ITT

Interconnect Solutions
Cannon, VEAM, BIW

Defining Interconnect Innovation for nearly 100 years, and over 20 billion interconnects

Interconnect Solutions Product Portfolio

Engineered for life

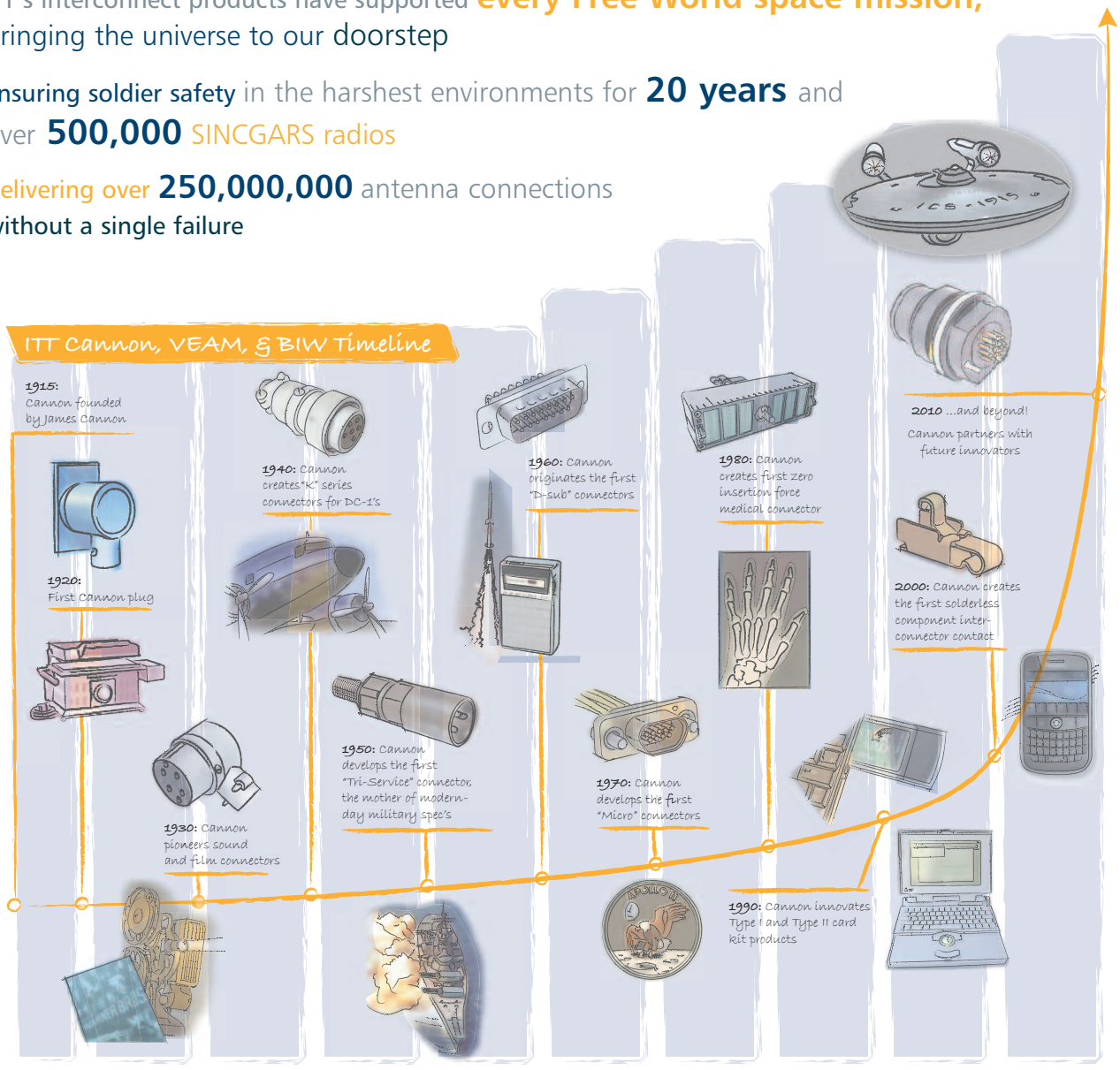
Cannon, VEAM, BIW

A Historical Achievement Approaching Nearly a Century of Technology Innovation

THINK ABOUT ITT

Reliability, Engineered Solutions, and Interconnect Science these terms collectively describe ITT Interconnect Solutions and define a legacy of Innovation spanning nearly a century, reflecting billions of quality products sold, and incorporating the three industry leading brands of Cannon, VEAM, and BIW. Our Innovation Timeline uniquely defines a historical compendium of interconnect leadership spanning over 90 years and including many industry firsts; Audio Connectors, Aviation Circulars, D-Sub's, Micro's, fiber optic assemblies, Zero Insertion Force Technologies, and other advanced applications of Interconnect Science. When collaborating with a technology leader, choose a participant with documented trust, established through multi-industry achievements as substantiated through the participation on every free world space mission, the creation of the first Mil / Spec interconnects, participation on the first talking movie, 100% reliability for over 45 years in Rail applications, and numerous additional achievements in major Military, Aerospace, Industrial, Medical, and Power markets. At ITT ICS, we truly are "Engineered for Life™."

- ITT's interconnect products have supported **every Free World space mission,** bringing the universe to our doorstep
- Ensuring soldier safety in the harshest environments for **20 years** and over **500,000** SINCGARS radios
- Delivering over **250,000,000** antenna connections without a single failure



Driving unrivaled Innovation since 1915, our company began as a small electrical specialty business in a backyard shed, originating the first **"Cannon Plugs."** Approaching nearly a century, our brands of Cannon, VEAM, BIW, and Sealectro continue to **excite customers with differentiated connectors,** interconnect systems, cable assemblies, I/O card kits, LAN components, **advanced interconnect science** applications, and **highly engineered and innovative** custom solutions. Global customers recognize our contributions as ubiquitous staples of the interconnect industry, a history seeded with many firsts.

Today, Interconnect Solutions proudly participates as part of ITT, a $10.9 billion diversified high-technology, multi-industry, engineering and manufacturing company that serves customers in more than 50 countries. Our ICS business incorporates manufacturing and customer service on every continent and reflects our commitment to providing our customers with truly localized **high service** and support.

We strongly embrace ITT's core vision and value built upon the three pillars of **Respect, Responsibility, and Integrity.** And, we extend these principles into all facets of our business and interactions with our valued, global customers.

RESPECT

Treat others fairly and courteously

Work as a team and help each other

Sustain a culture of diversity and inclusion

Value different ideas, opinions and experiences

RESPONSIBILITY

Take ownership of our words and actions

Commit to quality

Provide a safe and secure workplace

Care for the environment and our communities

INTEGRITY

Act ethically and honestly

Communicate with candor and courage

Keep our promises

Be consistent in what we say and do

Audio / Entertainment 10-11

GRH
CIR_FR
Mini XL, 40% smaller than XLR
XLB-PCB, Plastic Shell, PCB Mount, Low Cost
XLM-PCB, Metal Shell, PCB Mount, EMI Shielding
XLR, Metal Shell, Resilient Insulator, Quick Disconnect
VEAM VSC

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Electrical Power Connectors for Oil and Gas Wells
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BFH/TBFH; MIL-C-5015 *(see Hermetic, page 31)*
BFR/TBF; MIL-DTL-5015, Pressurized Bulkhead Receptacle
CA/MS-A&B; MIL-DTL-5015, Low Cost, High Reliability
CA-Bayonet; VG95234, Environmental, Bayonet Coupling
CA-COM, Commercial, Nickel Plated Shells
CA-KE; MIL-DTL-5015 Type, Firewall, Fire Proof and Moisture Proof
CGE; VG96929, High Current at Low Voltage
CGKX/KPTA; VG96912/VG95328, Environmental, High Density
CIR
FVF/FRA/WFB; MIL-DTL-5015 type
GS (Glass Sealed); MIL-C-5015 *(see Hermetic, page 31)*
KJL/KJ/KJA; MIL-DTL-38999, Series I, II, III
KJLY/KJY/KJAY; MIL-DTL-38999, Series I, II, III *(see Hermetic, page 31)*
KPT/KPSE; MIL-C-26482, Series I; VG95328
KPTC/KPTC-NG, Metal Shell, High Density
KPTH/PVAH; MIL-DTL-26482, Series I, II *(see Hermetic, page 31)*
M83723/CVA, MIL-DTL-83723, Series II (USAF)
MIKM *(see Microminiature, page 38)*
MIKQ (*see Microminiature, pages 38)*
MS/CA-E/F/R/ER; MIL-DTL-5015, Environmental, Low Cost, High Reliability
MS/CA-K; MIL-DTL-5015, Firewall
MS/CV345*; MIL-DTL-5015, Rear Release
Neptune *(see Trident, page 56)*
Powerlock
PV/PV-TBF, MIL-C-26482, Series 2, Environmental
PVW/PVX
Ringlock *(see Trident, page 55)*
RPTT
Snaplock
SureSeal/Mini Sure-Seal (see Sure-Seal, page 51)
TKJL/TKJ/TKJA/TKJB *(see Filter, page 30)*
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D*, Solder Cup Termination, Tin Shells, Cable Mount
D*, Solder Termination, 90° PCB
– European Footprint 10,2 or 9,4 mm
D*, Solder Termination, Straight PCB
– European PC Tails
D*, Wire Wrap Post Termination, Straight PCB
D*A, Combo D™
D*A, Crimp Connectors without Contacts, Cable Mount
D*BMA, Bulkhead
D*D, Environmental D; MIL-C-24308
D*JK/D*JT *(see Filter, page 29)*
D*H/D*TBH, *(see Hermetic, page 31)*
D*M, Combo D™
D*M, Solder Termination, 90° PCB
– Standard Footprint .318 or .283 inch
D*M, Solder Termination, Straight PCB
– Standard PC tails
D*M/D*MA, Space/High Reliability; MIL-DTL-24308
D*MM/D*MAM, Military/High Reliability; MIL-DTL-24308
D*NG, Pressfit Termination, Straight PCB
D*SF
D*A
D*W, Discrete Wire IDC
MDSM *(see Microminiature, page 38)*
TD1* *(see Filter, page 29)*
TMDM *(see Filter, page 30)*
ZD*, Solder Cup Termination, Tin Shells, Cable Mount
ZD*, Solder Termination, 90° PCB
– European Footprint 10,2 mm
ZD*, Solder Termination, Straight PCB
ZD*A, High Density
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FOMC, Fiber Optic Multi-Channel Connectors and Termini
PHD™ High Density
Harness Solutions

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D*JK/D*JT (Commercial D Subminiature)
TBKA (Rack & Panel); ARINC Series 600 Standard
TD1* (D Subminiature); MIL-C-24308
TDPX; (Rack & Panel); ARINC Series 404 Standard; MIL-C-81650
TKJL/TKJ/TKJA/TKJB (Miniature Circular); MIL-C-38999, Series I, II, III, IV
TMDM (Microminiature D Subminiature); MIL-PRF-83513
TPV (Miniature Circular); MIL-C-26482, Series 2 and MIL-C-83723, Series 1

C-Flash, PHD, and Cannon are registered trademarks of ITT Corporation.

Hermetic 31-32

BFH/TBFH (Standard Circular); MIL-DTL-5015
D*H/D*TBH (D Subminiature); MIL-DTL-24308
GS (Standard Circular); MIL-C-5015
KJLY/KJY/KJAY (Miniature Circular); MIL-DTL-38999, Series I, II, III
KPTH/PVAH (Miniature Circular); MIL-C-26482, Series I, II
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- Micro Line: 1,27(.050) Contact Spacing
  - MDM, Micro D Metal; MIL-PRF-83513
  - MDM C/P, Coaxial/Power; MIL-PRF-83513
  - MDMH; MIL-PRF-83513 *(see Hermetic, page 32)*
  - MDM-PCB, Printed Circuit Board; MIL-PRF-83513
  - MD, Micro D Plastic; MIL-C-83513
  - MDB C/P, Coaxial/Power; MIL-C-83513
  - MDB-PCB; Micro D-Printed Circuit Board, MIL-C-83513
  - MT (MTV/MTB) Series, (Micro Strip)
  - MEB, Edgeboard
- Centi-Line: 1,90(.075) Contact Spacing
  - 2D, Double Density D
  - 2DD, Environmental Double Density D
  - CDL, Centi D Loc
  - CTA Series (Centi Strip)
- Nano Line: 0,64(.025) Contact Spacing
  - NDM, Metal Shell
  - NJS, Nano Center Jackscrew, Rectangular
  - NT (NTP/NTDP) Series (Nano Strip)

MJS, Micro Center Jackscrew Series; MIL-C-83513
MIKM, Micro K Screw Coupling; MIL-C-83513
MIKQ, Micro K Push/Pull Coupling; MIL-C-83513
MDSM, Micro D Subminiature

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  - Fakra
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  - LPC MID
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Tempus™ CBC20HS; Series 1000/2000 (2mm)
Tempus™ CBC20HS; Series 4000 (2mm)

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CIR 295
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♦ Cannon, APV Vector, Trident, Netptune are registered trademarks of ITT Corporation.

Connector Product Overview

Audio / Entertainment: GRH

Literature Reference: Audio XL

VEAM GRH

GRH is a quarter turn coupling 5 pin cylindrical power connector for 100 amps continuous service. This is an extremely rugged connector with a compact size in comparison to competitive offerings. Set screw contact termination affords ease of wire installation.

www.ittcannon.com/audio

Applications:

- **Power Distribution Boxes**
- **Portable Power Generation Systems**

Product Features:

- **Finger protected contacts guarantee operator safety**
- **Rubber covered coupling nut for superior grip and durability**
- **Machined aluminum shells with black hard anodize finish**
- **High shock and vibration resistance**

Audio / Entertainment: CIR__FR

Literature Reference: Audio XL

VEAM CIR__FR

Used for HMI lighting applications, these rugged connectors with hard black anodized finish are available with extended coupling nuts for better gripping. Uses metal or composite backshells. Various types of strain relief options are available.

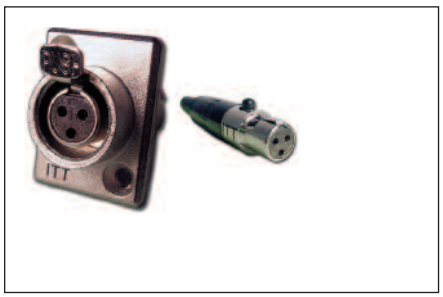
Applications:

- **HMI Lights**
- **Studio Controls**

Product Features:

- **Quick-Disconnect, Positive Lock**
- **UL Recognized**

Audio / Entertainment:Mini-XL



Literature Reference: Audio XL

Cannon Mini-XL

The Mini-XL audio connector is 40% smaller than XLR connectors, 3 to 6 position plugs and receptacles feature precision machined contacts and accommodates both cable and panel mount applications. This quick one touch connect/disconnect circular connector is designed to withstand extreme field use. RoHS Compliant.

www.ittcannon.com/audio

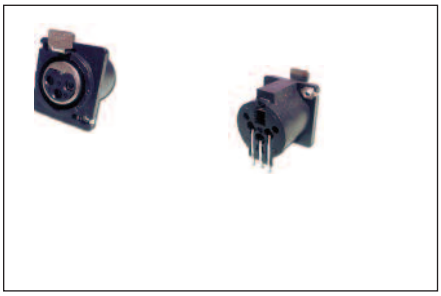
Applications:

- **Broadcast/Entertainment Equipment**
- **Medical Devices**

Product Features:

- **Gold plated contacts standard**
- **Rear cap available in plastic or metal**
- **High density solution**

Audio / Entertainment: XLB-PCB



Literature Reference: Audio XL

Cannon XLB-PCB

XLB male and female PCB flange mount receptacles are a plastic low cost alternative to our metal XLM-PCB connectors. They are ideal for applications where EMI protection and precise mechanical stability are not essential. The XLB-PCB connectors are interchangeable and intermateable with our XLR series. RoHS compliant.

www.ittcannon.com/audio

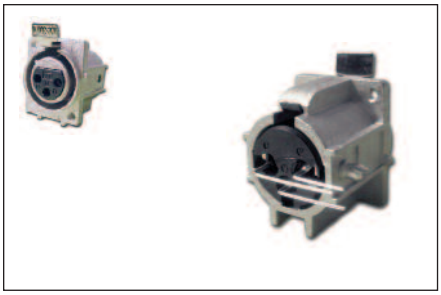
Applications:

- **Broadcast/Entertainment Equipment**
- **Medical and Industrial control devices**

Product Features:

- **Lightweight design.**
- **Separate ground contact**

Audio / Entertainment: XLM-PCB



Literature Reference: Audio XL

Cannon XLM-PCB

XLM male and female PCB metal flange mount receptacles offer durability, reliability, space savings, and greatly improved EMI shielding over our plastic XLB-PCB connectors. Ease of installation is enhanced since the grounding terminal can be used to temporarily fasten the connector to the circuit board during assembly. The XLM-PCB connectors are interchangeable and intermateable with our XLR series. RoHS Compliant.

www.ittcannon.com/audio

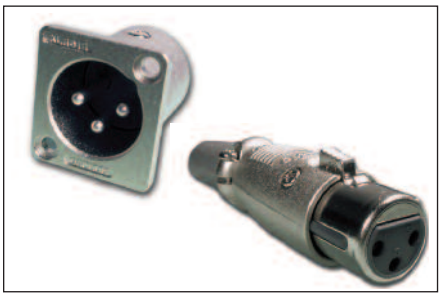
Applications:

- **Broadcasting/Entertainment Equipment**
- **Medical and Industrial control Devices**

Product Features:

- **Separate ground contact.**
- **Space-saving (smaller shell).**

Audio / Entertainment: XLR



Literature Reference: Audio XL

Cannon XLR

First introduced in 1958 ITT's broad range of XLR connectors are extensively used in a wide variety of audio OEM applications. Available in configurations of 2 and 7 positions, our plugs and receptacles offer precision, machined contacts, shock-absorbing rubber insulators, and lightweight aluminum shells. RoHS Compliant.

www.ittcannon.com/audio

Applications:

- **Audio Visual Equipment**
- **Broadcasting Equipment**

Product Features

- **Rugged design to withstand extreme field use.**
- **Quick disconnect latch lock.**

Audio / Entertainment: VEAM VSC

Literature Reference: Audio XL

VEAM VSC

VSC is a threaded coupling 19 pin cylindrical series of connectors for lighting applications. Uses the VEAM superior quality and design concept to provide a very rugged version of the Socapex™, SL-419 connector family. A 7 pin version VSC is now available.

www.ittcannon.com/VEAM

Applications:

- **Break-out & Break-in Cables**
- **Dimmers**
- **Junction Boxes**

Product Features

- **Meets IP67 in a mated condition**
- **UL Recognized**
- **Machined aluminum shells with black hard anodize finish**

Connector Product Overview

BIW Connector Systems: Electric Vehicles: Apollo's Power Connectors, 400/200 Series

BIW Apollo

Apollo EV power connectors, series 200 and 450, are designed for fast charging of battery powered electric vehicles. Connectors are intended to be used with microprocessor controlled off-board charging systems, which supply charging current to vehicle battery packs up to 450 A. Connectors are suitable for outdoor use and are field proven to withstand severe handling.

Applications:

- **Electric Vehicle Fast Charging**
- **High Current Connection**

Product Features:

- **PowerGlide contacts, low insertion forces.**
- **Molded design.**
- **Optional LED lights.**

BIW Connector Systems: Industrial & Military: High Voltage Cable Assembly

BIW High Voltage

The High Voltage Cable Assembly provides corona-free performance at 10,000 V dc, continuous working voltage, in high ambient temperature conditions.

www.ittcannon.com/BIW

Applications:

- **Industrial/Electronic**
- **Military/Aerospace**

Product Features:

- **Gold plated contacts.**
- **Silicone insulation.**
- **Tapered contact inserts.**
- **4-Conductor design.**

BIW Connector Systems: Electrical Power Connectors for Oil and Gas Wells

Literature Reference: Electrical Feedthru Systems for Oil and Gas

BIW Electrical Power Connectors

BIW Electrical Power Connectors have a world-wide reputation for reliability and quality in the oil and gas industry. BIW products are used in the recovery of oil and gas on six continents. From instrumentation connectors that monitor oil and gas production to power connectors that safely provide the energy to operate high powered systems related to oil production, BIW offers a wide product range to meet virtually any requirement.

www.ittcannon.com/BIW

Applications:

- **Oil and Gas Field Production**

Product Features:

- **Approved for Hazardous Zones**
- **Withstand pressures to 10,000 psi**
- **Service up to 5 KV, 200A**

BIW Connector Systems: Underwater: WetSeal

Literature Reference: WetSeal

BIW WetSeal

WetSeal underwater connectors feature heavy duty metal shells and are available with 3 to 84 contacts. Elastomeric inserts provide redundant levels of sealing against fluid intrusion, and most connectors do not require O-rings.

www.ittcannon.com/BIW

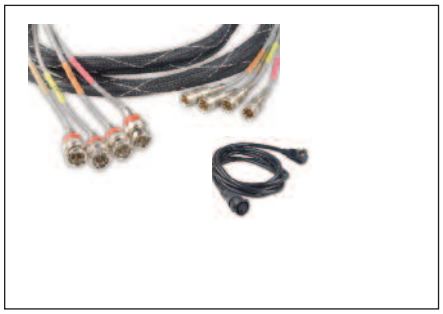
Applications:

- **ROV Military & Commercial**

Product Features:

- **Pressure rated to 10,000 psi.**
- **Low mating forces.**

Cable Assemblies: Cabling Capabilities



Literature Reference: Cable Assemblies

Cabling Capabilities - Cannon & VEAM

What's unique about ITT's cable assembly capabilities is that we have the flexibility to meet demanding schedules and design requirements. From concept to prototyping, engineering to manufacturing.

Applications:

- **Avionics/Military**
- **Communications**
- **Industrial**

Product Features:

- **Customized solutions.**
- **Harness design and/or design consultation.**

Connector Product Overview

Circular: BFR/TBF; MIL-DTL-5015

Literature Reference: ICS Military/Aerospace Sourcebook

Cannon BFR/TBF

BFR/TBFR (bulkhead fitting or thru-bulkhead fitting with rubber insert) pressurized bulkhead receptacles are compatible with standard MS type plugs (3106, 3107, 3108) with corresponding size and contact arrangements.

Applications:

- **Aerospace**
- **Military**

Product Features:

- **Threaded coupling.**
- **TBF allow coupling from both ends.**

Circular: CA/MS-A&B; MIL-DTL-5015

Literature Reference: MS A&B

Cannon CA/MS-A&B

The CA/MS-A&B design meets the performance requirements of MIL-DTL-5015. Available in 50 popular sizes and configurations in Class A (CA/MS-A, solid endbell) and Class B (CA/MS-B, split endbell) versions.

Applications:

- **Industrial Controls**
- **Test Equipment**

Product Features:

- **Threaded Coupling**
- **Machined contacts**
- **RoHS Option w/black zinc plating**

Circular: CA-Bayonet; VG95234

Literature Reference: CA Bayonet

Cannon CA-Bayonet

VG/CA-Bayonet signal and power connectors provide superior performance in extreme environmental conditions. They offer exceptional sealing against the ingress of fluids and will withstand the effects of high vibration.

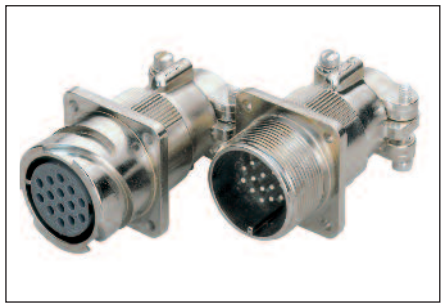
Applications:

- **Heavy Vehicle**
- **Industrial**
- **Transportation**

Product Features:

- **Bayonet coupling.**
- **Audible sound and color-code indicate positive mating.**

Circular: CA-COM



Literature Reference: CA-COM

Cannon CA-COM

CA-COM commercial signal and power connectors are designed to resist aggressive fluids like fuel, oil, etc. Compatible with MIL-DTL-5015 and VG95234 connectors with corresponding size, contact arrangements, and coupling method.

Applications:

- **Commercial**
- **Industrial**

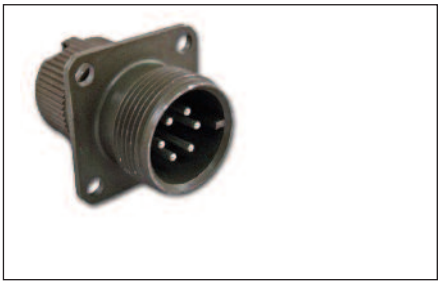
Product Features

- **Threaded and bayonet coupling.**
- **Nickel plated shells.**

www.ittcannon.com/circular

ITT

Circular: CA-KE; MIL-DTL-5015 type



Literature Reference: ICS Military/Aerospace Sourcebook

Cannon CA-KE

Environment-resistant firewall connectors combine moisture resistance with fireproof characteristics. Although fully compatible with standard MIL-DTL-5015 type connectors, to maintain their moisture seal and fire resistance, CA-KE connectors must mate with other CA-KE connectors with corresponding size and contact arrangements.

Applications:

- **Industrial**
- **Military**

Product Features:

- **Threaded coupling.**
- **Fireproof and moisture resistant.**

Circular: CGE; VG96929

Literature Reference: CGE

Cannon CGE

CGE connectors are designed to transmit very high current at low voltage. They meet the mating dimensions, mechanical features and rear panel installation requirements of VG96929.

www.ittcannon.com/circular

Applications:

- **Industrial**
- **Military**

Product Features:

- **Bayonet coupling.**
- **Audible sound and color-code indicate positive mating.**

Circular: CGKX/KPTA; VG96912/VG95328

Cannon CGKX/KPTA

Miniature CGKX/KPTA circular connectors offer high contact density in a rugged metal shell. They feature environmental sealing with fast and easy mating/unmating with bayonet coupling.

Applications:

- **Industrial Automation**
- **Black Box**

Product Features:

- **Bayonet coupling.**
- **Lightweight.**

Circular: CIR

Literature Reference: VEAM CIR

VEAM CIR

The VEAM CIR Series is the most versatile electrical, optical and pneumatic multi-pin connector available today. Designed originally for the hostile environment of Transit applications, CIR has earned acceptance in Military, Commercial, Nuclear and Entertainment markets requiring nearly non-destructible connector systems.

www.ittcannon.com/VEAM

Applications:

- **Mass Transit**
- **Commercial**
- **Military/Defense**
- **Entertainment**
- **Nuclear**

Product Features

- **Quick Quarter Turn Coupling**
- **Environmental Sealing**
- **High shock and Vibration resistance**
- **Over 250 insert arrangements available**

Connector Product Overview

Circular: FVF/FRA/WFB; MIL-DTL-5015 type

Literature Reference: ICS Military/Aerospace Sourcebook

Cannon FVF/FRA/WFB

FVF lightweight firewall connectors are designed according to MIL-DTL-5015, Class K. They utilize fluid resistant elastomers to provide maximum protection against degrading fuels, oils, coolants, and cleaners.FRA connectors are an aluminum shell version of the FRF.WFB connectors are an aluminum shell version qualified to Boeing BACC63CD & CE.

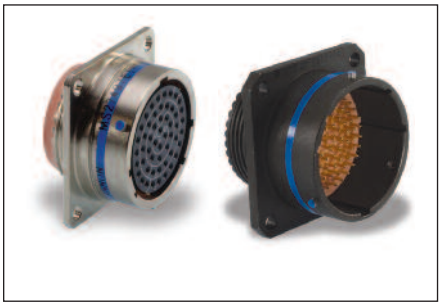
Applications:

- **Commercial Aircraft**
- **Military Aircraft**

Product Features:

- **Threaded coupling.**
- **Front release contacts.**

Circular: KJL/KJ/KJA; MIL-DTL-38999 Series I, II, III



Literature Reference: Cannon Mil-DTL-38999

Cannon KJL/KJ/KJA

High performance, high contact density miniature circular connectors are designed according to MIL-DTL-38999.

www.ittcannon.com/circular

Applications:

- **Military**
- **Satellite**

Product Features:

- **Bayonet and threaded coupling.**
- **Rear release snap-in contacts.**

Circular: KPT/KPSE; MIL-C-26482, Series I; VG95328

Literature Reference: ICS Military/Aerospace Sourcebook

Cannon KPT/KPSE

Miniature circular series with general purpose solder contacts and high performance crimp contacts. They feature fast and easy mating/ unmating with a three point bayonet coupling.

www.ittcannon.com/circular

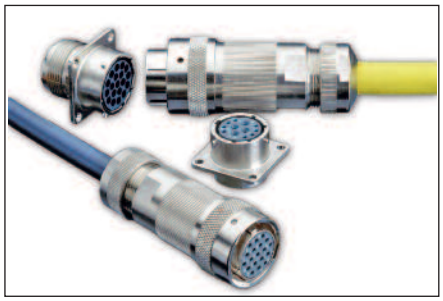
Applications:

- **Industrial**
- **Military**

Product Features:

- **Bayonet coupling.**
- **Closed-entry socket contacts.**
- **RoHS Option w/black zinc plating**

Circular: KPTC/KPTC-NG



Cannon KPTC/KPTC-NG

Miniature KPTC/KPTC-NG (New Generation) connectors offer high contact density in a rugged metal shell. They feature environmental sealing with a fast and easy mating/unmating with bayonet coupling.

www.ittcannon.com/circular

Applications:

- **Black Box**
- **Industrial Automotive**
- **Motion Control**

Product Features:

- **Bayonet coupling.**
- **Lightweight.**

Circular: M83723/CVA; MIL-DTL-83723

Cannon M83723/CVA

M83723/CVA series is high reliability version of the MIL-DTL-5015 type connectors. They utilize removable rear release crimp contacts. They are compatible with MIL-DTL-5015 connectors with corresponding size and contact arrangements.

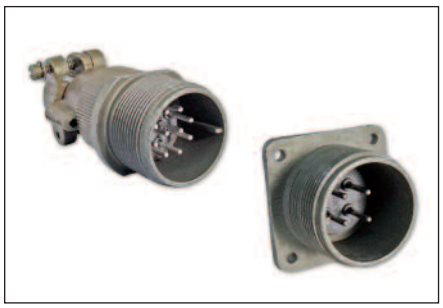
Applications:

- **Military**
- **Space**

Product Features:

- **Threaded coupling.**
- **Rear release crimp**These connectors are not environmentally sealed.

Circular: MS/CA-E/F/R/ER; MIL-DTL-5015



Cannon MS/CA-E/F/R/ER

MS/CA-E/F/R series are designed for extreme environmental sealing and high altitude conditions. MS/CA-ER are lightweight potting connectors that offer exceptional sealing against salt, water, fuels, etc., and will withstand the effects of high vibration.

Applications:

- **Commercial**
- **Industrial**

Product Features:

- **Threaded coupling.**
- **Low cost, high reliability.**
- **RoHS Option w/black zinc plating.**

Literature Reference: ICS Military/Aerospace Sourcebook

Circular: MS/CA-K; MIL-DTL-5015

Cannon MS/CA-K

MS/CA-K Firewall connectors qualified to the fireproof test of MIL-DTL-5015. These connectors are not environmentally sealed.

Applications:

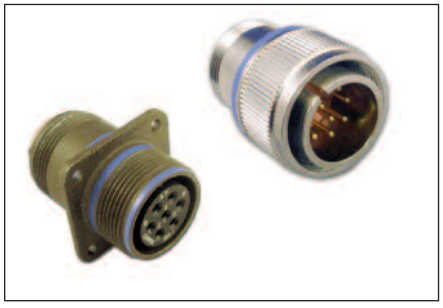
- **Industrial**
- **Military**

Product Features:

- **Threaded coupling.**
- **Crimp or thermocouple (solder) contacts.**

Literature Reference: ICS Military/Aerospace Sourcebook

Circular: MS/CV345*; MIL-DTL-5015 (Navy), Rear Release



Cannon MS/CV345*

Standard circular high environmental (MS/CV345*) connectors according to MIL-DTL-5015 (Navy). They utilize fluid resistant elastomers to provide maximum protection against degrading fuels, oils, coolants, and cleaners.

Applications:

- **Industrial**
- **Military**

Product Features:

- **Threaded coupling.**
- **Intermateable with threaded MIL-C-83723.**

Literature Reference: ICS Military/Aerospace Sourcebook

Connector Product Overview

Circular: Powerlock

Literature Reference: VEAM Powerlock

VEAM Powerlock

The VEAM Powerlock Series is designed for applications up to 660 amps terminating to cables up to 300mm². The contact mating areas are finger touch protected and these connectors are color coded with keyway orientation and locking mechanisms for a safe and reliable connection system.

www.ittcannon.com/VEAM

Applications:

- **Three Phase Motors**
- **Mobile Generators**
- **Lighting Distribution Panels**
- **Theme Park Rides**

Product Features:

- **Finger touch Protected contacts**
- **Meets IP67 in a mated condition**
- **UL Recognized**

Circular; VEAM PT/PTSE/CPT/Audio

Literature Reference: VEAM PT

VEAM PT/PTSE/CPT/Audio

Miniature circular connectors based on M26482 Series 1 with additional features to meet UK Fighting Vehicle requirements including many special backshells and accessories.

www.ittcannon.com/VEAM

Applications:

- **Military Vehicles**
- **Communications Industrial**

Product Features:

- **Retained coupling nuts on plugs**
- **Heavy (arctic) ribbed coupling nuts available**
- **Alternate keyway polarization and insert orientations to prevent cross-plugging**
- **Available with grounding springs for EMC shielding**
- **Positive coupling 3 bayonet construction with audible mate**
- **Solder or crimp terminations**
- **Wide range of cable accessories**

Circular: PV/PV-TBF; MIL-C-26482, Series 2

Literature Reference: ICS Military/Aerospace Sourcebook

Cannon PV/PV-TBF

Miniature environmental circular series. Designed according to MIL-C-26482, Series 2. They feature fast and easy mating/unmating with a three point bayonet coupling.

Applications:

- **Aerospace**
- **Space Shuttle**

Product Features:

- **Bayonet coupling.**
- **Closed-entry socket contacts.**

Circular; PVW/PVX

CANNON PVW/PVX

The Cannon PVX and PVW range of environment resistant connectors based on M26482 series 2, but with inserts designed to operate between -65° C and +200°C.

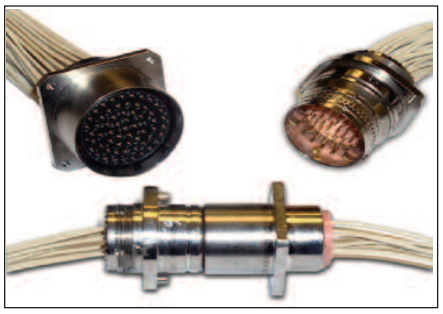
Applications:

- **Military Aircraft**
- **Commercial Aircraft**
- **Fighting Vehicles**

Product Features:

- **Intermateable with m26481 Series 1 and 2, m83723, Pattern 602 and HE301 ranges**
- **Broad range of connector styles and insert layouts including Panavia and Airbus specifications**
- **Two atmosphere sealed prssure bung feed-through solutions available**
- **Hermetic and Filtered styles available**
- **Extensive range of special contacts and accessories**
- **Finishes include Cadmium, Nickel, and Black anodized**

Circular; RPTT



VEAM RPTT

Circular connectors based on D38999 Series 3 insert arrangements in shells for 500hr salt spray environment with axial float features and panel lock mechanism for blind-mate panel to panel applications. Variants also include direct harness feature to a void additional backshell requirements.

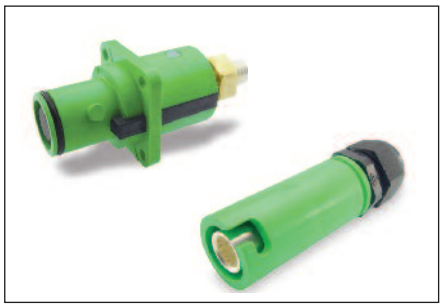
Applications:

- **Maritime aircraft**
- **Naval Radar**
- **Coastal Defense systems**

Product Features:

- **Shell sizes from 10 to 24 with standard and mixed contact layouts available**
- **Compliant with D38999 performance specifications**
- **Double the density on panels over conventional D28999 mated pairs**
- **Unique T83 plating gives 500hr salt spay resistance where Cadmium is not allowed**

Circular: Snaplock



VEAM Snaplock

The VEAM Snaplock connector series is a miniature single-pole power cable hook up system offering a 250amp continuous current rating capability while maintaining minimal physical dimensions.

www.ittcannon.com/VEAM

Applications:

- **High Power Lighting**
- **Battery Powered Vehicles**
- **Hybrid Buses**
- **Mass Transit Systems**

Product Features:

- **Finger Touch Protected pin contacts**
- **Meets IP67 in a mated condition**
- **Low contact resistance**

Connector Product Overview

Circular: Trinity™ MKJ Mini Circular

Cannon Trinity™ MKJ Mini Circular

The Trinity family of micro circular connectors is a smaller version of the Mil-DTL-38999 Series III Connector. This miniature connector series has several different shell sizes offering up to 85 contact positions on 0.076 contact spacing. Contact options include standard #23 AWG pin and socket contacts as well as pogo spring probe/pad contact system. The family of products offers several different coupling mechanisms including threaded coupling and push/pull coupling versions. The connectors are designed to withstand the harsh environments found in Defense Electronics and Industrial applications.

www.ittcannon.com/trinity

Applications:

- **Tactical Communications**
- **Avionics**
- **Defense Electronics**
- **Medical Electronics**

Product Features:

- **.076 contact spacing**
- **Pogo Spring Probe contact System**
- **Touch Pad Receptacle Inserts**

Circular: Nemesis™

Cannon Nemesis™

The Nemesis series connector has been designed to meet the requirements of Future Soldier Technology and is miniature, robust, sealed and salt spray resistant.

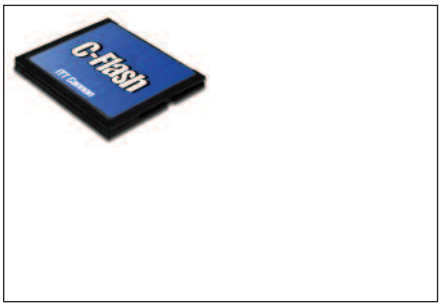
Applications:

- **Tactical Radios**
- **Computing Devices**

Product Features:

- **Robust Stainless Steel Construction**
- **Resistant to Salt spray for up to 500 hours**

Compact Flash Packaging Kit: C-Flash™ Cards and Connectors



Literature Reference: PC Card and Memory Card

Cannon C-Flash Cards and Connectors

Compact Flash product family utilizes ultrasonically welded covers and 50 pin I/O connectors. This packaging process produces the most robust and rigid products in the industry and allows OEM's to streamline their manufacturing process and deliver cost effective solutions in the minimum production time. Meets all CFA and complies with PCMCIA ATA electronic Standards.

www.ittcannon.com/pccard

Applications:

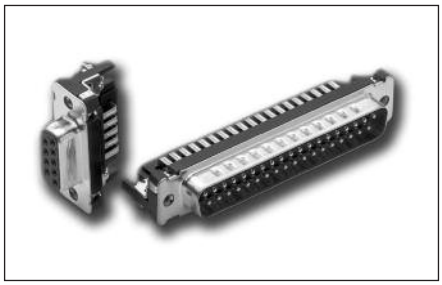
- **Personal Computers and Digital Cameras**
- **Portable Electronic Devices**

Product Features:

- **Small, lightweight and robust**
- **Available in both Type I and Type II packages**
- **Connectors available with multiple offsets**

Connector Product Overview

D Subminiature: D*, Eurostyle, CECC 75 301 802 (DIN 41652) 90º PCB



Cannon D*, Eurostyle

The Eurostyle D Subminiature (D*) low profile 90° PC tail connector is designed according to the CECC 75 301 802 (DIN 41652) European specification. The special low profile configuration provides additional space for the end user. D* connectors are compatible with all standard D subminiature connectors according to CECC 75 301 802 (DIN 41652).

Applications:

- **Communications**
- **Industrial**

Product Features:

- **Available in Performance Class 1, 2 and 3, according to CECC 75 301 802 (DIN 41652).**
- **Clinch nut or jackpost with M3 or #4-40 UNC thread.**

D Subminiature: D*, Solder Cup Termination, Tin Shells, Cable Mount

Literature Reference: D Subminiature

Cannon D*, Solder Cup, Cable Mount

The D*, solder cup termination connectors with tin shells are used for cable or panel mount wiring applications. Solder cup connectors provide maximum flexibility and performance for applications requiring discrete solder terminations and field repair without termination tooling.

www.ittcannon.com/dsubs

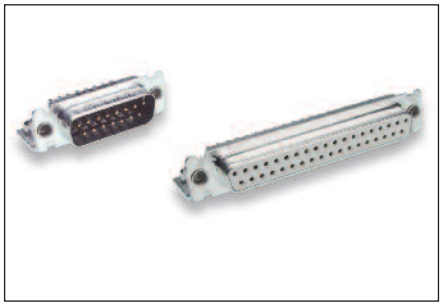
Applications:

- **Communication Systems**
- **Transportation**

Product Features:

- **High performance commercial class connectors.**
- **Three contact performance classes.**

D Subminiature: D*, Solder Termination, 90º PCB- European Footprint 10,2♦ or 9,4mm♦♦



Literature Reference: D Subminiature

Cannon D*, 90° PCB

The D*, 90° solder termination (machined contact) connectors are available for high performance uses according to CECC 75 301 802 (DIN 41652). Available with European footprint 1AON contacts, plastic and metal brackets, #4-40 or M3 threads and stamped pushfits/boardlocks.

♦Connector footprint measured from the front shell.

♦♦Connector footprint measured from the rear shell.

Applications:

- **Information Systems**
- **Medical**

Product Features:

- **High performance commercial class connectors.**
- **Three contact performance classes.**

D Subminiature: D*: Solder Termination, Straight PCB- European PC Tails

Literature Reference: D Subminiature

Cannon D*, Straight PCB

The D*, straight solder termination (machined contact) — European PC tail connectors are available for high performance uses according to CECC 75 301 802 (DIN 41652). Available with European length OL2 and OL4 contacts.

www.ittcannon.com/dsubs

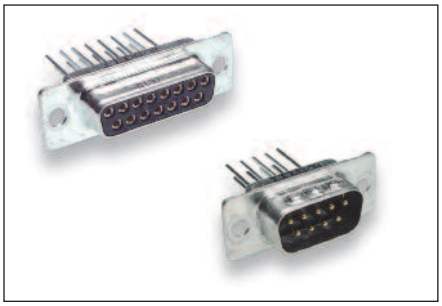
Applications:

- **Medical**
- **Test Equipment**

Product Features

- **High performance commercial class connectors.**
- **Three contact finish performance classes.**

D Subminiature: D*, Wire Wrap Post Termination, Straight PCB



Literature Reference: D Subminiature

Cannon D*, Straight Wire Wrap Post

The D*, straight wire wrap post termination connectors are available for high performance uses according to CECC 75 301 802 (DIN 41652). Contacts available in two popular lengths.

www.ittcannon.com/dsubs

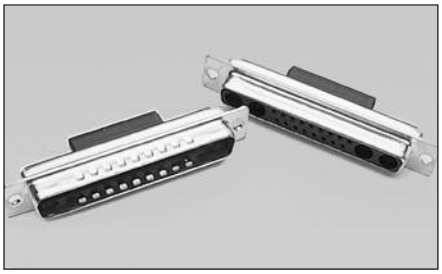
Applications:

- **Communication Systems**
- **Medical**

Product Features:

- **High performance commercial class connectors.**
- **Wrap post for 3 wraps.**

D Subminiature: D*A, Combo D™



Literature Reference: ZD

Cannon D*A, Combo D

Combo D, D*A connector series offers the advantages of an industry standard shield I/O interconnect, with the flexibility of a customized special, designed for any application. A combination of signal, high power, coaxial, high voltage, and fiber-optic contacts can be used.

www.ittcannon.com/dsubs

Applications:

- **Video Coaxial Transmission (75 ohm)**
- **RF and Telecom Transmission (50 ohm)**
- **Power Interconnects**

Product Features:

- **Crimp and poke.**
- **Low Cost**
- **Stainless or carbon shells available**

D Subminiature: D*A, Crimp Connectors without Contacts, Cable Mount

Literature Reference: ZD

Cannon D*A, Cable Mount

The D*A, crimp connectors without contacts are designed for reliable, fast cabling. Available in the industry standard D*A housing, the connectors provide a low-cost, quick cabling alternative compared to soldering.

www.ittcannon.com/dsubs

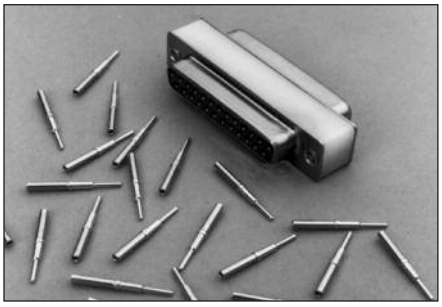
Applications:

- **Information Systems**
- **Transportation**

Product Features:

- **Crimp contacts available in reels of 5,000 and 400.**
- **Application tooling:**
  – Hand or automatic
  – Stripper crimper

D Subminiature: D*BMA, Bulkhead/Connector Saver



Literature Reference: D Subminiature Accessories

Cannon D*BMA, Bulkhead/Connector Saver

The D*BMA feed-thru bulkhead connector is used when it is desirable to connect and disconnect a cable on both sides of a bulkhead or panel. This connector can also be used as a connector saver in test equipment applications where more than normal mating/unmating would soon degrade a permanently mounted connector.

Applications:

- **Test Equipment**

Product Features:

- **Little Caesar rear insertion, rear release contact retention system.**
- **Durable design.**

Connector Product Overview

D Subminiature: D*D, Environmental D

Cannon D*D, Environmental D

The D*D environmental series is a rectangular connector in the popular D Subminiature shell configuration which meets all applicable performance requirements of MIL-C-24308. D*D is designed to meet demand for sealed subminiature plugs with superior vibration and moisture resistance characteristics.

Please Note: The D*D series is not intermateable with other D Subminiature connectors.
Standard, high density, and Combo-D versions are available.

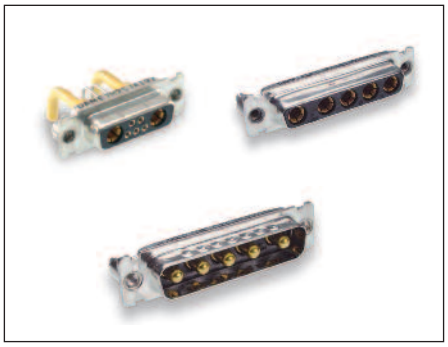
Applications:

- **Aircraft**
- **Missile**

Product Features:

- **Little Caesar rear insertion, rear release contact retention system.**
- **MIL-C-24308 compatibility.**

D Subminiature: D*M, Combo D™



Literature Reference: Combo D

Cannon D*M, Combo D

Combo D, D*M connector series offers the advantages of an industry standard shield I/O interconnect, with the flexibility of a customized special, designed for any application. A combination of signal, high power, coaxial, high voltage, and fiber-optic contacts are available.

www.ittcannon.com/dsubs

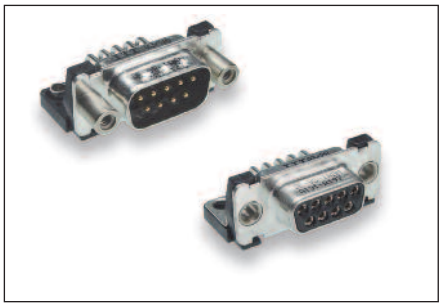
Applications:

- **Power Interconnects (Up to 40 A)**
- **RF and Telecom Transmission (50 Ω)**

Product Features:

- **Standard and European footprints.**
- **Pre-installed 75 Ω/50 Ω coaxial or high power contacts (one part number) or High power, High Voltage, Fiber Optic inserts.**
- **Stainless or carbon steel shells available**

D Subminiature: D*M Solder Termination 90° PCB, Standard Footprint .318♦ or .283 inch♦♦



Literature Reference: D Subminiature

Cannon D*M, 90° PCB

The D*M, 90° solder termination (machined contact) PCB connectors, equivalent to MIL-DTL-24308 qualified versions (except for finishes), for use with printed circuit boards in demanding applications. HIgh density layouts are available in D*MA versions.

♦Connector footprint measured from the front shell
♦♦Connector footprint measured from the rear shell

www.ittcannon.com/dsubs

Applications:

- **Communication Systems**
- **Test Equipment**

Product Features:

- **UL file number E8572.**
- **Metal bracket with threaded insert standard.**
- **Optional screw locks and boardlocks.**
- **Stainless or carbon steel shells available**

D Subminiature: D*M, Solder Termination, Straight PCB, Standard PC tails

Literature Reference: D Subminiature

Cannon D*M, Straight PCB

The D*M, straight solder termination (machined contact) – standard PC tail connectors, equivalent to MIL-DTL-24308 qualified versions (except for finishes) for printed circuit boards and backplanes in demanding applications. High density layouts are available in D*MA versions..

www.ittcannon.com/dsubs

Applications:

- **Aerospace**
- **Information Systems**

Product Features:

- **UL file number E8572.**
- **Optional vertical standoffs, screw locks and boardlocks available.**
- **Stainless or carbon steel shells available**

ITT

D Subminiature: D*M/D*MA, Space/High Reliability; MIL-DTL-24308

Literature Reference: D Subminiature

Cannon D*M/D*MA, Space/High Reliability

Space/high reliability D*M and D*MA high performance D Subminiature connectors meet stringent tests for outgassing and residual magnetism.

D*M and D*MA connectors meet the performance and dimensional requirements of the ESA/SCC 3401 and MIL-DTL-24308 specifications.

www.ittcannon.com/dsubs

Applications:

- **Medical**
- **Space- Low/High Orbit Satellites**

Product Features:

- **Non-Magnetic**
- **No outgassing**
- **Brass or aluminum shells available**

D Subminiature: D*MM/D*MAM, Military/High Reliability;MIL-DTL-24308

Literature Reference: D Subminiature

Cannon D*MM/D*MAM, Military/High Reliability

The D Subminiature D*MM and D*MAM connectors with fixed contacts in solder cup, straight and 90° PC contact terminations are qualified to MIL-DTL-24308. These high-reliability D Subminiature connectors are the finest quality connectors available at the most competitive prices in the market.

www.ittcannon.com/dsubs

Applications:

- **Aerospace**
- **Transportation**

Product Features:

- **Suitable for a variety of cable and printed circuit board options.**
- **Solder Cup version accommodates wire size #20 AWG maximum.**
- **Stainless or carbon steel shells available**

D Subminiature: D*NG, Pressfit, Straight PCB

Literature Reference: D Subminiature

Cannon D*NG, Pressfit, Straight PCB

The D*NG, straight pressfit termination is based upon the specification CECC 75 301 802. These connectors provide a low-cost alternative to traditional through hole solder contacts. Utilizing stamped "Eye of the Needle" compliant contact tails per IEC-352-5, the parts are quickly and easily mounted onto PCBs without soldering, crimping, or specialized tooling.

www.ittcannon.com/dsubs

Applications:

- **Information Systems**
- **Test Equipment**

Product Features:

- **Quick and easy press-in installation without specialized tooling.**
- **"Spoon" socket contact provides improved interface**

D Subminiature: D*SF

Cannon D*SF

The D*SF connectors allow reliable, fast, and economical termination of ribbon cable without stripping and without splicing. They are intermateable with all D Subminiature connectors and offer an extremely low profile.

Applications:

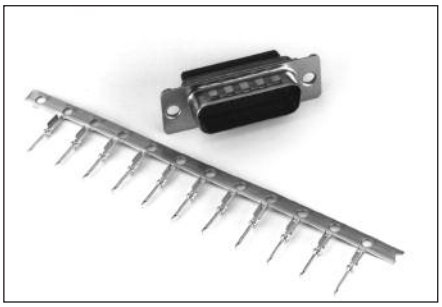
- **Communications**
- **Daisy-chain**

Product Features:

- **Low profile.**
- **No splitting of ribbon cable.**

Connector Product Overview

D Subminiature: D*A



Literature Reference: ZD

Cannon D*A

The D*A series, Cannon's low cost crimp-type D Subminiature connector, offers both machined and stamped contacts for crimp applications. Available in UL 94V-O material, D*A series features a snap-in, rear-release contact.

www.ittcannon.com/dsubs

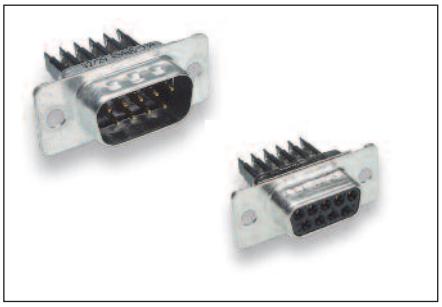
Applications:

- **Commercial Cabling**
- **Telecom/Industrial**

Product Features:

- **Corrects misaligned contacts.**
- **Mates with existing D Subminiature connectors.**

D Subminiature: D*W, Discrete Wire IDC



Literature Reference: D Subminiature

Cannon D*W, Discrete Wire IDC

The D*W connector provides insulation displacement connection technology for either solid or stranded wires. With D*W, speed of cabling is increased significantly over solder cup or crimp solutions. Contacts are easily removable and replaceable. Several specialized accessories (including shield cans, ferrules, and plastic boots) are available to provide a complete product solution.

www.ittcannon.com/dsubs

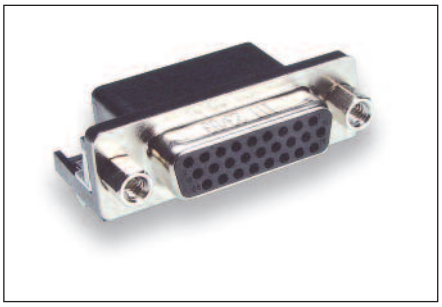
Applications:

- **Industrial**
- **Telecom**

Product Features:

- **Quick harnessing capability with simple hand or semi-automatic tooling.**
- **Accepts #30 AWG to #20 AWG**

D Subminiature: ZD*, Solder Cup Termination, Tin Shells, Cable Mount



Literature Reference: ZD

Cannon ZD*, Solder Cup, Cable Mount

The ZD*, solder cup termination (stamped and formed contact) connectors with tin shells are used for cable or panel mount wiring applications. Solder cup connectors provide maximum flexibility and performance for applications requiring discrete solder terminations.

www.ittcannon.com/dsubs

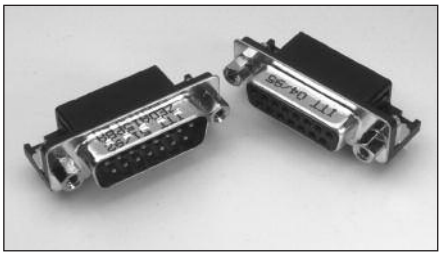
Applications:

- **Communications Systems**
- **Test Equipment**

Product Features:

- **Economical.**
- **Stamped solder cup contacts, 5 A current capacity.**

D Subminiature: ZD*, 90° PCB-European Footprint 10,2 mm♦, ZED*, 90° PCB-US Footprint, .318 inch



Literature Reference: ZD

Cannon ZD*, 90° PCB

The ZD*, 90° solder termination (stamped and formed contact) connectors are available for applications where price is the primary driver. They are available with integrated plastic brackets with European footprints.

* Connector footprint measured from the front shell.

www.ittcannon.com/dsubs

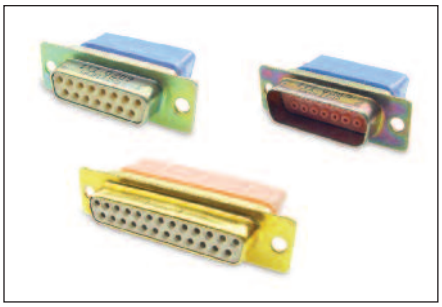
Applications:

- **Medical**
- **Transportation**

Product Features:

- **Economical.**
- **Stamped PCB contacts, 5 A current capacity.**

D Subminiature: GD*, Grommet D



Cannon GD*, Grommet D Subminiature

Cannon GDI* connectors are ideal for applications requiring environmental (moisture) protection with high reliability. Sealing is accomplished by bonding components inside the shell and using a resilient interfacial seal and a grommet.

Applications:

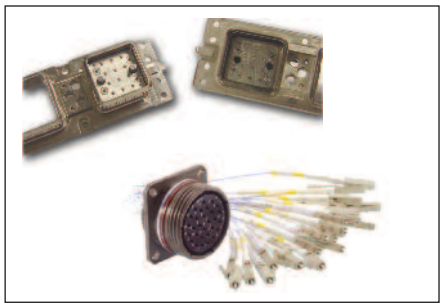
- **Aerospace**
- **Military**
- **Telecommunications**
- **Avionics**
- **Space-Satellites**

Product Features

- **Mil-DTL-24308 Compatibility**
- **No outgassing**
- **Environmental Protection**
- **Versatility**
- **High Reliability**
- **IP 67 Rated**
- **Crimp and PCB terminations**

Connector Product Overview

Fiber Optics: FOHC (Fiber Optic Hybrid Contacts) Termini



Literature Reference: Fiber Optics

Cannon FOHC

ITT Fiber Optic Termini are a standard in the industry. We offer the most complete line of fiber optic termini engineered to fit today's MIL-Spec Circular, Rack & Panel, Edgecard, LRM and D-Sub Connectors.

www.ittcannon.com/fiberoptics

Applications:

- **Harsh Environment**
- **Shipboard**
- **Military Electronics**

Product Features:

- **Conforms to MIL-T-29504 fiber optic termini.**
- **Fits any size 16 cavity with no modification to connector**
- **Both pin and socket termini end faces are easily cleaned**

Fiber Optics: FOMC (Fiber Optic Multi-Channel) Connectors

Literature Reference: Fiber Optics

Cannon FOMC

ITT Cannon's FOMC series fiber optic connectors are designed to meet the needs of military and commercial customers who require a rugged environmental multi-fiber filed connector.

www.ittcannon.com/fiberoptics

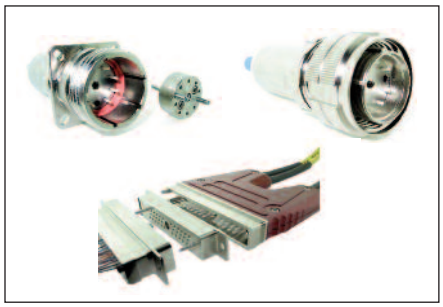
Applications:

- **Ground Tactical Communications**
- **Field Broadcase Network**
- **Mobile Communications Systems**

Product Features:

- **Environmentally Sealed**
- **Removable insert for easy access to termini**
- **Fiber Flex Chamber provides space for fiber service loop**

Fiber Optics: PHD (Photonics HIgh Density) Connectors



Literature Reference: Fiber Optics

Cannon PHD

ITT Cannon's PHD Connector System provides the industry's highest and most stable performance for multi-channel interconnects. The PHD design delivers reduced insertion loss, less channel-to-channel variance and easy integration into High Density Interconnect Hardware.

www.ittcannon.com/fiberoptics

Applications:

- **Military Electronics**
- **Medical**
- **Optical Networking**

Product Features:

- **Removable insert allows direct end-face access for terminus cleaning/inspection**
- **High Density, 50 channels per sq. inch**
- **Common Termini Solution deployable across all fiber sizes and types (SM & MM)**

Fiber Optics: Harness Solutions

Literature Reference: Fiber Optics

Cannon Fiber Optic Harness Solutions

ITT Cannon has a world class Fiber Optic facility with proven reputation of delivering high quality, high performance fiber optic cable assemblies for the Telecommunication, Automotive, Commercial Aircraft, Data Communication, Industrial, Medical and Military Electronic Industries. ITT's fiber optic production facility is staffed with both project and manufacturing engineers along with highly skilled technicians/operators which work to strict military and commercial standards. Our in-house capabilities allow us to design, manufacture and test, Standard and highly custom multi-channel Cable/Harness assemblies.

www.ittcannon.com/fiberoptics

ITT

Filter: CFKJA (Subminiature Chip on Flex)

Literature Reference: Cannon Filter

Cannon CFKJA: Chip on Flex

These filter connectors utilize new state of the art Chip-on-Flex technology that offers significant improvement in Thermal shock and vibration performance. These are available in all standard filter configurations.

www.ittcannon.com/filter

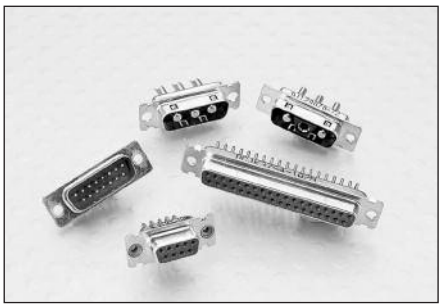
Applications:

- **Avionics**
- **Communications**

Product Features:

- **Chip-on-Flex Filtering**
- **Rugged construction**
- **Meet 1000 cycles of thermal shock**

Filter: D*JK/D*JT (Commercial D Subminiature)



Literature Reference: D Subminiature

Cannon D*JK/D*JT

D*JK and D*JT filter connectors utilize D Subminiature standard components and accessories which deliver 100% compatibility with equivalent products according to CECC 75 301 802 (DIN 41652) and offer a cost-effective production. They also provide excellent protection against EMI/RFI.

www.ittcannon.com/filter

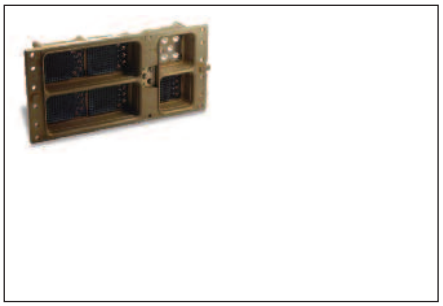
Applications:

- **EMI/RFI Sensitive Electronics**
- **Telecommunication Transmission**

Product Features:

- **HF-tightness and mechanical stability by closed backshell.**

Filter: TBKA, ARINC Series 600 Standard (Rack & Panel)



Literature Reference: Cannon Filter

Cannon TBKA, ARINC Series 600 Standard

These connectors provide solutions to high mating forces of pluggable modules in a rack by approximately two-thirds. Filter adaptations include either single module (gang) or complete connector filtering. The standard version features non-removable contacts with PC tail termination. Other versions include crimp piggyback rear release contacts and/or removable front sockets.

www.ittcannon.com/filter

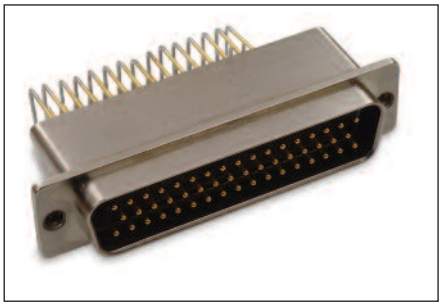
Applications:

- **TCAS Commercial Avionics**
- **Wind Shear**

Product Features:

- **Low insertion force contacts.**
- **Up to 800 (size 22) contacts in one connector.**

Filter: TD1* (D Subminiature)



Literature Reference: Cannon Filter

Cannon TD1*

These filter connectors have been developed to meet the industry's demands for improved control of EMI/RFI. They combine the functions of a standard electrical connector and feed-thru filters into one compact package. They are designed for applications where space and weight are the prime considerations.

www.ittcannon.com/filter

Applications:

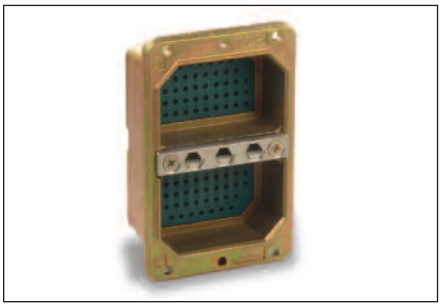
- **Avionics**
- **Fire Control Systems**

Product Features:

- **Intermateable with all standard D Subminiature connectors.**
- **Intermateable with MIL-C-24308 connectors and meets applicable portions of this specification.**

Connector Product Overview

Filter: TDPX, ARINC Series 404 Standard (Rack & Panel)



Literature Reference: Cannon Filter

Cannon TDPX, ARINC Series 404 Standard

These filter connectors are used primarily on commercial and military aircraft for radio and instrumentation equipment. They are available in single through four gang versions with standard ARINC shells and polarizing posts. They are intermateable with the standard DPX connectors.

www.ittcannon.com/filter

Applications:

- **Commercial/Military Avionics**
- **Military Communications**

Product Features:

- **Small packaging.**
- **Large selection of contact arrangements.**

Filter: TKJL/TKJ/TKJA/TKJB (Subminiature Circular)

Literature Reference: Cannon Filter

Cannon TKJL/TKJ/TKJA/TKJB

These subminiature circular filter connectors are designed to combine the functions of a standard electrical connector with a feed-thru filter into one compact package. They are designed to meet the applicable portions of MIL-C-38999, Series I, II, III, IV. These connectors feature arrangements that will accommodate up to 128 contacts.

www.ittcannon.com/filter

Applications:

- **Avionics**
- **Communication**

Product Features:

- **Series I – TKJL**
- **Series II – TKJ**
- **Series III – TKJA**
- **Series IV – TKJB**

Filter: TMDM (Microminiature D Subminiature)

Literature Reference: Cannon Filter

Cannon TMDM

These microminiature filter connectors offer higher contact density than traditional rectangular connectors, making them ideally suited for applications where space is limited and EMI/RFI filtering is required. They are designed to meet applicable portions of MIL-PRF-83513.

www.ittcannon.com/filter

Applications:

- **Jamming Devices**
- **Telemetry Systems**

Product Features:

- **Transverse monolith capacitive filter for EMI/RFI shielding.**
- **Rugged aluminum one-piece shell.**

Filter: TPV (Miniature Circular)

Literature Reference: Cannon Filter

Cannon TPV

These miniature circular filter connectors are designed to combine the functions of a standard electrical connector and a feed-thru into one compact package. They are designed to meet applicable portions of MIL-C-26482, Series 2 and MIL-C-83723, Series 1.

www.ittcannon.com/filter

Applications:

- **Avionics Systems**
- **Fire Control Units**

Product Features:

- **Small packaging.**
- **Total EMI protection.**

Hermetic: BFH/TBFH; MIL-C-5015 (Standard Circular)

Literature Reference: Hermetic

Cannon BFH/TBFH

The BFH is a hermetically sealed version of the BFR (Bulkhead Fitting Receptacle). The TBFH is a hermetically sealed version of the TBF (Thru-Bulkhead Fitting Receptacle). It is flange mounted and mates with 3106, 3107 and 3108 plugs.

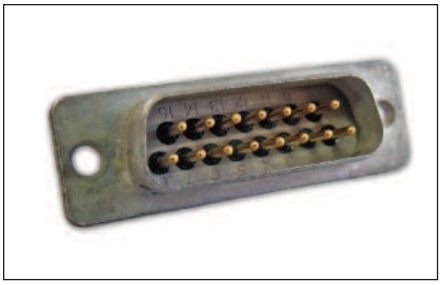
Applications:

- **Commercial Aircraft**
- **Industrial**
- **Military**

Product Features:

- **Meets the requirements of MIL-C-5015.**

Hermetic: D*H/D*TBH; MIL-DTL-24309 (D Subminiature)



Literature Reference: D Subminiature

Cannon D*H/D*TBH

The hermetically sealed D*H and D*TBH connectors are designed to meet environmental conditions of extreme pressure differential. These connectors are part of the D Subminiature series and are qualified to MIL-DTL-24308. The hermetic seal prevents leakage and subsequent accumulation of corrosive moisture behind the connector.

www.ittcannon.com/dsubs

Applications:

- **Commercial Aircraft**
- **Industrial**
- **Military**

Product Features:

- **Qualified to MIL-DTL-24308.**

Hermetic: GS; MIL-C-5015 (Standard Circular)

Literature Reference: Hermetic

Cannon GS

Cannon hermetic sealed GS (Glass Sealed) connectors are designed for applications where a vacuum, inert gas, or a constant or controlled pressure is required to eliminate adverse effects created by atmospheric changes.

Applications:

- **Commercial**
- **Industrial**
- **Military**

Product Features:

- **Meets the requirements of MIL-C-5015.**

Hermetic: KJLY/KJY/KJAY; MIL-DTL-38999, Series I, II, III (Miniature Circular)

Literature Reference: Hermetic

KJLY/KJY/KJAY

Cannon's KJLY, KJY and KJAY connectors are hermetically sealed and designed to meet the critical performance and design requirements of MIL-DTL-38999. Engineered for high density circuitry capabilities, these connectors are designed to operate at temperatures ranging from –65°C to 200°C (–85°F to 392°F).

Applications:

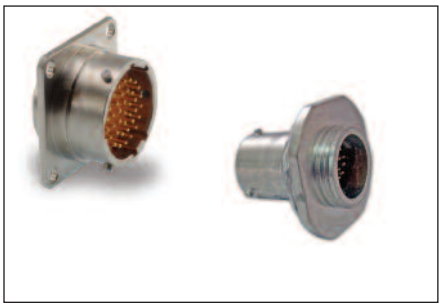
- **Industrial**
- **Military**

Product Features:

- **Qualified to MIL-DTL-38999.**

Connector Product Overview

Hermetic: KPTH/PVAH; MIL-C-26482, Series I,II (Miniature Circular)



Literature Reference: Hermetic

Cannon KPTH/PVAH

Cannon's hermetically sealed KPTH and PVAH (MIL-C-26482, Series I and II) connectors are designed for those applications and environments that require delicate mechanisms to be protected from variations in atmospheric pressure.

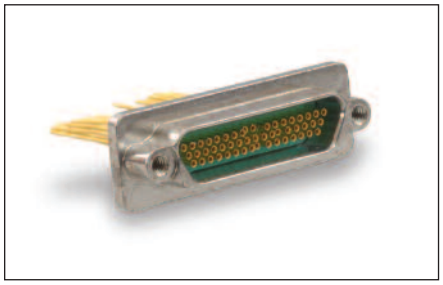
Applications:

- **Industrial**
- **Military**
- **Transportation**

Product Features:

- **Series I is qualified to MIL-C-26482.**

Hermetic: MDMH; MIL-PRF-93513 (Microminiature D Subminiature)



Literature Reference: Hermetic

Cannon MDMH

MDMH microminiature hermetic connectors feature compression glass sealed contacts into a steel shell with a high grade plastic "front end" insulator. An interfacial seal provides environmental protection when mated. MDMH receptacles are soldered to a chassis or container providing a completely leak-proof unit.

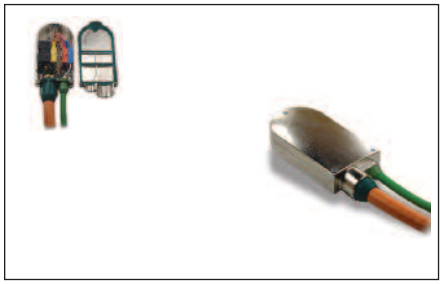
Applications:

- **Commercial Aircraft**
- **Industrial**
- **Military**

Product Features:

- **Meets the requirements of MIL-PRF-83513.**

Industrial Motors: CmX-Servo/Linear



Literature Reference: Cannon Servo Motor

Cannon CmX

CmX connector series feature a simplified design that replaces two sets of conventional circular connectors in servo/linear motor applications. CmX connectors incorporate both signal and power cables into a single housing resulting in 50% less weight and piece parts, lower profile, single footprint, and 50% reduction in cost over typical circular connectors. Available in IP65 and IP67 sealing. RoHS Compliant.

www.ittcannon.com/cmx

Applications:

- **Factory automation, material handling**
- **Industrial motion control, Robotics**
- **Packaging, conveyor systems**

Product Features:

- **Meets DIN EN61984 safety compliance**
- **Power Range to 40 Amps, Signal Range to 3 Amps**
- **Separate sealed entries for power and feedback cables**

Connector Product Overview

Microminiature: Micro Line-MDM (Micro D Metal); MIL-DTL-83513

Literature Reference: Microminiature

Cannon MDM

The Micro D Metal Shell (MDM) connectors meet or exceed the applicable requirements of MIL-DTL-83513. MDM connectors utilize the unique Micropin/Microsocket contact design system. This system features seven points of electrical contact. It assures high normal force, excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

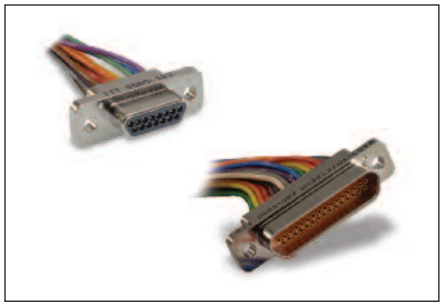
Applications:

- **Military Electronics**
- **Navigation Systems**
- **Oil Exploration**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line-MIL-DTL-83513 Micro D Connectors



Literature Reference: Microminiature

Cannon M83513

ITT is qualified to the MIL-DTL-83513 specification. ITT M83513 connectors meet or exceed all of the performance requirements of MIL-DTL-85313. ITT's m83513 connectors utilize the unique twist pin contact system. This system features seven points of electrical contact. It assures excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

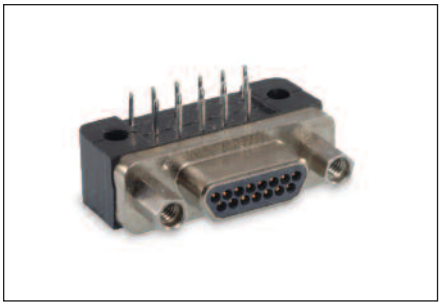
Applications:

- **Military Electronics**
- **Navigation Systems**
- **Oil Exploration**
- **Space Systems**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line-MDM (Micro D-Printed Circuit Board); MIL-DTL-83513



Literature Reference: Microminiature

Cannon MDM-PCB

The Micro D Metal Shell Printed Circuit Board (MDM-PCB) connectors meet or exceed the applicable requirements of MIL-DTL-83513. MDM-PCB connectors utilize the unique Micropin/Microsocket contact design system. This system features seven points of electrical contact. It assures high normal force, excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

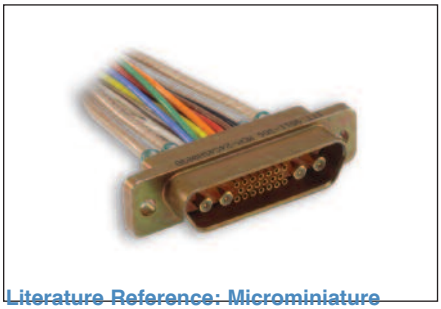
Applications:

- **Military Electronics**
- **Robotics**
- **Satellites**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line-MDM C/P (Micro D Metal Coaxial/Power)



Literature Reference: Microminiature

Cannon MDM C/P

The Micro D Metal Shell Coaxial/Power (MDM C/P) connectors meet or exceed the applicable requirements of MIL-DTL-83513. Coaxial and Power contacts can be interchanged as desired and offer the versatility of combining with signal lines in the same connector.

www.ittcannon.com/micro

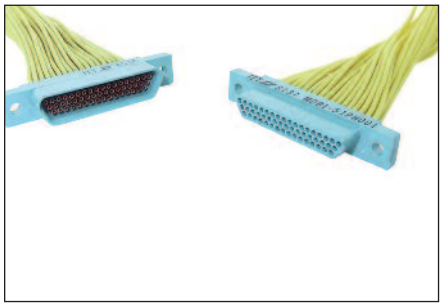
Applications:

- **Commercial Avionics**
- **Defense Electronics**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line-MD (Micro D Plastic); Mil-DTL-85313



Literature Reference: Microminiature

Cannon MD

The Micro D (MD) microminiature rectangular connectors meet or exceed the applicable requirements of MIL-DTL-83513. MD connectors are designed for use in applications requiring highly reliable, extremely small, lightweight connectors. Connectors are available in two insulator materials, allowing wide versatility in most applications required by industry.

www.ittcannon.com/micro

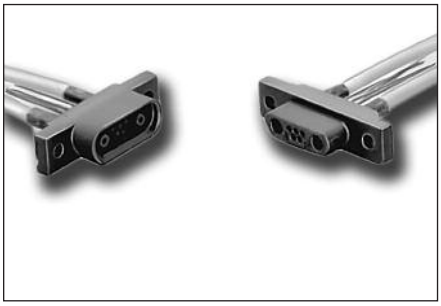
Applications:

- **High Speed Data**
- **Test Equipment**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line-MDB C/P



Literature Reference: Microminiature

Cannon MDB C/P

The Micro D (MD) microminiature rectangular connectors meet or exceed the applicable requirements of MIL-DTL-83513. MD connectors are designed for use in applications requiring highly reliable, extremely small, lightweight connectors. Connectors are available with your choice of two insulator materials, allowing wide versatility in most applications required by industry.

www.ittcannon.com/micro

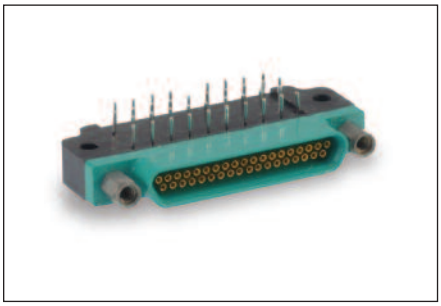
Applications:

- **Avionics Equipment**
- **Computer Equipment**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line-MDB-PCB (Micro D Plastic-Printed Circuit Board)



Literature Reference: Microminiature

Cannon MDB-PCB

The Micro D (MDB-PCB) microminiature rectangular connectors meet or exceed the applicable requirements of MIL-DTL-83513. They are designed for use in applications requiring highly reliable, extremely small, lightweight connectors. Connectors are available in two insulator materials, allowing wide versatility in most applications required by industry.

www.ittcannon.com/micro

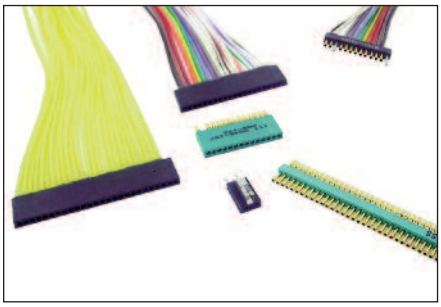
Applications:

- **Commercial Instruments**
- **High Speed Data**

Product Features

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line-MT (MTV/MTB) (Micro Strip)



Literature Reference: Microminiature

Cannon MT (MTV/MTB)

The Micro Strip (MT) microminiature connectors provide an extremely dense and reliable interconnection solution in a minimum profile package. These connectors meet or exceed the applicable requirements of MIL-DTL-83513. MT connectors utilize the unique Micropin/Microsocket contact design system. This system features seven points of electrical contact. It assures high normal force, excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

Applications:

- **Satellites**
- **Instrumentation**

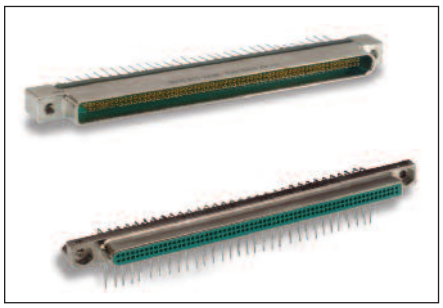
Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**

ITT

Connector Product Overview

Microminiature: Micro Line-MEB (Micro Edgeboard)



Literature Reference: Microminiature

Cannon MEB

The Micro Edgeboard (MEB) connector series provides a combination of high density and high reliability. MEB connectors utilize the unique Micropin/Microsocket contact design system. This system features seven points of electrical contact. It assures high normal force, excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

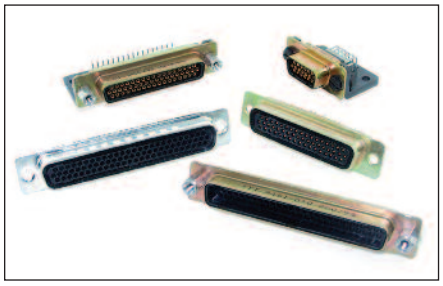
Applications:

- **Industrial Systems**
- **Military Electronics**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Centi Line- 2D (Double Density D)



Literature Reference: Microminiature

Cannon 2D

The Double Density D (2D) is a rectangular connector in the popular D Subminiature shell configuration. It offers (approximately) double the contact density in the same insert area.

www.ittcannon.com/micro

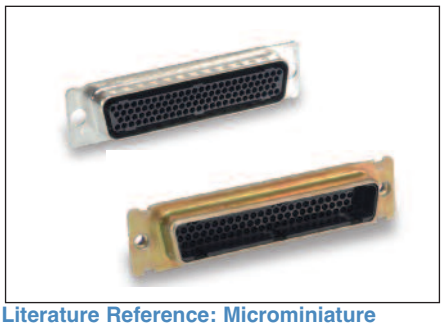
Applications:

- **Communications**
- **Instrumentation and Controls**

Product Features:

- **Contacts on 1.91 (.075) min. center spacing.**
- **Reliable, field-proven Centipin/Centisocket contacts.**

Microminiature: Centi Line- 2DD (Environmental Double Density D)



Literature Reference: Microminiature

Cannon 2DD

The Environmental Double Density D (2DD) is an environmental rectangular connector in the popular D Subminiature configuration. It offers double the contact density in the same insert area and features superior vibration and moisture resistance characteristics.

www.ittcannon.com/micro

Applications:

- **Avionics**
- **Instrumentation**

Product Features:

- **Contacts on 1.91 (.075) min. center spacing.**
- **Reliable, field-proven Centipin/Centisocket contacts.**

Microminiature: Centi Line- CDL (Centi D Lock)

Literature Reference: Microminiature

Cannon CDL

The Centi D Lock (CDL) series is an all plastic monoblock high density rectangular connector. The CDL is a general purpose connector with a peripheral O-ring and wire sealing gasket. The CDL connector can accommodate 139 contacts.

www.ittcannon.com/micro

Applications:

- **Aircraft and Avionics**
- **Instrumentation and Controls**

Product Features:

- **Contacts on 1.91 (.075) min. center spacing.**
- **Reliable, field-proven Centipin/Centisocket contacts.**

Microminiature: Centi Line- CTA (Centi Strip)

Literature Reference: Microminiature

Cannon CTA

The Centi-Loc (CTA) series are low-cost nylon strip connectors designed for military and commercial applications. The Centi-Loc strip connector may be ordered as a kit or ordered in bulk and assembled as desired.

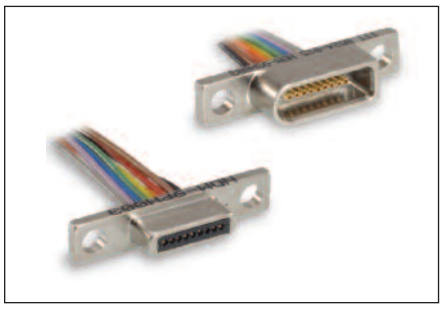
Applications:

- **Communications**
- **Medical Equipment**

Product Features:

- **Reliable, field-proven Centipin/Centisocket contacts.**

Microminiature: Nano Line-NDM



Literature Reference: Microminiature

Cannon NDM

The Nano single row (NDM) series is a metal shell connector that features the highly reliable Twist Pin Contact system. Twist Pin design allows continuity in very dense areas and under severe shock and vibration environments.

www.ittcannon.com/micro

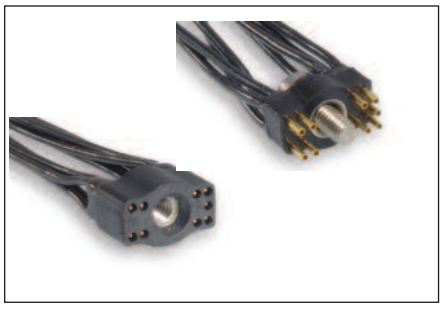
Applications:

- **Geological Exploration**
- **Medical Electronics**
- **Panel-to-Board**
- **Defense Electronics**

Product Features:

- **Contacts on 0.64 (.025) min. center spacing.**
- **Twist Pin Contact System**
- **Complete Cable Assemblies**

Microminiature: Nano Line- NJS (Nano Center Jackscrew Rectangular)



Literature Reference: Microminiature

Cannon NJS

The Nano Jackscrew (NJS) series is a rectangular configuration with a center jackscrew. This connector features the highly reliable Twist Pin Contact system. Twist Pin design allows continuity in very dense areas and under severe shock and vibration environments.

www.ittcannon.com/micro

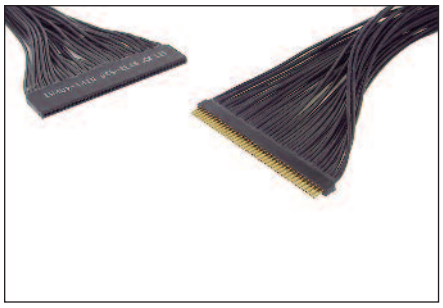
Applications:

- **Geophysical**
- **Defense Electronics**

Product Features:

- **Contacts on 0,64 (.025) min. center spacing.**
- **Rectangular configuration with center jackscrew.**
- **Complete Cable Assemblies**

Microminiature: Nano Line- NT (NTP/NTDP) (Nano Strip)



Literature Reference: Microminiature

Cannon NT (NTP/NTDP)

The single NTP or dual NTDP Nano Strip connectors feature the highly reliable Twist Pin Contact system. Twist Pin design allows continuity in very dense areas and under severe shock and vibration environments.

www.ittcannon.com/micro

Applications:

- **Medical**
- **Space Systems**

Product Features:

- **Max. 20 contacts on 1.27 (.050) min. center spacing.**
- **Max. 40 contacts on .64 (.025) min. center spacing.**

Connector Product Overview

Microminiature: Micro Line- MJS (Micro Center Jackscrew)

Literature Reference: Microminiature

Cannon MJS

The Micro Center Jackscrew (MJS) series meets or exceeds the applicable requirements of MIL-DTL-93513. MJS connectors utilize the unique Micropin/Microsocket contact design system. This system features seven points of electrical contact. It assures high normal force, excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

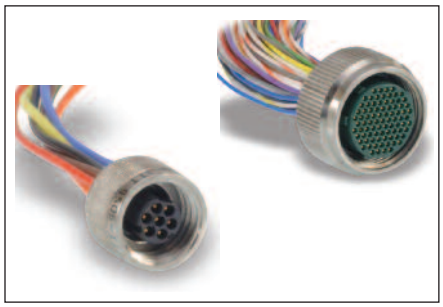
Applications:

- **Board-to-Board**
- **Board-to-Cable**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1,27 (.050) min. center spacing.**

Microminiature: Micro Line - MIKM (Micro K Screw Coupling Series)



Literature Reference: Microminiature

Cannon MIKM

The Micro K Screw Coupling (MIKM) series offers a steel shell for improved ruggedness and RFI resistance yet they are lightweight. They meet or exceed the applicable requirements of MIL-DTL-83513. MIKM connectors utilize the unique Micropin/Microsocket contact design system. This system features seven points of electrical contact. It assures high normal force, excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

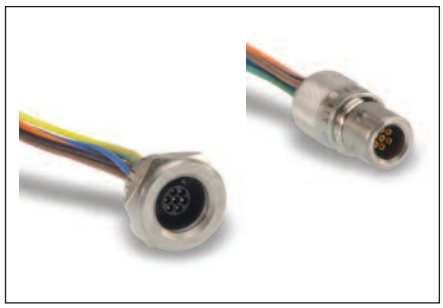
Applications:

- **High Reliability Cameras**
- **Instrumentation**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line - MIKQ (Micro K Push/Pull Coupling Series)



Literature Reference: Microminiature

Cannon MIKQ

The Micro K Push/Pull coupling (MIKQ) series offers a metal shell and a quick disconnect feature. They meet or exceed the applicable requirements of MIL-DTL-83513. MIKQ connectors utilize the unique Micropin/Microsocket contact design system. This system features seven points of electrical contact. It assures high normal force, excellent wipe and superior shock and vibration performance.

www.ittcannon.com/micro

Applications:

- **Computers**
- **Head Sets**

Product Features:

- **Micropin/Microsocket contacts, unique twist pin and solid tubular socket.**
- **Contacts on 1.27 (.050) min. center spacing.**

Microminiature: Micro Line - MDSM

Literature Reference: MDSM

Cannon MDSM

MDSM's rugged construction and unique contact design provide durability of 500 mating cycles. All of this comes in a sleek package that includes a snap together shield can and a slide over boot producing a cable assembly with an overmolded look and a low assembled cost.

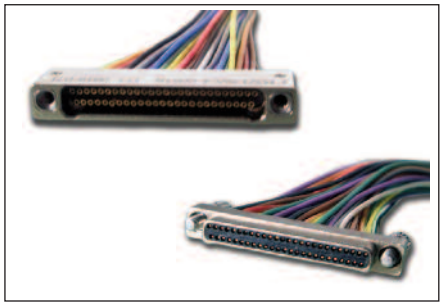
Applications:

- **Bar Code Scanners**
- **Hand Held Devices**

Product Features:

- **UL file number E8572.**
- **Choice of two different latching options (thumbscrew or push-pull).**

Microminiature: NDD



Literature Reference: Microminiature

Cannon NDD

The new NDD High Density Dual Row Nano Connector family is a metal shell connector that meets or exceeds all performance requirements of MIL-DTL-32139. This next generation rectangular connector features the highly reliable twist pin contact system. Contact spacing is on 0.0225" centers. Connector is designed to withstand high shock and vibration environments.

Applications:

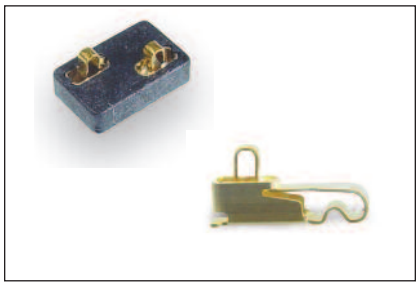
- **Defense Electronics**
- **Geophysical Exploration**
- **Medical Electronics**

Product Features:

- **Twist Pin Contacts**
- **Contacts on 0.64 (0.025) min. center spacing**
- **Rectangular configuration**

Connector Product Overview

Mobile: LF: Universal Contact



Literature Reference: Universal Contact Series

Cannon Universal Contact

The Universal Contact provides a standard interface solution across many platforms, therefore reducing qualification testing. In addition, these contacts eliminate the need for individual spring contacts on modular components. Universal Contacts are very small and can be soldered directly onto the PCB with a minimum pitch of 1,35 mm between contacts. Working heights range from .9mm to 3.7mm.

www.ittcannon.com/universalcontact

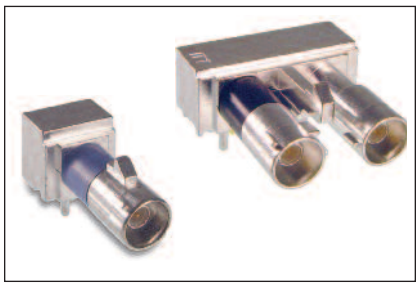
Applications:

- Speakers
- Microphones
- Key Fob
- Smoke Detectors
- White Goods
- Grounding
- Vibrator
- Antenna Pickup

Product Features:

- Contacts can be soldered directly onto PCB.
- Contacts are pre-loaded and feature anti-lifting protection.

Mobile: RF: Fakra



Literature Reference: 50 Ohm RF

Cannon Fakra

The 50 ohm Fakra connector features a solid one piece metal design. It offers a low mating/unmating force with high electrical performance, at 4 GHz, while contact resistance values are maintained from connector to connector.

www.ittcannon.com/rf50

Applications:

- Global Positioning Satellite
- Vehicular Internet Access
- Satellite Radio
- Blue Tooth

Product Features:

- Supports 0 to 4 GHz transferring speed.
- Available in a variety of key codes

Mobile: RF: LPC CP1

Cannon LPC SP1

The LPC SP1 is the waterproof version of the LPC CP1 RF switchable connector. It features a special seal, allowing it to be IP67 compliant (1 meter of water). These connectors are ideal for small handsets. They offer high performance in a very compact design with a unique cold pin to minimize the RF emissions in unmated conditions.

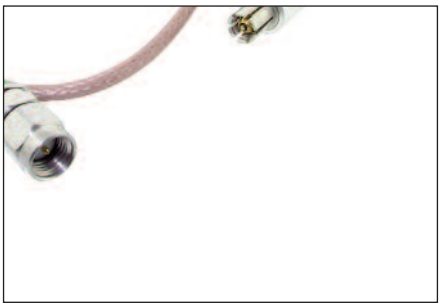
Applications:

- Mobile Phones
- PDA

Product Features:

- Cold pin to minimize RF emissions in unmated conditions.
- Low profile of 5,6 mm.
- Up to 6 GHz

Mobile: RF: LPC CP1 Accessories



Cannon LPC CP1 Accessories

To compliment the LPC CP1/CP2 PCB connectors, Cannon offers a wide range of accessories to cover different needs for testing. These accessories are also ideal for the automotive industry.

Our accessories can be easily customized for specific projects.

Applications:

- **Car kits**
- **On-line production testing**
- **Testing**

Product Features:

- **100% tested assemblies**
- **Customized lengths and mating connectors**

Mobile: LF: Mini RF

Literature Reference: 50 Ohm RF

Cannon Mini RF

The Mini RF switching connector operates up to 6 GHz, is small in size and provides over 5000 mating cycles. Designed for pick and place, it is compliant with WEEE and RoHS directives.

www.ittcannon.com/rf50

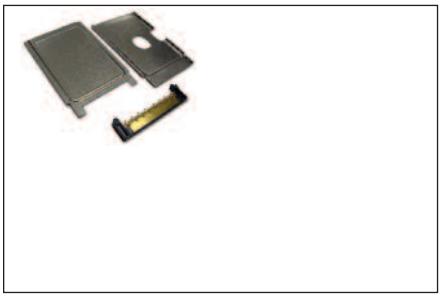
Applications:

- **Mobile Handset**
- **PDA, PPC, and Gaming**
- **GPS Systems**
- **White Goods**

Product Features:

- **Small Size**
- **Low Profile**
- **Latching Mechanism for hands free testing**
- **Allows for angular and offset misalignment**
- **5k mating cycle**

PC Card: PCMCIA I/O Card Kit, StarCard Snappy



Literature Reference: PC Card and Memory Card

Cannon StarCard Snappy Cover Sets and Connectors

The Snappy product family utilizes frameless stainless shell snap-on covers. Available in both Type I and Type II packages. These packages offer a wide variety of standard PCMCIA 68 pin I/O connectors with multiple offsets. We are capable of customizing extensions and end caps to customer specifications. RoHS Compliant.

www.ittcannon.com/pccard

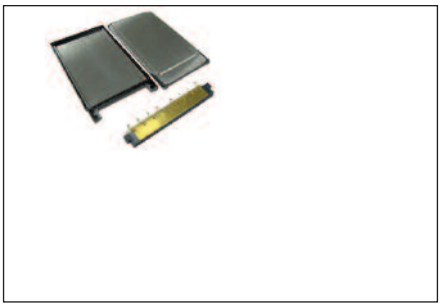
Applications:

- **LAN/Modems, Set-top Boxes**
- **Wireless Devices and Personal Computers**

Product Features:

- **Meets all current PCMCIA Standards**
- **Simple press tool required for assembly**

PC Card: PCMCIA I/O Card Kit, StarCard Ultra



Literature Reference: PC Card and Memory Card

Cannon StarCard Ultra Sets and Connectors

The Ultra product family utilizes ultrasonically welded covers. Available in both Type I and Type II packages. These packages offer a wide variety of standard PCMCIA 68 pin I/O connectors with multiple offsets. We are capable of customizing extensions and end caps to customer specifications. RoHS Compliant.

www.ittcannon.com/pccard

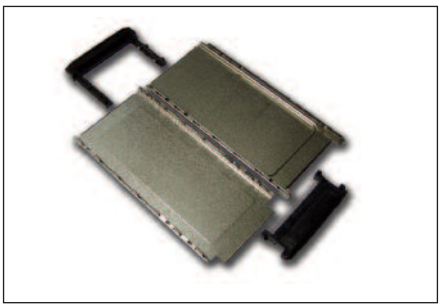
Applications:

- **LAN/Modems, Set-top Boxes**
- **Wireless Devices and Personal Computers**

Product Features:

- **Meets all current PCMCIA Standards**
- **Significantly improves assembly cycle times**

PC Card: PCMCIA I/O Card Kit, Expresscard



Cannon Expresscard Cover Sets and Connectors

The Expresscard product family is available in both ultrasonic weld and stainless steel snap-on covers for 34mm and 54mm modules. Our 26 pin I/O connectors are available with multiple offsets. Capabilities include customizing extensions and end caps. Passed Expresscard Compliance Program by PCMCIA. RoHS Compliant.

www.ittcannon.com/pccard

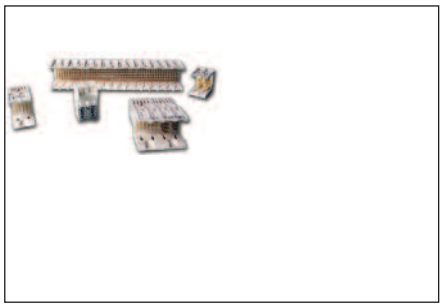
Applications:

- **Notebook/Desktop Computers**
- **Storage media and portable devices**

Product Features:

- **Universal slot design**
- **Connector designed to meet 10,000 mating cycles**

Printed Circuit Board: Tempus™ CBC20 (2mm)



Literature Reference: Tempus CBC20

Cannon Tempus CBC20 (640 Mbits)

Tempus CBC-20 is a 2mm modular two part plug and receptacle system. It is a reverse system with the male pin contacts mounted on the backplane and the female socket contacts mounted on the daughtercard. Available in 4 and 5 row configurations. It is used in DC, low frequency analog and digital high speed applications. Most designs RoHS Compliant, all others with Telecom exemption until 2010.

www.ittcannon.com/tempus

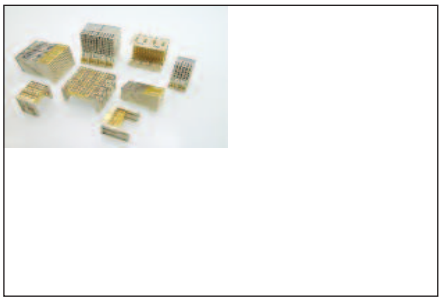
Applications:

- **Data Communication**
- **Telecommunication**

Product Features:

- **Optimum 2 mm connector pitch.**
- **Durability: 1000 mating cycles min.**

Printed CIrcuit Board: Tempus™ CBC20HS, Series 1000/2000 (2mm)



Literature Reference: Tempus HS

Cannon Tempus CBC20HS (2.5 Gb/s)

The Tempus 1000/2000 Series is a 2mm high-speed stripline-shielded backplane connector system. The 1000 Series features a unique stripline structure in both the header and receptacle. The 2000 Series adds column-wise stripline shielding to the header. Available in 5 and 8 row configurations. They are similar in profile, footprint, and mating interface to the Cannon Tempus CBC20 connectors. Most designs RoHS compliant, all other with Telecom exemption until 2010.

www.ittcannon.com/tempus

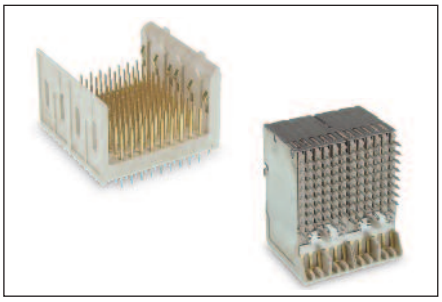
Applications:

- **Data Communications**
- **Telecommunications**

Product Features:

- **Backwards compatible with standard Tempus 2mm connectors**
- **Shielded to reduce crosstalk**

Printed CIrcuit Board: Tempus™ CBC20HS, Series 4000 (2mm)



Literature Reference: Tempus HS

Cannon Tempus CBC20HS (5 Gb/s+)

Tempus 4000 Series is based on the 2mm high-speed 1000/2000 series. The outside envelope and mating interfaces are the same between series, so they align evenly and stack side-by-side on pitch. Available in 5 and 8 row configurations. Connectors offer additional shielding, wide grounds, shorter signal tuning forks, and smaller plated through holes.. Most designs RoHS compliant, all others with Telecom exemption until 2010.

www.ittcannon.com/tempus

Applications:

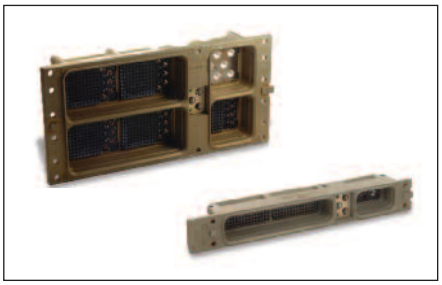
- **Data Communications**
- **Telecommunications**

Product Features:

- **Intermateable with Tempus HS 1000/2000 series**
- **0,5 mm PTH for improved routing and less foot print losses**
- **Pressfit on both sides**

Connector Product Overview

Rack and Panel: BKA, ARINC Series 600 Standard



Literature Reference: Rack and Panel

Cannon BKA

BKAD/BKAE connectors are available with rear release/rear removable, low insertion force contacts. They are interchangeable with the contacts used in the DPX series and permit retrofit of existing equipment.

BKAF connectors are totally intermateable and intermountable with ARINC Series 600 Standard connectors now in the field. They use front release/front removable, low insertion force contacts.

www.ittcannon.com/rackandpanel

Applications:

- **Avionics Equipment**
- **Commercial Aircraft**

Product Features:

- **Up to 800, size 22 contacts in one connector.**
- **Low insertion force contacts.**

Rack and Panel: DPA/DPAMA (Miniature)

Literature Reference: Rack and Panel

Cannon DPA/DPAMA

DPA series connectors are rugged, miniature rack and panel plugs utilizing maximum insert space in a one-piece shell.

www.ittcannon.com/rackandpanel

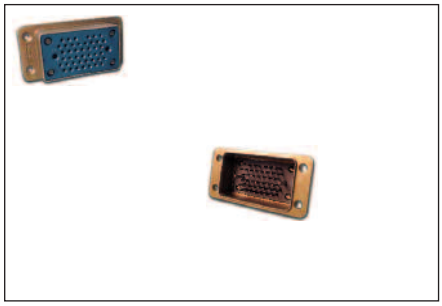
Applications:

- **Avionics Equipment**
- **Commercial Aircraft**

Product Features:

- **DPAMA connectors feature Little Caesar rear release contact retention assembly.**

Rack and Panel: DPD/DPDMA



Literature Reference: Rack and Panel

Cannon DPD/DPDMA

DPD rack and panel connectors are distinguished from other connector lines by their rectangular shape which provides maximum space utilization on rack or chassis mounted equipment. They are available in non-environmental single and two-gang configurations.

Applications:

- **Computer Panels**
- **GFE Test Equipment**

Product Features:

- **DPDMA/DPD2MA connectors feature Little Caesar rear release contact retention assembly. Preferred for new design.**

Rack and Panel: DPGM/DPJM/DPJMB

Literature Reference: Rack and Panel

Cannon DPGM/DPJM/DPJMB

DPGM, DPJM, and DPJMB connectors are designed for applications where space and weight are prime considerations. Their rectangular shape provides maximum space utilization and permits easy removal of equipment for inspection and/or repair.

www.ittcannon.com/rackandpanel

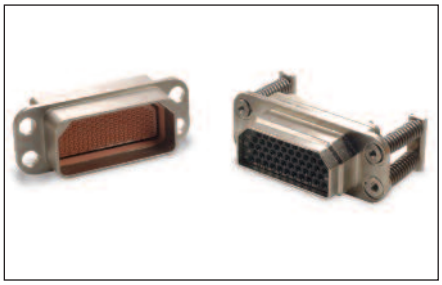
Applications:

- **Avionics Equipment**
- **Commercial Aircraft**

Product Features:

- **DPJMB features Little Caesar rear release contact retention assembly. Preferred for new design.**

Rack and Panel: DPK; MIL-C-83733 (USAF)



Literature Reference: Rack and Panel

Cannon DPK

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.

www.ittcannon.com/rackandpanel

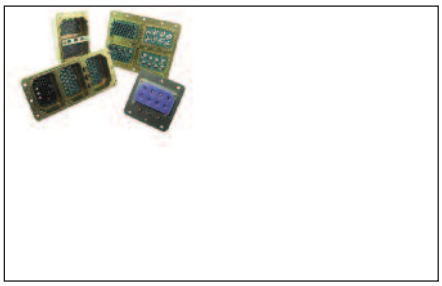
Applications:

- **Commercial Aircraft**
- **Military Aircraft**

Product Features:

- **Qualified to MIL-C-83733 (USAF).**
- **Little Caesar rear release contact retention assembly.**

Rack and Panel: DPX, ARINC Series 404 Standard



Literature Reference: Rack and Panel

Cannon DPX, ARINC Series 404 Standard

The DPX series are one-piece shell miniature rack and panel connectors. They are available in single through four gang versions with ARINC Series 404 Standard shells. Their construction offers high strength and maximum utilization of insert area.

www.ittcannon.com/rackandpanel

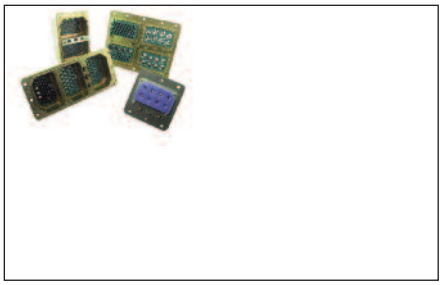
Applications:

- **Avionics Equipment**
- **Commercial Aircraft**

Product Features:

- **Accommodates up to 424 contacts.**

Rack and Panel: DPXNA/DPXNE; MIL-C-81659



Literature Reference: Rack and Panel

Cannon DPXNA/DPXNE

DPXNA (non-environmental, Type IV) and DPXNE (environmental, Types II and III) rack and panel connectors are designed to meet or exceed the requirements of MIL-C-81659, Revision B. They are available in single through four gang configurations, with a total of 12 contact arrangements accommodating contact sizes 12, 16, 20 and 22, and combination standard and coaxial contacts.

www.ittcannon.com/rackandpanel

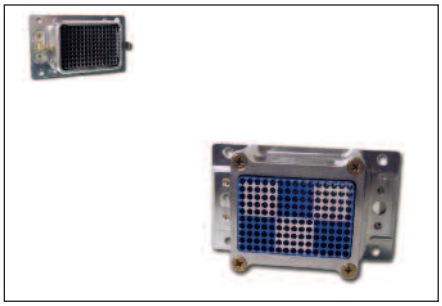
Applications:

- **Commercial Aircraft**
- **Military Aircraft**

Product Features:

- **Little Caesar rear release contact retention assembly.**
- **Qualified to MIL-C-81659.**

Rack and Panel: SGA- Single Gang ARINC



Literature Reference: Rack and Panel

Cannon SGA

SGA connectors utilize all the signal cavity inserts and contacts featured in the ARINC Series 600 Standard connector. It was designed to be used where there are space constraints in which an ARINC Series 600 Standard connector cannot be used. Cannon's SGA connector fills the need for a 150 maximum contact connector with a smaller shell design than shell size 2 of ARINC Series 600 Standard, and has more contacts available than single gang DPX with 106, size 22, contacts.

www.ittcannon.com/rackandpanel

Applications:

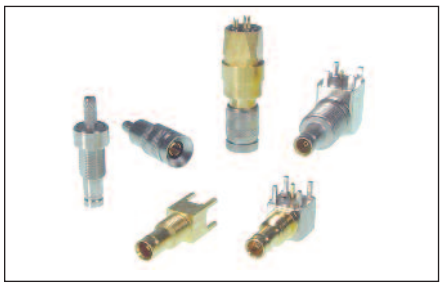
- **Avionics Equipment**
- **Commercial Aircraft**

Product Features:

- **Both environmental and non-environmental versions.**
- **Low insertion force contacts.**

Connector Product Overview

RF: 1.0/2.3



Literature Reference: 75 Ohm RF

Cannon 1.0/2.3

1.0/2.3 connectors are widely used in 75 ohm telecommunications and broadcast systems where due to their smaller size, significant space saving can be achieved. Ideally suited to RF and high speed digital equipment, the connectors are designed to meet the requirements of CECC 22230 and DIN 47247. RoHS Compliant.

www.ittcannon.com/rf75

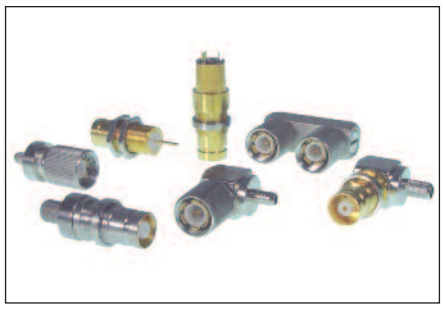
Applications:

- **Telecom Equipment**
- **Broadcast Equipment**

Product Features:

- **Push-Pull coupling mechanism.**
- **High density solution**

RF: 1.6/5.6



Literature Reference: 75 Ohm RF

Cannon 1.6/5.6

The range of 1.6/5.6 connectors are suitable for use in 75 ohm communication systems. These connectors have become the recognized standard in telecommunication systems in many parts of the world. These connectors are designed to meet the requirements of DIN 47295, CECC 22240 and IEC 169-13. RoHS Compliant.

www.ittcannon.com/rf75

Applications:

- **Switching Equipment**
- **Telecom Systems**
- **Transmission Equipment**
- **Voice over Internet Protocol**

RF: Between Series Adapters (Adaptors)

Literature Reference: 50 Ohm RF

Cannon Between Series Adapters

Between Series Adapters are widely used for high efficiency transitions between various types of RF coaxial connectors. They are used for connecting test equipment to systems employing a different type connector, or they are used as a component in electronic equipment where it is desirable to have one type of connector for external connections and another type for internal connections.

All Between Series Adapters are designed for lowest VSWR characteristics up to the frequency limits of the connector types involved. All popular types of miniature, subminiature and microminiature designs are available. RoHS Compliant.

www.ittcannon.com/rf50

Applications:

- **Industrial Systems**
- **Military Equipment**
- **Telecom Systems**
- **Test & Instrumentation Equipment**

RF: BNC

Literature Reference: 75 Ohm RF

Cannon BNC

The 75 ohm 90° BNC RF connectors are designed to meet and exceed the most rigorous demands in today's central offices. The 90° BNC connectors feature full crimp designs and can be easily terminated in the field with our recommended tools. RoHS Compliant.

www.ittcannon.com/rf75

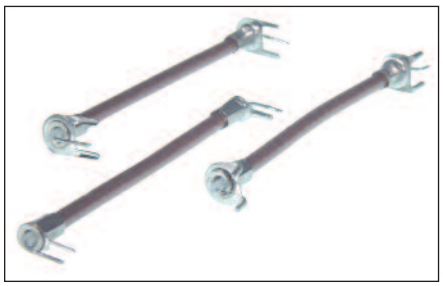
Applications:

- **Central Office Switching**
- **Telecommunications**

Product Features:

- **Fits 734 and 735 type DS3 coaxial cables.**
- **Available in single or bulk package.**

RF: Coaxial Terminators



Literature Reference: 50 Ohm RF

Cannon Coaxial Terminators

Coaxial Terminators provide a low cost means of cable junction to a printed circuit where engagement and disengagement are not required. This method of terminating cable on PCBs eliminates the inconsistency associated with hard wiring. RoHS Compliant.

www.ittcannon.com/rf50

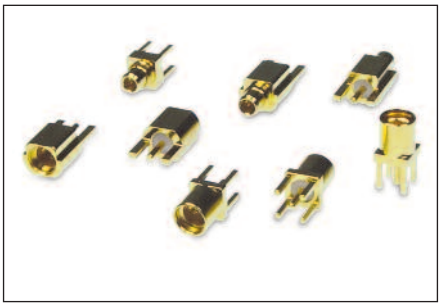
Applications:

- **Consumer Products**
- **Industrial Equipment**

Product Features:

- **Easy to assemble.**
- **Low cost.**

RF: MMCX



Cannon MMCX

Base stations and wireless architectures require the highest level of RF performance. The MMCX connector series is rated at 6 GHz and is about 50 percent of the size of the MCX and SMB series. The MMCX connector is designed with a 50 ohm impedance and a reliable snap-on coupling method producing low "RF leakage". It is designed for use in applications where space requirements are small and weight limitations are demanded.RoHS Compliant.

Applications:

- **Automotive**
- **GPS**

Product Features:

- **High reliability and long service life.**
- **Low RF leakage value.**

RF: QT-BNC

Literature Reference: 75 Ohm RF

Cannon QT-BNC

This termination technique provides the QT-BNC with a high pressure, gas tight center conductor joint of exceptional mechanical integrity, without crimping the center contact. The QT-BNC is a 75 ohm pre-assembled connector with an integral center contact and rear crimp ferrule. This connector may be terminated onto cable in under 20 seconds, significantly reducing installation costs. RoHS Compliant.

www.ittcannon.com/rf75

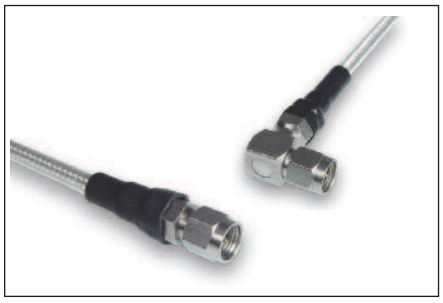
Applications:

- **Telecommunications**
- **Broadcast Systems**

Product Features:

- **Plastic rear cap is color coded for easy identification of cable type.**
- **Meets Telcordia/SMPTE 292M standards.**

RF: Seaflex 2



Literature Reference: 50 Ohm RF

Cannon Sealflex 2

Sealflex 2 microwave cable assemblies are designed for applications requiring consistent microwave performance through to 18 GHz and may be used with minimal degradation to 26 GHz, with SMA connectors.

All connector designs, except BNC, exhibit "mode free" characteristics to 18 GHz, thereby allowing low VSWR to be specified without "spikes" being present in the upper frequency spectrum. RoHS Compliant.

www.ittcannon.com/rf50

Applications:

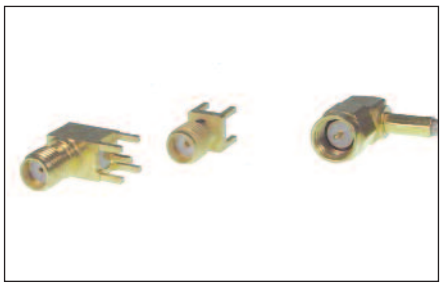
- **Avionics Systems**
- **Commercial Communications Equipment**

Product Features:

- **100% tested for VSWR and insertion loss and test plots are supplied with each item.**

Connector Product Overview

RF: SMA- Commercial



Literature Reference: 50 Ohm RF

Cannon SMA – Commercial

ITT offers a range of Commercial SMA, brass bodied connectors. These offer a more economic product for a slightly reduced performance. They are supplied with either gold or nickel plating. Also, available with passivated stainless steel coupling nuts. RoHS Compliant.

Applications:

- **Base Station - Networks**
- **Test & Instrumentation Equipment**

Product Features:

- **SMA plugs are environmentally sealed using a gasket.**
- **Intermateable with all SMA connectors currently available.**

RF: SMA- High Temperature

Cannon SMA – High Temperature

These SMA connectors are specially designed to operate in temperatures up to 250° C without impacting performance and feature the MIL-PRF-29012 SMA interface. Designed specifically for harsh environment applications requiring 50 Ohm RF interconnects. We also offer semi-rigid cable assemblies utilizing these connectors. RoHS Compliant.

www.ittcannon.com/rf50

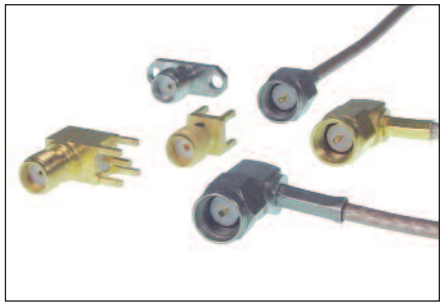
Applications:

- **Military**
- **Industrial**

Product Features:

- **Pressfit contact**
- **Semi-rigid cable assembly sets can be phase matched**

RF: SMA- Precision



Literature Reference: 50 Ohm RF

Cannon SMA – Precision

Precision SMA connectors feature the MIL-C-39012 Series SMA interface and envelope configuration. They can be mated with all connectors meeting the MIL-SPEC dimensions. Designed for use with a variety of subminiature coaxial cables, superior results are obtained from DC to 18 GHz when used with semi-rigid cables and from DC to 12.4 GHz with flexible cable. RoHS Compliant.

www.ittcannon.com/rf50

Applications:

- **Military Equipment**
- **Radar – Ground and Airborne**

Product Features:

- **SMA plugs are environmentally sealed using a gasket.**
- **Intermateable with all SMA connectors currently available.**

RF: SMB/SMC

Literature Reference: 50 Ohm RF

Cannon SMB/SMC

SMB/SMC connectors are compatible with all SMB/SMC connectors conforming with MIL-C-39012, BS9210, UTE C93 561, UTE C93 562, CECC 22130 and CECC 22140.

SMB connectors feature snap-on coupling, allowing rapid mating/unmating. SMC connectors feature screw-on coupling, permitting a low VSWR under vibration conditions and a matched impedance of 50 ohms. RoHS Compliant.

www.ittcannon.com/rf50

Applications:

- **Body Scanners – Medical**
- **Hard Disk Drives**
- **Radar – Airport Search**
- **Telecom Systems**
- **Test & Instrumentation Equipment**

ITT

RF: SMZ (Type 43)

Literature Reference: 75 Ohm RF

Cannon SMZ (Type 43)

The SMZ connector is a telecommunication standard in the UK and in many areas of the world. A series of 75 ohm connectors which feature positive latching and Cannon's unique QT™ (Quick Termination) assembly method. RoHS Compliant.

www.ittcannon.com/rf75

Applications:

- **Switching Equipment**
- **Telecom Network**
- **Transmission Equipment**
- **Voice over Internet Protocol**

Product Features:

- **Center contact termination using crimp or QT termination method to reduce installed costs.**
- **Interface to BS9210 F0022.**

RF: SSIS

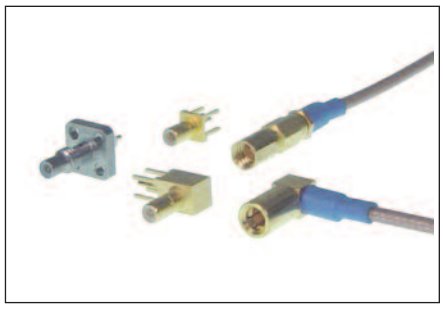
Cannon SSIS

Subminiature Intermediate Slide-On Series (SSIS) connectors are miniature versions of the SIS range. The jack-to-jack adapter has been designed to bias the mating forces. This feature ensures that the components will be retained in the desired module. One end of the adapter has a higher engagement/separation force than the other. Consequently at separation the high force end of the adapter will remain in one module while the low force end slides free. RoHS Compliant.

Applications:

- **Avionics Equipment**
- **Filters**
- **Radar**
- **Telecom – Base Station Equipment**

RF: SSMB/SSMC



Literature Reference: 50 Ohm RF

Cannon SSMB/SSMC

SSMB 50 ohm connectors feature snap-on coupling, allowing rapid mating/unmating in applications where limited space prohibits the use of torque wrenches or when components/modules must be quickly changed to reduce downtime. SSMC 50 ohm connectors feature screw-on coupling, to provide positive mechanical engagement, where space permits the use of torque wrenches. RoHS Compliant.

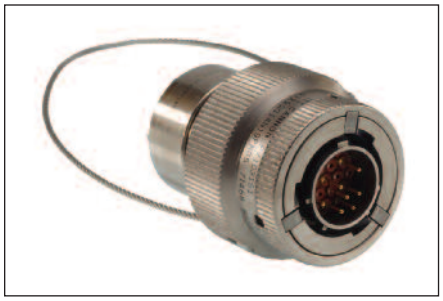
www.ittcannon.com/rf50

Applications:

- **Avionics Equipment**
- **Military Radio – Manpack**
- **Missiles**
- **Portable Equipment**
- **Weapon Control Systems**

Connector Product Overview

Space and Specials: GM- Quick Disconnects



Literature Reference: Space and Specials

Cannon GM

This family of special connectors feature customized umbilical and lanyard release that automatically disconnect at the time of system launch. They are designed to meet the highest quality and performance standards. Ideal for intersage separation, weapon stores, and pylon applications, these connectors can incorporate both pneumatic and electrical lines in the same assembly.

Applications:

- **Space Launch Vehicles**
- **Missile and Torpedos**

Product Features:

- **Rugged High Performance**
- **Custom and application specific designs**

Space and Specials: H- Hydrospace and Hull Penetrators

Literature Reference: Space and Specials

Cannon H Series

These custom designed ship and sub-safe bulkhead connectors provide the critical interface required to penetrate and carry signals through the hull or bulkhead of military ships and submarine vessels. Connectors are designed with a special compression glass interface that provides a highly reliable hermetic seal and will operate at extreme temperature and pressure up to 20,000 PSI.

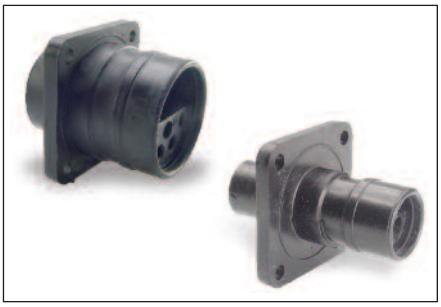
Applications:

- **Military Ships**
- **Submarine Ships**

Product Features:

- **High Pressure resistant to 20,000 PSI**
- **Compression Glass Sealed**
- **Sub-Safe Qualified**

Sure-Seal/ Mini Sure-Seal



Literature Reference: Sure-Seal

Cannon Sure-Seal/Mini Sure-Seal

A series of low cost, environmental circular connectors representing simplicity at its best. All that is needed is a rubber connector body and contacts to achieve a rugged IP67 solution. Sure-Seal connectors were designed to meet the increased requirements for safety and reliability in the automotive field brought about by Department of Transportation regulations. These sealed connectors satisfy all of the parameters defined by automotive/industrial standards including vibration, shock, temperature cycling, salt water spray and immersion, petroleum derivatives, industrial gas, and most important low millivolt drop and low contact resistance.

www.ittcannon.com/circular

Applications:

- **Off-road Vehicles**
- **Industrial machinery**
- **Generally for humid and dirty environment**

Product Features:

- **Layout 2-10 way equipped with pin and socket**
- **Inexpensive, IP67 seal solution**
- **Available in 2 main sizes, Standard and Mini Version**
- **Flange and inline connectors**

Connector Product Overview

Transportation: Cannon, Aquatica™ APD/DIN 72585

Literature Reference: APD DIN 72585

Cannon Aquatica™ APD/DIN 72585

This series of in-line and bulkhead sensor connectors are resistant to engine, transmission and brake fluid – specifically designed for the harsh environment on a vehicle. It also boasts very low contact resistance, so you can benefit from maximum signal integrity. Configurations from 1 way to 51 way (contact count).

www.ittcannon.com/apd

Applications:

- **ABS Brake control**
- **Valve control (water, oil, air pressure)**

Product Features:

- **Bayonet coupling.**
- **Environmentally sealed to IP69K.**

Transportation: APE

Cannon APE

APE 2 and 3-way connectors are designed to protect against the harshest environmental conditions. It stands up to contaminant's, vibration and shock. Low contact resistance provides a maximum signal integrity. Also available as free assembly version for socket receptacle.

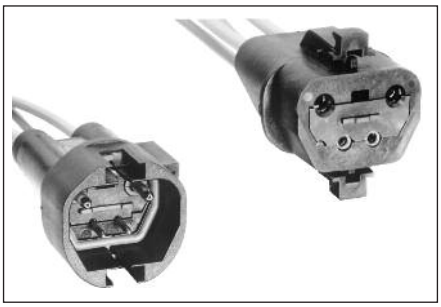
Applications:

- **ABS/EBS Brake Systems for Truck and Trailers**

Product Features:

- **Environmentally sealed to IP69K.**
- **Individual wire seals**

Transportation: APV Vector



Literature Reference: SLC/SLE/CLC APV

Cannon APV Vector

This series of connectors offers a low cost, lightweight environmental sealing solution with a maximum of space savings. Positive polarization is assured by the trapezoidal shape of the connectors and additional coding positions. Reliable mating and locking is indicated both visually and audibly.

www.ittcannon.com/slc

Applications:

- **Transportation**

Product Features:

- **In-line design.**
- **Positive mating.**
- **Secondary terminal locking.**
- **Signal and Power with single housing.**

Transportation: CIR290

Literature Reference: VEAM CIR

VEAM CIR290

The VEAM CIR290 connector series is used principally in the harsh environment of Railroad Mass Transit Systems. Has fast and precise quarter turn coupling of the plug and receptacle connectors

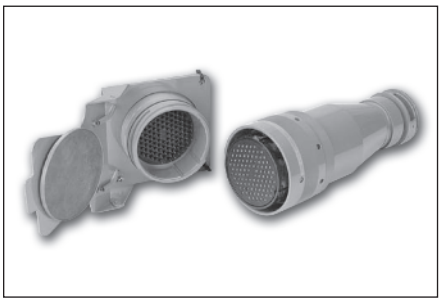
Applications:

- **Mass Transit Systems**

Product Features:

- **Watertight seal**
- **High current versions (up to1200 amps)**

Transportation: CIR295



Literature Reference: VEAM CIR

VEAM CIR295

The VEAM CIR295 connector series is used principally in the harsh environment of Railroad Mass Transit Systems. Has fast and precise quarter turn coupling of the plug and receptacle connectors. These connectors have rigid insulators and contacts with retention clips.

Applications:

- **Mass Transit Systems**

Product Features:

- **Watertight seal**
- **Ease of contact insertion and extraction**

Transportation: CLC/ Y-Splice

Literature Reference: SLC/SLE/CLC/APV

Cannon CLC/Y-Splice

Cannon's Clip Lock Circular (CLC) environmental miniature connector and Y-Splice series are designed to support electronic networks, sensors and actuators direct, in-line and feed-thru interconnect applications. CLC is one rugged connector system that can really take the heat, shock and vibration found in the harshest vehicle environments. CLC's Pass-Thru and Y-Splice connectors both offer field-proven elastomeric seals.

www.ittcannon.com/slc

Applications:

- **CAN Bus Systems (J1939)**
- **Engine Block – Fuel Injection**
- **Transmission – Automotive**

Product Features:

- **In-line design.**
- **Bulkhead feed-thru.**

Transportation: DSR

VEAM DSR

The VEAM DSR connectors have a double start, ratcheted coupling system with a durable hard anodize finish. A contrasting brightly colored stripe on the receptacle connector provides visual indication when the connectors are fully mated.

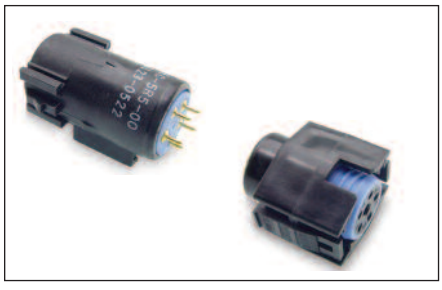
Applications:

- **Mass Transit Systems**

Product Features:

- **Coupling system prevents unmating in high shock and vibration conditions**
- **Connector shells have 5 keys for positive and stable alignment**

Transportation: SLC/SLC-T



Literature Reference: SLC/SLE/CLC/APV

Cannon SLC/SLC-T

For high performance circular connector requirements look to the environmentally sealed Snap-(Clip) Lock Circular (SLC/SLC-T) series from Cannon. The connector design ensures a tightly sealed connection that can withstand heat, shock and vibration, preserving the integrity of the solid state package.

www.ittcannon.com/slc

Applications:

- **Black Box**
- **Printed Circuit Board**
- **Transmission – Automotive**

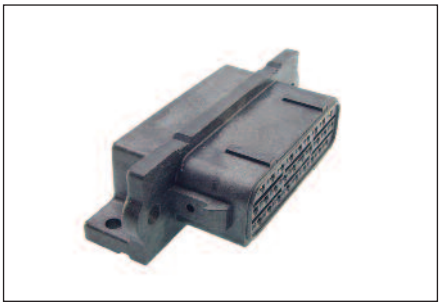
Product Features:

- **Superior environmental sealing.**
- **Low installed cost.**
- **5, 8, 10 and 15 contact cavities.**

ITT

Connector Product Overview

Transportation: SLE



Literature Reference: SLC/SLE/CLC/APV

Cannon SLE

For high performance rectangular connector requirements look to the Snap Lock Environmental (SLE) series from Cannon. The connector design ensures a tightly sealed connection that can withstand heat, shock and vibration, preserving the integrity of the solid state package, while protecting against contaminant's – even when unmated.

www.ittcannon.com/slc

Applications:

- **Black Box**
- **Control Module**
- **Printed Circuit Board**

Product Features:

- **Superior environmental sealing.**
- **Low installed cost.**

Transportation: VBN

Literature Reference: VEAM VBN

VEAM VBN

The VEAM VBN connector series is completely intermateable with VG95234/CIR reverse bayonet connectors and conforms to the Mass Transit specification NF F 61-030.

www.ittcannon.com/VEAM

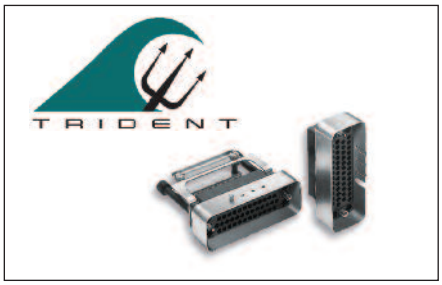
Applications:

- **Mass Transit Systems**
- **Industrial/Commercial**

Product Features:

- **Vibration resistant**
- **Flame retardant UL 94V-0 Thermoplastic Inserts.**
- **Ease of contact insertion and extraction**

Trident™: Multiway- Rack & Panel



Literature Reference: Trident

Cannon Trident Multiway (TM)

The Multiway range is an extremely reliable and robust series of rack & panel connectors. The design is based on the requirements of Mil-C-28748 and will accept any of the Trident signal or coax contacts. It is available in 6 arrangements ranging from 14 to 75 ways, together with a wide range of accessories and mounting hardware.

www.ittcannon.com/trident

Applications:

- **Rail equipment**
- **Test equipment**

Product Features:

- **Fully tested to MIL-STD-202 and now IEC 512.**

Trident™: Snap Together- Rectangular

Literature Reference: Trident

Cannon Trident Snap Together – Rectangular (TST)

These are low installed cost connectors rated for up to 13 A and 250 V ac rms. They are typically used for circuit board and internal wiring applications. Snap Together connectors facilitate easy assembly and removal of equipment such as motors, fans, and transformers.

www.ittcannon.com/trident

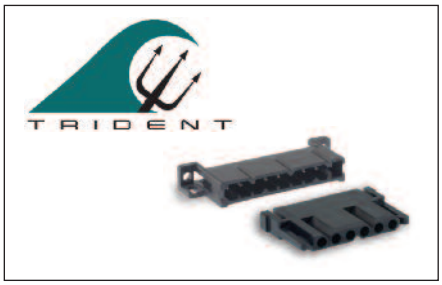
Applications:

- **Circuit Board connections**
- **Internal connections**

Product Features:

- **Easy, cost effective installation**
- **Recognized under the component program of UL Inc.**

Trident™: Snap Together- Slimline



Literature Reference: Trident

Cannon Trident Snap Together – Slimline (TST)

The Slimline Range offers a low profile connector system that is well suited for circuit board applications. The precision machined contacts are ideal for power and sensitive signals.

www.ittcannon.com/trident

Applications:

- **Communication equipment**
- **Test equipment**

Product Features:

- **Five single row contact arrangements available.**
- **10 A per circuit.**
- **Recognized under the component program of UL Inc.**

Trident™: Ringlock- Circular

Literature Reference: Trident

Cannon Trident Ringlock (TR)

Ringlock is a range of robust circular connectors for industrial applications. It uses a metal bayonet coupling system for quick and reliable connections and thermoplastic bodies for low installed cost. The connectors are available in several sizes ranging from 4 to 48 circuits for signals up to 13 A or coax. With the addition of a sealed cable clamp, the connectors can be water sealed to meet IP65.

www.ittcannon.com/trident

Applications:

- **Industrial electronics**
- **Manufacturing equipment**

Product Features:

- **Recognized under the component program of UL Inc.**
- **Rugged metal coupling.**

Connector Product Overview

Trident™: Neptune™- Circular

Literature Reference: Trident

Cannon Trident Neptune (TN)

Neptune is a range of circular connectors specifically designed for harsh environment applications. They are water sealed to IP67 and do not require blanking plugs for unused cavities. Contact arrangements include combinations of signal (13 A) and power (30 A) contacts. The mating uses a highly reliable bayonet coupling system with either high strength metal or corrosion resistant plastic coupling rings.

www.ittcannon.com/trident

Applications:

- **Off Road Vehicles**
- **Outdoor electronics**

Product Features:

- **Mixes signal and 30 A power contacts in one housing.**
- **Full interface and cable sealing up to IP67.**

Trident™: TNM (Trident Neptune Metal) Circular

Literature Reference: Trident

Cannon Trident Neptune Metal TNM

TNM is a series of metal shell connectors that, when used with the shielded end bell, provides RF shielding from cable-to-equipment or cable-to-cable. Connectors and end bells are moisture sealed to IP67. They are ideal for applications that require the additional strength of metal shells.

www.ittcannon.com/trident

Applications:

- **Communication equipment**
- **Industrial electronics**

Product Features:

- **Can be sealed to IP67.**
- **Easy-to-assemble.**
- **Recognized under the component program of UL Inc.**

Trident™: Contacts

Literature Reference: Trident

Cannon Trident Contacts

The Trident series of contacts are based on a standard cavity design. This enables the stamped, machined, PCB, solder, and coax contacts to fit into any of the connectors in the Trident connector system. In addition, the mating interface is standardized so that the various signal contacts (ranging from 14-26 AWG) will all mate together. The retention system of the contacts enables quick and cost effective assembly without special insertion tools.

www.ittcannon.com/trident

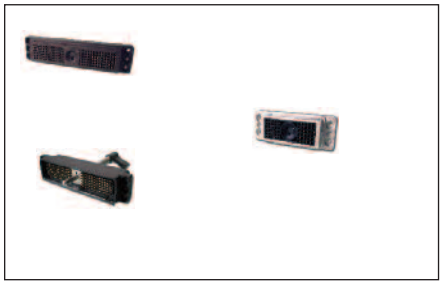
Applications:

- **Trident rectangular connectors**
- **Trident circular connectors**

Product Features:

- **Formed/Stamped Contacts**
- **Solder Contacts**
- **Power Contacts**
- **Coaxial Contacts**
- **Discriminating/Keying Pins**

ZIF: DL (Plastic)



Literature Reference: DL/DLM/DLD

Cannon DL1/2/3/5

The DL Series of Zero Insertion Force (ZIF) connectors feature: a minimum rated life of 10,000 complete mating/unmating cycles with no performance loss; can be mated/unmated in less than two seconds even with as many as 2496 contacts; and they cost less (often as much as 25% less) per mated line than singular high-density rack & panel connectors.

www.ittcannon.com/dl

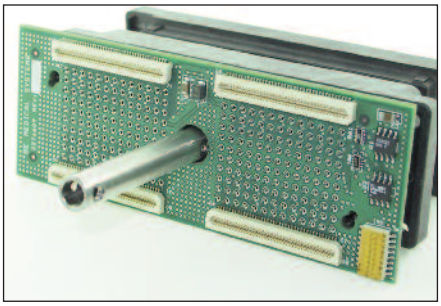
Applications:

- **Entertainment**
- **Medical – Ultrasound**

Product Features:

- **Plastic Body.**
- **60, 96, 156, or 260 contact cavities.**

ZIF: DL Pressfit PCB Adapter



Literature Reference: DL/DLM/DLD

Cannon DL5 Pressfit

The DL Pressfit is a unique modification of the standard Zero Insertion Force (ZIF) – DL5 product offering. An eye-of-needle design allows the receptacle side product to be press fit onto an application circuit board assembly.

www.ittcannon.com/dl

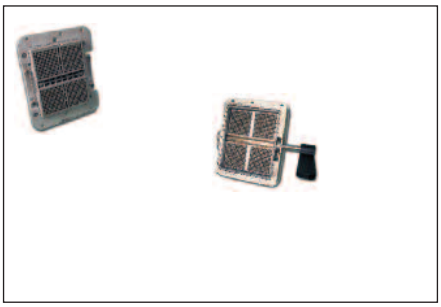
Applications:

- **Medical Ultrasound**
- **Test & Measurement Equipment**

Product Features:

- **Alignment plate sub-assembly assures proper positioning and structural support during insertion of the DL contacts..**

ZIF: DL4



Literature Reference: DL/DLM/DLD

Cannon DL4

The DL4 series of Zero Insertion Force (ZIF) connectors feature; a minimum rated life of 20,000 complete mating/unmating cycles with no performance loss; can be mated/unmated in less than two seconds even with as many as 2496 contacts; and they cost less (often as much as 25% less) per mated line than singular high-density rack and panel connectors.

www.ittcannon.com/dl

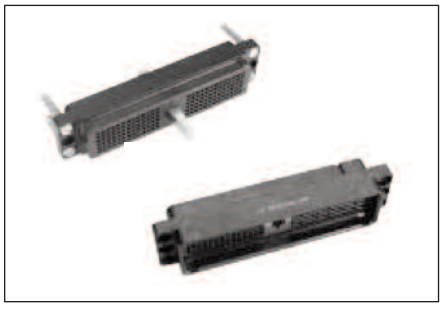
Applications:

- **Medical**
- **Entertainment**

Product Features:

- **Panel Mount.**
- **Metal Frame.**
- **624, 1248, or 2496 contact cavities.**

ZIF: DLD (Drawer)



Literature Reference: DL/DLM/DLD

Cannon DLD1/2

ITT has combined Zero Insertion Force (ZIF) technology with remote electrical engagement. The DLD Drawer allows the movement of a drawer or panel to effortlessly mate/unmate the connector halves. As an example: electrical sub-systems can be easily removed for service, interchangeability, or portability.

The contacts in the DLD Drawer product series do not touch each other while the connector halves are mating. This unique ZIF technology, introduced in the Cannon DL series in the early 1970's, has time-tested proven reliability and durability.

Applications:

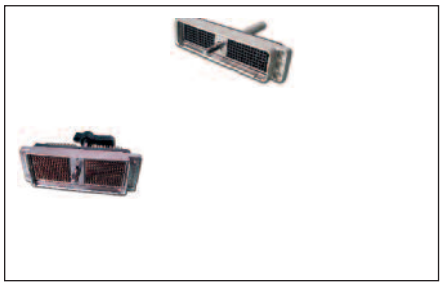
- **Telecommunication**
- **Test Instrumentation**
- **Transportation**

Product Features:

- **Drawer Style.**
- **Plastic Body.**
- **96 or 156 contact cavities.**

Connector Product Overview

ZIF: DLM (Metal)



Literature Reference: DL/DLM/DLD

Cannon DLM1/2/3/5/6

ITT has expanded the DL-ZIF series offering with the addition of the DLM (metal shell) versions. The DLM uses a rugged nickel plated aluminum housing. A shield-locking mechanism feature ensures uniform mating pressure around the perimeter of the mated connector to create an EMI/RFI shield. Facilitates compliance of equipment to CE EMC directives.

www.ittcannon.com/dl

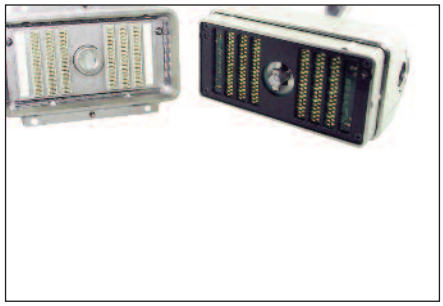
Applications:

- **Commercial/Industrial Manufacturing**
- **Test Instrumentation**

Product Features:

- **Metal body.**
- **EMI/RFI shielding.**
- **60, 96, 156, 260, or 360 contact cavities.**

ZIF: DLP-272



Literature Reference: DLP ZIF

Cannon DLP-272

The DLP is a Zero Insertion Force (ZIF) wire-to-board connector. Developed for use in multi-conductor cable interface applications. DLP offers higher performance in the most compact design.

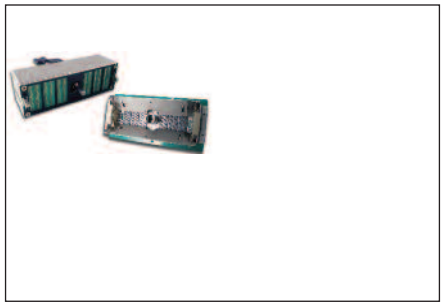
Applications:

- **Mobile Medical Equipment**
- **Semiconductor Production**

Product Features:

- **A lower profile plug connector with high-density contact layout.**
- **EMI/RFI protection with metal shell and grounding spring.**

ZIF: DLP-408



Literature Reference: DLP ZIF

Cannon DLP-408

The DLP is a Zero Insertion Force (ZIF) wire-to-board connector. Developed for use in multi-conductor cable interface applications. DLP offers higher performance in the most compact design. Integral shutters cover the contact area for maximum protection.

Applications:

- **Mobile Medical Equipment**
- **Semiconductor Production**

Product Features:

- **A lower profile plug connector with high-density contact layout.**
- **EMI/RFI protection with metal shell and grounding spring.**
- **Integral shutters cover the contact area for maximum protection**

Product Category	Product Line	Summary Catalog Section	Marketing Part Number	Manufacturing Part Number	Page
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Product Safety and Warranty

1. MATERIAL CONTENT AND PHYSICAL FORM
Electrical connectors do not usually contain hazardous materials.

Electrical connectors and individual components do not release or otherwise result in exposure to hazardous chemicals under normal conditions of use and fall under the definition of "Article," under the Hazard Communication Standard, 29 CFR 1910.1200, and are not considered hazardous materials.

Solder and fluxes can be hazardous if inhaled or absorbed through the skin and should only be used as recommended by the manufacturer. Please consult your solder and flux manufacturer for more specific application recommendations.

2. FIRE CHARACTERISTICS AND ELECTRIC SHOCK HAZARD
There is no fire hazard when the connector is correctly wired and used within the specified parameters. Incorrect wiring or assembly of the connector or careless use of metal tools or conductive fluids, or transit damage to any of the component parts may cause electric shock or burns. Live circuits must not be broken by separating mated connectors as this may cause arcing, ionization and burning. Heat dissipation is greater at maximum resistance in a circuit. Hot spots may occur when resistance is raised locally by damage, e.g. cracked or deformed contacts, broken strands of wire. Local overheating may also result from the use of the incorrect application tools or from poor quality soldering or slack screw terminals. Overheating may occur if the ratings in the product Data Sheet/Catalog are exceeded and can cause breakdown of insulation and hence electric shock. If heating is allowed to continue it intensifies by further increasing the local resistance through loss of temper of spring contacts, formation of oxide film on contacts and wires and leakage currents through carbonization of insulation and tracking paths. Fire can then result in the presence of combustible materials and this may release noxious fumes. Overheating may not be visually apparent. Burns may result from touching overheated components.

3. HANDLING
Care must be taken to avoid damage
to any component parts of electrical connectors during installation and use. Although there are normally no sharp edges, care must be taken when handling certain components to avoid injury to fingers. Always wear safety glasses to avoid potential injury to eyes during cleaning, soldering, fiber preparation, etc.

Electrical connectors may be damaged in transit to the customers, and damage may result in creation of hazards. Products should therefore be examined prior to installation/use and rejected if found to be damaged. Proper lifting techniques shall be used for handling shipping cartons.

4. DISPOSAL
Please recycle, reclaim or dispose of connectors and individual components in accordance with local, state and federal laws. Incineration of certain materials may release noxious or even toxic fumes..

5. APPLICATION
Connectors with exposed contacts should not be selected for use on the current supply side of an electrical circuit, because an electric shock could result from touching exposed contacts on an unmated connector. Voltages in excess of 30 V ac or 42.5 V dc are potentially hazardous and care should be taken to ensure that such voltages cannot be transmitted in any way to exposed metal parts of the connector body. The connector and wiring should be checked, before making live, to have no damage to metal parts or insulators, no solder blobs, loose strands, conducting lubricants, swarf, or any other undesired conducting particles. Circuit resistance and continuity check should be made to make certain that there are no high resistance joints or spurious conducting paths. Always use the specified application tools, cleaning materials and assembly instructions documented in the Data Sheet/Catalog. Do not permit untrained personnel to wire, assemble or tamper with connectors. For operation voltage please see appropriate national regulations.

IMPORTANT GENERAL INFORMATION
(i) Air and creepage paths/Operating voltage. The admissible operating voltages depend on the individual applications and the valid national and other applicable safety regulations.
For this reason the air and creepage path data are only reference values. Observe reduction of air and creepage paths due to PC board and/or harnessing.

(ii) Temperature
All information given are temperature limits. The operation temperature depends on the individual application.

(iii) Pressure
All pressure information given are differential pressure limits. The specific differential pressure limits, across the connector interface, are documented in the Data Safety/catalog

(iv) Other important information
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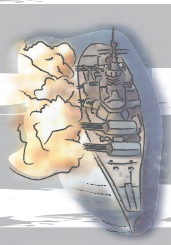

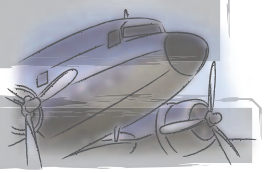

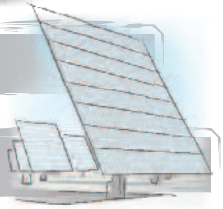

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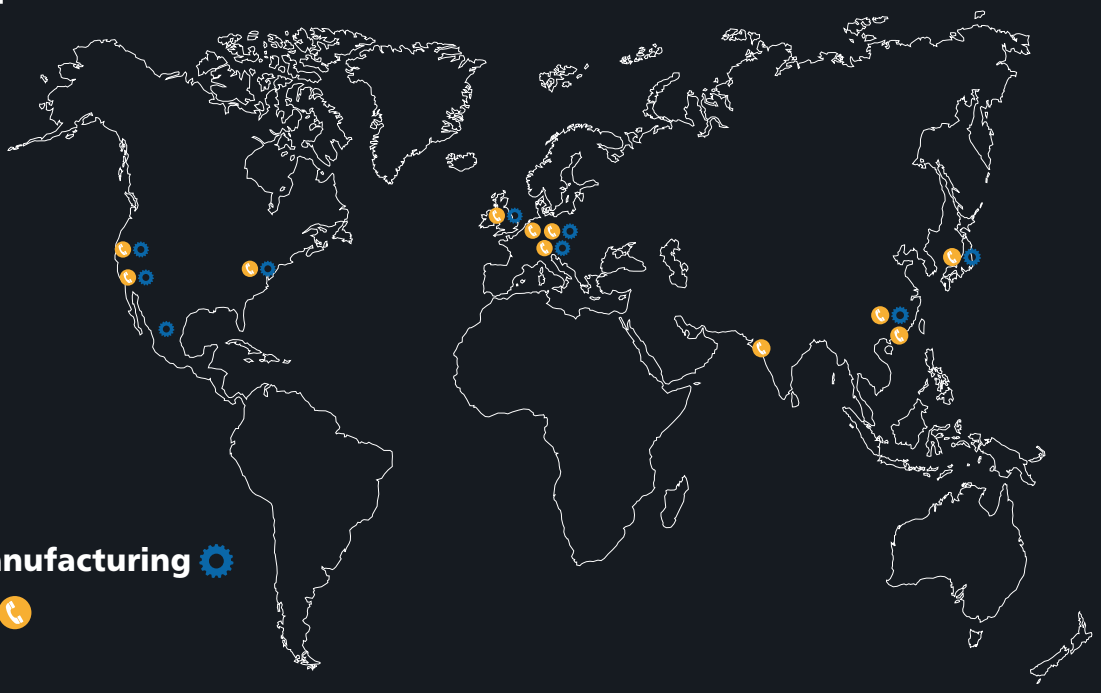

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