

# AS85049/7 and MS3189B 45° Environmental Backshell



AS85049

## CONNECTOR DESIGNATOR:

**A**

AS50151 Series AS34001  
MIL-DTL-26482 Series II  
AS81703 Series III  
MIL-DTL-83723 Series I & III  
40M39569, DEF 5326-3, EN 2997  
EN 3646, ESC 10, ESC 11, LN 29504  
NFC93422 Series HE302  
PAN 6432-1, PAN 6432-2, PATT 602

Basic  
Part Number

Dash Number  
(Table II)

**M85049/7**

**- 21**

**N**

Superseded  
Part Number

**MS3189B 21 N**

Basic  
Part No.

Dash  
No.

**Finish  
(Material is Aluminum Only)**

**A** = Cadmium Olive Drab over Nickel  
**C** = Cadmium Olive Drab  
**N** = Electroless Nickel

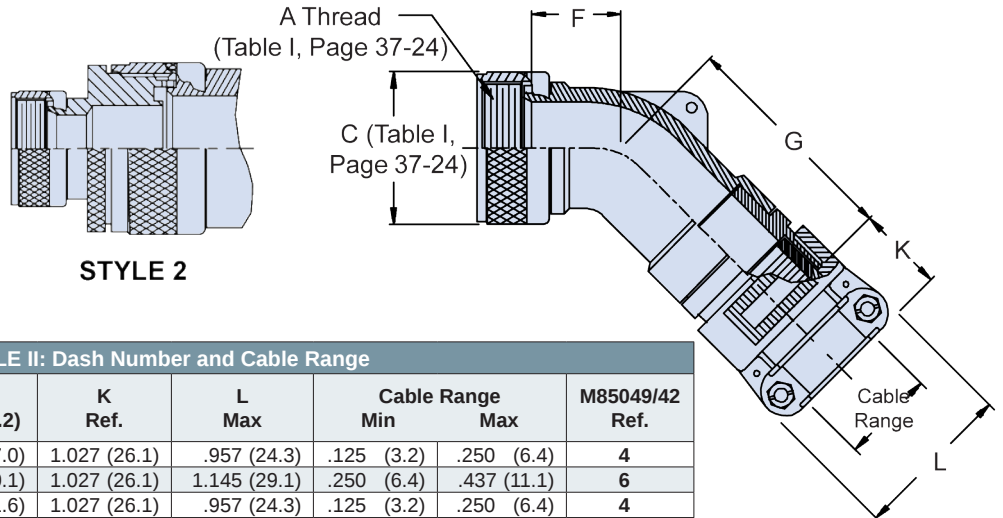
**B**

## APPLICATION NOTES

- For complete dimensions see the applicable Military Specification.
- Metric dimensions (mm) are in parentheses.
- When maximum cable entry is exceeded, Style 2 will be supplied.
- Cable Range is defined as the accommodation range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
- Approximate chain lengths:  
Dash No. 01-12 = 5.0 (127.0); Dash No. 13-29 = 6.0 (152.4).

## Finish / Material

**B** = Black Cadmium / Stainless Steel  
**N** = Electroless Nickel / Aluminum  
**S** = Passivated / Stainless Steel  
**W** = 1,000 Hr. Cadmium Olive Drab over Electroless Nickel / Aluminum  
**X** = Nickel Fluorocarbon Polymer / Aluminum  
**Y** = Pure Dense Electrodeposited Aluminum / Aluminum  
**Z** = Zinc Nickel, Black / Aluminum  
**XS** = Nickel Fluorocarbon Polymer / Stainless Steel  
**YS** = Pure Dense Electrodeposited Aluminum / Stainless Steel  
**ZS** = Zinc Nickel, Black / Stainless Steel



**STYLE 2**

**TABLE II: Dash Number and Cable Range**

| Dash No. | Shell Size | F Max        | G ± .125 (3.2) | K Ref.       | L Max        | Cable Range Min | Cable Range Max | M85049/42 Ref. |
|----------|------------|--------------|----------------|--------------|--------------|-----------------|-----------------|----------------|
| 1        | 03         | .688 (17.5)  | 1.852 (47.0)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .250 (6.4)      | 4              |
| 2        | 03         | 1.500 (38.1) | 1.972 (50.1)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)      | .437 (11.1)     | 6              |
| 3        | 08         | .625 (15.9)  | 1.244 (31.6)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .250 (6.4)      | 4              |
| 4        | 10         | .688 (17.5)  | 1.912 (48.6)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .312 (7.9)      | 4              |
| 5        | 10         | .688 (17.5)  | 1.307 (33.2)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)      | .375 (9.5)      | 6              |
| 6        | 12         | .750 (19.1)  | 1.972 (50.1)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)      | .312 (7.9)      | 4              |
| 7        | 12         | .750 (19.1)  | 1.972 (50.1)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)      | .437 (11.1)     | 6              |
| 8        | 12         | .750 (19.1)  | 1.972 (50.1)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .500 (12.7)     | 10             |
| 9        | 14         | .812 (20.6)  | 2.062 (52.4)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)      | .437 (11.1)     | 6              |
| 10       | 14         | .812 (20.6)  | 1.717 (43.6)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .575 (14.6)     | 10             |
| 11       | 16         | .906 (23.0)  | 2.172 (55.2)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)      | .437 (11.1)     | 6              |
| 12       | 16         | .906 (23.0)  | 1.812 (46.0)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)     | .700 (17.8)     | 12             |
| 13       | 18         | 1.093 (27.8) | 2.362 (60.0)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .625 (15.9)     | 10             |
| 14       | 18         | 1.093 (27.8) | 2.000 (50.8)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)     | .779 (19.8)     | 16             |
| 15       | 20         | 1.093 (27.8) | 2.362 (60.0)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)      | .625 (15.9)     | 10             |
| 16       | 20         | 1.093 (27.8) | 2.000 (50.8)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)     | .904 (23.0)     | 16             |
| 17       | 22         | 1.188 (30.2) | 2.512 (63.8)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)     | .750 (19.1)     | 12             |
| 18       | 22         | 1.188 (30.2) | 2.155 (54.7)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)     | 1.029 (26.1)    | 20             |
| 19       | 24         | 1.188 (30.2) | 2.512 (63.8)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)     | .750 (19.1)     | 12             |
| 20       | 24         | 1.188 (30.2) | 2.093 (53.2)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)     | 1.144 (29.1)    | 20             |
| 21       | 28         | 1.312 (33.3) | 2.500 (63.5)   | 1.156 (33.7) | 1.770 (45.0) | .625 (15.9)     | .937 (23.8)     | 16             |

Table Continued on Page B-22

Dimensions in inches (millimeters) and are subject to change without notice.

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B

TABLE II: Dash Number and Cable Range (Continued From Page B-21)

| Dash No. | Shell Size | F Max        | G ± .125 (3.2) | K Ref.       | L Max        | Cable Range  |              | M85049/42 Ref. |
|----------|------------|--------------|----------------|--------------|--------------|--------------|--------------|----------------|
|          |            |              |                |              |              | Min          | Max          |                |
| 22       | 28         | 1.312 (33.3) | 2.218 (56.3)   | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) | 24             |
| 23       | 32         | 1.375 (34.9) | 2.662 (67.6)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 24       | 32         | 1.375 (34.9) | 2.662 (67.6)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 25       | 32         | 1.375 (34.9) | 2.312 (58.7)   | 1.781 (45.2) | 2.770 (70.4) | 1.250 (31.8) | 1.625 (41.3) | 28             |
| 26       | 36         | 1.406 (35.7) | 2.752 (69.9)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 27       | 36         | 1.406 (35.7) | 2.752 (69.9)   | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) | 24             |
| 28       | 36         | 1.406 (35.7) | 2.406 (61.1)   | 1.830 (46.5) | 3.020 (76.7) | 1.437 (36.5) | 1.840 (46.7) | 32             |
| 29       | 40         | 2.156 (54.8) | 2.752 (69.9)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 30       | 40         | 2.156 (54.8) | 2.752 (69.9)   | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) | 24             |
| 31       | 40         | 2.156 (54.8) | 2.406 (61.1)   | 1.830 (46.5) | 3.020 (76.7) | 1.437 (36.5) | 1.875 (47.6) | 32             |
| 32       | 44         | 2.156 (54.8) | 2.752 (69.9)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 33       | 44         | 2.156 (54.8) | 2.752 (69.9)   | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) | 24             |
| 34       | 44         | 2.156 (54.8) | 2.406 (61.1)   | 1.830 (46.5) | 3.020 (76.7) | 1.437 (36.5) | 1.875 (47.6) | 32             |
| 35       | 48         | 2.156 (54.8) | 2.752 (69.9)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 36       | 48         | 2.156 (54.8) | 2.752 (69.9)   | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) | 24             |
| 37       | 48         | 2.156 (54.8) | 2.406 (61.1)   | 1.830 (46.5) | 3.020 (76.7) | 1.437 (36.5) | 1.875 (47.6) | 32             |
| 38       | 61         | 1.188 (30.2) | 2.512 (63.8)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  | 12             |
| 39       | 61         | 1.188 (30.2) | 2.155 (54.7)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.184 (30.1) | 20             |
| 40       | 16         | .906 (23.0)  | 2.172 (55.2)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)   | .625 (15.9)  | 10             |
| 41       | 18         | 1.093 (27.8) | 2.362 (60.0)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)   | .312 (7.9)   | 4              |
| 42       | 18         | 1.093 (27.8) | 2.362 (60.0)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)   | .437 (11.1)  | 6              |
| 43       | 20         | 1.093 (27.8) | 2.362 (60.0)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)   | .437 (11.1)  | 6              |
| 44       | 22         | 1.188 (30.2) | 2.512 (63.8)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)   | .312 (7.9)   | 4              |
| 45       | 22         | 1.188 (30.2) | 2.512 (63.8)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)   | .437 (11.1)  | 6              |
| 46       | 24         | 1.188 (30.2) | 2.512 (63.8)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)   | .625 (15.9)  | 10             |
| 47       | 36         | 1.406 (35.7) | 2.752 (69.9)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  | 12             |
| 48       | 40         | 2.156 (54.8) | 2.752 (69.9)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  | 12             |
| 49*      | 10         | 1.500 (38.1) | 1.972 (50.1)   | 1.027 (26.1) | 1.145 (29.1) | .250 (6.4)   | .437 (11.1)  | 6              |
| 50*      | 14         | 1.842 (46.8) | 2.362 (60.0)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  | 12             |
| 51*      | 16         | 1.938 (49.2) | 2.512 (63.8)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 52       | 18         | 1.093 (27.8) | 2.362 (60.0)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  | 12             |
| 53       | 61         | 1.188 (30.2) | 2.512 (63.8)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 54       | 20         | 1.093 (27.8) | 2.362 (60.0)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  | 12             |
| 55*      | 20         | 2.061 (52.3) | 2.562 (65.1)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 56       | 22         | 1.188 (30.2) | 2.512 (63.8)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)   | .625 (15.9)  | 10             |
| 57       | 22         | 1.188 (30.2) | 2.512 (63.8)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 58*      | 22         | 2.061 (52.3) | 2.562 (65.1)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 59       | 24         | 1.188 (30.2) | 2.512 (63.8)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 60       | 28         | 1.312 (33.3) | 2.562 (65.1)   | 1.059 (26.9) | 1.551 (39.4) | .500 (12.7)  | .750 (19.1)  | 12             |
| 61       | 28         | 1.312 (33.3) | 2.562 (65.1)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 62       | 32         | 1.375 (34.9) | 2.662 (67.6)   | 1.500 (38.1) | 2.363 (60.0) | 1.000 (25.4) | 1.375 (34.9) | 24             |
| 63       | 36         | 1.406 (35.7) | 2.752 (69.9)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 64       | 36         | 1.406 (35.7) | 2.752 (69.9)   | 1.781 (45.2) | 2.770 (70.4) | 1.250 (31.8) | 1.625 (41.3) | 28             |
| 65       | 40         | 2.156 (54.8) | 2.752 (69.9)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 66       | 40         | 2.156 (54.8) | 2.752 (69.9)   | 1.781 (45.2) | 2.770 (70.4) | 1.250 (31.8) | 1.625 (41.3) | 28             |
| 67       | 44         | 2.156 (54.8) | 2.752 (69.9)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 68       | 44         | 2.156 (54.8) | 2.752 (69.9)   | 1.781 (45.2) | 2.770 (70.4) | 1.250 (31.8) | 1.625 (41.3) | 28             |
| 69       | 48         | 2.156 (54.8) | 2.752 (69.9)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 70       | 48         | 2.156 (54.8) | 2.752 (69.9)   | 1.781 (45.2) | 2.770 (70.4) | 1.250 (31.8) | 1.625 (41.3) | 28             |
| 71*      | 12         | 1.654 (42.0) | 2.173 (55.2)   | 1.027 (26.1) | 1.332 (33.8) | .350 (8.9)   | .625 (15.9)  | 10             |
| 72*      | 18         | 1.938 (49.2) | 2.512 (63.8)   | 1.156 (29.4) | 1.770 (45.0) | .625 (15.9)  | .937 (23.8)  | 16             |
| 73*      | 24         | 2.061 (52.3) | 2.562 (65.1)   | 1.375 (34.9) | 2.113 (53.7) | .875 (22.2)  | 1.250 (31.8) | 20             |
| 74       | 14         | .812 (20.6)  | 2.062 (52.4)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)   | .312 (7.9)   | 4              |
| 75       | 16         | .906 (23.0)  | 2.172 (55.2)   | 1.027 (26.1) | .957 (24.3)  | .125 (3.2)   | .312 (7.9)   | 4              |

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