# 711 Series Single/Multi Way Bayonet Coupled Connectors

DB2

## Data Bus Interconnection System

This high density Data Bus Interconnection System has been designed specifically for use with data transmission as defined MIL-STD-15538, STANAG 3838 and DEF STAN 00-18 (Part 2).

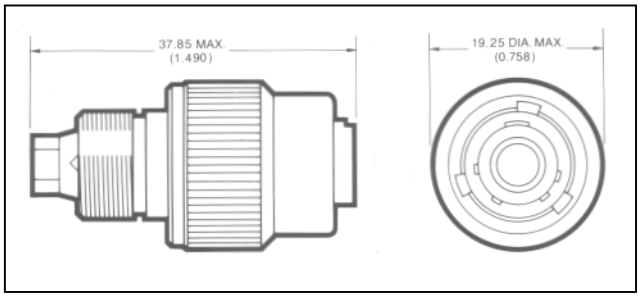
**Approved to BS 9522 F0042 and qualified to PAN 6484/6499 this interconnection system is also ideal for use with video transmission systems and the termination of screened twisted pairs.**

**Amphenol**

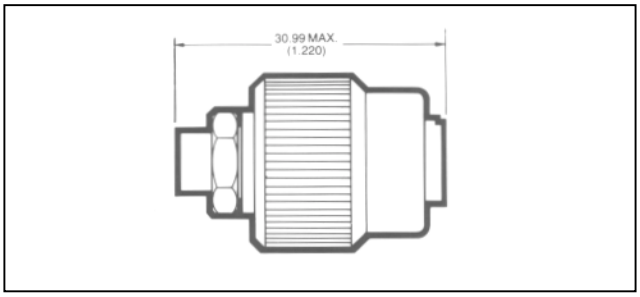
# Single/Multi Way Bayonet Coupling Connectors

**(All crimp contact. All contacts grounded to shell)**

**Single Way Plug (to accept EL 2112 Patt. 602 back end accessories) - 06E08-1 S**

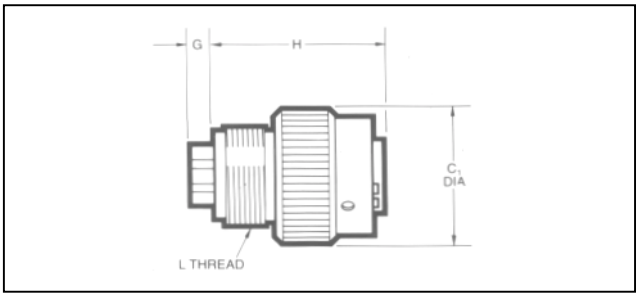



**Single Way Plug 06E 08-1 S (510)**

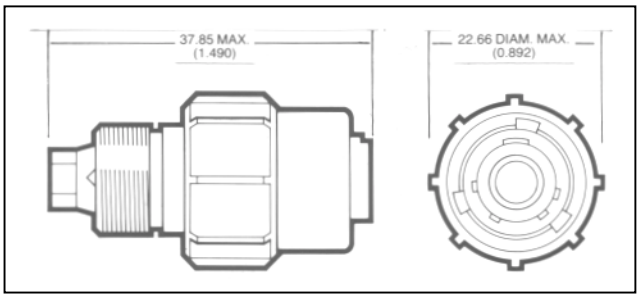



**Multi Way Plug - 06E /C2811-/PAN 6486 F**

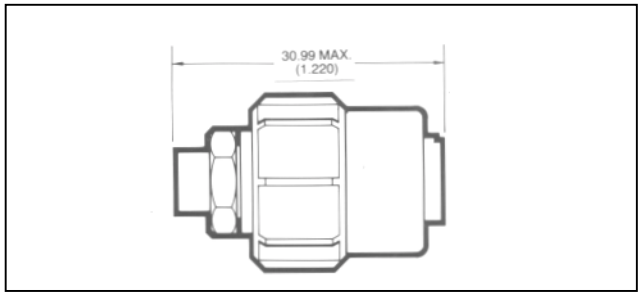
| Shell Size | C max. Dia. | G max. | H max. | L Thd UNEF 2A |
|---|---|---|---|---|
| **14** | **30.05** (1.183) | **7.50** (0.295) | **31.24** (1.230) | $^{7}/_{8}$ - 20 |
| **16** | **33.15** (1.305) | **7.50** (0.295) | **31.24** (1.230) | 1 - 20 |
| **18** | **35.33** (1.391) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{1}/_{16}$ -18 |
| **20** | **38.89** (1.531) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{3}/_{16}$ -18 |
| **22** | **42.06** (1.656) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{5}/_{16}$ - 18 |
| **24** | **45.14** (1.777) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{7}/_{16}$ – 18 |




**Single Way Plug with heavy duty Coupling Ring - 05E08-1 S (To accept EL 2112 Patt. 602 back end accessories)**

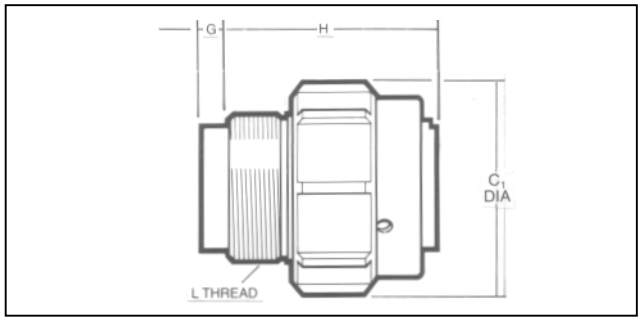



**Single way plug with heavy duty coupling ring 05E08-1 S(510)**

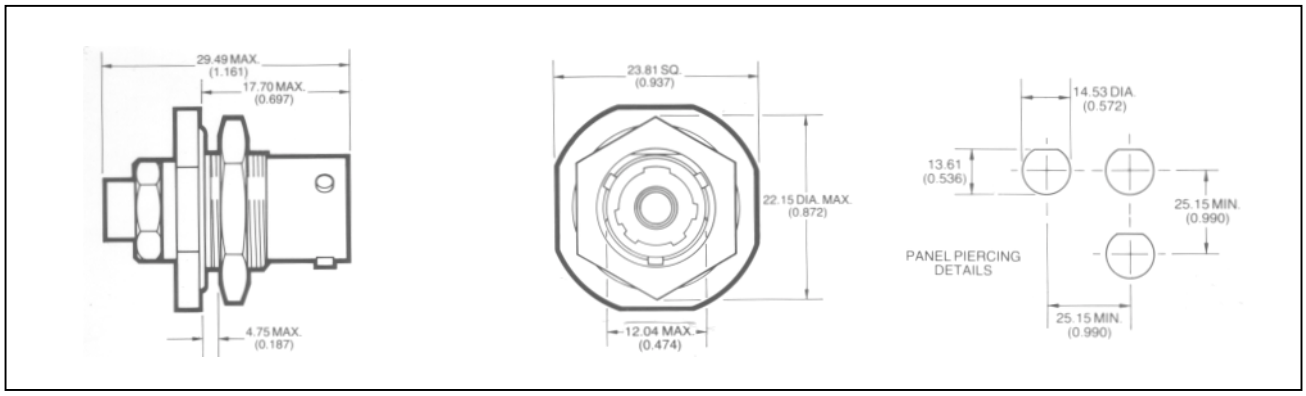



**Multi Way Plug with heavy duty Coupling Ring - 05E /C2812**

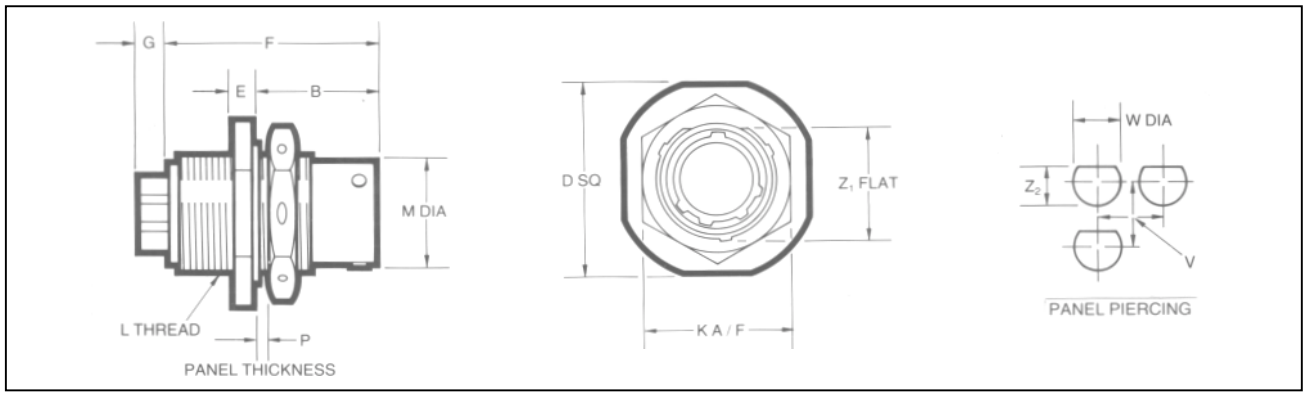
| Shell Size | $C_2$ Max. Dia. | G max. | H max. | L Thd UNEF 2A |
|---|---|---|---|---|
| **14** | **31.18** (1.267) | **7.50** (0.295) | **31.24** (1.230) | $^{7}/_{8}$ - 20 |
| **16** | **36.93** (1.454) | **7.50** (0.295) | **31.24** (1.230) | 1 – 20 |
| **18** | **39.70** (1.563) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{1}/_{16}$ -18 |
| **20** | **42.85** (1.687) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{3}/_{16}$ -18 |
| **22** | **45.64** (1.797) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{5}/_{16}$ - 18 |
| **24** | **48.82** (1.922) | **7.50** (0.295) | **31.24** (1.230) | 1 $^{7}/_{16}$ – 18 |



**Single Way Single Hole Mtg. Receptacle - 07E08-1 P**

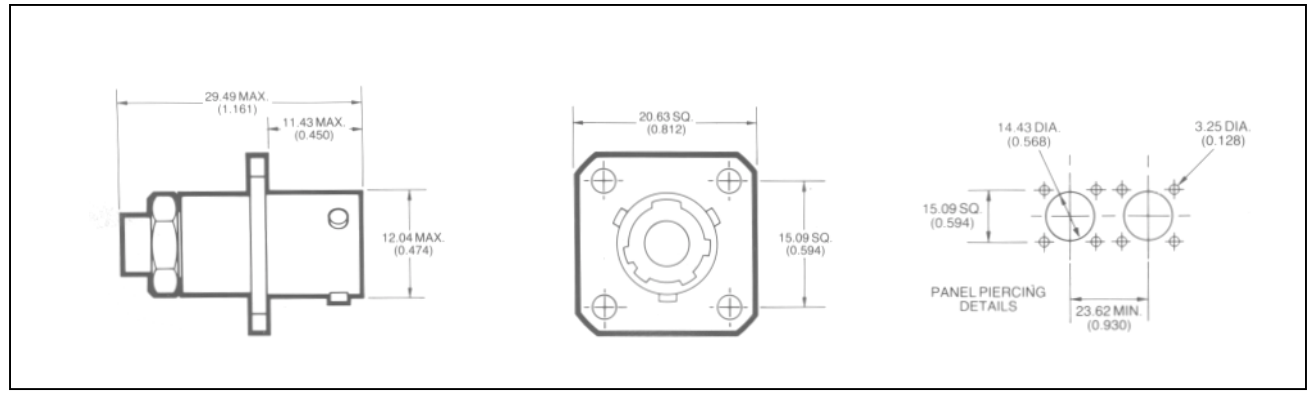



**Multi Way Single Hole Mtg. Receptacle - 07E /C2814-/PAN 6486A**

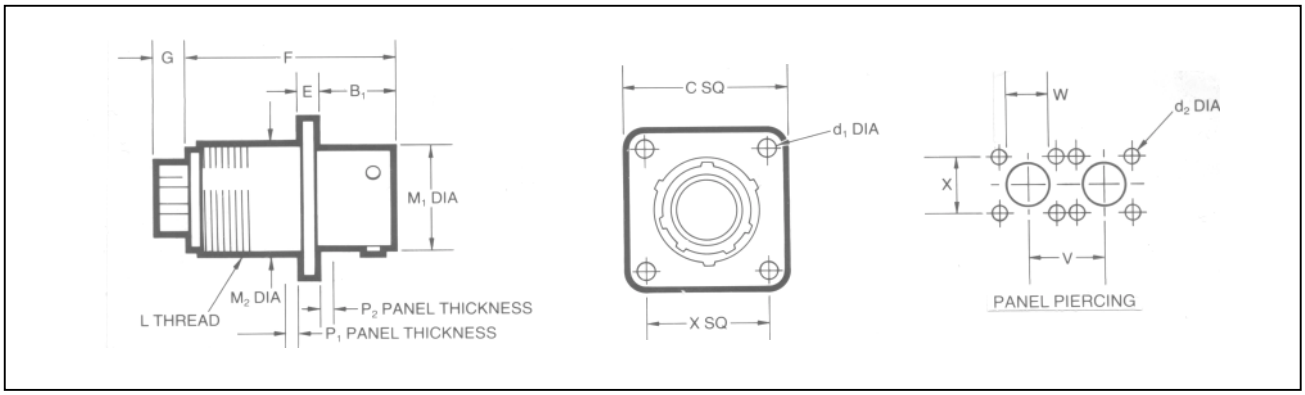



| Shell Size | B Max. | D SQ | E max. | F max. | G max. | KA/F max. | L Thd UNEF 2A | M max. dia. | P Panel thickness max. | P Panel thickness min. | V min. | W dia ± 0.13 (± .005) | $Z_1$ ± 0.13 (± .005) | Z ± 0.13 (± .005) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 17.96 (0.707) | 35.33 (1.391) | 2.87 (0.113) | 30.86 (1.215) | 7.50 (0.295) | 30.61 (1.205) | $^{7}/_{8}$ – 20 | 22.25 (0.876) | 4.75 (0.187) | 1.57 (0.062) | 36.32 (1.430) | 25.65 (1.010) | 23.80 (0.937) | 24.08 (0.948) |
| 16 | 17.96 (0.707) | 38.51 (1.516) | 2.87 (0.113) | 30.86 (1.215) | 7.50 (0.295) | 33.76 (1.329) | 1 – 20 | 25.43 (1.001) | 4.75 (0.187) | 1.57 (0.062) | 39.88 (1.570) | 28.83 (1.135) | 26.95 (1.061) | 27.23 (1.072) |
| 18 | 17.96 (0.707) | 41.68 (1.641) | 2.87 (0.113) | 30.86 (1.215) | 7.50 (0.295) | 36.96 (1.455) | 1 $^{1}/_{16}$ – 18 | 28.60 (1.126) | 4.75 (0.187) | 1.57 (0.062) | 43.69 (1.720) | 32.00 (1 260) | 30.12 (1.186) | 30.40 (1.197) |
| 20 | 19.61 (0.772) | 46.43 (1.828) | 3.76 (0.148) | 32.38 (1.275) | 7.50 (0.295) | 40.11 (1.579) | 1 $^{3}/_{16}$ – 18 | 31.78 (1 251) | 6.35 (0.250) | 1.57 (0.062) | 47.37 (1.865) | 35.18 (1.385) | 33.30 (1.311) | 33.58 (1.322) |
| 22 | 19.61 (0.772) | 49.63 (1.954) | 3.76 (0.148) | 32.38 (1.275) | 7.50 (0.295) | 43.31 (1.705) | 1 $^{5}/_{16}$ – 18 | 34.95 (1 376) | 6.35 (0.250) | 1.57 (0.062) | 50.93 (2.005) | 38.35 (1.510) | 36.47 (1.436) | 36.75 (1.447) |
| 24 | 19.61 (0.772) | 52.78 (2.078) | 3.76 (0.148) | 32.38 (1.275) | 7.50 (0.295) | 46.46 (1.829) | 1 $^{7}/_{16}$ – 18 | 38.13 (1.501) | 5.56 (0.219) | 1.57 (0.062) | 54.61 (2.150) | 41.53 (1.635) | 39.65 (1 561) | 39.93 (1.572) |

**Single Way Flange Mtg. Receptacle - OOE08-1 P**

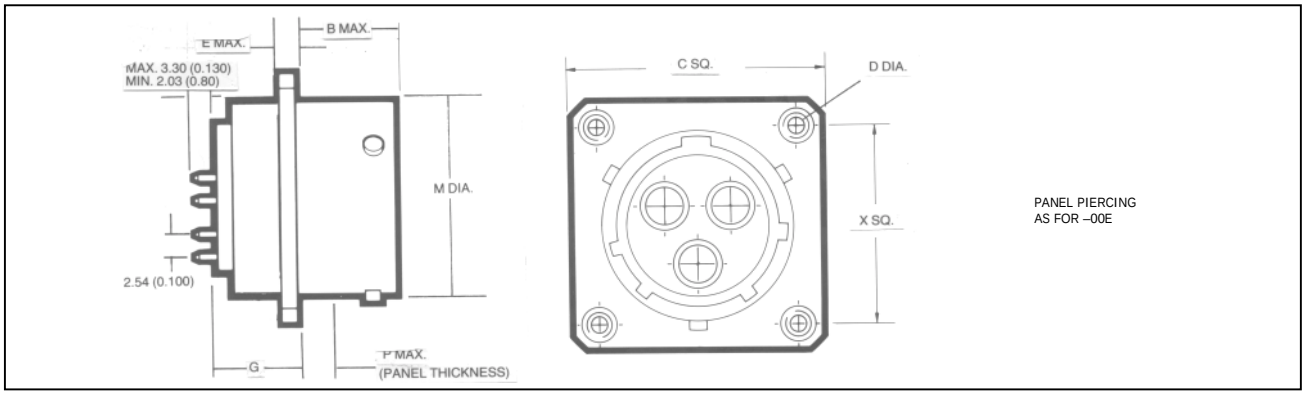


**Multi Way Flange Mtg. Receptacle - OOE /C2813-/PAN 6486B-**



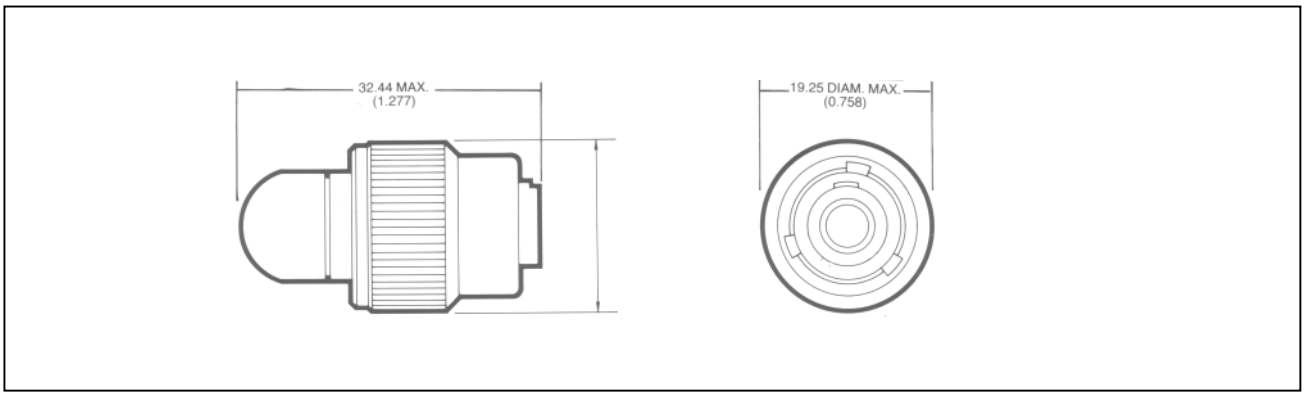

| Shell Size | B ± 0.38 (± .015) | C sq. max. | $d_1$ dia ± 0.05 (± .002) | $d_2$ dia ± 0.13 (± .005) | E ± 0.41 (± .016) | F max. | G max. | L Thd UNEF 2A | $M_1$ Dia. max. | $M_2$ Dia. max. | $P_1$ max. | $P_2$ max. | V min. | W dia ± 0.13 (± .005) | x sq ± 0.13 (± .005) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 11.33 | 28.98 | 3.18 | 3.25 | 1.57 | 30.86 | 7.50 | $^{7}/_{8}$ – 20 | 22.25 | 22.22 | 3.18 | 2.21 | 33.15 | 25.12 | 23.01 |
| | (0 446) | (1.141) | (0.125) | (0.128) | (0.062) | (1.215) | (0295) | | (0.876) | (0.875) | (0 125) | (0.087) | (1.305) | (0.989) | (0.906) |
| 16 | 11.33 | 31.34 | 3.18 | 3.25 | 1.57 | 30.86 | 7.50 | 1 – 20 | 25.43 | 25.40 | 3.18 | 2.21 | 37.85 | 28.27 | 24.61 |
| | (0.446) | (1.234) | (0.125) | (0.128) | (0.062) | (1.215) | (0.295) | | (1.001) | (1.000) | (0.125) | (0.087) | (1.490) | (1.113) | (0.969) |
| 18 | 11.33 | 33.73 | 3.18 | 3.25 | 1.57 | 30.86 | 7.50 | 1 $^{1}/_{16}$ – 18 | 28.60 | 26.97 | 3.18 | 2.21 | 40.64 | 31.45 | 26.97 |
| | (0.446) | (1.328) | (0.125) | (0.128) | (0.062) | (1.215) | (0.295) | | (1.126) | (1.062) | (0.125) | (0.087) | (1.600) | (1.238) | (1.062) |
| 20 | 14.50 | 36.91 | 3.18 | 3.25 | 2.39 | 32.38 | 7.50 | 1 $^{3}/_{16}$ – 18 | 31.78 | 30.15 | 3.18 | 5.38 | 43.81 | 34.62 | 29.36 |
| | (0.571) | (1.453) | (0.125) | (0.128) | (0.094) | (1.275) | (0.295) | | (1.251) | (1.187) | (0.125) | (0.212) | (1.725) | (1.363) | (1.156) |
| 22 | 14.50 | 40.08 | 3.18 | 3.25 | 2.39 | 32.38 | 7.50 | 1 $^{5}/_{16}$ – 18 | 34.95 | 33.32 | 3.18 | 5.38 | 46.61 | 37.80 | 31.75 |
| | (0.571) | (1.578) | (0.125) | (0.128) | (0.094) | (1.275) | (0.295) | | (1.376) | (1.312) | (0.125) | (0.212) | (1.835) | (1.488) | (1.250) |
| 24 | 15.37 | 43.26 | 3.86 | 3.94 | 2.39 | 32.38 | 7.50 | 1 $^{7}/_{16}$ – 18 | 38.13 | 36.50 | 3.18 | 5.38 | 49.78 | 41.02 | 34.92 |
| | (0.605) | (1.703) | (0.152) | (0.155) | (0.094) | (1.275) | (0295) | | (1.501) | (1.437) | (0.125) | (0.212) | (1.960) | (1.615) | (1.375) |

**Multi Way Flange Mtg. Receptacle with P.C. Termination Contacts - 02A (219) Deviation /C2815-**



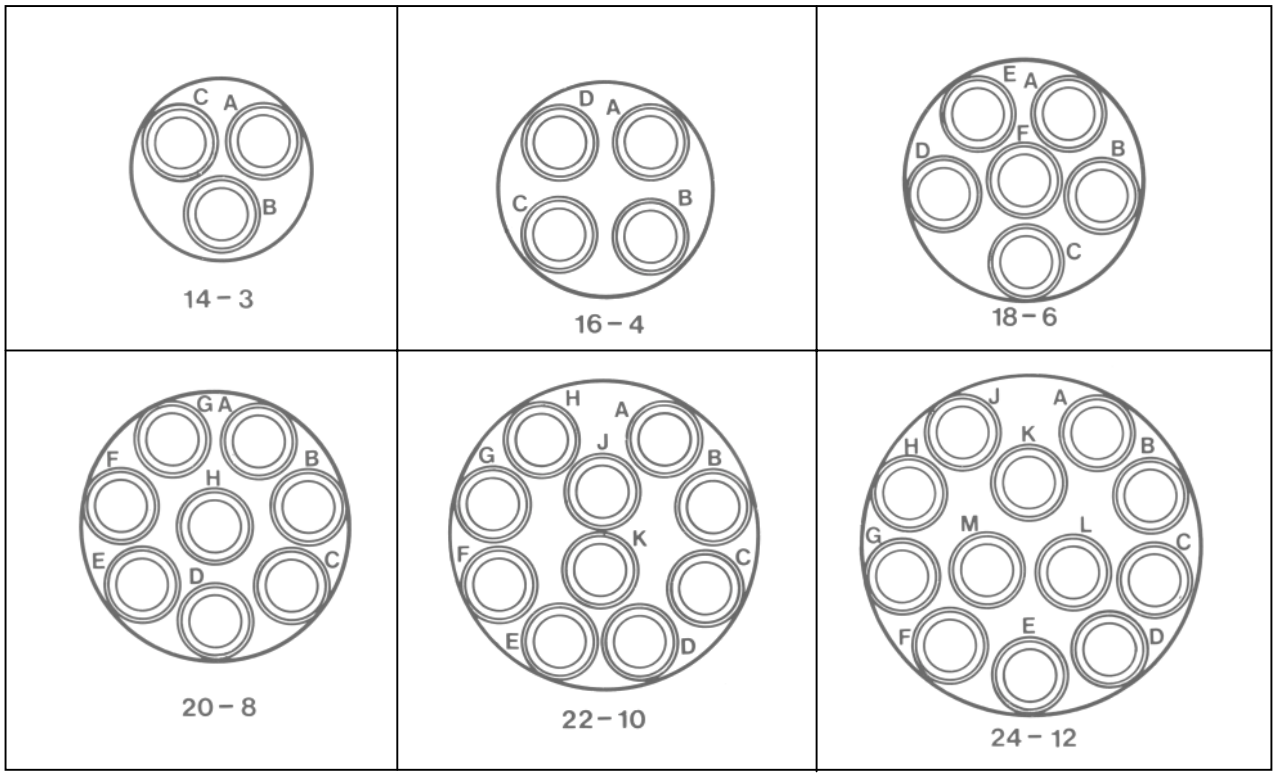

| Shell Size | B max. | C Sq. max. | D Dia. ±0.05 (±0.002) | E max. | G max. | M Dia. max. | P max. |
|---|---|---|---|---|---|---|---|
| 14 | **11.71** (0.461) | **28.98** (1.141) | **3.18** (0.125) | **1.96** (0.077) | **9.37** (0.369) | **22.25** (0.876) | **2.21** (0.087) |
| 16 | **11.71** (0.461) | **31.34** (1.234) | **3.18** (0.125) | **1.96** (0.077) | **9.37** (0.369) | **25.43** (1.001) | **2.21** (0.087) |
| 18 | **11.71** (0.461) | **33.73** (1.328) | **3.18** (0.125) | **1.96** (0.077) | **9.37** (0.369) | **28.60** (1.126) | **2.21** (0.087) |

Single Way Plug Terminator 77± 1%-06ET08-1S (77)




## Multi Way Insert Availability

Lettering of inserts shown here corresponds to views of front (mating) surface of pin inserts.




## Protective Caps and Backshells

This series of connectors is designed to use EL2112 Patt. 602 accessories.

**Terminating Contacts** (for use with multi way connectors)
Pin terminator 3KΩ±5% - 711-0176-3K also 77Ω±1%
Socket terminator 3KΩ±5% - 711-0125-3K also 77Ω±1%

**Dummy Contact and Seal Plug Kit** (for use with multi way connectors)
Pin 711-0174-P
Socket 711-0174-S

**Contacts**

Pin 711-0013-1 Socket 711-0014-1

**Tools for 711 Series Connectors**
Centre contact crimp-Crimp tool M22520/2-01.
Positioner 2946 B-5027-1.
Intermediate/Outer crimp - Crimp tool 227-944 (M22520/5-01).
Die Set 294GB-5026-1.
Insertion/Removal tool -294GB-5028.
Metal removal tool - 294GB-5047.

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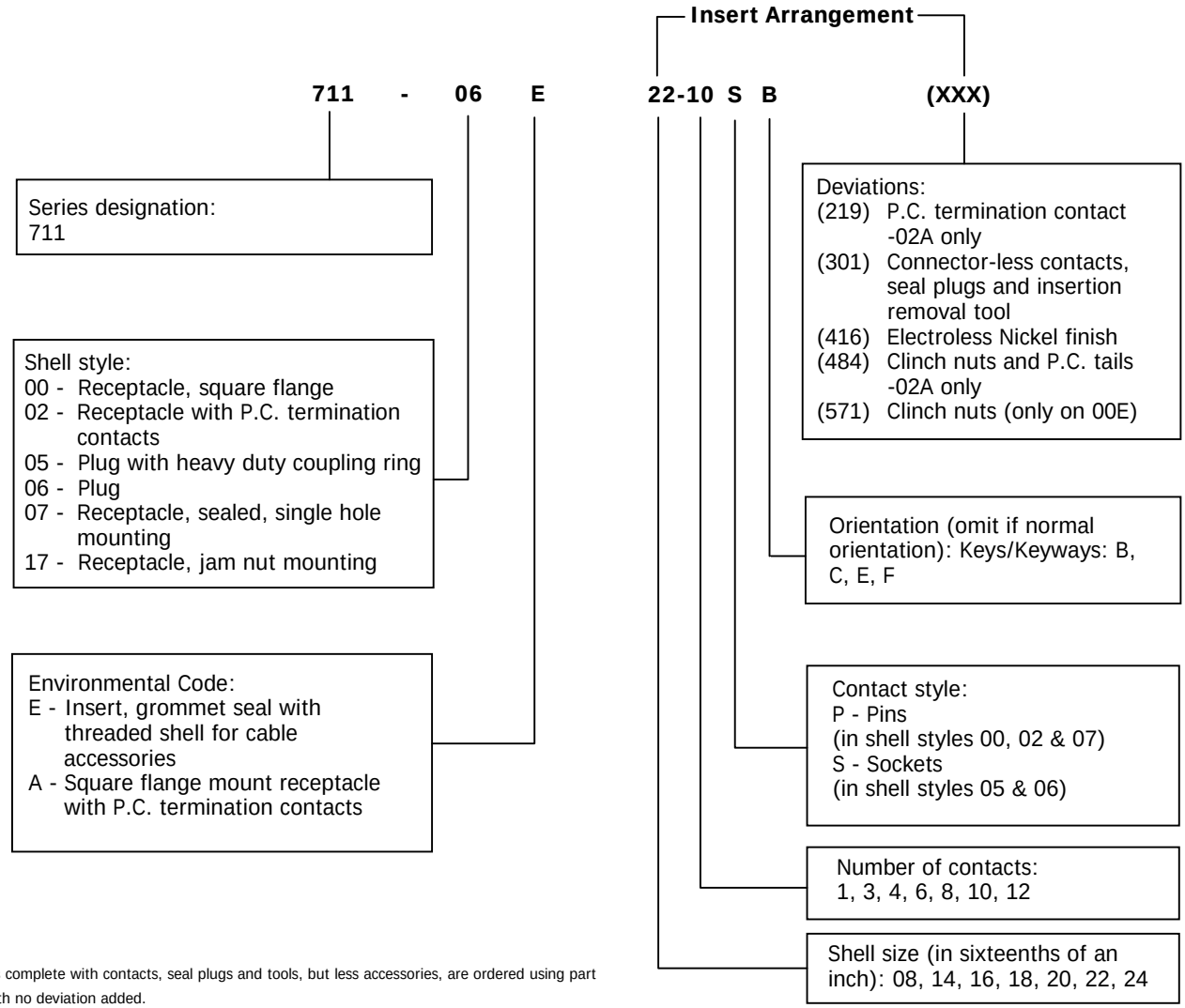
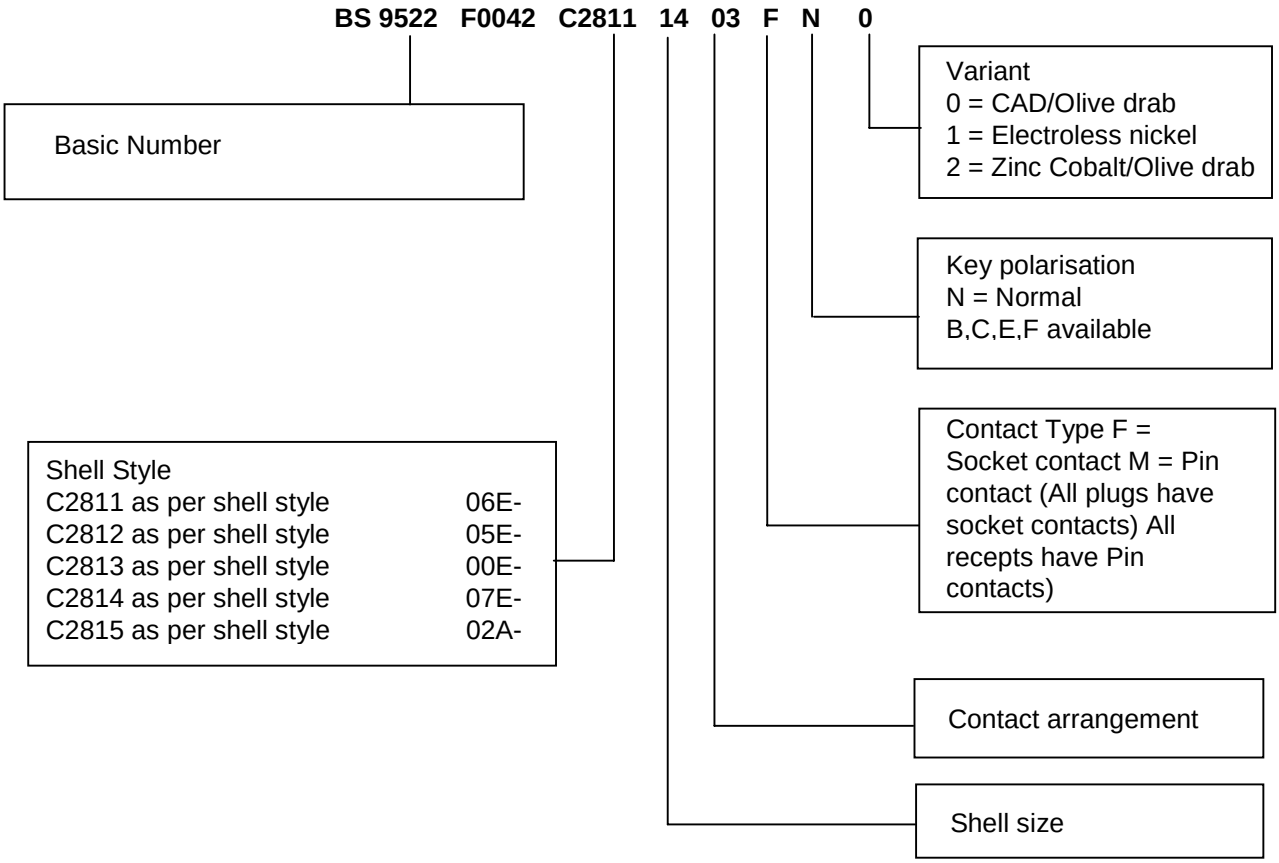
# Single / Multi Way

**Ordering by Amphenol Part Numbers**

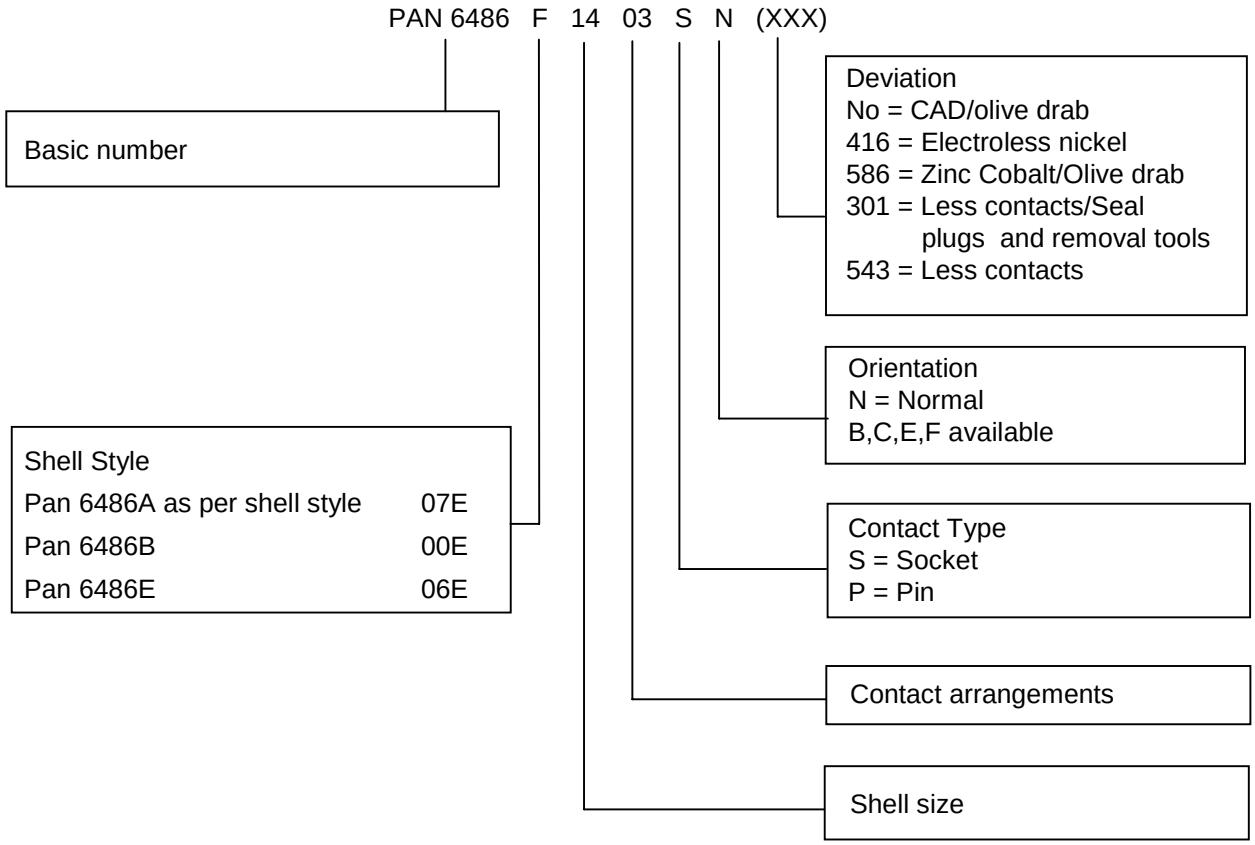



Connectors complete with contacts, seal plugs and tools, but less accessories, are ordered using part number with no deviation added.

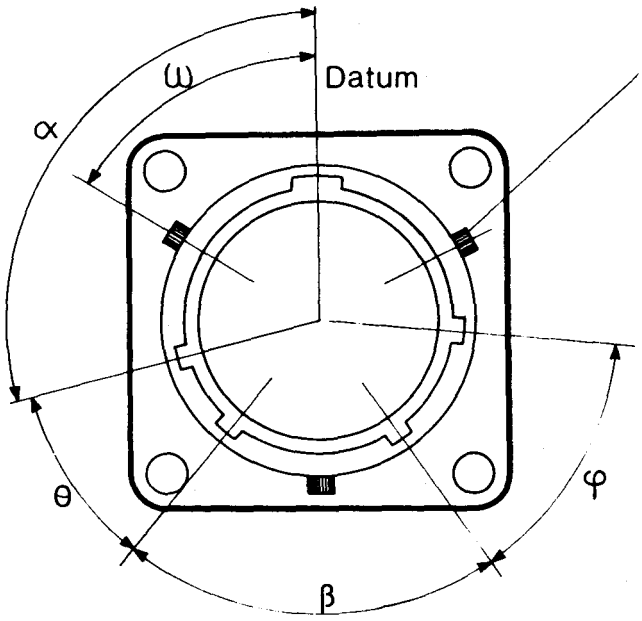
Ordering by BS Part Number




Ordering by Pan Part Number



# Key / Keyway Orientations



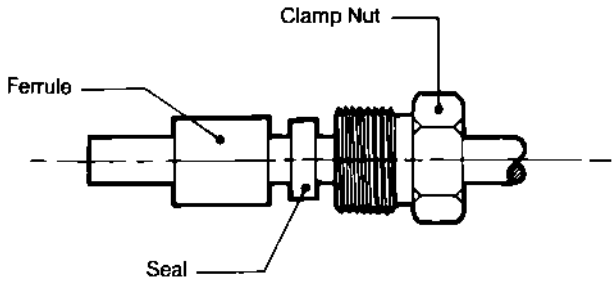

Datum is always taken from major key or keyway. In receptacles the major keyway always remains fixed in relation to the mounting flange. For the B,C,E and F orientations, the three bayonet locations and associated minor keyways are rotated complete, in accordance with the table below.

N.B. - The accompanying diagram shows a receptacle shell, with keyways. Corresponding key orientations for a mating plug shell are therefore always clockwise.

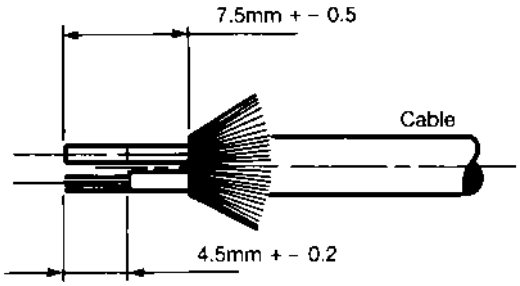
| Shell | VALUES FOR α (degrees) | | | | | VALUES FOR θ (degrees) | | | | | VALUES FOR β (degrees) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | N | B | C | E | F | N | B | C | E | F | N | B | C | E | F |
| **14** | 105 | 91 | 119 | 75 | 120 | 35 | 35 | 35 | 30 | 50 | 75 | 75 | 75 | 100 | 75 |
| **16** | 105 | 93 | 117 | 75 | 120 | 35 | 35 | 35 | 30 | 50 | 75 | 75 | 75 | 100 | 75 |
| **18** | 105 | 95 | 115 | 75 | 120 | 35 | 35 | 35 | 30 | 50 | 75 | 75 | 75 | 100 | 75 |
| **20** | 105 | 95 | 115 | 75 | 120 | 35 | 35 | 35 | 30 | 50 | 75 | 75 | 75 | 100 | 75 |
| **22** | 105 | 97 | 113 | 75 | 120 | 35 | 35 | 35 | 30 | 50 | 75 | 75 | 75 | 100 | 75 |
| **24** | 105 | 97 | 113 | 75 | 120 | 35 | 35 | 35 | 30 | 50 | 75 | 75 | 75 | 100 | 75 |

| Shell | VALUES FOR φ (degrees) ORIENTATION | | | | | VALUES FOR ω (degrees) ORIENTATION | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Size | N | B | C | E | F | N | B | C | E | F |
| **14** | 50 | 50 | 50 | 30 | 35 | 60 | 46 | 74 | 30 | 75 |
| **16** | 50 | 50 | 50 | 30 | 35 | 60 | 48 | 72 | 30 | 75 |
| **18** | 50 | 50 | 50 | 30 | 35 | 60 | 50 | 70 | 30 | 75 |
| **20** | 50 | 50 | 50 | 30 | 35 | 60 | 50 | 70 | 30 | 75 |
| **22** | 50 | 50 | 50 | 30 | 35 | 60 | 52 | 68 | 30 | 75 |
| **24** | 50 | 50 | 50 | 30 | 35 | 60 | 52 | 68 | 30 | 75 |

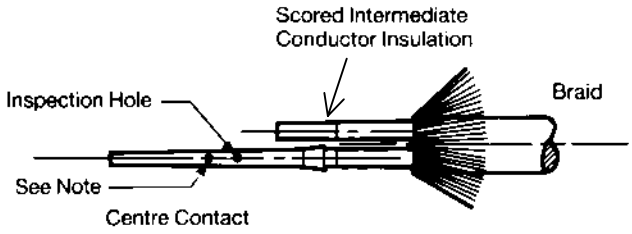
**Size #10 Data Bus Contact Assembly Instructions**



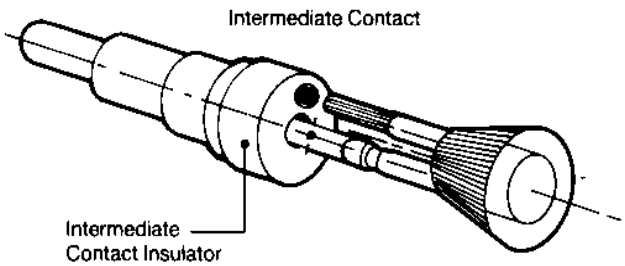

Slide clamp nut, seal and ferrule over cable. (Nut & seal only applicable on single way connector).



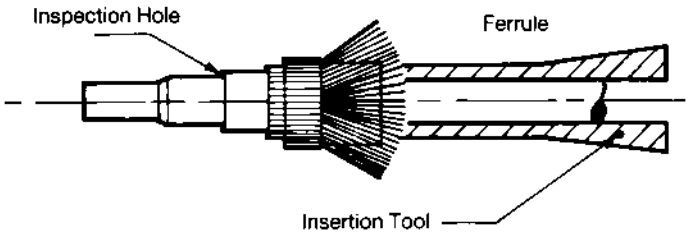

Remove outer sheath of cable to 7.5mm comb out all braids evenly and fold back. Remove cable fillers from stripped length. Strip the centre contact conductor to 4.5mm. Note: It is recommended that both intermediate and centre contact conductors are scored at the correct stripping length. The intermediate conductor insulation should not be removed until the centre contact has been crimped.



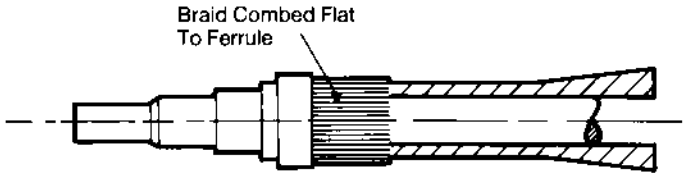

Crimp centre contact (Pin or Socket) on to the stripped wire using tool M22520/2-01 and crimp positioner 294GB-5027-1 (setting No. 4 for 24AWG) butting rear end of contact to wire insulation. The conductor end should be visible in the inspection hole. Note: A second hole is permissible in the socket contact for manufacturing purposes. It is not required to be on the same centre line as the inspection hole.



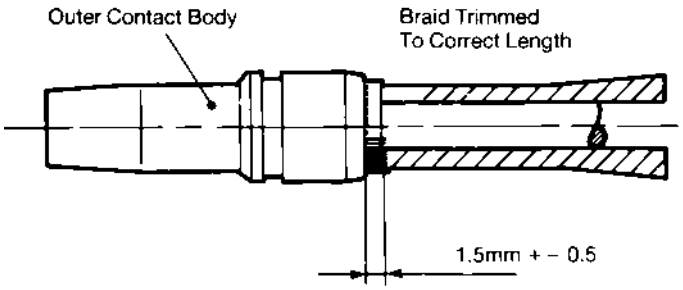

Strip intermediate contact conductor to 4.5mm. Insert centre contact into centre hole of intermediate contact conductor into the outer hole of the intermediate contact assembly. Push firmly home until the centre contact is felt to snap into place and ensure that the insulation of each conductor is fully inserted into the intermediate contact insulator. The intermediate conductor should be visible in the inspection hole in the intermediate contact. There should be no loose cable strands visible. Crimp the intermediate contact assembly using the appropriate cavity of crimp jaw 294GB-5026-1 fitted into M22520/5-01 tool.



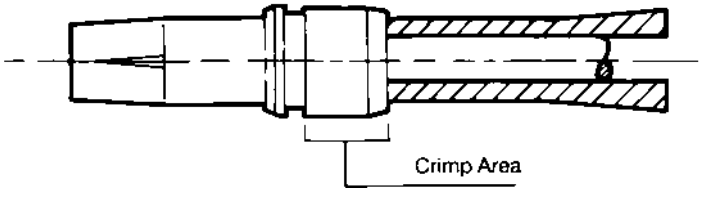

Slide the ferrule forward under the braid to trap the braid against the rear of the intermediate contact insulator, for all succeeding operations keep the ferrule firmly against the rear of the insulator using insertion tool (294GB-5028).



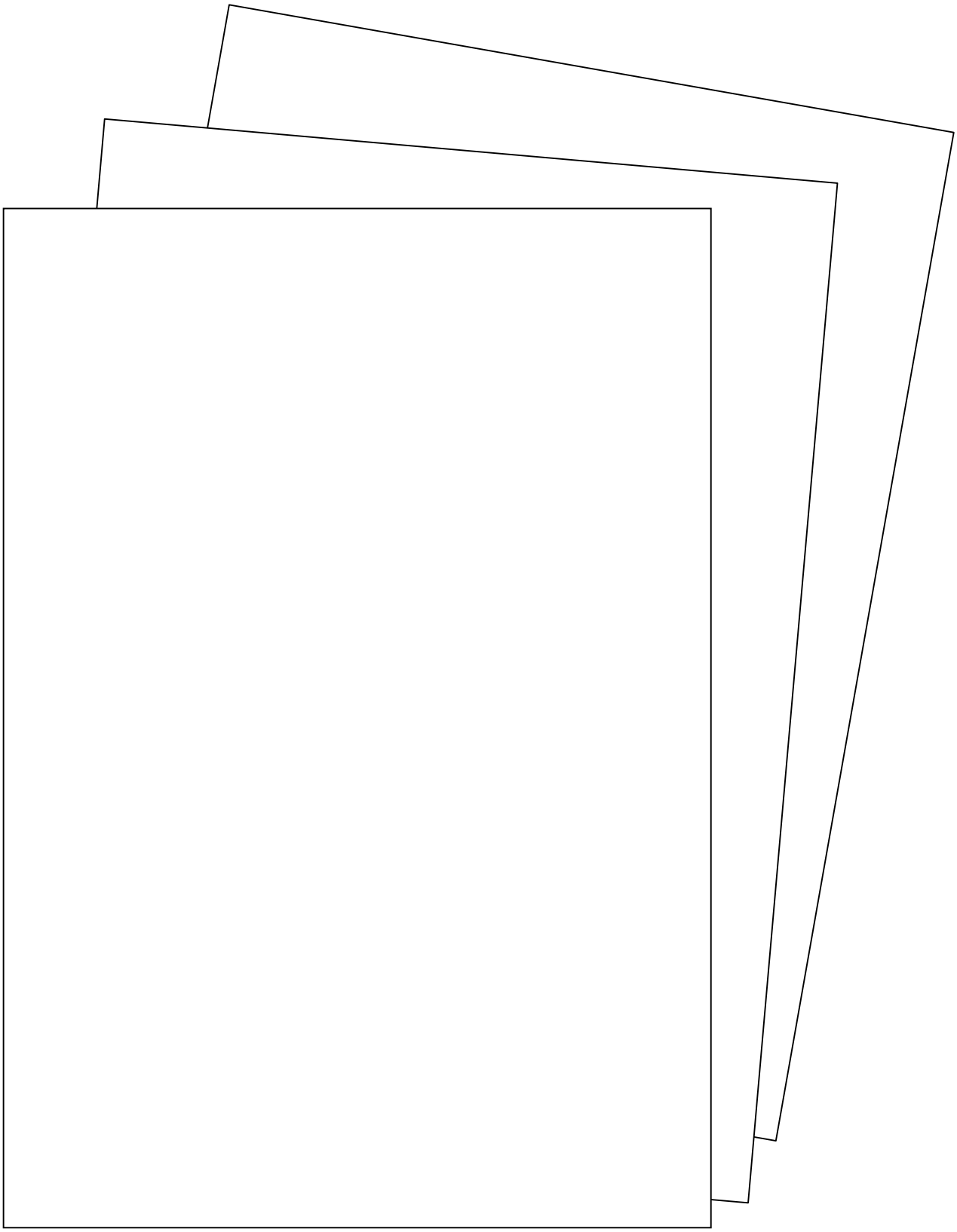

Comb the braid back evenly and flatten it onto the ferrule.




Slide the outer contact body over the intermediate contact assembly and ferrule until approximately 1.5 mm of the ferrule is visible. Trim off the excess braid using the rear of the outer contact body as a guide. Ensure that there are no loose braid clippings at the rear of the ferrule.




Place the outer contact body into the hexagonal cavity of the crimp jaws (294GB-5026-1). Slide the intermediate contact assembly and ferrule fully into the outer body using the insertion tool. The rear of the ferrule should be -0.5 or ± 0.5 mm to the rear of the outer contact body when fully inserted. Complete the hexagonal crimp.



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# International Catalogue System

Amphenol products produced worldwide are shown in four product catalogue binders.

The International Catalogue for Amphenol products consists of an individual data catalogue for each product series produced world-wide. Product series are combined by product groups, and published in eight (8) separate condensed catalogues as listed below:

| Catalogue | Number |
|---|---|
| Circular Environmental Connectors | CE-SF |
| Circular Industrial Connectors | CI-SF |
| Coaxial Connectors | CC-SF |
| Flat Ribbon Connectors | FR-SF |
| Printed Circuit Connectors | PC-SF |
| Rack and Panel (Rectangular) Connectors | RP-SF |
| Fibre Optics | - |

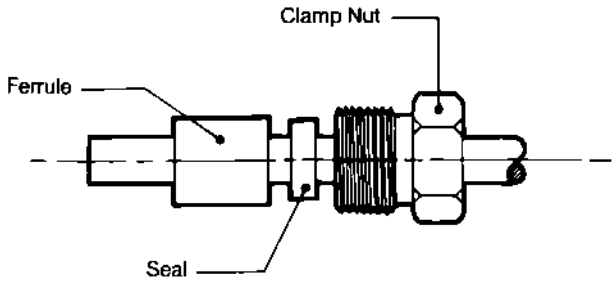
Data catalogues contain a description of the product series, technical information, specification data, dimensions and part numbers. A data catalogue or a condensed catalogue can be obtained from any international location listed above. When ordering state the catalogue.

Seven Condensed Catalogues illustrate the products by series designation.

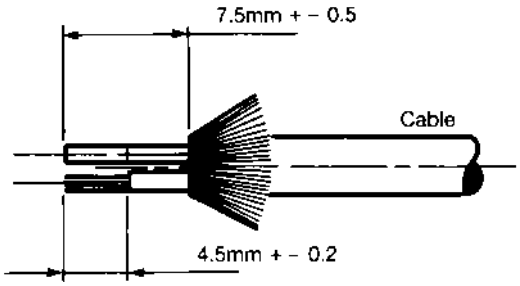


**Amphenol**

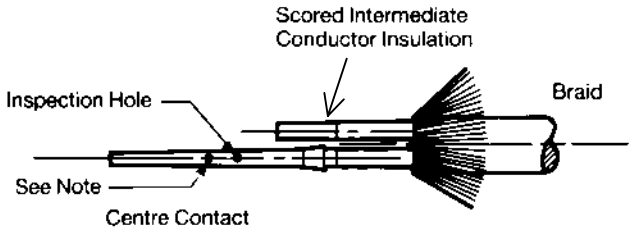
**Size #10 Data Bus Contact Assembly Instructions**



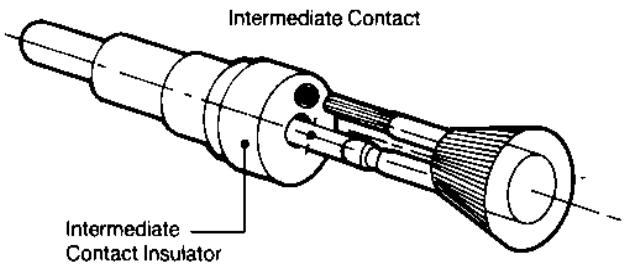

Slide clamp nut, seal and ferrule over cable. (Nut & seal only applicable on single way connector).



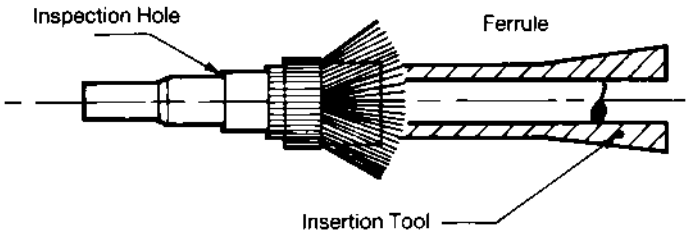

Remove outer sheath of cable to 7.5mm comb out all braids evenly and fold back. Remove cable fillers from stripped length. Strip the centre contact conductor to 4.5mm. Note: It is recommended that both intermediate and centre contact conductors are scored at the correct stripping length. The intermediate conductor insulation should not be removed until the centre contact has been crimped.



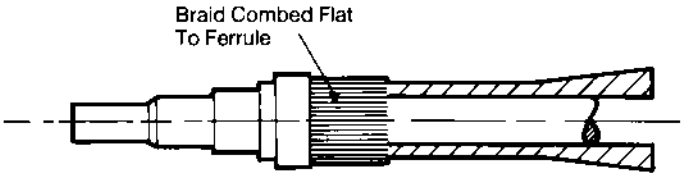

Crimp centre contact (Pin or Socket) on to the stripped wire using tool M22520/2-01 and crimp positioner 294GB-5027-1 (setting No. 4 for 24AWG) butting rear end of contact to wire insulation. The conductor end should be visible in the inspection hole. Note: A second hole is permissible in the socket contact for manufacturing purposes. It is not required to be on the same centre line as the inspection hole.



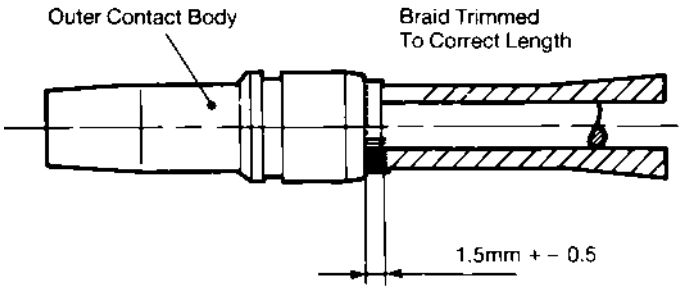

Strip intermediate contact conductor to 4.5mm. Insert centre contact into centre hole of intermediate contact conductor into the outer hole of the intermediate contact assembly. Push firmly home until the centre contact is felt to snap into place and ensure that the insulation of each conductor is fully inserted into the intermediate contact insulator. The intermediate conductor should be visible in the inspection hole in the intermediate contact. There should be no loose cable strands visible. Crimp the intermediate contact assembly using the appropriate cavity of crimp jaw 294GB-5026-1 fitted into M22520/5-01 tool.



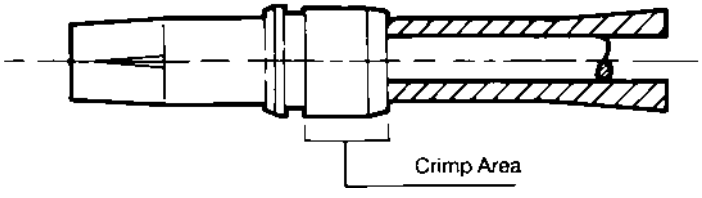

Slide the ferrule forward under the braid to trap the braid against the rear of the intermediate contact insulator, for all succeeding operations keep the ferrule firmly against the rear of the insulator using insertion tool (294GB-5028).




Comb the braid back evenly and flatten it onto the ferrule.




Slide the outer contact body over the intermediate contact assembly and ferrule until approximately 1.5 mm of the ferrule is visible. Trim off the excess braid using the rear of the outer contact body as a guide. Ensure that there are no loose braid clippings at the rear of the ferrule.




Place the outer contact body into the hexagonal cavity of the crimp jaws (294GB-5026-1). Slide the intermediate contact assembly and ferrule fully into the outer body using the insertion tool. The rear of the ferrule should be -0.5 or ± 0.5 mm to the rear of the outer contact body when fully inserted. Complete the hexagonal crimp.