



## High Performance Backshells and Caps

SUNBANK products define the standard for highly reliable, environment resisting, electrically passive components. We offer a full range of backshells and caps in different materials and platings.

**Highest reliability** ■ Qualified according to:  
· AS85049  
· MIL-DTL-38999  
· MS27501/MS27502

**Designed for a wide range of qualified products** ■ Available for most of the standard connectors known on the market.

**Many plating options** ■ High corrosion resistance and electrical continuity properties.

# M85049 Backshells / D38999 & MS27 Protective Caps

## Overview

| Backshell style  | Connector type   | AS85049 Series  |
|--|--|---|
| Cable clamp strain relief<br>             | MIL-DTL-38999 Series III & IV<br>EN3645  | AS85049/38 - see p.03   |
|  | MIL-DTL-27599<br>MIL-DTL-38999 Series I & II   | AS85049/49-2 - see p.05   |
|  | MIL-DTL-5015 crimp<br>MIL-DTL-26482 Series 2<br>AS81703 Series 3<br>MIL-DTL-83723 Series 1 & 3 | AS85049/43 - see p.04<br>AS85049/51 - see p.06<br>AS85049/52 - see p.07 |
| One arm strain relief<br>                 | MIL-DTL-5015 crimp<br>MIL-DTL-26482 Series 2<br>AS81703 Series 3<br>MIL-DTL-83723 Series 1 & 3 | AS85049/53 - see p.08<br>AS85049/54 - see p.08<br>AS85049/55 - see p.08 |
| Shrink boot adapter<br>                  | MIL-DTL-5015 crimp<br>MIL-DTL-26482 Series 2<br>AS81703 Series 3<br>MIL-DTL-83723 Series 1 & 3 | AS85049/60-1 - see p.09   |
|  | MIL-DTL-27599<br>MIL-DTL-38999 Series I & II   | AS85049/62 - see p.10   |
|  | MIL-DTL-38999 Series III & IV<br>EN3645  | AS85049/69 - see p.11   |
| Banding backshell with self-locking<br> | MIL-DTL-5015 crimp<br>MIL-DTL-26482 Series 2<br>AS81703 Series 3<br>MIL-DTL-83723 Series 1 & 3 | AS85049/82 - see p.12<br>AS85049/83 - see p.12<br>AS85049/84 - see p.12 |
|  | MIL-DTL-27599<br>MIL-DTL-38999 Series I & II   | AS85049/85 - see p.13<br>AS85049/86 - see p.13<br>AS85049/87 - see p.13 |
|  | MIL-DTL-38999 Series III & IV<br>EN3645  | AS85049/88 - see p.14<br>AS85049/89 - see p.14<br>AS85049/90 - see p.14 |
| Shield support ring<br>                 | All  | AS85049/93 - see p.15   |

| Cap style   | Connector type           | Series            |
|---|--------------------------|-------------------|
| Screw mating<br>   | MIL-DTL-38999 Series III | D38999 - see p.16 |
| Bayonet mating<br> | MIL-DTL-38999 Series I   | MS27 - see p.17   |

# M85049 Backshells

## AS85049/38 Series - Cable clamp strain relief

### For connectors:

- MIL-DTL-38999 Series III & IV
- EN3645

### Ordering information

|   |           |   |    |   |
|---|-----------|---|----|---|
| Basic Series  | M85049/38 | S | 11 | N |
| <b>Self-locking option</b>  |           |   |    |   |
| S: Self-locking, detented - utilizes an audible detented anti-decoupling device.  |           |   |    |   |
| N: Self-locking, non detented - utilizes an internal captivated anti-decoupling device (Self-Seating) with no audible clicking mechanism. |           |   |    |   |
| - : Non self locking  |           |   |    |   |
| <b>Shell size</b>   |           |   |    |   |
| 9, 11, 13, 15, 16, 17, 19, 21, 23, 25   |           |   |    |   |
| <b>Material and plating</b>   |           |   |    |   |
| A: Aluminum, black anodize  |           |   |    |   |
| N: Aluminum, electroless nickel   |           |   |    |   |
| S: Stainless steel, passivated  |           |   |    |   |
| W: Aluminum, olive drab cadmium over electroless nickel, 500 hours salt spray   |           |   |    |   |

### Dimensions



| Shell size | A Thread<br>Class 2B | B Max<br>Self-locking only |       | C Max<br>Self-locking only |         | D Max |       | Cable entry<br>Min |       | Cable entry<br>Max |       |
|------------|----------------------|----------------------------|-------|----------------------------|---------|-------|-------|--------------------|-------|--------------------|-------|
|            |                      | inch                       | mm    | inch                       | mm      | inch  | mm    | inch               | mm    | inch               | mm    |
| 9          | M12X1-6H             | 0.858                      | 21.79 | 0.91                       | 23.11   | 0.85  | 21.60 | 0.098              | 2.49  | 0.234              | 5.94  |
| 11         | M15X1-6H             | 0.984                      | 24.99 | 0.91                       | 23.11   | 0.90  | 22.90 | 0.153              | 3.89  | 0.234              | 5.94  |
| 13         | M18X1-6H             | 1.157                      | 29.39 | 1.01                       | 25.65   | 1.10  | 27.90 | 0.19               | 4.83  | 0.328              | 8.33  |
| 15         | M22X1-6H             | 1.279                      | 32.49 | 1.06                       | 26.92   | 1.15  | 29.20 | 0.26               | 6.60  | 0.457              | 11.61 |
| 17         | M25X1-6H             | 1.406                      | 35.71 | 1.16                       | 29.46   | 1.30  | 33.00 | 0.283              | 7.19  | 0.614              | 15.60 |
| 19         | M28X1-6H             | 1.516                      | 38.51 | 1.41                       | (35.81) | 1.50  | 38.10 | 0.325              | 8.26  | 0.634              | 16.10 |
| 21         | M31X1-6H             | 1.642                      | 41.71 | 1.51                       | 38.35   | 1.60  | 40.60 | 0.343              | 8.71  | 0.698              | 17.73 |
| 23         | M34X1-6H             | 1.768                      | 44.91 | 1.66                       | 42.16   | 1.70  | 43.20 | 0.381              | 9.68  | 0.823              | 20.90 |
| 25         | M37X1-6H             | 1.889                      | 47.98 | 1.76                       | 44.70   | 1.80  | 45.70 | 0.418              | 10.62 | 0.853              | 21.67 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/43 Series - 45° cable clamp strain relief

For connectors:

MIL-DTL-5015 crimp

MIL-DTL-26482 Series 2

AS81703 Series 3

MIL-DTL-83723 Series 1 & 3

### Ordering information

|   |           |   |    |   |
|---|-----------|---|----|---|
| Basic Series  | M85049/43 | - | 10 | N |
| Self-locking option<br>- : Non self locking   |           |   |    |   |
| Shell size<br>3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48, 61  |           |   |    |   |
| Material and plating<br>N: Aluminum, electroless nickel<br>W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray |           |   |    |   |

### Dimensions



| Shell size | A Thread Class 2B | B Max |       | C Max closed |       | D Max |       | Cable entry Min |       | Cable entry Max |       |
|------------|-------------------|-------|-------|--------------|-------|-------|-------|-----------------|-------|-----------------|-------|
|            |                   | inch  | mm    | inch         | mm    | inch  | mm    | inch            | mm    | inch            | mm    |
| 3          | 0.562 - 24 UNEF   | 0.669 | 16.99 | 1.160        | 29.46 | 0.772 | 19.61 | 0.125           | 3.20  | 0.204           | 5.20  |
| 8          | 0.500 - 20 UNF    | 0.885 | 22.50 | 1.650        | 41.91 | 0.772 | 19.61 | 0.125           | 3.20  | 0.204           | 5.20  |
| 10         | 0.625 - 24 UNEF   | 1.010 | 25.70 | 1.694        | 43.03 | 0.803 | 20.40 | 0.187           | 4.70  | 0.286           | 7.30  |
| 12         | 0.750 - 20 UNEF   | 1.135 | 28.80 | 1.768        | 44.91 | 0.866 | 21.00 | 0.291           | 7.40  | 0.416           | 10.60 |
| 14         | 0.875 - 20 UNEF   | 1.260 | 32.00 | 1.840        | 46.74 | 0.928 | 23.57 | 0.351           | 8.90  | 0.476           | 12.10 |
| 16         | 1.000 - 20 UNEF   | 1.385 | 35.20 | 1.916        | 48.67 | 0.991 | 25.17 | 0.501           | 12.70 | 0.625           | 15.90 |
| 18         | 1.062 - 18 UNEF   | 1.570 | 39.88 | 2.034        | 51.66 | 1.110 | 28.19 | 0.518           | 13.20 | 0.706           | 17.90 |
| 20         | 1.188 - 18 UNEF   | 1.635 | 41.50 | 2.078        | 52.78 | 1.172 | 29.77 | 0.581           | 14.80 | 0.831           | 21.10 |
| 22         | 1.313 - 18 UNEF   | 1.760 | 44.70 | 2.122        | 53.90 | 1.235 | 31.37 | 0.644           | 16.40 | 0.956           | 24.30 |
| 24         | 1.438 - 18 UNEF   | 1.885 | 47.90 | 2.166        | 55.02 | 1.297 | 32.94 | 0.706           | 17.90 | 1.081           | 27.50 |
| 28         | 1.750 - 18 UNS    | 2.135 | 54.20 | 2.461        | 62.51 | 1.543 | 39.19 | 0.750           | 19.10 | 1.187           | 30.10 |
| 32         | 2.000 - 18 UNS    | 2.315 | 58.80 | 2.549        | 64.75 | 1.668 | 42.37 | 0.875           | 22.20 | 1.250           | 31.80 |
| 36         | 2.250 - 16 UN     | 2.635 | 66.90 | 2.595        | 65.91 | 1.793 | 45.54 | 0.938           | 23.80 | 1.375           | 34.90 |
| 40         | 2.500 - 16 UN     | 2.885 | 73.30 | 2.599        | 66.01 | 1.918 | 48.72 | 0.938           | 23.80 | 1.500           | 38.10 |
| 44         | 2.750 - 16 UN     | 3.135 | 79.60 | 2.860        | 72.64 | 2.132 | 54.15 | 1.188           | 30.20 | 1.750           | 44.50 |
| 48         | 3.000 - 16 UN     | 3.385 | 86.00 | 2.918        | 74.12 | 2.257 | 57.33 | 1.312           | 33.30 | 1.875           | 47.60 |
| 61         | 1.500 - 18 UNEF   | 1.653 | 41.99 | 1.676        | 42.57 | 1.204 | 30.58 | 0.706           | 17.90 | 1.081           | 27.50 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/49-2 Series - Cable clamp strain relief

For connectors:

MIL-DTL-27599

MIL-DTL-38999 Series I & II

### Ordering information

|   |             |   |    |   |
|---|-------------|---|----|---|
| Basic Series  | M85049/49-2 | S | 10 | N |
| <b>Self-locking option</b>  |             |   |    |   |
| S: Self-locking, detented - utilizes an audible detented anti-decoupling device.  |             |   |    |   |
| N: Self-locking, non detented - utilizes an internal captivated anti-decoupling device (Self-Seating) with no audible clicking mechanism. |             |   |    |   |
| - : Non self locking  |             |   |    |   |
| <b>Shell size</b>   |             |   |    |   |
| 8, 10, 12, 14, 16, 18, 20, 22, 24   |             |   |    |   |
| <b>Material and plating</b>   |             |   |    |   |
| A: Aluminum, black anodize  |             |   |    |   |
| N: Aluminum, electroless nickel   |             |   |    |   |
| S: Stainless steel, passivated  |             |   |    |   |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray  |             |   |    |   |

### Dimensions



| Shell size | A Thread Class 2B | B Max Self-locking only |       | C Max Self-locking only |       | D Max |       | Cable entry Min |       | Cable entry Max |       |
|------------|-------------------|-------------------------|-------|-------------------------|-------|-------|-------|-----------------|-------|-----------------|-------|
|            |                   | inch                    | mm    | inch                    | mm    | inch  | mm    | inch            | mm    | inch            | mm    |
| 8          | 0.438-28 UNEF     | 0.858                   | 21.80 | 0.91                    | 23.10 | 0.85  | 21.60 | 0.098           | 2.50  | 0.234           | 5.90  |
| 10         | 0.562-24 UNEF     | 0.984                   | 25.00 | 0.91                    | 23.10 | 0.90  | 22.90 | 0.153           | 3.90  | 0.234           | 5.90  |
| 12         | 0.688-24 UNEF     | 1.157                   | 29.40 | 1.01                    | 25.70 | 1.10  | 27.90 | 0.19            | 4.80  | 0.328           | 8.30  |
| 14         | 0.812-20 UNEF     | 1.279                   | 32.50 | 1.06                    | 26.90 | 1.15  | 29.20 | 0.26            | 6.60  | 0.457           | 11.60 |
| 16         | 0.938-20 UNEF     | 1.406                   | 35.70 | 1.16                    | 29.50 | 1.30  | 33.00 | 0.283           | 7.20  | 0.614           | 15.60 |
| 18         | 1.062-18 UNEF     | 1.516                   | 38.50 | 1.41                    | 35.80 | 1.50  | 38.10 | 0.325           | 8.30  | 0.634           | 16.10 |
| 20         | 1.188-18 UNEF     | 1.642                   | 41.70 | 1.51                    | 38.40 | 1.60  | 40.60 | 0.343           | 8.70  | 0.698           | 17.70 |
| 22         | 1.312-18 UNEF     | 1.768                   | 44.90 | 1.66                    | 42.20 | 1.70  | 43.20 | 0.381           | 9.70  | 0.823           | 20.90 |
| 24         | 1.438-18 UNEF     | 1.889                   | 48.00 | 1.76                    | 44.70 | 1.80  | 45.70 | 0.418           | 10.60 | 0.853           | 21.70 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/51 Series - 90° cable clamp strain relief

For connectors:

MIL-DTL-5015 crimp

MIL-DTL-26482 Series 2

AS81703 Series 3

MIL-DTL-83723 Series 1 & 3

### Ordering information

|   |            |   |    |   |
|---|------------|---|----|---|
| Basic Series  | AS85049/51 | S | 10 | N |
| <b>Self-locking option</b>  |            |   |    |   |
| S: Self-locking, detented - utilizes an audible detented anti-decoupling device.  |            |   |    |   |
| N: Self-locking, non detented - utilizes an internal captivated anti-decoupling device (Self-Seating) with no audible clicking mechanism. |            |   |    |   |
| -1: Non self locking  |            |   |    |   |
| <b>Shell size</b>   |            |   |    |   |
| 3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48, 61  |            |   |    |   |
| <b>Material and plating</b>   |            |   |    |   |
| A: Aluminum, black anodize  |            |   |    |   |
| N: Aluminum, electroless nickel   |            |   |    |   |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray  |            |   |    |   |

### Dimensions



| Shell size | A Thread Class 2B | B Max Self-locking only       |       | C Max Self-locking only |       | D Max |       | E ± 0.062 / 1.6 |       | Cable entry Min |       | Cable entry Max |       |
|------------|-------------------|-------------------------------|-------|-------------------------|-------|-------|-------|-----------------|-------|-----------------|-------|-----------------|-------|
|            |                   | inch                          | mm    | inch                    | mm    | inch  | mm    | inch            | mm    | inch            | mm    | inch            | mm    |
| 3          | 0.562 - 24 UNEF   | Not available in self-locking |       | 0.782                   | 19.90 | 0.777 | 19.70 | 0.125           | 3.20  | 0.204           | 5.20  |                 |       |
| 8          | 0.500 - 20 UNF    | 0.885                         | 22.50 | 1.257                   | 31.90 | 0.782 | 19.90 | 0.746           | 18.90 | 0.125           | 3.20  | 0.204           | 5.20  |
| 10         | 0.625 - 24 UNEF   | 1.010                         | 25.70 | 1.339                   | 34.00 | 0.862 | 21.90 | 0.805           | 20.40 | 0.187           | 4.70  | 0.286           | 7.30  |
| 12         | 0.750 - 20 UNEF   | 1.135                         | 28.80 | 1.532                   | 38.90 | 0.968 | 24.60 | 0.867           | 22.00 | 0.291           | 7.40  | 0.416           | 10.60 |
| 14         | 0.875 - 20 UNEF   | 1.26                          | 32.00 | 1.592                   | 40.40 | 1.003 | 25.50 | 0.930           | 23.60 | 0.351           | 8.90  | 0.476           | 12.10 |
| 16         | 1.000 - 20 UNEF   | 1.385                         | 35.20 | 1.741                   | 44.20 | 1.061 | 26.90 | 0.994           | 25.20 | 0.501           | 12.70 | 0.626           | 15.90 |
| 18         | 1.062 - 18 UNEF   | 1.510                         | 38.40 | 1.853                   | 47.10 | 1.394 | 35.40 | 1.171           | 29.70 | 0.518           | 13.20 | 0.706           | 17.90 |
| 20         | 1.188 - 18 UNEF   | 1.635                         | 41.50 | 1.978                   | 50.20 | 1.466 | 37.20 | 1.234           | 31.20 | 0.581           | 14.80 | 0.831           | 21.10 |
| 22         | 1.313 - 18 UNEF   | 1.760                         | 44.70 | 2.108                   | 53.50 | 1.572 | 39.90 | 1.296           | 32.90 | 0.644           | 16.40 | 0.956           | 24.30 |
| 24         | 1.438 - 18 UNEF   | 1.885                         | 47.90 | 2.228                   | 56.60 | 1.698 | 43.10 | 1.358           | 34.50 | 0.706           | 17.90 | 1.081           | 27.50 |
| 28         | 1.750 - 18 UNS    | 2.135                         | 54.20 | 2.528                   | 64.20 | 1.790 | 45.50 | 1.572           | 39.90 | 0.750           | 19.10 | 1.187           | 30.10 |
| 32         | 2.000 - 18 UNS    | 2.395                         | 60.80 | 2.591                   | 65.80 | 2.035 | 51.70 | 1.797           | 45.60 | 0.875           | 22.20 | 1.250           | 31.80 |
| 36         | 2.250 - 16 UN     | 2.635                         | 66.90 | 2.716                   | 69.00 | 2.386 | 60.60 | 1.922           | 48.80 | 0.938           | 23.80 | 1.375           | 34.90 |
| 40         | 2.500 - 16 UN     | 2.885                         | 73.30 | 2.841                   | 72.20 | 2.566 | 65.20 | 2.047           | 52.00 | 0.938           | 23.80 | 1.500           | 38.10 |
| 44         | 2.750 - 16 UN     | 3.135                         | 79.60 | 3.091                   | 78.50 | 2.86  | 72.60 | 2.296           | 58.30 | 1.188           | 30.20 | 1.750           | 44.50 |
| 48         | 3.000 - 16 UN     | 3.385                         | 86.00 | 3.216                   | 81.70 | 3.344 | 84.90 | 2.421           | 61.50 | 1.312           | 33.30 | 1.875           | 47.60 |
| 61         | 1.500 - 18 UNEF   | Not available in self-locking |       | 1.775                   | 45.10 | 1.388 | 35.30 | 0.706           | 17.90 | 1.081           | 27.50 |                 |       |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/52 Series - Straight cable clamp strain relief

For connectors:

MIL-DTL-5015 crimp

MIL-DTL-26482 Series 2

AS81703 Series 3

MIL-DTL-83723 Series 1 & 3

### Ordering information

|   |            |   |    |   |
|---|------------|---|----|---|
| Basic Series  | AS85049/52 | S | 10 | N |
| <b>Self-locking option</b>  |            |   |    |   |
| S: Self-locking, detented - utilizes an audible detented anti-decoupling device.  |            |   |    |   |
| N: Self-locking, non detented - utilizes an internal captivated anti-decoupling device (Self-Seating) with no audible clicking mechanism. |            |   |    |   |
| -1: Non self locking  |            |   |    |   |
| <b>Shell size</b>   |            |   |    |   |
| 3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48, 61  |            |   |    |   |
| <b>Material and plating</b>   |            |   |    |   |
| A: Aluminum, black anodize  |            |   |    |   |
| N: Aluminum, electroless nickel   |            |   |    |   |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray  |            |   |    |   |

### Dimensions



| Shell size | A Thread Class 2B | B Max Self-locking only       |       | C Max Self-locking only |       | D Max |       | Cable entry Min |       | Cable entry Max |       |
|------------|-------------------|-------------------------------|-------|-------------------------|-------|-------|-------|-----------------|-------|-----------------|-------|
|            |                   | inch                          | mm    | inch                    | mm    | inch  | mm    | inch            | mm    | inch            | mm    |
| 3          | 0.562 - 24 UNEF   | Not available in self-locking |       |                         |       | 0.782 | 19.90 | 0.125           | 3.20  | 0.204           | 5.20  |
| 8          | 0.500 - 20 UNF    | 0.885                         | 22.50 | 0.73                    | 18.50 | 0.782 | 19.90 | 0.125           | 3.20  | 0.204           | 5.20  |
| 10         | 0.625 - 24 UNEF   | 1.010                         | 25.70 | 0.85                    | 21.60 | 0.862 | 21.90 | 0.187           | 4.70  | 0.286           | 7.30  |
| 12         | 0.750 - 20 UNEF   | 1.135                         | 28.80 | 0.98                    | 24.90 | 0.968 | 24.60 | 0.291           | 7.40  | 0.416           | 10.60 |
| 14         | 0.875 - 20 UNEF   | 1.26                          | 32.00 | 0.98                    | 24.90 | 1.003 | 25.50 | 0.351           | 8.90  | 0.476           | 12.10 |
| 16         | 1.000 - 20 UNEF   | 1.385                         | 35.20 | 1.10                    | 27.90 | 1.061 | 26.90 | 0.501           | 12.70 | 0.626           | 15.90 |
| 18         | 1.062 - 18 UNEF   | 1.510                         | 38.40 | 1.35                    | 34.30 | 1.394 | 35.40 | 0.518           | 13.20 | 0.706           | 17.90 |
| 20         | 1.188 - 18 UNEF   | 1.635                         | 41.50 | 1.48                    | 37.60 | 1.466 | 37.20 | 0.581           | 14.80 | 0.831           | 21.10 |
| 22         | 1.313 - 18 UNEF   | 1.760                         | 44.70 | 1.60                    | 40.60 | 1.572 | 39.90 | 0.644           | 16.40 | 0.956           | 24.30 |
| 24         | 1.438 - 18 UNEF   | 1.885                         | 47.90 | 1.73                    | 43.90 | 1.698 | 43.10 | 0.706           | 17.90 | 1.081           | 27.50 |
| 28         | 1.750 - 18 UNS    | 2.135                         | 54.20 | 1.88                    | 47.80 | 1.790 | 45.50 | 0.750           | 19.10 | 1.187           | 30.10 |
| 32         | 2.000 - 18 UNS    | 2.395                         | 60.80 | 2.13                    | 54.10 | 2.035 | 51.70 | 0.875           | 22.20 | 1.250           | 31.80 |
| 36         | 2.250 - 16 UN     | 2.635                         | 66.90 | 2.44                    | 62.00 | 2.386 | 60.60 | 0.938           | 23.80 | 1.375           | 34.90 |
| 40         | 2.500 - 16 UN     | 2.885                         | 73.30 | 2.63                    | 66.80 | 2.566 | 65.20 | 0.938           | 23.80 | 1.500           | 38.10 |
| 44         | 2.750 - 16 UN     | 3.135                         | 79.60 | 3.00                    | 76.20 | 2.86  | 72.60 | 1.188           | 30.20 | 1.750           | 44.50 |
| 48         | 3.000 - 16 UN     | 3.385                         | 86.00 | 3.40                    | 86.40 | 3.344 | 84.90 | 1.312           | 33.30 | 1.875           | 47.60 |
| 61         | 1.500 - 18 UNEF   | Not available in self-locking |       |                         |       | 1.775 | 45.10 | 0.706           | 17.90 | 1.081           | 27.50 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/53, 54, 55 Series - One arm strain relief

For connectors:

MIL-DTL-5015 crimp

MIL-DTL-26482 Series 2

AS81703 Series 3

MIL-DTL-83723 Series 1 & 3

### Ordering information

|  |          |    |   |    |   |
|--|----------|----|---|----|---|
| <b>Basic Series</b>  | AS85049/ | 53 | - | 10 | N |
| <b>Angle</b>   |          |    |   |    |   |
| 53: Straight   |          |    |   |    |   |
| 54: 45°  |          |    |   |    |   |
| 55: 90°  |          |    |   |    |   |
| <b>Self-locking option</b>   |          |    |   |    |   |
| - : Non self locking   |          |    |   |    |   |
| <b>Shell size</b>  |          |    |   |    |   |
| 3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28                                       |          |    |   |    |   |
| <b>Material and plating</b>  |          |    |   |    |   |
| A: Aluminum, black anodize   |          |    |   |    |   |
| N: Aluminum, electroless nickel  |          |    |   |    |   |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray |          |    |   |    |   |

### Dimensions



For new design use:  
M85049/43 (45°),  
M85049/51 (90°) and  
M85049/52 (straight)

| Shell size | A Thread Class 2B | B Max |       | C Max |       | D Max |       | E Max |       | F Max |       | Cable entry |       |
|------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|-------|
|            |                   | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch        | mm    |
| 3          | 0.562 - 24 UNEF   | 0.780 | 19.80 | 0.954 | 24.00 | 1.232 | 31.30 | 0.730 | 18.50 | 1.290 | 32.80 | 0.260       | 6.60  |
| 8          | 0.500 - 20 UNF    | 0.660 | 16.80 |       |       |       |       |       |       |       |       | 0.260       | 6.60  |
| 10         | 0.625 - 24 UNEF   | 0.780 | 19.80 |       |       |       |       |       |       |       |       | 0.365       | 9.30  |
| 12         | 0.750 - 20 UNEF   | 0.940 | 23.90 | 1.204 | 30.60 | 1.482 | 37.60 | 0.750 | 19.10 | 1.620 | 41.10 | 0.501       | 12.70 |
| 14         | 0.875 - 20 UNEF   | 1.050 | 26.70 |       |       |       |       |       |       | 1.660 | 42.20 | 0.575       | 14.60 |
| 16         | 1.000 - 20 UNEF   | 1.240 | 31.50 |       |       |       |       |       |       | 1.720 | 43.70 | 0.700       | 17.80 |
| 18         | 1.062 - 18 UNEF   | 1.380 | 35.10 | 1.310 | 33.30 | 1.469 | 37.30 | 0.750 | 19.10 | 1.790 | 45.50 | 0.904       | 23.00 |
| 20         | 1.188 - 18 UNEF   | 1.500 | 38.10 |       |       |       |       |       |       | 1.850 | 47.00 | 1.029       | 26.10 |
| 22         | 1.313 - 18 UNEF   | 1.630 | 41.40 |       |       |       |       |       |       | 1.430 | 36.30 | 1.910       | 48.50 |
| 24         | 1.438 - 18 UNEF   | 1.750 | 44.50 | 1.560 | 39.60 | 1.469 | 37.30 | 0.750 | 19.10 | 2.060 | 52.30 | 1.379       | 35.00 |
| 28         | 1.750 - 18 UNS    | 1.970 | 50.00 | 1.560 | 39.60 |       |       |       |       | 2.060 | 52.30 | 1.379       | 35.00 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.



# M85049 Backshells

## AS85049/60-1 Series - Shrink boot adapter

For connectors:

MIL-DTL-5015 crimp

MIL-DTL-26482 Series 2

AS81703 Series 3

MIL-DTL-83723 Series 1 & 3

### Ordering information

|  |             |   |    |
|--|-------------|---|----|
| Basic Series   | M85049/60-1 | N | 10 |
| <b>Material and plating</b>  |             |   |    |
| A: Aluminum, black anodize   |             |   |    |
| N: Aluminum, electroless nickel  |             |   |    |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray |             |   |    |
| <b>Shell size</b>  |             |   |    |
| 3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48, 61               |             |   |    |

### Dimensions



| Shell size | A Thread Class 2B | B Max |       | C Max |       | D Max |       | Cable entry |       |
|------------|-------------------|-------|-------|-------|-------|-------|-------|-------------|-------|
|            |                   | inch  | mm    | inch  | mm    | inch  | mm    | inch        | mm    |
| 3          | 0.562 - 24 UNEF   | 0.670 | 17.00 | 0.832 | 21.10 | 0.533 | 13.50 | 0.250       | 6.40  |
| 8          | 0.500 - 20 UNF    | 0.620 | 15.70 |       |       | 0.533 | 13.50 | 0.250       | 6.40  |
| 10         | 0.625 - 24 UNEF   | 0.740 | 18.80 |       |       | 0.605 | 15.40 | 0.355       | 9.00  |
| 12         | 0.750 - 20 UNEF   | 0.860 | 21.80 |       |       | 0.774 | 19.70 | 0.491       | 12.50 |
| 14         | 0.875 - 20 UNEF   | 0.980 | 24.90 |       |       | 0.838 | 21.30 | 0.565       | 14.40 |
| 16         | 1.000 - 20 UNEF   | 1.110 | 28.20 |       |       | 0.963 | 24.50 | 0.690       | 17.50 |
| 18         | 1.062 - 18 UNEF   | 1.220 | 31.00 |       |       | 1.042 | 26.50 | 0.769       | 19.50 |
| 20         | 1.188 - 18 UNEF   | 1.350 | 34.30 |       |       | 1.217 | 30.90 | 0.894       | 22.70 |
| 22         | 1.313 - 18 UNEF   | 1.470 | 37.30 |       |       | 1.355 | 34.40 | 1.019       | 25.90 |
| 24         | 1.438 - 18 UNEF   | 1.590 | 40.40 |       |       | 1.443 | 36.70 | 1.134       | 28.80 |
| 28         | 1.750 - 18 UNS    | 1.970 | 50.00 | 0.994 | 25.30 | 1.709 | 43.40 | 1.369       | 34.80 |
| 32         | 2.000 - 18 UNS    | 2.220 | 56.40 |       |       | 1.919 | 48.70 | 1.615       | 41.00 |
| 36         | 2.250 - 16 UN     | 2.470 | 62.70 |       |       | 2.169 | 55.10 | 1.830       | 46.50 |
| 40         | 2.500 - 16 UN     | 2.720 | 69.10 |       |       | 2.402 | 61.00 | 2.045       | 51.90 |
| 44         | 2.750 - 16 UN     | 2.970 | 75.40 |       |       | 2.657 | 67.50 | 2.300       | 58.40 |
| 48         | 3.000 - 16 UN     | 3.220 | 81.80 |       |       | 2.907 | 73.80 | 2.550       | 64.80 |
| 61         | 1.500 - 18 UNEF   | 1.650 | 41.90 | 0.832 | 21.10 | 1.529 | 38.80 | 1.174       | 29.80 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/62 Series - Shrink boot adapter

For connectors:

**MIL-DTL-27599**

**MIL-DTL-38999 Series I & II**

### Ordering information

|  |           |    |   |   |
|--|-----------|----|---|---|
| Basic Series   | M85049/62 | 10 | N | D |
| <b>Shell size</b><br>8, 10, 12, 14, 16, 18, 20, 22, 24   |           |    |   |   |
| <b>Material and plating</b><br><b>A:</b> Aluminum, black anodize<br><b>N:</b> Aluminum, electroless nickel<br><b>S:</b> Stainless steel, passivated<br><b>W:</b> Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray |           |    |   |   |
| <b>Drain hole</b><br><b>D:</b> with drain hole<br><b>empty:</b> without drain hole   |           |    |   |   |

### Dimensions



| Shell size | A Thread Class 2B | B Max |       | C Max |       | D Max |       | Cable entry |       |
|------------|-------------------|-------|-------|-------|-------|-------|-------|-------------|-------|
|            |                   | inch  | mm    | inch  | mm    | inch  | mm    | inch        | mm    |
| 8          | 0.438 - 28 UNEF   | 0.750 | 19.10 | 1.000 | 25.40 | 0.533 | 13.50 | 0.250       | 6.40  |
| 10         | 0.562 - 24 UNEF   | 0.850 | 21.60 |       |       | 0.605 | 15.40 | 0.375       | 9.50  |
| 12         | 0.688 - 24 UNEF   | 1.000 | 25.40 |       |       | 0.774 | 19.70 | 0.500       | 12.70 |
| 14         | 0.813 - 20 UNEF   | 1.100 | 27.90 |       |       | 0.838 | 21.30 | 0.625       | 15.90 |
| 16         | 0.938 - 20 UNEF   | 1.250 | 31.80 |       |       | 0.963 | 24.50 | 0.750       | 19.10 |
| 18         | 1.063 - 18 UNEF   | 1.400 | 35.60 |       |       | 1.042 | 26.50 | 0.812       | 20.60 |
| 20         | 1.188 - 18 UNEF   | 1.500 | 38.10 |       |       | 1.217 | 30.90 | 0.937       | 23.80 |
| 22         | 1.313 - 18 UNEF   | 1.650 | 41.90 |       |       | 1.355 | 34.40 | 1.062       | 27.00 |
| 24         | 1.438 - 18 UNEF   | 1.750 | 44.50 |       |       | 1.443 | 36.70 | 1.188       | 30.20 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/69 Series - Shrink boot adapter

For connectors:

MIL-DTL-38999 Series III & IV

EN3645

### Ordering information

|                      |  |    |   |
|----------------------|--|----|---|
| Basic Series         | M85049/69  | 11 | N |
| Shell size           | 9, 11, 13, 15, 17, 19, 21, 23, 25  |    |   |
| Material and plating | <p><b>A:</b> Aluminum, black anodize</p> <p><b>N:</b> Aluminum, electroless nickel</p> <p><b>S:</b> Stainless steel, passivated</p> <p><b>W:</b> Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray</p> |    |   |
| Drain hole           | <p><b>D:</b> with drain hole</p> <p><b>empty:</b> without drain hole</p>   |    |   |

### Dimensions



| Shell size | A Thread Class 2B | B Max |       | C Max |       | D Max |       | Cable entry |       |
|------------|-------------------|-------|-------|-------|-------|-------|-------|-------------|-------|
|            |                   | inch  | mm    | inch  | mm    | inch  | mm    | inch        | mm    |
| 9          | M12 X 1 - 6H      | 0.750 | 19.10 | 0.710 | 18.00 | 0.533 | 13.50 | 0.250       | 6.40  |
| 11         | M15 X 1 - 6H      | 0.850 | 21.60 |       |       | 0.605 | 15.40 | 0.375       | 9.50  |
| 13         | M18 X 1 - 6H      | 1.000 | 25.40 |       |       | 0.774 | 19.70 | 0.500       | 12.70 |
| 15         | M22 X 1 - 6H      | 1.150 | 29.20 |       |       | 0.838 | 21.30 | 0.625       | 15.90 |
| 17         | M25 X 1 - 6H      | 1.250 | 31.80 |       |       | 0.963 | 24.50 | 0.750       | 19.10 |
| 19         | M28 X 1 - 6H      | 1.400 | 35.60 |       |       | 1.042 | 26.50 | 0.812       | 20.60 |
| 21         | M31 X 1 - 6H      | 1.500 | 38.10 |       |       | 1.217 | 30.90 | 0.938       | 23.80 |
| 23         | M34 X 1 - 6H      | 1.650 | 41.90 |       |       | 1.355 | 34.40 | 1.062       | 27.00 |
| 25         | M37 X 1 - 6H      | 1.785 | 47.00 |       |       | 1.443 | 36.70 | 1.188       | 30.20 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/82, 83, 84 Series - Banding backshell with self-locking

For connectors:

MIL-DTL-5015 crimp

MIL-DTL-26482 Series 2

AS81703 Series 3

MIL-DTL-83723 Series 1 & 3

### Ordering information

|   |          |    |   |    |   |    |
|---|----------|----|---|----|---|----|
| Basic Series  | AS85049/ | 82 | - | 10 | N | 02 |
| <b>Angle</b>  |          |    |   |    |   |    |
| 82: Straight  |          |    |   |    |   |    |
| 83: 45°   |          |    |   |    |   |    |
| 84: 90° (size 28 not qualified for AS85049/84)  |          |    |   |    |   |    |
| <b>Self-locking option</b>  |          |    |   |    |   |    |
| - : Detended  |          |    |   |    |   |    |
| N: Non detended   |          |    |   |    |   |    |
| <b>Shell size: 8, 10, 12, 14, 16, 18, 20, 22, 24, 28</b> (size 28 not qualified for AS85049/84) |          |    |   |    |   |    |
| <b>Material and plating</b>   |          |    |   |    |   |    |
| N: Aluminum, electroless nickel   |          |    |   |    |   |    |
| P: Aluminum, olive drab cadmium over electroless nickel with polysulfide sealant strips         |          |    |   |    |   |    |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray                  |          |    |   |    |   |    |
| <b>Entry size</b> (see table below): <b>02, 03</b>  |          |    |   |    |   |    |

### Dimensions



| Shell size | A Thread Class 2B | B Max |       | C Max |       | D Max |       | E Max |       | F Max |       | Cable entry Size 02 ±0.01/0.30 |       | Cable entry Size 03 ±0.01/0.30 |       |
|------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------------------|-------|--------------------------------|-------|
|            |                   | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch                           | mm    | inch                           | mm    |
| 8          | 0.500 - 20 UNF    | 0.886 | 22.40 | 0.870 | 22.10 | 1.160 | 29.50 | 1.188 | 30.20 | 1.417 | 36.00 | N/A                            | N/A   | 0.250                          | 6.40  |
| 10         | 0.625 - 24 UNEF   | 1.010 | 25.70 | 0.890 | 22.60 | 1.180 | 30.00 | 1.281 | 32.50 | 1.480 | 37.60 | N/A                            | N/A   | 0.312                          | 7.90  |
| 12         | 0.750 - 20 UNEF   | 1.130 | 28.70 | 0.920 | 23.40 | 1.200 | 30.50 | 1.406 | 35.70 | 1.542 | 39.20 | 0.312                          | 7.90  | 0.438                          | 11.10 |
| 14         | 0.875 - 20 UNEF   | 1.260 | 32.00 | 0.940 | 23.90 | 1.220 | 31.00 | 1.531 | 38.90 | 1.605 | 40.80 | 0.438                          | 11.10 | 0.562                          | 14.30 |
| 16         | 1.000 - 20 UNEF   | 1.386 | 35.10 | 0.960 | 24.40 | 1.250 | 31.80 | 1.656 | 42.10 | 1.667 | 42.30 | 0.500                          | 12.70 | 0.625                          | 15.90 |
| 18         | 1.062 - 18 UNEF   | 1.510 | 38.40 | 0.980 | 24.90 | 1.260 | 32.00 | 1.718 | 43.60 | 1.730 | 43.90 | 0.625                          | 15.90 | 0.750                          | 19.10 |
| 20         | 1.188 - 18 UNEF   | 1.636 | 41.40 | 1.000 | 25.40 | 1.290 | 32.80 | 1.844 | 46.80 | 1.792 | 45.50 | 0.625                          | 15.90 | 0.812                          | 20.60 |
| 22         | 1.313 - 18 UNEF   | 1.760 | 44.70 | 1.030 | 26.20 | 1.310 | 33.30 | 1.938 | 49.20 | 1.850 | 47.00 | 0.688                          | 17.50 | 0.938                          | 23.80 |
| 24         | 1.438 - 18 UNEF   | 1.886 | 47.80 | 1.050 | 26.70 | 1.340 | 34.00 | 2.093 | 53.20 | 1.917 | 48.70 | 0.750                          | 19.10 | 1.000                          | 25.40 |
| 28         | 1.750 - 18 UNS    | 2.136 | 54.10 | 1.100 | 27.90 | 1.380 | 35.10 | 2.531 | 64.30 | 2.042 | 51.90 | 0.875                          | 22.20 | 1.125                          | 28.60 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/85, 86, 87 Series - Banding backshell with self-locking

For connectors:

MIL-DTL-27599

MIL-DTL-38999 Series I & II

### Ordering information

|   |          |    |   |    |   |    |
|---|----------|----|---|----|---|----|
| Basic Series  | AS85049/ | 85 | - | 10 | N | 02 |
| <b>Angle</b>  |          |    |   |    |   |    |
| 85: Straight  |          |    |   |    |   |    |
| 86: 45°   |          |    |   |    |   |    |
| 87: 90°   |          |    |   |    |   |    |
| <b>Self-locking option</b>  |          |    |   |    |   |    |
| - : Detended  |          |    |   |    |   |    |
| N: Non detended   |          |    |   |    |   |    |
| <b>Shell size: 8, 10, 12, 14, 16, 18, 20, 22, 24</b>                                    |          |    |   |    |   |    |
| <b>Material and plating</b>   |          |    |   |    |   |    |
| N: Aluminum, electroless nickel   |          |    |   |    |   |    |
| P: Aluminum, olive drab cadmium over electroless nickel with polysulfide sealant strips |          |    |   |    |   |    |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray          |          |    |   |    |   |    |
| <b>Entry size (see table below): 02, 03</b>   |          |    |   |    |   |    |

### Dimensions



| Shell size | A Thread Class 2B | B Max |       | C Max |       | D Max |       | E Max |       | F Max |       | Cable entry for AS85049/85, Straight version |       |         |       | Cable entry for AS85049/86 and AS85049/87, 45° & 90° |       |         |       |
|------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|---------|-------|--|-------|---------|-------|
|            |                   |       |       |       |       |       |       |       |       |       |       | Size 01                                      |       | Size 02 |       | Size 02  |       | Size 03 |       |
|            |                   | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch   | mm    | inch    | mm    | inch   | mm    | inch    | mm    |
| 8          | 0.438-28 UNEF     | 0.860 | 21.80 | 0.870 | 22.10 | 1.160 | 29.50 | 1.375 | 34.90 | 1.417 | 36.00 | N/A  | N/A   | 0.250   | 6.40  | N/A  | N/A   | 0.250   | 6.40  |
| 10         | 0.562-24 UNEF     | 0.990 | 25.10 | 0.900 | 22.90 | 1.190 | 30.20 | 1.437 | 36.50 | 1.480 | 37.60 | N/A  | N/A   | 0.312   | 7.90  | N/A  | N/A   | 0.312   | 7.90  |
| 12         | 0.688-24 UNEF     | 1.160 | 29.50 | 0.920 | 23.40 | 1.210 | 30.70 | 1.562 | 39.70 | 1.553 | 39.40 | 0.312  | 7.90  | 0.438   | 11.10 | 0.312  | 7.90  | 0.438   | 11.10 |
| 14         | 0.812-20 UNEF     | 1.280 | 32.50 | 0.950 | 24.10 | 1.240 | 31.50 | 1.687 | 42.80 | 1.614 | 41.00 | 0.438  | 11.10 | 0.562   | 14.30 | 0.438  | 11.10 | 0.562   | 14.30 |
| 16         | 0.938-20 UNEF     | 1.410 | 35.80 | 0.980 | 24.90 | 1.260 | 32.00 | 1.750 | 44.50 | 1.678 | 42.60 | 0.500  | 12.70 | 0.625   | 15.90 | 0.500  | 12.70 | 0.625   | 15.90 |
| 18         | 1.062-18 UNEF     | 1.520 | 38.60 | 0.980 | 24.90 | 1.270 | 32.30 | 1.875 | 47.60 | 1.733 | 44.00 | 0.625  | 15.90 | 0.750   | 19.10 | 0.625  | 15.90 | 0.750   | 19.10 |
| 20         | 1.188-18 UNEF     | 1.640 | 41.70 | 1.010 | 25.70 | 1.300 | 33.00 | 1.938 | 49.20 | 1.796 | 45.60 | 0.625  | 15.90 | 0.812   | 20.60 | 0.625  | 15.90 | 0.812   | 20.60 |
| 22         | 1.312-18 UNEF     | 1.770 | 45.00 | 1.040 | 26.40 | 1.330 | 33.80 | 2.062 | 52.40 | 1.859 | 47.20 | 0.688  | 17.50 | 0.938   | 23.80 | 0.688  | 17.50 | 0.938   | 23.80 |
| 24         | 1.438-18 UNEF     | 1.890 | 48.00 | 1.070 | 27.20 | 1.350 | 34.30 | 2.125 | 54.00 | 1.919 | 48.70 | 0.750  | 19.10 | 1.000   | 25.40 | 0.750  | 19.10 | 1.000   | 25.40 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## AS85049/88, 89, 90 Series - Banding backshell with self-locking

For connectors:

MIL-DTL-38999 Series III & IV

EN3645

### Ordering information

|   |          |    |   |    |   |    |
|---|----------|----|---|----|---|----|
| Basic Series  | AS85049/ | 88 | - | 11 | N | 02 |
| <b>Angle</b>  |          |    |   |    |   |    |
| 88: Straight  |          |    |   |    |   |    |
| 89: 45°   |          |    |   |    |   |    |
| 90: 90°   |          |    |   |    |   |    |
| <b>Self-locking option</b>  |          |    |   |    |   |    |
| - : Detended  |          |    |   |    |   |    |
| N: Non detended   |          |    |   |    |   |    |
| <b>Shell size: 9, 11, 13, 15, 17, 19, 21, 23, 25</b>                                    |          |    |   |    |   |    |
| <b>Material and plating</b>   |          |    |   |    |   |    |
| N: Aluminum, electroless nickel   |          |    |   |    |   |    |
| P: Aluminum, olive drab cadmium over electroless nickel with polysulfide sealant strips |          |    |   |    |   |    |
| W: Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray          |          |    |   |    |   |    |
| <b>Entry size (see table below): 02, 03</b>   |          |    |   |    |   |    |

### Dimensions



| Shell size | A Thread Class 2B | B Max |       | C Max |       | D Max |       | E Max |       | F Max |       | Cable entry Size 02 |       | Cable entry Size 03 |       |
|------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------|-------|---------------------|-------|
|            |                   | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch  | mm    | inch                | mm    | inch                | mm    |
| 9          | M12X1-6H          | 0.860 | 21.80 | 1.010 | 25.70 | 1.160 | 29.50 | 1.375 | 34.90 | 1.417 | 36.00 | N/A                 | N/A   | 0.250               | 6.40  |
| 11         | M15X1-6H          | 0.990 | 25.10 | 1.030 | 26.20 | 1.190 | 30.20 | 1.437 | 36.50 | 1.480 | 37.60 | N/A                 | N/A   | 0.312               | 7.90  |
| 13         | M18X1-6H          | 1.160 | 29.50 | 1.060 | 26.90 | 1.210 | 30.70 | 1.562 | 39.70 | 1.553 | 39.40 | 0.312               | 7.90  | 0.438               | 11.10 |
| 15         | M22X1-6H          | 1.280 | 32.50 | 1.080 | 27.40 | 1.240 | 31.50 | 1.687 | 42.80 | 1.614 | 41.00 | 0.438               | 11.10 | 0.562               | 14.30 |
| 17         | M25X1-6H          | 1.410 | 35.80 | 1.110 | 28.20 | 1.260 | 32.00 | 1.750 | 44.50 | 1.678 | 42.60 | 0.500               | 12.70 | 0.625               | 15.90 |
| 19         | M28X1-6H          | 1.520 | 38.60 | 1.120 | 28.40 | 1.270 | 32.30 | 1.875 | 47.60 | 1.733 | 44.00 | 0.625               | 15.90 | 0.750               | 19.10 |
| 21         | M31X1-6H          | 1.640 | 41.70 | 1.150 | 29.20 | 1.300 | 33.00 | 1.938 | 49.20 | 1.796 | 45.60 | 0.625               | 15.90 | 0.812               | 20.60 |
| 23         | M34X1-6H          | 1.770 | 45.00 | 1.170 | 29.70 | 1.330 | 33.80 | 2.062 | 52.40 | 1.859 | 47.20 | 0.688               | 17.50 | 0.938               | 23.80 |
| 25         | M37X1-6H          | 1.890 | 48.00 | 1.200 | 30.50 | 1.350 | 34.30 | 2.125 | 54.00 | 1.919 | 48.70 | 0.750               | 19.10 | 1.000               | 25.40 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification. Cable entry is defined as the envelope area of the cable or wire bundle. It is not intended for inspection criteria.

# M85049 Backshells

## M85049/93 Series - Shield support ring

For **ALL** connectors.

### Ordering information

|              |   |    |
|--------------|---|----|
| Basic Series | M85049/93                                       | 10 |
| Dash number  | 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28 |    |

### Dimensions



| Dash number | X    |       | Y     |       | Z    |       |
|-------------|------|-------|-------|-------|------|-------|
|             | inch | mm    | inch  | mm    | inch | mm    |
| 4           | 0.25 | 6.40  | 0.404 | 10.30 | 0.36 | 9.10  |
| 6           | 0.38 | 9.70  | 0.529 | 13.40 | 0.49 | 12.40 |
| 8           | 0.50 | 12.70 | 0.654 | 16.60 | 0.61 | 15.50 |
| 10          | 0.63 | 16.00 | 0.779 | 19.80 | 0.74 | 18.80 |
| 12          | 0.75 | 19.10 | 0.904 | 23.00 | 0.86 | 21.80 |
| 14          | 0.88 | 22.40 | 1.029 | 26.10 | 0.99 | 25.10 |
| 16          | 1.00 | 25.40 | 1.154 | 29.30 | 1.11 | 28.20 |
| 18          | 1.13 | 28.70 | 1.279 | 32.50 | 1.24 | 31.50 |
| 20          | 1.25 | 21.80 | 1.404 | 35.70 | 1.36 | 34.50 |
| 22          | 1.38 | 35.10 | 1.529 | 38.90 | 1.49 | 37.80 |
| 24          | 1.50 | 38.10 | 1.654 | 42.00 | 1.61 | 40.90 |
| 26          | 1.63 | 41.40 | 1.779 | 45.20 | 1.74 | 44.20 |
| 28          | 1.75 | 44.50 | 1.904 | 48.60 | 1.86 | 47.20 |

Note: All dimensions are in inches and millimeters (inch/mm). For complete dimensions, see the applicable Military Specification.

# Protective Caps

## MS27501/MS27502 Series - Protective caps for plug and receptacle

For connectors:  
MIL-DTL-38999 Series I

### Ordering information

|   |             |            |          |           |          |
|---|-------------|------------|----------|-----------|----------|
| <b>Basic Series</b>                                   | <b>MS27</b> | <b>501</b> | <b>B</b> | <b>11</b> | <b>N</b> |
| <b>Cap type</b>                                       |             |            |          |           |          |
| 501: Cap for plug                                     |             |            |          |           |          |
| 502: Cap for receptacle                               |             |            |          |           |          |
| <b>Material and plating</b>                           |             |            |          |           |          |
| B: Aluminum, olive drab cadmium, 500 hours salt spray |             |            |          |           |          |
| C: Aluminum, black anodize                            |             |            |          |           |          |
| F: Aluminum, electroless nickel                       |             |            |          |           |          |
| <b>Shell size: 9, 11, 13, 15, 17, 19, 21, 23, 25</b>  |             |            |          |           |          |
| <b>Style</b>  |             |            |          |           |          |
| A: Without chain                                      |             |            |          |           |          |
| C: Chain with eyelet                                  |             |            |          |           |          |
| N: Chain with ring (MS27502 only)                     |             |            |          |           |          |
| <b>Chain length (in inches/mm)</b>                    |             |            |          |           |          |
| empty: Standard chain length, see table below (C Max) |             |            |          |           |          |
| L: 5.0/127.0  |             |            |          |           |          |
| M: 6.0/152.4 (MS27501 only)                           |             |            |          |           |          |
| N: 7.0/177.8 (MS27501 only)                           |             |            |          |           |          |

### Dimensions

Cap for plug Type 501



Cap for receptacle Type 502



| Size | ØA Max |       | ØB Max |       | C Max |        | ØD Min |       |
|------|--------|-------|--------|-------|-------|--------|--------|-------|
|      | inch   | mm    | inch   | mm    | inch  | mm     | inch   | mm    |
| 9    | 0.82   | 20.80 | 0.82   | 20.80 | 3.00  | 76.20  | 0.70   | 17.80 |
| 11   | 0.94   | 23.90 | 0.94   | 23.90 |       |        | 0.84   | 21.30 |
| 13   | 1.07   | 27.20 | 1.10   | 27.90 | 3.50  | 88.90  | 1.01   | 25.70 |
| 15   | 1.19   | 30.20 | 1.22   | 31.00 |       |        | 1.14   | 29.00 |
| 17   | 1.35   | 33.50 | 1.34   | 34.00 |       |        | 1.26   | 32.00 |
| 19   | 1.44   | 36.60 | 1.46   | 37.10 | 4.00  | 101.60 | 1.39   | 35.30 |
| 21   | 1.57   | 39.90 | 1.58   | 40.10 |       |        | 1.51   | 38.40 |
| 23   | 1.69   | 42.90 | 1.70   | 43.20 |       |        | 1.64   | 41.70 |
| 25   | 1.82   | 46.20 | 1.83   | 46.50 |       |        | 1.76   | 44.70 |

Note: All dimensions are in inches and millimeters (inch/mm).



# Protective Caps

## D38999 Series - Protective caps for plug and receptacle

For connectors:  
MIL-DTL-38999 Series III

### Ordering information

|   |         |    |   |    |   |
|---|---------|----|---|----|---|
| Basic Series                                  | D38999/ | 32 | W | 11 | N |
| <b>Cap type</b>                               |         |    |   |    |   |
| 32: Cap for plug                              |         |    |   |    |   |
| 33: Cap for receptacle                        |         |    |   |    |   |
| <b>Material and plating</b>                   |         |    |   |    |   |
| W: Aluminum, olive drab cadmium               |         |    |   |    |   |
| F: Aluminum, nickel                           |         |    |   |    |   |
| Z: Aluminum, black zinc nickel                |         |    |   |    |   |
| Shell size: 9, 11, 13, 15, 17, 19, 21, 23, 25 |         |    |   |    |   |
| <b>Style</b>                                  |         |    |   |    |   |
| N: With stainless steel rope and ring         |         |    |   |    |   |
| R: With stainless steel rope and eyelet       |         |    |   |    |   |

### Dimensions

Cap for plug Type 32



Cap for receptacle Type 33



| Size | ØA Max |       | ØB Max |       | C Max |        | ØD    |       | ØE    |       | Thread: Stub ACME<br>2A/2B modified 60° |
|------|--------|-------|--------|-------|-------|--------|-------|-------|-------|-------|---|
|      | inch   | mm    | inch   | mm    | inch  | mm     | inch  | mm    | inch  | mm    |   |
| 9    | 0.889  | 22.60 | 0.898  | 22.80 | 3.31  | 84.00  | 0.591 | 15.00 | 0.724 | 18.40 | 0.6250-0.1P-0.3L-TS                     |
| 11   | 1.016  | 25.80 | 1.043  | 26.50 |       |        | 0.724 | 18.40 | 0.913 | 23.20 | 0.7500-0.1P-0.3L-TS                     |
| 13   | 1.181  | 30.00 | 1.181  | 30.00 | 3.90  | 99.00  | 0.913 | 23.20 | 1.043 | 26.50 | 0.8750-0.1P-0.3L-TS                     |
| 15   | 1.299  | 33.00 | 1.252  | 31.80 |       |        | 0.913 | 23.20 | 1.193 | 30.30 | 1.0000-0.1P-0.3L-TS                     |
| 17   | 1.437  | 36.50 | 1.449  | 36.80 |       |        | 1.043 | 26.50 | 1.283 | 32.60 | 1.1875-0.1P-0.3L-TS                     |
| 19   | 1.543  | 39.20 | 1.528  | 38.80 | 4.49  | 114.00 | 1.193 | 30.30 | 1.437 | 36.50 | 1.2500-0.1P-0.3L-TS                     |
| 21   | 1.673  | 42.50 | 1.646  | 41.80 |       |        | 1.283 | 32.60 | 1.547 | 39.30 | 1.3750-0.1P-0.3L-TS                     |
| 23   | 1.803  | 45.80 | 1.764  | 44.80 |       |        | 1.437 | 36.50 | 1.689 | 42.90 | 1.5000-0.1P-0.3L-TS                     |
| 25   | 1.925  | 48.90 | 1.921  | 48.80 |       |        | 1.547 | 39.30 | 1.772 | 45.00 | 1.6250-0.1P-0.3L-TS                     |

Note: All dimensions are in inches and millimeters (inch/mm).

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