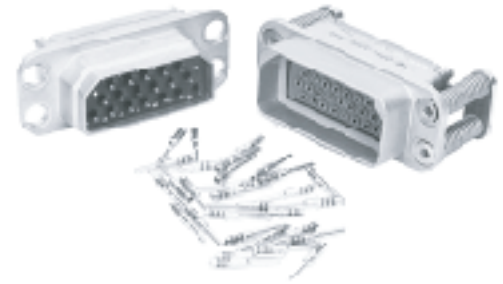


HIGH-PERFORMANCE MIL-C-83733 QUALIFIED Temperature Ranges of - 65 C to +200 C Environment - Resistant

The Cannon DPK series are high performance environment- resistant, rectangular connectors qualified to MIL-C-83733 (USAF). They feature crimp snap-in contacts in the dependable LITTLE CAESAR® rear release contact retention assembly. This field-proven assembly permits contacts to be inserted and extracted at the rear of the connector. Contacts are qualified to military specifications and are crimped with MIL-C-22520 crimp tools, using standard locators.

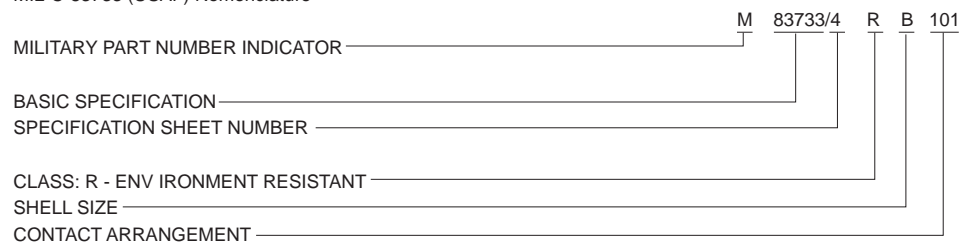
The versatile DPK Connector is suitable for many applications, particularly where environment or thermal protection is mandatory and high reliability is a design requirement.

These high performance connectors are available in two shell sizes with a variety of mounting configurations. There are 13 contact arrangements available accommodating from 18 to 185 standard contacts. The standard contacts are available in sizes 12, 16, 20 and 22D. Shells are a die-cast aluminum alloy with electroless nickel finish. Insulators are a high grade, glass reinforced, resin conforming to MIL-M-14 which meets or exceeds the requirements of MIL-C-83733. Silicone rubber is used for wire sealing grommets, interfacial and peripheral seals.



How To Order

MIL-C-83733 (USAF) Nomenclature



SHELL SIZE

A - Small shell

B - Large shell

CONTACT MODIFICATION

G-MIL-C-38999 contacts. Size 22D for DPKA-131 and DPKB-185 contact arrangements only.

W-MIL-C-38999 type contacts. Size 22D wrap posts for DPKA-131 and DPKB-185 layouts. .025 (0.63) square posts for .340(8.64); extension from grommet face.

CONTACT ARRANGEMENT

Shell Size A-18, 32, 51 and 131 (MIL-STD-1531).

Shell Size B-48, 64, 78, 101 59W7, 71, 71C15, 161 and 185 (MIL-STD-1532).

CONTACT TYPE

P-Pin (Receptacle Connectors)

S-Socket (Plug Connectors)

POLARIZATION

Six-position shell polarization accomplished with Polarizing pins mounted on each end of shell flange. Available on mounting style A only.

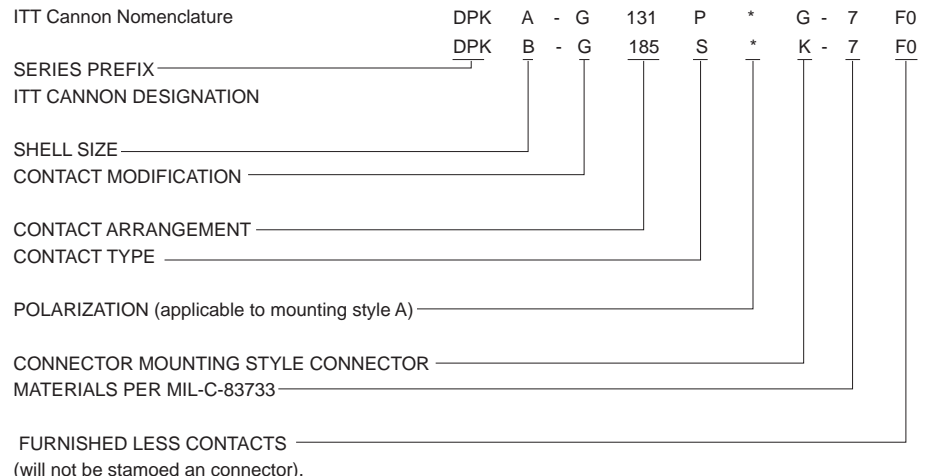
MOUNTING STYLES

A - Two mounting holes .197(5.00) diameter (for either nuts or jackscrews ordered separately) and two polarizing posts. (Replaces Mounting Style B.)

C - Four MS24700-2 bushings, included for the receptacle (M83733/5).

F - Four (4) clinch nuts (No. 6-32 thread) M83733/6.

ITT Cannon Nomenclature



G - Four .281(7.14) diameter holes (for MS24700-2 bushings or 231-0019-000 spring mounts) (M83733/1).

H - Two mounting hole flange. Two (231-0019-000) spring mounts on the plug and two MS24700-2 bushing mounts on the receptacle (M83733/10/12).

K - Four captivated, non-rotating spring mounts on the plug (M83733/4).

M - Two mounting hole flange. Two mounting holes .281(7.14) diameter (for MS24700-2 bushings or 231-0019-000 spring mounts) (M83733/9).

X - Two guide pins with two (231-0019-000) spring mounts on the plug and two guide sockets with two .197(5.00) diameter holes on the receptacle (M83733/2; /3)

Y - Two guide sockets with two (231-0019-000) spring mounts on the plug and two guide pins with .197(5.00) diameter holes on the receptacle (M83733/7; /8).

Z - Two staggered clinch nuts on the receptacle (No. 6-32 thread) (M83733/11).

MATERIAL MOOIRCATION

- 7 standard product line, environment resistant per MIL-C-83733(USAF). QPL M83733

Performance and Material Specifications

MATERIALS

| | |
|--------------------|---|
| Shell | Diecast aluminum alloy A-380 per QQ-A-591 |
| Insulator | Thermosetting Plastic/Thermoplastic |
| Contacts | Copper alloy per QQ-C-533 |
| Grommets and Seals | Silicone base elastomer |
| Mounting hardware | Stainless steel/Alloy steel |

FINISHES

| | |
|----------|---|
| Shell | Electroless nickel plate per MIL-C-26074, Class 3 |
| Contacts | Gold over suitable underplate per MIL-C-39029 |
| Hardware | Passivate/Cadmium plate |

MECHANICAL FEATURES

| | |
|----------------------|---|
| Shell Sizes | A (DPKA); B (DPKB) |
| Coupling | Friction, spring mount or jackscrew-coupling nut |
| Contact Arrangements | A-18,32,51,G131 B-48,64,78,101,59W7,71,71C15,161 G185 |
| Contact Termination | Crimp |

ELECTRICAL

| Contact Sizes | Wire Accommodation (AWG) | Sealing Range Wire Diameter | |
|---------------|--------------------------|-----------------------------|------------|
| | | Min. | Max. |
| 22D | 22,24,26 | .030(0.76) | .060(1.52) |
| 20 | 20,22,24 | .040(1.02) | .083(2.11) |
| 16 | 16,18 | .063(1.60) | .103(2.62) |
| 12 | 12,14 | .081(2.06) | .158(4.01) |
| 12 | RG-179/U | .081(2.06) | .158(4.01) |
| Shielded | | | |

Max. current carrying capacity of contacts

| | | | | |
|---------------|-----|-----|-----|-----|
| Contact Size: | #12 | #16 | #20 | #22 |
| Amperage: | 23 | 13 | 7.5 | 5.0 |

Test Voltages (AC-RMS)

| Altitude (feet) | Equivalent Pressure (Torr) | Service Ratings (M&I) | | | | Unmated 161 Arrangement |
|--------------------|----------------------------------|-----------------------|------|---------|------|-------------------------------|
| | | Mated | | Unmated | | |
| | | M | I | M | I | |
| Sea level | - | 1300 | 1800 | 1300 | 1800 | 1000 |
| 50,000 | 87.5 | 800 | 1000 | 550 | 600 | 350 |
| 70,000 | 35.5 | 800 | 1000 | 350 | 400 | 250 |
| 110,000 | 5.74 | 800 | 1000 | 200 | 200 | 150 |

Cross Reference From Military to Cannon Part Numbers

| MIL-SPEC P/N | ITTC P/N | MIL-SPEC P/N | ITTC P/N | MIL-SPEC P/N | ITTC P/N | MIL-SPEC P/N | ITTC P/N |
|---------------|----------------|---------------|----------------|---------------|----------------|----------------|----------------|
| M83733/1RA018 | DPKA-18PG-7 | M83733/4RA018 | DPKA-18SK-7 | M83733/7RA018 | DPKA-18SY-7 | M83733/10RA018 | DPKA-18PH-7 |
| M83733/1RA032 | DPKA-32PG-7 | M83733/4RA032 | DPKA-32SK-7 | M83733/7RA032 | DPKA-32SY-7 | M83733/10RA032 | DPKA-32PH-7 |
| M83733/1RA051 | DPKA-51PG-7 | M83733/4RA051 | DPKA-51SK-7 | M83733/7RA051 | DPKA-51SY-7 | M83733/10RA051 | DPKA-51PH-7 |
| M83733/1RA131 | DPKA-G131PG-7 | M83733/4RA131 | DPKA-G131 SK-7 | M83733/7RA131 | DPKA-G131SY-7 | M83733/10RB048 | DPKB-48PH-7 |
| M83733/1RB048 | DPKB-48PG-7 | M83733/4RA048 | DPKB-48SK-7 | M83733/7RB048 | DPKB-48SY-7 | M83733/10RB064 | DPKB-64PH-7 |
| M83733/1RB064 | DPKB-64PG-7 | M83733/4RB064 | DPKB-64SK-7 | M83733/7RB064 | DPKB-64SY-7 | M83733/10RB071 | DPKB-71PH-7 |
| M83733/1RB071 | DPKB-71PG-7 | M83733/4RB071 | DPKB-71SK-7 | M83733/7RB071 | DPKB-72SY-7 | M83733/10RB71C | DPKB-71C15PH-7 |
| M83733/1RB71C | DPKB-71C15PG-7 | M83733/4RB71C | DPKB-71C15SK-7 | M83733/7RB71C | DPKB-71C15SY-7 | M83733/10RB078 | DPKB-78PH-7 |
| M83733/1RB078 | DPKB-78PG-7 | M83733/4RB078 | DPKB-78SK-7 | M83733/7RB078 | DPKB-78SY-7 | M83733/10RB101 | DPKB-101PH-7 |
| M83733/1RB101 | DPKB-101PG-7 | M83733/4RB101 | DPKB-101 SK-7 | M83733/7RB101 | DPKB-101 SY-7 | M83733/11RA018 | DPKA-18PZ-7 |
| M83733/1RB185 | DPKB-G185PG-7 | M83733/4RB185 | DPKB-G185SK-7 | M83733/8RA018 | DPKA-18PY-7 | M83733/11RA032 | DPKA-32PZ-7 |
| M83733/2RA018 | DPKA-18SX-7 | M83733/5RA018 | DPKA-18PC-7 | M83733/8RA032 | DPKA-32PY-7 | M83733/11RA051 | DPKA-51PZ-7 |
| M83733/2RA032 | DPKA-32SX-7 | M83733/5RA032 | DPKA-32PC-7 | M83733/8RA051 | DPKA-51PY-7 | M83733/11RB048 | DPKB-48PZ-7 |
| M83733/2RA051 | DPKA-51SX-7 | M83733/5RA051 | DPKA-51PC-7 | M83733/8RB048 | DPKB-48PY-7 | M83733/11RB064 | DPKB-64PZ-7 |
| M83733/2RA131 | DPKA-G131SX-7 | M83733/5RA131 | DPKA-G131 PC-7 | M83733/8RB064 | DPKB-64PY-7 | M83733/11RB071 | DPKB-71PZ-7 |
| M83733/2RB048 | DPKB-48SX-7 | M83733/5RB048 | DPKB-48PC-7 | M83733/8RB071 | DPKB-71PY-7 | M83733/11RB71C | DPKB-71C15PZ-7 |
| M83733/2RB064 | DPKB-64SX-7 | M83733/5RB064 | DPKB-64PC-7 | M83733/8RB71C | DPKB-71C15PY-7 | M83733/11RB078 | DPKB-78PZ-7 |
| M83733/2RB071 | DPKB-71SX-7 | M83733/5RB71C | DPKB-71C15PC-7 | M83733/8RB078 | DPKB-78PY-7 | M83733/11RB101 | DPKB-101 PZ-7 |
| M83733/2RB71C | DPKB-71C15SX-7 | M83733/5RB078 | DPKB-78PC-7 | M83733/8RB101 | DPKB-101PY-7 | M83733/12RA018 | DPKA-18SH-7 |
| M83733/2RB078 | DPKB-78SX-7 | M83733/5RB101 | DPKB-101PC-7 | M83733/9RA018 | DPKA-18PM-7 | M83733/12RA032 | DPKA-32SH-7 |
| M83733/2RB101 | DPKB-101SX-7 | M83733/5RB185 | DPKB-G185PC-7 | M83733/9RA032 | DPKA-32PM-7 | M83733/12RA051 | DPKA-51SH-7 |
| M83733/3RA018 | DPKA-18PX-7 | M83733/5RB071 | DPKB-71PC-7 | M83733/9RA051 | DPKA-51PM-7 | M83733/12RB048 | DPKB-48SH-7 |
| M83733/3RA032 | DPKA-32PX-7 | M83733/6RA018 | DPKA-18PF-7 | M83733/9RB048 | DPKB-48PM-7 | M83733/12RB064 | DPKB-64SH-7 |
| M83733/3RA051 | DPKA-51PX-7 | M83733/6RA032 | DPKA-32PF-7 | M83733/9RB064 | DPKB-64PM-7 | M83733/12RB071 | DPKB-71SH-7 |
| M83733/3RA131 | DPKA-G131PX-7 | M83733/6RA051 | DPKA-51PF-7 | M83733/9RB071 | DPKB-71PM-7 | M83733/12RB71C | DPKB-71C15SH-7 |
| M83733/3RB048 | DPKB-48PX-7 | M83733/6RA131 | DPKA-G131 PF-7 | M83733/9RB71C | DPKB-71C15PM-7 | M83733/12RB078 | DPKB-78SH-7 |
| M83733/3RB064 | DPKB-64PX-7 | M83733/6RB048 | DPKB-48PF-7 | M83733/9RB078 | DPKB-78PM-7 | M83733/12RB101 | DPKB-101SH-7 |
| M83733/3RB071 | DPKB-71PX-7 | M83733/6RB064 | DPKB-64PF-7 | M83733/9RB101 | DPKB-101PM-7 | | |
| M83733/3RB71C | DPKB-71C15PX-7 | M83733/6RB071 | DPKB-71PF-7 | | | | |
| M83733/3RB078 | DPKB-78PX-7 | M83733/6RB71C | DPKB-71C15PF-7 | | | | |
| M83733/3RB101 | DPK- 101PX-7 | M83733/6RB078 | DPKB-78PF-7 | | | | |
| M83733/3RB185 | DPKB-G185PX-7 | M83733/6RB101 | DPKB-101 PF-7 | | | | |
| | | M83733/6RB185 | DPKB-G185PF-7 | | | | |

Test Data

The following is a presentation of the certified capabilities of Cannon's DPK, high performance, rectangular, rack and panel series connectors with respect to critical qualification performance and design requirements of MIL-C-83733. The data presented herein is a condensation of authentic qualification test data extracted from the original qualification reports on file at the ITT Cannon Test Laboratory.

The successful completion of the conducted qualification program clearly demonstrates the compliance of ITT Cannon, DPK series connectors and contacts to meet or exceed the performance requirements of MIL-C-83733.

Identification of Qualification Specimens

The DPK connectors listed below represent the description and identification of the test specimens

subjected to the qualification test sequence of MIL-C-83733.

DPKA-G-131PC-7 (Receptacle) DPKB-G185PC-7 (Receptacle)
DPKA-G131SK-7 (Plug) DPKA-G185SK-7 (Plug)
DPKA-G-131PC-7 (Receptacle) DPKB-G185PC-7 (Receptacle)

Table I below, lists the conducted tests executed in accordance with the applicable test paragraphs of MIL-C-83733, with the Test Level, Parameter Limits and Measured Values listed in Table 11.

TABLE 1 TEST PERFORMED

| Test Description | Test Description | Test Description | Test Description |
|----------------------------------|--------------------------------------|-----------------------------|------------------------------------|
| Examination Of Product | Contact Separating Forces | Low Leve Contact Resistance | Moisture Resistance |
| visual Examination | Connector Mating and Unmating Forces | Thermal Shock | Altitude Immersion |
| Sample Preparation | Contact Retention | Crimp Potential Drop | Insert Retention |
| Insulation Resistance - 25°C | Endurance | Vibration (Random) | Corrosion |
| Withstanding Voltage - Sea Level | Gold Plating Porosity | Physical Shock | Analyses |
| Withstanding Voltage - Altitude | Temperature Life | Ozone Exposure | Service and Storage Life |
| Contact Resistance | Insulation Resistance - 200°C | Fluid Immersion | Gases and Toxic or Corrosive Fumes |

TABLE II

| Test or Environment | Test Level or Special Requirments | Parameters Limits | Measured Values or Comments |
|---|--|--|--|
| Examination Of Product visual Examination Sample Preparation Insulation Resistance - 25°C Withstanding Voltage - Sea Level Withstanding Voltage - Altitude Contact Resistance | Assure compliance with: a) Applicable detail specifications and control drawings b) Materials c) Design and construction d) Dimensional e) Finish f) Product identification g) Workmanship | Compliance to applicable detail specification and control drawings. | Product submitted accompanied by Q.A.certificates of compliance. complied with the applicable acceptance requirements for qualification testing. |
| VISUAL EXAMINATION | Visual examination of qualification test specimens for completeness, workmanship, identification and /or other detrimental conditions. | Visual examination acceptance. | No visible detection of any condition detrimental to normal function. |
| SAMPLE PREPARATION | MIL-W-16878/4A, 28 AWG (min. dia.) and 22 AWG (max. dia.) wire. Daniels WA22A crimping tool. M22520/2-06 and M22520/2-09 contact positioner for resp.22D size socket and pin. MS7495A22M insertion and MS27495R22M removal tool. | Assemblies to conform with specified wiring and termination requirements. | Qualification test specimens prepared and terminated in accordance with specified wiring requirements. No difficulties encountered during wiring operation. |
| INSULATION RESISTANCE [25°C (77 F)] | Unmated condition. 50% of contact complement measured. Between adjacent contact pairs and each contact and connector shell. | 5.1 Gigohms minimum at 500 Vdc. Electrification Time 120 secs. maximum. | Insul. res. range (ohms) (25°C) DPKA Adj. Cont. Cont./Shell 300G-1.0T 1.1T-1.8T DPKB 400G-1.6T 1.1T-20T (Ganged parallel test circuits) |
| DIELECTRIC WITHSTANDING VOLTAGE (SEA LEVEL) | Unmated condition. 50% of contact complement measured. Test voltage 1350 Vac/rms-60hz, applied between adjacent contact pairs and each contact and connector shell. | No electrical breakdown, flashover or excessive current leakage.Electrification 2 secs. minimum. | No evidence of breakdown or flashover Leakage ≤.5mA. (Ganged Parallel test circuits) |
| SALT SPRAY (CORROSION) | Method 101, test condition B. (48 hours) unmated. Salt souldion 5% by weight. S.G. 1.026 to 1.040 at 22.8°C-23.9°C (73°F-75°F). Solution pH6.5 to 7.2 and chamber temp 33.9°C to 36.1°C (93°F to 97°F). | Visual examination. No degradation of normal connector functions. | No detrimental corrosive attack on connector's surface finish or contacts. |
| CONTACT RESISTANCE [AT 25°C AND 200°C (77 F AND 392 F)] | Mated condition 20% of contact complement tested. Test circuit per Fig. 2 measured across points YY performed at 25°C and 200°C (77°F and 392°F). | Max. Voltage Drop (MV) Wire 25°C 200°C Size (77°F) (392°F) 28 8 19 22 14 25 | MV-Drop Range. (25°C) Wire Size Adc Range (mV) Avg. (mV) 28 1.5 2.3-5.2 3.8 22 5.0 6.3-10 8.2 (200°C) 28 1.5 9-17 11.8 22 5.0 16-21 17.8 |
| CONTACT SEPARATING FORCES | 100% of socket contact complement measured. Separating force measured on steel test pin .0294 ±.0001 (0.747 ±0.002) dia. insertion depth .205 (5.21) min. from insert face. | Separating Force (ounce-force) Min. Max. 0.6 4.9 | Separating force range (ounce-force) DPKA Sep. Force Avg. Force 1.3-4.1 2.4 DPKB 1.0-2.9 2.0 |
| CONNECTOR MATING AND UNMATING FORCES | Mating dept. .390 (9.91) panel spacing. Total of 10 cycles mating and unmatings. Forces measured on 10th cycle. | Axial mating and unmating forces 175 pounds-force maximum. | Mating/Unmating Force (pound-force) Mate Unmated DPKA 145 34 DPKB 150 72 Forces obtained on 10th cycle. |
| CONTACT RETENTION | Unmated. 50% of contacts measured. 10.0 lbf applied to contact engaging end. Zero reference at 2.0 lbf preload. Displacement measured under spec. load. | Max. contact displacement under 10.0 lbf load .011 (0.28) maximum. | Contact Displacement Range (inch) DPKA Avg. Pins 0.002-0.003 0.0027 Sockets 0.002-0.004 0.0031 DPKB Pins 0.002-0.004 0.0027 Sockets 0.002-0.003 0.0026 |
| ENDURANCE (DURABILITY) | Mating dept. .450 (11.43) panel spacing. Total of 500 cycles mating and unmating at a rate of 300 cycles/hour maximum. | Withstand 500 cycles of durability conditioning without detrimental effects to function. | No detrimental damage. Connectors fully functional. |

Test Data (Continued)

(TABLE II Continued)

| Test or Environment | Test Level or Special Requirments | Parameters Limits | Measured Values or Comments |
|---|---|---|---|
| THERMAL SHOCK | Mated condition. Five continuous cycles of temperature change. 30 mins. exposure at each temp. extreme constitutes one cycle. Transfer time between chambers 2 mins. max. temp. extremes: - 54 ± 3° C and 200 ± 3° C (-??° +_ 5.4° F and 392 ± 5.4° F). | Withstand temperatre cycling. No damage. | No apparent damage. |
| CRIMP POTENTIAL DROP | 20% of the contacts in each connector measured. Test circuit per Fig. 2 measured across points X-X and X'-X'. <div><div>Contact/Wire-size</div><div>22D/28</div><div>22D/22</div></div> <div><div>Test Current (Adc)</div><div>1.5</div><div>5.0</div></div> | Max. crimp potential drop: <div><div>Wire Size</div><div>28</div><div>22</div></div> <div><div>M.V.</div><div>2.8</div><div>7.0</div></div> | Crimp mV drop range. DPKA (sockets) <div><div>Adc</div><div>1.5</div></div> <div><div>Range</div><div>1.7-2.1</div></div> <div><div>Avg.</div><div>1.8</div></div> <div><div>(Pins)</div><div>1.5</div></div> <div><div>Range</div><div>1.1-1.6</div></div> <div><div>Avg.</div><div>1.3</div></div> <div><div>DPKB (sockets)</div><div>Adc</div><div>5.0</div></div> <div><div>Range</div><div>1.8-2.4</div></div> <div><div>Avg.</div><div>2.1</div></div> <div><div>(Pins)</div><div>5.0</div></div> <div><div>Range</div><div>1.4-1.8</div></div> <div><div>Avg.</div><div>1.5</div></div> |
| DIELECTRIC WITHSTANDING VOLTAGE (ALTITUDE) | Mated condition. 50% of contact complement measured. Performed at simulated altitude of 70,000 ft. (33.7 mm Hg pressure) Test voltage 825 Vac/rms-60 Hz, applied between adjacent contact pairs and each contact and connector shell. | Same as at sea level conditions. | No evidence of breakdown or flashover. Leakage ≤5mA. (Ganged Parallel test circuits) |
| INSULATION RESISTANCE ELEVATED TEMP.[200° C (392° F)] | Unmated condition. 50% of contact complement measured. Test points identical to those measured at 25° C (77° F). Oven ambient controlled at 200° C (392° F). Stabilization period 30 minutes minimum. | 204 Megohms minimum at 500 Vdc. Electrification time 120 secs. maximum, | Insul. Res. range (ohms) [200° C (392° F)] DPKA <div><div>Adj. Cont.</div><div>1.4G-10G</div></div> <div><div>Cont./Shell</div><div>2.4G-4.0G</div></div> <div><div>DPKB</div><div>0.75G-10G</div></div> <div><div>2.26G-5.0G</div></div> (Ganged parallel test circuits) |
| VIBRATION (RANDOM) | Method 214, Test condition II, Letter 'G'. Test level envelope per figure and table 214-2. Contact circuit senes wired far current discontinuity monitoring. Eight hours duration in each of three mutually peipendicular axes. Connector mating depth .450 (11.43) panel spacing. | No current discontinuity ≥ 1.0 microsec. No cracking, breaking or loosening of connector parts. | Connectors met random vibration requirements. No electrical discontinuity detected. |
| PHYSICAL SHOCK | Mated condition, .450 (11.43) panel spacing. Shock pulse duration I I ± 1 mS, waveshape terminal peak smooth, peak amplitude 20g. Contact circuit series wired for current discontinuity monitoring. One shock pulse in each of three mutually perp. axes. | No current discontinuity ≥ 1.0 microsec. No cracking, breaking or loosening of connector parts. | Connectors met physical shock requirements. No electrical discontinuity or damage detected. |
| MOISTURE RESISTANCE | Method 106, (Step 7b) ommed) Mated condition. 10 days humidity and temperature cycling. At end Step 6 final cycle at 25° C (77° F) and 90-98% RH insulation resistance in asured 100% between each and all other contacts and the shell in parallel circuit. | Insulation resistance at final humidity cycle 102 Megohms minimum at 50 Vdc. | Insul. Res. range (ohms) final humidity cycle. DPKA <div><div>1.66-500G</div><div>Avg: 224G</div></div> <div><div>DPKB</div><div>1.6-500G</div><div>Avg: 190G</div></div> |
| ALTITUDE IMMERSION | Mated condition. Immersed in 5% sail solution by weight. Unsealed wire ends exposed to chamber atmosphere. Simulated test altitude 75,000 ft. (1.0 inch Hg). 30 mins. at altitude followed by 15 mins. at room ambient. Repeat for total of 3 cycles. Insul. res. and OWV measured 100% of contact complement at room ambient and submerged. | Insulation resistance 1.2 Gigohm minimum at 5 Vdc. DWV 1350 Vac/rms - 60 Hz, electrification time 60 secs. minimum. No breakdow, flashover or leadage ≤ 2 mA, | Final insul. Res ranges (ohms). DPKA <div><div>1.5T-4.5T</div><div>Avg. 1.9T</div></div> <div><div>DPKB</div><div>0.7-3.5T</div><div>Avg: 1.3T</div></div> DWV - No evidence of insert movement and /or dislocation from normal position |
| INSERT RETENTION | Unmated. 46 1bf/in. ² pressure lead applied to each inert face at 5 1bf/in ² /sec.. maintained for 5 secs. min. at specified load. | No insert disociation from normal position in the connector shell. | No evidence of insert movement and/or dislocation from normal position. |
| OZONE EXPOSURE | Unimated. Ozone concentration 0.010 to 0.015 percent by volume. Exposure period 2 hours minimum at room temperature. | No deterioration. | No evidence of ozone effects. |
| FLUID IMMERSION | Fluid immersion rest fluids and procedures per Table 4: <div><div>Sample No.</div><div>4-1P/R</div><div>4-2P/R</div><div>4-3P/R</div><div>4-4P/R</div><div>4-5P/R</div><div>4-6P/R</div><div>4-7P/R</div><div>4-8P/R</div><div>4-9P/R</div><div>4-10P/R</div><div>4-11P/R</div><div>4-12P/R</div></div> <div><div>Test Fluid</div><div>MIL-L-7808</div><div>MIL-L-23699</div><div>M2-V CHEVRON</div><div>MIL-H-5606</div><div>MIL-A-8243</div><div>MIL-C-25769</div><div>MIL-T-5624 (JP-5)</div><div>Coolanol-25</div><div>Regular (Leaded commercial auto-gasoline</div><div>Solvent (a) MIL-STD-202)</div><div>Solvent (b) MIL-STD-202)</div><div>Solvent (c) MIL-STD-202)</div></div> | No detrimental damage of effects to connector performance. Axial Mate and unimate forces after fluid immersion 175 1bf max. | Other than evidence of normal light swelling of the connector resilient seals, the samples did not exhibit any detirmental affects. Mateability was not imparied. <div><div>After Fluid Immersion Mating/Unmating forces (Pound-Force)</div><div><div>DPKA</div><div>Mate</div><div>Unmated</div><div>DPKB</div><div>Mate</div><div>Unmated</div></div><div><div>4-1P/R</div><div>125</div><div>27</div><div>4-7P/R</div><div>138</div><div>71</div></div><div><div>4-2P/R</div><div>125</div><div>31</div><div>4-8P/R</div><div>141</div><div>57</div></div><div><div>4-3P/R</div><div>127</div><div>35</div><div>4-9P/R</div><div>137</div><div>63.5</div></div><div><div>4-4P/R</div><div>132</div><div>35</div><div>4-10P/R</div><div>145</div><div>76</div></div><div><div>4-5P/R</div><div>132</div><div>63</div><div>4-11P/R</div><div>150</div><div>81</div></div><div><div>4-6P/R</div><div>123</div><div>55</div><div>4-12P/R</div><div>148</div><div>86</div></div></div> |
| GOLD PLATING POROSITY | Unwired. wouissembled contact bodies. One part (by volume) concentrated Nitric Acid (S.G.-1.42) to we part distilled water. 30 secs. minimum immersion period. | No visible reaction (bubbles forming) to reagent. | No evidence of reaction to reagent. |
| TEMPERATURE LIFE W/CONTACT LOADING | Wired mated condition, with contacts under specific load: #220 (5 lbs.); #16 12.5 lbs. A current of 100 MA was applied during life of test. Test duration, 1000 hours at temperature of + 200° C (392° F). | Withstand temp life. No damage. No discontinuity higher than 1.0 microsecond. No contact dislodging order load. | No evidence of contact dislodging and/or electrical disconinuity of 1.0 microsecond or greater during the speified temperature life exposure under contact loading conditions. All post test requirements were met. |

Conclusion

All subject test specimens, connector components, materials, accessories and contacts covered by this report satisfied and/or exceeded the specified requirement.

The successful completion of the qualification program as reported herein, demonstrates the capabilities of the subject ITT Cannon DPK series connectors to comply with stringent verification

qualification requirements in accordance with MIL-C-83733. On the basis of testing, the DPK connector series was granted full OPI status to MIL-C-83733.

Weights

The following are weights for DPK connector assemblies, mounting hardware, contacts, and sealing plugs. All connector weights are listed less contacts (FO) and mounting hardware. The total connector weight is obtained by adding mounting hardware, contacts, and sealing plugs weight to the connector assembly weight.

Example:

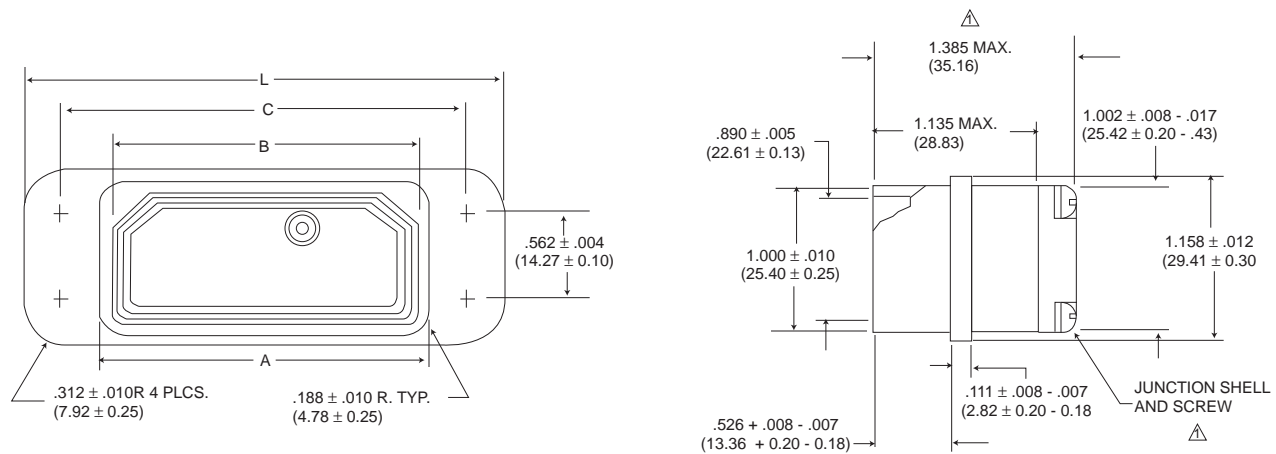
DPKB-101SK-7 (with 90 contacts and 11 sealing plugs)

| | Weight Pounds | Weight Grams |
|------------------------------|------------------|-----------------|
| DPKB-101SG-7-FO | .2332 | 105.78 |
| Type K Spring Mount | .0825 | 37.42 |
| 90 Number 20 Socket Contacts | .0639 | 28.98 |
| 11 Number 20 Sealing Plugs | .0020 | .88 |
| Maximum Connector Weight | .3816 | 173.06 |

| Part Number (Description) | Maximum Weight | |
|---|----------------|--------|
| | Lbs. | Grams |
| DPKA-18PG-7-F0 | .1474 | 66.86 |
| DPKA- 18SG-7-F0 | .1496 | 67.86 |
| DPKA-32PG-7-F0 | .1496 | 67.86 |
| DPKA-18SG-7-F0 | .1518 | 68.86 |
| DPKA-51PG-7-F0 | .1529 | 69.35 |
| DPKA-51SG-7-F0 | .1551 | 70.35 |
| DPKA-G131PG-7-F0 | .1045 | 47.40 |
| DPKA-G131SG-7-F0 | .1077 | 48.85 |
| DPKB-48PG-7-F0 | .2398 | 108.77 |
| DPKB-48SG-7-F0 | .2486 | 112.76 |
| DPKB-59W7PG-7-F0 | .2354 | 106.78 |
| DPKB-59W7SG-7-F0 | .2442 | 110.78 |
| DPKB-64PG-7-F0 | .2354 | 106.78 |
| DPKB-64SG-7-F0 | .2442 | 110.78 |
| DPKB- 71PG-7-F0 | .2288 | 103.78 |
| DPKB-71SG-7-F0 | .2332 | 105.78 |
| DPKB-71C15PG-7-F0 | .2288 | 103.78 |
| DPKB-71C15SG-7-F0 | .2332 | 105.78 |
| DPKB-78PG-7-F0 | .2266 | 102.78 |
| DPKB-78SG-7-F0 | .2288 | 103.78 |
| DPKB-101PG-7-F0 | .2288 | 103.78 |
| DPKB-101SG-7-F0 | .2332 | 105.78 |
| DPKB-G185PG-7-F0 | .1628 | 73.85 |
| DPKB-G185SG-7-F0 | .1650 | 74.85 |
| #12 Pin, 030-9185-003 | .00298 | 1.353 |
| #12 Skt, 030-9186-003 | .00291 | 1.318 |
| #16 Pin, 030-9205-007 | .00135 | .611 |
| #16 Skt, 030-9206-006 | .00146 | .664 |
| #20 Pin, 030-9173-006 | .00062 | .280 |
| #20 Skt, 031-9174-004 | .00071 | .322 |
| #22D Pin, 030-2042-000 | .00021 | .093 |
| #22D Skt, 031-1147-000 | .00025 | .111 |
| #12 Shielded Pin, 249-1825-001 | .00206 | .943 |
| #12 Shielded Skt, 249-1826-000 | .00258 | 1.168 |
| #8 Coaxial Pin, 59W7 Layout | .00420 | 1.910 |
| #8 Coaxial Skt, 59W7 Layout | .00650 | 2.948 |
| Type C Bushing, 012-0515-000 (4 reqd) | .00606 | 2.750 |
| Type K Spring Mtg Captive (non-rotate) | .08250 | 37.42 |
| Type F Nut (4 reqd) | .00072 | .325 |
| Type G Spring Mtg 231-0019-000 (4 reqd) | .01180 | 5.350 |
| Size 22; 225-1013-000 | .00006 | .027 |
| Size 20; 225-0070-000 | .00018 | .080 |
| Size 16; 225-0071-000 | .00036 | .163 |
| Size 12; 225-0072-000 | .00064 | .291 |
| SEALING PLUGS | | |

Receptacle (Pin Contacts)

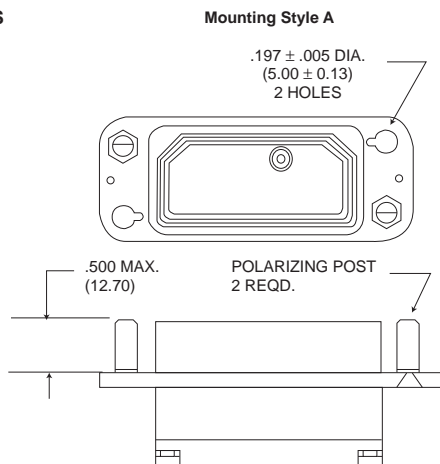
BASIC RECEPTACLE SHELL DIMENSIONS



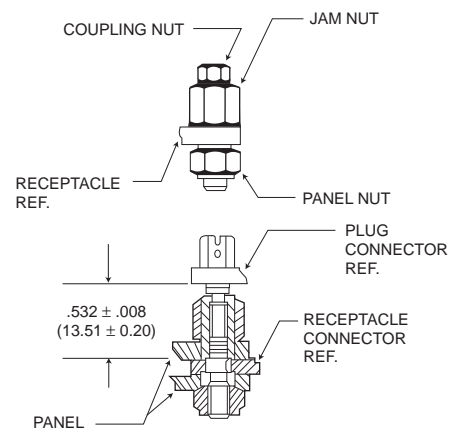
| SHELL SIZE | A | B | C | L | N Staggered † |
|------------|---------------|---------------|---------------|----------------|------------------|
| DPKA*P** | 2.085 (52.96) | 1.976 (50.19) | 2.580 (65.58) | 3.030 (76.96) | 2.150 (54.61) |
| DPKB*P** | 2.072 (52.63) | 1.961 (49.81) | 2.570 (65.38) | 3.000 (76.20) | 2.130 (54.10) |
| DPKC*P** | 3.385 (85.98) | 3.281 (83.34) | 3.880 (98.53) | 4.330 (109.98) | 3.450 (87.63) |
| DPKE*P** | 3.372 (85.65) | 3.261 (82.83) | 3.870 (98.32) | 4.300 (109.22) | 3.430 (87.12) |

†See Page 81 Style M and Z

DPK TYPES

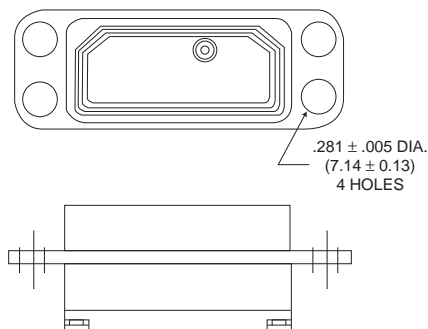


Mounting Dimensions for Coupling Nut Assemblies

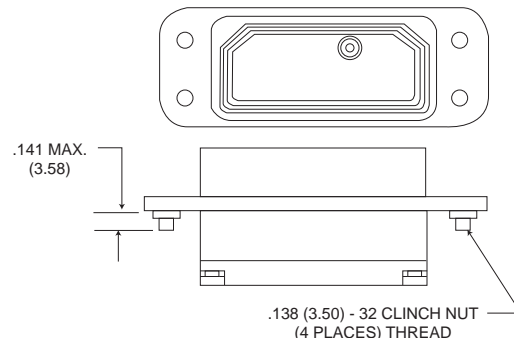


DPK/MIL-C-83733 TYPES

Mounting Style G Standard Hole Mounting MIL-C-83733/1(USAF)



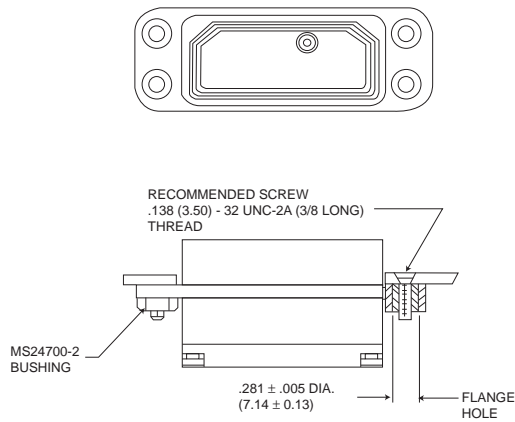
Mounting Style F Clinch Nut Mounting MIL-C-83733/6(USAF)



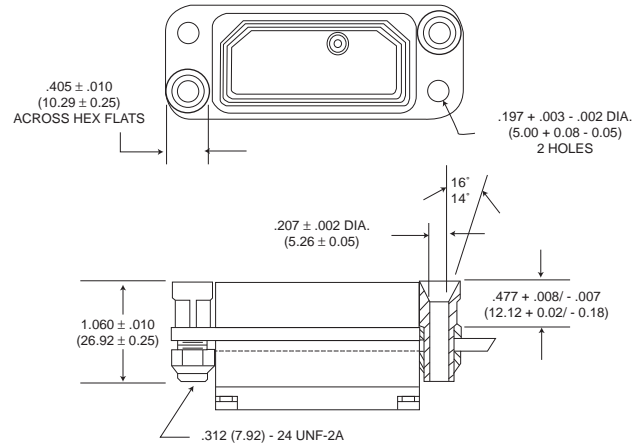
Receptacle/Configurations (Pin Contacts)

DPK/MIL-C-83733 TYPES

Mounting Style C
Bushing Mounting MIL-C-83733/5(USAF)

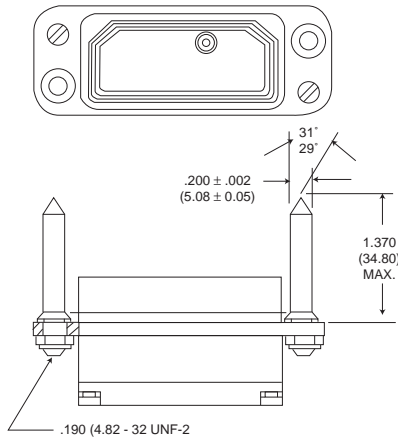


Mounting Style X
With Guide Sockets MIL-C-83733/3(USAF)

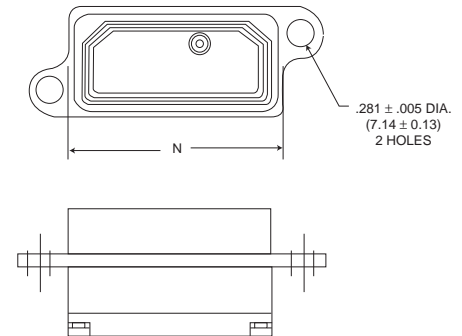


DPK/MIL-C-83733 TYPES

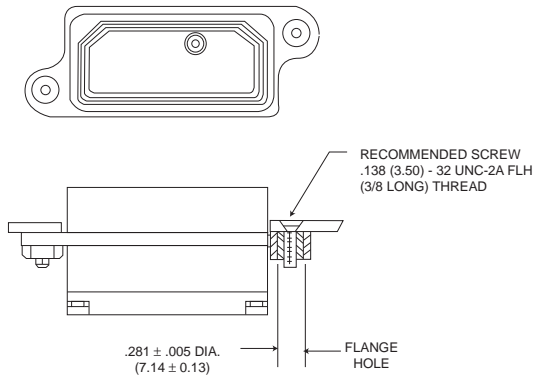
Mounting Style Y
With Guide Pins MIL-C-83733/8(USAF)



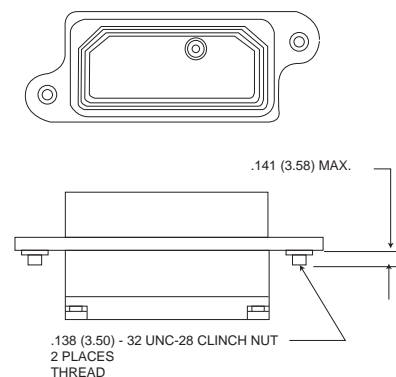
Mounting Style M
Staggered Standard Hole Mounting MIL-C-83733/9(USAF)



Mounting Style H
Staggered Bushing Mounting MIL-C-83733/10(USAF)

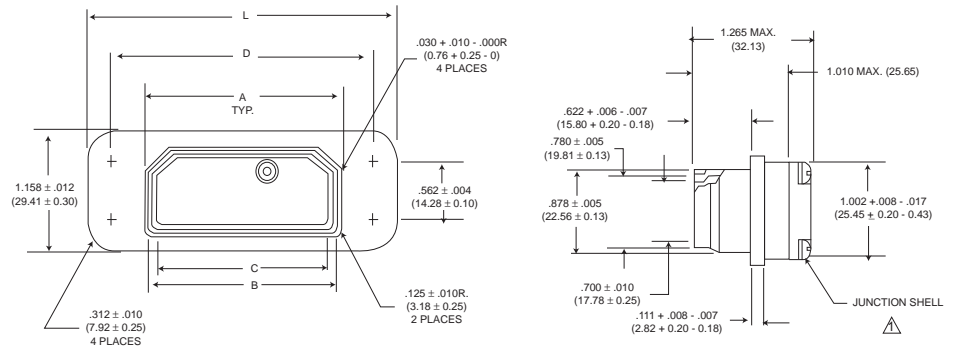


Mounting Style Z
Staggered Clinch Nut Mounting MIL-C-83733/11(USAF)



Plugs/Configurations (Socket Contacts)

Basic Plug Shell Dimensions

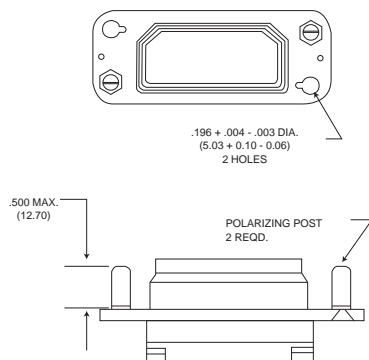


⚠ Junction shell and hardware are not supplied on -G131 and -G185 layouts.
† See page 83 Style M and H

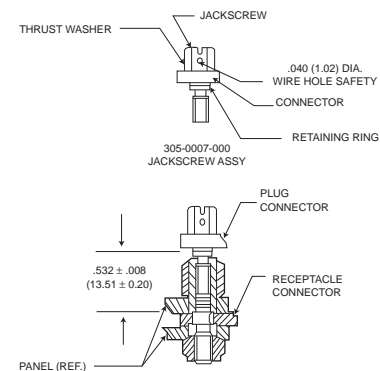
| SHELL SIZE | A | B | C | D | L | N Staggered † |
|------------|---------------|---------------|---------------|---------------|----------------|------------------|
| DPKA*S** | 1.959 (49.76) | 1.864 (47.35) | 1.780 (45.21) | 2.580 (65.53) | 3.030 (76.96) | 2.150 (54.61) |
| | 1.946 (49.43) | 1.853 (47.07) | 1.763 (44.78) | 2.570 (65.28) | 3.000 (76.20) | 2.130 (54.10) |
| | 3.259 (82.78) | 3.164 (80.37) | 3.080 (78.23) | 3.880 (96.52) | 4.330 (109.98) | 3.450 (87.63) |
| DPKB*S** | 3.246 (82.45) | 3.153 (80.09) | 3.063 (77.80) | 3.870 (98.30) | 4.300 (109.22) | 3.430 (87.12) |

DPK Styles

Mounting Style A

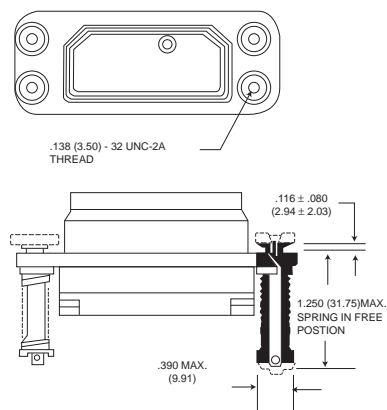


Mounting Spacing Dimensions For Jackscrew Assemblies



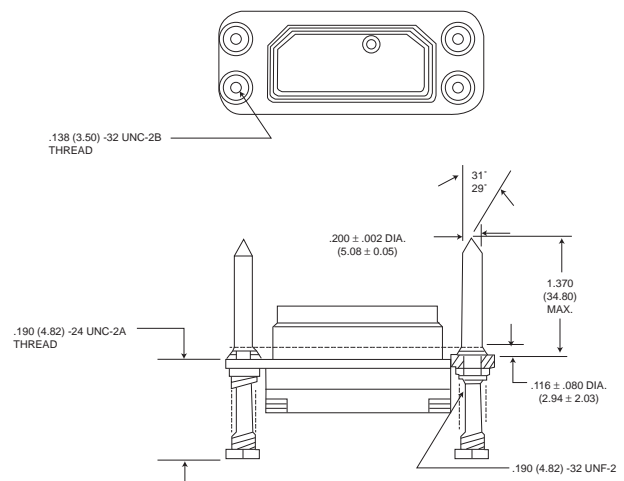
DPK/MIL-C-83733 TYPES

Mounting Style K - MIL-C-83733/4(USAF) With Captive Springs



- NOTES:
1. Springs are pre-loaded to 25 pounds each in free position.
 2. Spring forces will be 118 pounds minimum at .500 (12.70) panel spacing and 176 pounds maximum at .390 (9.91) panel spacing

Mounting Style X - MIL-C-83733/2(USAF) With Guide Pins and Spring Mounting

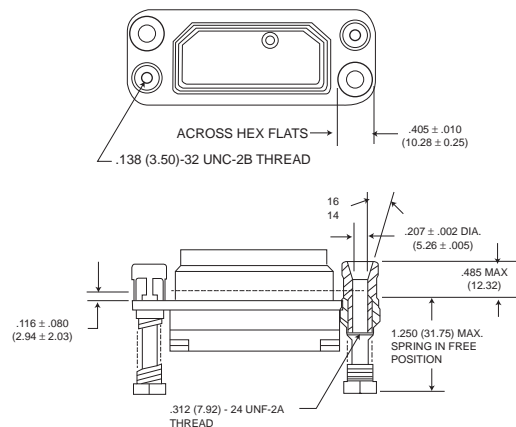


- NOTES:
1. Springs are pre-loaded to 25 pounds each in free position.
 2. Spring forces will be 59 pounds minimum at .500 (12.70) panel spacing and 88 pounds maximum at .390 (9.91) panel spacing
 3. This configuration must not be used on the 131 or 185 contact layouts.

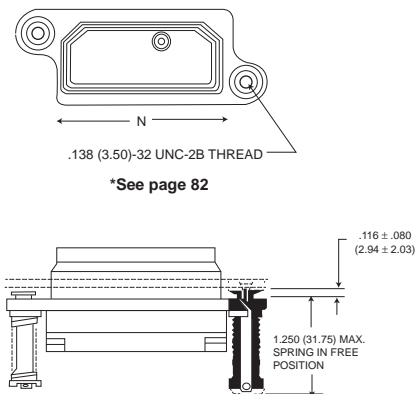
Plugs/Configurations (Socket Contacts)

DPK/MIL-C-83733 TYPES

Mounting Style Y - MIL-C-83733/7(USAF)
With Guide Sockets and Spring Mounting



Mounting Style H - MIL-C-83733/12(USAF)
Staggered Spring Mounting

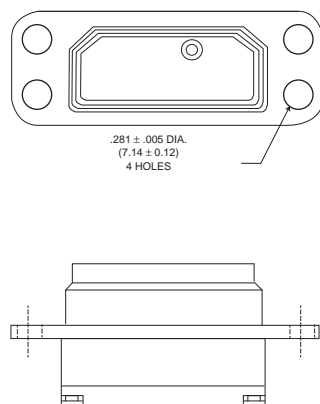


NOTES: 1. Springs are pre-loaded to 25 pounds each in free position.
2. Spring forces will be 59 pounds minimum at .500 (12.70) panel spacing and 88 pounds maximum at .390 (9.91) panel spacing

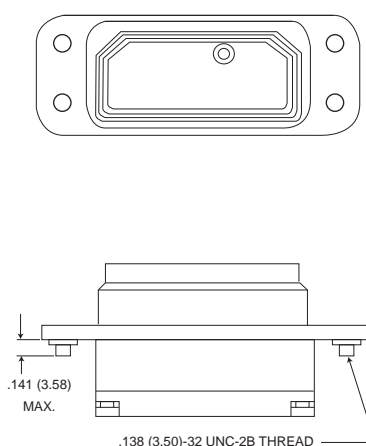
NOTES: 1. Springs are pre-loaded to 25 pounds each in free position.
2. Spring forces will be 59 pounds minimum at .500 (12.70) panel spacing and 88 pounds maximum at .390 (9.91) panel spacing
3. This configuration must not be used on teh 131 or 185 contact layouts.

DPK Commercial Types

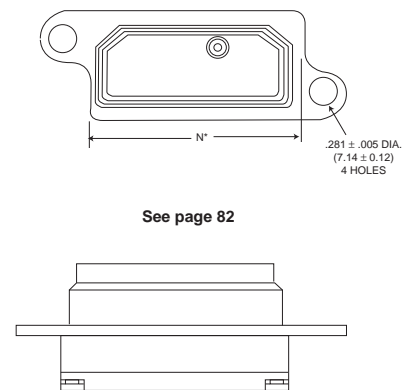
Mounting Style G
Standard Hole Mounting



Mounting Style F
Clinch Nut Mounting



Mounting Style M
Mounting



Mounting Styles/Applications

DPK connectors for rectangular or staggered mounting are available in both two- and four-spring mount assemblies, or the same shelf style may be ordered to accommodate bushing assemblies. In the spring mount version the spring-loaded mechanism will compensate for a panel space variation of up to .070(1.78) while insuring electrical and environmental integrity.

DPK connectors are also available with polarizing posts, accommodations for jackscrews, and coupling nuts for cord-to-card and cord-to-panel applications. Another shelf style has two or four mounting holes fitted with captive clinch nuts. For mounting dimensions of the various mounting styles shown here please refer to page 87.

Style A

Mounting style A is designed for cord-to-panel and cord-to-cord applications. Connectors are supplied with two polarizing posts installed and provisions for installation of two jackscrew assemblies or two coupling nut assemblies. (Replaces Mounting Style B.)



Plug
Socket Contacts

Receptacle
Pin Contacts

Ordered Separately



Jackscrew Assembly
305-0007-000

Coupling Nut Assembly
335-0002-000

Style C

Mounting style C is designed for cord-to-panel or rack-to-panel applications. Connectors are supplied with (4) MS24700-2 bushings on the receptacle and 4 spring mount assemblies on the plug.

M83733/5



Receptacle
Pin Contacts

Supplied with Connector



Bushing MS24700-2
(Self-Locking)
012-0515-000

Spring Mount Assembly
MIL-C-83733/17
231-00019-000

Style F

Mounting Style F is designed for rack-to-panel applications. Connectors are supplied with four captive clinch nuts installed.

M83733/6



Receptacle
Pin Contacts

Style G

Mounting style G is designed for rack-to-panel applications. Connectors are supplied with four .281(7.14) diameter holes which will accommodate either four MS24700-2 bushings or four 231-0019-000 spring mounts,

M83733/1



Plug
Socket Contacts



Receptacle
Pin Contacts

Ordered Separately



Bushing MS24700-2
(Self-Locking)
012-0515-000

Spring Mount Assembly
MIL-C-83733/17
231-0019-000

Style H

Mounting style H is designed for rack-to-panel applications. Connectors are supplied with two .281(7.14) diameter holes which are staggered. Two spring mounts are on the plug end two MS24700-2 bushings are on the receptacle.

M83733-12



Plug
Socket Contacts

M83733-10



Receptacle
Pin Contacts

Supplied with Connector



Bushing MS24700-2
(Self-Locking)
012-0515-000

Spring Mount Assembly
MIL-C-83733/17
231-0019-000

Style K

Mounting style K is designed for rack-to-panel applications. Connectors are supplied with four activated, non-rotating spring mounts on the plug.

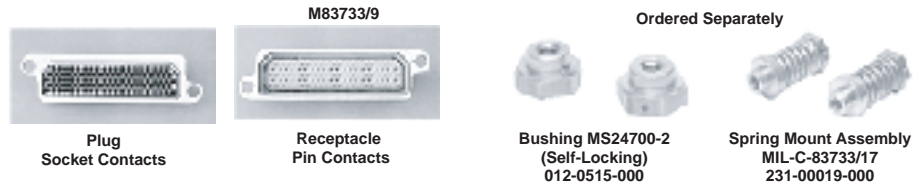
M83733/4



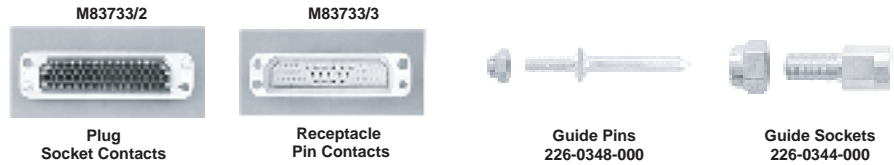
Plug
Socket Contacts

Style M

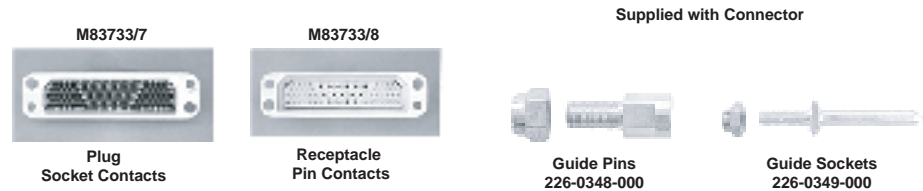
Mounting style M is designed for rack-to-panel applications. Connectors are supplied with two .281 (7,14) diameter holes which are staggered and will accommodate eight two MS24700-2 bushings or two 231-0019-000 spring mounts.

**Style X**

Mounting style X is designed for rack-to-panel applications where positive alignment is required before connectors are mated. Plug has two guide pins and two spring mounts (MIL-STO-1533); receptacle has two guide sockets and two .197 (5.00) dia. holes.

**Style Y**

Mounting style Y is identical to mounting style X, except the guide sockets are on the plug and the guide pin and springs are on the receptacle.

**Style Z**

Mounting style Z is designed for use in rack-to-panel applications. Connectors are supplied with two captive clinch nuts which are staggered.

**MIL-C-83733/DPK Mounting Style**

| MIL-C-83733 Connector Type | DPK Mtg. Style | Mating MIL-C-83733 Connector | DPK Mtg. Style |
|-------------------------------|-------------------|---------------------------------|-------------------|
| M83733/1 RECEPTACLE | G | M83733/4 | K |
| M83733/2 PLUG | X | M83733/3 | X |
| M83733/3 RECEPTACLE | X | M83733/2 | X |
| M83733/4 PLUG | K | M83733/1 | G |
| | | M83733/5 | C |
| | | M83733/6 | F |
| M83733/5 RECEPTACLE | C | M83733/4 | K |
| M83733/6 RECEPTACLE | F | M83733/4 | K |
| M83733-07 PLUG | Y | M83733/8 | Y |
| M83733-08 RECEPTACLE | Y | M83733/7 | Y |
| M83733-09 RECEPTACLE* | M | M83733/12 | H |
| M83733-10 RECEPTACLE* | H | M83733/12 | H |
| M83733-11 RECEPTACLE* | Z | M83733/12 | H |
| M83733-12 RECEPTACLE | H | M83733/9 | M |
| | | M83733/10 | H |
| | | M83733/11 | Z |

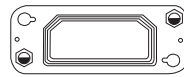
*Not recommended for G131 and G185 layouts.

Polarization (Mounting Style A only)

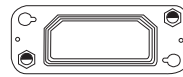
Polarizing Post Alternate Positions

Pin inserts polarizing positions are 180° opposite socket insert polarizing positions. Shaded areas indicate extended portion of the polarizing post. Cord to panel DPK connectors are available in 35 alternate polarizing positions by changing indexing of the polarizing posts. Keystone corners and hexagonal posts provide this wide range of alternate positions.

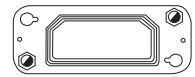
Face view of socket insert plug connector engaging end.



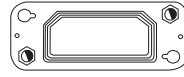
N



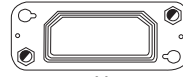
V



W



X



Y



Z

Contact Data

Standard Contacts

| Contact Size | Type | Cannon Part Number | MIL-C-39029 Military Part Number | Crimp Tool | Insertion/ Extraction Tool | Grommet Sealing Plug Part Number (Color) |
|--------------|----------|------------------------------|----------------------------------|---|----------------------------|--|
| 12 | Pin Skt. | 030-9185-003 031-9186-003 | M39029/4-113 M39029/5-118 | M22520/1-01 with M22520/1-02 Turret | MIL-I-81969/14-04 | 225-0072-000 (Yellow) |
| 16 | Pin Skt. | 030-9205-007 031-9206-006 | M39029/4-111 M39029/5-116 | | MIL-I-81969/14-03 | 225-0071-000 (Blue) |
| 20 | Pin Skt. | 030-9173-006 031-9174-004 | M39029/4-110 M39029/5-115 | M22520/2-01 with M22520/2-02 Turret | MIL-I-81969/14-11 | 225-0070-000 (Red) |
| 22 | Pin Skt. | 030-1975-008 031-1113-008 | M39039/11-144 M39029/12-148 | M22520/2-01 with M22520/2-23 Turret | MIL-I-81969/14-01 | 225-1013-000 (Black) |
| 22D | Pin Skt. | 030-2042-000 031-1147-000 | M39029/58-360 M39029/57-354 | M22520/2-01 with M22520/2-06 (Socket) Turret M22520/2-09 (Pin) Turret | MIL-I-81969/14-01 | |

Coaxial/Shielded Contacts

| Coaxial | Type | Prefix | Cannon Part Number | Cable Accom. | DWV Voltage | Min./Max. O.D. Wire Accom. | Crimp Tool | Ins./ Ext. Tool | Grommet Sealing Plug Part Number (Color) |
|---|-----------------|--------|------------------------------|--------------|-------------|----------------------------|---|-----------------|--|
| Coaxial Contacts* △59W7 Arrangement Only | Plug Receptacle | G G | 249-5500-012 249-5500-013 | RG-316 | 500 VDC | .122 (3.10) .250 (6.35) | CCTC8 Outer M22520/2-01 M22520/2-30 | CET-C8 | 225-0085-00 (White) |
| | Plug Receptacle | F F | 249-5500-010 249-5500-011 | RG-180/U | 500 VDC | .122/250 | CCTC9 Outer M22520/2-01 M22520/2-30 | CET-C8 | |

*Plug coaxials go into plug connectors (59W7S inserts with socket contacts). Receptacle coaxials go into receptacle connectors ("P" inserts) with pin contacts (59W7P inserts with pin contacts).

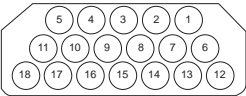
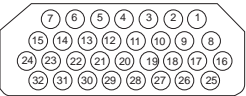
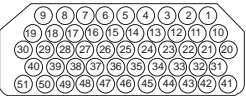
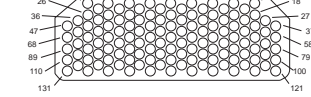
| Coaxial | Type | Cannon Part Number | MIL-C-39029 Part Number | Cable Accom. | Min./Max Cable Dia. | Crimp Tool | Locator | Ins./ Ext. Tool | Grommet Sealing Plug Part Number (Color) |
|--------------------------------------|---------------|------------------------------|--------------------------------|--------------|----------------------------|---|---|-----------------|--|
| Size 12 Contact 71C15 Layout Only | Pin Socket | 249-1825-001 249-1826-000 | M39029/50-340 M39029/51-341 | RG-179U | .081 (2.06) .158 (4.01) | .M22520/5-01 Outer M22520/2-01 Inner | .M22520/5-08 Outer M22520/2-30 Inner | CIET - 12 | 225-0072-000 (Yellow) |

*Pin shielded contacts utilized in receptacle connectors (71C15P inserts).
Socket shielded contacts utilized in plug connectors (71C15S inserts).

Contact Arrangements

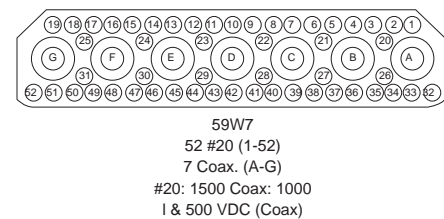
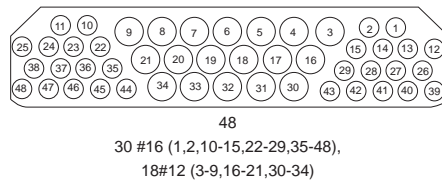
DPKA

Face View Pin Insert Shown

| | | | | |
|-------------------------------|---|---|--|---|
| |  |  |  |  |
| Layout | 18 | 32 | 51 | G131 |
| No. of Contacts and Wire Size | 18 #12 | 32 #16 | 51 #20 | 131 #220 |
| Service Rating | I | I | I | M |

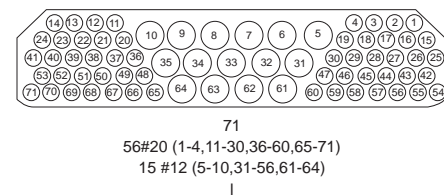
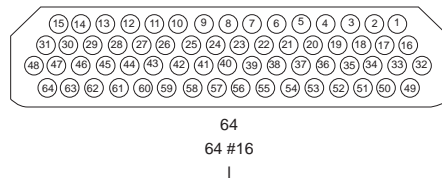
DPKB

Layout
No. of Contacts
and Wire Size
Service Rating

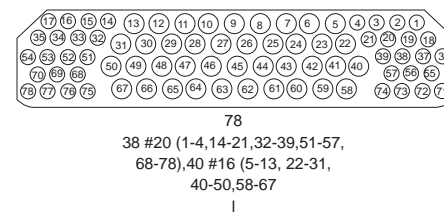
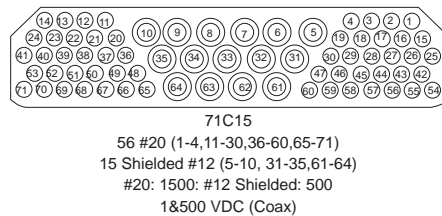


The 59W7 Layout is sold less coaxial contacts, see page 86 for contact part numbers.

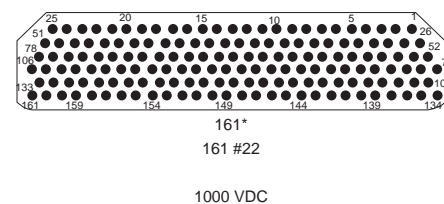
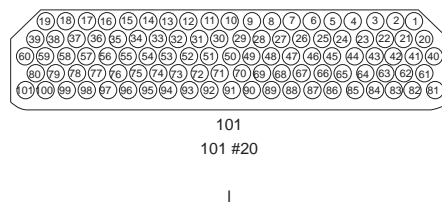
Layout
No. of Contacts
and Wire Size
Service Rating



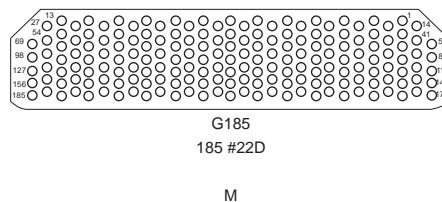
Layout
No. of Contacts
and Wire Size
Service Rating



Layout
No. of Contacts
and Wire Size
Service Rating



Layout
No. of Contacts
and Wire Size
Service Rating



*POS-ALINE DESIGN

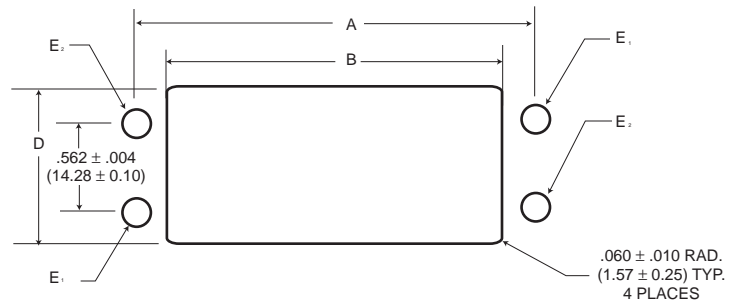
In the 161 contact arrangement, the entire pin contact is recessed in and individual cavity in the plug connector. The socket contact is exposed and extends from the connector receptacle face. (Pin insulator accepts socket contacts.)

Panel Cutout Dimensions

Mounting Styles

PG, SG SY, PY
PC, PF, SF S*A, S*B
SX, PX, SK P*A, P*B

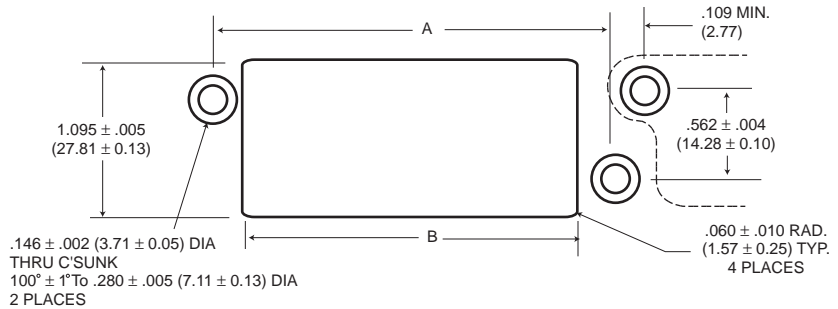
Figure 1.



Mounting Styles

SH, SM

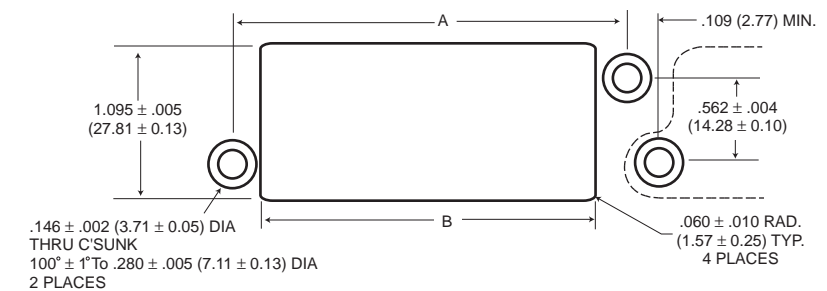
Figure 2.



Mounting Styles

PM, PH, PZ

Figure 3.

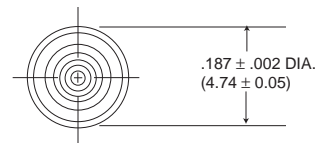
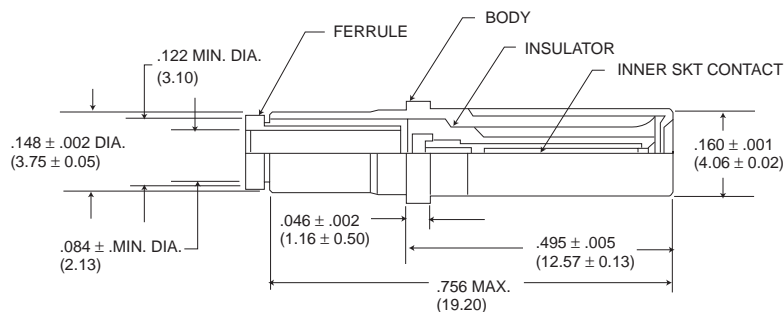


| MIL-C-83733 Part No./ Mounting Style | DPK Mounting Styles | Figure Ref. | A ± .004(± 0.10) | | B ± .005(± 0.13) | | D ± .005(± 0.13) | | E ₁ | | E ₂ | |
|--|---------------------------|----------------|---------------------|------------------|---------------------|------------------|---------------------|------------------|----------------------------|----------------------------|------------------------------|------------------------------|
| | | | Shell Size A | Shell Size B | Shell Size A | Shell Size B | Shell Size A | Shell Size B | Shell Size A | Shell Size B | Shell Size A | Shell Size B |
| M83733/1/5/6 | PG, SG, PC, PF, SF | 1 | 2.578 (65.48) | 3.875 (98.43) | 2.103 (51.13) | 3.400 (86.36) | 1.022 (25.96) | 1.022 (25.96) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) |
| M83733/2 | SX | 1 | 2.578 (65.48) | 3.875 (98.43) | 2.103 (51.13) | 3.465 (88.01) | 1.022 (25.96) | 1.095 (27.81) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) | .260 (6.60) .250 (6.35) | .260 (6.60) .250 (6.35) |
| M83733/3 | PX | 1 | 2.578 (65.48) | 3.875 (98.43) | 2.103 (51.13) | 3.465 (88.01) | 1.022 (25.96) | 1.095 (27.81) | .320 (8.13) .315 (8.00) | .320 (8.13) .315 (8.00) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) |
| M83733/4 | SK | 1 | 2.578 (65.48) | 3.875 (98.43) | 2.167 (55.04) | 3.465 (88.01) | 1.095 (27.81) | 1.095 (27.81) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) |
| M83733/7 | SY | 1 | 2.578 (65.48) | 3.875 (98.43) | 2.167 (55.04) | 3.465 (88.01) | 1.095 (27.81) | 1.095 (27.81) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) | .430 (10.92) .420 (10.67) | .430 (10.92) .420 (10.67) |
| M83733/8 | PY | 1 | 2.578 (65.48) | 3.875 (98.43) | 2.167 (55.04) | 3.465 (88.01) | 1.095 (27.81) | 1.095 (27.81) | .380 (9.65) .370 (9.40) | .380 (9.65) .370 (9.40) | .148 (3.76) .144 (3.66) | .148 (3.76) .144 (3.66) |
| M83733/9/10/11 | PM, PH PZ | 2 | 2.578 (65.48) | 3.875 (98.43) | 2.167 (55.04) | 3.465 (88.01) | 1.095 (27.81) | 1.022 (25.96) | - | - | - | - |
| M83733/12 | SH, SM | 3 | 2.578 (65.48) | 3.875 (98.43) | 2.095 (53.21) | 3.400 (86.36) | 1.095 (27.81) | 1.095 (27.81) | - | - | - | - |
| N/A | S*A, S*B, P*A, P*B | 1 | 2.578 (65.48) | 3.875 (98.43) | 2.103 (51.13) | 3.465 (88.01) | 1.022 (25.96) | 1.095 (27.81) | .301 (7.65) .294 (7.45) | .301 (7.65) .294 (7.45) | .301 (7.65) .294 (7.45) | .301 (7.65) .294 (7.45) |

Assembly/Shielded Contacts

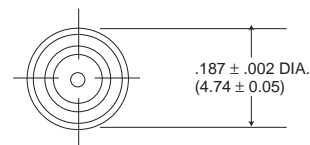
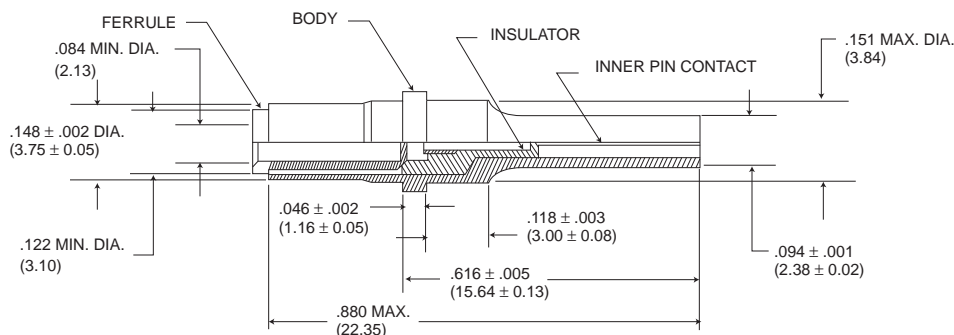
Socket

249-1826-000/MIL-C-39029/51
Size 12/RG-179B/U Cable (used in 71C15 layout)

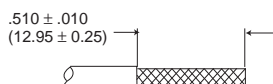


Pin

249-1826-000/MIL-C-39029/50
Size 12/RG-179B/U Cable (used in 71C15 layout)

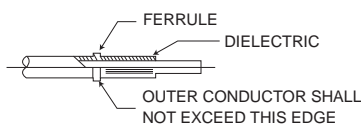


Assembly Instructions



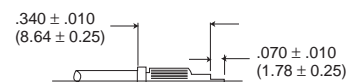
Step 1.

Strip outer jacket to dimensions shown to expose outer conductor.



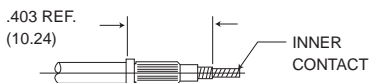
Step 2.

Slip (or install) ferrule over outer conductor against cable jacket. Exposed portion of the outer conductor must be combed out then folded back over ferrule.



Step 3.

Trim cable to dimensions, as shown. (Ferrule must butt against cable jacket).



Step 4.

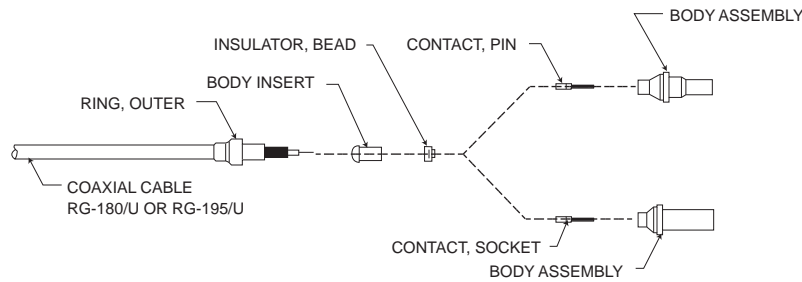
Install inner contact against dielectric then crimp contact and center conductor with a M22520/2-01 crimp tool using a M22520/2-30 locator.

Step 5.

Insert cable, ferrule and inner contact to rear of shell and crimp into place with M22520/5-03 crimp tool.

Coaxial Contact/Assembly

249-5500-010 Socket*
249-5500-011 PIN*

**STEP 1.**

Slide outer ring over cable as shown (Figure 1).

STEP 2.

Strip cable as shown (Figure 1).

STEP 3.

Install body insert, insulator bead, and contact on cable as shown (Figure 2).

STEP 4.

With body insert, insulator bead, and contact firmly in place, crimp the contact with tool M22520/2-01 (setting number 3) and locator M22520/2-30 (Figure 2). Caution: The assembled components must be tightly in place after crimping.

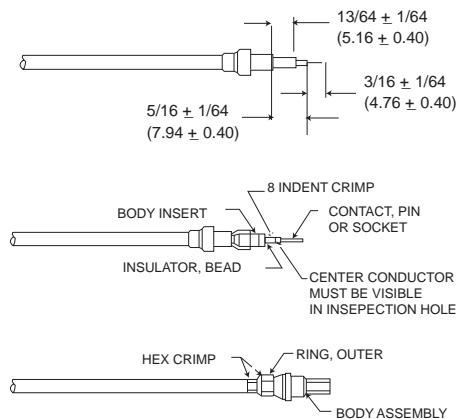
STEP 5.

Slide body assembly over components and under shield until firmly bottomed in place. Locate outer ring over shield and against body as shown (Figure 3).

STEP 6.

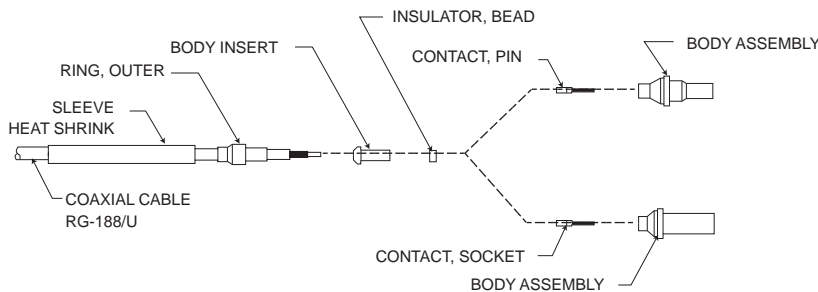
With cable and body assembly securely held together, hex crimp the outer ring with tool CCT-C9 (Figure 3). Important: For optimum hex crimp, firmly bottom the outer ring against the shoulder of the hex die before compressing the handles.

- NOTES:**
1. These assembly instructions apply to 249-5500-010, and 249-5500-011.
 2. The following assembly tools are required:
 - a) CCT-C9 hex crimp tool
 - b) MS3198-Q W/L-3198-C1 contact crimp tool and locator
 - c) 149 C(300 F) hot air gun (recommended): Regal heat Gun No. 9A)
 - d) Blades, scissors, and picks



*These contacts are used in the F59C7 layout.

249-5500-012 Socket*
249-5500-013 PIN*

**STEP 1.**

Slide heat-shrink sleeve and outer ring over cable as shown.

STEP 2.

Strip cable as shown (Figure 1). Caution: Do not nick shield wires.

STEP 3.

Install body insert, insulator bead, and contact on cable as shown.

STEP 4.

With body insert, insulator bead, and contact firmly in place, crimp the contact with tool M22520/2-01, using setting number 3 and locator M22520/2-30 (Figure 2). Caution: The assembled components must be tightly in place after crimping.

STEP 5.

Slide body assembly over components and under shield until firmly bottomed in place. Locate outer ring over shield and against body as shown (Figure 3).

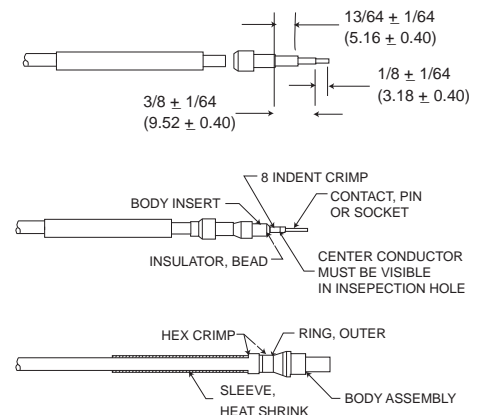
STEP 6.

With cable and body assembly securely held together, hex crimp the outer ring with tool CCT-C9 (Figure 3). Important: For optimum hex crimp, firmly bottom the outer ring against the shoulder of the hex die before compressing the handles.

STEP 7.

The final step is to shrink the heat sleeve in place with a hot air source of 149 C to 327 C (300 F to 621 F) (Figure 3).

- NOTES:**
1. These assembly instructions apply to 249-5500-010, and 249-5500-011.
 2. The following assembly tools are required:
 - a) CCT-C9 hex crimp tool
 - b) M22520/2-01 contact crimp tool and locator
 - c) 149 C(300 F) hot air gun (recommended): Regal heat Gun No. 9A)
 - d) Blades, scissors, and picks



*These contacts are used in the G59C7 layout.