Ref     | PGR Ref     | X Max<br>O.D. Cable |
|------------|----------------------|-------|--------------------|--------------------|-------|---------------------------------|-------------|-------------|---------------------|
| 10SL       | 10.31                | 54.08 | 76.45              | 55.60              | 22.71 | 19.05                           | 3.81/8.13   | 1.78/6.10   | 7.93                |
| 12S        | 10.72                | 54.08 | 76.45              | 57.43              | 22.71 | 19.05                           | 3.81/8.13   | 1.78/6.10   | 7.93                |
| 12         | 16.66                | 64.11 | 88.90              | 67.16              | 22.71 | 19.05                           | 3.81/8.13   | 1.78/6.10   | 7.93                |
| 14S        | 9.93                 | 55.91 | 80.98              | 57.43              | 27.51 | 22.35                           | 4.83/9.91   | 2.79/7.11   | 11.13               |
| 14         | 15.88                | 64.11 | 92.48              | 67.16              | 27.51 | 22.35                           | 4.83/9.91   | 2.79/7.11   | 11.13               |
| 16S        | 9.93                 | 55.91 | 82.93              | 57.56              | 30.00 | 23.88                           | 5.84/11.94  | 4.83/8.89   | 13.49               |
| 16         | 15.88                | 64.11 | 94.44              | 67.16              | 30.00 | 23.88                           | 5.84/11.94  | 4.83/8.89   | 13.49               |
| 18         | 15.88                | 65.94 | 94.44              | 68.99              | 33.02 | 23.88                           | 5.84/11.94  | 4.83/8.89   | 15.88               |
| 20         | 15.88                | 67.41 | 96.47              | 70.46              | 37.77 | 26.92                           | 9.91/14.22  | 6.86/11.94  | 19.05               |
| 22         | 15.88                | 67.41 | 103.63             | 74.07              | 37.77 | 26.92                           | 9.91/14.22  | 6.86/11.94  | 19.05               |
| 24         | 15.88                | 73.28 | 105.21             | 77.50              | 43.49 | 26.92                           | 9.91/14.22  | 6.86/11.94  | 23.83               |
| 28         | 15.88                | 73.28 | 108.99             | 79.76              | 43.49 | 33.02                           | 12.95/18.03 | 8.89/16.00  | 23.83               |
| 32         | 15.88                | 74.75 | 117.93             | 80.87              | 52.40 | 41.91                           | 17.78/24.89 | 12.95/20.07 | 31.75               |
| 36         | 15.88                | 74.75 | 117.93             | 82.42              | 57.99 | 41.91                           | 17.78/24.89 | 12.95/20.07 | 34.93               |
| 40         | 15.88                | 77.93 | 143.13             | 93.22              | 68.28 | 41.91                           | 17.78/24.89 | 12.95/20.07 | 41.28               |

All dimensions for reference only.

# AC Threaded box mounting receptacle



AC ( )02A\*□  
AC ( )02E\*

\* To complete order number, see how to order, page 59.

Inches

| Shell Size | A Thread Class 2 A | B Min Full Thread | K +.020 - .010 | L +.000 - .010 | M +.010 - .000 | P Dia +.010 - .000 | R ±.005 | S ±.031 | T Dia +.004 - .002 | Z Max** |
|------------|--------------------|-------------------|----------------|----------------|----------------|--------------------|---------|---------|--------------------|---------|
| 8S         | .5000-28UNEF       | .391              | .672           | .297           | .562           | .375               | .594    | .875    | .120               | .519    |
| 10S        | .6250-24NEF        | .391              | .672           | .297           | .562           | .500               | .719    | 1.000   | .120               | .519    |
| 10SL       | .6250-24NEF        | .391              | .672           | .297           | .562           | .625               | .719    | 1.000   | .120               | .519    |
| 12S        | .7500-20UNEF       | .450              | .672           | .297           | .562           | .625               | .812    | 1.094   | .120               | .519    |
| 12         | .7500-20UNEF       | .625              | .860           | .484           | .750           | .625               | .812    | 1.094   | .120               | .722    |
| 14S        | .8750-20UNEF       | .450              | .672           | .297           | .562           | .750               | .906    | 1.188   | .120               | .519    |
| 14         | .8750-20UNEF       | .625              | .860           | .484           | .750           | .750               | .906    | 1.188   | .120               | .722    |
| 16S        | 1.0000-20UNEF      | .450              | .672           | .297           | .562           | .875               | .969    | 1.281   | .120               | .519    |
| 16         | 1.0000-20UNEF      | .625              | .860           | .484           | .750           | .875               | .969    | 1.281   | .120               | .722    |
| 18         | 1.1250-18NEF       | .625              | .891           | .453           | .750           | 1.000              | 1.062   | 1.375   | .120               | .691    |
| 20         | 1.2500-18NEF       | .625              | .891           | .453           | .750           | 1.125              | 1.156   | 1.500   | .120               | .691    |
| 22         | 1.3750-18NEF       | .625              | .891           | .453           | .750           | 1.250              | 1.250   | 1.625   | .120               | .691    |
| 24         | 1.5000-18NEF       | .625              | .953           | .453           | .812           | 1.375              | 1.375   | 1.750   | .147               | .628    |
| 28         | 1.7500-18NS        | .625              | .953           | .453           | .812           | 1.625              | 1.562   | 2.000   | .147               | .628    |
| 32         | 2.0000-18NS        | .625              | 1.031          | .438           | .875           | 1.875              | 1.750   | 2.250   | .173               | .550    |
| 36         | 2.2500-16UN        | .625              | 1.031          | .438           | .875           | 2.062              | 1.938   | 2.500   | .173               | .550    |
| 40         | 2.5000-16UN        | .625              | 1.031          | .438           | .875           | 2.312              | 2.188   | 2.750   | .173               | .550    |

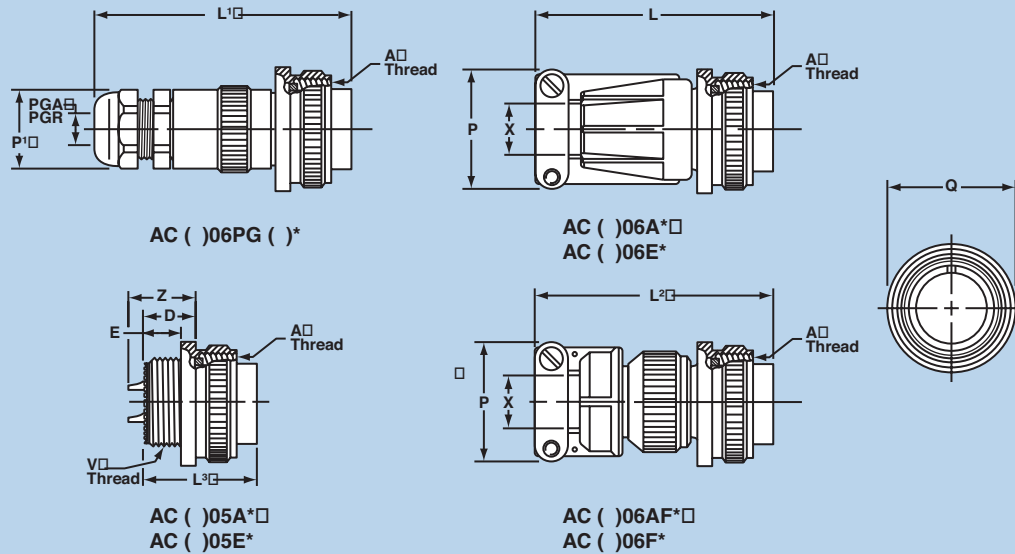
Millimeters

| Shell Size | B Min Full Thread | K +.51 - .25 | L +.00 - .25 | M +.25 - .00 | P Dia +.25 - .00 | R ±.13 | S ±.79 | T Dia +.10 - .05 | Z Max** |
|------------|-------------------|--------------|--------------|--------------|------------------|--------|--------|------------------|---------|
| 8S         | 9.93              | 17.07        | 7.54         | 14.28        | 9.53             | 15.09  | 22.23  | 3.05             | 13.18   |
| 10S        | 9.93              | 17.07        | 7.54         | 14.28        | 12.70            | 18.26  | 25.40  | 3.05             | 13.18   |
| 10SL       | 9.93              | 17.07        | 7.54         | 14.28        | 15.88            | 18.26  | 25.40  | 3.05             | 13.18   |
| 12S        | 11.43             | 17.07        | 7.54         | 14.28        | 15.88            | 20.63  | 27.79  | 3.05             | 13.18   |
| 12         | 15.88             | 21.84        | 12.29        | 19.05        | 15.88            | 20.63  | 27.79  | 3.05             | 18.34   |
| 14S        | 11.43             | 17.07        | 7.54         | 14.28        | 19.05            | 23.01  | 30.18  | 3.05             | 13.18   |
| 14         | 15.88             | 21.84        | 12.29        | 19.05        | 19.05            | 23.01  | 30.18  | 3.05             | 18.34   |
| 16S        | 11.43             | 17.07        | 7.54         | 14.28        | 22.23            | 24.61  | 32.54  | 3.05             | 13.18   |
| 16         | 15.88             | 21.84        | 12.29        | 19.05        | 22.23            | 24.61  | 32.54  | 3.05             | 18.34   |
| 18         | 15.88             | 22.63        | 11.51        | 19.05        | 25.40            | 26.98  | 34.93  | 3.05             | 17.55   |
| 20         | 15.88             | 22.63        | 11.51        | 19.05        | 28.58            | 29.36  | 38.10  | 3.05             | 17.55   |
| 22         | 15.88             | 22.63        | 11.51        | 19.05        | 31.75            | 31.75  | 41.28  | 3.05             | 17.55   |
| 24         | 15.88             | 24.21        | 11.51        | 20.63        | 34.93            | 34.93  | 44.45  | 3.73             | 15.95   |
| 28         | 15.88             | 24.21        | 11.51        | 20.63        | 41.28            | 39.68  | 50.80  | 3.73             | 15.95   |
| 32         | 15.88             | 26.19        | 11.13        | 22.23        | 47.63            | 44.45  | 57.15  | 4.39             | 13.97   |
| 36         | 15.88             | 26.19        | 11.13        | 22.23        | 52.38            | 49.23  | 63.50  | 4.39             | 13.97   |
| 40         | 15.88             | 26.19        | 11.13        | 22.23        | 58.73            | 55.58  | 69.85  | 4.39             | 13.97   |

\*\* Increase Z dimension by .312 for size "0" contact only.

All dimensions for reference only.

# AC Threaded straight plug



\* To complete order number, see how to order, page 59.

Inches

| Shell Size | A Thread Class 2B | D ±.010 | E +.020 - .030 | L Max | L' Max | L² Max | L³ Max | P Max | P¹ Hex Flats Ref | PGA Ref   | PGR Ref   | Q Max | V Thread Plated Class 2A | X Max O.D. Cable | Z ±.045 |
|------------|-------------------|---------|----------------|-------|--------|--------|--------|-------|------------------|-----------|-----------|-------|--------------------------|------------------|---------|
| 10SL       | .6250-24UNEF      | .438    | .298           | 2.129 | 3.010  | 2.189  | .989   | .894  | .750             | .150/.320 | .070/.240 | .946  | .6250-24UNEF             | .312             | .562    |
| 12S        | .7500-20UNEF      | .438    | .312           | 2.129 | 3.010  | 2.261  | .989   | .894  | .750             | .150/.320 | .070/.240 | .995  | .6250-24UNEF             | .312             | .562    |
| 12         | .7500-20UNEF      | .625    | .469           | 2.524 | 3.500  | 2.644  | 1.364  | .894  | .750             | .150/.320 | .070/.240 | .995  | .6250-24UNEF             | .312             | .812    |
| 14S        | .8750-20UNEF      | .438    | .312           | 2.201 | 3.188  | 2.261  | .989   | 1.083 | .880             | .190/.390 | .110/.280 | 1.123 | .7500-20UNEF             | .438             | .562    |
| 14         | .8750-20UNEF      | .625    | .469           | 2.524 | 3.641  | 2.644  | 1.364  | 1.083 | .880             | .190/.390 | .110/.280 | 1.123 | .7500-20UNEF             | .438             | .812    |
| 16S        | 1.0000-20UNEF     | .438    | .312           | 2.201 | 3.265  | 2.266  | .989   | 1.181 | .940             | .230/.470 | .190/.350 | 1.250 | .8750-20UNEF             | .531             | .562    |
| 16         | 1.0000-20UNEF     | .625    | .469           | 2.524 | 3.718  | 2.644  | 1.364  | 1.181 | .940             | .230/.470 | .190/.350 | 1.250 | .8750-20UNEF             | .531             | .812    |
| 18         | 1.1250-18UNEF     | .625    | .469           | 2.596 | 3.718  | 2.716  | 1.364  | 1.300 | .940             | .230/.470 | .190/.350 | 1.333 | 1.0000-20UNEF            | .625             | .812    |
| 20         | 1.2500-18UNEF     | .625    | .469           | 2.654 | 3.798  | 2.774  | 1.364  | 1.487 | 1.060            | .390/.560 | .270/.470 | 1.461 | 1.1250-18UNEF            | .750             | .812    |
| 22         | 1.3750-18UNEF     | .625    | .469           | 2.654 | 4.080  | 2.916  | 1.364  | 1.487 | 1.060            | .390/.560 | .270/.470 | 1.588 | 1.2500-18UNEF            | .750             | .812    |
| 24         | 1.5000-18UNEF     | .688    | .469           | 2.885 | 4.142  | 3.051  | 1.427  | 1.712 | 1.060            | .390/.560 | .270/.470 | 1.715 | 1.3750-18UNEF            | .938             | .812    |
| 28         | 1.7500-18UNS      | .688    | .469           | 2.885 | 4.291  | 3.140  | 1.427  | 1.712 | 1.300            | .510/.710 | .350/.630 | 1.968 | 1.6250-18UNEF            | .938             | .812    |
| 32         | 2.0000-18UNS      | .750    | .469           | 2.943 | 4.643  | 3.184  | 1.489  | 2.063 | 1.650            | .700/.980 | .510/.790 | 2.209 | 1.8750-16UN              | 1.250            | .812    |
| 36         | 2.2500-16UN       | .750    | .469           | 2.943 | 4.643  | 3.245  | 1.489  | 2.283 | 1.650            | .700/.980 | .510/.790 | 2.463 | 2.0625-16UN              | 1.375            | .812    |
| 40         | 2.5000-16UN       | .750    | .469           | 3.068 | 5.635  | 3.670  | 1.489  | 2.688 | 1.650            | .700/.980 | .510/.790 | 2.718 | 2.3125-16UN              | 1.625            | .812    |

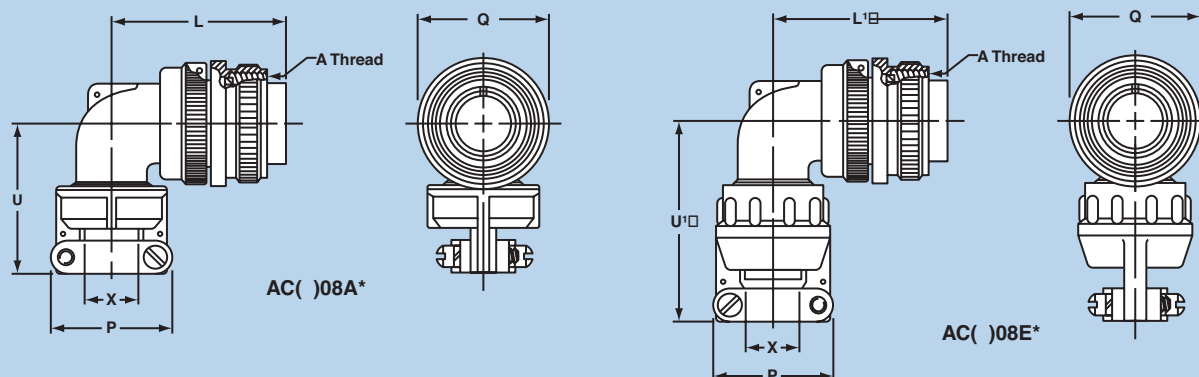
Millimeters

| Shell Size | D ±.25 | E +.51 - .76 | L Max | L' Max | L² Max | L³ Max | P Max | P¹ Hex Flats Ref | PGA Ref     | PGR Ref     | Q Max | X Max O.D. Cable | Z ±1.14 |
|------------|--------|--------------|-------|--------|--------|--------|-------|------------------|-------------|-------------|-------|------------------|---------|
| 10SL       | 11.13  | 7.57         | 54.08 | 76.45  | 55.60  | 25.12  | 22.71 | 19.05            | 3.81/8.13   | 1.78/6.10   | 24.03 | 7.93             | 14.28   |
| 12S        | 11.13  | 7.93         | 54.08 | 76.45  | 57.43  | 25.12  | 22.71 | 19.05            | 3.81/8.13   | 1.78/6.10   | 25.27 | 7.93             | 14.28   |
| 12         | 15.88  | 11.91        | 64.11 | 88.90  | 67.16  | 34.65  | 22.71 | 19.05            | 3.81/8.13   | 1.78/6.10   | 25.27 | 7.93             | 20.63   |
| 14S        | 11.13  | 7.93         | 55.91 | 80.98  | 57.43  | 25.12  | 27.51 | 22.35            | 4.83/9.91   | 2.79/7.11   | 28.52 | 11.13            | 14.28   |
| 14         | 15.88  | 11.91        | 64.11 | 92.48  | 67.16  | 34.65  | 27.51 | 22.35            | 4.83/9.91   | 2.79/7.11   | 28.52 | 11.13            | 20.63   |
| 16S        | 11.13  | 7.93         | 55.91 | 82.93  | 57.56  | 25.12  | 30.00 | 23.88            | 5.84/11.94  | 4.83/8.89   | 31.75 | 13.49            | 14.28   |
| 16         | 15.88  | 11.91        | 64.11 | 94.44  | 67.16  | 34.65  | 30.00 | 23.88            | 5.84/11.94  | 4.83/8.89   | 31.75 | 13.49            | 20.63   |
| 18         | 15.88  | 11.91        | 65.94 | 94.44  | 68.99  | 34.65  | 33.02 | 23.88            | 5.84/11.94  | 4.83/8.89   | 33.86 | 15.88            | 20.63   |
| 20         | 15.88  | 11.91        | 67.41 | 96.47  | 70.46  | 34.65  | 37.77 | 26.92            | 9.91/14.22  | 6.86/11.94  | 37.11 | 19.05            | 20.63   |
| 22         | 15.88  | 11.91        | 67.41 | 103.63 | 74.07  | 34.65  | 37.77 | 26.92            | 9.91/14.22  | 6.86/11.94  | 40.34 | 19.05            | 20.63   |
| 24         | 17.48  | 11.91        | 73.28 | 105.21 | 77.50  | 36.25  | 43.49 | 26.92            | 9.91/14.22  | 6.86/11.94  | 43.56 | 23.83            | 20.63   |
| 28         | 17.48  | 11.91        | 73.28 | 108.99 | 79.76  | 36.25  | 43.49 | 33.02            | 12.95/18.03 | 8.89/16.00  | 49.99 | 23.83            | 20.63   |
| 32         | 19.05  | 11.91        | 74.75 | 117.93 | 80.87  | 37.82  | 52.40 | 41.91            | 17.78/24.89 | 12.95/20.07 | 56.11 | 31.75            | 20.63   |
| 36         | 19.05  | 11.91        | 74.75 | 117.93 | 82.42  | 37.82  | 57.99 | 41.91            | 17.78/24.89 | 12.95/20.07 | 62.56 | 34.93            | 20.63   |
| 40         | 19.05  | 11.91        | 77.93 | 143.13 | 93.22  | 37.82  | 68.28 | 41.91            | 17.78/24.89 | 12.95/20.07 | 69.04 | 41.28            | 20.63   |

All dimensions for reference only.

# AC Threaded

## 90 degree plug



\* To complete order number, see how to order, page 59.

Inches

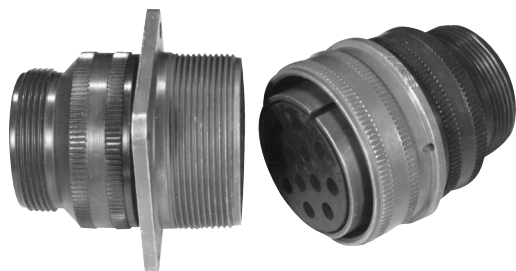
| Shell Size | A Thread Class 2B | L Max | L' Max | P Max | Q Dia Max | U Max | U' Max | X Max O.D. Cable |
|------------|-------------------|-------|--------|-------|-----------|-------|--------|------------------|
| 10SL       | .6250-24NEF       | 1.492 | 1.492  | .906  | .946      | 1.305 | 1.812  | .312             |
| 12S        | .7500-20UNEF      | 1.492 | 1.492  | .906  | .995      | 1.305 | 1.812  | .312             |
| 12         | .7500-20UNEF      | 1.867 | 1.867  | .906  | .995      | 1.305 | 1.812  | .312             |
| 14S        | .8750-20UNEF      | 1.556 | 1.556  | 1.031 | 1.123     | 1.485 | 1.875  | .438             |
| 14         | .8750-20UNEF      | 1.931 | 1.931  | 1.031 | 1.123     | 1.485 | 1.875  | .438             |
| 16S        | 1.0000-20UNEF     | 1.682 | 1.682  | 1.125 | 1.250     | 1.612 | 1.937  | .531             |
| 16         | 1.0000-20UNEF     | 2.057 | 2.057  | 1.125 | 1.250     | 1.612 | 1.937  | .531             |
| 18         | 1.1250-18NEF      | 2.119 | 2.119  | 1.234 | 1.333     | 1.738 | 2.109  | .625             |
| 20         | 1.2500-18NEF      | 2.369 | 2.322  | 1.484 | 1.461     | 1.800 | 2.187  | .750             |
| 22         | 1.3750-18NEF      | 2.369 | 2.322  | 1.484 | 1.588     | 1.862 | 2.250  | .750             |
| 24         | 1.5000-18NEF      | 2.620 | 2.510  | 1.683 | 1.715     | 2.100 | 2.484  | .938             |
| 28         | 1.7500-18NS       | 2.620 | 2.510  | 1.683 | 1.968     | 2.162 | 2.546  | .938             |
| 32         | 2.0000-18NS       | 2.842 | 2.744  | 2.188 | 2.209     | 2.405 | 3.045  | 1.250            |
| 36         | 2.2500-16UN       | 2.900 | 2.869  | 2.344 | 2.463     | 2.536 | 3.218  | 1.375            |
| 40         | 2.5000-16UN       | 3.025 | 2.994  | 2.688 | 2.719     | 3.206 | 3.375  | 1.625            |

Millimeters

| Shell Size | L Max | L' Max | P Max | Q Dia Max | U Max | U' Max | X Max O.D. Cable |
|------------|-------|--------|-------|-----------|-------|--------|------------------|
| 10SL       | 37.90 | 37.90  | 23.01 | 24.03     | 33.15 | 46.03  | 7.93             |
| 12S        | 37.90 | 37.90  | 23.01 | 25.27     | 33.15 | 46.03  | 7.93             |
| 12         | 47.42 | 47.42  | 23.01 | 25.27     | 33.15 | 46.03  | 7.93             |
| 14S        | 39.52 | 39.52  | 26.19 | 28.52     | 37.72 | 47.63  | 11.13            |
| 14         | 49.05 | 49.05  | 26.19 | 28.52     | 37.72 | 47.63  | 11.13            |
| 16S        | 42.72 | 42.72  | 28.58 | 31.75     | 40.95 | 49.20  | 13.49            |
| 16         | 52.25 | 52.25  | 28.58 | 31.75     | 40.95 | 49.20  | 13.49            |
| 18         | 53.82 | 53.82  | 31.34 | 33.86     | 44.15 | 53.57  | 15.88            |
| 20         | 60.17 | 58.98  | 37.69 | 37.11     | 45.72 | 55.55  | 19.05            |
| 22         | 60.17 | 58.98  | 37.69 | 40.34     | 47.30 | 57.15  | 19.05            |
| 24         | 66.55 | 63.75  | 42.75 | 43.56     | 53.34 | 63.09  | 23.83            |
| 28         | 66.55 | 63.75  | 42.75 | 49.99     | 54.92 | 64.67  | 23.83            |
| 32         | 72.19 | 69.70  | 55.58 | 56.11     | 61.09 | 77.34  | 31.75            |
| 36         | 73.66 | 72.87  | 59.54 | 62.56     | 64.41 | 81.74  | 34.93            |
| 40         | 76.84 | 76.05  | 68.28 | 69.06     | 81.43 | 85.73  | 41.28            |

All dimensions for reference only.

# Amphenol SAE AS50151 Standard Cylindrical Connectors



**MS-A, MS-C**



**MS-E/F**



**MS-R**

## DESIGN CHARACTERISTICS

- Medium to heavy weight cylindrical
- Durable, field-proven design
- Environmental resistant
- Resilient inserts
- Operating voltage to 3000 VAC (RMS) at sea level
- Threaded couplings
- Single key/keyway shell polarization

## CUSTOMER OPTIONS

- Five shell styles
- Nineteen shell sizes
- 305 contact arrangements from 1 to 104 circuits
- Solder or crimp contacts, sizes 16-0 accepting 22-0 AWG.
- Five class designations
- Alternate insert positioning
- Hermetic configurations available

MS connectors meet the latest performance requirements of SAE AS50151. These connectors represent well-proven electrical capability at an acceptable cost for most equipment where durability is important.

SAE AS50151 features threaded couplings and single key/keyway polarization, representing maximum simplicity in design. Applications include military ground support equipment, ordnance and shipboard installations.

Amphenol Industrial Operations manufactures five classes of connectors to meet different requirements. Class designations and brief descriptions are listed below.

A – Solid Shell – for general, non-environmental applications.

C – Pressurized – for use on pressurized bulkheads or pressure barriers; limits air leakage regardless of type and class of plug mated with them.

E/F –Environmental Resisting with Strain Relief – designed for applications where the connector will be exposed to moisture, vibration, and rapid changes in pressure and temperature.

R – Lightweight Environmental Resisting – shorter in length and lighter in weight than the E and F classes, the MS-R offers a high degree of reliability under adverse conditions: recommended for new design applications.

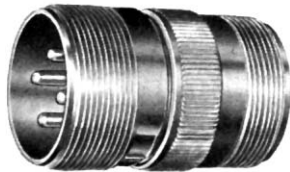
Environmental Classes F and R are updated to and produced in strict accordance to SAE AS50151. Classes A, C and E are still produced, but are no longer listed on the qualified products database (QPD).

# MS/Standard

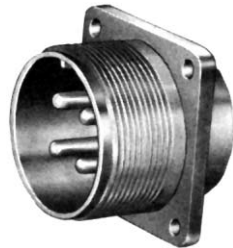
## MS-A and MS-C



**wall mounting receptacle**



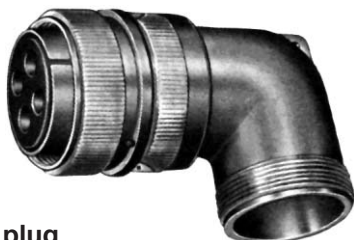
**inline receptacle**



**box mounting receptacle**



**straight plug**



**90 degree plug**

### MS-A and MS-C

MS-A and MS-C class connectors perform many of the vital functions in powering, testing and ground support systems. Class A applications include communications equipment, computers and shipboard installations where mechanical forces and physical parameters are not subject to extreme or rapid environmental changes.

Class C connectors are most frequently used on pressurized bulkheads or pressure barriers at elevated altitudes or maritime applications. Air leakage is limited to one cubic inch per hour at a pressure differential of 30 lbs. per square inch.

#### Shells:

Shell components are fabricated from high grade aluminum alloy. Electrically conductive cadmium plate finish with an olive drab chromate after-treat offers corrosion resistance.

#### Contacts:

Contacts are solder with pre-filled solder cups. Pins and sockets are machined from copper alloy with a silver plated finish. Size 16 and 12 socket contacts incorporate a closed entry design. Refer to page 54 for additional contact information.

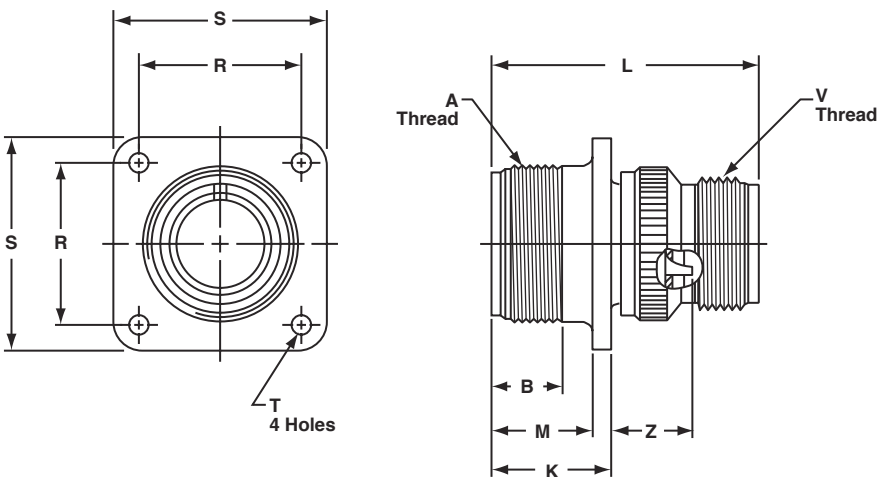
#### Inserts:

Inserts are resilient neoprene, offering high dielectric strength, high arc resistance and resistance to vibration.

# MS/Standard

# MS3100A or C

## wall mounting receptacle



To complete order number, see “how to order” pg. 59.  
For solder well data, see page 29.

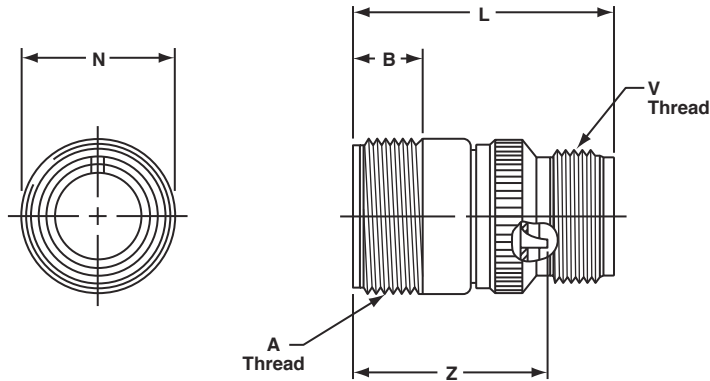
| Shell Size | A Thread<br>Class 2A | B Min Full Thread | K<br>+.020<br>-.010 | L<br>±.030 | M<br>+.010<br>-.000 | R<br>±.005 | S<br>±.031 | T Dia.<br>+.004<br>-.002 | V Thread<br>Class 2A | Z<br>+.050<br>-.060 |
|------------|----------------------|-------------------|---------------------|------------|---------------------|------------|------------|--------------------------|----------------------|---------------------|
| 8S         | .5000-28UNEF         | .391              | .672                | 1.391      | .562                | .594       | .875       | .120                     | .5000-28UNEF         | .422                |
| 10S        | .6250-24 UNF         | .391              | .672                | 1.468      | .562                | .719       | 1.000      | .120                     | .5000-28UNEF         | .422                |
| 10SL       | .6250-24 UNF         | .391              | .672                | 1.468      | .562                | .719       | 1.000      | .120                     | .6250-24NEF          | .422                |
| 12S        | .7500-20UNEF         | .450              | .672                | 1.468      | .562                | .812       | 1.094      | .120                     | .6250-24NEF          | .422                |
| 12         | .7500-20UNEF         | .625              | .860                | 1.843      | .750                | .812       | 1.094      | .120                     | .6250-24NEF          | .672                |
| 14S        | .8750-20UNEF         | .450              | .672                | 1.468      | .562                | .906       | 1.188      | .120                     | .7500-20UNEF         | .422                |
| 14         | .8750-20UNEF         | .625              | .860                | 1.843      | .750                | .906       | 1.188      | .120                     | .7500-20UNEF         | .672                |
| 16S        | 1.0000-20UNEF        | .450              | .672                | 1.468      | .562                | .969       | 1.281      | .120                     | .8750-20UNEF         | .422                |
| 16         | 1.0000-20UNEF        | .625              | .860                | 1.843      | .750                | .969       | 1.281      | .120                     | .8750-20UNEF         | .672                |
| 18         | 1.1250-18NEF         | .625              | .891                | 1.938      | .750                | 1.063      | 1.375      | .120                     | 1.0000-20UNEF        | .641*               |
| 20         | 1.2500-18NEF         | .625              | .891                | 1.844      | .750                | 1.156      | 1.500      | .120                     | 1.1875-18NEF         | .641*               |
| 22         | 1.3750-18NEF         | .625              | .891                | 1.938      | .750                | 1.250      | 1.625      | .120                     | 1.1875-18NEF         | .641*               |
| 24         | 1.5000-18NEF         | .625              | .953                | 1.969      | .812                | 1.375      | 1.750      | .147                     | 1.4375-18NEF         | .578*               |
| 28         | 1.7500-18NS          | .625              | .953                | 2.188      | .812                | 1.562      | 2.000      | .147                     | 1.4375-18NEF         | .578*               |
| 32         | 2.0000-18NS          | .625              | 1.031               | 2.157      | .875                | 1.750      | 2.250      | .173                     | 1.7500-18NS          | .500*               |
| 36         | 2.2500-16UN          | .625              | 1.031               | 2.219      | .875                | 1.938      | 2.500      | .173                     | 2.0000-18NS          | .500*               |
| 40         | 2.5000-16UN          | .625              | 1.031               | 2.188      | .875                | 2.188      | 2.750      | .173                     | 2.2500-16UN          | .500*               |
| 44***      | 2.7500-16UN          | .625              | 1.031†              | 2.547      | .875                | 2.375      | 3.000††    | .173                     | 2.5000-16UN          | .751**              |
| 48***      | 3.0000-16UN          | .625              | 1.031†              | 2.547      | .875                | 2.625      | 3.000††    | .173                     | 3.0000-16UN          | .751**              |

\* Increase Z dimension by .312 for size "0" contact only.  
 \*\* Increase Z dimension by .062 for size "0" contact only.  
 \*\*\* Available in proprietary version only.  
 † +.020 -.030  
 †† ±.020

# MS/Standard

## MS3101A

### inline receptacle



To complete order number, see "how to order" pg. 59.  
For solder well data, see page 29.

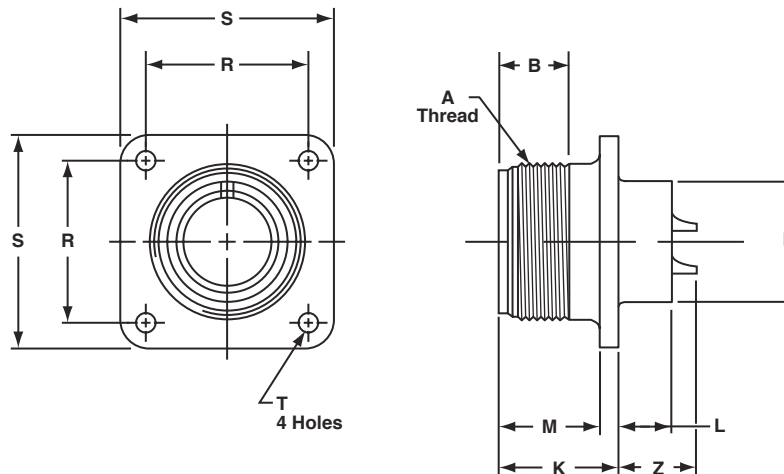
| Shell Size | A Thread Class 2A | B Min. Full Thread | L $\pm.030$ | N Dia. Max. | V Thread Class 2A | Z $\pm.040$ |
|------------|-------------------|--------------------|-------------|-------------|-------------------|-------------|
| 8S         | .5000-28UNEF      | .406               | 1.390       | .532        | .5000-28UNEF      | 1.094       |
| 10S        | .6250-24NEF       | .406               | 1.468       | .628        | .5000-28UNEF      | 1.094       |
| 10SL       | .6250-24NEF       | .406               | 1.468       | .755        | .6250-24NEF       | 1.094       |
| 12S        | .7500-20UNEF      | .422               | 1.468       | .755        | .6250-24NEF       | 1.094       |
| 12         | .7500-20UNEF      | .656               | 1.843       | .755        | .6250-24NEF       | 1.532       |
| 14S        | .8750-20UNEF      | .391               | 1.468       | .882        | .7500-20UNEF      | 1.094       |
| 14         | .8750-20UNEF      | .625               | 1.843       | .882        | .7500-20UNEF      | 1.532       |
| 16S        | 1.0000-20UNEF     | .391               | 1.468       | 1.010       | .8750-20UNEF      | 1.094       |
| 16         | 1.0000-20UNEF     | .625               | 1.843       | 1.010       | .8750-20UNEF      | 1.532       |
| 18         | 1.1250-18NEF      | .625               | 1.938       | 1.137       | 1.0000-20UNEF     | 1.532*      |
| 20         | 1.2500-18NEF      | .625               | 1.844       | 1.264       | 1.1875-18NEF      | 1.532*      |
| 22         | 1.3750-18NEF      | .625               | 1.938       | 1.392       | 1.1875-18NEF      | 1.532*      |
| 24         | 1.5000-18NEF      | .625               | 1.969       | 1.519       | 1.4375-18NEF      | 1.532*      |
| 28         | 1.7500-18NS       | .625               | 2.188       | 1.774       | 1.4375-18NEF      | 1.532*      |
| 32         | 2.0000-18NS       | .625               | 2.157       | 1.996       | 1.7500-18NS       | 1.532*      |
| 36         | 2.2500-16UN       | .625               | 2.219       | 2.251       | 2.0000-18NS       | 1.532*      |
| 40         | 2.5000-16UN       | .625               | 2.188       | 2.506       | 2.2500-16UN       | 1.532*      |
| 44***      | 2.7500-16UN       | .625               | 2.521       | 3.135       | 2.5000-16UN       | 1.782**     |

\* Increase Z dimension by .312 for size "0" contact only.

\*\* Increase Z dimension by .062 for size "0" contact only.

\*\*\* Available in proprietary version only.

# MS/Standard MS3102A or C box mounting receptacle



To complete order number, see "how to order" pg. 59.  
For solder well data, see page 29.

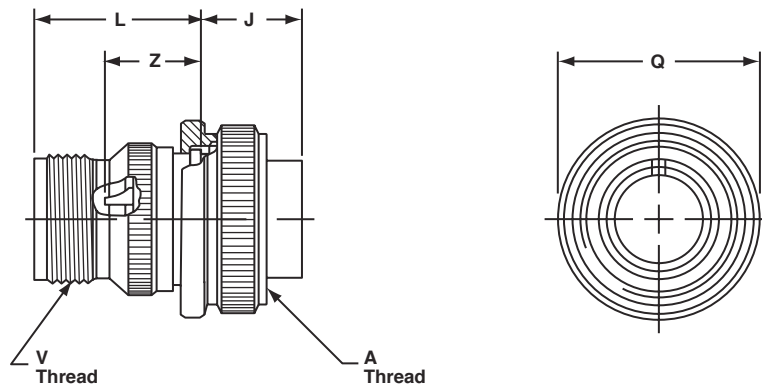
| Shell Size | A Thread Class 2A | B Min Full Thread | K $+.020$ $-.010$ | L $+.000$ $-.010$ | M $+.010$ $-.000$ | N Dia. $+.010$ $-.000$ | R $\pm.005$ | S $\pm.031$ | T Dia. $+.004$ $-.002$ | Z $+.050$ $-.060$ |
|------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------------|-------------|-------------|------------------------|-------------------|
| 8S         | .5000-28UNEF      | .391              | .672              | .297              | .562              | .375                   | .594        | .875        | .120                   | .422              |
| 10S        | .6250-24NEF       | .391              | .672              | .297              | .562              | .500                   | .719        | 1.000       | .120                   | .422              |
| 10SL       | .6250-24NEF       | .391              | .672              | .297              | .562              | .625                   | .719        | 1.000       | .120                   | .422              |
| 12S        | .7500-20UNEF      | .450              | .672              | .297              | .562              | .625                   | .812        | 1.094       | .120                   | .422              |
| 12         | .7500-20UNEF      | .625              | .860              | .484              | .750              | .625                   | .812        | 1.094       | .120                   | .672              |
| 14S        | .8750-20UNEF      | .450              | .672              | .297              | .562              | .750                   | .906        | 1.188       | .120                   | .422              |
| 14         | .8750-20UNEF      | .625              | .860              | .484              | .750              | .750                   | .906        | 1.188       | .120                   | .672              |
| 16S        | 1.0000-20UNEF     | .450              | .672              | .297              | .562              | .875                   | .969        | 1.281       | .120                   | .422              |
| 16         | 1.0000-20UNEF     | .625              | .860              | .484              | .750              | .875                   | .969        | 1.281       | .120                   | .672              |
| 18         | 1.1250-18NEF      | .625              | .891              | .453              | .750              | 1.000                  | 1.062       | 1.375       | .120                   | .641*             |
| 20         | 1.2500-18NEF      | .625              | .891              | .453              | .750              | 1.125                  | 1.156       | 1.500       | .120                   | .641*             |
| 22         | 1.3750-18NEF      | .625              | .891              | .453              | .750              | 1.250                  | 1.250       | 1.625       | .120                   | .641*             |
| 24         | 1.5000-18NEF      | .625              | .953              | .453              | .812              | 1.375                  | 1.375       | 1.750       | .147                   | .578              |
| 28         | 1.7500-18NS       | .625              | .953              | .453              | .812              | 1.625                  | 1.562       | 2.000       | .147                   | .578*             |
| 32         | 2.0000-18NS       | .625              | 1.031             | .438              | .875              | 1.875                  | 1.750       | 2.250       | .173                   | .500*             |
| 36         | 2.2500-16UN       | .625              | 1.031             | .438              | .875              | 2.062                  | 1.938       | 2.500       | .173                   | .500*             |
| 40         | 2.5000-16UN       | .625              | 1.031             | .438              | .875              | 2.312                  | 2.188       | 2.750       | .173                   | .500*             |
| 44***      | 2.7500-16UN       | .625              | 1.063             | .543†             | .875              | 2.594                  | 2.375       | 3.000††     | .173                   | .768**            |
| 48***      | 3.0000-16UN       | .625              | 1.063             | .543†             | .875              | 2.812                  | 2.625       | 3.250††     | .209                   | .769**            |

\* Increase Z dimension by .312 for size "0" contact only.  
\*\* Increase Z dimension by .062 for size "0" contact only.  
\*\*\* Available in proprietary version only.  
†  $+.020$   $-.030$   
††  $\pm.020$

# MS/Standard

## MS3106A

### straight plug



To complete order number, see "how to order" pg. 59.  
For solder well data, see page 29.  
All lockwire holes are .045 dia. min.

| Shell Size | A Thread Class 2B | J $\pm.005$ | L $\pm.030$ | Q Dia. Max. | V Thread Class 2A | Z $\pm.045$ |
|------------|-------------------|-------------|-------------|-------------|-------------------|-------------|
| 8S         | .5000-28UNEF      | .531        | .859        | .741        | .5000-28UNEF      | .562        |
| 10S        | .6250-24NEF       | .531        | .937        | .869        | .5000-28UNEF      | .562        |
| 10SL       | .6250-24NEF       | .531        | .937        | .946        | .6250-24NEF       | .562        |
| 12S        | .7500-20UNEF      | .531        | .937        | .995        | .6250-24NEF       | .562        |
| 12         | .7500-20UNEF      | .719        | 1.124       | .995        | .6250-24NEF       | .812        |
| 14S        | .8750-20UNEF      | .531        | .937        | 1.123       | .7500-20UNEF      | .562        |
| 14         | .8750-20UNEF      | .719        | 1.124       | 1.123       | .7500-20UNEF      | .812        |
| 16S        | 1.0000-20UNEF     | .531        | .937        | 1.250       | .8750-20UNEF      | .562        |
| 16         | 1.0000-20UNEF     | .719        | 1.124       | 1.250       | .8750-20UNEF      | .812        |
| 18         | 1.1250-18NEF      | .719        | 1.219       | 1.333       | 1.0000-20UNEF     | .812*       |
| 20         | 1.2500-18NEF      | .719        | 1.125       | 1.461       | 1.1875-18NEF      | .812*       |
| 22         | 1.3750-18NEF      | .719        | 1.219       | 1.588       | 1.1875-18NEF      | .812*       |
| 24         | 1.5000-18NEF      | .719        | 1.251       | 1.715       | 1.4375-18NEF      | .812*       |
| 28         | 1.7500-18NS       | .719        | 1.470       | 1.968       | 1.4375-18NEF      | .812*       |
| 32         | 2.0000-18NS       | .719        | 1.439       | 2.209       | 1.7500-18NS       | .812*       |
| 36         | 2.2500-16UN       | .719        | 1.500       | 2.463       | 2.0000-18NS       | .812*       |
| 40         | 2.5000-16UN       | .719        | 1.469       | 2.719       | 2.2500-16UN       | .812*       |
| 44***      | 2.7500-16UN       | .719        | 1.818†      | 3.084       | 2.5000-16UN       | 1.063**     |
| 48***      | 3.3000-16UN       | .719        | 1.818†      | 3.354       | 3.0000-16UN       | 1.063**     |

\* Increase Z dimension by .312 for size "0" contact only.

\*\* Increase Z dimension by .062 for size "0" contact only.

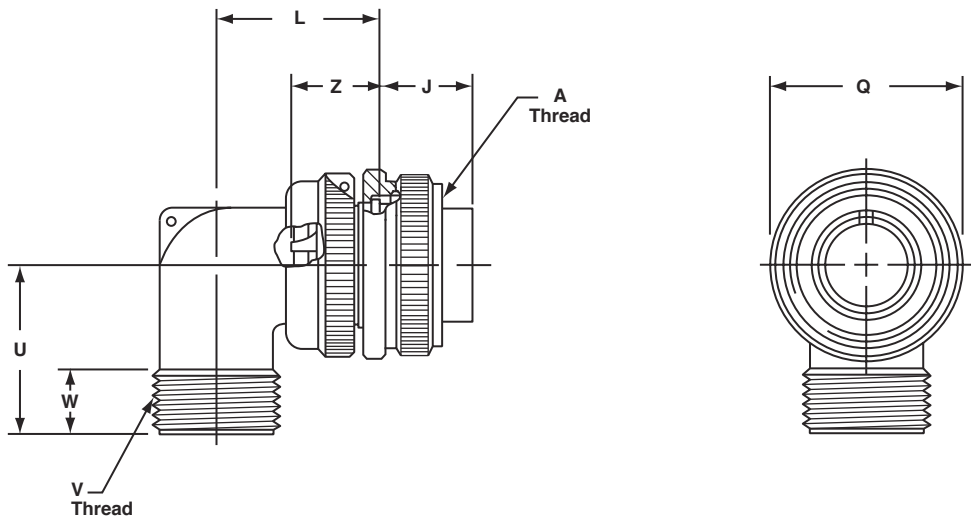
\*\*\* Available in proprietary version only.

† +.020 –.030

# MS/Standard

## MS3108A

### 90 degree plug



To complete order number, see “how to order” pg. 59.  
 For solder well data, see page 29.  
 All lockwire holes are .045 dia. min.

| Shell Size | A Thread<br>Class 2B | J<br>±.005 | L<br>Max. | Q Dia.<br>Max. | U<br>Max. | V Thread<br>Class 2A | W    | Z<br>±.045 |
|------------|----------------------|------------|-----------|----------------|-----------|----------------------|------|------------|
| 8S         | .5000-28UNEF         | .531       | .896      | .741           | .750      | .5000-28UNEF         | .375 | .562       |
| 10S        | .6250-24NEF          | .531       | .927      | .869           | .750      | .5000-28UNEF         | .375 | .562       |
| 10SL       | .6250-24NEF          | .531       | .951      | .946           | .875      | .6250-24NEF          | .375 | .562       |
| 12S        | .7500-20UNEF         | .531       | .956      | .995           | .875      | .6250-24NEF          | .375 | .562       |
| 12         | .7500-20UNEF         | .719       | 1.143     | .995           | .875      | .6250-24NEF          | .375 | .812       |
| 14S        | .8750-20UNEF         | .531       | 1.120     | 1.123          | 1.000     | .7500-20UNEF         | .375 | .562       |
| 14         | .8750-20UNEF         | .719       | 1.207     | 1.123          | 1.000     | .7500-20UNEF         | .375 | .812       |
| 16S        | 1.0000-20UNEF        | .531       | 1.146     | 1.250          | 1.062     | .8750-20UNEF         | .375 | .562       |
| 16         | 1.0000-20UNEF        | .719       | 1.332     | 1.250          | 1.062     | .8750-20UNEF         | .375 | .812       |
| 18         | 1.1250-18NEF         | .719       | 1.395     | 1.333          | 1.188     | 1.0000-20UNEF        | .375 | .812*      |
| 20         | 1.2500-18NEF         | .719       | 1.645     | 1.461          | 1.250     | 1.1875-18NEF         | .375 | .812*      |
| 22         | 1.3750-18NEF         | .719       | 1.645     | 1.588          | 1.312     | 1.1875-18NEF         | .375 | .812*      |
| 24         | 1.5000-18NEF         | .719       | 1.896     | 1.715          | 1.438     | 1.4375-18NEF         | .375 | .812*      |
| 28         | 1.7500-18NS          | .719       | 1.896     | 1.968          | 1.500     | 1.4375-18NEF         | .375 | .812*      |
| 32         | 2.0000-18NS          | .719       | 2.118     | 2.209          | 1.750     | 1.7500-18NS          | .438 | .812*      |
| 36         | 2.2500-16UN          | .719       | 2.176     | 2.463          | 1.875     | 2.0000-18NS          | .500 | .812*      |
| 40         | 2.5000-16UN          | .719       | 2.301     | 2.719          | 2.031     | 2.2500-16UN          | .500 | .812*      |

\* Increase Z dimension by .312 for size “0” contact only.

# MS/Standard

## MS-E/F



**wall mounting receptacle**



**inline receptacle**



**box mounting receptacle**



**straight plug**



**90 degree plug**

### MS-E & F

MS Class F connectors satisfy all the performance requirements of SAE AS50151. Class E, environmental is also produced, but is no longer listed on the qualified products listing (QPL). These connectors are recommended for conditions where vibration, moisture, pressure and/or temperature are extreme. Strain relief is supplied on most shell sizes.

#### Shells:

Shell components are fabricated from high grade aluminum alloy. The standard hardware plating is electrically conductive cadmium plated finish with an olive drab chromate after-treatment for corrosion resistance.

#### Contacts:

Contacts are silver plated copper alloy for maximum corrosion resistance, maximum current carrying capacity and low millivolt drop. Size 16 and 12 socket contacts incorporate a closed entry design. Refer to page 54 for additional contact information.

#### Inserts:

Resilient neoprene inserts provide an outstanding moisture barrier, high dielectric strength, and resistance to vibration. Either pin or socket insert can be pressurized.

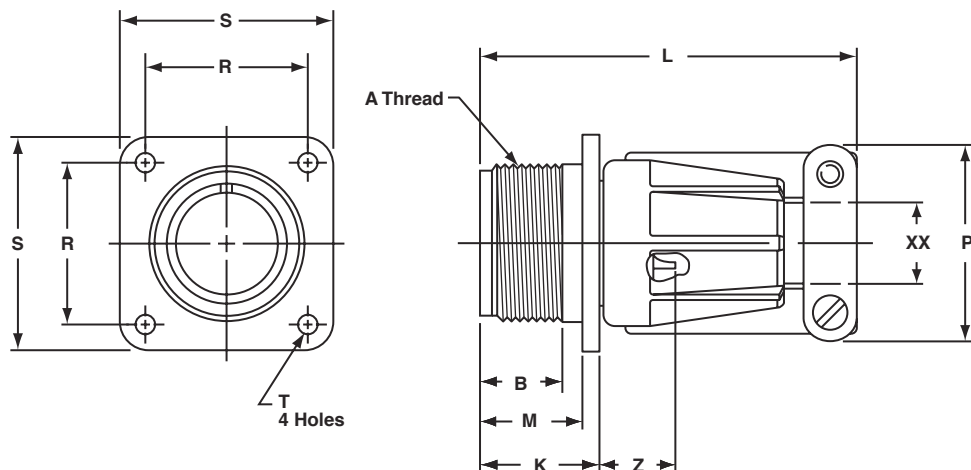
#### Strain Relief Clamp:

Strain relief clamps minimize tension at the solder well connection and provide a positive mechanical moisture seal. Complete field serviceability is possible with the strain relief clamp.

# MS/Standard

## MS3100E/F

### wall mounting receptacle



To complete order number, see “how to order” pg. 59.  
 For solder well data, see page 29.

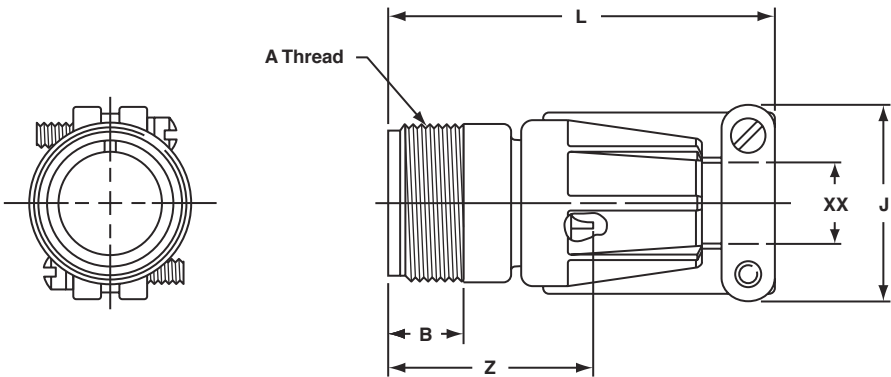
| Shell Size | A Thread Class 2A | B Min. Full Thread | K +.020 --.010 | L Max. | M +.010 --.000 | P Max. | R ±.005 | S ±.010 | T Dia. +.004 --.002 | Z* Max. | XX Min. Cable Clearance |
|------------|-------------------|--------------------|----------------|--------|----------------|--------|---------|---------|---------------------|---------|-------------------------|
| 10SL       | .6250-24UNEF      | .391               | .672           | 2.129  | .562           | .896   | .719    | 1.000   | .120                | .472    | .281                    |
| 12S        | .7500-20UNEF      | .450               | .672           | 2.129  | .562           | .896   | .812    | 1.094   | .120                | .472    | .281                    |
| 12         | .7500-20UNEF      | .625               | .860           | 2.129  | .750           | .896   | .812    | 1.094   | .120                | .722    | .281                    |
| 14S        | .8750-20UNEF      | .450               | .672           | 2.201  | .562           | 1.021  | .906    | 1.188   | .120                | .472    | .406                    |
| 14         | .8750-20UNEF      | .625               | .860           | 2.524  | .750           | 1.021  | .906    | 1.188   | .120                | .722    | .406                    |
| 16S        | 1.0000-20UNEF     | .450               | .672           | 2.201  | .562           | 1.151  | .969    | 1.281   | .120                | .472    | .500                    |
| 16         | 1.0000-20UNEF     | .625               | .860           | 2.524  | .750           | 1.151  | .969    | 1.281   | .120                | .722    | .500                    |
| 18         | 1.1250-18UNEF     | .625               | .891           | 2.596  | .750           | 1.242  | 1.063   | 1.375   | .120                | .691    | .531                    |
| 20         | 1.2500-18UNEF     | .625               | .891           | 2.654  | .750           | 1.499  | 1.156   | 1.500   | .120                | .691    | .656                    |
| 22         | 1.3750-18UNEF     | .625               | .891           | 2.654  | .750           | 1.499  | 1.250   | 1.625   | .120                | .691    | .740                    |
| 24         | 1.5000-18UNEF     | .625               | .953           | 2.885  | .812           | 1.781  | 1.375   | 1.750   | .147                | .628    | .781                    |
| 28         | 1.7500-18UNS      | .625               | .953           | 2.885  | .812           | 1.781  | 1.562   | 2.000   | .147                | .628    | .922                    |
| 32         | 2.0000-18UNS      | .625               | 1.031          | 2.943  | .875           | 2.087  | 1.750   | 2.250   | .173                | .550    | 1.156                   |
| 36         | 2.2500-16UN       | .625               | 1.031          | 2.943  | .875           | 2.281  | 1.938   | 2.500   | .173                | .550    | 1.250                   |
| 40         | 2.5000-16UN       | .625               | 1.031          | 3.068  | .875           | 2.581  | 2.188   | 2.750   | .173                | .550    | 1.562                   |

\* Increase Z dimension by .312 for size “0” contact only.

# MS/Standard

## MS3101E/F

### inline receptacle



To complete order number, see “how to order” pg. 59.  
 For solder well data, see page 29.

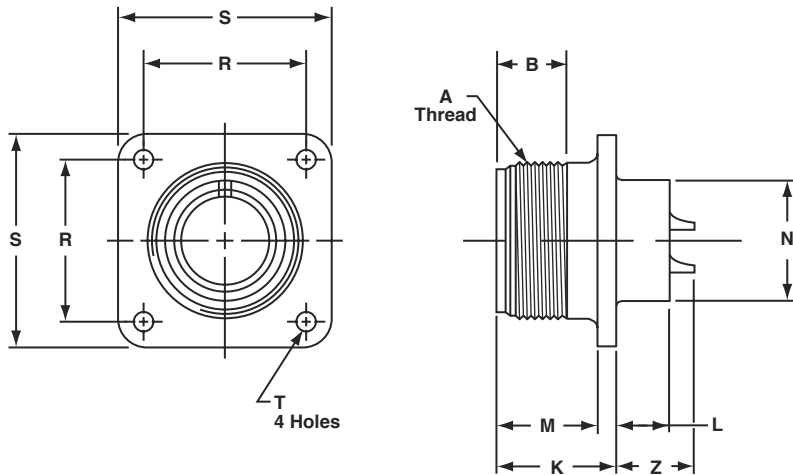
| Shell Size | A Thread Class 2A | B Min. Full Thread | J Max. | L Max. | Z* Max. | XX Min. Cable Clearance |
|------------|-------------------|--------------------|--------|--------|---------|-------------------------|
| 10SL       | .6250-24UNEF      | .406               | .896   | 2.129  | 1.134   | .281                    |
| 12S        | .7500-20UNEF      | .422               | .896   | 2.129  | 1.134   | .281                    |
| 12         | .7500-20UNEF      | .656               | .896   | 2.129  | 1.572   | .281                    |
| 14S        | .8750-20UNEF      | .391               | 1.021  | 2.201  | 1.134   | .406                    |
| 14         | .8750-20UNEF      | .625               | 1.021  | 2.524  | 1.572   | .406                    |
| 16S        | 1.0000-20UNEF     | .391               | 1.151  | 2.201  | 1.134   | .500                    |
| 16         | 1.0000-20UNEF     | .625               | 1.151  | 2.524  | 1.572   | .500                    |
| 18         | 1.1250-18UNEF     | .625               | 1.242  | 2.596  | 1.572   | .531                    |
| 20         | 1.2500-18UNEF     | .625               | 1.499  | 2.654  | 1.572   | .656                    |
| 22         | 1.3750-18UNEF     | .625               | 1.499  | 2.654  | 1.572   | .740                    |
| 24         | 1.5000-18UNEF     | .625               | 1.781  | 2.885  | 1.572   | .781                    |
| 28         | 1.7500-18UNS      | .625               | 1.781  | 2.885  | 1.572   | .922                    |
| 32         | 2.0000-18UNS      | .625               | 2.087  | 2.943  | 1.572   | 1.156                   |
| 36         | 2.2500-16UN       | .625               | 2.281  | 2.943  | 1.572   | 1.250                   |
| 40         | 2.5000-16UN       | .625               | 2.581  | 3.068  | 1.572   | 1.562                   |

\* Increase Z dimension by .312 for size “0” contact only.

# MS/Standard

# MS3102E

## box mounting receptacle



To complete order number, see "how to order" pg. 59.  
For solder well data, see page 29.

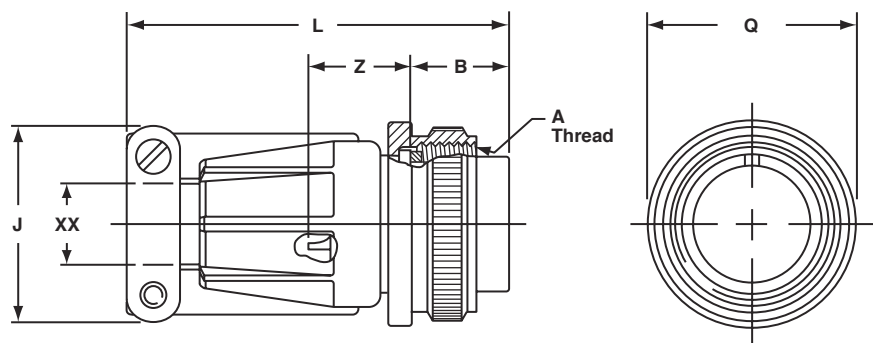
| Shell Size | A Thread Class 2A | B Min. Full Thread | K +.020 - .010 | L +.000 - .010 | M +.010 - .000 | N Dia. +.010 - .000 | R ±.005 | S ±.031 | T Dia. +.004 - .002 | Z +.050 - .060 |
|------------|-------------------|--------------------|----------------|----------------|----------------|---------------------|---------|---------|---------------------|----------------|
| 8S         | .5000-28UNEF      | .391               | .672           | .297           | .562           | .375                | .594    | .875    | .120                | .422           |
| 10S        | .6250-24NEF       | .391               | .672           | .297           | .562           | .500                | .719    | 1.000   | .120                | .422           |
| 10SL       | .6250-24NEF       | .391               | .672           | .297           | .562           | .625                | .719    | 1.000   | .120                | .422           |
| 12S        | .7500-20UNEF      | .450               | .672           | .297           | .562           | .625                | .812    | 1.094   | .120                | .422           |
| 12         | .7500-20UNEF      | .625               | .860           | .484           | .750           | .625                | .812    | 1.094   | .120                | .672           |
| 14S        | .8750-20UNEF      | .450               | .672           | .297           | .562           | .750                | .906    | 1.188   | .120                | .422           |
| 14         | .8750-20UNEF      | .625               | .860           | .484           | .750           | .750                | .906    | 1.188   | .120                | .672           |
| 16S        | 1.0000-20UNEF     | .450               | .672           | .297           | .562           | .875                | .969    | 1.281   | .120                | .422           |
| 16         | 1.0000-20UNEF     | .625               | .860           | .484           | .750           | .875                | .969    | 1.281   | .120                | .672           |
| 18         | 1.1250-18NEF      | .625               | .891           | .453           | .750           | 1.000               | 1.062   | 1.375   | .120                | .641*          |
| 20         | 1.2500-18NEF      | .625               | .891           | .453           | .750           | 1.125               | 1.156   | 1.500   | .120                | .641*          |
| 22         | 1.3750-18NEF      | .625               | .891           | .453           | .750           | 1.250               | 1.250   | 1.625   | .120                | .641*          |
| 24         | 1.5000-18NEF      | .625               | .953           | .453           | .812           | 1.375               | 1.375   | 1.750   | .147                | .578*          |
| 28         | 1.7500-18NS       | .625               | .953           | .453           | .812           | 1.625               | 1.562   | 2.000   | .147                | .578*          |
| 32         | 2.0000-18NS       | .625               | 1.031          | .438           | .875           | 1.875               | 1.750   | 2.250   | .173                | .500*          |
| 36         | 2.2500-16UN       | .625               | 1.031          | .438           | .875           | 2.062               | 1.938   | 2.500   | .173                | .500*          |
| 40         | 2.5000-16UN       | .625               | 1.031          | .438           | .875           | 2.312               | 2.188   | 2.750   | .173                | .500*          |

\* Increase Z dimension by .312 for size "0" contact only.

# MS/Standard

## MS3106E/F

### straight plug



To complete order number, see “how to order” pg. 59.  
 For solder well data, see page 29.  
 All lockwire holes are .045 dia. min.

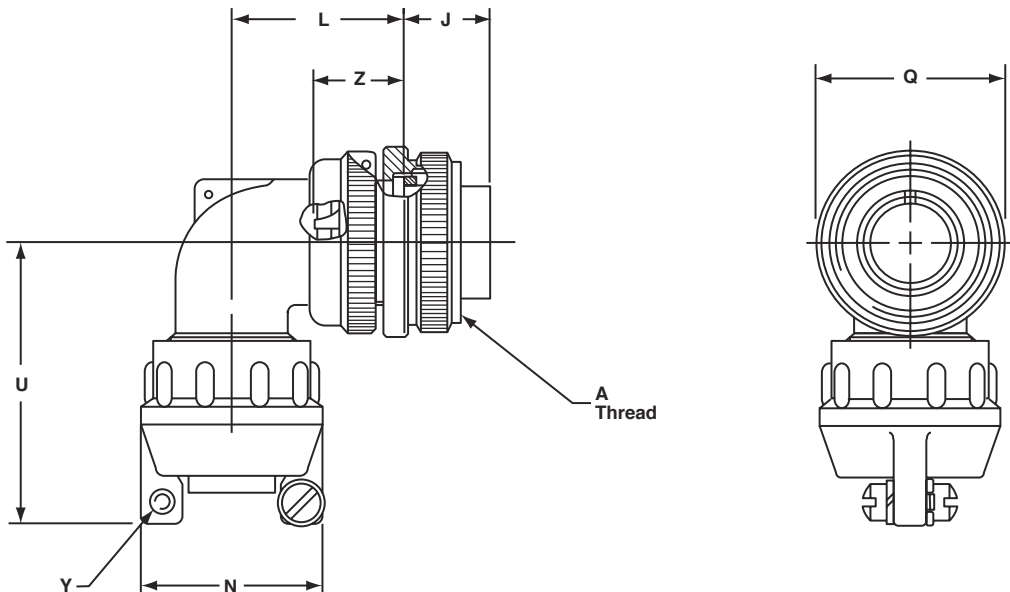
| Shell Size | A Thread Class 2A | B ±.005 | J Max. | L Max. | Q Max. | Z* ±.045 | XX Min. Cable Clearance |
|------------|-------------------|---------|--------|--------|--------|----------|-------------------------|
| 10SL       | .6250-24UNEF      | .531    | .896   | 2.129  | .946   | .607     | .281                    |
| 12S        | .7500-20UNEF      | .531    | .896   | 2.129  | .995   | .607     | .281                    |
| 12         | .7500-20UNEF      | .719    | .896   | 2.129  | .995   | .857     | .281                    |
| 14S        | .8750-20UNEF      | .531    | 1.021  | 2.201  | 1.123  | .607     | .406                    |
| 14         | .8750-20UNEF      | .719    | 1.021  | 2.524  | 1.123  | .857     | .406                    |
| 16S        | 1.0000-20UNEF     | .531    | 1.151  | 2.201  | 1.250  | .607     | .500                    |
| 16         | 1.0000-20UNEF     | .719    | 1.151  | 2.524  | 1.250  | .857     | .500                    |
| 18         | 1.1250-18UNEF     | .719    | 1.242  | 2.596  | 1.333  | .857     | .531                    |
| 20         | 1.2500-18UNEF     | .719    | 1.499  | 2.654  | 1.461  | .857     | .656                    |
| 22         | 1.3750-18UNEF     | .719    | 1.499  | 2.654  | 1.588  | .857     | .740                    |
| 24         | 1.5000-18UNEF     | .719    | 1.781  | 2.885  | 1.715  | .857     | .781                    |
| 28         | 1.7500-18UNS      | .719    | 1.781  | 2.885  | 1.968  | .857     | .922                    |
| 32         | 2.0000-18UNS      | .719    | 2.087  | 2.943  | 2.209  | .857     | 1.156                   |
| 36         | 2.2500-16UN       | .719    | 2.281  | 2.943  | 2.463  | .857     | 1.250                   |
| 40         | 2.5000-16UN       | .719    | 2.581  | 3.068  | 2.718  | .857     | 1.562                   |

\* Increase Z dimension by .312 for size “0” contact only.

# MS/Standard

## MS3108E

### 90 degree plug



To complete order number, see "how to order" pg. 59.  
 For solder well data, see page 29.  
 All lockwire holes are .045 dia. min.

| Shell Size | A Thread Class 2B | J ±.005 | L Max. | N Max. | Q Dia. Max. | U Max. | Y Thread Class 2B | Z ±.045 |
|------------|-------------------|---------|--------|--------|-------------|--------|-------------------|---------|
| 8S         | .5000-28UNEF      | .531    | .927   | .807   | .741        | 1.445  | 6-32NC            | .562    |
| 10S        | .6250-24NEF       | .531    | .927   | .807   | .869        | 1.445  | 6-32NC            | .562    |
| 10SL       | .6250-24NEF       | .531    | .951   | .901   | .946        | 1.508  | 6-32NC            | .562    |
| 12S        | .7500-20UNEF      | .531    | .956   | .901   | .995        | 1.508  | 6-32NC            | .562    |
| 12         | .7500-20UNEF      | .719    | 1.143  | .901   | .995        | 1.508  | 6-32NC            | .812    |
| 14S        | .8750-20UNEF      | .531    | 1.020  | 1.026  | 1.123       | 1.570  | 6-32NC            | .562    |
| 14         | .8750-20UNEF      | .719    | 1.207  | 1.026  | 1.123       | 1.570  | 6-32NC            | .812    |
| 16S        | 1.0000-20UNEF     | .531    | 1.146  | 1.119  | 1.250       | 1.633  | 6-32NC            | .562    |
| 16         | 1.1000-20UNEF     | .719    | 1.333  | 1.119  | 1.250       | 1.633  | 6-32NC            | .812    |
| 18         | 1.1250-18NEF      | .719    | 1.395  | 1.229  | 1.333       | 1.759  | 6-32NC            | .812*   |
| 20         | 1.2500-18NEF      | .719    | 1.598  | 1.479  | 1.461       | 1.931  | 8-32NC            | .812*   |
| 22         | 1.3750-18NEF      | .719    | 1.598  | 1.479  | 1.588       | 1.993  | 8-32NC            | .812*   |
| 24         | 1.5000-18NEF      | .719    | 1.786  | 1.666  | 1.729       | 2.119  | 8-32NC            | .812*   |
| 28         | 1.7500-18NS       | .719    | 1.786  | 1.666  | 1.968       | 2.181  | 8-32NC            | .812*   |
| 32         | 2.0000-18NS       | .719    | 2.020  | 2.135  | 2.209       | 2.570  | 10-32NF           | .812*   |
| 36         | 2.2500-16UN       | .719    | 2.145  | 2.260  | 2.463       | 2.695  | 10-32NF           | .812*   |
| 40         | 2.5000-16UN       | .719    | 2.270  | 2.510  | 2.719       | 2.851  | 10-32NF           | .812*   |

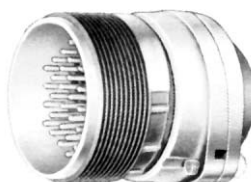
\* Increase Z dimension by .312 for size "0" contact only.

# MS/Standard

## MS-R



**wall mounting receptacle**



**inline receptacle**



**box mounting receptacle**



**straight plug**

### MS-R

Specification requirements for greater reliability in a shorter, lighter weight environmental resistant connector led to the design of the MS-R. MS Class R connectors satisfy all the performance requirements of SAE AS50151.

This low profile assembly was attained by moving the axial compression nut and grommet assembly forward and flush with the rear of the insert. The neoprene grommet, with its low coefficient of friction, assures easier threading of wire bundles and quicker assembly and serviceability of the unit. Molded webs in each wire hole insure a moisture barrier around each wire.

The addition of an "O" ring at the main joint of all MS3106R plugs provide a main joint seal supplementary to the interfacial seal, thus insuring a higher degree of reliability when connector halves from different sources are employed.

#### Shells:

Shell components are fabricated from high grade aluminum alloy. All components have the standard electrically conductive cadmium plated finish with an olive drab chromate after-treatment for corrosion resistance.

#### Contacts:

Contacts are machined from copper alloy for maximum corrosion resistance, maximum current carrying capacity and low millivolt drop. Refer to page 54 for additional contact information.

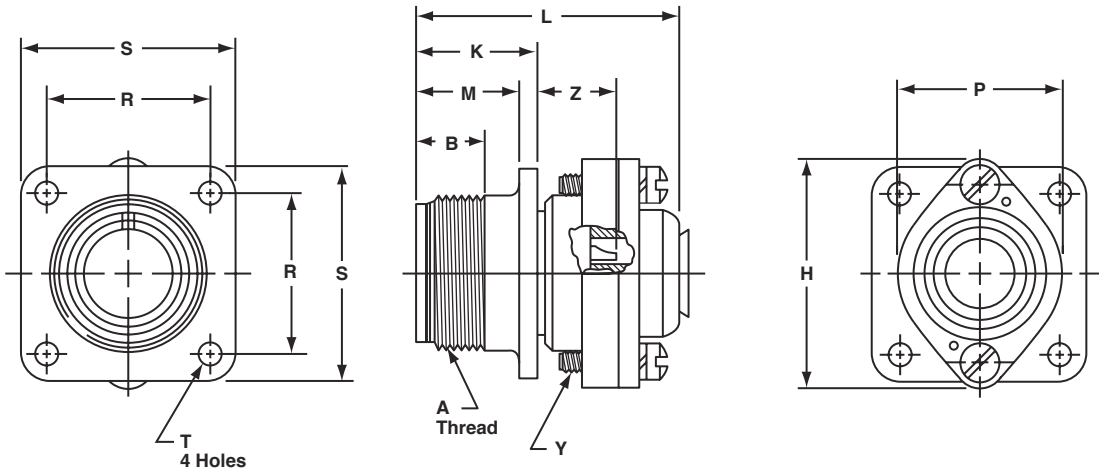
#### Inserts:

Resilient neoprene inserts provide an outstanding moisture barrier, maximum vibration resistance and high dielectric strength. Either pin or socket insert can be pressurized.

# MS/Standard

## MS3100R

### wall mounting receptacle



To complete order number, see “how to order” pg. 59.  
 For solder well data, see page 29.  
 All lockwire holes are .045 dia. min.

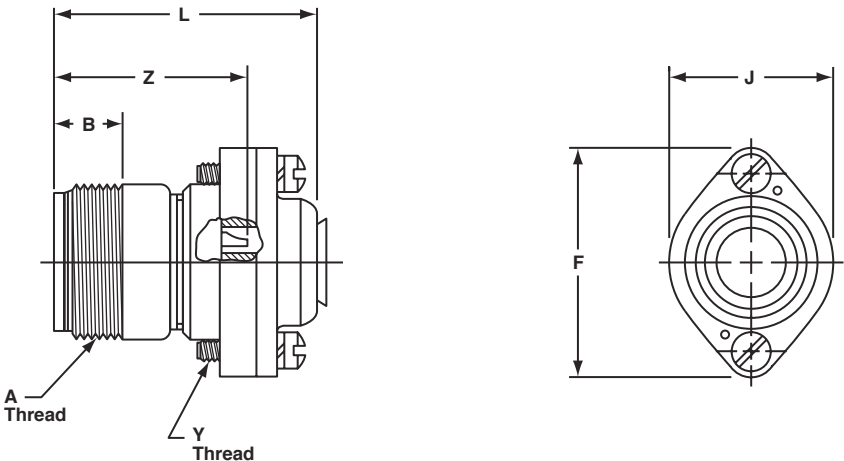
| Shell Size | A Thread Class 2A | B Min. Full Thread | H Dia. Max. | K +.020 --.010 | L Max. | M +.010 --.000 | P Dia. Max. | R ±.005 | S ±.031 | Y Thread Class 2 | T Dia. +.004 --.002 | Z +.050 --.060 |
|------------|-------------------|--------------------|-------------|----------------|--------|----------------|-------------|---------|---------|------------------|---------------------|----------------|
| 8S         | .5000-28UNEF      | .391               | .959        | .672           | 1.588  | .562           | .557        | .594    | .875    | 6-32NC           | .120                | .422           |
| 10S        | .6250-24NEF       | .391               | 1.026       | .672           | 1.588  | .562           | .682        | .719    | 1.000   | 6-32NC           | .120                | .422           |
| 10SL       | .6250-24NEF       | .391               | 1.120       | .672           | 1.588  | .562           | .807        | .719    | 1.000   | 6-32NC           | .120                | .422           |
| 12S        | .7500-20UNEF      | .450               | 1.120       | .672           | 1.588  | .562           | .807        | .812    | 1.094   | 6-32NC           | .120                | .422           |
| 12         | .7500-20UNEF      | .625               | 1.120       | .860           | 1.931  | .750           | .807        | .812    | 1.094   | 6-32NC           | .120                | .672           |
| 14S        | .8750-20UNEF      | .450               | 1.307       | .672           | 1.588  | .562           | .932        | .906    | 1.188   | 6-32NC           | .120                | .422           |
| 14         | .8750-20UNEF      | .625               | 1.307       | .860           | 1.931  | .750           | .932        | .906    | 1.188   | 6-32NC           | .120                | .672           |
| 16S        | 1.0000-20UNEF     | .450               | 1.432       | .672           | 1.588  | .562           | 1.057       | .969    | 1.281   | 6-32NC           | .120                | .422           |
| 16         | 1.0000-20UNEF     | .625               | 1.432       | .860           | 1.931  | .750           | 1.057       | .969    | 1.281   | 6-32NC           | .120                | .672           |
| 18         | 1.1250-18NEF      | .625               | 1.557       | .891           | 1.931  | .750           | 1.182       | 1.063   | 1.375   | 6-32NC           | .120                | .641*          |
| 20         | 1.2500-18NEF      | .625               | 1.744       | .891           | 1.931  | .750           | 1.291       | 1.156   | 1.500   | 8-32NC           | .120                | .641*          |
| 22         | 1.3750-18NEF      | .625               | 1.869       | .891           | 1.931  | .750           | 1.432       | 1.250   | 1.625   | 8-32NC           | .120                | .641*          |
| 24         | 1.5000-18NEF      | .625               | 1.994       | .953           | 2.009  | .812           | 1.557       | 1.375   | 1.750   | 8-32NC           | .147                | .578*          |
| 28         | 1.7500-18NS       | .625               | 2.166       | .953           | 2.009  | .812           | 1.807       | 1.562   | 2.000   | 8-32NC           | .147                | .578*          |
| 32         | 2.0000-18NS       | .625               | 2.541       | 1.031          | 2.072  | .875           | 2.057       | 1.750   | 2.250   | 10-32NF          | .173                | .500*          |
| 36         | 2.2500-16UN       | .625               | 2.729       | 1.031          | 2.072  | .875           | 2.260       | 1.938   | 2.500   | 10-32NF          | .173                | .500*          |
| 40         | 2.5000-16UN       | .625               | 2.979       | 1.031          | 2.072  | .875           | 2.260       | 2.510   | 2.750   | 10-32NF          | .173                | .500*          |

\* Increase Z dimension by .312 for size “0” contact only.

# MS/Standard

## MS3101R

### inline receptacle



To complete order number, see “how to order” pg. 59.  
 For solder well data, see page 29.  
 All lockwire holes are .045 dia. min.

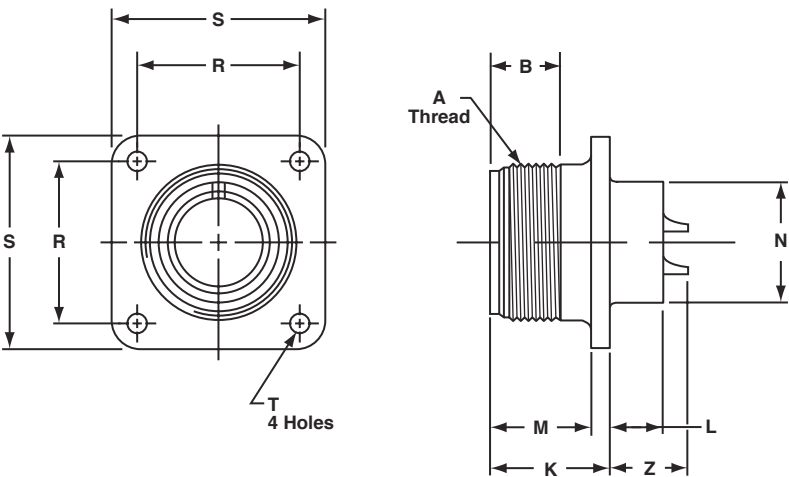
| Shell Size | A Thread Class 2A | B Min. Full Thread | F Dia. Max. | J Dia. Max. | L Max. | Y Thread Class 2 | Z ±.040 |
|------------|-------------------|--------------------|-------------|-------------|--------|------------------|---------|
| 8S         | .5000-28UNEF      | .406               | .959        | .557        | 1.588  | 6-32NC           | 1.094   |
| 10S        | .6250-24NEF       | .406               | 1.026       | .682        | 1.588  | 6-32NC           | 1.094   |
| 10SL       | .6250-24NEF       | .406               | 1.120       | .807        | 1.588  | 6-32NC           | 1.094   |
| 12S        | .7500-20UNEF      | .422               | 1.120       | .807        | 1.588  | 6-32NC           | 1.094   |
| 12         | .7500-20UNEF      | .656               | 1.120       | .807        | 1.931  | 6-32NC           | 1.532   |
| 14S        | .8750-20UNEF      | .391               | 1.307       | .932        | 1.588  | 6-32NC           | 1.094   |
| 14         | .8750-20UNEF      | .625               | 1.307       | .932        | 1.931  | 6-32NC           | 1.532   |
| 16S        | 1.0000-20UNEF     | .391               | 1.432       | 1.057       | 1.588  | 6-32NC           | 1.094   |
| 16         | 1.0000-20UNEF     | .625               | 1.432       | 1.057       | 1.931  | 6-32NC           | 1.532   |
| 18         | 1.1250-18NEF      | .625               | 1.557       | 1.182       | 1.931  | 6-32NC           | 1.532*  |
| 20         | 1.2500-18NEF      | .625               | 1.744       | 1.291       | 1.931  | 8-32NC           | 1.532*  |
| 22         | 1.3750-18NEF      | .625               | 1.869       | 1.432       | 1.931  | 8-32NC           | 1.532*  |
| 24         | 1.5000-18NEF      | .625               | 1.994       | 1.557       | 2.009  | 8-32NC           | 1.532*  |
| 28         | 1.7500-18NS       | .625               | 2.166       | 1.807       | 2.009  | 8-32NC           | 1.532*  |
| 32         | 2.0000-18NS       | .625               | 2.541       | 2.057       | 2.072  | 10-32NF          | 1.532*  |
| 36         | 2.2500-16UN       | .625               | 2.729       | 2.260       | 2.072  | 10-32NF          | 1.532*  |
| 40         | 2.5000-16UN       | .625               | 2.979       | 2.510       | 2.072  | 10-32NF          | 1.532*  |

\* Increase Z dimension by .312 for size "0" contact only.

# MS/Standard

# MS3102R

## box mounting receptacle



To complete order number, see "how to order" pg. 59.  
 For solder well data, see page 29.

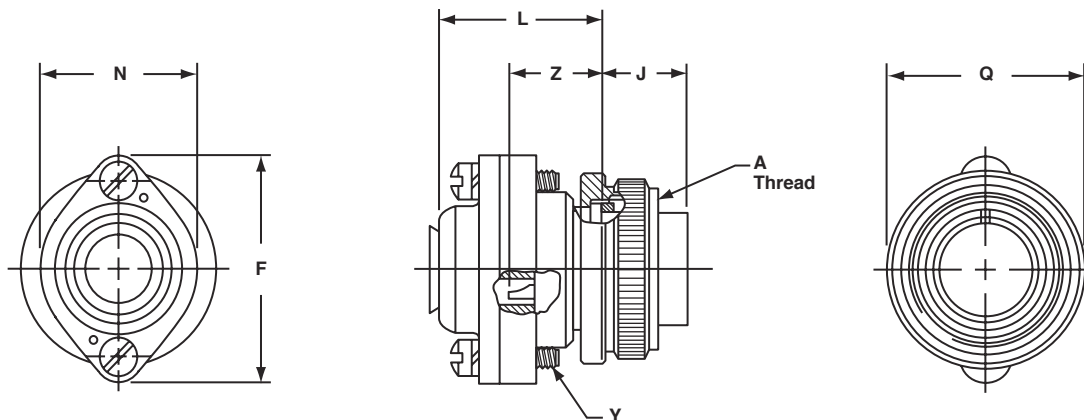
| Shell Size | A Thread Class 2A | B Min. Full Thread | K +.020 - .010 | L +.000 - .010 | M +.010 - .000 | N Dia. +.010 - .000 | R ±.005 | S ±.031 | T Dia. +.004 - .002 | Z +.050 - .060 |
|------------|-------------------|--------------------|----------------|----------------|----------------|---------------------|---------|---------|---------------------|----------------|
| 8S         | .5000-28UNEF      | .391               | .672           | .297           | .562           | .375                | .594    | .875    | .120                | .422           |
| 10S        | .6250-24NEF       | .391               | .672           | .297           | .562           | .500                | .719    | 1.000   | .120                | .422           |
| 10SL       | .6250-24NEF       | .391               | .672           | .297           | .562           | .625                | .719    | 1.000   | .120                | .422           |
| 12S        | .7500-20UNEF      | .450               | .672           | .297           | .562           | .625                | .812    | 1.094   | .120                | .422           |
| 12         | .7500-20UNEF      | .625               | .860           | .484           | .750           | .625                | .812    | 1.094   | .120                | .672           |
| 14S        | .8750-20UNEF      | .450               | .672           | .297           | .562           | .750                | .906    | 1.188   | .120                | .422           |
| 14         | .8750-20UNEF      | .625               | .860           | .484           | .750           | .750                | .906    | 1.188   | .120                | .672           |
| 16S        | 1.0000-20UNEF     | .450               | .672           | .297           | .562           | .875                | .969    | 1.281   | .120                | .422           |
| 16         | 1.0000-20UNEF     | .625               | .860           | .484           | .750           | .875                | .969    | 1.281   | .120                | .672           |
| 18         | 1.1250-18NEF      | .625               | .891           | .453           | .750           | 1.000               | 1.062   | 1.375   | .120                | .641*          |
| 20         | 1.2500-18NEF      | .625               | .891           | .453           | .750           | 1.125               | 1.156   | 1.500   | .120                | .641*          |
| 22         | 1.3750-18NEF      | .625               | .891           | .453           | .750           | 1.250               | 1.250   | 1.625   | .120                | .641*          |
| 24         | 1.5000-18NEF      | .625               | .953           | .453           | .812           | 1.375               | 1.375   | 1.750   | .147                | .578*          |
| 28         | 1.7500-18NS       | .625               | .953           | .453           | .812           | 1.625               | 1.562   | 2.000   | .147                | .578*          |
| 32         | 2.0000-18NS       | .625               | 1.031          | .438           | .875           | 1.875               | 1.750   | 2.250   | .173                | .500*          |
| 36         | 2.2500-16UN       | .625               | 1.031          | .438           | .875           | 2.062               | 1.938   | 2.500   | .173                | .500*          |
| 40         | 2.5000-16UN       | .625               | 1.031          | .438           | .875           | 2.312               | 2.188   | 2.750   | .173                | .500*          |

\* Increase Z dimension by .312 for size "0" contact only.

# MS/Standard

## MS3106R

### straight plug



To complete order number, see "how to order" pg. 59.  
For solder well data, see page 29.  
All lockwire holes are .045 dia. min.

| Shell Size | A Thread Class 2B | F Dia. Max. | J $\pm.005$ | L Max. | N Dia. Max. | Q Dia. Max. | Y Thread Class 2 | Z $\pm.045$ |
|------------|-------------------|-------------|-------------|--------|-------------|-------------|------------------|-------------|
| 8S         | .5000-28UNEF      | .959        | .531        | 1.057  | .557        | .741        | 6-32NC           | .562        |
| 10S        | .6250-24NEF       | 1.026       | .531        | 1.057  | .682        | .869        | 6-32NC           | .562        |
| 10SL       | .6250-24NEF       | 1.120       | .531        | 1.057  | .807        | .946        | 6-32NC           | .562        |
| 12S        | .7500-20UNEF      | 1.120       | .531        | 1.057  | .807        | .995        | 6-32NC           | .562        |
| 12         | .7500-20UNEF      | 1.120       | .719        | 1.212  | .807        | .995        | 6-32NC           | .812        |
| 14S        | .8750-20UNEF      | 1.307       | .531        | 1.057  | .932        | 1.123       | 6-32NC           | .562        |
| 14         | .8750-20UNEF      | 1.307       | .719        | 1.212  | .932        | 1.123       | 6-32NC           | .812        |
| 16S        | 1.0000-20UNEF     | 1.432       | .531        | 1.057  | 1.057       | 1.250       | 6-32NC           | .562        |
| 16         | 1.0000-20UNEF     | 1.432       | .719        | 1.212  | 1.057       | 1.250       | 6-32NC           | .812        |
| 18         | 1.1250-18NEF      | 1.557       | .719        | 1.212  | 1.182       | 1.333       | 6-32NC           | .812*       |
| 20         | 1.2500-18NEF      | 1.744       | .719        | 1.212  | 1.291       | 1.461       | 8-32NC           | .812*       |
| 22         | 1.3750-18NEF      | 1.869       | .719        | 1.212  | 1.432       | 1.588       | 8-32NC           | .812*       |
| 24         | 1.5000-18NEF      | 1.994       | .719        | 1.291  | 1.557       | 1.715       | 8-32NC           | .812*       |
| 28         | 1.7500-18NS       | 2.166       | .719        | 1.291  | 1.807       | 1.968       | 8-32NC           | .812*       |
| 32         | 2.0000-18NS       | 2.541       | .719        | 1.353  | 2.057       | 2.209       | 10-32NF          | .812*       |
| 36         | 2.2500-16UN       | 2.729       | .719        | 1.353  | 2.260       | 2.463       | 10-32NF          | .812*       |
| 40         | 2.5000-16UN       | 2.979       | .719        | 1.353  | 2.510       | 2.719       | 10-32NF          | .812*       |

\* Increase Z dimension by .312 for size "0" contact only.

# AC Series/MS

## insert availability

| Insert Arrangement | Service Rating | Total Contacts | Contact Size |   |   |    |    |
|--------------------|----------------|----------------|--------------|---|---|----|----|
|                    |                |                | 0            | 4 | 8 | 12 | 16 |
| 10SL-3             | A              | 3              |              |   |   |    | 3  |
| 10SL-4†            | A              | 2              |              |   |   |    | 2  |
| 12S-3              | A              | 2              |              |   |   |    | 2  |
| 12S-4              | D              | 1              |              |   |   |    | 1  |
| 12-5               | D              | 1              |              |   |   | 1  |    |
| 14S-1              | A              | 3              |              |   |   |    | 3  |
| 14S-2              | Inst.          | 4              |              |   |   |    | 4  |
| 14S-4              | D              | 1              |              |   |   |    | 1  |
| 14S-5              | Inst.          | 5              |              |   |   |    | 5  |
| 14S-6              | Inst.          | 6              |              |   |   |    | 6  |
| 14S-7              | A              | 3              |              |   |   |    | 3  |
| 14S-9              | A              | 2              |              |   |   |    | 2  |
| 14S-10             | Inst.          | 4              |              |   |   |    | 4  |
| 14S-12             | A              | 3              |              |   |   |    | 3  |
| 14S-A7             | A              | 7              |              |   |   |    | 7  |
| 14-3               | A              | 1              |              |   | 1 |    |    |
| 16S-1              | A              | 7              |              |   |   |    | 7  |
| 16S-3              | B              | 1              |              |   |   |    | 1  |
| 16S-4              | D              | 2              |              |   |   |    | 2  |
| 16S-5              | A              | 3              |              |   |   |    | 3  |
| 16S-6              | A              | 3              |              |   |   |    | 3  |
| 16S-8              | A              | 5              |              |   |   |    | 5  |
| 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  |    |
| 16-59              | A              | 4              |              |   |   | 4  |    |
| 18-1               | A/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              | A/Inst.        | 10             |              |   |   |    | 10 |
| 18-29              | A              | 5              |              |   |   |    | 5  |

| Insert Arrangement | Service Rating | Total Contacts | Contact Size |   |    |    |    |
|--------------------|----------------|----------------|--------------|---|----|----|----|
|                    |                |                | 0            | 4 | 8  | 12 | 16 |
| 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               | D/A            | 8              |              |   |    |    | 8  |
| 20-8               | Inst.          | 6              |              |   | 2  |    | 4  |
| 20-9               | D/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 |
| 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              | D/A            | 8              |              |   |    | 1  | 7  |
| 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              | D/A            | 5              |              |   |    | 4  | 1  |
| 22-14              | A              | 19             |              |   |    |    | 19 |
| 22-15              | E/A            | 6              |              |   |    | 5  | 1  |
| 22-16              | A              | 9              |              |   |    | 3  | 6  |
| 22-17              | D/A            | 9              |              |   |    | 1  | 8  |
| 22-18              | D/A            | 8              |              |   |    |    | 8  |

\* 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 32-53 for application wire size.

# AC Series/MS

## insert availability, cont.

| Insert<br>Arrange-<br>ment | Service<br>Rating | Total<br>Con-<br>tacts | Contact Size |     |   |   |    |    |    |  |  |  | Coax** |   |   |    |
|----------------------------|-------------------|------------------------|--------------|-----|---|---|----|----|----|--|--|--|--------|---|---|----|
|                            |                   |                        | 4/0          | 2/0 | 0 | 4 | 8  | 12 | 16 |  |  |  | 0      | 4 | 8 | 12 |
| 22-19                      | A                 | 14                     |              |     |   |   |    |    | 14 |  |  |  |        |   |   |    |
| 22-20                      | A                 | 9                      |              |     |   |   |    |    | 9  |  |  |  |        |   |   |    |
| 22-21                      | A                 | 3                      |              |     | 1 |   |    |    | 2  |  |  |  |        |   |   |    |
| 22-22                      | A                 | 4                      |              |     |   |   | 4  |    |    |  |  |  |        |   |   |    |
| 22-23                      | D/A               | 8                      |              |     |   |   |    | 8  |    |  |  |  |        |   |   |    |
| 22-24                      | D/A               | 6                      |              |     |   |   |    | 2  | 4  |  |  |  |        |   |   |    |
| 22-27                      | D/A               | 9                      |              |     |   |   | 1  |    | 8  |  |  |  |        |   |   |    |
| 22-28                      | A                 | 7                      |              |     |   |   |    | 7  |    |  |  |  |        |   |   |    |
| 22-33                      | D/A               | 7                      |              |     |   |   |    |    | 7  |  |  |  |        |   |   |    |
| 22-34                      | D                 | 5                      |              |     |   |   |    | 3  | 2  |  |  |  |        |   |   |    |
| 22-36                      | D/A               | 8                      |              |     |   |   |    | 8  |    |  |  |  |        |   |   |    |
| 22-63                      | A                 | 12                     |              |     |   |   |    | 4  | 8  |  |  |  |        |   |   |    |
| 22-65                      | D/A               | 8                      |              |     |   |   |    | 8* |    |  |  |  |        |   |   |    |
| 22-70                      | A                 | 13                     |              |     |   |   |    | 8  | 5  |  |  |  |        |   |   |    |
| 22-80                      | A                 | 3                      |              |     |   |   | 3* |    |    |  |  |  |        |   |   |    |
| 24-2                       | D                 | 7                      |              |     |   |   |    | 7  |    |  |  |  |        |   |   |    |
| 24-3                       | D                 | 7                      |              |     |   |   |    | 2  | 5  |  |  |  |        |   |   |    |
| 24-5                       | A                 | 16                     |              |     |   |   |    |    | 16 |  |  |  |        |   |   |    |
| 24-6                       | D/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                      | D/A               | 7                      |              |     |   |   | 1  | 3  | 3  |  |  |  |        |   |   |    |
| 24-17                      | D                 | 5                      |              |     |   |   |    | 2  | 3  |  |  |  |        |   |   |    |
| 24-19                      | A                 | 12                     |              |     |   |   |    |    | 12 |  |  |  |        |   |   |    |
| 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 |  |  |  |        |   |   |    |
| 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 |
| 24-96                      | Inst.             | 28                     |              |     |   |   |    |    | 28 |  |  |  |        |   |   |    |
| 24-AJ                      | A                 | 25                     |              |     |   |   |    |    | 25 |  |  |  |        |   |   |    |
| 28-1                       | D/A               | 9                      |              |     |   |   | 3  | 6  |    |  |  |  |        |   |   |    |
| 28-2                       | D                 | 14                     |              |     |   |   |    | 2  | 12 |  |  |  |        |   |   |    |

| Insert<br>Arrange-<br>ment | Service<br>Rating | Total<br>Con-<br>tacts | Contact Size |     |   |   |    |    |    |    |  |  | Coax** |   |   |    |
|----------------------------|-------------------|------------------------|--------------|-----|---|---|----|----|----|----|--|--|--------|---|---|----|
|                            |                   |                        | 4/0          | 2/0 | 0 | 4 | 8  | 12 | 16 |    |  |  | 0      | 4 | 8 | 12 |
| 28-3                       | E                 | 3                      |              |     |   |   | 3  |    |    |    |  |  |        |   |   |    |
| 28-4                       | E/D               | 9                      |              |     |   |   |    | 2  | 7  |    |  |  |        |   |   |    |
| 28-5                       | D                 | 5                      |              |     |   |   | 2  |    | 1  | 2  |  |  |        |   |   |    |
| 28-6                       | D                 | 3                      |              |     |   |   | 3  |    |    |    |  |  |        |   |   |    |
| 28-7                       | D                 | 2                      |              |     |   |   | 2  |    |    |    |  |  |        |   |   |    |
| 28-8                       | E/D/A             | 12                     |              |     |   |   |    |    | 2  | 10 |  |  |        |   |   |    |
| 28-9                       | D                 | 12                     |              |     |   |   |    |    | 6  | 6  |  |  |        |   |   |    |
| 28-10                      | D/A               | 7                      |              |     |   |   | 2  | 2  | 3  |    |  |  |        |   |   |    |
| 28-11                      | A                 | 22                     |              |     |   |   |    |    | 4  | 18 |  |  |        |   |   |    |
| 28-12                      | A                 | 26                     |              |     |   |   |    |    |    | 26 |  |  |        |   |   |    |
| 28-13                      | A                 | 26                     |              |     |   |   |    |    |    | 26 |  |  |        |   |   |    |
| 28-15                      | A                 | 35                     |              |     |   |   |    |    |    | 35 |  |  |        |   |   |    |
| 28-16                      | A                 | 20                     |              |     |   |   |    |    |    | 20 |  |  |        |   |   |    |
| 28-17                      | B/D/A             | 15                     |              |     |   |   |    |    |    | 15 |  |  |        |   |   |    |
| 28-18                      | C/D/A/Inst.       | 12                     |              |     |   |   |    |    |    | 12 |  |  |        |   |   |    |
| 28-19                      | B/D/A             | 10                     |              |     |   |   |    |    | 4  | 6  |  |  |        |   |   |    |
| 28-20                      | A                 | 14                     |              |     |   |   |    |    | 10 | 4  |  |  |        |   |   |    |
| 28-21                      | A                 | 37                     |              |     |   |   |    |    |    | 37 |  |  |        |   |   |    |
| 28-22                      | D                 | 6                      |              |     |   |   | 3  |    |    | 3  |  |  |        |   |   |    |
| 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  |    |    |    |  |  |        |   |   |    |
| 28-AY                      | A                 | 9                      |              |     |   |   | 4  |    | 5  |    |  |  |        |   |   |    |
| 32-1                       | E/D               | 5                      |              |     | 2 |   |    |    | 3  |    |  |  |        |   |   |    |
| 32-2                       | E                 | 5                      |              |     |   | 3 |    |    | 2  |    |  |  |        |   |   |    |
| 32-3                       | D                 | 9                      |              |     | 1 | 2 |    | 2  | 4  |    |  |  |        |   |   |    |
| 32-4                       | A/D               | 14                     |              |     |   |   |    |    | 2  | 12 |  |  |        |   |   |    |
| 32-5                       | D                 | 2                      |              |     | 2 |   |    |    |    |    |  |  |        |   |   |    |
| 32-6                       | A                 | 23                     |              |     |   | 2 | 3  | 2  | 16 |    |  |  |        |   |   |    |
| 32-7                       | Inst./A           | 35                     |              |     |   |   |    |    | 7  | 28 |  |  |        |   |   |    |
| 32-8                       | A                 | 30                     |              |     |   |   |    |    | 6  | 24 |  |  |        |   |   |    |
| 32-9                       | D                 | 14                     |              |     |   | 2 |    |    | 12 |    |  |  |        |   |   |    |
| 32-10                      | E/B/D/A           | 7                      |              |     |   | 2 | 2  |    | 3  |    |  |  |        |   |   |    |
| 32-12                      | A/D               | 15                     |              |     |   |   |    |    | 5  | 10 |  |  |        |   |   |    |
| 32-13                      | D                 | 23                     |              |     |   |   |    |    | 5  | 18 |  |  |        |   |   |    |
| 32-14                      | D                 | 13                     |              |     |   |   |    |    | 13 |    |  |  |        |   |   |    |
| 32-15                      | D                 | 8                      |              |     | 2 |   |    |    | 6  |    |  |  |        |   |   |    |
| 32-16                      | A                 | 23                     |              |     |   | 2 | 3  | 2  | 16 |    |  |  |        |   |   |    |
| 32-17                      | D                 | 4                      |              |     |   | 4 |    |    |    |    |  |  |        |   |   |    |
| 32-22                      | A                 | 54                     |              |     |   |   |    |    | 54 |    |  |  |        |   |   |    |
| 32-25                      | A                 | 25                     |              |     |   |   |    |    | 25 |    |  |  |        |   |   |    |
| 32-31                      | A                 | 31                     |              |     |   |   |    |    | 31 |    |  |  |        |   |   |    |
| 32-48                      | Inst.             | 48                     |              |     |   |   |    |    | 48 |    |  |  |        |   |   |    |
| 32-52                      | D                 | 8                      |              |     | 2 |   |    |    | 6  |    |  |  |        |   |   |    |
| 32-53                      | Inst./E           | 42                     |              |     |   |   |    |    | 5  | 37 |  |  |        |   |   |    |

\* 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 32-53 for application wire size.

# AC Series/MS

## insert availability, cont.

| Insert<br>Arrange<br>ment | Service<br>Rating | Total<br>Con-<br>tacts | Contact Size |     |   |   |    |    |     |        |   |   |    |  |
|---------------------------|-------------------|------------------------|--------------|-----|---|---|----|----|-----|--------|---|---|----|--|
|                           |                   |                        | 4/0          | 2/0 | 0 | 4 | 8  | 12 | 16  | Coax** |   |   |    |  |
|                           |                   |                        |              |     |   |   |    |    |     | 0      | 4 | 8 | 12 |  |
| 32-56                     | A                 | 30                     |              |     |   |   |    | 6* | 24  |        |   |   |    |  |
| 32-57                     | Coax              | 8                      |              |     |   |   |    | 6  |     | 2      |   |   |    |  |
| 32-58                     | Coax              | 4                      |              |     |   |   |    |    |     |        | 4 |   |    |  |
| 32-59                     | A                 | 42                     |              |     |   |   |    |    | 40  |        |   | 2 |    |  |
| 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 |   |    |  |
| 32-73                     | A                 | 46                     |              |     |   |   |    |    | 46  |        |   |   |    |  |
| 32-75                     | Coax              | 9                      |              |     |   |   |    | 2  |     |        |   | 7 |    |  |
| 32-76                     | A                 | 19                     |              |     |   |   |    | 19 |     |        |   |   |    |  |
| 32-79                     | D                 | 5                      |              |     |   | 4 | 1  |    |     |        |   |   |    |  |
| 32-82                     | A                 | 16                     |              |     |   | 4 |    |    | 12  |        |   |   |    |  |
| 32-AF                     | A                 | 55                     |              |     |   |   |    |    | 55  |        |   |   |    |  |
| 36-1                      | D                 | 22                     |              |     |   |   |    | 4  | 18  |        |   |   |    |  |
| 36-3                      | D                 | 6                      |              |     | 3 |   |    | 3  |     |        |   |   |    |  |
| 36-4                      | D/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                     | E/A               | 17                     |              |     |   |   |    | 2  | 15  |        |   |   |    |  |
| 36-14                     | D                 | 16                     |              |     |   |   | 5  | 5  | 6   |        |   |   |    |  |
| 36-15                     | D/A               | 35                     |              |     |   |   |    |    | 35  |        |   |   |    |  |
| 36-16                     | A                 | 47                     |              |     |   |   |    | 7  | 40  |        |   |   |    |  |
| 36-17                     | A                 | 47                     |              |     |   |   |    | 7  | 40  |        |   |   |    |  |
| 36-18                     | A                 | 31                     |              |     |   | 1 | 2  | 14 | 14  |        |   |   |    |  |
| 36-20                     | A                 | 34                     |              |     |   |   | 2  | 2  | 30  |        |   |   |    |  |
| 36-51                     | D                 | 4                      |              |     | 2 | 2 |    |    |     |        |   |   |    |  |
| 36-52                     | A                 | 52                     |              |     |   |   |    |    | 52  |        |   |   |    |  |
| 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* |        |   |   |    |  |

| Insert<br>Arrange<br>ment | Service<br>Rating | Total<br>Con-<br>tacts | Contact Size |     |   |    |    |    |     |        |    |    |    |  |
|---------------------------|-------------------|------------------------|--------------|-----|---|----|----|----|-----|--------|----|----|----|--|
|                           |                   |                        | 4/0          | 2/0 | 0 | 4  | 8  | 12 | 16  | Coax** |    |    |    |  |
|                           |                   |                        |              |     |   |    |    |    |     | 0      | 4  | 8  | 12 |  |
| 36-83                     | Coax              | 7                      |              |     |   |    |    |    |     |        |    |    |    |  |
| 36-85                     | A/D               | 35                     |              |     |   |    |    |    | 35* |        | 7  |    |    |  |
| 36-97                     | C                 | 1                      | 1            |     |   |    |    |    |     |        |    |    |    |  |
| 36-99                     | D                 | 12                     |              |     |   | 3  | 3  | 3  | 3   |        |    |    |    |  |
| 36-AF                     | A                 | 48                     |              |     |   |    |    |    | 48  |        |    |    |    |  |
| 40-1                      | D                 | 30                     |              |     |   |    |    | 6  | 24  |        |    |    |    |  |
| 40-5                      | A                 | 5                      |              |     | 5 |    |    |    |     |        |    |    |    |  |
| 40-9                      | A                 | 47                     |              |     |   |    | 1  | 22 | 24  |        |    |    |    |  |
| 40-10                     | A                 | 29                     |              |     |   | 4  | 9  |    | 16  |        |    |    |    |  |
| 40-30                     | A                 | 30                     |              |     |   | 1  |    |    |     |        |    |    |    |  |
| 40-35                     | D                 | 35                     |              |     |   |    |    |    | 35  |        |    |    |    |  |
| 40-53                     | A                 | 60                     |              |     |   |    |    |    | 60  |        |    |    |    |  |
| 40-56                     | A                 | 85                     |              |     |   |    |    |    | 85  |        |    |    |    |  |
| 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  |    |    |     |        |    |    |    |  |
| 40-AD                     | A                 | 8                      |              |     | 4 |    | 4  |    |     |        |    |    |    |  |
| 40-AG                     | A                 | 38                     |              |     |   |    |    | 38 |     |        |    |    |    |  |
| 40-AP                     | E                 | 2                      | 2            |     |   |    |    |    |     |        |    |    |    |  |
| 40-AR                     | Inst.             | 13                     |              |     | 3 | 3  |    | 7  |     |        |    |    |    |  |
| 40-AS                     | A                 | 40                     |              |     |   |    |    | 25 | 15  |        |    |    |    |  |
| 40-AT                     | A                 | 43                     |              |     |   |    | 1  | 24 | 18  |        |    |    |    |  |
| 40-AU                     | A                 | 14                     |              |     |   | 3  | 10 |    | 1   |        |    |    |    |  |
| 40-AV                     | D                 | 3                      |              | 3   |   |    |    |    |     |        |    |    |    |  |

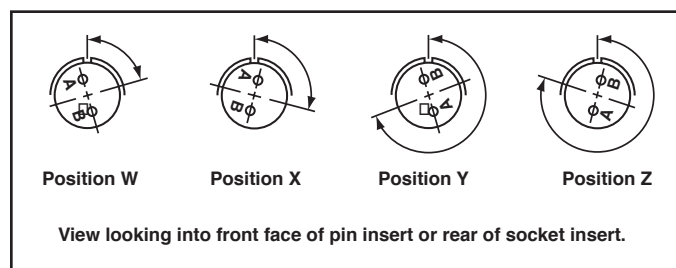
\* Crimp contacts accommodate wire the same size as the contact as well as wire of the next smaller, even size. Arrangements identified with an asterisk (\*) are exceptions. See insert arrangement drawings on pages 32-53 for application wire size.

# AC Series/MS

## insert alternate positioning

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

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



The 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  | 20-20 | 22-21 | 24-7  | 28-8  | 32-1  | 36-1  |
| 18-5  | 20-22 | 22-24 | 24-12 | 28-9  | 32-3  | 36-7  |
| 18-9  | 22-3  | 22-25 | 24-14 | 28-10 | 32-4  | 36-8  |
| 18-13 | 22-6  | 22-29 | 24-16 | 28-11 | 32-6  | 36-13 |
| 18-14 | 22-12 | 22-33 | 24-17 | 28-14 | 32-9  | 40-AR |
| 20-7  | 22-14 | 22-34 | 24-20 | 28-15 | 32-10 | 40-AS |
| 20-8  | 22-15 | 24-1  | 24-21 | 28-16 | 32-12 | 40-AT |
| 20-9  | 22-16 | 24-3  | 24-28 | 28-17 | 32-13 | 40-AU |
| 20-12 | 22-17 | 24-4  | 24-AJ | 28-19 | 32-22 |       |
| 20-14 | 22-18 | 24-5  | 28-1  | 28-20 | 32-31 |       |
| 20-16 | 22-19 | 24-6  | 28-4  | 28-21 | 32-AF |       |

| Insert Arrangement | Degrees |     |     |     |
|--------------------|---------|-----|-----|-----|
|                    | W       | X   | Y   | Z   |
| 10-SL-4            | 63      | —   | —   | —   |
| 12S-3              | 70      | 145 | 215 | 290 |
| 14S-2              | —       | 120 | 240 | —   |
| 14S-5              | —       | 110 | —   | —   |
| 14S-7              | 90      | 180 | 270 | —   |
| 14S-9              | 70      | 145 | 215 | 290 |
| 16-9               | 35      | 110 | 250 | 325 |
| 16-10              | 90      | 180 | 270 | —   |
| 16-11              | 35      | 110 | 250 | 325 |
| 16-13              | 35      | 110 | 250 | 325 |
| 16S-1              | 80      | —   | —   | 280 |
| 16S-4              | 35      | 110 | 250 | 325 |
| 16S-5              | 70      | 145 | 215 | 290 |
| 16S-6              | 90      | 180 | 270 | —   |
| 16S-8              | —       | 170 | 265 | —   |
| 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 | —   |
| 18-20              | 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 |

| Insert Arrangement | Degrees |     |     |     |
|--------------------|---------|-----|-----|-----|
|                    | W       | X   | Y   | Z   |
| 20-19              | 90      | 180 | 270 | —   |
| 20-21              | 35      | 110 | 250 | 325 |
| 20-23              | 35      | 110 | 250 | 325 |
| 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 |
| 22-63              | 20      | —   | —   | —   |
| 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 |
| 28-6               | 70      | 145 | 215 | 290 |
| 28-7               | 35      | 110 | 250 | 325 |
| 28-12              | 90      | 180 | 270 | —   |

| Insert Arrangement | Degrees |     |     |     |
|--------------------|---------|-----|-----|-----|
|                    | W       | X   | Y   | Z   |
| 28-18              | 70      | 145 | 215 | 290 |
| 28-22              | 70      | 145 | 215 | 290 |
| 28-AY              | 45      | 110 | 250 | —   |
| 32-2               | 70      | 145 | 215 | 290 |
| 32-5               | 35      | 110 | 250 | 325 |
| 32-7               | 80      | 125 | 235 | 280 |
| 32-8               | 80      | 125 | 235 | 280 |
| 32-14              | 65      | 130 | 230 | 295 |
| 32-15              | 35      | 110 | 250 | 280 |
| 32-17              | 45      | 110 | 250 | —   |
| 32-25              | 60      | 120 | —   | —   |
| 32-48              | 80      | —   | —   | —   |
| 32-64              | 80      | 100 | 110 | 250 |
| 32-68              | 30      | —   | —   | —   |
| 32-82              | 30      | —   | —   | —   |
| 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-AF              | 65      | —   | —   | —   |
| 40-1               | 65      | 130 | 235 | 300 |
| 40-5               | 33      | —   | —   | 270 |
| 40-9               | 65      | 125 | 225 | 310 |
| 40-10              | 65      | 125 | 225 | 310 |
| 40-35              | 70      | 130 | 230 | 290 |
| 40-AD              | 45      | —   | —   | —   |
| 40-AG              | 37      | 74  | 285 | 322 |
| 40-AP              | 35      | 110 | 250 | 325 |
| 40-AV              | 90      | 180 | 270 | —   |

# AC Series/MS

## solder contacts

Machined 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 solder contacts for maximum corrosion resistance, maximum current carrying capacity and low millivolt drop.

### SOLDER CONTACTS\*

| Pin/<br>Socket | Mating End<br>Size | Wire Barrel<br>Size | Allowable<br>Wire Size | Test Current**<br>Amps |
|----------------|--------------------|---------------------|------------------------|------------------------|
| Pin            | 16 Short†          | 16                  | 16                     | 13                     |
| Socket         |                    |                     | 18                     | 10                     |
|                |                    |                     | 20                     | 7.5                    |
|                |                    |                     | 22                     | 5                      |
| Pin            | 16 Long            | 16                  | 16                     | 13                     |
| Socket         |                    |                     | 18                     | 10                     |
|                |                    |                     | 20                     | 7.5                    |
|                |                    |                     | 22                     | 5                      |
| Pin            | 12                 | 12                  | 12                     | 23                     |
| Socket         |                    |                     | 14                     | 17                     |
| Pin            | 8                  | 8                   | 8                      | 46                     |
| Socket         |                    |                     | 10                     | 33                     |
| Pin            | 4                  | 4                   | 4                      | 80                     |
| Socket         |                    |                     | 6                      | 60                     |
| Pin            | 0                  | 0                   | 0                      | 150                    |
| Socket         |                    |                     | 1                      | 125                    |
|                |                    |                     | 2                      | 100                    |

\* Solder Wells Filled

\*\* Contact ratings as stated are test ratings only. The connector may 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.

† The 10SL, 12S, 14S and 16S connectors require short contacts.

### CONTACT ARRANGEMENT SERVICE RATING

| M S<br>Service<br>Rating | Recommended<br>Operating Voltage*<br>at Sea Level |          | Effective<br>Creepage<br>Distance<br>Nom. | Mechanical<br>Spacing<br>Nom. |
|--------------------------|---------------------------------------------------|----------|-------------------------------------------|-------------------------------|
|                          | D C                                               | 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.

### ALTITUDE VOLTAGE DERATING\*\* CHART

| MS<br>Service<br>Rating | Nominal<br>Distance |          | Standard Sea<br>Level Conditions            |                             | Pressure Altitude †<br>50,000 Feet          |                             | Pressure Altitude†<br>70,000 Feet           |                             |
|-------------------------|---------------------|----------|---------------------------------------------|-----------------------------|---------------------------------------------|-----------------------------|---------------------------------------------|-----------------------------|
|                         | Airspace            | Creepage | Minimum<br>Flashover<br>Voltage<br>AC (RMS) | Test<br>Voltage<br>AC (RMS) | Minimum<br>Flashover<br>Voltage<br>AC (RMS) | Test<br>Voltage<br>AC (RMS) | Minimum<br>Flashover<br>Voltage<br>AC (RMS) | Test<br>Voltage<br>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.

# AC Series/MS

## 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 insert arrangements and are identified with a Amphenol® proprietary number. Gold plated contacts are also available. (See how to order on page 59).

### CRIMP CONTACTS\*

| Part Number   | Pin/Socket | Mating End Size | Wire Barrel Size | Allowable Wire Size | Required Wire Adapter Sleeve | Test Current* Amps |
|---------------|------------|-----------------|------------------|---------------------|------------------------------|--------------------|
| 10-40553      | Pin        | 16 Short†       | 16               | 16                  | —                            | 13                 |
| 10-597109-161 | Socket     |                 |                  | 18                  | —                            | 10                 |
|               |            |                 |                  | 20                  | —                            | 7.5                |
|               |            |                 |                  | 22*                 | 10-74696-6                   | 5                  |
| 10-40557      | Pin        | 16 Long         | 16               | 16                  | —                            | 13                 |
| 10-597109-171 | Socket     |                 |                  | 18                  | —                            | 10                 |
|               |            |                 |                  | 20                  | —                            | 7.5                |
|               |            |                 |                  | 22*                 | 10-74696-6                   | 5                  |
| 10-40561      | Pin        | 12              | 12               | 12                  | —                            | 23                 |
| 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                 |
| 10-581806-000 | Pin        | 0               | 0                | 0                   | —                            | 150                |
| 10-581808-000 | Socket     |                 |                  | 2*                  | 10-74696-7                   | 125                |

\* When using wire adapter sleeve shown

\*\* Contact ratings as stated are test ratings only. The connector may 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.

† The 10SL, 12S, 14S and 16S connectors require short contacts.

Additional contact variations are available; consult Amphenol, Sidney NY for information.

### CONTACT ARRANGEMENT SERVICE RATING

| MS Service Rating | Recommended Operating Voltage* at Sea Level |          | Effective Creepage Distance Nom. | Mechanical Spacing Nom. |
|-------------------|---------------------------------------------|----------|----------------------------------|-------------------------|
|                   | D C                                         | 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                    |

### 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.

# RADSOK® Technology

## RADSOK® Technology Advantages

RADSOK'S twisted grid configuration allows for 50% more current to pass through the same size pin, while providing increased reliability, ampacity and cycle durability as well as lower insertion force, T-rise and voltage drop.

### • HIGH RELIABILITY

Unique RADSOK® design and construction technology create an electrical contact interface that exceeds typical interconnect requirements. Applications in aerospace, medical, industrial, automotive, mining, offshore, and other harsh environments depend on the high reliability of Amphenol's RADSOK® technology.

### • LOW CONTACT ENGAGEMENT/SEPARATION FORCES

The hyperbolic lamella socket contact construction distributes normal forces over a high percentage of the mating pin surface. This creates a smooth, even engagement effort. This force distribution also contributes to excellent performance in vibration applications with resistance to typical fretting corrosion.

### • LOW CONTACT RESISTANCE

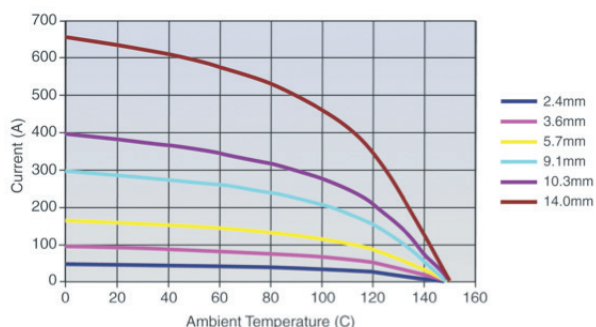
The large interface area between the socket lamella and pin surface result in very low contact resistance, enabling the RADSOK® contacts' high current ratings compared to traditional power contact designs.

### • HIGH MATING CYCLE DURABILITY

RADSOK® contacts with typical silver plating finishes have demonstrated survival of 20,000 mating cycles. Specialized plating and contact lubricants can extend cycle life to 200,000 matings or higher. Even with continuous exposure to harsh environmental abuse (salt, sand, and high humidity), RADSOK® contacts have been tested to maintain low contact resistance beyond 10,000 mating cycles.

## RADSOK® Derating Chart – Temperature vs. Current

Based on single conductors in free air. Wire cross-section same size as pin contact cross-sectional area.



## RADSOK® Socket Table

| CRIMP CONTACT DATA  |                |             |                   |                     |                              |                     |
|---------------------|----------------|-------------|-------------------|---------------------|------------------------------|---------------------|
| RADSOK® Part Number |                | Mating Size | Wire Barrell Size | Allowable Wire Size | Required Wire Adapter Sleeve | Test Current** AMPS |
| Socket Contact      |                |             |                   |                     |                              |                     |
| Silver              | Gold           |             |                   |                     |                              |                     |
| 10-639140-121       | 10-639140-1231 | 12          | 12-14             | 12<br>14            | -<br>-                       | 35<br>***           |
| 10-639140-081       | 10-639140-0831 | 8           | 8                 | 8<br>10*            | -<br>10-74696-1              | 70<br>***           |
| 10-639140-041       | 10-639140-0431 | 4           | 4                 | 4<br>6*             | -<br>10-74696-2              | 120<br>***          |
| 10-639140-001       | 10-639140-0031 | 0           | 0                 | 0<br>2*             | -<br>10-74696-7              | 250<br>***          |

\* When using wire adapter sleeve shown

\*\* Contact ratings as stated are test ratings only. The connector may 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.

\*\*\* Consult Amphenol Industrial for test current at these wire sizes.

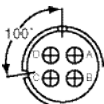
# AC Series/MS

## contact arrangements

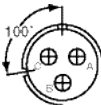
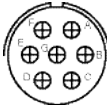
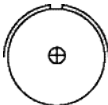
front face of pin insert or rear face of socket insert illustrated

|                    |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |  |
|                    | Front of Socket Insert                                                            | Front of Socket Insert                                                            |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Insert Arrangement | 10SL-3                                                                            | 10SL-4                                                                            | 12S-3                                                                             | 12S-4                                                                             | 12-5                                                                                | 14S-1                                                                               | 14S-2                                                                               |
| Service Rating     | A                                                                                 | A                                                                                 | A                                                                                 | D                                                                                 | D                                                                                   | A                                                                                   | Inst.                                                                               |
| Number of Contacts | 3                                                                                 | 2                                                                                 | 2                                                                                 | 1                                                                                 | 1                                                                                   | 3                                                                                   | 4                                                                                   |
| Contact Size       | 16                                                                                | 16                                                                                | 16                                                                                | 16                                                                                | 12                                                                                  | 16                                                                                  | 16                                                                                  |

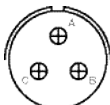
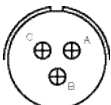
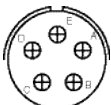
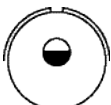
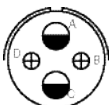
  

|                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
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|                    |  |  |  |  |  |  |
|                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 100° Rotation of 14S-2                                                              |
| Insert Arrangement | 14S-4                                                                             | 14S-5                                                                             | 14S-6                                                                             | 14S-7                                                                              | 14S-9                                                                               | 14S-10                                                                              |
| Service Rating     | D                                                                                 | Inst.                                                                             | Inst.                                                                             | A                                                                                  | A                                                                                   | Inst.                                                                               |
| Number of Contacts | 1                                                                                 | 5                                                                                 | 6                                                                                 | 3                                                                                  | 2                                                                                   | 4                                                                                   |
| Contact Size       | 16                                                                                | 16                                                                                | 16                                                                                | 16                                                                                 | 16                                                                                  | 16                                                                                  |

|                    |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
|                    | 100° Rotation of 14S-7                                                              |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
| Insert Arrangement | 14S-12                                                                              | 14S-A7                                                                              | 14-3                                                                                | 16S-1                                                                                | 16S-3                                                                                 | 16S-4                                                                                 |
| Service Rating     | A                                                                                   | A                                                                                   | A                                                                                   | A                                                                                    | B                                                                                     | D                                                                                     |
| Number of Contacts | 3                                                                                   | 7                                                                                   | 1                                                                                   | 7                                                                                    | 1                                                                                     | 2                                                                                     |
| Contact Size       | 16                                                                                  | 16                                                                                  | 8                                                                                   | 16                                                                                   | 16                                                                                    | 16                                                                                    |

|                    |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
| Insert Arrangement | 16S-5                                                                               | 16S-6                                                                               | 16S-8                                                                               | 16-2                                                                                 | 16-7                                                                                  | 16-9                                                                                  |
| Service Rating     | A                                                                                   | A                                                                                   | A                                                                                   | E                                                                                    | A                                                                                     | A                                                                                     |
| Number of Contacts | 3                                                                                   | 3                                                                                   | 5                                                                                   | 1                                                                                    | 1 2                                                                                   | 2 2                                                                                   |
| Contact Size       | 16                                                                                  | 16                                                                                  | 16                                                                                  | 12                                                                                   | 8 16                                                                                  | 12 16                                                                                 |

CONTACT LEGEND

 16
  12
  8
  4
  0

# AC Series/MS

## contact arrangements

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

|                    |       |       |       |       |       |                              |
|--------------------|-------|-------|-------|-------|-------|------------------------------|
|                    |       |       |       |       |       |                              |
| Insert Arrangement | 16-10 | 16-11 | 16-12 | 16-13 | 16-59 | 18-1                         |
| Service Rating     | A     | A     | A     | A     | A     | B, C, F, G = A; bal. = Inst. |
| Number of Contacts | 3     | 2     | 1     | 2*    | 4     | 10                           |
| Contact Size       | 12    | 12    | 4     | 12    | 12    | 16                           |

|                    |      |      |       |      |      |       |
|--------------------|------|------|-------|------|------|-------|
|                    |      |      |       |      |      |       |
| Insert Arrangement | 18-3 | 18-4 | 18-5  | 18-6 | 18-7 | 18-8  |
| Service Rating     | D    | D    | D     | D    | B    | A     |
| Number of Contacts | 2    | 4    | 2 1   | 1    | 1    | 1 7   |
| Contact Size       | 12   | 16   | 12 16 | 4    | 8    | 12 16 |

|                    |       |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|-------|
|                    |       |       |       |       |       |       |
| Insert Arrangement | 18-9  | 18-10 | 18-11 | 18-12 | 18-13 | 18-14 |
| Service Rating     | Inst. | A     | A     | A     | A     | A     |
| Number of Contacts | 2 5   | 4     | 5     | 6     | 1 3   | 1 1   |
| Contact Size       | 12 16 | 12    | 12    | 16    | 8 12  | 4 16  |

|                    |       |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|-------|
|                    |       |       |       |       |       |       |
| Insert Arrangement | 18-15 | 18-16 | 18-17 | 18-19 | 18-20 | 18-22 |
| Service Rating     | A     | C     | Inst. | A     | A     | D     |
| Number of Contacts | 4**   | 1     | 2 5   | 10    | 5     | 3     |
| Contact Size       | 12    | 12    | 12 16 | 16    | 16    | 16    |

\*A = Iron; B = Constantan

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

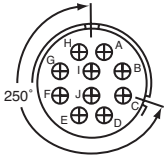
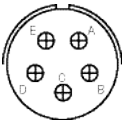
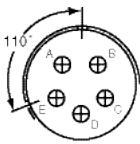
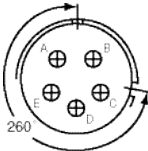
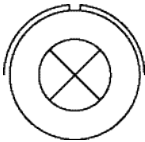
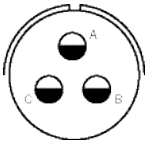
CONTACT LEGEND

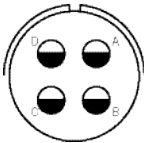
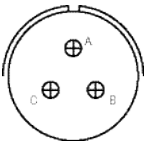
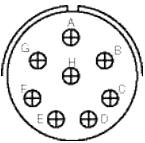
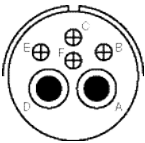
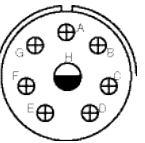
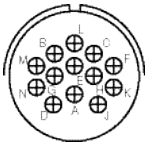
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|----|----|---|---|---|
|    |    |   |   |   |
| 16 | 12 | 8 | 4 | 0 |

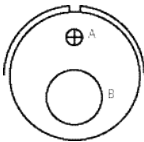
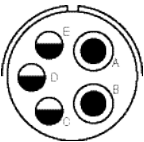
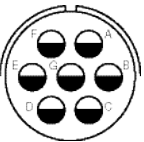
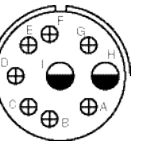
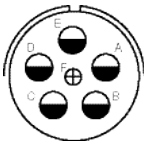
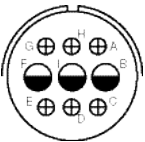
# AC Series/MS

## contact arrangements

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

|                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
| Insert Arrangement | 250° Rotation of 18-1                                                             | 18-29                                                                             | 110° Rotation of 18-20                                                            | 260° Rotation of 18-20                                                             | 20-2                                                                                | 20-3                                                                                |
| Service Rating     | 18-24<br>B, C, F, G = A; Bal. = Inst.                                             | 18-29<br>A                                                                        | 18-30<br>A                                                                        | 18-31<br>A                                                                         | 20-2<br>D                                                                           | 20-3<br>D                                                                           |
| Number of Contacts | 10                                                                                | 5                                                                                 | 5                                                                                 | 5                                                                                  | 1                                                                                   | 3                                                                                   |
| Contact Size       | 16                                                                                | 16                                                                                | 16                                                                                | 16                                                                                 | 0                                                                                   | 12                                                                                  |

|                    |                                                                                    |                                                                                    |                                                                                    |                                                                                      |                                                                                      |                                                                                      |
|--------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
| Insert Arrangement | 20-4                                                                               | 20-6                                                                               | 20-7                                                                               | 20-8                                                                                 | 20-9                                                                                 | 20-11                                                                                |
| Service Rating     | D                                                                                  | D                                                                                  | A, B, H, G = D; C, D, E, F = A                                                     | Inst.                                                                                | H = D; Bal. = A                                                                      | Inst.                                                                                |
| Number of Contacts | 4                                                                                  | 3                                                                                  | 8                                                                                  | 2 4                                                                                  | 1 7                                                                                  | 13                                                                                   |
| Contact Size       | 12                                                                                 | 16                                                                                 | 16                                                                                 | 8 16                                                                                 | 12 16                                                                                | 16                                                                                   |

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

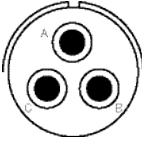
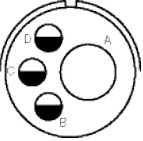
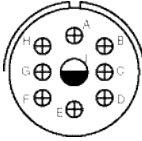
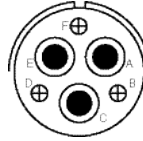
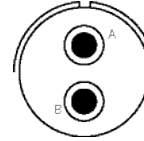
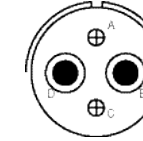


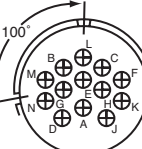
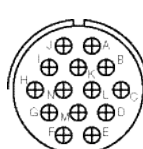
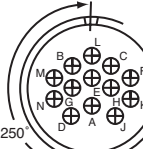
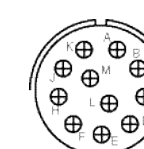
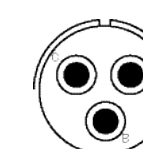
CONTACT LEGEND    16    12    8    4    0

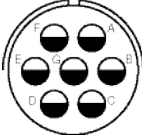
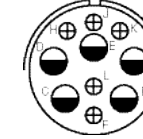
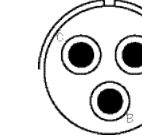
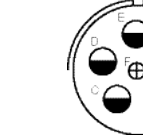
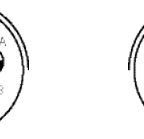
# AC Series/MS

## contact arrangements

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

|                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
| Insert Arrangement | 20-19                                                                             | 20-20                                                                             | 20-21                                                                             | 20-22                                                                              | 20-23                                                                               | 20-24                                                                               |
| Service Rating     | A                                                                                 | A                                                                                 | A                                                                                 | A                                                                                  | A                                                                                   | A                                                                                   |
| Number of Contacts | 3                                                                                 | 1 3                                                                               | 1 8                                                                               | 3 3                                                                                | 2                                                                                   | 2 2                                                                                 |
| Contact Size       | 8                                                                                 | 4 12                                                                              | 12 16                                                                             | 8 16                                                                               | 8                                                                                   | 8 16                                                                                |

|                    |                                                                                    |                                                                                    |                                                                                    |                                                                                     |                                                                                      |                                                                                      |
|--------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |  |
|                    | 100° Rotation<br>of 20-11                                                          |                                                                                    |                                                                                    | 250° Rotation<br>of 20-11                                                           |                                                                                      |                                                                                      |
| Insert Arrangement | 20-25                                                                              | 20-27                                                                              | 20-29                                                                              | 20-30                                                                               | 20-33                                                                                | 20-51                                                                                |
| Service Rating     | Inst.                                                                              | A                                                                                  | A                                                                                  | Inst.                                                                               | A                                                                                    | A                                                                                    |
| Number of Contacts | 13                                                                                 | 14                                                                                 | 17                                                                                 | 13                                                                                  | 11                                                                                   | 3*                                                                                   |
| Contact Size       | 16                                                                                 | 16                                                                                 | 16                                                                                 | 16                                                                                  | 16                                                                                   | 8                                                                                    |

|                    |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |
| Insert Arrangement | 20-57                                                                               | 20-58                                                                               | 20-59                                                                               | 20-66                                                                                | 20-79                                                                                 |
| Service Rating     | A                                                                                   | A                                                                                   | A                                                                                   | A                                                                                    | H = D; Bal. = A                                                                       |
| Number of Contacts | 7*                                                                                  | 5 5                                                                                 | 3*                                                                                  | 1 5                                                                                  | 7* 1*                                                                                 |
| Contact Size       | 12 for #14 or 16 wire                                                               | 12 16                                                                               | 8 for #10 or 12 wire                                                                | 16 12 for #10 wire                                                                   | 16 12 for #16 wire                                                                    |

|                |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|----------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                |  |  |  |  |  |
| CONTACT LEGEND | 16                                                                                    | 12                                                                                    | 8                                                                                     | 4                                                                                     | 0                                                                                     |

# AC Series/MS

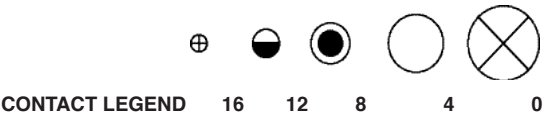
## contact arrangements

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

|                    |      |      |      |       |      |      |
|--------------------|------|------|------|-------|------|------|
|                    |      |      |      |       |      |      |
| Insert Arrangement | 22-1 | 22-2 | 22-4 | 22-5  | 22-6 | 22-7 |
| Service Rating     | D    | D    | A    | D     | D    | E    |
| Number of Contacts | 2    | 3    | 2 2  | 2 4   | 2 1  | 1    |
| Contact Size       | 8    | 8    | 8 12 | 12 16 | 8 16 | 0    |

|                    |      |      |       |       |       |                       |
|--------------------|------|------|-------|-------|-------|-----------------------|
|                    |      |      |       |       |       |                       |
| Insert Arrangement | 22-8 | 22-9 | 22-10 | 22-11 | 22-12 | 22-13                 |
| Service Rating     | E    | E    | E     | B     | D     | E = D; A, B, C, D = A |
| Number of Contacts | 2    | 3    | 4     | 2     | 2 3   | 4 1                   |
| Contact Size       | 12   | 12   | 16    | 16    | 8 16  | 12 16                 |

|                    |       |                          |       |                 |                                |
|--------------------|-------|--------------------------|-------|-----------------|--------------------------------|
|                    |       |                          |       |                 |                                |
| Insert Arrangement | 22-14 | 22-15                    | 22-16 | 22-17           | 22-18                          |
| Service Rating     | A     | D = E; A, B, C, E, F = A | A     | A = D; Bal. = A | A, B, F, G, H = D; C, D, E = A |
| Number of Contacts | 19    | 5 1                      | 3 6   | 1 8             | 8                              |
| Contact Size       | 16    | 12 16                    | 12 16 | 12 16           | 16                             |



# AC Series/MS

## contact arrangements

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

|                           |                                 |                        |                              |                                    |                             |
|---------------------------|---------------------------------|------------------------|------------------------------|------------------------------------|-----------------------------|
|                           |                                 |                        |                              |                                    |                             |
| <b>Insert Arrangement</b> | <b>22-19</b>                    | <b>22-20</b>           | <b>22-21</b>                 | <b>22-22</b>                       | <b>22-23</b>                |
| <b>Service Rating</b>     | <b>A</b>                        | <b>A</b>               | <b>A</b>                     | <b>A</b>                           | <b>H = D; Bal = A</b>       |
| <b>Number of Contacts</b> | <b>14</b>                       | <b>9</b>               | <b>1 2</b>                   | <b>4</b>                           | <b>8</b>                    |
| <b>Contact Size</b>       | <b>16</b>                       | <b>16</b>              | <b>0 16</b>                  | <b>8</b>                           | <b>12</b>                   |
|                           |                                 |                        |                              |                                    |                             |
| <b>Insert Arrangement</b> | <b>22-24</b>                    | <b>22-27</b>           | <b>22-28</b>                 | <b>22-33</b>                       | <b>22-34</b>                |
| <b>Service Rating</b>     | <b>C, D, E = D; A, B, F = A</b> | <b>J = D; Bal. = A</b> | <b>A</b>                     | <b>A, B, C, D = D; E, F, G = A</b> | <b>D</b>                    |
| <b>Number of Contacts</b> | <b>2 4</b>                      | <b>1 8</b>             | <b>7</b>                     | <b>7</b>                           | <b>3 2</b>                  |
| <b>Contact Size</b>       | <b>12 16</b>                    | <b>8 16</b>            | <b>12</b>                    | <b>16</b>                          | <b>12 16</b>                |
|                           |                                 |                        |                              |                                    |                             |
| <b>Insert Arrangement</b> | <b>22-36</b>                    | <b>22-63</b>           | <b>22-65</b>                 | <b>22-70</b>                       | <b>22-80</b>                |
| <b>Service Rating</b>     | <b>H = D; Bal. = A**</b>        | <b>A</b>               | <b>H = D; Bal. = A</b>       | <b>A</b>                           | <b>A</b>                    |
| <b>Number of Contacts</b> | <b>8</b>                        | <b>4 8</b>             | <b>8*</b>                    | <b>8 5</b>                         | <b>3*</b>                   |
| <b>Contact Size</b>       | <b>12</b>                       | <b>12 16</b>           | <b>12 for #14 or 16 wire</b> | <b>12 16</b>                       | <b>8 for #10 or 12 wire</b> |

\* Solderless

\*\* A, C, E, G = Iron

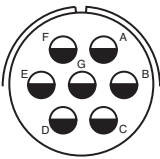
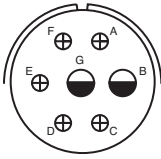
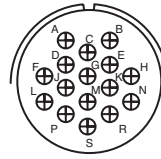
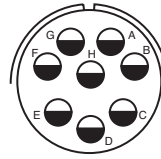
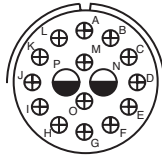
B, D, F, H = Constantan

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

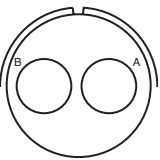
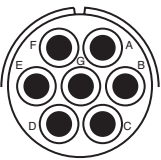
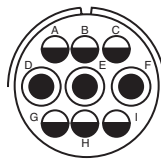
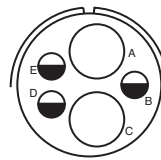
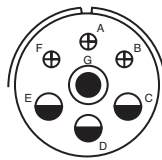
# AC Series/MS

## contact arrangements

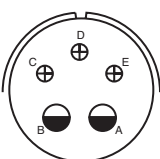
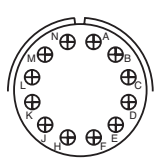
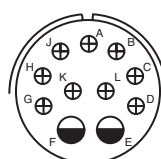
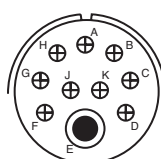
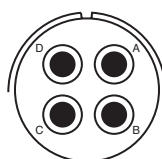
front face of pin insert or rear face of socket insert illustrated

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

|                    |                                                                                    |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
|--------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |
| Insert Arrangement | 24-9                                                                               | 24-10                                                                              | 24-11                                                                              | 24-12                                                                                | 24-16                                                                                |
| Service Rating     | A                                                                                  | A                                                                                  | A                                                                                  | A                                                                                    | A, B, F, G = D; C, D, E = A                                                          |
| Number of Contacts | 2                                                                                  | 7                                                                                  | 3 6                                                                                | 2 3                                                                                  | 1 3 3                                                                                |
| Contact Size       | 4                                                                                  | 8                                                                                  | 8 12                                                                               | 4 12                                                                                 | 8 12 16                                                                              |

|                    |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                    |  |  |  |  |  |
| Insert Arrangement | 24-17                                                                               | 24-19                                                                               | 24-20                                                                               | 24-21                                                                                 | 24-22                                                                                 |
| Service Rating     | D                                                                                   | A                                                                                   | D                                                                                   | D                                                                                     | D                                                                                     |
| Number of Contacts | 2 3                                                                                 | 12                                                                                  | 2 9                                                                                 | 1 9                                                                                   | 4                                                                                     |
| Contact Size       | 12 16                                                                               | 16                                                                                  | 12 16                                                                               | 8 16                                                                                  | 8                                                                                     |



CONTACT LEGEND1612840

# AC Series/MS

## contact arrangements

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

|                    |       |       |                                                     |         |       |
|--------------------|-------|-------|-----------------------------------------------------|---------|-------|
|                    |       |       |                                                     |         |       |
| Insert Arrangement | 24-27 | 24-28 | 24-51                                               | 24-52   | 24-53 |
| Service Rating     | E     | Inst. | A                                                   | Hi-Volt | A     |
| Number of Contacts | 7     | 24    | 5*                                                  | 1       | 5*    |
| Contact Size       | 16    | 16    | B, E for AN#10 or 12 wire<br>A, C, D for AN #8 wire |         |       |

|                    |         |       |                      |       |       |
|--------------------|---------|-------|----------------------|-------|-------|
|                    |         |       |                      |       |       |
| Insert Arrangement | 24-58   | 24-59 | 24-60                | 24-65 | 24-66 |
| Service Rating     | A       | A     | A                    | A     | D     |
| Number of Contacts | 3 3 7   | 7 7   | 7*                   | 11 4  | 7     |
| Contact Size       | 8 12 16 | 12 16 | 8 for #10 or 12 wire | 12 16 | 12    |

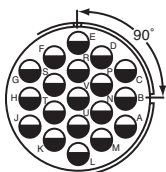
|                    |       |                        |                  |       |       |
|--------------------|-------|------------------------|------------------|-------|-------|
|                    |       |                        |                  |       |       |
| Insert Arrangement | 24-67 | 24-71                  | 24-75            | 24-79 | 24-80 |
| Service Rating     | Inst. | A                      | A                | A     | Inst. |
| Number of Contacts | 19    | 2* 5*                  | 5 2              | 5     | 23    |
| Contact Size       | 12    | 8 8 for #10 or 12 wire | 8 8 for #16 wire | 8     | 16    |

CONTACT LEGEND
16
12
8
4
0

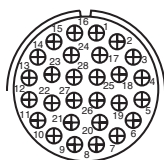
# AC Series/MS

## contact arrangements

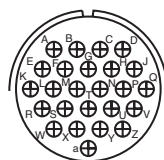
front face of pin insert or rear face of socket insert illustrated



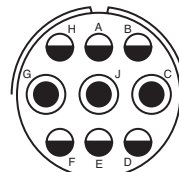
24-84



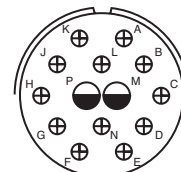
24-96



24-AJ



28-1



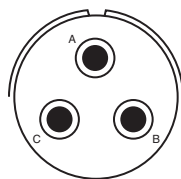
28-2

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

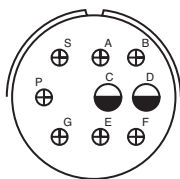
A  
1 18  
12 12 (Coax)  
RG-188/U  
or RG-174/U

Inst.  
25  
16

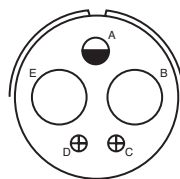
A A, J, E = D; Bal. = A D  
3 6 2 12  
8 12 12 16



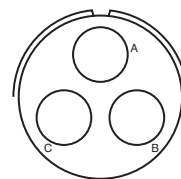
28-3



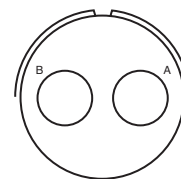
28-4



28-5



28-6



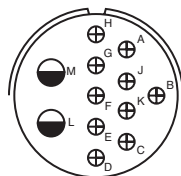
28-7

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

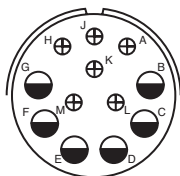
E G, P, S = E; Bal. = D  
3 2 7  
8 12 16

D  
2 1 2  
4 12 16

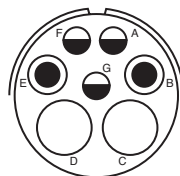
D  
3 2  
4 4



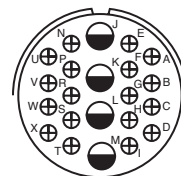
28-8



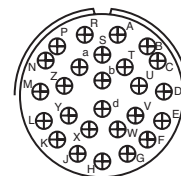
28-9



28-10



28-11



28-12

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

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

D  
6 6  
12 16

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

A  
4 18  
12 16

A  
26  
16

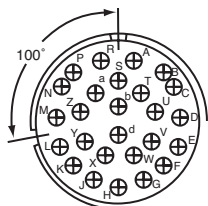


CONTACT LEGEND 16 12 8 4 0

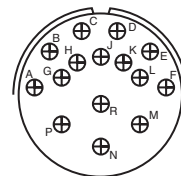
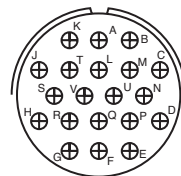
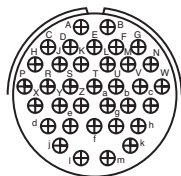
# AC Series/MS

## contact arrangements

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



100° Rotation  
of 28-12



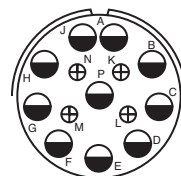
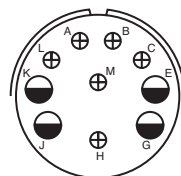
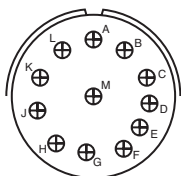
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

28-13  
A  
26  
16

28-15  
A  
35  
16

28-16  
A  
20  
16

28-17  
R = B; M, N, P = D; A to L = A  
15  
16

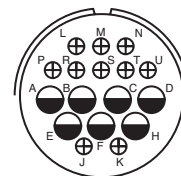
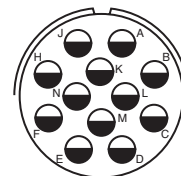
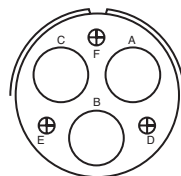
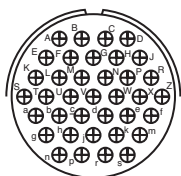


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

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

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

28-20  
A  
10 4  
12 16



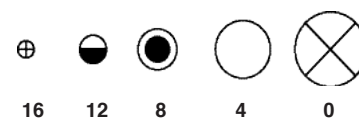
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

28-21  
A  
37  
16

28-22  
D  
3 3  
4 16

28-51  
A  
12  
12

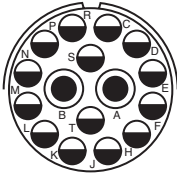
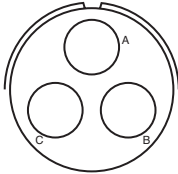
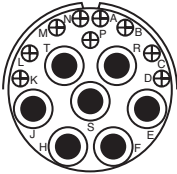
28-59  
A  
7 10  
12 16

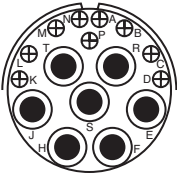
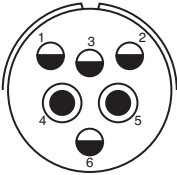
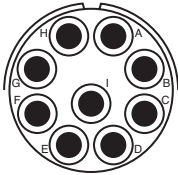
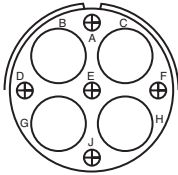


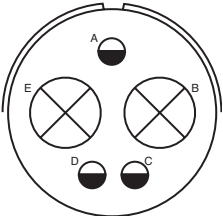
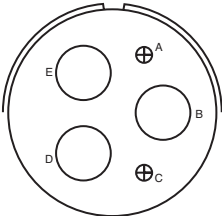
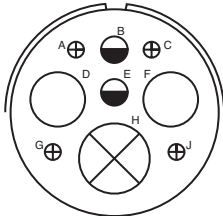
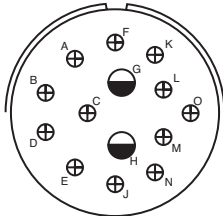
# AC Series/MS

## contact arrangements

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

|                    |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                    |  |  |  |  |
| Insert Arrangement | 28-66                                                                             | 28-72                                                                             | 28-74                                                                              | 28-75                                                                               |
| Service Rating     | A                                                                                 | —                                                                                 | A                                                                                  | A                                                                                   |
| Number of Contacts | 2 14                                                                              | 3                                                                                 | 9* 4* 3*                                                                           | 9* 7*                                                                               |
| Contact Size       | 8 12                                                                              | 4 (Coax) RG-59 A/U                                                                | 16 8 8 for #10 wire                                                                | 16 8 for #10 wire                                                                   |

|                    |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
|--------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                    |  |  |  |  |
| Insert Arrangement | 28-79                                                                              | 28-82                                                                              | 28-84                                                                                | 28-AY                                                                                |
| Service Rating     | A                                                                                  | D                                                                                  | A                                                                                    | A                                                                                    |
| Number of Contacts | 9 7                                                                                | 2 4                                                                                | 9                                                                                    | 4 5                                                                                  |
| Contact Size       | 16 8                                                                               | 8 12                                                                               | 8                                                                                    | 4 16                                                                                 |

|                    |                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                    |  |  |  |  |
| Insert Arrangement | 32-1                                                                                | 32-2                                                                                | 32-3                                                                                 | 32-4                                                                                  |
| Service Rating     | A = E; B, C, D, E = D                                                               | E                                                                                   | D                                                                                    | F, J, K, N = A; Bal. =                                                                |
| Number of Contacts | 2 3                                                                                 | 3 2                                                                                 | 1 2 2 4                                                                              | 2 12                                                                                  |

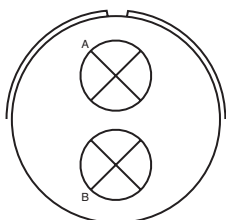


CONTACT LEGEND
16
12
8
4
0

# AC Series/MS

## contact arrangements

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



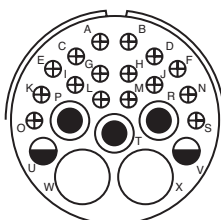
32-5

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

D

2

0

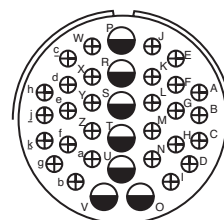


32-6

A

2 3 2 16

4 8 12 16

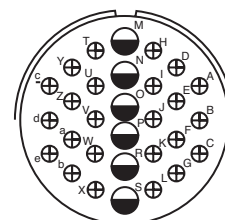


32-7

A, B, h, j = Inst.; Bal = A

7 28

12 16

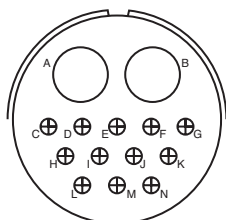


32-8

A

6 24

12 16



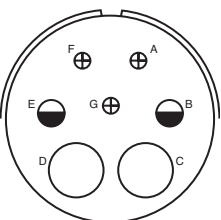
32-9

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

D

2 12

4 16

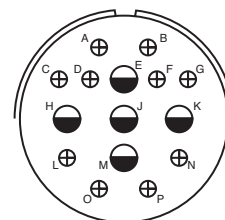


32-10

A, F = E; G = B; B, E = D; C, D = A

2 2 3

4 8 16

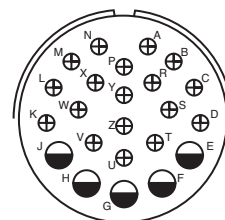


32-12

C, D, E, F, G = A; Bal. = D

5 10

12 16

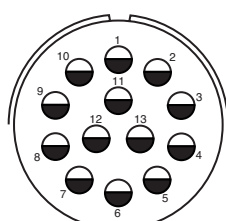


32-13

D

5 18

12 16



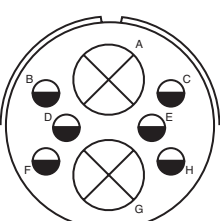
32-14

Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

D

13

12

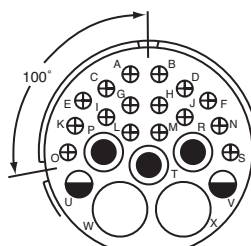


32-15

D

2 6

0 12



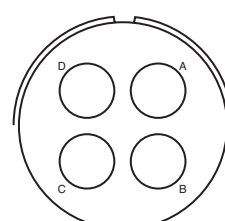
100° Rotation  
of 32-6

32-16

A

2 3 2 16

4 8 12 16



32-17

D

4

4



CONTACT LEGEND

16

12

8

4

0

# AC Series/MS

## contact arrangements

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

|                                                   |                                  |                       |                         |                                  |
|---------------------------------------------------|----------------------------------|-----------------------|-------------------------|----------------------------------|
|                                                   |                                  |                       |                         |                                  |
| Insert Arrangement                                | 32-22                            | 32-25                 | 32-31                   | 32-48                            |
| Service Rating                                    | A                                | A                     | A                       | Inst.                            |
| Number of Contacts                                | 54                               | 25                    | 31                      | 48                               |
| Contact Size                                      | 16                               | 12                    | 16                      | 16                               |
|                                                   |                                  |                       |                         |                                  |
| Insert Arrangement                                | 32-52                            | 32-53                 | 32-56                   | 32-57                            |
| Service Rating                                    | D                                | t, u = E; Bal = Inst. | A                       | **                               |
| Number of Contacts                                | 2 6                              | 5 37                  | 24 6                    | 6 2                              |
| Contact Size                                      | 0 12                             | 12 16                 | 16 12 for #10 wire      | 12 0 (Coax) RG-71/U              |
|                                                   |                                  |                       |                         |                                  |
| Insert Arrangement                                | 32-58                            | 32-59                 | 32-60                   | 32-62                            |
| Service Rating                                    | —                                | A                     | A                       | **                               |
| Number of Contacts                                | 4                                | 40 2                  | 15 8                    | 2 1 2 16 2                       |
| Contact Size                                      | 4 (Coax) RG-161/U<br>or RG-179/U | 16 8 (Coax) RG-161/U  | 16 8 (Coax)<br>RG-124/U | 4 8 12 16 8 (Coax)<br>RG-124/U16 |
| <div></div> <div>CONTACT LEGEND 16 12 8 4 0</div> |                                  |                       |                         |                                  |

# AC Series/MS

## contact arrangements

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

|                    |       |                       |       |                        |
|--------------------|-------|-----------------------|-------|------------------------|
|                    |       |                       |       |                        |
| Insert Arrangement | 32-64 | 32-68                 | 32-73 | 32-75                  |
| Service Rating     | Inst. | A                     | A     | 8, 9 = D               |
| Number of Contacts | 54    | 12 4                  | 46    | 2 7                    |
| Contact Size       | 16    | 16 4 (Coax) RG-58 C/U | 16    | 12 8 (Coax) RG-180 B/U |

|                    |       |       |       |       |
|--------------------|-------|-------|-------|-------|
|                    |       |       |       |       |
| Insert Arrangement | 32-76 | 32-79 | 32-82 | 32-AF |
| Service Rating     | A     | D     | A     | A     |
| Number of Contacts | 19    | 4 1   | 12 4  | 55    |
| Contact Size       | 12    | 4 8   | 16 4  | 16    |

|                    |       |      |                 |      |
|--------------------|-------|------|-----------------|------|
|                    |       |      |                 |      |
| Insert Arrangement | 36-1  | 36-3 | 36-4            | 36-5 |
| Service Rating     | D     | D    | A = D; B, C = A | A    |
| Number of Contacts | 4 18  | 3 3  | 3               | 4    |
| Contact Size       | 12 16 | 0 12 | 0               | 0    |

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CONTACT LEGEND

16

12

8

4

0

# AC Series/MS

## contact arrangements

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

36-6

A

2 4

0 4

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

36-10

A

48

16

36-11

A

48

16

36-12

A

48

16

36-13

N, P, Q = E; Bal. = A

2 15

12 16

36-14

D

5 5 6

36-15

35

36-16

M = D; Bal. = A

7 40

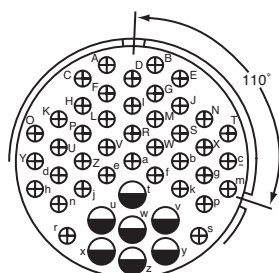
CONTACT LEGEND

16 12 8 4 0

# AC Series/MS

## contact arrangements

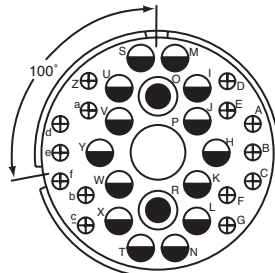
front face of pin insert or rear face of socket insert illustrated



110° Rotation  
of 36-7

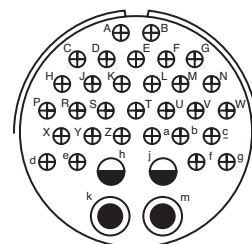
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

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

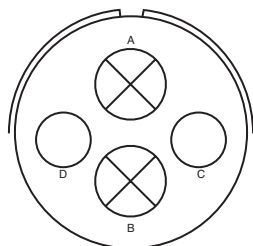


100° Rotation  
of 36-9

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



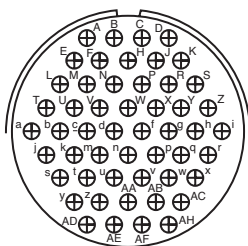
**36-20**  
**A**  
2 2 30  
8 12 16



**36-51**

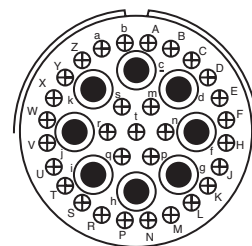
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

**D**  
2 2  
0 4



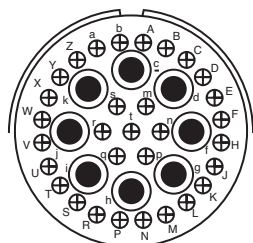
**36-52**

**A**  
52  
16



**36-54**

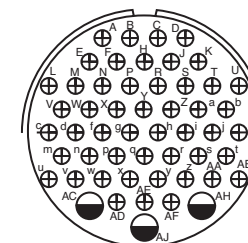
**A**  
8 31  
8 16



**36-55**

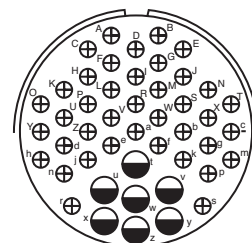
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

**A**  
31 8  
16 8 for #6 wire



**36-59**

**A**  
50 3  
16 12 for #10 wire



**36-60**

**\*\***  
40 7  
16 12 for #10 wire



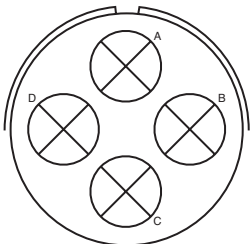
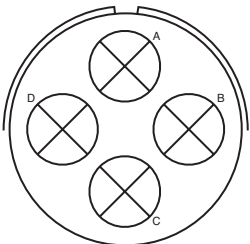
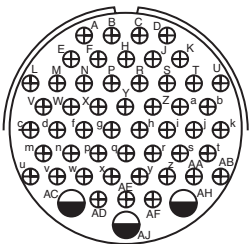
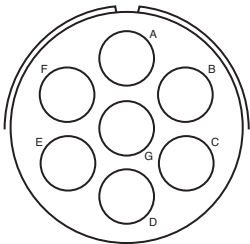
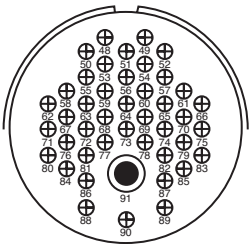
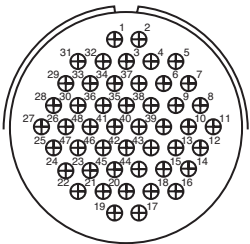
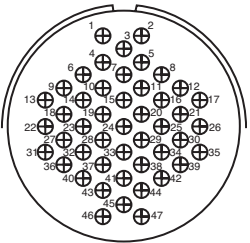
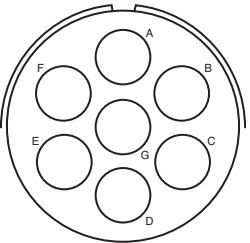
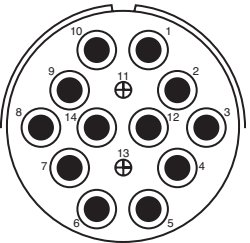
CONTACT LEGEND

16 12 8 4 0

# AC Series/MS

## contact arrangements

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

|                    |                                                                                     |                                                                                      |                                                                                       |
|--------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                    |    |    |    |
| Insert Arrangement | 36-64                                                                               | 36-65                                                                                | 36-71                                                                                 |
| Service Rating     | —                                                                                   | —                                                                                    | A                                                                                     |
| Number of Contacts | 4                                                                                   | 4                                                                                    | 3 50                                                                                  |
| Contact Size       | 0 (Coax) RG-11/U,<br>RG-12/U or RG-13/U                                             | 0 (Coax) RG-59/U, RG-62/U<br>or RG-71/U                                              | 12 16                                                                                 |
|                    |   |   |   |
| Insert Arrangement | 36-73                                                                               | 36-74                                                                                | 36-75                                                                                 |
| Service Rating     | —                                                                                   | A                                                                                    | A                                                                                     |
| Number of Contacts | 7                                                                                   | 43 1                                                                                 | 48                                                                                    |
| Contact Size       | 4 (Coax) RG-62B/U                                                                   | 16 8 (Coax) RG-187/U                                                                 | 16 for #14 wire                                                                       |
|                    |  |  |  |
| Insert Arrangement | 36-76                                                                               | 36-77                                                                                | 36-78                                                                                 |
| Service Rating     | A                                                                                   | D                                                                                    | A                                                                                     |
| Number of Contacts | 47                                                                                  | 7                                                                                    | 2 12                                                                                  |
| Contact Size       | 16                                                                                  | 4                                                                                    | 16 8                                                                                  |

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CONTACT LEGEND

16

12

8

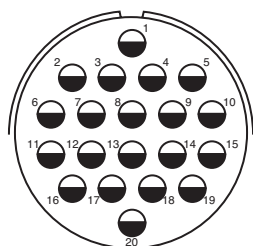
4

0

# AC Series/MS

## contact arrangements

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



**36-79**

**Insert Arrangement**

**A**

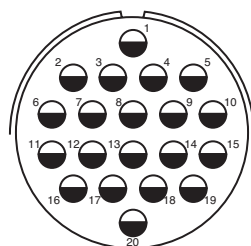
**Service Rating**

**20**

**Number of Contacts**

**12**

**Contact Size**

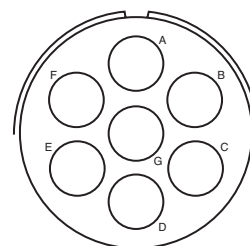


**36-80**

**A**

**20**

**12 for #10 wire**

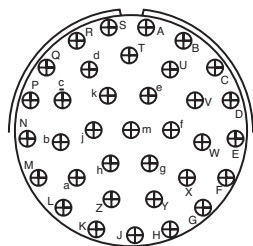


**36-83**

**-**

**7**

**4 (Coax) RG-58/U**



**36-85**

**Insert Arrangement**

**M = D; Bal. = A**

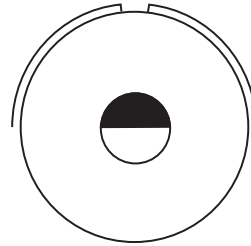
**Service Rating**

**35**

**Number of Contacts**

**16 for #12 wire**

**Contact Size**

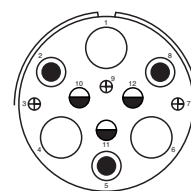


**36-97**

**C**

**1**

**4/0**

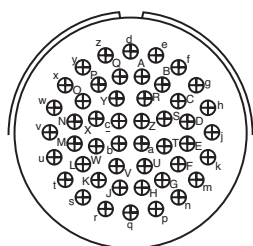


**36-99**

**D**

**3 3 3 3**

**4 8 12 16**



**36-AF**

**Insert Arrangement**

**A**

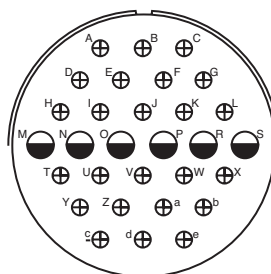
**Service Rating**

**48**

**Number of Contacts**

**16**

**Contact Size**

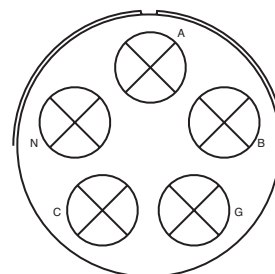


**40-1**

**D**

**6 24**

**12 16**



**40-5**

**A**

**5**

**0**



**CONTACT LEGEND**

**16**

**12**

**8**

**4**

**0**

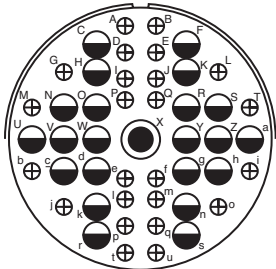
**2/0**

**4/0**

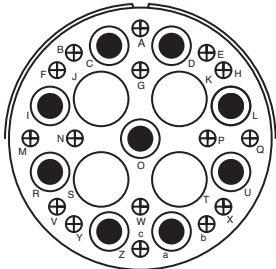
# AC Series/MS

## contact arrangements

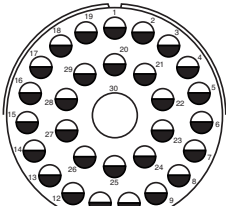
front face of pin insert or rear face of socket insert illustrated



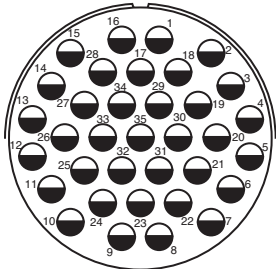
|                    |         |
|--------------------|---------|
| Insert Arrangement | 40-9    |
| Service Rating     | A       |
| Number of Contacts | 1 22 24 |
| Contact Size       | 8 12 16 |



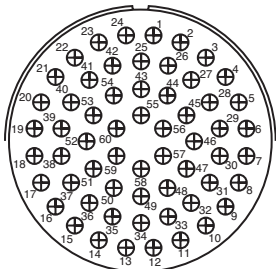
|                    |        |
|--------------------|--------|
| Insert Arrangement | 40-10  |
| Service Rating     | A      |
| Number of Contacts | 4 9 16 |
| Contact Size       | 4 8 16 |



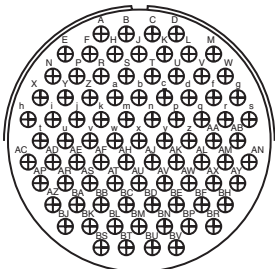
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-30 |
| Service Rating     | A     |
| Number of Contacts | 29 1  |
| Contact Size       | 12 4  |



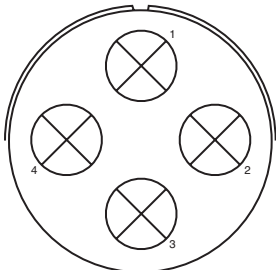
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-35 |
| Service Rating     | D     |
| Number of Contacts | 35    |
| Contact Size       | 12    |



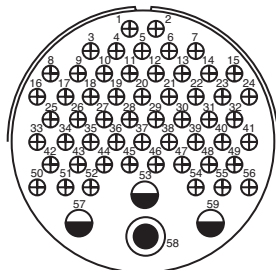
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-53 |
| Service Rating     | A     |
| Number of Contacts | 60    |
| Contact Size       | 16    |



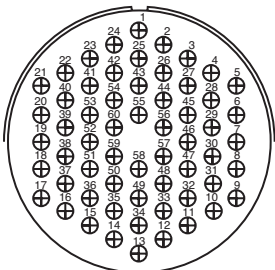
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-56 |
| Service Rating     | A     |
| Number of Contacts | 85    |
| Contact Size       | 16    |



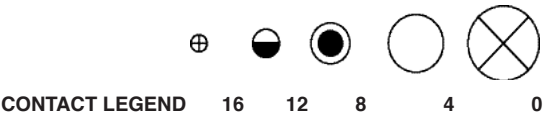
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-57 |
| Service Rating     | E     |
| Number of Contacts | 4     |
| Contact Size       | 0     |



|                    |         |
|--------------------|---------|
| Insert Arrangement | 40-61   |
| Service Rating     | A       |
| Number of Contacts | 1 3 55  |
| Contact Size       | 8 12 16 |



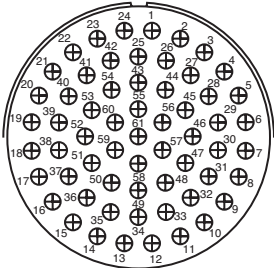
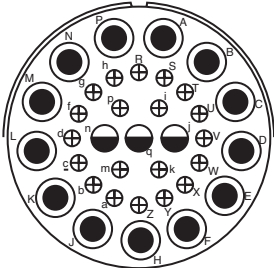
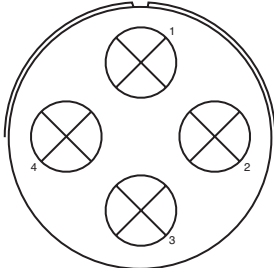
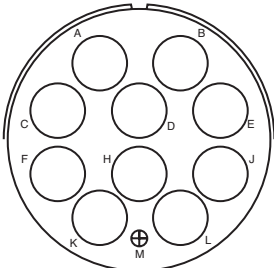
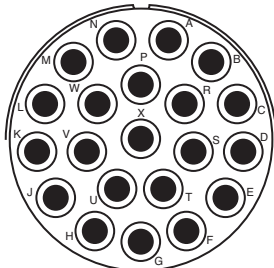
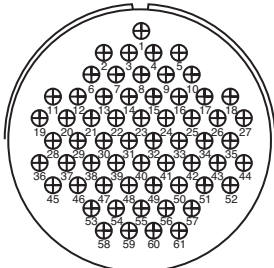
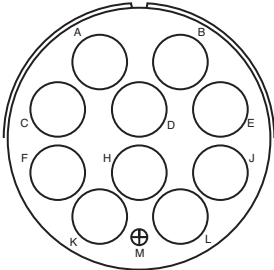
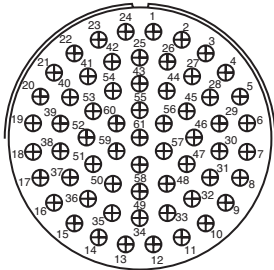
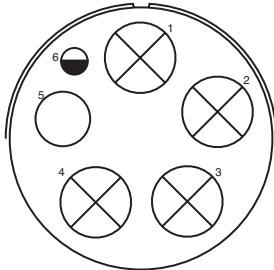
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-62 |
| Service Rating     | A     |
| Number of Contacts | 60    |
| Contact Size       | 16    |



# AC Series/MS

## contact arrangements

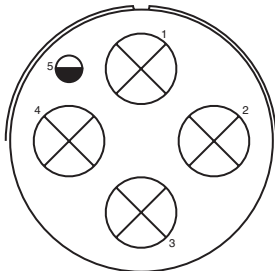
front face of pin insert or rear face of socket insert illustrated

|                                                                                                                                  |                                                                                       |              |          |                |                                  |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------|----------|----------------|----------------------------------|
| <div>Insert Arrangement</div> <div>Service Rating</div> <div>Number of Contacts</div> <div>Contact Size</div>                    |      | <b>40-63</b> | <b>A</b> | <b>61</b>      | <b>16 for #14 wire</b>           |
|                                                                                                                                  |     | <b>40-64</b> | <b>-</b> | <b>3 20 13</b> | <b>12 16 8 (Coax) RG-124/U</b>   |
|                                                                                                                                  |    | <b>40-66</b> | <b>-</b> | <b>4</b>       | <b>0 (Coax) RG-63B/U</b>         |
|                                                                                                                                  |                                                                                       |              |          |                |                                  |
| <div>Insert Arrangement</div> <div>Service Rating</div> <div>Number of Contacts</div> <div>Contact Size</div>                    |     | <b>40-67</b> | <b>A</b> | <b>1 10</b>    | <b>16</b>                        |
|                                                                                                                                  |    | <b>40-68</b> | <b>A</b> | <b>21</b>      | <b>4 (Coax) RG-59/U</b>          |
|                                                                                                                                  |   | <b>40-70</b> | <b>A</b> | <b>61</b>      | <b>8 16</b>                      |
|                                                                                                                                  |                                                                                       |              |          |                |                                  |
| <div>Insert Arrangement</div> <div>Service Rating</div> <div>Number of Contacts</div> <div>Contact Size</div> <div>RG-9B/U</div> |    | <b>40-72</b> | <b>A</b> | <b>1 10</b>    | <b>16</b>                        |
|                                                                                                                                  |   | <b>40-73</b> | <b>A</b> | <b>61</b>      | <b>4 (Coax) RG-9B/U</b>          |
|                                                                                                                                  |  | <b>40-74</b> | <b>A</b> | <b>4</b>       | <b>4 (Coax) RG-62/U 0 (Coax)</b> |
|                                                                                                                                  |                                                                                       |              |          |                |                                  |
| <div>CONTACT LEGEND</div> <div> <div>⊕</div> <div>⬤</div> <div>●</div> <div>○</div> <div>⊗</div> </div> <div>16 12 8 4 0</div>   |                                                                                       |              |          |                |                                  |

# AC Series/MS

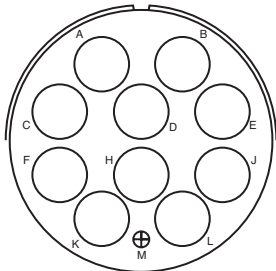
## contact arrangements

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

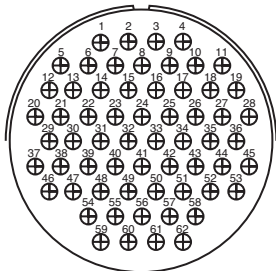


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

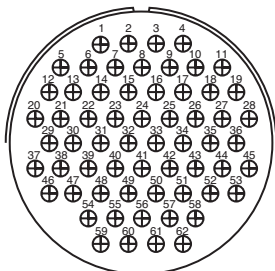
40-75  
E  
1 4  
12 0



40-80  
A  
1 10  
16 4

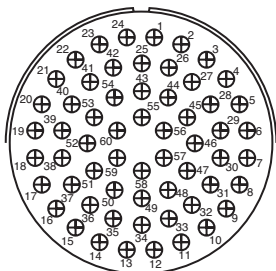


40-81  
A  
62  
16 for #14 wire

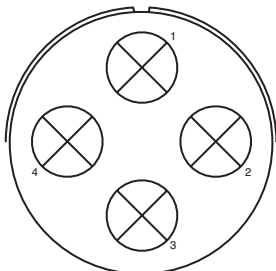


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

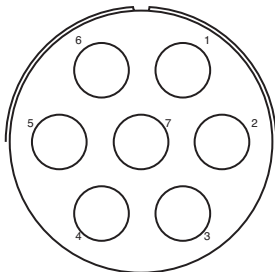
40-82  
A  
62  
16



40-85  
A  
60  
16 for #14 wire

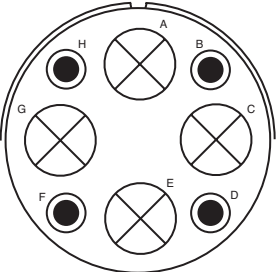


40-86  
—  
4  
0 (Coax) RG-115A/U

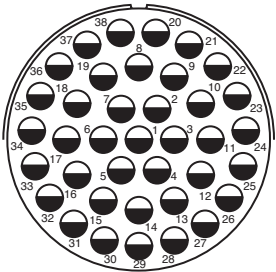


Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

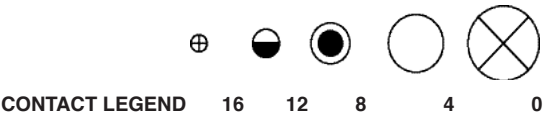
40-87  
D  
7  
4



40-AD  
A  
4 4  
8 0



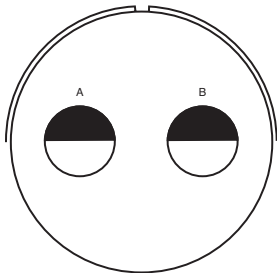
40-AG  
A  
38  
12



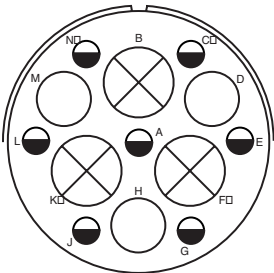
# AC Series/MS

## contact arrangements

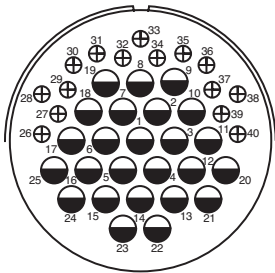
front face of pin insert or rear face of socket insert illustrated



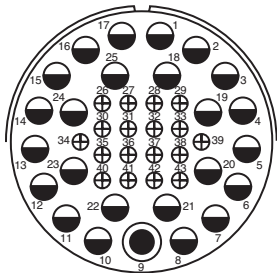
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-AP |
| Service Rating     | E     |
| Number of Contacts | 2     |
| Contact Size       | 4/0   |



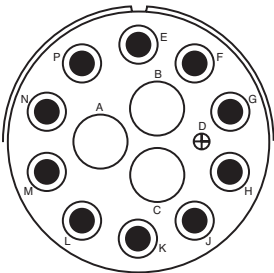
|                    |        |
|--------------------|--------|
| Insert Arrangement | 40-AR  |
| Service Rating     | Inst.  |
| Number of Contacts | 7 3 3  |
| Contact Size       | 12 4 0 |



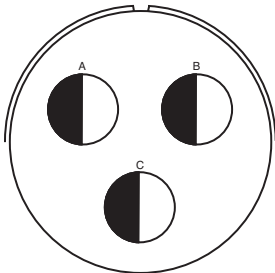
|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-AS |
| Service Rating     | A     |
| Number of Contacts | 15 25 |
| Contact Size       | 16 12 |



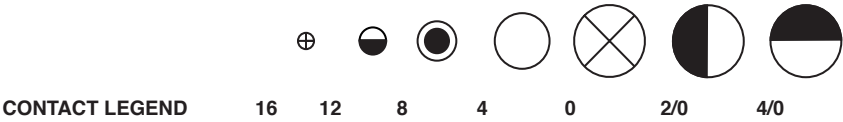
|                    |         |
|--------------------|---------|
| Insert Arrangement | 40-AT   |
| Service Rating     | A       |
| Number of Contacts | 24 18 1 |
| Contact Size       | 12 16 8 |



|                    |        |
|--------------------|--------|
| Insert Arrangement | 40-AU  |
| Service Rating     | A      |
| Number of Contacts | 3 10 1 |
| Contact Size       | 4 8 16 |



|                    |       |
|--------------------|-------|
| Insert Arrangement | 40-AV |
| Service Rating     | D     |
| Number of Contacts | 3     |
| Contact Size       | 2/0   |



# AC Series - 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 MS/Standard contact arrangement section, pages 32-53, or the Special contact arrangement section, pages 54-58. 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 the 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 <sup>+.002</sup><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 |

# AC Series - Thermocouple

## contact arrangements

| Shell<br>Size<br>and Arrg. | Similar<br>to<br>MS Arrg. | Total<br>Contacts | Contact<br>Size |    | Pin<br>Insert<br>Rotation<br>C W | Contact Material                                |
|----------------------------|---------------------------|-------------------|-----------------|----|----------------------------------|-------------------------------------------------|
|                            |                           |                   | 12              | 16 |                                  |                                                 |
| 10SL-51                    | 10SL-4                    | 2                 |                 | 2  | 45°                              | A = Ir.; B = Con.                               |
| 10SL-52                    | 10SL-4                    | 2                 |                 | 2  | 45°                              | A = Cu.; B = Con.                               |
| 10SL-53                    | 10SL-4                    | 2                 |                 | 2  | 45°                              | A = Al.; B = Ch.                                |
| 10SL-54                    | 10SL-3                    | 3                 |                 | 3  | None                             | A = Ir.; B = Con.; C = Cu.                      |
| 10SL-55                    | 10SL-3                    | 3                 |                 | 3  | None                             | A = Al.; B = Ch.; C = Cu.                       |
| 10SL-56                    | 10SL-4                    | 2                 |                 | 2  | None                             | A = Al.; B = Ch.                                |
| 10SL-57                    | 10SL-4                    | 2                 |                 | 2  | None                             | A = Ch.; B = Con.                               |
| 10SL-58                    | 10SL-3                    | 3                 |                 | 3  | None                             | A = Ch.; B = Al.; C = Cu.                       |
| 10SL-59                    | 10SL-4                    | 2                 |                 | 2  | None                             | A = Ch.; B = Al.                                |
| 10SL-60                    | 10SL-4                    | 2                 |                 | 2  | None                             | A = Ir.; B = Con.                               |
| 10SL-61                    | 10SL-4                    | 2                 |                 | 2  | None                             | A = Cu.; B = Con.                               |
| 10SL-62                    | 10SL-3                    | 3                 |                 | 3  | None                             | A = Cu.; B = Al.; C = Ir.                       |
| 10SL-63                    | 10SL-3                    | 3                 |                 | 3  | None                             | A, C = Con.; B = Ch.                            |
| 10SL-64                    | 10SL-3                    | 3                 |                 | 3  | None                             | A, C = Ch.; B = Al.                             |
|                            |                           |                   |                 |    |                                  |                                                 |
| 12S-51                     | 12S-3                     | 2                 |                 | 2  | 315°                             | A = Ch.; B = Al.                                |
| 12S-54                     | 12S-3                     | 2                 |                 | 2  | 315°                             | A = Ir.; B = Con.                               |
| 12S-55                     | 12S-3                     | 2                 |                 | 2  | 45°                              | A = Cu.; B = Con.                               |
| 12S-56                     | 12S-3                     | 2                 |                 | 2  | None                             | A = Al.; B = Ch.                                |
| 12S-57                     | 12S-3                     | 2                 |                 | 2  | 60°                              | A = Ch.; B = Al.                                |
| 12S-58                     | 12S-3                     | 2                 |                 | 2  | 120°                             | A = Ir.; B = Con.                               |
| 12S-59                     | 12S-3                     | 2                 |                 | 2  | None                             | A = Ir.; B = Con.                               |
| 12S-60                     | 12S-3                     | 2                 |                 | 2  | None                             | A = Cu.; B = Con.                               |
| 12S-61                     | 12S-3                     | 2                 |                 | 2  | None                             | A = Ch.; B = Con.                               |
| 12S-62                     | 12S-3                     | 2                 |                 | 2  | None                             | A = Ch.; B = Al.                                |
|                            |                           |                   |                 |    |                                  |                                                 |
| 14S-51                     | 14S-9                     | 2                 |                 | 2  | 90°                              | A = Al.; B = Ch.                                |
| 14S-52                     | 14S-2                     | 4                 |                 | 4  | 45°                              | A, B = Cu.; C = Al.; D = Ch.                    |
| 14S-53                     | 14S-9                     | 2                 |                 | 2  | 90°                              | A = Ir.; B = Con.                               |
| 14S-54                     | 14S-6                     | 6                 |                 | 6  | 45°                              | A, C, E = Ir.; B, D, F = Con.                   |
| 14S-55                     | 14S-2                     | 4                 |                 | 4  | 45°                              | A, C = Ir.; B, D = Con.                         |
| 14S-56                     | 14S-2                     | 4                 |                 | 4  | 45°                              | A = Ir.; B = Con.; C, D = Cu.                   |
| 14S-57                     | 14S-2                     | 4                 |                 | 4  | 45°                              | A, C = Al.; B, D = Ch.                          |
| 14S-58                     | 14S-7                     | 3                 |                 | 3  | 45°                              | A = Al.; B = Ch.; C = Cu.                       |
| 14S-59                     | 14S-9                     | 2                 |                 | 2  | 90°                              | A = Cu.; B = Con.                               |
| 14S-60                     | 14S-9                     | 2                 |                 | 2  | None                             | A = Al.; B = Ch.                                |
| 14S-61                     | 14S-6                     | 6                 |                 | 6  | 45°                              | A = Al.; B = Ch.; C = Ir.; D = Con.; E, F = Cu. |
| 14S-63                     | 14S-6                     | 6                 |                 | 6  | None                             | A, C = Al.; B, D = Ch.; E = Ir.; F = Con.       |
| 14S-64                     | 14S-2                     | 4                 |                 | 4  | None                             | A, C = Con.; B, D = Cu.                         |
| 14S-65                     | 14S-6                     | 6                 |                 | 6  | None                             | A, C, E = Cu.; B, D, F = Con.                   |
| 14S-67                     | 14S-6                     | 6                 |                 | 6  | None                             | A = Al.; B = Ch.; Balance = Cu.                 |
| 14S-68                     | 14S-2                     | 4                 |                 | 4  | 45°                              | A = Ch.; B = Con.; C, D = Cu.                   |
| 14S-69                     | 14S-7                     | 3                 |                 | 3  | None                             | A = Con.; B = Ch.; C = Cu.                      |
| 14S-70                     | 14S-2                     | 4                 |                 | 4  | None                             | A, D = Ch.; B, C = Al.                          |
| 14S-71                     | 14S-2                     | 4                 |                 | 4  | None                             | A, B, D = Cu.; C = Con.                         |
| 14S-72                     | 14S-9                     | 2                 |                 | 2  | None                             | A = Con.; B = Cu.                               |
| 14S-73                     | 14S-2                     | 4                 |                 | 4  | None                             | A, B = Cu.; C = Al.; D = Ch.                    |

# AC Series - Thermocouple

## contact arrangements

| Shell<br>Size<br>and Arrg. | Similar<br>to<br>MS Arrg. | Total<br>Contacts | Contact<br>Size |    | Pin<br>Insert<br>Rotation<br>C W | Contact Material                                |
|----------------------------|---------------------------|-------------------|-----------------|----|----------------------------------|-------------------------------------------------|
|                            |                           |                   | 12              | 16 |                                  |                                                 |
| 14S-74                     | 14S-2                     | 4                 |                 | 4  | None                             | A, B = Ch.; C, D = Al.                          |
| 14S-75                     | 14S-2                     | 4                 |                 | 4  | None                             | A, B = Cu.; C, D = Con.                         |
| 14S-76                     | 14S-2                     | 4                 |                 | 4  | None                             | A, C = Al.; B, D = Ch.                          |
| 14S-77                     | 14S-2                     | 4                 |                 | 4  | None                             | A, D = Al.; B, C = Ch.                          |
| 14S-78                     | 14S-9                     | 2                 |                 | 2  | None                             | A = Ch.; B = Al.                                |
|                            |                           |                   |                 |    |                                  |                                                 |
| 16S-52                     | 16S-4                     | 2                 |                 | 2  | None                             | A = Ch.; B = Al.                                |
| 16S-54                     | 16S-1                     | 7                 |                 | 7  | None                             | A = Al.; B = Ch.; Balance = Cu.                 |
| 16S-55                     | 16S-1                     | 7                 |                 | 7  | None                             | A = Con.; Balance = 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.                               |
|                            |                           |                   |                 |    |                                  |                                                 |
| 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 = Cu.                |
| 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, C = 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. |
|                            |                           |                   |                 |    |                                  |                                                 |
| 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.           |
| 20-64                      | 20-27                     | 14                |                 | 14 | None                             | A = Al.; C = Ch.; Balance = Cu.                 |

# AC Series - Thermocouple

## contact arrangements

| Shell Size and Arrg. | Similar to MS Arrg. | Total Contacts | Contact Size |    | Pin Insert Rotation C W | Contact Material                                                                                            |
|----------------------|---------------------|----------------|--------------|----|-------------------------|-------------------------------------------------------------------------------------------------------------|
|                      |                     |                | 12           | 16 |                         |                                                                                                             |
| 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.                                         |
|                      |                     |                |              |    |                         |                                                                                                             |
| 22-36                | 22-23               | 8              | 8            |    | 347°                    | A, C, E, G = Ir.; B, D, F, H = Con.                                                                         |
| 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.; Balance = 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.                                                                                    |
|                      |                     |                |              |    |                         |                                                                                                             |
| 24-56                | 24-20               | 11             | 2            | 9  | 45°                     | E = Al.; F = Ch.; Balance = Cu.                                                                             |
| 24-57                | 24-28               | 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.                                  |
| 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.                                                 |
|                      |                     |                |              |    |                         |                                                                                                             |
| 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.                                                                             |

## AC Series - Thermocouple contact arrangements

[illegible]

\* Amphenol arrangement

# AC Series

## how to order

To more easily illustrate ordering procedure, part number ACCL06AF18-1SX(025) is shown as follows:

| AC | C | L | 06 | AF | 18-1 | S | X | (025) |
|----|---|---|----|----|------|---|---|-------|
| 1  | 2 | 3 | 4  | 5  | 6    | 7 | 8 | 9     |

1. **AC** designates Amphenol Industrial Series Threaded Connectors

2. **C** designates Crimp Contacts

**S** designates Solder Contacts

3. **L** designates low smoke zero halogen inserts and grommets

Omit for standard resilient inserts and grommets.

4. **Shell Style**

00 - Wall Mounting Receptacle

01 - Line Receptacle

02 - Box Mounting Receptacle

05 - Straight Plug

06 - Straight Plug with hardware

08 - 90 degree Plug

5. **Class**

A or AF - General duty connector

E or F - Environmental connector for a wire bundle

PGA or

PGR - Environmental connector for jacketed cable

6. **Shell size and insert arrangement**

See insert availability on pages 25-27

7. **Contact type**

P - Pin contacts

S - Socket contacts

R - RADSOK® crimp socket contacts (see page 31)

Ask for Brochure SL-391 for Amphe-Power Connectors with RADSOK Technology.

8. **Alternate insert rotation**

“W”, “X”, “Y”, “Z” designates that the insert is rotated in its shell from a normal position. No letter required for normal (no rotation) position.

See page 28 for availability.

9. **Variations**

**RoHS Compliant**

(072) - Gray zinc nickel finish

(023) - Electroless nickel finish

(025) - Black zinc alloy finish

(G96) - Black hard-coat anodize

(B30) - Gold plated contacts

(116) - Non-pre-tinned solder contacts

(472) - Black zinc alloy finish and solder contacts

less pre-filled cup

✓

(548) - Electroless nickel finish and solder contacts

less pre-filled cup

✓

(724) - Gray zinc nickel finish and solder contacts

less pre-filled cup

✓



For further RoHS Compliant support, contact Amphenol Industrial Operations or call 1-866-315-8559.

# MS/Standard

## how to order

### SAE AS50151 (Solder Contacts)

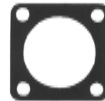
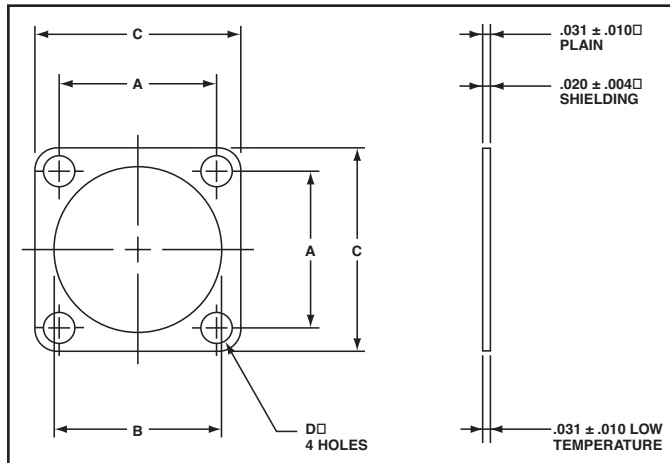
|    |      |   |      |   |   |
|----|------|---|------|---|---|
| MS | 3102 | A | 18-3 | P | W |
| 1  | 2    | 3 | 4 5  | 6 | 7 |

1. Connector Type  
MS designates Military Standard
2. Connector Style  
3100 wall mounting receptacle  
3101 cable connecting receptacle  
3102 box mounting receptacle  
3106 straight plug  
3108 90° plug
3. Service Class  
A solid shell for general, non-environmental applications  
C solid shell for pressurized applications (MS3102 only)  
E environmental resisting  
F environmental resisting with strain relief  
R lightweight environmental resisting
- 4., 5. Shell size and insert arrangement - see tables, pages 25-27.
6. Contact Types  
P designates pin contact  
S designates socket contact
7. Insert Rotation  
“W”, “X”, “Y”, or “Z” designate that insert is rotated in its shell from normal position. No letter required for normal (no rotation) position.

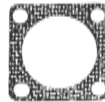
# AC Series/MS – accessories

## 10-40450, 10-36675 sealing gaskets, 10-405996 sealing plugs, sealing ranges

### SEALING GASKETS



The Amphenol plain flat gasket of synthetic rubber material is provided to take complete advantage of waterproof and pressure sealing features. It is for use with the flange mounted receptacle.



This flat gasket is provided to give the maximum in connector performance. Its special feature is in providing the maximum radio shielding under difficult conditions of high receiver sensitivity and low signal strength while retaining the sealing characteristics of the plain gasket. This gasket is for use with the flange mounting

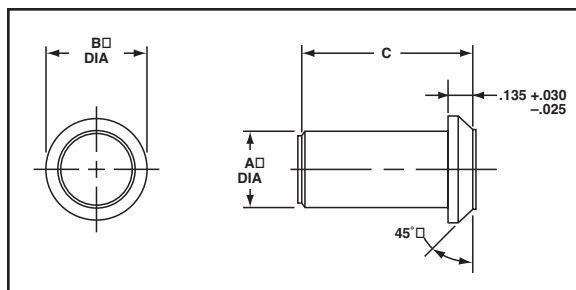


This gasket is provided for applications where the major requirement is resistance to the injurious effects of extremely low temperature. Even at temperatures as low as -67°F this gasket retains its resiliency and will seal a pressure differential of 30 psi.

| MS<br>Shell<br>Size | Installation Dimensions |                       |                       |             |             |                     |                     |            | Order Data  |              |                             |
|---------------------|-------------------------|-----------------------|-----------------------|-------------|-------------|---------------------|---------------------|------------|-------------|--------------|-----------------------------|
|                     | Inches                  |                       |                       |             | Millimeters |                     |                     |            | Plain       | Shielding    | Low<br>Temperature<br>Style |
|                     | A<br>± .010             | B<br>+ .016<br>- .000 | C<br>+ .016<br>- .000 | D<br>± .010 | A<br>± .25  | B<br>+ .41<br>- .00 | C<br>+ .41<br>- .00 | D<br>± .25 |             |              |                             |
| 8S                  | .594                    | .500                  | .875                  | .172        | 15.09       | 12.70               | 22.22               | 4.37       | 10-40450-8  | 10-40450-8S  | 10-36675-8                  |
| 10S                 | .719                    | .625                  | 1.000                 | .172        | 18.26       | 15.88               | 25.40               | 4.37       | 10-40450-10 | 10-40450-10S | 10-36675-10                 |
| 10SL                | .719                    | .625                  | 1.000                 | .172        | 18.26       | 15.88               | 25.40               | 4.37       | 10-40450-10 | 10-40450-10S | 10-36675-10                 |
| 12S                 | .813                    | .750                  | 1.094                 | .172        | 20.65       | 19.05               | 27.79               | 4.37       | 10-40450-12 | 10-40450-12S | 10-36675-12                 |
| 12                  | .813                    | .750                  | 1.094                 | .172        | 20.65       | 19.05               | 27.79               | 4.37       | 10-40450-12 | 10-40450-12S | 10-36675-12                 |
| 14S                 | .906                    | .875                  | 1.188                 | .172        | 23.01       | 22.22               | 30.18               | 4.37       | 10-40450-14 | 10-40450-14S | 10-36675-14                 |
| 14                  | .906                    | .875                  | 1.188                 | .172        | 23.01       | 22.22               | 30.18               | 4.37       | 10-40450-14 | 10-40450-14S | 10-36675-14                 |
| 16S                 | .969                    | 1.000                 | 1.281                 | .172        | 24.61       | 25.40               | 32.54               | 4.37       | 10-40450-16 | 10-40450-16S | 10-36675-16                 |
| 16                  | .969                    | 1.000                 | 1.281                 | .172        | 24.61       | 25.40               | 32.54               | 4.37       | 10-40450-16 | 10-40450-16S | 10-36675-16                 |
| 18                  | 1.063                   | 1.125                 | 1.375                 | .203        | 27.00       | 28.57               | 34.92               | 5.16       | 10-40450-18 | 10-40450-18S | 10-36675-18                 |
| 20                  | 1.156                   | 1.250                 | 1.500                 | .203        | 29.36       | 31.75               | 38.10               | 5.16       | 10-40450-20 | 10-40450-20S | 10-36675-20                 |
| 22                  | 1.250                   | 1.375                 | 1.625                 | .203        | 31.75       | 34.92               | 41.27               | 5.16       | 10-40450-22 | 10-40450-22S | 10-36675-22                 |
| 24                  | 1.375                   | 1.500                 | 1.750                 | .203        | 34.92       | 38.10               | 44.45               | 5.16       | 10-40450-24 | 10-40450-24S | 10-36675-24                 |
| 28                  | 1.563                   | 1.750                 | 2.000                 | .203        | 39.70       | 44.45               | 50.80               | 5.16       | 10-40450-28 | 10-40450-28S | 10-36675-28                 |
| 32                  | 1.750                   | 2.000                 | 2.250                 | .219        | 44.45       | 50.80               | 57.15               | 5.56       | 10-40450-32 | 10-40450-32S | 10-36675-32                 |
| 36                  | 1.938                   | 2.188                 | 2.500                 | .219        | 49.23       | 55.58               | 63.50               | 5.56       | 10-40450-36 | 10-40450-36S | 10-36675-36                 |
| 40                  | 2.188                   | 2.438                 | 2.750                 | .219        | 55.58       | 61.93               | 69.85               | 5.56       | 10-40450-40 | 10-40450-40S | 10-36675-40                 |

### SEALING PLUG 10-405996-XX1

Sealing plugs are used to fill unused holes in multi-holed grommet configurations.



All dimensions for reference only.

| Order No.     | Contact<br>Size | Wire<br>Size | Color<br>Code | Inches          |             |             | Millimeters     |            |            |
|---------------|-----------------|--------------|---------------|-----------------|-------------|-------------|-----------------|------------|------------|
|               |                 |              |               | A Dia<br>± .010 | B<br>± .005 | C<br>± .010 | A Dia.<br>± 0.2 | B<br>± 0.1 | C<br>± 0.2 |
| 10-405996-161 | 16              | 20-16        | Blue          | .083            | .133        | .564**      | 2.1             | 3.4        | 14.3***    |
| 10-405996-121 | 12              | 14-12        | Yellow        | .121            | .171        | .564**      | 3.1             | 4.3        | 14.3***    |
| 10-405996-081 | 8               | 10-8         | White         | .185            | .315        | .470        | 4.7             | 8.0        | 11.9       |
| 10-405996-041 | 4               | 4-6          | Blue          | .310            | .415        | .470        | 7.9             | 10.5       | 11.9       |
| 10-405996-001 | 0               | 0-2          | Yellow        | .440            | .605        | 1.000       | 11.2            | 15.4       | 25.4       |

\*\* ± .020  
\*\*\* ± 0.5 mm

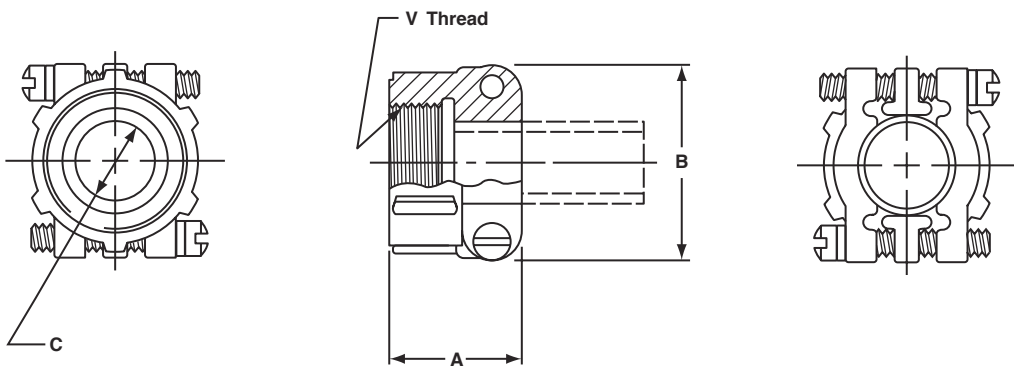
### GROMMET HOLE SEALING RANGE

| Hole<br>Size | Sealing Range |             |
|--------------|---------------|-------------|
|              | Millimeters   | Inches      |
| 16           | 2.3 – 3.0     | .090 – .118 |
| 12           | 3.2 – 4.5     | .126 – .177 |
| 8            | 3.8 – 6.5     | .150 – .256 |
| 4            | 7.1 – 9.3     | .279 – .366 |
| 0            | 10.0 – 13.7   | .394 – .539 |

# AC Series/MS Accessories

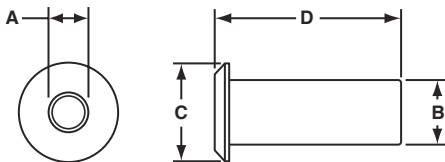
## MS3057-A style cable clamp, MS3420 sleeve

The MS3057-A style cable clamp was designed for use with jacketed cable or wires protected by tubing. Both clamping halves float for maximum strain relief. For unjacketed cable or wires, use corresponding MS3420 sleeve. To order clamp with sleeve, add -1 to the 97 - number. Two telescoping sleeves are furnished with shells sizes 24 and larger.



| Shell Size | Amphenol Number | A<br>±.031 | B<br>Max. | C<br>Dia.<br>Min. | V<br>Thread |
|------------|-----------------|------------|-----------|-------------------|-------------|
| 10SL, 12S  | 97-3057-1004    | .795       | .842      | .3125             | .6250-24    |
| 14,14S     | 97-3057-1007    | .850       | .995      | .4375             | .7500-20    |
| 16,16S     | 97-3057-1008    | .920       | 1.120     | .5625             | .8750-20    |
| 18         | 97-3057-1010    | .920       | 1.216     | .6250             | 1.0000-20   |
| 20, 22     | 97-3057-1012    | .927       | 1.403     | .7500             | 1.1875-18   |
| 24, 28     | 97-3057-1016    | 1.015      | 1.683     | .9375             | 1.4375-18   |
| 32         | 97-3057-1020    | 1.095      | 2.050     | 1.2500            | 1.7500-18   |
| 36         | 97-3057-1024    | 1.156      | 2.245     | 1.3750            | 2.0000-18   |

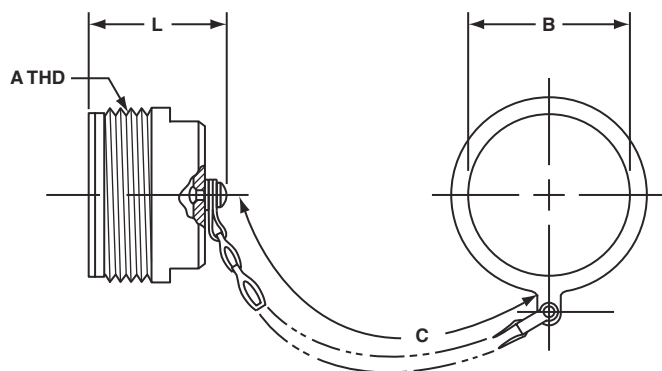
| Sleeve MS Part No. | Amphenol Number | A<br>±.005 | B<br>±.005 | C<br>±.010 | D<br>±.031 |
|--------------------|-----------------|------------|------------|------------|------------|
| 3420-3             | 9779-513-3      | .130       | .210       | .374       | 2.875      |
| 3420-4             | 9779-513-4      | .220       | .302       | .500       | 2.750      |
| 3420-6             | 9779-513-6      | .312       | .427       | .614       | 2.625      |
| 3420-8             | 9779-513-8      | .437       | .552       | .739       | 2.500      |
| 3420-10            | 9779-513-10     | .562       | .615       | .889       | 2.375      |
| 3420-12            | 9779-513-12     | .625       | .740       | 1.084      | 2.250      |
| 3420-16            | 9779-513-16     | .750       | .927       | 1.309      | 2.125      |
| 3420-20            | 9779-513-20     | .937       | 1.240      | 1.592      | 2.000      |
| 3420-24            | 9779-513-24     | 1.250      | 1.365      | 1.842      | 1.875      |



# AC Series/MS Accessories

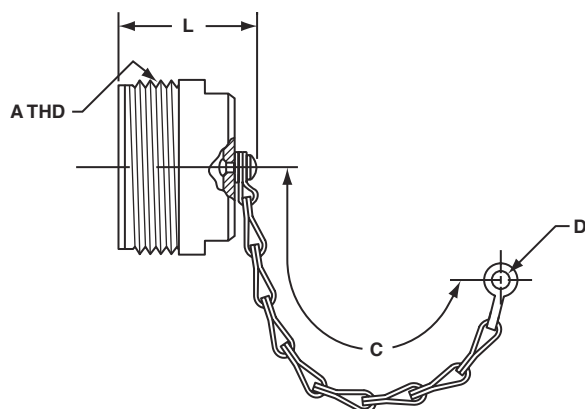
## protection caps – plug

### PLUG PROTECTION CAP 10-329391-XX\*



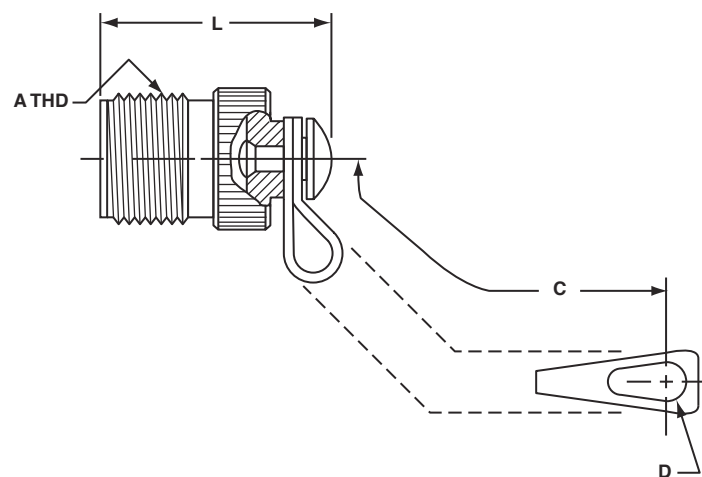
| Assembly Number | A Thread Class 2A | B Dia. +.010 - .000 | C Approx. | L Max. |
|-----------------|-------------------|---------------------|-----------|--------|
| 10-329391-10    | .625-24UNEF       | .516                | 3.5       | 1.312  |
| 10-329391-11    | .625-24UNEF       | .641                | 3.5       | 1.312  |
| 10-329391-12    | .750-20UNEF       | .641                | 3.5       | 1.500  |
| 10-329391-14    | .875-20UNEF       | .766                | 3.5       | 1.500  |
| 10-329391-16    | 1.000-20UNEF      | .891                | 3.5       | 1.500  |
| 10-329391-18    | 1.125-18UNEF      | 1.016               | 3.5       | 1.500  |
| 10-329391-20    | 1.250-18UNEF      | 1.141               | 4.0       | 1.500  |
| 10-329391-22    | 1.375-18UNEF      | 1.266               | 4.0       | 1.500  |
| 10-329391-24    | 1.500-18UNEF      | 1.391               | 4.5       | 1.500  |
| 10-329391-28    | 1.750-18UNS       | 1.641               | 4.5       | 1.500  |
| 10-329391-32    | 2.000-18UNS       | 1.891               | 5.0       | 1.500  |
| 10-329391-36    | 2.250-16UN        | 2.078               | 5.0       | 1.500  |
| 10-329391-40    | 2.500-16UN        | 2.328               | 5.0       | 1.500  |
| 10-329391-44    | 2.750-16UN        | 2.641               | 6.0       | 1.500  |

### PLUG PROTECTION CAP 10-229125-XX\*



| Assembly Number | A Thread Class 2A | C Approx. | D Ref. | L Max. |
|-----------------|-------------------|-----------|--------|--------|
| 10-229125-10    | .625-24NEF        | 3.0       | .140   | 1.233  |
| 10-229125-12    | .750-20UNEF       | 3.5       | .140   | 1.421  |
| 10-229125-14    | .875-20UNEF       | 3.5       | .140   | 1.421  |
| 10-229125-16    | 1.000-20UNEF      | 3.5       | .140   | 1.421  |
| 10-229125-18    | 1.125-18NEF       | 3.5       | .140   | 1.421  |
| 10-229125-20    | 1.250-18NEF       | 3.5       | .193   | 1.421  |
| 10-229125-22    | 1.375-18NEF       | 3.5       | .193   | 1.421  |
| 10-229125-24    | 1.500-18NEF       | 4.5       | .193   | 1.421  |
| 10-229125-28    | 1.750-18NS        | 4.5       | .193   | 1.421  |
| 10-229125-32    | 2.000-18NS        | 5.0       | .193   | 1.421  |
| 10-229125-36    | 2.250-16UN        | 5.0       | .193   | 1.421  |
| 10-229125-40    | 2.500-16UN        | 5.0       | .193   | 1.421  |

### PLUG PROTECTION CAP MS25042-XXDA\*



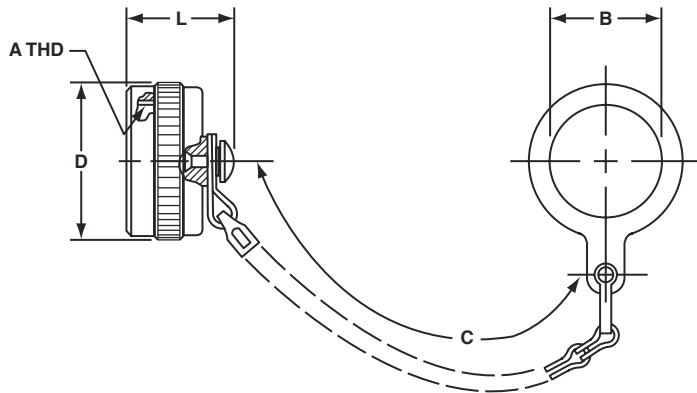
| MS Number    | A Thread Class 2A | B Dia. +.010 - .005 | C Approx. | L Max. |
|--------------|-------------------|---------------------|-----------|--------|
| MS25042-8DA  | .500-28UNEF       | .156                | 4.00      | .969   |
| MS25042-10DA | .625-24UNEF       | .156                | 4.00      | .969   |
| MS25042-12DA | .750-20UNEF       | .156                | 4.50      | 1.156  |
| MS25042-14DA | .875-20UNEF       | .156                | 4.50      | 1.156  |
| MS25042-16DA | 1.000-20UNEF      | .156                | 4.50      | 1.156  |
| MS25042-18DA | 1.125-18UNEF      | .156                | 4.50      | 1.156  |
| MS25042-20DA | 1.250-18UNEF      | .187                | 5.00      | 1.156  |
| MS25042-22DA | 1.375-18UNEF      | .187                | 5.00      | 1.156  |
| MS25042-24DA | 1.500-18UNEF      | .187                | 5.50      | 1.156  |
| MS25042-28DA | 1.750-18UNS       | .187                | 7.75      | 1.156  |
| MS25042-32DA | 2.000-18UNS       | .218                | 7.75      | 1.156  |
| MS25042-36DA | 2.250-16UN        | .218                | 7.75      | 1.156  |
| MS25042-40DA | 2.500-16UN        | .218                | 7.75      | 1.156  |

\* Protective caps are illustrated with sash chains and are available with beaded chains or without chains. Optional terminations are also available. Consult Amphenol, Sidney, NY when ordering.

# AC Series/MS Accessories

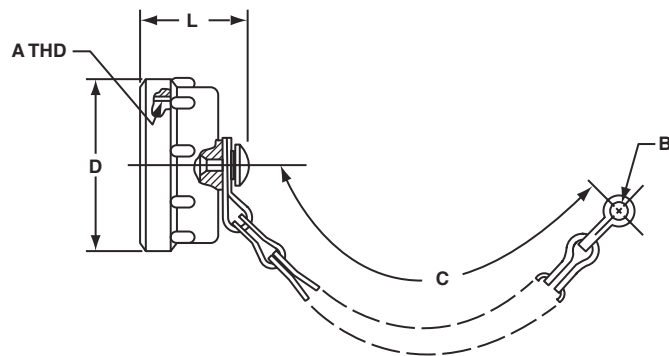
## protection caps – receptacle

### RECEPTACLE PROTECTION CAP 10-329392-XX\*



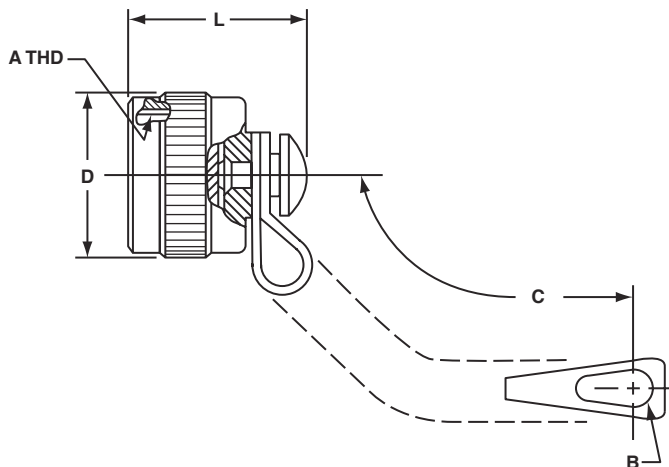
| Assembly Number | A Thread Class 2B | B Dia. Min. | C Approx. | D Dia. Max. | L Max. |
|-----------------|-------------------|-------------|-----------|-------------|--------|
| 10-329392-10    | .625-24UNEF       | .516        | 3.5       | .875        | .793   |
| 10-329392-12    | .750-20UNEF       | .641        | 3.5       | 1.000       | .793   |
| 10-329392-14    | .875-20UNEF       | .766        | 3.5       | 1.125       | .793   |
| 10-329392-16    | 1.000-20UNEF      | .891        | 3.5       | 1.250       | .793   |
| 10-329392-18    | 1.125-18UNEF      | 1.016       | 3.5       | 1.375       | 1.024  |
| 10-329392-20    | 1.250-18UNEF      | 1.141       | 4.0       | 1.500       | 1.024  |
| 10-329392-22    | 1.375-18UNEF      | 1.266       | 4.0       | 1.625       | 1.024  |
| 10-329392-24    | 1.500-18UNEF      | 1.391       | 4.5       | 1.750       | 1.024  |
| 10-329392-28    | 1.750-18UNS       | 1.641       | 4.5       | 2.000       | 1.024  |
| 10-329392-32    | 2.000-18UNS       | 1.891       | 5.0       | 2.250       | 1.024  |
| 10-329392-36    | 2.250-16UN        | 2.078       | 5.0       | 2.500       | 1.024  |
| 10-329392-40    | 2.500-16UN        | 2.328       | 5.0       | 2.656       | 1.024  |
| 10-329392-44    | 2.750-16UN        | 2.641       | 6.0       | 2.938       | 1.024  |

### RECEPTACLE PROTECTION CAP 10-422905-XXX\*



| Assembly Number | A Thread Class 2B | B Ref. | C Approx. | D Dia. Max. | L Max. |
|-----------------|-------------------|--------|-----------|-------------|--------|
| 10-422905-103   | .625-24UNEF       | .140   | 3.0       | .875        | .812   |
| 10-422905-123   | .750-20UNEF       | .140   | 3.5       | 1.000       | .812   |
| 10-422905-143   | .875-20UNEF       | .140   | 3.5       | 1.125       | .812   |
| 10-422905-163   | 1.000-20UNEF      | .140   | 3.5       | 1.250       | .812   |
| 10-422905-183   | 1.125-18UNEF      | .193   | 3.5       | 1.375       | 1.031  |
| 10-422905-203   | 1.250-18UNEF      | .193   | 4.0       | 1.500       | 1.031  |
| 10-422905-223   | 1.375-18UNEF      | .193   | 4.0       | 1.625       | 1.031  |
| 10-422905-243   | 1.500-18UNEF      | .193   | 4.5       | 1.750       | 1.031  |
| 10-422905-283   | 1.750-18UNS       | .193   | 4.5       | 2.000       | 1.031  |
| 10-422905-323   | 2.000-18UNS       | .193   | 5.0       | 2.250       | 1.031  |
| 10-422905-363   | 2.250-16UN        | .193   | 5.0       | 2.500       | 1.031  |
| 10-422905-403   | 2.500-16UN        | .193   | 5.0       | 2.656       | 1.031  |

### RECEPTACLE PROTECTION CAP MS25043-XXDA\*



| MS Number    | A Thread Class 2B | B +.010 - .005 | C Approx. | D Dia. Max. | L Max. |
|--------------|-------------------|----------------|-----------|-------------|--------|
| MS25043-8DA  | .500-28UNEF       | .140           | 4.00      | .688        | .750   |
| MS25043-10DA | .625-24UNEF       | .140           | 4.00      | .815        | .750   |
| MS25043-12DA | .750-20UNEF       | .140           | 4.50      | 1.000       | .750   |
| MS25043-14DA | .875-20UNEF       | .140           | 4.50      | 1.125       | .750   |
| MS25043-16DA | 1.000-20UNEF      | .140           | 4.50      | 1.188       | .750   |
| MS25043-18DA | 1.125-18UNEF      | .140           | 4.50      | 1.344       | .750   |
| MS25043-20DA | 1.250-18UNEF      | .140           | 5.00      | 1.469       | .750   |
| MS25043-22DA | 1.375-18UNEF      | .140           | 5.00      | 1.594       | .750   |
| MS25043-24DA | 1.500-18UNEF      | .171           | 5.50      | 1.719       | .750   |
| MS25043-28DA | 1.750-18UNS       | .171           | 7.75      | 1.969       | .812   |
| MS25043-32DA | 2.000-18UNS       | .187           | 7.75      | 2.219       | .812   |
| MS25043-36DA | 2.250-16UN        | .187           | 7.75      | 2.469       | .812   |
| MS25043-40DA | 2.500-16UN        | .187           | 7.75      | 2.719       | .812   |

\* Protective caps are illustrated with sash chains and are available with beaded chains or without chains. Optional terminations are also available. Consult Amphenol, Sidney, NY when ordering.

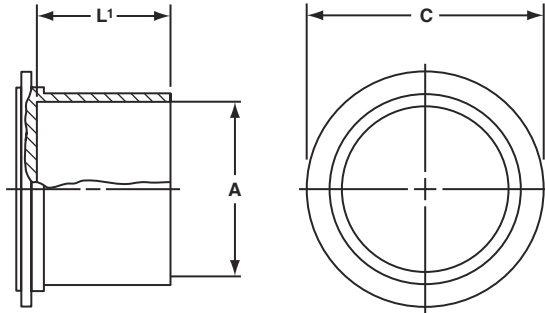
Cap without chain - 10-130969

# AC Series/MS

## dust caps

### 10-70500 RECEPTACLE DUST CAP

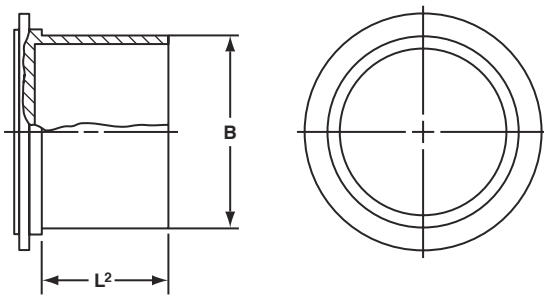
for external threads



| MS<br>Shell Size | Order<br>Number | A Dia.<br>Nominal<br>Thread | C<br>Dia.<br>±.031 | L¹<br>±.062 |
|------------------|-----------------|-----------------------------|--------------------|-------------|
| 8S               | 10-70500-8      | .500                        | .750               | .500        |
| 10S              | 10-70500-10     | .625                        | .875               | .500        |
| 10SL             | 10-70500-10     | .625                        | .875               | .500        |
| 12S              | 10-70500-12     | .750                        | 1.000              | .500        |
| 12               | 10-70500-12     | .750                        | 1.000              | .500        |
| 14S              | 10-70500-14     | .875                        | 1.125              | .500        |
| 14               | 10-70500-14     | .875                        | 1.125              | .500        |
| 16S              | 10-70500-16     | 1.000                       | 1.250              | .500        |
| 16               | 10-70500-16     | 1.000                       | 1.250              | .500        |
| 18               | 10-70500-18     | 1.125                       | 1.375              | .562        |
| 20               | 10-70500-20     | 1.250                       | 1.500              | .562        |
| 22               | 10-70500-22     | 1.375                       | 1.625              | .562        |
| 24               | 10-70500-24     | 1.500                       | 1.750              | .562        |
| 28               | 10-70500-28     | 1.750                       | 1.938              | .562        |
| 32               | 10-70500-32     | 2.000                       | 2.250              | .562        |
| 36               | 10-70500-36     | 2.250                       | 2.500              | .625        |
| 40               | 10-70500-40     | 2.500                       | 2.750              | .625        |

### 10-70506 PLUG DUST CAP

for internal threads



| MS<br>Shell Size | Order<br>Number | B<br>Dia.<br>Min. | L²<br>±.125 |
|------------------|-----------------|-------------------|-------------|
| 8S               | 10-70506-8S     | .469              | .625        |
| 10S              | 10-70506-10S    | .587              | .625        |
| 10SL             | 10-70506-10S    | .587              | .625        |
| 12S              | 10-70506-12     | .704              | .625        |
| 12               | 10-70506-12     | .704              | .625        |
| 14S              | 10-70506-14     | .828              | .625        |
| 14               | 10-70506-14     | .828              | .625        |
| 16S              | 10-70506-16     | .953              | .625        |
| 16               | 10-70506-16     | .953              | .625        |
| 18               | 10-70506-18     | 1.072             | .625        |
| 20               | 10-70506-20     | 1.197             | .625        |
| 22               | 10-70506-22     | 1.322             | .625        |
| 24               | 10-70506-24     | 1.447             | .625        |
| 28               | 10-70506-28     | 1.697             | .625        |
| 32               | 10-70506-32     | 1.947             | .625        |
| 36               | 10-70506-36     | 2.190             | .625        |
| 40               | 10-70506-40     | 2.440             | .625        |

# AC Series/MS

## application tools, torque values

When proprietary crimp contacts are employed rather than the standard MS approved solder contacts, the following application tools are recommended for use. There is a possibility of additional crimping tools other than those included being available at present or in the future for this specific application.

Complete instructions for providing reliable crimped wire to contact terminations and inserting proprietary crimp contacts in AC Series connectors are available in publication L-757.

**TOOLING CHART**

| 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.

† Tools used with Arbor Press 11-7364

**RECOMMENDED TORQUE FORCES  
CONNECTOR BACKSHELLS**

| Size | In./Lb. Max. | Size | In./Lb. Max. |
|------|--------------|------|--------------|
| 10SL | 26           | 22   | 85           |
| 14S  | 44           | 24   | 90           |
| 16   | 50           | 28   | 114          |
| 16S  | 50           | 32   | 120          |
| 18   | 55           | 36   | 153          |
| 20   | 65           | 40   | 170          |

# Additional Products

## reverse bayonet coupling

### 5015 type connectors

**Amphenol has replaced the previously available AC-B series with the ACA-B.**

The ACA-B is a modification of the SAE AS50151 family designed for commercial and industrial environments requiring a rugged bayonet style connector, including heavy duty power and signal applications. A comprehensive selection of insert arrangements and accessory hardware are available to accommodate heavy-duty, commercial wire and cable. The rugged shell is made from aluminum alloy and plated with a variety of finishes to meet any application.

#### **Features of the ACA-B Reverse Bayonet series:**

- Quick positive coupling with audible and tactile indication of full coupling.
- Intermateable with existing VG95234 connectors
- Rated 500 couplings minimum.
- No lockwiring required
- Inserts available in Neoprene material with alternate materials available upon request.
- Contacts available in gold and silver plating
- Available in both crimp and solder terminations
- Numerous finishes available, including cadmium free zinc alloy.
- Rugged construction; aluminum or stainless steel components.

Ask for Amphenol catalog IC-4 for further information on ACA-B Reverse Bayonet Connectors.

#### **GT Reverse Bayonet Connectors**

Amphenol GT Series of Connectors are heavy duty, rugged and environmentally resistant, and are the preferred interconnect for the mass transit industry. They are also used in power generation, petrochemical industries and heavy equipment/geophysical marketplaces. GT connector utilize SAE AS50151 and commercial inserts and are intermateable with existing VG95234 connectors. Other features include:

- reverse bayonet coupling - quick mating, audible, visual and tactile full mating indicators.
- UL recognized
- rated to 2000 couplings min.
- operating temperature range:
  - with Neoprene inserts: -55°C to +125°C
  - with Viton\*\* inserts: -50°C to +200°C
  - with low smoke/flame retardant inserts: -55°C to +125°C
- available in both crimp and solder termination
- rugged construction - aluminum or stainless steel components
- numerous military and commercial finishes available including gray zinc nickel (cadmium free)
- resilient inserts provide high dielectric strength and moisture barrier. IP67 performance in environmental versions
- over 40 varieties of shell styles and backend accessory combinations

Ask for Amphenol catalog IC-4 for further information on GT Series Connectors.



**Amphenol ACA-B Reverse Bayonet Connectors**



**Amphenol® GT Reverse Bayonet Connectors**

Amphenol Power GT Connectors are also available that incorporate RADSOK socket contacts. See page 31 for advantages and features of RADSOK contacts for high amperage capability.

# AC Series/MS Alternate Designs

## Amphe-Power™ 5015 Connectors

Amphenol offers the AC threaded series derived from the 5015 family that can be enhanced with high amperage RADSOK® contacts.

Design characteristics of the Amphe-Power 5015 connectors are:

- The RADSOK contact handles 50% to 150% higher amperages than standard contacts
- The RADSOK contact has a twisted hyperbolic, stamped grid configuration within the socket. This design ensures a large, coaxial, face-to-face surface area engagement. As male pin is inserted, axial members in the female half deflect, imparting high current flow across the connection with minimal voltage loss.
- Contact arrangements have RADSOK sockets in sizes 0, 4, 8 and 12 with standard contacts in size 16.

The contacts available in RADSOK and the amperages are as follows:

- Size 12 AWG can handle currents up to 35 amps.
- Size 8 AWG can handle currents up to 70 amps.
- Size 4 AWG can handle currents up to 120 amps.
- Size 0 AWG can handle currents up to 250 amps.
- AC threaded 5015 styles include: solid shell for general, non-environmental applications; pressurized style for use on pressurized bulkheads or pressure barriers; environmental resisting style with strain relief; lighter weight and shorter environmental resisting style

For more information ask for Amphenol brochure SL-391, Amphe-Power Connectors with RADSOK technology.



**Amphe-Power® 5015 Connectors**  
(AC Threaded 5015 type connectors with RADSOK® high amperage contacts)



**The RADSOK design - socket cylinder within female contact has twisted hyperbolic grid.**  
**Provides higher amperage capabilities with low insertion force and low temperature rise.**

## 5015 Connectors with PCB Contacts

Box mount receptacle 5015 type connectors can be supplied with PCB tails for mounting to a printed circuit board.

Consult Amphenol Industrial for part numbering.





**AMPHENOL CORPORATION**

**Amphenol Industrial**

Phone: 888-364-9011

191 Delaware Avenue

Sidney, NY 13838-1395

**[www.amphenol-industrial.com](http://www.amphenol-industrial.com)**

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