



**ITT**

**Interconnect Solutions  
Cannon, VEAM, BIW**

## **D Subminiature Accessories**



*Engineered for life*

# Cannon, VEAM, BIW

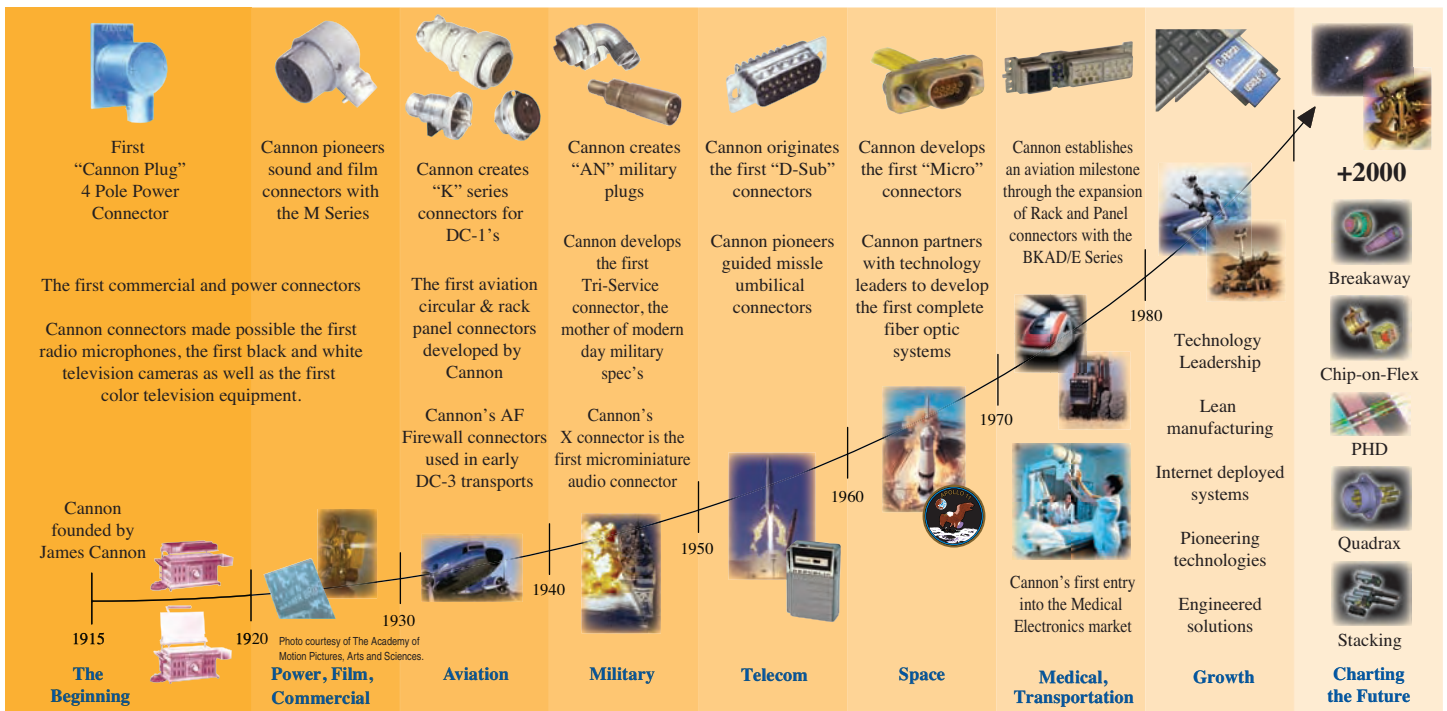
## A Historical Achievement of Technology Leadership

### Defining and Championing Innovation

Showcasing a portfolio of creativity, ITT's "Engineered For Life" execution embraces products which have become ubiquitous in a broad collection of markets including: Military/Aerospace, Civil Aircraft, Industrial Instrumentation, Medical, Oil & Gas, Energy, Transportation, Telecom/Handset, Computer, Consumer, and Automotive.

ITT's rich interconnect history embraces contributions to both technological breakthroughs and social movements. With one of the industry's broadest product offerings, ITT's interconnect products have supported:

- Every Free World space mission, bringing the universe to our doorstep.
- Motion picture, radio, and television equipment, serving laughter and entertainment to millions.
- Commercial and military communications systems, linking the voices of the world.
- Computerized tools, reshaping the information highway.
- Aircraft, rapid transit, and automobiles, mobilizing our expanding society.
- Oil and natural gas production, powering the world's economies.
- Agricultural equipment, attacking the roots of world hunger.



**Description**

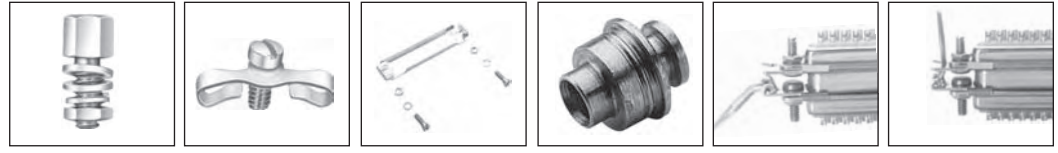
*D Subminiature Accessories*

**Accessory Selection Guide** ..... 2-3

- **Metal Backshell**
  - Die Cast Zinc, EMI Shielded Straight Exit ..... 4
  - Metal Backshell Straight Exit ..... 5
  - Metal Backshell 45° Exit ..... 15
  - Clamps ..... 7-8
  
- **Plastic Backshell**
  - Snap-Together Metalized Plastic, EMI Shielded ..... 9
  - Locking Hardware for Snap-Together Plastic Backshell ..... 10
  - Low Cost Metalized Plastic, Straight Exit ..... 10
  - Snap-Together Universal ..... 11
  - One-Piece Snap-Together ..... 11
  - One-Piece Straight Exit ..... 12
  - One-Piece Plastic, 90° Exit ..... 12
  
- **Locking Hardware**
  - Screw Lock Assemblies ..... 13-14
  - Slide Lock Assemblies ..... 15
  - Spring Latch Assemblies ..... 16
  - Jackscrew/Jackpot Assemblies ..... 17
  
- **Guide Pin Plate**
  - Female Guide Pin Plate ..... 18
  - Male Guide Pin Plate ..... 19
  
- **Connector Saver**
  - High Reliability Connector Saver ..... 20
  
- **Miscellaneous**
  - Polarizing Plates ..... 21
  - Right Angle Brackets ..... 21
  - Wire Hole Fillers ..... 21
  - Dust Cap ..... 22
  - Interfacial Seal ..... 22
  - Potting Shell ..... 22
  
- Part Number Index** ..... 23
  
- Product Safety Warranty** ..... 25

# Cannon D-Subminiature Accessories

## Selection Guide



### Locking Hardware

Backshell	Style	Female Screw Lock see page 14	Male Screw Lock see page 13	Sliding Lock Retainer see page 15	Slide Lock Post see page 15	Spring Latch Plate see page 16	Spring Latch see page 16
EMI Shielded	Snap-Together Metalized Plastic Straight Exit see page 9	—	—	—	—	—	—
EMI Shielded	Snap-Together Metalized Plastic 50° Exit see page 9	—	—	—	—	—	—
EMI Shielded	Die Cast Zinc Metal see page 4	—	▲	—	—	—	—
Metal	Metal Backshell 45° Exit see page 4	—	—	—	—	—	—
Metal	Deep Straight Clamp see page 7	•	•	•	•	•	•
Metal	Round Cable Clamp see page 7	•	•	•	•	•	•
Metal	Short Straight Clamp see page 8	•	•	•	•	•	•
Metal	90° Entry see page 8	•	•	•	•	•	•
Plastic	Snap-Together Universal see page 11	•	•	—	—	—	—
Plastic	One-Piece Snap-Together see page 11	—	▲	—	—	—	—
Plastic	One-Piece Plastic Straight Exit see page 12	—	—	•	•	•	•
Plastic	One-Piece Plastic 90° Exit see page 12	—	—	•	•	•	•

▲ Supplied with backshell

• Optional compatible locking hardware

— Not compatible

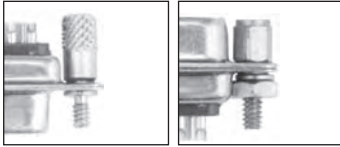


Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

www.ittcannon.com

# Cannon D-Subminiature Accessories

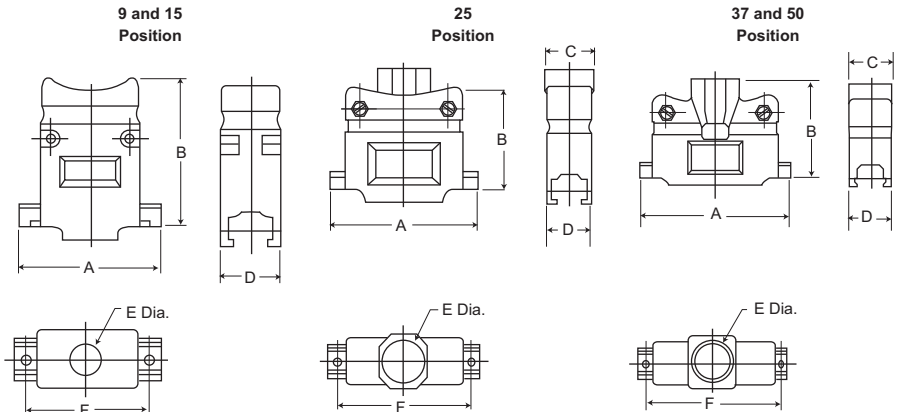
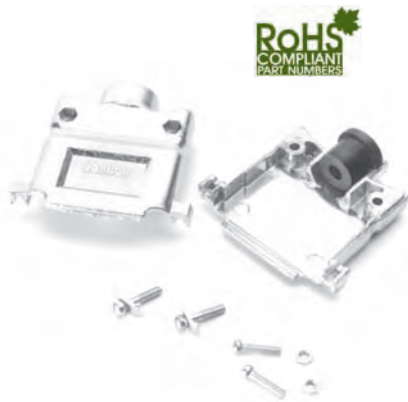
## Selection Guide



### Locking Hardware

Jackscrew Assembly see page 17	Jackpost Assembly see page 17	Recessed Jackscrew see page 10	Extended Jackscrew see page 10	Thumbscrew see page 10	Jackpost for In-Line Connections see page 10
—	—	•	•	•	•
—	—	•	•	•	•
—	—	—	—	—	—
—	—	—	—	—	—
—	•	—	—	—	—
—	•	—	—	—	—
—	•	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

## Die Cast Zinc Backshell, Straight Exit, EMI Shielded



Die cast metal backshells reduce EMI/RFI emissions. Die cast metal backshells offer improved shielding in a rugged package.

### Product Features

- Improves conformance to FCC DOC #20780 shielding requirements
- No crimp ferrule tooling needed
- Kit consists of 1 front shell, 1 rear shell, 2 screws, 2 hex nuts, 2 mounting screws, 2 end brackets, 1 set of compression inserts

Shell Size	Layout	Part Number	A ±0,13 (.005)	B ±0,13 (.005)	C ±0,13 (.005)	D ±0,13 (.005)	øE ±0,13 (.005)	F ±0,13 (.005)
DE	9	980-2000-345	31,12 (1.225)	37,21 (1.465)	15,75 (.620)	15,75 (.620)	10,16 (.400)	24,99 (.984)
DA	15	980-2000-346	39,12 (1.540)	40,64 (1.600)	15,75 (.620)	15,75 (.620)	10,16 (.400)	33,32 (1.312)
DB	25	980-2000-347	53,09 (2.090)	39,37 (1.550)	17,53 (.690)	15,75 (.620)	13,34 (.525)	47,17 (1.857)
DC	37	980-2000-348	69,34 (2.730)	45,72 (1.800)	21,95 (.864)	15,75 (.620)	18,44 (.726)	63,50 (2.500)
DD	50	980-2000-349	66,70 (2.626)	45,72 (1.800)	21,95 (.864)	18,54 (.730)	18,44 (.726)	61,11 (2.406)

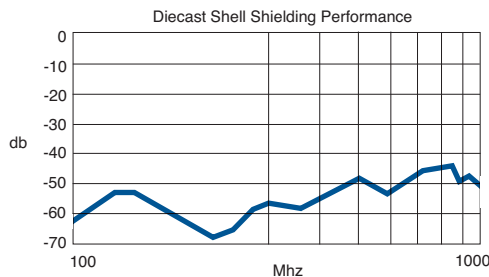
### Specifications

Attenuation:	-50 dB @ 1000MHz
Temperature Range:	-20° C to 80° C

### Materials and Finishes

Backshell Material:	Zinc
Backshell Finish:	Clear Zinc
Compression Inserts:	PVC
Hardware Material:	Steel
Hardware Finish:	Clear Zinc

### Attenuation

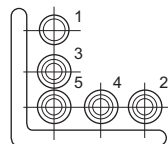


Compression inserts (included with die cast zinc metal backshell)

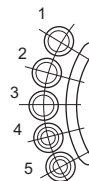
Compression inserts accommodate a wide variety of cable sizes.

Position	Cable Diameter
9,15	4,83/8,89 (.190/.350)
25	4,83/11,68 (.190/.460)
37,50	7,62/17,27 (.300/.680)

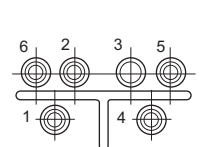
9 and 15 Position\*



25 Position\*



37 and 50 Position\*



\* Inserts may be supplied mirror image.

Position	#1		#2		#3		#4		#5		#6	
	O.D.	I.D.	O.D.	I.D.	O.D.	I.D.	O.D.	I.D.	O.D.	I.D.	O.D.	I.D.
9,15	12,07 (.475)	8,13 (.320)	9,14 (.360)	8,00 (.315)	9,14 (.360)	6,48 (.255)	9,14 (.360)	7,24 (.285)	9,14 (.360)	5,33 (.210)	—	—
25	15,24 (.600)	11,43 (.450)	11,43 (.450)	10,41 (.410)	11,43 (.450)	9,40 (.370)	11,43 (.450)	7,62 (.300)	11,43 (.450)	5,84 (.230)	—	—
37,50	16,64 (.655)	14,48 (.570)	17,78 (.700)	15,75 (.620)	20,57 (.810)	16,51 (.650)	16,64 (.655)	12,70 (.500)	16,64 (.655)	10,80 (.425)	16,64 (.655)	8,89 (.350)



Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

www.ittcannon.com

## Metal Backshell Straight Exit

The new Cannon Metal Backshells D\*FM series for D-Subminiature Connectors offers protection from magnetic and radio interferences to cable assemblies.

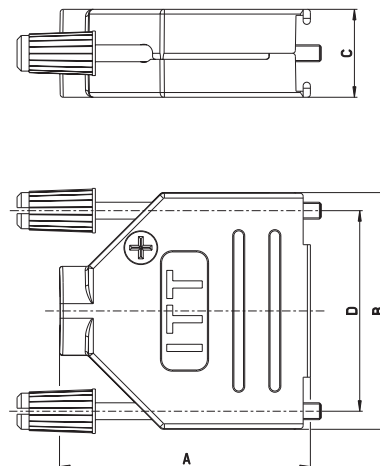
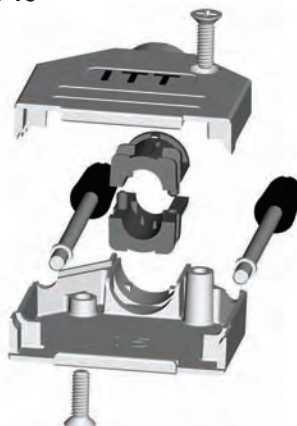


This backshell series is characterized by simple assembly and fit for industrial and telecom applications.

### Product Features:

- No crimp ferrule tooling needed
- Material: Zinc, blue chromated
- Unique metal filled plastic cable strain relief guarantees 360° shielding
- RoHS compliant
- -40 - +120°C temperature range
- Corrosion resistant

Size 15



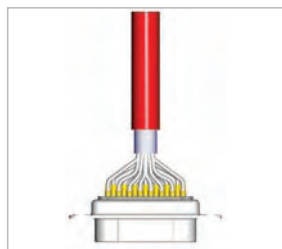
Part Description With #4-40 UNC Jackscrew	Part Description With M3 Jackscrew	Shell Size	A	B	C	D	Cable Diameter
DEFME-101	DEFMX-101	Size 9	39,55mm [1.555inch]	31,3mm [1.232inch]	14,6mm [0.575inch]	25,0mm [0.984inch]	4 - 9mm
DAFME-101	DAFMX-101	Size 15	41,7mm [1.642inch]	39,3mm [1.547inch]	14,6mm [0.575inch]	33,3mm [1.311inch]	4 - 9mm
DBFME-101	DBFMX-101	Size 25	49,0mm [1.929inch]	53,5mm [2.106inch]	14,6mm [0.575inch]	47,0mm [1.850inch]	4 - 9mm
DCFME-101	DCFMX-101	Size 37	53,3mm [1.098inch]	69,7mm [2.744inch]	14,6mm [0.575inch]	63,5mm [2.500inch]	4 - 9mm

Kit consists of 1 front shell, 1 rear shell, 4 strain reliefs, 2 mounting crosshead screws, and 2 jack screws.

### Assembly instructions Size 9, 15, 25, 37



Use two halves of strain relief (different sizes can be mixed)



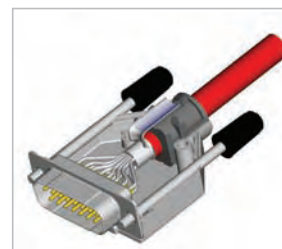
Strip cable 18mm and shape cable to two pigtailed



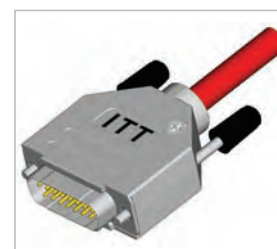
Attach the strain relief around the cable



Bend cable shielding back on outside of strain relief

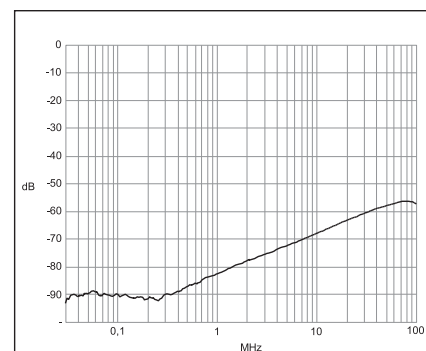


Mount connector and cable into the backshell



Assemble the other half (screwing force: 100-120 Ncm)

Attenuation curve



Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

[www.ittcannon.com](http://www.ittcannon.com)



## Metal Backshell 45° Exit

The new Cannon Metal Backshells D\*FM series for D-Subminiature Connectors offers protection from magnetic and radio interferences to cable assemblies.

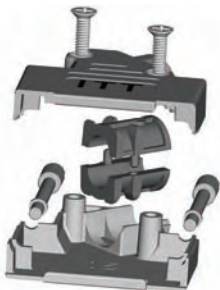


This backshell series is characterized by simple assembly and fit for Industrial and telecom applications.

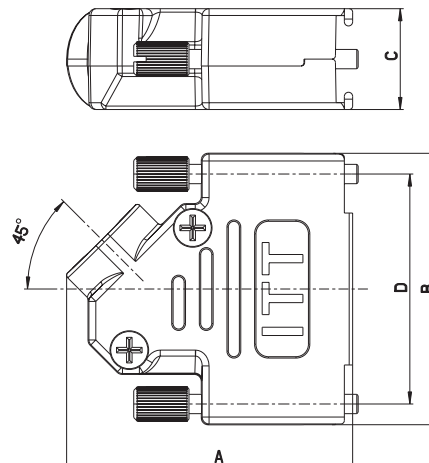
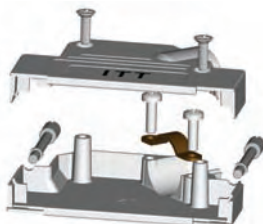
### Product Features:

- No crimp ferrule tooling needed
- Material: Zinc, blue chromated
- Unique metal filled plastic cable strain relief guarantees 360° shielding
- RoHS compliant
- -40 - +120°C temperature range
- Corrosion resistant

Size 15



Size 50



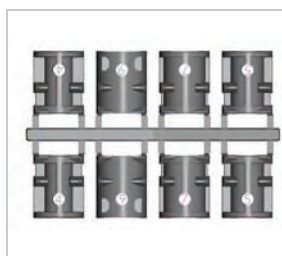
Part Description With #4-40 UNC Jackscrew	Part Description With M3 Jackscrew	Shell Size	A	B	C	D	Cable Diameter
DEFME-100	DEFMX-100	Size 9*	37,5mm [1.476inch]	35,5mm [1.398inch]	14,6mm [0.575inch]		4 - 9mm
DAFME-100	DAFMX-100	Size 15**	41,5mm [1.634inch]	39,5mm [1.555inch]	14,6mm [0.575inch]	33,3mm [1.311inch]	4 - 9mm
DBFME-100	DBFMX-100	Size 25**	41,5mm [1.634inch]	53,5mm [2.106inch]	14,5mm [0.571inch]	47,0mm [1.850inch]	4 - 9mm
DCFME-100	DCFMX-100	Size 37**	41,5mm [1.634inch]	70,0mm [2.756inch]	14,5mm [0.571inch]	63,5mm [2.500inch]	4 - 9mm
DDFME-100	DDFMX-100	Size 50***	45,0mm [1.772inch]	67,5mm [2.657inch]	17,4mm [0.69inch]	61,0mm [2.402inch]	13-16mm

\*Size 9 Backshell: Kit consists of 1 front shell, 1 rear shell, 4 strain reliefs, 2 mounting crosshead screws, 1 jack screw

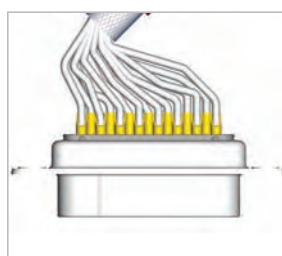
\*\*Size 15, 25, 37 Backshell: Kit consists of 1 front shell, 1 rear shell, 4 strain reliefs, 2 mounting crosshead screws, 2 jack screws

\*\*\*Size 50 Backshell: Kit consists of 1 front shell, 1 rear shell, 1 cable clamp, 4 mounting crosshead screws, 2 jack screws

### Assembly instructions Size 9, 15, 25, 37



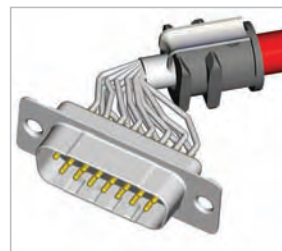
Use two halves of strain relief (different sizes can be mixed)



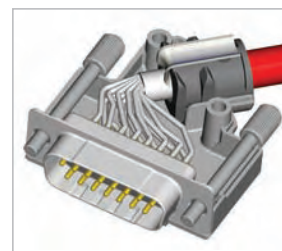
Strip cable 18mm and shape cable to two pigtails



Attach the strain relief around the cable



Bend cable shielding back on outside of strain relief

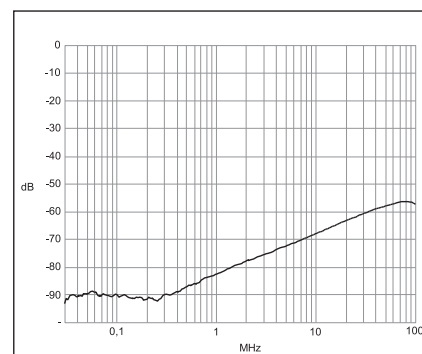


Mount connector and cable into the backshell



Assemble the other half (screwing force: 100-120 Ncm)

Attenuation curve



Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

www.ittcannon.com



## Metal Backshell

Metal Backshells provide strain relief. Various profiles available for different cable routing requirements.

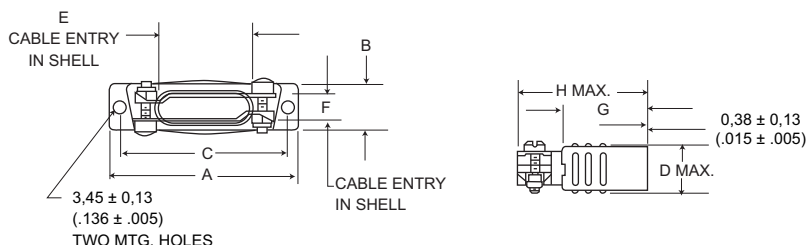
### Product Features

Qualified to MIL-Spec M85049

### Materials and Finishes

Backshell Material:	Low Carbon Steel or Brass
Backshell Finish:	Chromate over Cadmium (Mil Spec) or Zinc (RoHS)
Hardware Material:	Steel

## Deep Straight Clamp



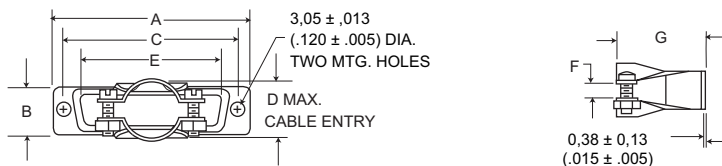
- Kit consists of 1 shell, 2 cable clamps, 2 screws, 2 hex nuts.

Shell Size	RoHS Compliant Part Number	Mil-Spec Parts (Brass)		Brass	
		Mil-Spec Part Number	Part Number	50 μ in. Gold over Copper	Part Number
DE	DE24657-29	M85049/48-1-6F	DE24657-5	DE24657-16	
DA	DA24658-28	M85049/48-1-7F	DA24658-2	DA24658-15	
DB	DB24659-27	M85049/48-1-8F	DB24659-2	DB24659-15	
DC	DC24660-27	M85049/48-1-9F	DC24660-11	DC24660-16	
DD	DD24661-27	M85049/48-1-10F	DD24661-4	DD24661-13	

Shell Size	Layout	Part Number	Mil Spec Part Number*	A ±0,38 (.015)	B ±0,572 (.0225)	C ±0,38 (.015)	D max.	E ±0,38 (.015)	F ±0,38 (.015)	G ±0,38 (.015)	H max.
DE	9	DE24657	M85049/48-1-1F	30,56 (1.203)	12,484 (.4915)	24,99 (.984)	14,68 (.578)	9,53 (.375)	9,53 (.375)	19,05 (.750)	31,75 (1.250)
DA	15	DA24658	M85049/48-1-2F	38,89 (1.531)	12,484 (.4915)	33,32 (1.312)	14,68 (.578)	18,11 (.713)	7,93 (.312)	19,05 (.750)	31,75 (1.250)
DB	25	DB24659	M85049/48-1-3F	52,78 (2.078)	12,484 (.4915)	47,04 (1.852)	14,68 (.578)	25,40 (1.000)	7,93 (.312)	25,40 (1.000)	39,70 (1.563)
DC	37	DC24660	M85049/48-1-4F	69,04 (2.718)	12,484 (.4915)	63,50 (2.500)	14,68 (.578)	34,93 (1.375)	7,93 (.312)	25,40 (1.000)	39,70 (1.563)
DD	50	DD24661	M85049/48-1-5F	66,68 (2.625)	15,253 (.6005)	61,11 (2.406)	17,45 (.578)	35,71 (1.406)	10,31 (.406)	28,57 (1.125)	42,88 (1.688)

\* Parts ordered with no suffix or "Z" suffix will be substituted with "F" suffix.

## Round Cable Clamp



- Kit consists of 1 shell, 2 cable clamps, 2 screws, 2 hex nuts.

Shell Size	RoHS Compliant Part Number	Mil-Spec Parts (Brass)		Brass	
		Mil-Spec Part Number	Part Number	50 μ in. Gold over Copper	Part Number
DE	DE44994-14	M85049/48-2-6F	DE44994-3	DE44994-2	
DA	DA20961-26	M85049/48-2-7F	DA20961-3	DA20961-16	
DB	DB20962-30	M85049/48-2-8F	DB20962-8	DB20962-18	
DC	DC20963-27	M85049/48-2-9F	DC20963-8	DC20963-17	
DD	DD20964-32	M85049/48-2-10F	DD20964-8	DD20964-19	

Shell Size	Layout	Part Number	Mil Spec Part Number*	A ±0,38 (.015)	B ±0,572 (.0225)	C ±0,38 (.015)	D max.	E ±0,38 (.015)	F ±0,38 (.015)	G ±0,76 (.030)
DE	9	DE44994	M85049/48-2-1F	30,68 (1.208)	12,70 (.500)	24,99 (.984)	10,31 (.406)	16,79 (.661)	3,18 (.125)	26,18 (1.031)
DA	15	DA20961	M85049/48-2-2F	38,89 (1.531)	12,70 (.500)	33,33 (1.312)	10,31 (.406)	24,99 (.984)	3,18 (.125)	26,18 (1.031)
DB	25	DB20962	M85049/48-2-3F	52,78 (2.078)	12,70 (.500)	47,04 (1.852)	15,06 (.593)	38,48 (1.515)	4,75 (.187)	26,98 (1.062)
DC	37	DC20963	M85049/48-2-4F	69,04 (2.718)	12,70 (.500)	63,50 (2.500)	18,23 (.718)	55,14 (2.171)	6,35 (.250)	26,98 (1.062)
DD	50	DD20964	M85049/48-2-5F	66,68 (2.625)	15,47 (.609)	61,11 (2.406)	20,62 (.812)	53,16 (2.093)	7,92 (.312)	26,98 (1.062)

\* Parts ordered with no suffix or "Z" suffix will be substituted with "F" suffix.

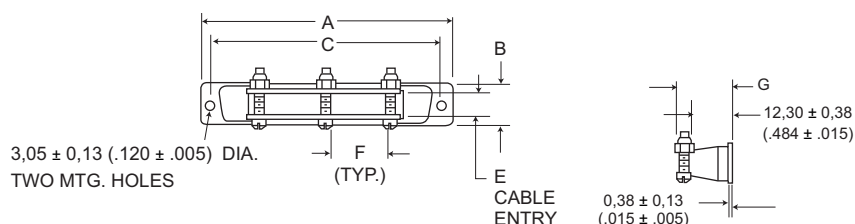
Dimensions shown in mm (inch)  
Specifications and dimensions subject to change



## Short Straight Clamp



- Kit consists of 1 shell, 2 or 3 screws, 2 or 3 hex nuts



Shell Size	RoHS Compliant Part Number	Mil-Spec Parts (Brass)		Brass
		Mil-Spec Part Number	Part Number	50 $\mu$ in. Gold over Copper
DA	DA19678-212	M85049/48-3-7F	DA19678-38	DA19678-167
DB	DB19678-213	M85049/48-3-8F	DB19678-53	DA19678-168
DC	DC19678-214	M85049/48-3-9F	DC19678-85	DA19678-138
DD	DD19678-214	M85049/48-3-10F	DD19678-55	DA19678-161

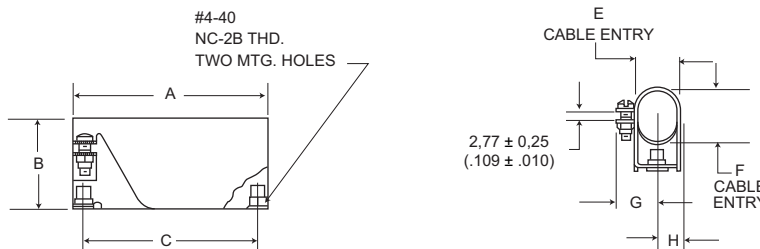
Shell Size	Layout	Part Number	Mil Spec Part Number*	No. of Cable Locking Screws Included	A $\pm 0,38 (.015)$	B $\pm 0,38 (.015)$	C $\pm 0,13 (.005)$	E $\pm 0,38 (.015)$	F $\pm 0,38 (.015)$	G $\pm 0,98 (.035)$
DA	15	DA19678-1	M85049/48-3-2F	2	38,88 (1.531)	12,70 (.500)	33,33 (1.312)	7,51 (.296)	7,93 (.312)	16,36 (.644)
DB	25	DB19678-2	M85049/48-3-3F	2	52,78 (2.078)	12,70 (.500)	47,04 (1.852)	7,51 (.296)	20,22 (.796)	16,36 (.644)
DC	37	DC19678-3	M85049/48-3-4F	3	69,04 (2.718)	12,70 (.500)	63,50 (2.500)	7,51 (.296)	17,45 (.687)	16,36 (.644)
DD	50	DD19678-4	M85049/48-3-5F	3	66,68 (2.625)	15,47 (.690)	61,11 (2.406)	9,91 (.390)	17,45 (.687)	17,63 (.694)

\* Parts ordered with no suffix or "Z" suffix will be substituted with "F" suffix.

## 90° Entry



- Kit consists of 1 shell, 1 cable clamp, 1 screw, 1 nut, 2 rivnuts (assembled)



Shell Size	RoHS Compliant Part Number	Mil-Spec Parts (Brass)		Brass
		Mil-Spec Part Number	Part Number	50 $\mu$ in. Gold over Copper
DE	DE19977-72	M85049/50-6F	DE19977-20	DE19977-47
DA	DA19977-68	M85049/50-7F	DA19977-6	DE19977-40
DB	DB19977-69	M85049/50-8F	DB19977-17	DE19977-43
DC	DC19977-70	M85049/50-9F	DC19977-18	DE19977-45
DD	DC19977-71	M85049/50-10F	DD19977-19	DE19977-44

Shell Size	Layout	Part Number	Mil Spec Part Number*	A $\pm 0,38 (.015)$	B $\pm 0,38 (.015)$	C $\pm 0,13 (.005)$	E $\pm 0,38 (.015)$	F $\pm 0,38 (.015)$	G $\pm 0,98 (.035)$	H
DE	9	DE19977-5	M85049/50-1F	30,56 (1.203)	18,24 (.718)	24,99 (.984)	11,10 (.437)	11,10 (.437)	11,89 (.468)	7,14 (.281)
DA	15	DA19977-1	M85049/50-2F	38,89 (1.531)	12,70 (.500)	33,33 (1.312)	11,10 (.437)	11,10 (.437)	11,89 (.468)	7,14 (.281)
DB	25	DB19977-2	M85049/50-3F	52,78 (2.078)	12,70 (.500)	47,04 (1.852)	11,10 (.437)	15,88 (.625)	11,89 (.468)	7,14 (.281)
DC	37	DC19977-3	M85049/50-4F	69,04 (2.718)	12,70 (.500)	63,50 (2.500)	11,10 (.437)	20,63 (.812)	11,89 (.468)	7,14 (.281)
DD	50	DD19977-4	M85049/50-5F	66,68 (2.625)	15,47 (.690)	61,11 (2.406)	14,28 (.562)	23,01 (.906)	13,47 (.531)	8,71 (.343)

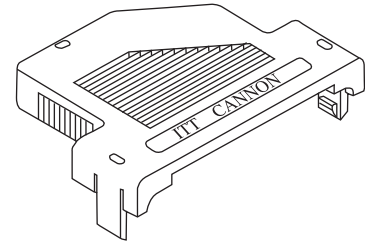
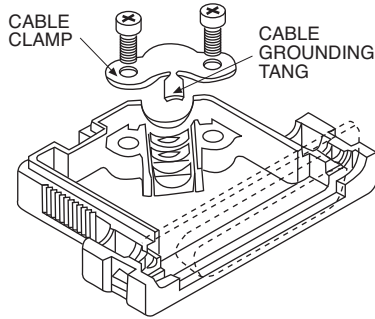
\* Parts ordered with no suffix or "Z" suffix will be substituted with "F" suffix.

## Snap-Together Metalized Plastic

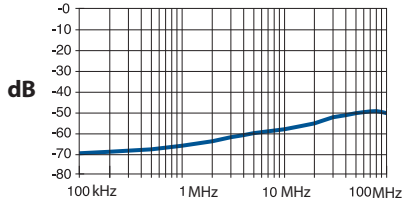
Metalized plastic backshells reduce EMI/RFI emissions. Metalized plastic provides a light weight solution. Includes integral strain relieving cable clamp.

### Product Features

- Improves conformance to FCC DOC #20780 shielding requirements
- No crimp ferrule tooling needed
- Quick and simple assembly using snap-together design feature
- Non-metalized, non-shielded versions available



Attenuation Curve



Note: Cable grounding tang not available on DE size backshell.

### Specifications

Attenuation:	-49 dB @ 100MHz
Temperature Range:	-20° C to 80° C

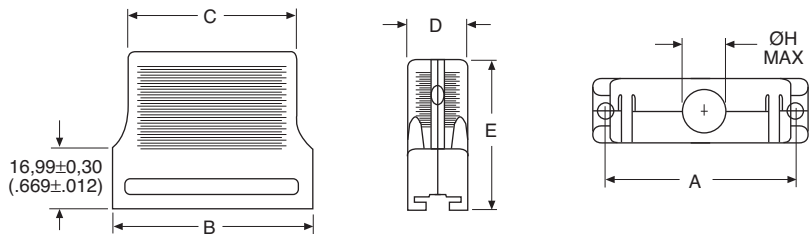
### Materials and Finishes

Material:	Thermoplastic, UL 94V-0 rated
Finish:	Nickel over Copper

## Straight Exit



- Kit consists of 1 front shell, 1 rear shell, 1 cable clamp, 2 screws
- Optional locking hardware sold separately, see page 10

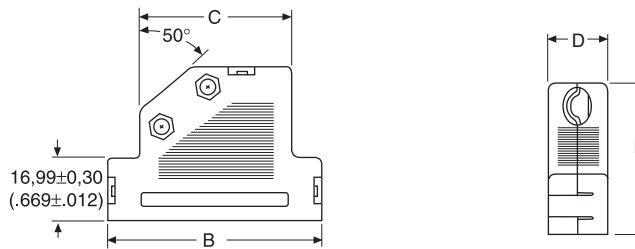


Shell Size	Layout	Computer Cable			Ribbon Cable		A	B	C	D	E	øH Max.
		Shielded	Non-Shielded Gray	Non-Shielded Black	Shielded	Non-Shielded Gray	±0,15 (.006)	±0,30 (.012)	±0,30 (.012)	±0,30 (.120)	±0,20 (.008)	
DE	9	DE121073-154	DE121073-159	DE121073-259	DE121073-164	DE121073-169	24,95 (.982)	30,81 (1.213)	23,70 (.933)	16,00 (.630)	35,99 (1.417)	7,32 (.288A)
DA	15	DA121073-150	DA121073-155	DA121073-255	DA121073-160	DA121073-165	33,30 (1.311)	39,09 (1.539)	31,80 (1.252)	16,00 (.630)	42,00 (1.654)	8,31 (.327)
DB	25	DB121073-151	DB121073-156	DB121073-256	DB121073-161	DB121073-166	47,00 (1.850)	53,01 (2.087)	45,01 (1.772)	16,00 (.630)	42,00 (1.654)	10,52 (.414)
DC	37	DC121073-152	DC121073-157	DC121073-257	DC121073-162	DC121073-167	63,45 (2.498)	69,29 (2.728)	60,30 (2.374)	16,00 (.630)	42,00 (1.654)	12,32 (.485)
DD	50	DD121073-153	DD121073-158	DD121073-258	-	-	61,10 (2.410)	66,90 (2.634)	58,30 (2.295)	19,00 (.748)	42,00 (1.654)	13,00 (.512)

## 50° Exit



- Kit consists of 1 front shell, 1 rear shell, 1 cable clamp, 2 screws
- Optional locking hardware sold separately, see page 5



Shell Size	Layout	Shielded Part #	Non-Shielded Part # Gray	B	C	D	E	Cable Diameter	
				±0,30 (.012)	±0,30 (.012)	±0,30 (.012)	±0,20 (.008)	Min.	Max.
DE	9	DE121073-54	DE121073-59	35,99 (1.417)	22,00 (8.66)	16,00 (.630)	35,99 (1.417)	3,51 (.138)	7,49 (.295)
DA	15	DA121073-50	DA121073-55	44,29 (1.744)	27,31 (1.075)	16,00 (.630)	42,01 (1.654)	6,50 (.256)	8,99 (.354)
DB	25	DB121073-51	DB121073-56	57,99 (2.283)	41,00 (1.614)	16,00 (.630)	42,01 (1.654)	6,50 (.256)	11,00 (.433)
DC	37	DC121073-52	DC121073-57	74,50 (2.933)	57,51 (2.264)	16,00 (.630)	42,01 (1.654)	6,50 (.256)	11,00 (.433)
DD	50	DD121073-53	DD121073-58	72,97 (2.873)	54,99 (2.165)	19,00 (.748)	42,01 (1.654)	8,99 (.354)	13,00 (.512)

Dimensions shown in mm (inch)

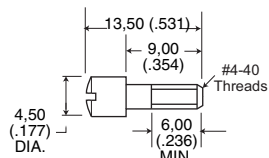
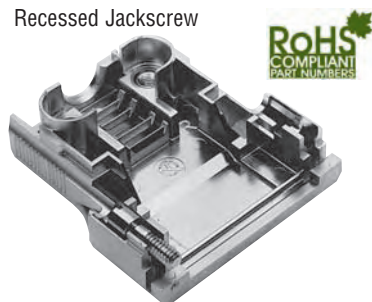
Specifications and dimensions subject to change

www.ittcannon.com

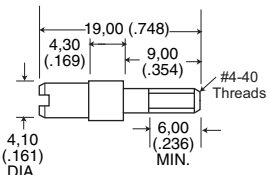
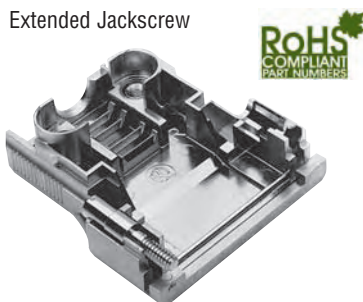


## Locking Hardware for Snap-Together Plastic Backshell

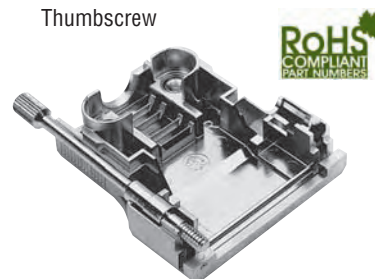
Recessed Jackscrew



Extended Jackscrew



Thumbscrew

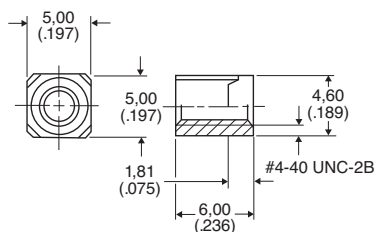


### Materials and Finishes

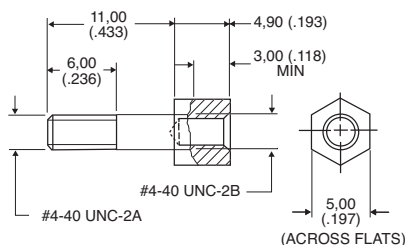
Part Number	Material	Finish	Quantity Required per Connector
250-8501-004	Brass	Nickel	2
250-8501-009 (M3), 250-8501-010 (#4-40)	Brass	Nickel	2
250-8501-013	Brass	Nickel	2

## Jackpost for In-Line Connections

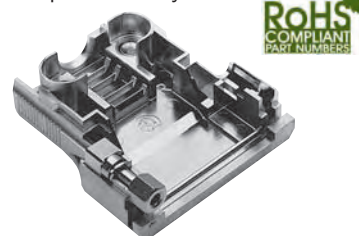
Rectangular Nut



Jackpost



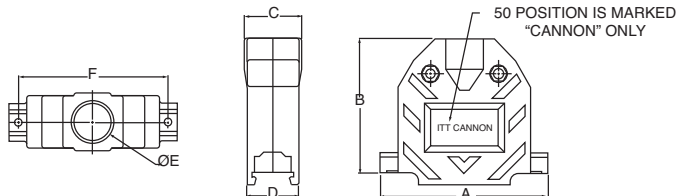
Jackpost Assembly



Assembly consists of 1 rectangular nut, 1 jackpost, 1 # 4-40 lock washer.

Part Number:	D121073-19
Material:	Brass
Finish:	Nickel
Quantity required per connector:	2

## Straight Exit - Metalized Plastic Low Cost



- Kit consists of 1 front shell, 1 rear shell, 1 cable clamp, 2 screws

Shell Size	Layout	Part Number	A	B	C	D	ø E	F
DE	9	980-2000-350	30,91 (1.217)	39,29 (1.547)	16,26 (.640)	16,26 (.640)	10,16 (.400)	24,99 (.984)
DA	15	980-2000-351	39,24 (1.545)	38,23 (1.505)	16,26 (.640)	16,26 (.640)	10,16 (.400)	33,32 (1.312)
DB	25	980-2000-352	53,09 (2.090)	42,04 (1.655)	18,03 (.710)	16,26 (.640)	13,26 (.522)	47,17 (1.857)
DC	37	980-2000-353	69,44 (2.734)	46,48 (1.830)	23,01 (.906)	16,26 (.640)	18,44 (.726)	63,50 (2.500)
DD	50	980-2000-354	67,18 (2.645)	47,12 (1.855)	23,88 (.940)	19,56 (.770)	18,44 (.726)	61,11 (2.406)

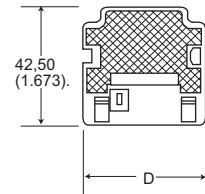
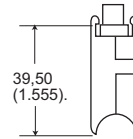
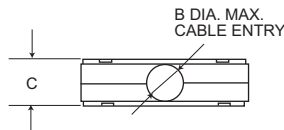
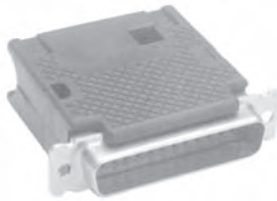
Materials and Finishes: Thermoplastic, UL 94V-0 rated, Nickel plated



Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

www.ittcannon.com

## Snap-Together Universal



- 2-piece snap-together design for quick assembly.
- Customer furnishes tie-wrap.

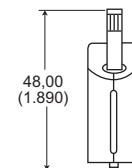
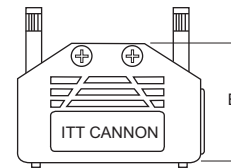
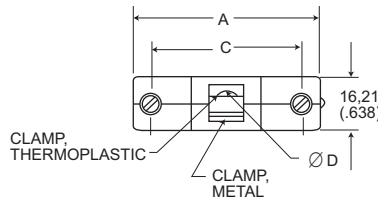
Shell Size	Layout	Part Number	øB max.	C ±0,20 (.008)	D ±0,20 (.008)
DE	9	DE115339-20	7,01 (.276)	17,00 (.669)	19,51 (.768)
DA	15	DA115339-21	9,60 (.378)	17,00 (.669)	27,79 (1.094)
DB	25	DB115339-22	11,61 (.457)	17,00 (.669)	41,61 (1.638)
DC	37	DC115339-23	13,00 (.512)	17,00 (.669)	59,99 (2.283)
DD	50	DD115339-24	16,00 (.630)	19,81 (.780)	52,32 (2.060)

Note: Part Numbers above replace the following part number series: DE110963-1 to DD110963-5

### Materials and Finishes

Material: Black Thermoplastic,  
UL 94V-0 rated

## One-Piece Snap-Together



- Low cost
- Easy to assemble
- Mounting hardware included
- 2 thumbscrews, 2 cable clamps

Shell Size	Layout	Part Number	A	C	ø D max.	E
DE	9	DEBS-9	35,20 (1.386)	24,99 (.984)	5,69 (.224)	27,51 (1.083)
DA	15	DABS-15	43,31 (1.705)	33,33 (1.312)	5,69 (.224)	31,19 (1.228)
DB	25	DBBS-25	57,20 (2.252)	47,04 (1.852)	6,50 (.256)	38,30 (1.508)
DC	37	DCBS-37	72,00 (2.83)	62,00 (2.44)	7,80 (.307)	43,08 (1.69)
DD	50	DBBS-50	73,70 (2.90)	63,70 (2.50)	8,20 (.322)	48,04 (1.89)

### Materials and Finishes

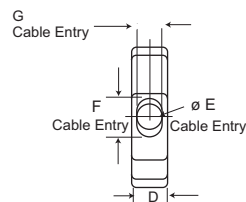
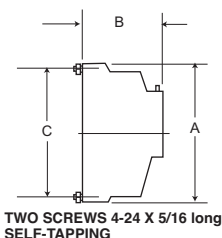
Backshell Material: Polypropylene  
Hardware Material: Steel  
Hardware Finish: Black Nickel

## One-Piece Plastic

### Straight Exit



- Kit consists of 1 shell, 1 cable clamp, 1 set screw
- Mounting hardware included
- 2 screws #4-24 x 5/16 long self tapping
- Accommodates spring latches



TWO SCREWS 4-24 X 5/16 long SELF-TAPPING

#### Materials and Finishes

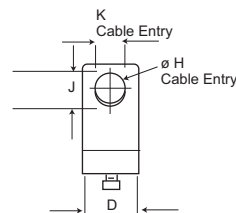
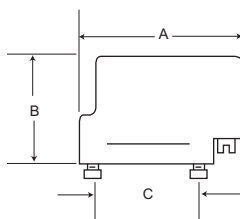
Material:	Black Thermoplastic, UL 94V-0 rated
Hardware Material:	Steel
Hardware Finish:	Chromate over Zinc

Shell Size	Part Layout Number	A	B	C	D	øE	F	G
DE 9	DE51218	30,94 (1.218)	25,40 (1.000)	24,99 (.984)	12,70 (.500)	7,14 (.281)	—	—
DA 15	DA51210	39,27 (1.546)	25,40 (1.000)	33,33 (1.312)	12,70 (.500)	9,14 (.360)	—	—
DB 25	DB51212	53,16 (2.093)	31,75 (1.250)	47,04 (1.852)	12,70 (.500)	—	12,52 (.493)	9,15 (.360)
DC 37	DC51214	69,44 (2.734)	38,10 (1.500)	63,50 (2.500)	12,70 (.500)	—	17,63 (.694)	9,15 (.360)
DD 50	DD51216	67,06 (2.640)	38,10 (1.500)	61,11 (2.406)	15,47 (.690)	—	18,64 (.734)	11,89 (.468)

### 90° Exit



- Kit consists of 1 shell, 1 cable clamp, 1 set screw
- Mounting hardware included
- 2 screws #4-24 x 5/16 long self tapping



#### Materials and Finishes

Material:	Black Thermoplastic, UL 94V-0 rated
Hardware Material:	Steel
Hardware Finish:	Chromate over Zinc

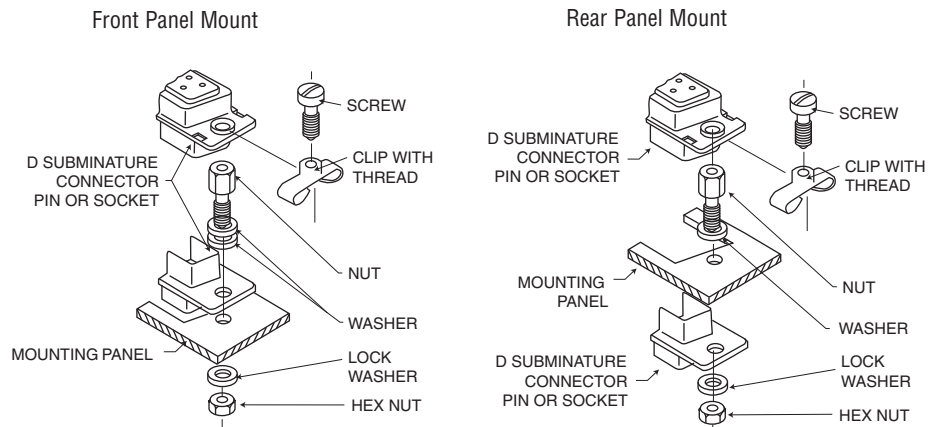
Shell Size	Part Layout Number	A	B	C	D	øH	J	K
DE 9	DE51219	37,95 (1.494)	25,40 (1.000)	24,99 (.984)	12,70 (.500)	7,14 (.281)	—	—
DA 15	DA51211	46,28 (1.822)	25,40 (1.000)	33,33 (1.312)	12,70 (.500)	9,14 (.360)	—	—
DB 25	DB51213	60,15 (2.368)	31,75 (1.250)	47,04 (1.852)	12,70 (.500)	—	12,52 (.493)	9,15 (.360)
DC 37	DC51215	76,43 (3.009)	38,10 (1.500)	63,50 (2.500)	12,70 (.500)	—	17,63 (.694)	9,15 (.360)
DD 50	DD51217	74,04 (2.915)	38,10 (1.500)	61,11 (2.406)	15,47 (.690)	—	18,64 (.734)	11,89 (.468)

## Screw Lock Assemblies

ITT offers the largest variety of locking and latching hardware. Refer to the accessories selection guide on pages 2-3 for use with Cannon backshells.

### Product Features

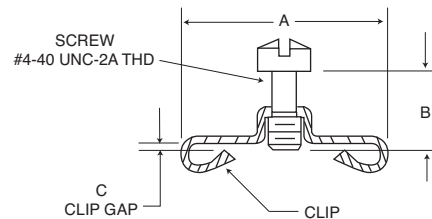
- Ensures positive mating
- Provides locking and latching for high vibration applications



## Male Screw Lock



- Kit consists of 1 screw and 1 clip
- Order 2 per connector
- Similar to M24308/25



### Materials and Finishes

Material:	Steel
Finish:	Trivalent Chromate over Zinc

Shell Size	each P/N	2 each P/N	A ±0,38(.015)	B ±0,2 (.010)	C ±0,13 (.005)	RoHS Compliant P/N each	RoHS Compliant P/N 2 each
DE, DA, DB, DC	D20419	D20419-119	14,10 (.555)	6,35 (.250)	1,22 (.048)	D20419-211	D20419-218
DE, DA, DB, DC	D20419-18	D20419-121	14,10 (.555)	7,14 (.281)	1,70 (.067)	D20419-212	D20419-219
DE, DA, DB, DC	D20419-21	D20419-122	14,10 (.555)	7,14 (.281)	2,34 (.092)	D20419-213	D20419-220
DE, DA, DB, DC	D20419-104	D20419-216	14,10 (.555)	7,92 (.312)	2,34 (.092)	D20419-214	D20419-221
DD	D20420	D20420-097	16,66 (.656)	6,35 (.250)	1,22 (.048)	D20420-157	D20420-163
DD	D20420-13	D20420-099	16,66 (.656)	7,14 (.281)	1,70 (.067)	D20420-158	D20420-164
DD	D20420-15	D20420-100	16,66 (.656)	7,14 (.281)	2,34 (.092)	D20420-159	D20420-165
DD	D20420-86	D20420-162	16,66 (.656)	7,92 (.312)	2,34 (.092)	D20420-160	D20420-166

Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

www.ittcannon.com



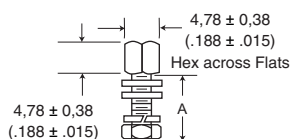
## Female Screw Lock



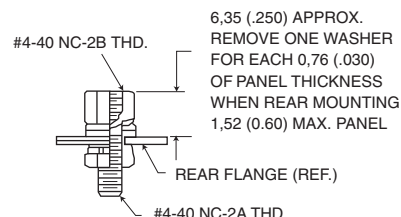
- Kit consists of 1 nut, 3 washer, 1 lock washer, 1 hex nut.
- Order 2 per connector.

Material: Steel  
 Finish: Chromate over Cadmium (Mil Spec) or Zinc (RoHS)

### Front Panel Mount



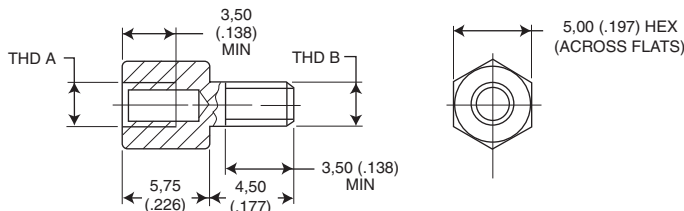
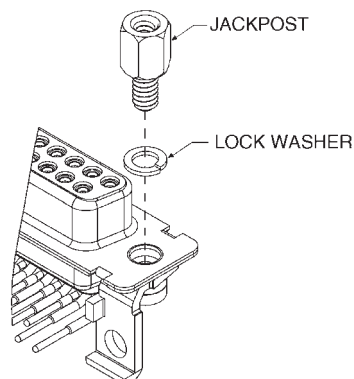
### Rear Panel Mount



NOTE: (1) A 6 inch/pound (female) and 4 inch/pound (male) maximum torque during assembly is recommended on steel screw lock assemblies. (2) A third flat washer is supplied for front panel mounting of tab shell connectors.

Yellow Chromate Over Cadmium each	Chromate Over Zinc Kit of 2 each	RoHS Compliant Part Number	A ± 0,38 (.015)	Mil-Spec Part Number
D20418-2	D20418-82	D20418-128	7,92 (.312)	M24308/26-1F
D20418-50	D20418-131	-	12,70 (.500)	-
D20418-39	D20418-83	D20418-129	15,88 (.625)	M24308/26-2F
D20418-74	D20418-132	-	19,05 (.750)	-

## Screw Locks for Connectors with Integral Threaded Inserts



Part Number	Thread Type	
	THD A	THD B
D121073-39	# 4-40 UNC-2B	# 4-40 UNC-2A
D112041 *	# 4-40 UNC-2B	# 4-40 UNC-2A
D121073-42	M3	M3

\* without lock washer

- Kit consists of 1 jackpost, 1 lock washer.
- Order 2 per connector.

## Loose Spacer

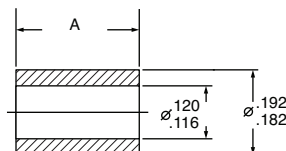
Part Number: 253-0343-000 (D\*M Style)

Dim A  
5.84 ± .08 (.230 ± .003)

Part Number: 253-0343-011 (D\*MA Style)

9.40 ± .13 (.370 ± .005)

Material: Aluminum  
 Finish: Chromate over Cadmium



Dimensions shown in mm (inch)  
 Specifications and dimensions subject to change

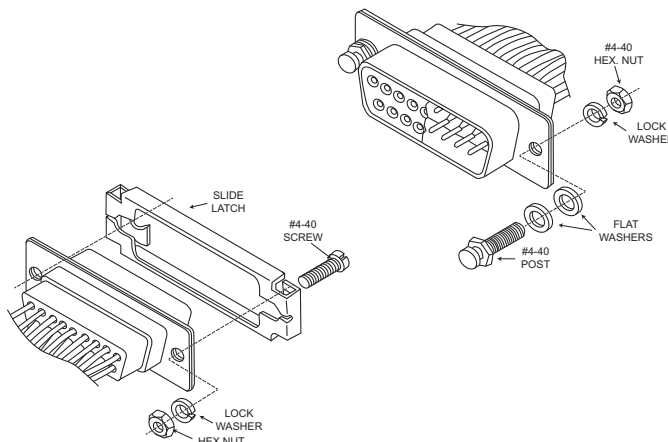


## Slide Lock Assemblies

ITT offers the largest variety of locking and latching hardware. Refer to the accessories selection guide on pages 2-3 for use with Cannon backshells.

### Product Features

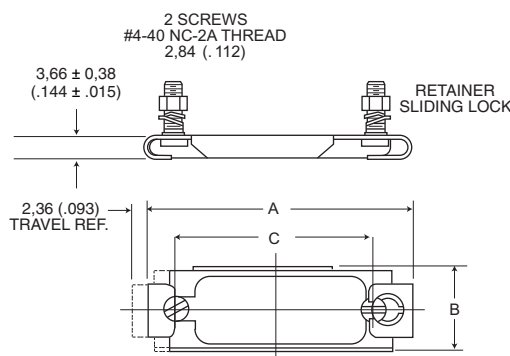
- Ensures positive mating
- Provides locking and latching for high vibration applications



## Sliding Lock Retainer Assembly



- Kit consists of 1 sliding lock plate, 2 mounting screws, 2 lock washer, 2 hex nuts
- Order 1 kit per connector



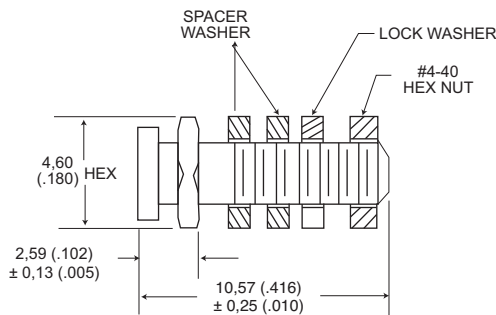
Descriptions	Material	Finish/ Treatment
Sliding Lock Plate	Stainless Steel	Passivated
Screw, Mounting	Steel	Trivalent
Washer Lock	Steel	Chromate over
Nut, Hex	Steel	Zinc

Shell Size	Layout	Part Number	A ± 0,38 (.015)	B ± 0,38 (.015)	C ± 0,13 (.005)
DE	9	DE51224-1	35,05 (1.380)	12,70 (.500)	25,00 (.984)
DA	15	DA51220-1	43,70 (1.720)	12,70 (.500)	33,32 (1.312)
DB	25	DB51221-1	57,40 (2.260)	12,70 (.500)	47,04 (1.852)
DC	37	DC51222-1	73,86 (2.908)	12,70 (.500)	63,50 (2.500)
DD	50	DD51223-1	71,47 (2.814)	15,47 (.609)	61,11 (2.406)

## Slide Lock Post Assemblies



- Consists of 1 post, 2 washers, 1 lock washer, and 1 hex nut.<sup>1</sup>
- Order 2 per connector.<sup>2</sup>



Part Number:	Each <sup>1,2</sup>	Kit of 2 each	Material: Steel, Finish: Chromate/Zinc
D53018	D53018-11	D53018-11	Material: Steel, Finish: Chromate/Zinc
D53018-14	D53018-20	D53018-20	Material: Stainless Steel, Finish: Passivated

NOTE: When rear-mounting connector to a 1/16" panel, delete the second spacer washer.

## Spring Latch Assemblies

ITT offers the largest variety of locking and latching hardware. Refer to the accessories selection guide on pages 2-3 for use with Cannon backshells.

### Product Features

- Low Cost
- Minimizes field connection time
- Positive lock between connectors
- Packaged 2 kits per bag

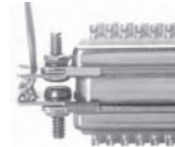
### Materials and Finishes

Material:	Stainless Steel
Treatment:	Passivated

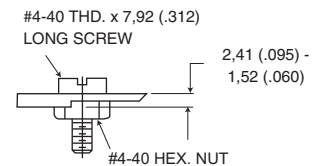
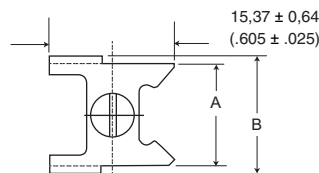
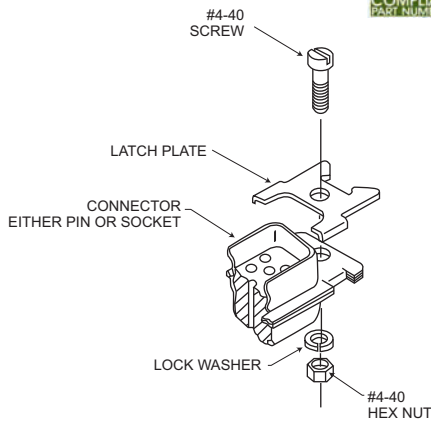
Unlocked



Locked



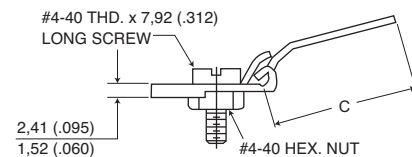
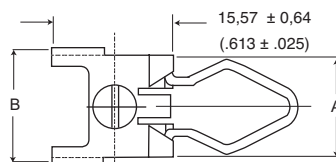
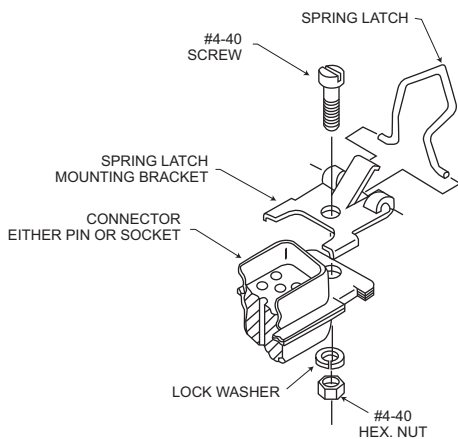
## Spring Latch Plate Assembly



Shell Size	Layout	Part Number	A ± 0,38 (.015)	B ± 0,38 (.015)	Part Number Kit of 2 each
DE, DA, DB, DC	9,15, 25, 37	D110278	12,42 (.489)	14,35 (.565)	D110278-4
DD	50	D110280	15,47 (.609)	17,09 (.673)	D110280-3

- Kit consists of 1 plate, 1 screw, 1 lock washer, 1 hex nut.
- Order 2 kits per connector.

## Spring Latch Assembly



Shell Size	Layout	Part Number	A ± 0,38 (.015)	B ± 0,38 (.015)	C ± 0,51 (.020)	Part Number Kit of 2 each
DE, DA, DB, DC	9,15, 25, 37	D110277	12,42 (.489)	14,35 (.565)	18,59 (.732)	D110277-2
DD	50	D110279	15,47 (.609)	17,09 (.673)	18,59 (.732)	D110279-3

D110277-4 Rear panel mount version also available

- Kit consists of 1 spring, 1 screw, 1 bracket, 1 lock washer, 1 hex nut.
- Order 2 kits per connector. Front panel mounting.



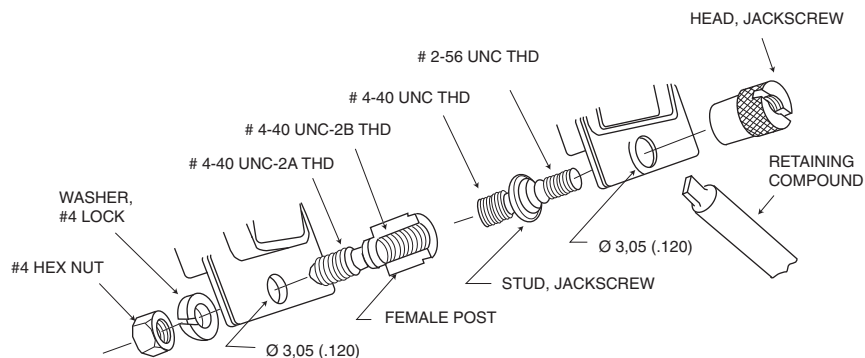
Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

## Jackscrew/Jackpost Assemblies

ITT offers the largest variety of locking and latching hardware. Refer to the accessories selection guide on pages 2-3 for use with Cannon backshells.

Jackscrew Assembly

Jackpost Assembly

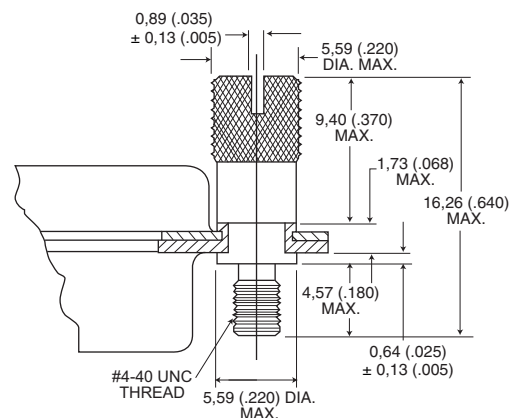


### Jackscrew Assembly



- Kit consists of 2 studs, 2 heads, 1 tube retaining compound (US only)
- Order one kit per connector

Part Number:	D110550
Materials and Finishes	
Material:	Stainless Steel
Treatment:	Passivated

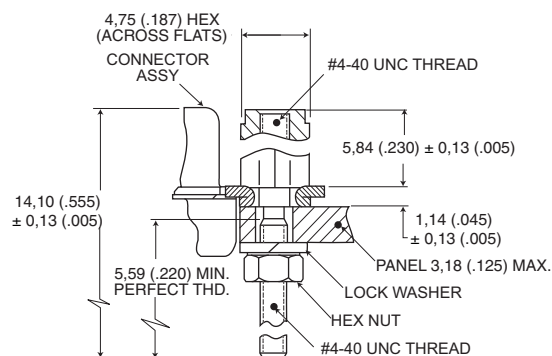


### Jackpost Assembly



- Kit consists of 2 posts, 2 hex nuts, 2 lock washer
- Order one kit per connector

Part Number:	D110551
Materials and Finishes	
Material:	Stainless Steel
Treatment:	Passivated



NOTE: Jack post is not compatible with rear-panel mount connectors.

Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

www.ittcannon.com



## Guide Pin Plate

Female



- Useful in blind mate applications.
- Kit consists of 1 plate, 2 screws.
- Guide pin inserts for Size 8 cavities for Combo D® connectors also available. Refer to Combo D Catalog.

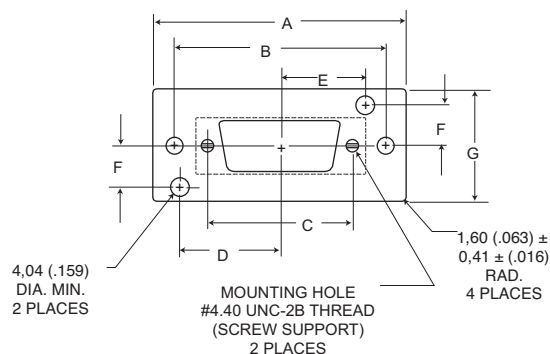
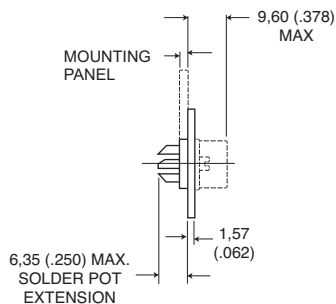
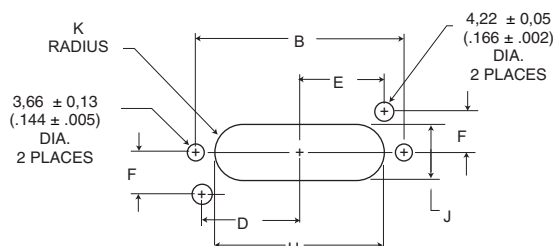


Plate and Hardware Material: Steel

Plate and Hardware Finish: Chromate over Zinc

Shell Size	Layout	Part Number	A ±0,41 (.016)	B ±0,13 (.005)	C ±0,13 (.005)	D ±0,13 (.005)	E ±0,13 (.005)	F ±0,13 (.005)	G ±0,41 (.016)	H ±0,41 (.016)	J ±0,41 (.016)	K ±0,41 (.016)
DE	9	DE111920	49,61 (1.953)	40,08 (1.578)	25,00 (.986)	18,65 (.734)	15,27 (.601)	9,52 (.375)	25,40 (1.000)	30,58 (1.204)	12,29 (.484)	6,15 (.242)
DA	15	DA22214	57,96 (2.282)	48,41 (1.906)	33,32 (1.312)	22,81 (.898)	19,43 (.765)	9,52 (.375)	25,40 (1.000)	38,91 (1.532)	12,29 (.484)	6,15 (.242)
DB	25	DB22254	71,63 (2.820)	62,13 (2.446)	47,04 (1.852)	29,67 (1.168)	26,29 (1.035)	9,52 (.375)	25,40 (1.000)	51,21 (2.016)	11,91 (.469)	5,94 (.234)
DC	37	DC22071	88,11 (3.469)	78,59 (3.094)	63,50 (2.500)	37,90 (1.492)	34,52 (1.359)	9,52 (.375)	25,40 (1.000)	67,49 (2.657)	11,91 (.469)	5,94 (.234)
DD	50	DD21961	85,72 (3.375)	76,20 (3.000)	61,11 (2.406)	36,50 (1.437)	33,32 (1.312)	11,10 (.437)	28,58 (1.125)	65,10 (2.563)	14,30 (.563)	7,16 (.282)

## Recommended Panel Cutout



## Guide Pin Plate

Male



- Useful in blind mate applications.
- Kit consists of 1 plate, 2 sems screws, 2 rivets, 2 guide pins, 2 washer
- Guide pin inserts for Size 8 cavities for Combo D<sup>®</sup> connectors also available. Refer to Combo D Catalog.

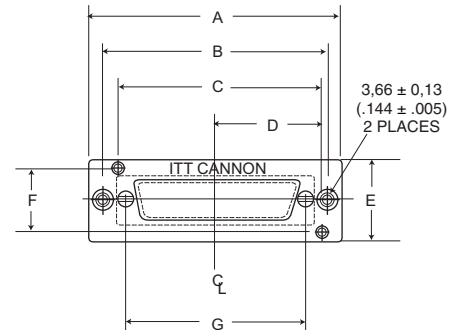
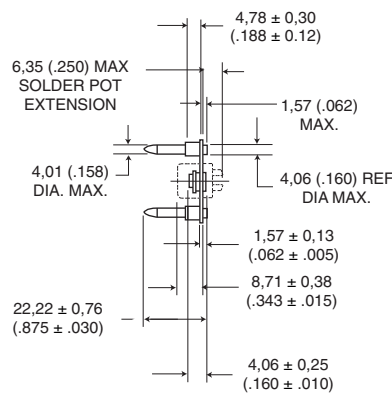


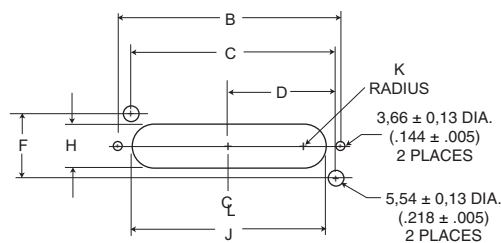
Plate and Hardware Material: Steel

Plate and Hardware Finish: Chromate over Zinc

Guide Pin Material: Stainless Steel

Shell Size	Layout	Part Number	A ±0,41 (.016)	B ±0,13 (.005)	C ±0,13 (.005)	D ±0,13 (.005)	E ±0,13 (.005)	F ±0,13 (.005)	G ±0,41 (.016)	H ±0,41 (.016)	J ±0,41 (.016)	K ±0,41 (.016)
DE	9	DE111919	49,61 (1.953)	40,08 (1.578)	33,91 (1.335)	18,65 (.734)	25,40 (1.000)	19,05 (.750)	25,00 (.984)	12,29 (.484)	30,58 (1.204)	6,15 (.242)
DA	15	DA22213	57,96 (2.282)	48,41 (1.906)	42,24 (1.663)	22,81 (.898)	25,40 (1.000)	19,05 (.750)	33,32 (1.312)	12,29 (.484)	38,89 (1.531)	6,15 (.242)
DB	25	DB22255	71,63 (2.820)	62,13 (2.446)	55,96 (2.203)	29,67 (1.168)	25,40 (1.000)	19,05 (.750)	47,04 (1.852)	12,29 (.484)	51,99 (2.047)	6,15 (.242)
DC	37	DC22070	88,11 (3.469)	78,59 (3.094)	72,42 (2.851)	37,90 (1.492)	25,40 (1.000)	19,05 (.750)	63,50 (2.500)	12,29 (.484)	68,25 (2.687)	6,15 (.242)
DD	50	DD21962	85,72 (3.375)	76,20 (3.000)	69,82 (2.749)	36,50 (1.437)	28,58 (1.125)	22,20 (.874)	61,11 (2.406)	15,06 (.593)	66,93 (2.635)	7,52 (.296)

## Recommended Panel Cutout



Dimensions shown in mm (inch)

Specifications and dimensions subject to change

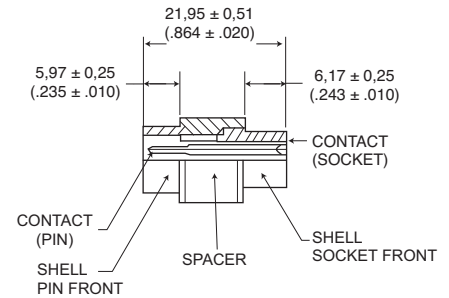
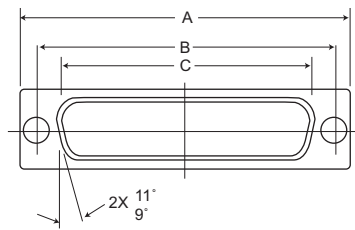
www.ittcannon.com



## High Reliability Connector Saver



Engaging Face, Pin Side



NOTE: Hardware removed for clarity.

Shell Size	Layout	Part Number	A ± 0,40 (.015)	B ± 0,25 (.010)	C ± 0,25 (.010)
DE	9	DEBMAM9PS	30,81 (1.213)	24,99 (.984)	16,92 (.666)
DA	15	DABMAM15PS	39,14 (1.541)	33,32 (1.312)	25,25 (.994)
DB	50	DBBMAM25PS	53,04 (2.088)	47,04 (1.852)	38,96 (1.534)
DC	37	DCBMAM37PS	69,32 (2.729)	63,50 (2.500)	55,42 (2.182)
DD	50	DDBMAM50PS	66,93 (2.635)	61,11 (2.406)	52,81 (2.079)

## Specifications

Temperature: -55° C to 105° C

Current Rating: 7 A

Dielectric withstanding Voltage: 500 VAC at Sea Level

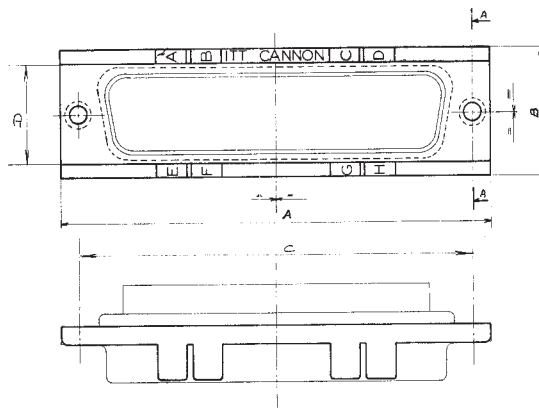
## Materials and Finishes

Description	Material	Finish
Shells	Steel	Yellow Chromate over Zinc
Insulator	White Thermoplastic, UL 94V-0	—
Contacts	Copper Alloy	Gold Over Copper
Locking Hardware	Stainless Steel	Passivated

## Polarizing Plates

**Material:** Black plastic, 94-V-0 rated

Part Number by Shell Size	A	B
DE 115398	1.208 (30.7)	0.629 (16)
DA 115398-1	1.535 (39.0)	0.629 (16)
DB 115398-2	2.082 (52.9)	0.629 (16)
DC 115398-3	2.726 (69.2)	0.629 (16)
DD 115398-3	2.630 (66.8)	0.749 (19)



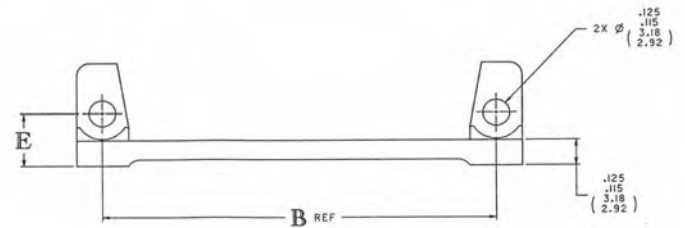
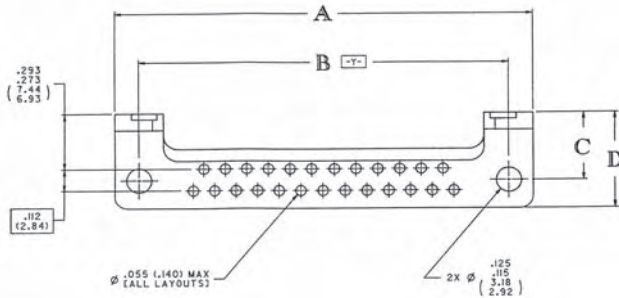
## Polarizing Scheme

Polarizing Keys Position	A	B	C	D	E	F	G	H
1	○	×	×	○	○	×	×	○
2	×	○	○	×	×	○	○	×
3			×	×	×	×	×	
4	×	×					×	×
5	×	×			×	×		
6			×	×			×	×
7	×		×			×		×
8		×		×	×	×	×	
9	×	×	×	×	×	×	×	
10		×		×		×	×	×

○ Cut Key on pin connector    × Cut Key on socket connector

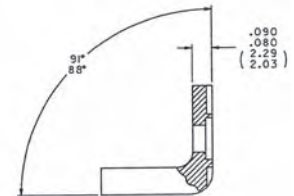
## Right Angle Brackets (Used with 90° Printed Circuit Connector D\*M, D\*, D\*C, D\*U)

**Material:** Black Polyester, UL-94V-0 Rated



## D\*/D\*M

Shell Size	Part Number	A ± .015	B ± .005	C ± .010	D ± .010	E ± .010	F ± .010
DE	015-0338-000	1.224 (31.1)	.984 (24.0)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DA	015-0339-000	1.552 (39.4)	1.312 (33.3)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DB	015-0340-000	2.092 (53.1)	1.852 (47.0)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DC	015-0341-000	2.740 (69.0)	2.500 (63.5)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DD	015-0342-000	2.646 (67.2)	2.406 (61.1)	.395 (10.0)	.594 (15.1)	.302 (7.67)	.283 (7.2)



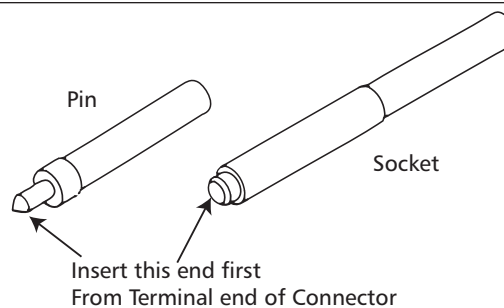
## D\*C/D\*U

Shell Size	Part Number	A ± .015	B ± .005	C ± .010	D ± .010	E ± .010	F ± .010
DE	015-0348-000	1.224 (31.1)	.984 (24.0)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DA	015-0349-000	1.552 (39.4)	1.312 (33.3)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DB	015-0350-000	2.092 (53.1)	1.852 (47.0)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DC	015-0351-000	2.740 (69.0)	2.500 (63.5)	.340 (8.63)	.484 (12.3)	24.7 (6.27)	.283 (7.2)
DD	015-0352-000	2.646 (67.2)	2.406 (61.1)	.395 (10.0)	.594 (15.1)	.302 (7.67)	.283 (7.2)

## Wire Hole Fillers (D\*MA Series Only)

**Material:** Nylon

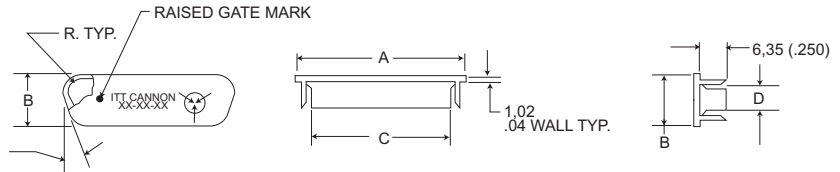
Part Number	Insert Type
DMA 51236-1	Socket
DMA 51235-1	Pin



Dimensions shown in mm (inch)  
Specifications and dimensions subject to change



## Dust Cap



NOTE: C dim. applies at point of maximum Integral interface length. Drawing shown for Black Anti-static caps. Dimensions shown are reference only.

Dust caps provide protection from moisture and dust for unused I/O ports.

### Product Features

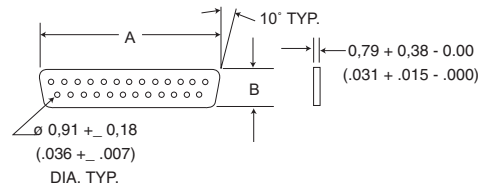
- Dust Caps meet the static decay test requirements of MIL-B- 81705C, Type II.
- Dust Caps have an integral flange for easy application and removal

### Materials and Finishes

Material: Polyethylene

Black Antistatic		Red Caps		I.D.	A	B	C	D
(Surface Resistivity <math><1 \times 10^9 \text{ ohm/sq}</math>)	(Surface Resistivity <math&gt;10^9\text{-}10^{12} \text{="" math&gt;)<="" ohm="" sq}&lt;="" th=""> <th></th> <th></th> </math&gt;10^9\text{-}10^{12}>							
DE-59-20BA	DE-59-20RC	Socket	20,32 (.800)	11,43 (.450)	16,36 (.644)	7,59 (2.99)		
DA-59-20BA	DA-59-20RC	Socket	28,45 (1.120)	11,68 (.460)	24,59 (.968)	7,62 (.300)		
DB-59-20BA	DB-59-20RC	Socket	42,42 (1.670)	11,68 (.460)	38,25 (1.506)	7,49 (.295)		
DC-59-20BA	DC-59-20RC	Socket	58,93 (2.320)	11,68 (.460)	54,81 (2.158)	7,37 (.290)		
DD-59-20BA	DD-59-20RC	Socket	56,90 (2.240)	14,48 (.570)	53,11 (2.091)	10,41 (.410)		
DE-60-20BA	DE-60-20RC	Pin	21,84 (.860)	12,95 (5.10)	17,78 (.700)	8,92 (.351)		
DA-60-20BA	DA-60-20RC	Pin	30,48 (1.200)	12,95 (.510)	26,52 (1.044)	9,02 (.355)		
DB-60-20BA	DB-60-20RC	Pin	44,20 (1.740)	13,46 (.530)	39,60 (1.559)	9,09 (.358)		
DC-60-20BA	DC-60-20RC	Pin	60,71 (2.390)	13,46 (.530)	56,90 (2.240)	9,37 (.369)		
DD-60-20BA	DD-60-20RC	Pin	58,17 (2.290)	16,00 (.630)	54,28 (2.137)	12,04 (.474)		

## Interfacial Seal



Interfacial seals provide moisture resistance at the mating interface.

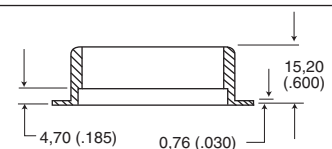
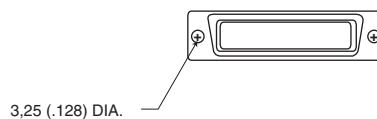
### Product Features

- Other Interfacial Seals in the Combo D® layouts are available upon request.

Material: Silastic Sheet

Shell Size	Layout	Part Number	A	B
DE	9	DE53750	16,66 (.656)	8,41 (.331)
DA	15	DA53750-1	24,99 (.984)	8,41 (.331)
DB	25	DB53750-2	38,88 (1.531)	8,41 (.331)
DC	37	DC53750-3	55,14 (2.171)	8,41 (.331)
DD	50	DD53750-4	52,78 (2.078)	11,10 (.437)
DC	21WA4	075-0354-003	55,14 (2.171)	8,41 (.331)
DE	15	273-0333-000	16,66 (.656)	8,41 (.331)
DA	26	273-0334-000	24,99 (.984)	8,41 (.331)
DB	44	273-0335-000	38,88 (1.531)	8,41 (.331)
DC	62	273-0336-000	55,14 (2.171)	8,41 (.331)
DD	78	273-0337-000	52,78 (2.078)	11,10 (.437)

## Potting Shell



Potting shells are molded with a thin flange 0,76 (.030) to permit the use of D Subminiature locking devices.

### Materials and Finishes

Material: Nylon  
Color: Natural (white)

Shell Size	Layout	Part Number
DE	9	DE50904-1
DA	15	DA50905-1
DB	25	DB50906-1
DC	37	DC50907-1
DD	50	DD50908-1



Dimensions shown in mm (inch)  
Specifications and dimensions subject to change



Standard RoHS Part #	Part #	Page #	StandardRoHS Part #	Part #	Page #	StandardRoHS Part #	Part #	Page #
075-0354-003	Same	22	DA22214	Same	18	DD121073-53	Same	4
250-8501-004	Same	5	DA24658	DA24658-28	9	DD19678-4	Same	10
250-8501-009	Same	5	DA50905-1	Same	22	DD19977-4	Same	10
250-8501-010	Same	5	DA51210	Same	12	DD20964	DD20964-32	9
250-8501-013	Same	5	DA51211	Same	12	DD21961	Same	18
273-0333-000	Same	22	DA51220-1	Same	15	DD21962	Same	19
273-0334-000	Same	22	DA53750-1	Same	22	DD24661	Same	9
273-0335-000	Same	22	DA-59-20	Same	22	DD50908-1	Same	22
273-0336-000	Same	22	DA-60-20	Same	22	DD51216	Same	12
273-0337-000	Same	22	DABMA15PS	Same	20	DD51217	Same	12
980-2000-345	Same	6	DABS-15	Same	11	DD51223-1	Same	15
980-2000-346	Same	6	DB115339-22	Same	9	DD53750-4	Same	22
980-2000-347	Same	6	DB121073-151	Same	4	DD-59-20	Same	22
980-2000-348	Same	6	DB121073-51	Same	4	DD-60-20	Same	22
980-2000-350	Same	12	DB19678-2	DB19678-213	10	DDBMA50PS	Same	20
980-2000-351	Same	12	DB19977-2	DB19977-69	9	DE111919	Same	19
980-2000-352	Same	12	DB20962	DB20962-30	10	DE111920	Same	18
980-2000-353	Same	12	DB22254	Same	18	DE115339-20	Same	11
980-2000-354	Same	12	DB22255	Same	19	DE121073-154	Same	4
D110277	Same	16	DB24659	DB24659-27	9	DE121073-54	Same	4
D110278	Same	16	DB50906-1	Same	22	DE19977-5	DE19977-72	10
D110279	Same	16	DB51212	Same	12	DE24657	DE24657-29	9
D110280	Same	16	DB51213	Same	12	DE44994	DE44994-14	9
D110550	Same	17	DB51221-1	Same	15	DE50904-1	Same	22
D110551	Same	17	DB53750-2	Same	22	DE51218	Same	12
D121073-19	Same	5	DB-59-20	Same	22	DE51219	Same	12
D121073-39	Same	14	DB-60-20	Same	22	DE51224-1	Same	15
D121073-42	Same	14	DBBMA25PS	Same	20	DE53750	Same	22
D20418-2	D20418-134	14	DBBS-25	Same	11	DE-59-20	Same	22
D20418-39	D20418-136	14	DC115339-23	Same	11	DE-60-20	Same	22
D20418-50	D20418-135	14	DC121073-152	Same	4	DEBMA9PS	Same	20
D20418-74	D20418-137	14	DC121073-52	Same	4	DEBS-9	Same	11
D20419	D20419-211	13	DC19678-3	DC19678-214	9			
D20419-104	D20419-214	13	DC19977-3	DC19977-70	9			
D20419-18	D20419-212	13	DC20963	DC20963-27	9			
D20419-21	D20419-213	13	DC22070	Same	19			
D20420	D20420-157	13	DC22071	Same	18			
D20420-13	D20420-158	13	DC24660	Same	7			
D20420-15	D20420-159	13	DC50907-1	Same	22			
D20420-86	D20420-160	13	DC51214	Same	12			
D53018	Same	15	DC51215	Same	12			
DA115339-21	Same	11	DC51222-1	Same	15			
DA121073-150	Same	4	DC53750-3	Same	22			
DA121073-50	Same	4	DC-59-20	Same	22			
DA19678-1	DA19678-212	10	DC-60-20	Same	22			
DA19977-1	DA19977-68	10	DCBMA37PS	Same	20			
DA20961	DA20961-26	9	DD115339-24	Same	11			
DA22213	Same	19	DD121073-153	Same	4			

# Product Safety and Warranty

## 1. MATERIAL CONTENT AND PHYSICAL FORM

Electrical connectors do not usually contain hazardous materials. They contain conducting and non-conducting materials and can be divided into two groups.

- a) Printed circuit types and low cost audio types which employ all plastic insulators and casings.
- b) Rugged, Fire Barrier and High Reliability types with metal casings and either natural rubber, synthetic rubber, plastic or glass insulating materials. Contact materials vary with type of connector and also application and are usually manufactured from either: Copper, copper alloys, nickel, alumel, chromel or steel. In special applications, other alloys may be specified.

## 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. 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.

## 4. DISPOSAL

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 correct application tools as specified 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) Other important information

Cannon continuously endeavors to improve their products. Therefore, Cannon products may deviate from the description, technical data and shape as shown in this catalog and data sheets.

ITT Interconnect Solutions, a Division of ITT Corporation manufactures the highest quality products available in the marketplace; however these products are intended to be used in accordance with the specifications in this publication. Any use or application that deviates from the stated operating specifications is not recommended and may be unsafe. No information and data contained in this publication shall be construed to create any liability on the part of Cannon. Any new issue of this publication shall automatically invalidate and supersede any and all previous issues.

## Product Warranty

A limited warranty applies to Cannon products. In general, except for obligations assumed by Cannon under this warranty, Cannon shall not be liable for any loss, damage, cost of repairs, incidental or consequential damages of any kind, whether or not based on express or implied warranty, contract, negligence or strict liability arising in connection with the design, manufacture, sale, use or repair of the products. Product availability, prices and delivery dates are exclusively subject to our respective order confirmation form; the same applies to orders based on development samples delivered. Please refer to [www.ittcannon.com](http://www.ittcannon.com) (General Terms of Sale) for the complete text of Cannon's applicable Terms and Conditions, including Warranty.

This publication is not to be construed as an offer. It is intended merely as an invitation to make an offer. By this publication, Cannon does not assume responsibility or any liability for any patent infringements or other rights of third parties which may result from its use.

Reprinting this publication is generally permitted, indicating the source. However, Cannon's prior consent must be obtained in all cases. "Engineered for life" is a registered trademark of ITT Corporation ©2006. All other trademarks or registered trademarks are property of their respective owners. All dates subject to change without notice.

*Commodities in this catalog may be controlled for export by the International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR) when specifically designed modified, or configured for articles controlled by the United States Government.*



## Circular/Filter/Hermetic/Fiber Optic Connectors

As a world leader in circular, filter, and hermetic connectors, ITT can leverage its design and manufacturing expertise to fit virtually any application. Our expertise includes fast positive mating for a wide range of military applications, as well as numerous sizes and contact configurations for various harsh environments. Our wide variety of fiber optic products include hybrid contacts, multi-channel, rack and panel, and hi-rel assemblies, including MIL and ARINC standard solutions. ITT can meet numerous specs, including NATO and MIL standards.

[www.ittcannon.com/circulars](http://www.ittcannon.com/circulars) • [www.ittcannon.com/filter](http://www.ittcannon.com/filter) • [www.ittcannon.com/hermetics](http://www.ittcannon.com/hermetics) • [www.ittcannon.com/fiberoptics](http://www.ittcannon.com/fiberoptics)



## D-Subminiature Connectors

Cannon invented D-sub connectors in 1952. Our family of D-Subs now includes combinations of signal, power and RF, as well as severe service sealed connectors. Cannon D-Subs are available with an extensive line of backshells and accessories and are one of the most economical shielded connector solutions available. ITT D-Sub connectors are qualified to the MIL-DTL-24308 specification.

[www.ittcannon.com/dsubs](http://www.ittcannon.com/dsubs)



## Microminiature Connectors

Developed first by Cannon in the 1960's, Interconnect Solutions microminiature connectors offer high performance and reliability with exceptional versatility. Available in rectangular, circular, and strip configurations for countless applications, many of our connectors meet or exceed applicable requirements of the MIL-DTL-83513 specification.

[www.ittcannon.com/micro](http://www.ittcannon.com/micro)



## Rack and Panel Connectors

Initially pioneered by Cannon during the 1930s, Interconnect Solutions is the world leader in rack and panel connectors, offering unmatched variety of shell configurations and insert arrangements, materials, plating, and contact options. Many of our standard and custom designs meet the stringent requirements of ARINC 600, ARINC 404 (MIL-C-81659), and MIL-DTL-83733 standards.

[www.ittcannon.com/rackandpanel](http://www.ittcannon.com/rackandpanel)



## RF Connectors

ITT Interconnect Solutions has been providing interconnect products to the Microwave and RF industry since 1963 (formerly The Sealectro Corporation). The RF 50 & 75 Ohm product lines cover UHF band through Ku band requirements. These connectors and cable assemblies are available with a thread type, snap type, bayonet type or slide on coupling method. The frequencies range from DC to 18+ GHz.

[www.ittcannon.com/RF50](http://www.ittcannon.com/RF50) • [www.ittcannon.com/RF75](http://www.ittcannon.com/RF75)



## Transportation

The ITT ICS interconnect range includes sealed circular and rectangular connectors in metal or plastic shells. These configurations include board to cable or cable to cable/ bulkhead applications. Both signal and power contacts can be combined in various layouts. All product lines within the Transportation segment offer very low contact resistance providing maximum signal integrity.

[www.ittcannon.com/transportation](http://www.ittcannon.com/transportation)



ITT Interconnect Solutions is an international manufacturer and supplier of connectors including circular, rectangular, fiber optic, RF, power and high voltage, audio, PMCIA, Compact Flash Card, enclosures, cable assemblies, and application specific custom solutions. The Interconnect Solutions portfolio includes the brands Cannon, VEAM, and BIW. As a worldwide leader in connector technology for nearly a century, ITT offers one of the broadest product offerings, six sigma manufacturing capability, Value Based Product Development with exceptional engineering capability, and an extensive sales, distribution, and customer support network.





# ITT

## Customer Support Locations

### *CHINA*

Tuopandun Industrial Area, Jinda Cheng,  
Xiner Village, Shajing Town,  
Baoan District, Shenzhen City,  
Guangdong, China 518125  
phone: +86.755.2726.7238  
fax: +86.755.2726.7515

### *GERMANY*

Cannonstrasse 1  
Weinstadt, 71384  
phone: +49.7151.699.0  
fax: +49.7151.699.217

### *FRANCE*

15, Boulevard Robert Thiboust  
Serris, France 77700  
phone: +33.1.60.04.93.93  
fax: +33.1.60.04.93.90

### *HONG KONG*

Units 2405-6, 24/F, ING Tower  
308 Des Voeux Road  
Central  
Hong Kong  
phone: +852.2732.2720  
fax: +852.2732.2919

### *ITALY*

Corso Europa 41/43  
Lainate (MI), Italy 20020  
phone: +39.02938721  
fax: +39.0293872300

### *JAPAN*

11-3, 5 Chome, Hibarigaoka, Zama-shi  
Kanagawa, Japan 228-0003  
phone: +81.462.57.2010  
fax: +81.462.57.1680

### *UK*

Jays Close, Viables Estate  
Basingstoke, RG22 4BA  
phone: +44.1256.311200  
fax: +44.1256.323356

### *USA*

666 East Dyer Road  
Santa Ana, CA 92705  
toll free: 1.800.854.3028  
phone: +1.714.557.4700  
fax: +1.714.628.2142

©2008 ITT Corporation. "Engineered for life" and "Cannon" are registered trademarks of ITT Corporation. Specification and other data are based on information available at the time of printing, and are subject to change without notice.