

Cannon has re-introduced the widely used MS A&B product line with improved features. For corrosion protection we have changed the shell finish to an environmentally safe, zinc alloy plating. The plating is a high quality finish and uniform in color. The contacts, which are preloaded in the insulator, have been redesigned such that the solder cups remain in proper orientation and will not rotate during wiring termination. The contacts are also machined for strength and durability and plated with silver. The Cannon MS A&B design meets the performance requirements of the MIL-C-5015. The product is available in all the popular sizes and configurations in Class A (solid end bell) and Class B (split end bell versions).

Applications:

- Industrial Controls
- Test Equipment
- Traffic Signals
- Bus Systems



For more information: www.ittcannon.com/cat107

Product Features and Benefits

- High strength aluminum alloy connector
- High strength plastic insulators
- Environmentally safe shell finishes
- Protected against corrosion
- High quality plating finish
- Threaded coupling
- Product is tooled and available in 50 insert patterns
- Machined contacts
- Low cost

Performance Specifications

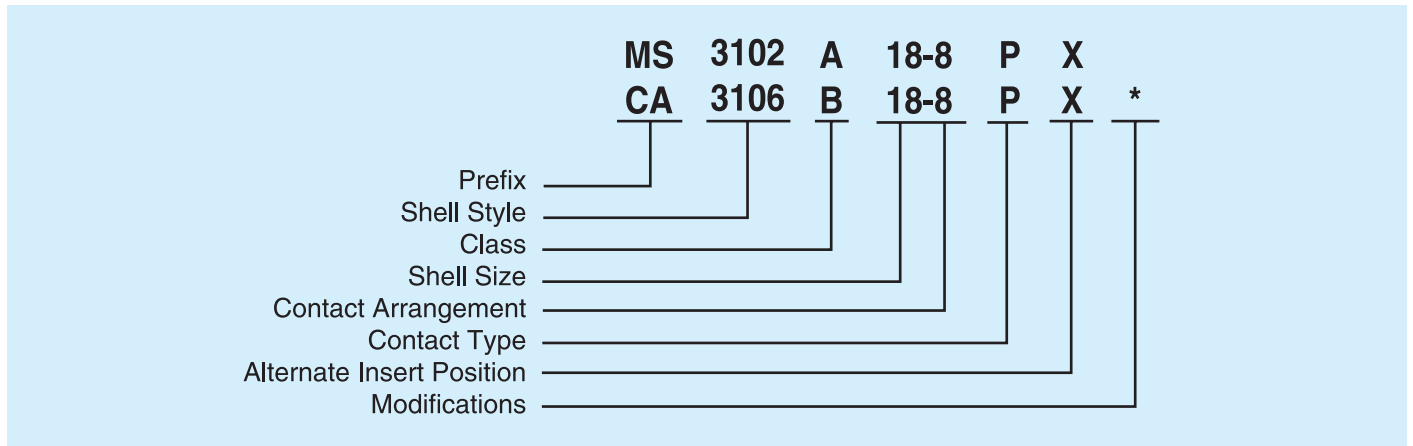
| | |
|---------------------|---------------------------------|
| Temperature Range: | -55°C to 125°C (-67°F to 257°F) |
| Current Rating: | 13 A to 150 A* |
| Durability: | 500 mating cycles min. |
| Wire Accommodation: | 0 to 20 AWG* |
| No. of Contacts: | 2 to 48 |
| Termination: | Solder |

*Depending on contact size.

Materials and Finishes

| Description | Material | Finish |
|-------------|-----------------------|--------------------------|
| Shell | Aluminum Alloy | Green Zinc or Black Zinc |
| Insulator | Hard Plastic | — |
| Contact | Brass or Copper Alloy | Silver |

How to Order



SERIES PREFIX

MS – Complies with Military Specification MIL-C-5015

CA – Cannon prefix indicating special application or variation of MS

SHELL STYLE

3100 – Wall Mounting Receptacle (A version only)

3101 – Cord Connector Plug (A version only)

3102 – Box Mounting Receptacle

3106 – Straight Plug

3108 – 90° Angle Plug (B version only)

CLASS

A – Solid or one-piece endbell

B – Split or two-piece endbell

SHELL SIZE

Coupling thread diameter in sixteenths of an inch

CONTACT ARRANGEMENTS

Refer to page 3

CONTACT TYPE

P – Pin

S – Socket

ALTERNATE INSERT POSITIONS

Refer to page 4

MODIFICATIONS

Contact Cannon for other options.

For more information, please contact your local Cannon sales office.

Accessories

Cable clamps are available in both the environmentally safe green zinc and black zinc, and will accommodate shell sizes 10SL-36. Double clamping action provides a balanced, positive hold on the wires and greatly reduces moisture transmission, a real benefit in applications that require environmental sealing. This clamp is provided with the bushing.

| Shell Size | Part Number Green Zinc | Part Number Black Zinc |
|------------|------------------------|------------------------|
| 10SL, 12S | CA17711-111 | CA17711-103 |
| 14S | CA17711-112 | CA17711-104 |
| 16S, 16 | CA17711-113 | CA17711-101 |
| 18 | CA17711-114 | CA17711-102 |
| 20, 22 | CA17711-115 | CA17711-22 |
| 24, 28 | CA17711-116 | CA17711-105 |
| 32 | CA17711-117 | CA17711-106 |
| 36 | CA17711-118 | CA17711-107 |



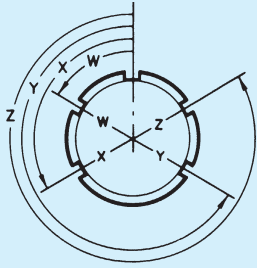
Contact Cavity Arrangements

The following table lists the contact cavity arrangements shown in the image:

| | | | | | | | | | | | |
|--------------------------|---|--|--------------------------|--|---|--|--|--------------------------|---|-------------------------|-------------------------|
| 10SL-3 3 - #16 | 10SL-4 2 - #16 | 12S-3 2 - #16 | 14S-1 3 - #16 | 14S-2 4 - #16 | 14S-5 5 - #16 | 14S-6 6 - #16 | 14S-7 3 - #16 | 14S-9 2 - #16 | 16-9 2 - #16 (B, D) 2 - #12 (A, C) | 16-10 3 - #12 | 16-11 2 - #12 |
| 16S-1 7 - #16 | 16S-8 5 - #16 | 18-1 10 - #16 | 18-4 4 - #16 | 18-5 1 - #16 (A) 2 - #12 (B, C) | 18-8 7 - #16 (A-G) 1 - #12 (H) | 18-9 5 - #16 (B, C, E-G) 2 - #12 (A, D) | 18-10 4 - #12 | 18-11 5 - #12 | 18-12 6 - #16 | | |
| 18-20 5 - #16 | 18-22 3 - #16 | 20-3 3 - #12 | 20-4 4 - #12 | 20-7 8 - #16 | 20-19 3 - #8 | 20-27 14 - #16 | 20-29 17 - #16 | 20-33 11 - #16 | | | |
| 22-2 3 - #8 | 22-14 19 - #16 | 22-19 14 - #16 | 22-23 8 - #12 | 22-28 7 - #12 | 24-2 7 - #12 | 24-10 7 - #8 | 24-20 9 - #16 (A-D, G-L) 2 - #12 (E, F) | | | | |
| 24-28 24 - #16 | 28-10 3 - #12 (A, F, G) 2 - #8 (B, E) 2 - #4 (C, D) | 28-11 18 - #16 (A-I, N-X) 4 - #12 (J-M) | 28-12 26 - #16 | 28-15 35 - #16 | 28-16 20 - #16 | 28-21 37 - #16 | | | | | |
| 36-5 4 - #0 | 36-7 40 - #16 (A-Z, a-s) 7 - #12 (t-z) | 36-8 46 - #16 (A-X, Z-z) 1 - #12 (Y) | 36-10 48 - #16 | | | | | | | | |

Alternate Insert Positions

Pin front view: Shell rotation



| Contact Arrangement | W° | X° | Y° | Z° |
|---------------------|----|-----|-----|-----|
| 10SL-3 | — | — | — | — |
| 10SL-4 | — | — | — | — |
| 12S-3 | 70 | 145 | 215 | 290 |
| 14S-1 | — | — | — | — |
| 14S-2 | — | 120 | 240 | — |
| 14S-5 | — | 110 | — | — |
| 14S-6 | — | — | — | — |
| 14S-7 | 90 | 180 | 270 | — |

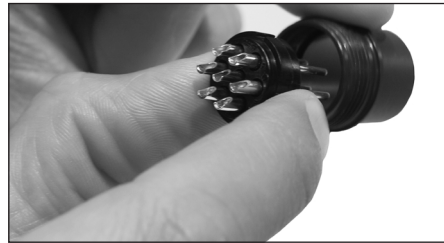
| Contact Arrangement | W° | X° | Y° | Z° |
|---------------------|----|-----|-----|-----|
| 14S-9 | 70 | 145 | 215 | 290 |
| 16-9 | 35 | 110 | 250 | 325 |
| 16-10 | 90 | 180 | 270 | — |
| 16-11 | 35 | 110 | 250 | 325 |
| 16S-1 | 80 | — | — | 280 |
| 16S-8 | — | 170 | 265 | — |
| 18-1 | 70 | 145 | 215 | 290 |
| 18-4 | 35 | 110 | 250 | 325 |
| 18-5 | 80 | 110 | 250 | 280 |
| 18-8 | 70 | — | — | 290 |
| 18-9 | 80 | 110 | 250 | 280 |
| 18-10 | — | 120 | 240 | — |
| 18-11 | — | 170 | 265 | — |
| 18-12 | 80 | — | — | 280 |
| 18-20 | 90 | 180 | 270 | — |
| 18-22 | 70 | 145 | 215 | 290 |
| 20-3 | 70 | 145 | 215 | 290 |
| 20-4 | 45 | 110 | 250 | — |
| 20-7 | 80 | 110 | 250 | 280 |
| 20-19 | 90 | 180 | 270 | — |
| 20-27 | 35 | 110 | 250 | 325 |

| Contact Arrangement | W° | X° | Y° | Z° |
|---------------------|----|-----|-----|-----|
| 20-29 | 80 | — | — | 280 |
| 20-33 | 35 | 110 | 256 | 325 |
| 22-2 | 70 | 145 | 215 | 290 |
| 22-14 | 80 | — | — | 280 |
| 22-19 | 80 | 110 | 250 | 280 |
| 22-23 | 35 | — | 250 | — |
| 22-28 | 80 | — | — | 280 |
| 24-2 | 80 | — | — | 280 |
| 24-10 | 80 | — | — | 280 |
| 24-20 | 80 | 110 | 250 | 280 |
| 24-28 | 80 | 110 | 250 | 280 |
| 28-10 | 80 | 110 | 250 | 280 |
| 28-11 | 80 | 110 | 250 | 280 |
| 28-12 | 90 | 180 | 270 | — |
| 28-15 | 80 | 110 | 250 | 280 |
| 28-16 | 80 | 110 | 250 | 280 |
| 28-21 | 80 | 110 | 250 | 280 |
| 36-5 | — | 120 | 240 | — |
| 36-7 | 80 | 110 | 250 | 280 |
| 36-8 | 80 | 110 | 250 | 280 |
| 36-10 | 80 | 125 | 235 | 280 |

Assembly Instructions



Unassembled connectors are supplied in kits, an insulator kit and hardware kit. The insulator kit includes a snap ring and insulator with preloaded contacts. The hardware kit includes the shell along with appropriate endbell (except box mount receptacles) and coupling nut (plug only).



Step 1*: Remove tape from insulator. With the insulator and shell positioned as shown above, polarize insulator to desired position and place inside shell using the internal keyway as guide. Once inside the shell, the insulator cannot rotate. However, until the snap ring is applied in step 2, the insulator is not captivated in the shell.



Step 2: After insulator is seated in shell, install the snap ring on the rear of the connector. Slightly compress ring and insert into recessed area just above the insulator. If not completely in place, manipulate the snap ring with finger until visual or audible seating confirmation is made. No tooling is required.



Step 3: Confirm insulator is fixed inside shell by applying slight force on the engaging side of the insulator. If properly installed, the insulator can not be pushed out the rear of the shell. If the insulator is displaced with this test, please repeat steps 1 and 2.



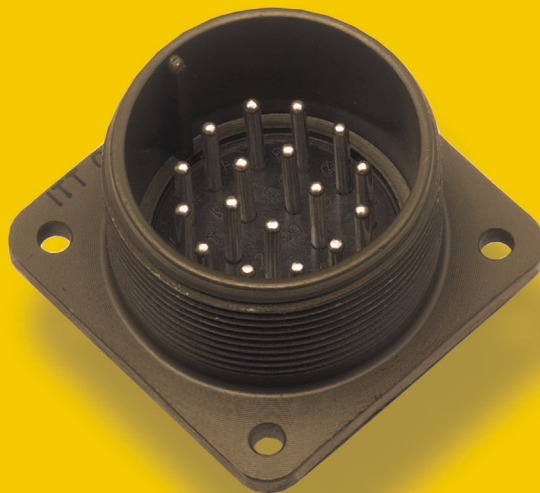
Step 4: Complete assembly by adding coupling nut and endbell. Please note that the coupling nut is used on the plug side only.

*Note: During installation, ensure that all contacts remain fixed. If during this process the contacts rotate out of position, separate the 2 piece insulator and adjust accordingly.



Industrial Connectors

CA/MS A&B



2001

Cannon



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