M85049 Backshells
D38999 & MS27 Protective Caps

SUNBANK

# 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.

Esterline
Connection Technologies

# Overview

| Backshell style | Connector type | AS85049 Series |
|---|---|---|
| Cable clamp strain relief | 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 | 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 | 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<br>with self-locking | 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 | All | AS85049/93 - *see p.15* |

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

# AS85049/38 Series - Cable clamp strain relief

## For connectors:

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

## Ordering information

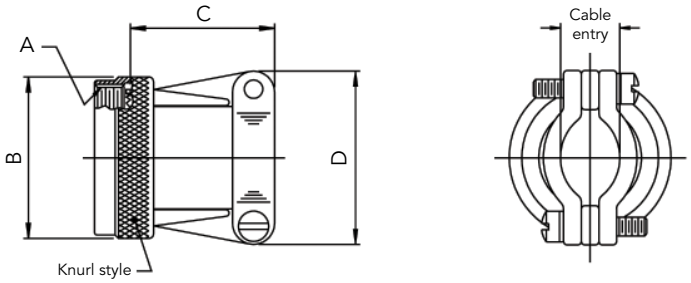
| Basic Series | M85049/38 | S | 11 | N |
|---|---|---|---|---|

**Self-locking option**
**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

**Shell size**
**9, 11, 13, 15, 16, 17, 19, 21, 23, 25**

**Material and plating**
**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 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 |
| 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.

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

For connectors:

**MIL-DTL-5015 crimp**
**AS81703 Series 3**
**MIL-DTL-26482 Series 2**
**MIL-DTL-83723 Series 1 & 3**

## Ordering information

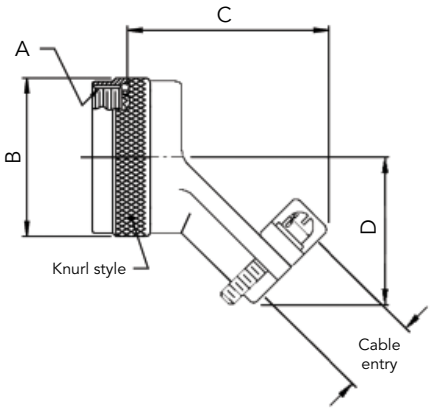
| | | | | |
|---|---|---|---|---|
| **Basic Series** | **M85049/43** | **-** | **10** | **N** |

**Self-locking option**
**- :** Non self locking

**Shell size**
**3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48, 61**

**Material and plating**
**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 | | 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.

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

For connectors:
**MIL-DTL-27599**
**MIL-DTL-38999 Series I & II**

## Ordering information

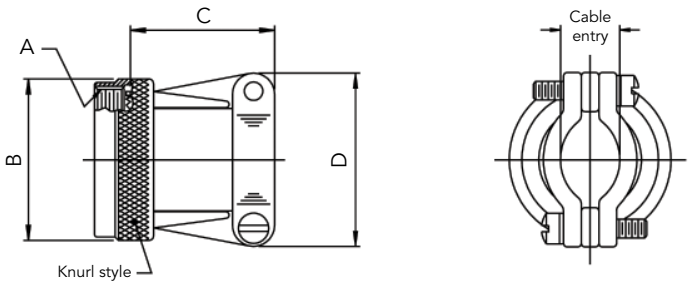
| Basic Series | M85049/49-2 | S | 10 | N |
|---|---|---|---|---|

**Self-locking option**
**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

**Shell size**
**8, 10, 12, 14, 16, 18, 20, 22, 24**

**Material and plating**
**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.

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

For connectors:

**MIL-DTL-5015 crimp**
**AS81703 Series 3**
**MIL-DTL-26482 Series 2**
**MIL-DTL-83723 Series 1 & 3**

## Ordering information

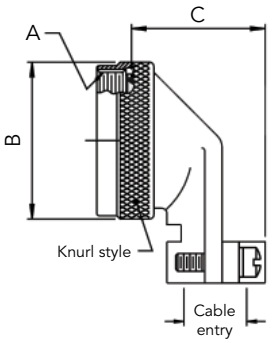
| Basic Series | AS85049/51 | S | 10 | N |
|---|---|---|---|---|

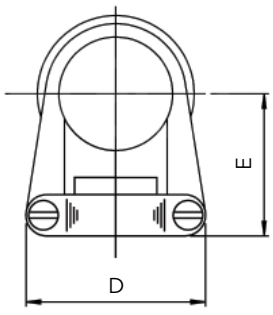
**Self-locking option**
**S:** Self-locking, detented - utilizes an audible detented anti-decoupling device.
**N:** Self-locking, non detented - utilizes an internal captivated anti-decoupling device (Self-Seating) with no audible clicking mechanism.
**-1:** Non self locking

**Shell size**
**3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48, 61**

**Material and plating**
**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.

# 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

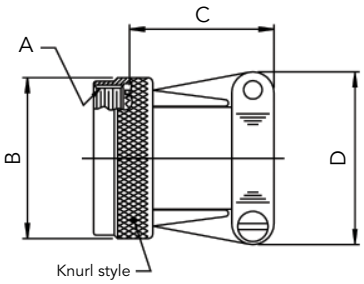
| **Basic Series** | **AS85049/52** | **S** | **10** | **N** |
|---|---|---|---|---|

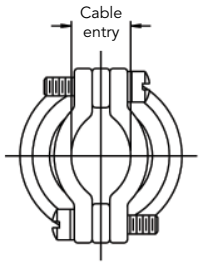
**Self-locking option**
**S:** Self-locking, detented - utilizes an audible detented anti-decoupling device.
**N:** Self-locking, non detented - utilizes an internal captivated anti-decoupling device (Self-Seating) with no audible clicking mechanism.
**-1:** Non self locking

**Shell size**
**3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28, 32, 36, 40, 44, 48, 61**

**Material and plating**
**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.

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

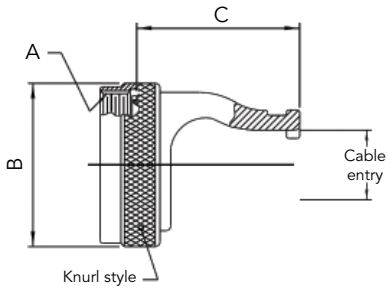
For connectors:

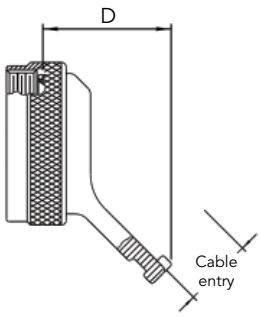
**MIL-DTL-5015 crimp**
**AS81703 Series 3**
**MIL-DTL-26482 Series 2**
**MIL-DTL-83723 Series 1 & 3**

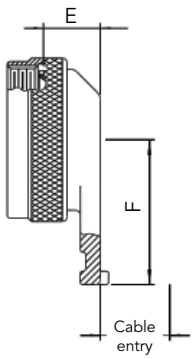
## Ordering information

| | | | | | |
|---|---|---|---|---|---|
| **Basic Series** | **AS85049/** | **53** | **-** | **10** | **N** |
| **Angle**<br>**53:** Straight<br>**54:** 45°<br>**55:** 90° | | | | | |
| **Self-locking option**<br>**- :** Non self locking | | | | | |
| **Shell size**<br>**3, 8, 10, 12, 14, 16, 18, 20, 22, 24, 28** | | | | | |
| **Material and plating**<br>**A:** Aluminum, black anodize<br>**N:** Aluminum, electroless nickel<br>**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 | | | | | | | 1.620 | 41.10 | 0.501 | 12.70 |
| **14** | 0.875 - 20 UNEF | 1.050 | 26.70 | 1.204 | 30.60 | | | | | 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 | | | | | | | | | 0.779 | 19.80 |
| **20** | 1.188 - 18 UNEF | 1.500 | 38.10 | 1.310 | 33.30 | 1.482 | 37.60 | 0.750 | 19.10 | 1.790 | 45.50 | 0.904 | 23.00 |
| **22** | 1.313 - 18 UNEF | 1.630 | 41.40 | 1.430 | 36.30 | | | | | 1.850 | 47.00 | 1.029 | 26.10 |
| **24** | 1.438 - 18 UNEF | 1.750 | 44.50 | 1.560 | 39.60 | | | | | 1.910 | 48.50 | 1.144 | 29.10 |
| **28** | 1.750 - 18 UNS | 1.970 | 50.00 | 1.560 | 39.60 | 1.469 | 37.30 | | | 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.

# AS85049/60-1 Series - Shrink boot adapter

For connectors:

**MIL-DTL-5015 crimp**
**AS81703 Series 3**
**MIL-DTL-26482 Series 2**
**MIL-DTL-83723 Series 1 & 3**

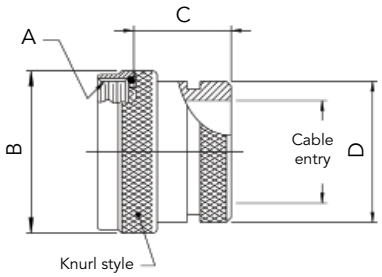
## Ordering information

| Basic Series | M85049/60-1 | N | 10 |
|---|---|---|---|

**Material and plating**
**A:** Aluminum, black anodize
**N:** Aluminum, electroless nickel
**W:** Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray

**Shell size**
**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.

# AS85049/62 Series - Shrink boot adapter

For connectors:
**MIL-DTL-27599**
**MIL-DTL-38999 Series I & II**

## Ordering information

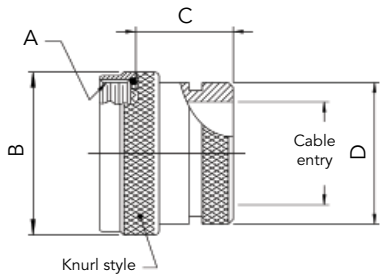
| Basic Series | M85049/62 | 10 | N | D |
|---|---|---|---|---|

**Shell size**
**8, 10, 12, 14, 16, 18, 20, 22, 24**

**Material and plating**
**A:** Aluminum, black anodize
**N:** Aluminum, electroless nickel
**S:** Stainless steel, passivated
**W:** Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray

**Drain hole**
**D:** with drain hole
**empty:** 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.

# AS85049/69 Series - Shrink boot adapter

For connectors:
**MIL-DTL-38999 Series III & IV**
**EN3645**

## Ordering information

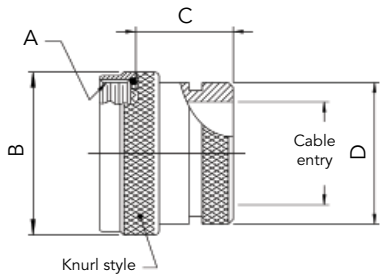
| Basic Series | M85049/69 | 11 | N |
|---|---|---|---|

**Shell size**
**9, 11, 13, 15, 17, 19, 21, 23, 25**

**Material and plating**
**A:** Aluminum, black anodize
**N:** Aluminum, electroless nickel
**S:** Stainless steel, passivated
**W:** Aluminum, olive drab cadmium over electroless nickel, 1000 hours salt spray

**Drain hole**
**D:** with drain hole
**empty:** 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 |
| **9** | M12 X 1 - 6H | 0.750 | 19.10 | | | 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 | 0.710 | 18.00 | 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.

# 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** |
|---|---|---|---|---|---|---|

**Angle**
**82:** Straight
**83:** 45°
**84:** 90° (size 28 not qualified for AS85049/84)

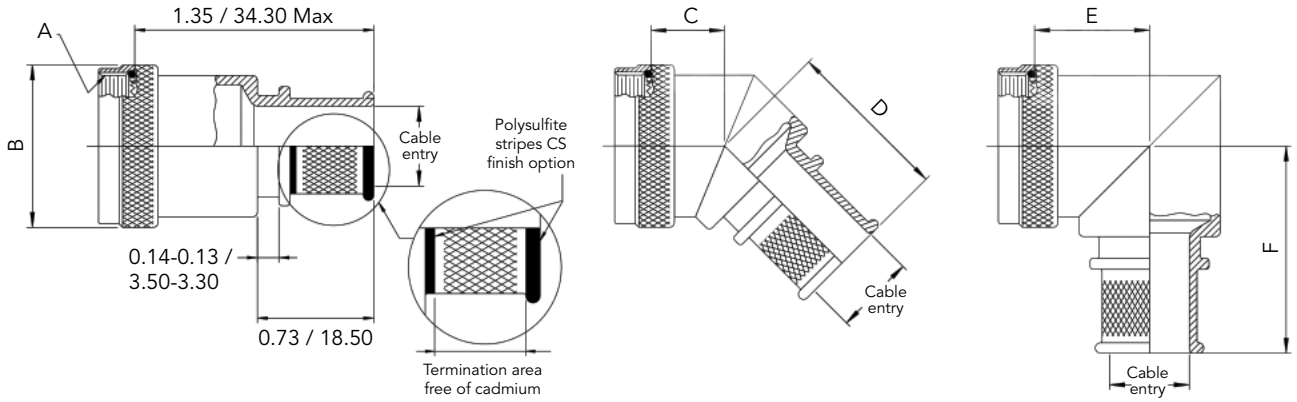
**Self-locking option**
**- :** Detended
**N:** Non detended

**Shell size: 8, 10, 12, 14, 16, 18, 20, 22, 24, 28** (size 28 not qualified for AS85049/84)

**Material and plating**
**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

**Entry size** (see table below): **02, 03**

## 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.

# 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 |
|---|---|---|---|---|---|---|

**Angle**
**85:** Straight
**86:** 45°
**87:** 90°

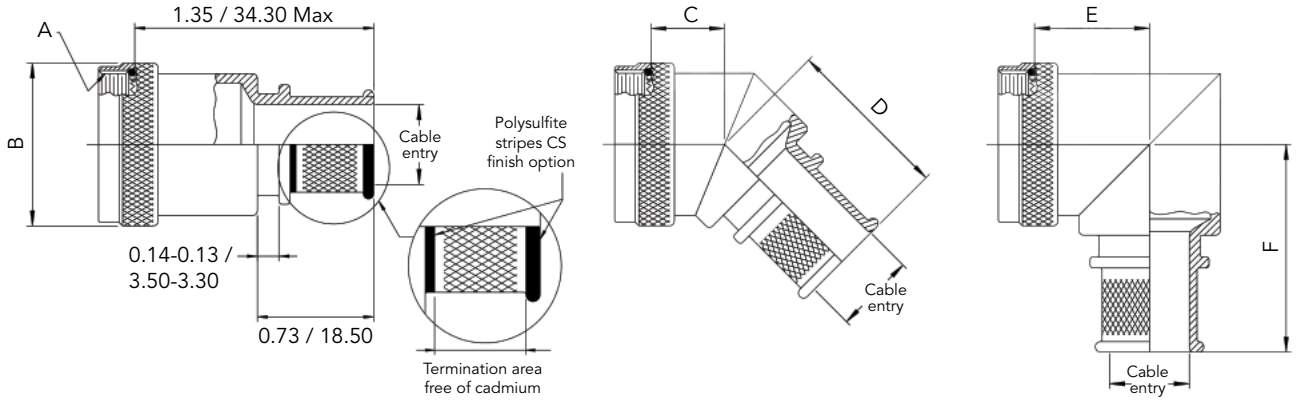
**Self-locking option**
**- :** Detended
**N:** Non detended

**Shell size: 8, 10, 12, 14, 16, 18, 20, 22, 24**

**Material and plating**
**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

**Entry size** (see table below)**: 02, 03**

## 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.

# 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** |

**Angle**
**88:** Straight
**89:** 45°
**90:** 90°

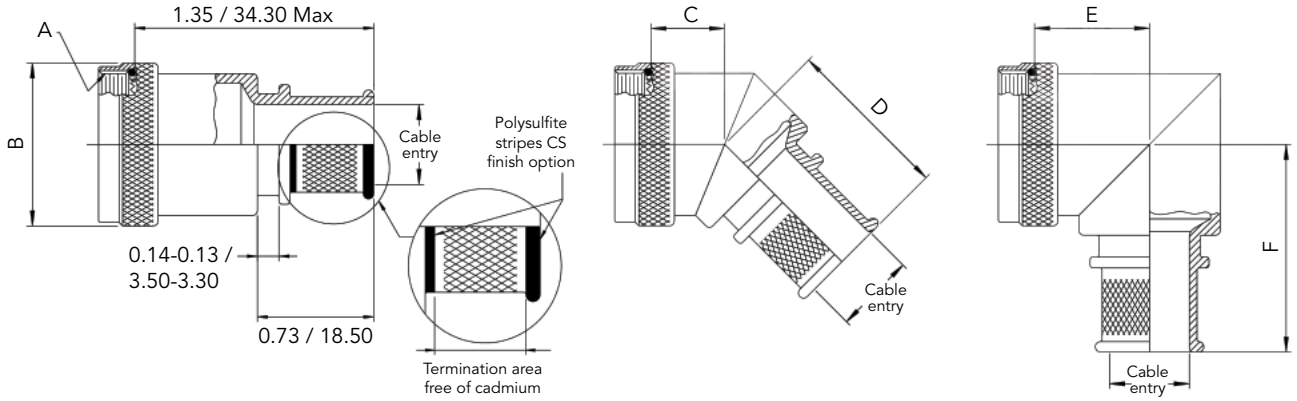
**Self-locking option**
**- :** Detended
**N:** Non detended

**Shell size: 9, 11, 13, 15, 17, 19, 21, 23, 25**

**Material and plating**
**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

**Entry size** (see table below)**: 02, 03**

## 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.

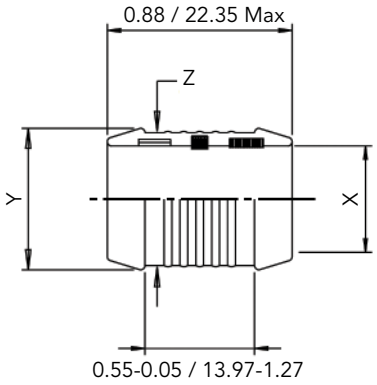
# M85049/93 Series - Shield support ring

For **ALL** connectors.

## Ordering information

| | | |
|---|---|---|
| **Basic Series** | **M85049/93** | **10** |
| **Dash number**<br>**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.

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

For connectors:
**MIL-DTL-38999 Series I**

## Ordering information

| | | | | | |
|---|---|---|---|---|---|
| **Basic Series** | **MS27** | **501** | **B** | **11** | **N** |

**Cap type**
**501:** Cap for plug
**502:** Cap for receptacle

**Material and plating**
**B:** Aluminum, olive drab cadmium, 500 hours salt spray
**C:** Aluminum, black anodize
**F:** Aluminum, electroless nickel

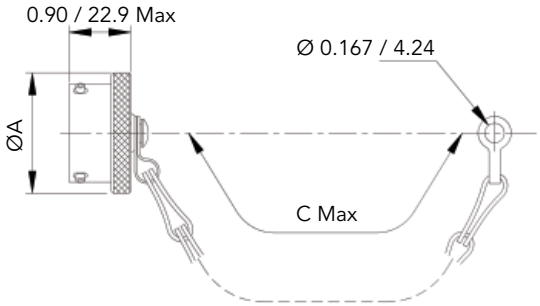
**Shell size: 9, 11, 13, 15, 17, 19, 21, 23, 25**

**Style**
**A:** Without chain
**C:** Chain with eyelet
**N:** Chain with ring (MS27502 only)

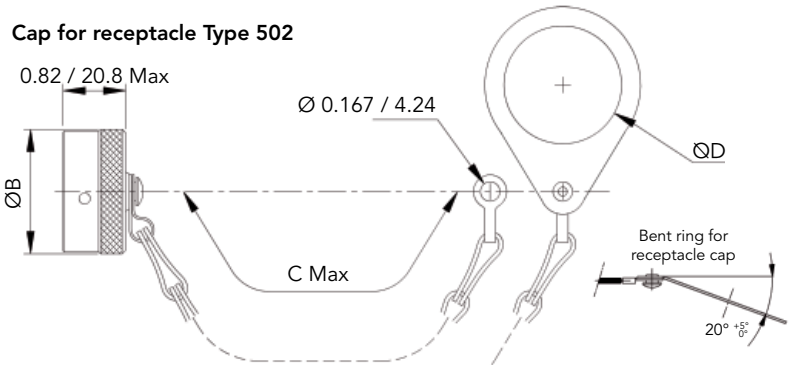
**Chain length (in inches/mm)**
**empty:** Standard chain length, see table below (C Max)
**L:** 5.0/127.0
**M:** 6.0/152.4 (MS27501 only)
**N:** 7.0/177.8 (MS27501 only)

## 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 | | | 1.39 | 35.30 |
| **21** | 1.57 | 39.90 | 1.58 | 40.10 | 4.00 | 101.60 | 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).

# D38999 Series - Protective caps for plug and receptacle

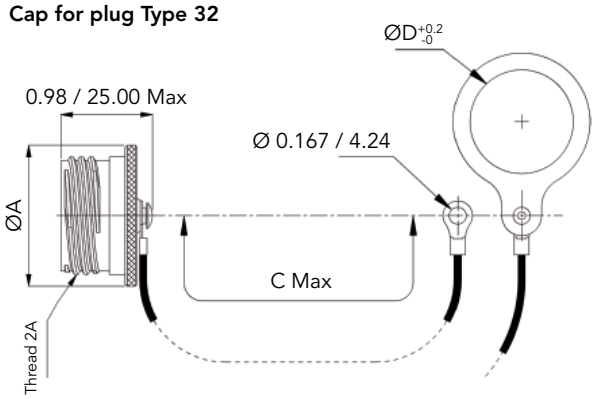
For connectors:
**MIL-DTL-38999 Series III**

## Ordering information

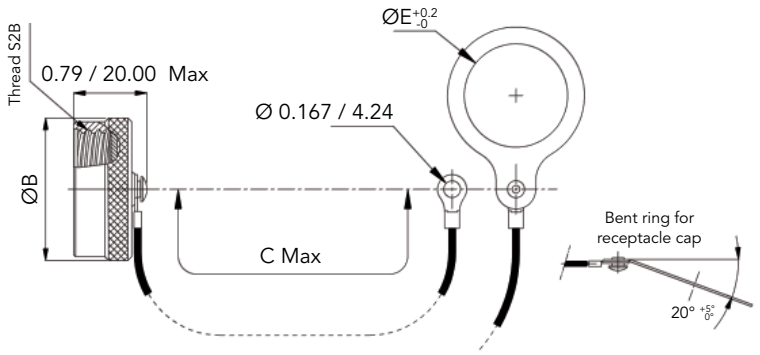
| Basic Series | D38999/ | 32 | W | 11 | N |
|---|---|---|---|---|---|
| **Cap type**<br>**32:** Cap for plug<br>**33:** Cap for receptacle | | | | | |
| **Material and plating**<br>**W:** Aluminum, olive drab cadmium<br>**F:** Aluminum, nickel<br>**Z:** Aluminum, black zinc nickel | | | | | |
| **Shell size: 9, 11, 13, 15, 17, 19, 21, 23, 25** | | | | | |
| **Style**<br>**N:** With stainless steel rope and ring<br>**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 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 | | | 1.193 | 30.30 | 1.437 | 36.50 | 1.2500-0.1P-0.3L-TS |
| **21** | 1.673 | 42.50 | 1.646 | 41.80 | 4.49 | 114.00 | 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).

For further information contact us at sunbank.sales@esterline.com
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