

CONNECTOR SELECTION GUIDE (Continued)

CONNECTORS FOR PRINTED CIRCUIT BOARDS

SHIELDED RIGHT ANGLE



EDBL25SBA1
ED* Series Page 17

PIN AND SOCKET RIGHT ANGLE



DDP-50SAA
D*P Series Page 20

VERTICAL MOUNT



DBPF25 (P or S) Y4
D*PF Series Page 22

MILITARY/AEROSPACE

M24308 SOLDER CUP



DCMME37P
D*M Series Page 29

M24308 PRINTED CIRCUIT



DCM-37PA
D*M Series Page 29

M24308 CRIMP



DAMAM15P
D*MA Series Page 39

M24308 HERMETIC



D*H Series Phoenix

COAX/HIGH VOLT/ HIGH POWER



DBM-17W2P
D*M Series Page 29

HIGH DENSITY



DDMA-78S-F0
D*MA Series Page 39

SPECIAL PURPOSE

DOUBLE-DENSITY



2D* Series Micro

CONNECTOR SAVER



DBBMA-25PS
D*BMA Series Page 50

M24308 TYPE ENVIRONMENTAL



GDB-25P
GD* Series Page 46

DIE-CAST ENVIRONMENTAL



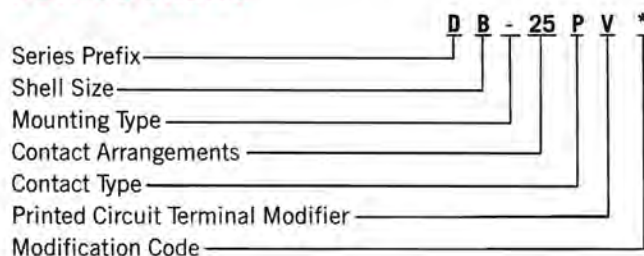
D*D Series Page 51

ORIGINAL-D

The Original-D, Cannon's low cost general-purpose D Subminiature, features solder cup, P.C., or wrap post contacts available in 9, 15, 25, 37, and 50 contact arrangements. Cannon's Original-D utilizes a rugged machined contact captivated in a two-piece insulator.



HOW TO ORDER



SERIES PREFIX

D

SHELL SIZE

E, A, B, C, D

MOUNTING TYPE

No designator—Standard .120 (3.05) diameter mounting hole
 E — 4-40 clinch nut for rear panel mounting
 F — Float mount for rear panel mounting
 K — .154 (3.91) diameter mounting hole
 R — Reverse float mount for front panel mounting
 Y — Dual float mount for both front and rear panel mounting

CONTACT ARRANGEMENTS

9, 15, 25, 37, 50

CONTACT TYPE

P — Pin; S — Socket

PRINTED CIRCUIT TERMINAL MODIFIER

No designator—Solder cup contacts (standard)
 A — Right angle, .040 (1.02) diameter terminals with bracket; .093 (2.36) extension below bracket
 C — Same as A except less bracket
 H — Straight P.C. .040 (1.02) diameter, .156 (3.96) extension
 U — Straight P.C. .024 (0.61) diameter, .125 (3.17) extension
 V — Straight P.C. .040 (1.02) diameter, .093 (2.35) extension

MODIFICATION CODE

Wire Wrapping Applications
 F179—.024 (0.61) sq post, .375 (9.52) extension
 F179A—.024 (0.61) sq post, .500 (12.70) extension
 C53—UL 94V-0 rated polyamide insulator, color black
 See pg. 66 for additional modifications

STANDARD DATA

MATERIALS AND FINISHES

	Material	Finish
Shell	Steel	Yellow chromate over cadmium
Insulator	Two piece white nylon	—
Contacts	Copper alloy	Gold over nickel
Float Mount Hardware	Stainless steel	Passivated

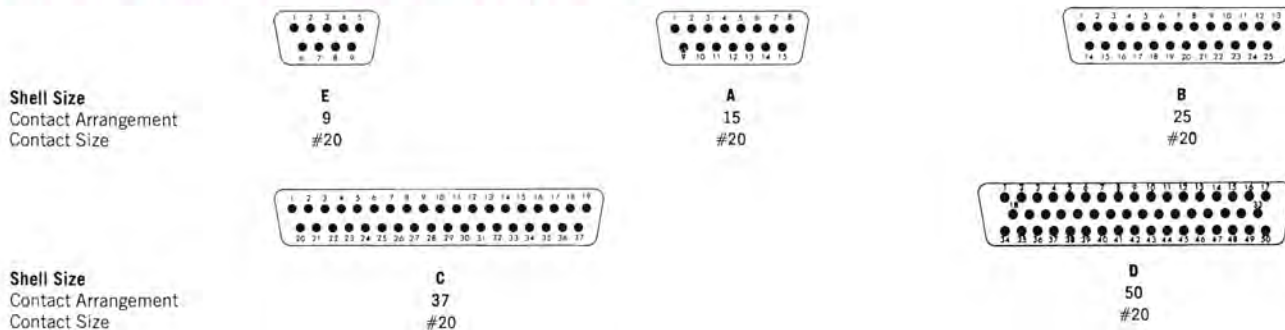
MECHANICAL FEATURES

Coupling—Friction and lock accessories
 Polarization—Keystone-shaped shells

PERFORMANCE SPECIFICATIONS

Temperature Rating— -55°C to $+120^{\circ}\text{C}$
 Dielectric Withstanding Voltage—1250 VAC sea level
 Wire/Contact Size—#20 AWG
 Current Rating—#20 contact 5 Amps

CONTACT ARRANGEMENTS (Face View Pin Insert)



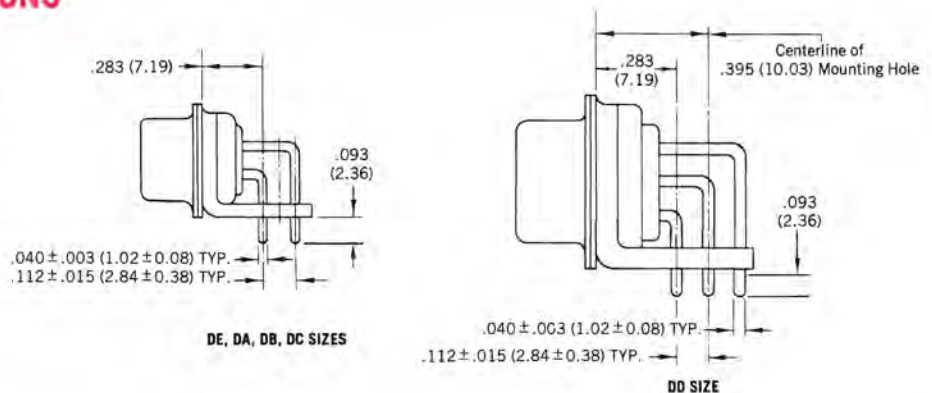
PRINTED CIRCUIT APPLICATIONS

RIGHT ANGLE 90° TERMINAL

Connectors are furnished with or without a bracket.

Part Number Printed Circuit Terminal Modifier	90° Bracket Included
A	Yes
C	No

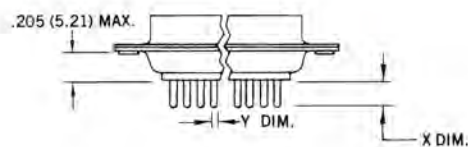
Example: DE-9PA, see page 4 for ordering nomenclature.



STRAIGHT TERMINAL

Part Number Printed Circuit Terminal Modifier	X Nominal	Y ± .003 (± 0.08)
H	.156 (3.96)	.040 (1.02)
U	.125 (3.18)	.024 (0.61)
V	.093 (2.36)	.040 (1.02)

Example: DE-9PV, see page 4 for ordering nomenclature.

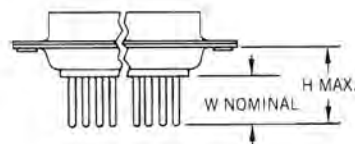


WIRE WRAPPING APPLICATIONS

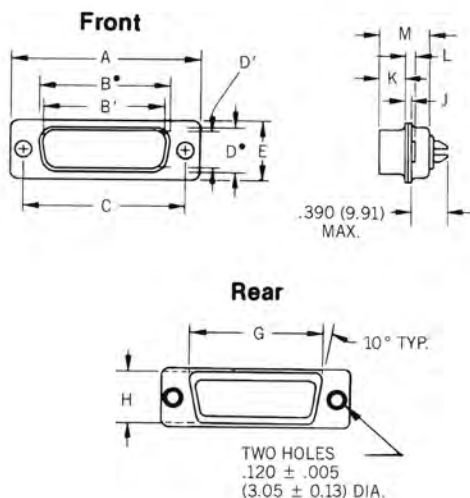
Modification Code	H	W	Wrap Accommodations
F179	.587 (14.91)	.375 (9.52)	2
F179A	.713 (18.11)	.500 (12.7)	3

.024 (0.61) square contact tails will accommodate #28 or #30 AWG rigid wire (diagonal of square is .034/.031 (0.86/0.79)).

Example: DE-9P-F179A, See page 4 for ordering nomenclature.

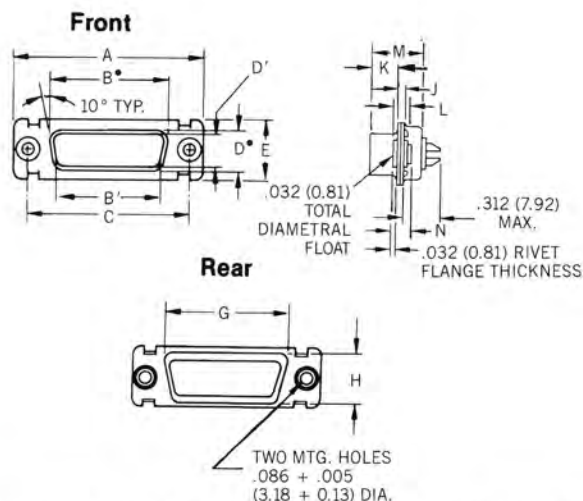


STANDARD SHELL



SHELL WITH FLOAT MOUNTS

(For shell with float mounts add letter F: e.g., DEF9P)



It is recommended that only one assembly, either pin or socket, be float mounted. For front panel mounting use reverse float mount; see page 65.

INCHES

Part Number by Shell Size	A ±.015	B• ±.010	B' ±.010	C ±.005	D• ±.010	D' ±.010	E ±.015	G• ±.010	H• ±.010	J ±.010	K ±.010	L ±.010	M ±.015	N ±.010
DE-9P	1.213	—	.666	.984	—	.329	.494	.759	.422	.030	.236	.045	.422	.120
DE-9S	1.213	.640	—	.984	.308	—	.494	.759	.422	.030	.243	.045	.429	.120
DA-15P	1.541	—	.994	1.312	—	.329	.494	1.083	.422	.030	.236	.045	.422	.120
DA-15S	1.541	.968	—	1.312	.308	—	.494	1.083	.422	.030	.243	.045	.429	.120
DB-25P	2.088	—	1.534	1.852	—	.329	.494	1.625	.422	.039	.231	.060	.426	.129
DB-25S	2.088	1.508	—	1.852	.308	—	.494	1.625	.422	.030	.243	.045	.429	.120
DC-37P	2.729	—	2.182	2.500	—	.329	.494	2.272	.422	.039	.231	.060	.426	.129
DC-37S	2.729	2.156	—	2.500	.308	—	.494	2.272	.422	.030	.243	.045	.429	.120
DD-50P	2.635	—	2.079	2.406	—	.436	.605	2.178	.534	.039	.231	.060	.426	.129
DD-50S	2.635	2.062	—	2.406	.420	—	.605	2.178	.534	.030	.243	.045	.429	.120

MILLIMETERS

Part Number by Shell Size	A ±0.38	B• ±0.25	B' ±0.25	C ±0.12	D• ±0.25	D' ±0.25	E ±0.38	G• ±0.25	H• ±0.25	J ±0.25	K ±0.25	L ±0.25	M ±0.38	N ±0.25
DE-9P	30.81	—	16.91	24.99	—	8.36	12.55	19.28	10.72	0.76	5.99	1.14	10.72	3.05
DE-9S	30.81	16.25	—	24.99	7.82	—	12.55	19.28	10.72	0.76	6.17	1.14	10.90	3.05
DA-15P	39.14	—	25.24	33.32	—	8.36	12.55	27.51	10.72	0.76	5.99	1.14	10.72	3.05
DA-15S	39.14	24.58	—	33.32	7.82	—	12.55	27.51	10.72	0.76	6.17	1.14	10.90	3.05
DB-25P	53.03	—	38.96	47.04	—	8.36	12.55	41.27	10.72	0.99	5.87	1.52	10.82	3.28
DB-25S	53.03	38.30	—	47.04	7.82	—	12.55	41.27	10.72	0.76	6.17	1.14	10.90	3.05
DC-37P	69.31	—	55.42	63.50	—	8.36	12.55	57.71	10.72	0.99	5.87	1.52	10.82	3.28
DC-37S	69.31	54.76	—	63.50	7.82	—	12.55	57.71	10.72	0.76	6.17	1.14	10.90	3.05
DD-50P	66.92	—	52.81	61.11	—	11.07	15.37	55.32	13.56	0.99	5.87	1.52	10.82	3.28
DD-50S	66.92	52.37	—	61.11	10.67	—	15.37	55.32	13.56	0.76	6.17	1.14	10.90	3.05

• Dimensions B, D, G, and H are measured as outside dimensions at the bottom of draw.

NOTE: B• and D• are the O.D. dims. for socket side, B' and D' are the I.D. dims. for pin side.

BURGUN-D D*C/D*U

The BURGUN-D Series, Cannon's low cost crimp-type D Subminiature, offers both machined and stamped contacts for crimp and printed circuit applications. Available in UL 94V-0 material, the D*C/D*U Series features a snap-in, rear-release contact and is widely used for commercial cabling and P.C. board applications. For high volume crimp applications connectors are purchased less contacts (code "FO"), and stamped contacts on reels are purchased in bulk for use with Cannon's high-speed crimping equipment.



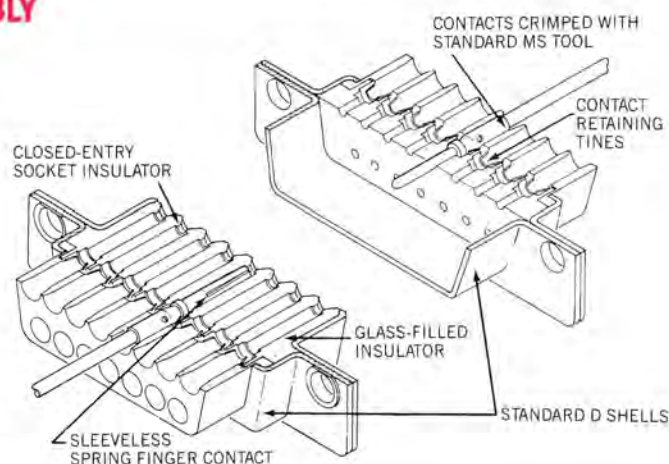
REAR RELEASE CONTACT RETENTION ASSEMBLY

The D*C and D*U connectors feature a rear insulator with integral, molded contact retaining tines. These plastic tines permit the insertion and extraction of contacts from the rear of the connector with a simple, expendable plastic insertion/extraction tool.

During contact insertion, the retaining tines expand as the contact passes thru. These rugged tines snap into place behind the contact shoulder when the contact is fully inserted. The tool is inserted to expand the tines, allowing easy extraction of the wired contact.

The retention system and the integral contact retaining tines guarantee functional reliability in many environments.

- Mates with existing D types
- Operates in temperatures to + 125 °C
- Crimp snap-in contacts
- Highly reliable socket contacts
- Insertion/extraction with expendable tool
- Corrects misaligned contacts



STANDARD DATA

MATERIALS AND FINISHES

	Material	Finish
Shell	Steel	Yellow chromate over cadmium
Insulator	D*C: Thermoplastic, Glass-filled, color red D*U: UL 94V-0 rated Thermoplastic, Glass-filled, color black	
Contacts		
Machined	Copper alloy	Gold over nickel
Stamped and Formed Crimp Type	Copper alloy	Gold over nickel
Stamped and Formed P.C. Type	Copper alloy	Gold over nickel engaging end, tin/lead terminal end
Float Mount Hardware	Stainless Steel	Passivated

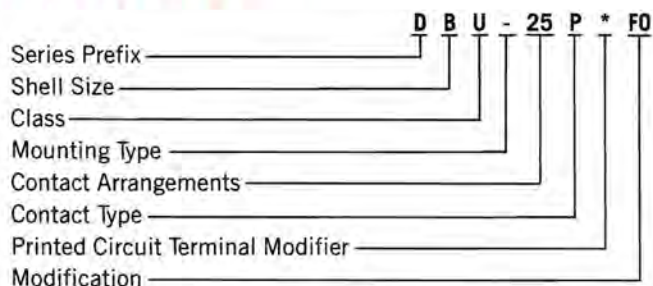
MECHANICAL FEATURES

Coupling—Friction and lock accessories
Polarization—Keystone-shaped shells

PERFORMANCE SPECIFICATIONS

Wire Size—See contact ordering information.
Current Rating—#20 contact, 5 Amps
Voltage Rating—1000 VAC sea level
Temperature Rating— - 65 °C to + 125 °C

HOW TO ORDER



SERIES PREFIX

D — ITT Cannon designation

SHELL SIZE

E, A, B, C and D

CLASS

C — Contact retaining tines, BURGUN-D insulator
U — Contact retaining tines, UL 94V-O rated black insulator

MOUNTING TYPE

No designator — standard .120 (3.05) diameter mounting holes
E — 4-40 clinch nut for rear panel mounting
F — Float mount for rear panel mounting
K — .154 (3.91) diameter mounting hole
R — Reverse float mount for front panel mounting
Y — Dual float mount for both front and rear panel mounting

CONTACT ARRANGEMENTS

3, 5, 9, 15, 25, 37 and 50

CONTACT TYPE

P — Pin; S — Socket

PRINTED CIRCUIT TERMINAL MODIFIER

Right Angle Terminal

AA — Stamped contacts with bracket—.030/.026 (0.76/0.66) dia. with .164/.149 (4.16/3.78) extension from bracket
AD — Machined contacts with bracket—.026/.022 (0.66/0.56) dia. with .164/.149 (4.16/3.78) extension from bracket
CA — Stamped contacts with metal bracket—.030/.026 (0.76/0.66) dia. with .164/.149 (4.16/3.78) extension from bracket

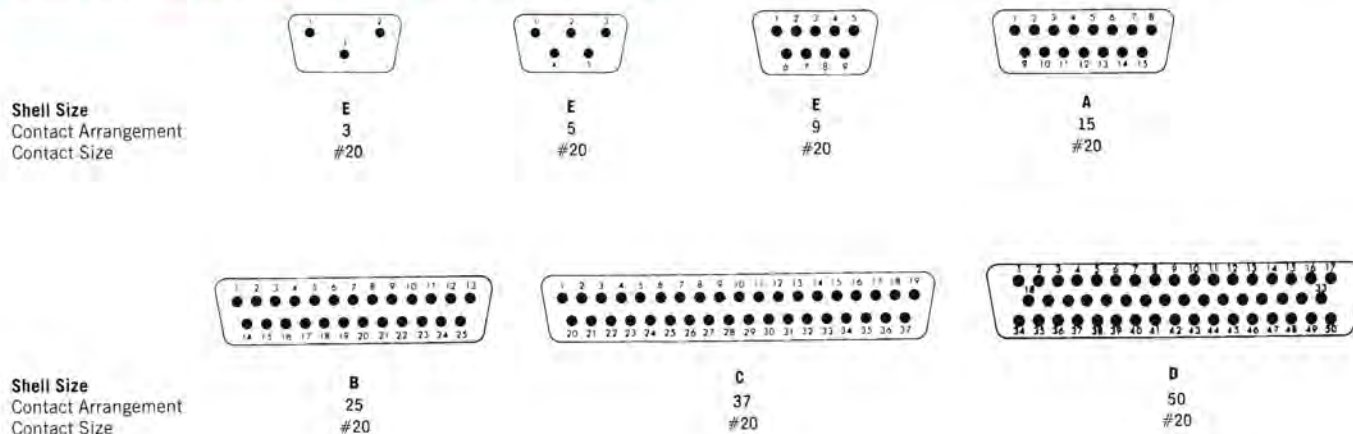
Straight Terminal

BB — Stamped contacts—.030/.026 (0.76/0.66) dia. with .159/.129 (4.04/3.28) extension from rear of insulator
BF — Machined contacts—.026/.022 (0.66/0.56) dia. with .159/.129 (4.04/3.28) extension from rear of insulator

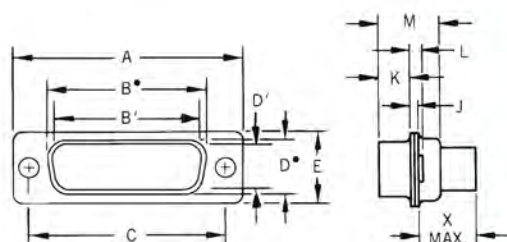
MODIFICATION

A197 — Tin plated shells
K87 — Tin plated shells with grounding indents for EMI/RFI suppression (pin connectors only)
FO — Connector less contacts (not stamped on connector)
See page 66 for additional modifications.

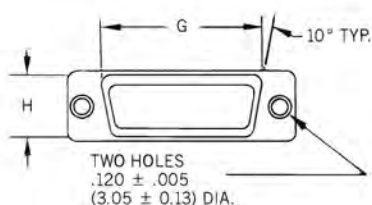
CONTACT ARRANGEMENTS (Face View Pin Insert)



STANDARD SHELL



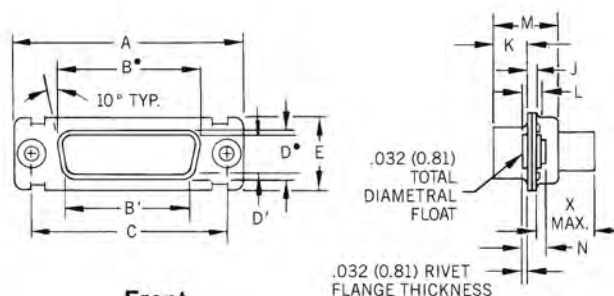
Front



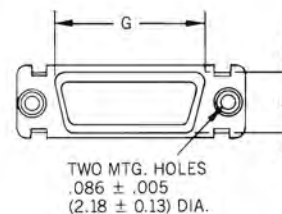
Rear

SHELL WITH FLOAT MOUNTS

(For shell with float mounts add letter F: e.g., DEC-F9P)



Front



Rear

It is recommended that only one assembly, either pin or socket, be float mounted. For front panel mounting use reverse float mount; see page 65.

INCHES

Part Number by Shell Size	A ±.015	B* ±.010	B' ±.010	C ±.005	D* ±.010	D' ±.010	E ±.015	G* ±.010	H* ±.010	J ±.010	K ±.010	L ±.010	M ±.015	N ±.010	X Max.
DEC-9P	1.213	—	.666	.984	—	.329	.494	.759	.422	.030	.236	.045	.422	.120	.375
DEC-9S	1.213	.640	—	.984	.308	—	.494	.759	.422	.030	.243	.045	.429	.120	.375
DAC-15P	1.541	—	.994	1.312	—	.329	.494	1.083	.422	.030	.236	.045	.422	.120	.375
DAC-15S	1.541	.968	—	1.312	.308	—	.494	1.083	.422	.030	.243	.045	.429	.120	.375
DBC-25P	2.088	—	1.534	1.852	—	.329	.494	1.625	.422	.039	.231	.060	.426	.129	.375
DBC-25S	2.088	1.508	—	1.852	.308	—	.494	1.625	.422	.030	.243	.045	.429	.120	.375
DCC-37P	2.729	—	2.182	2.500	—	.329	.494	2.272	.422	.039	.231	.060	.426	.129	.375
DCC-37S	2.729	2.156	—	2.500	.308	—	.494	2.272	.422	.030	.243	.045	.429	.120	.375
DDC-50P	2.635	—	2.079	2.406	—	.436	.605	2.178	.534	.039	.231	.060	.426	.129	.375
DDC-50S	2.635	2.062	—	2.406	.420	—	.605	2.178	.534	.030	.243	.045	.429	.120	.375

MILLIMETERS

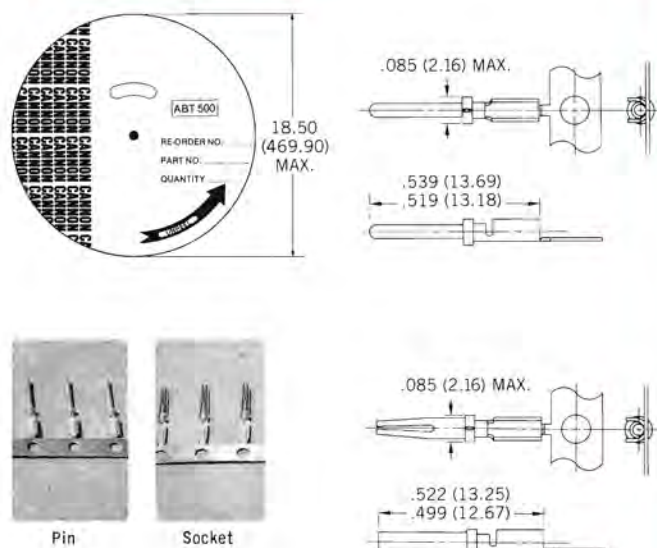
Part Number by Shell Size	A ±0.38	B* ±0.25	B' ±0.25	C ±0.12	D* ±0.25	D' ±0.25	E ±0.38	G* ±0.25	H* ±0.25	J ±0.25	K ±0.25	L ±0.25	M ±0.38	N ±0.25	X Max.
DEC-9P	30.81	—	16.91	24.99	—	8.36	12.55	19.28	10.72	0.76	5.99	1.14	10.72	3.05	9.52
DEC-9S	30.81	16.25	—	24.99	7.82	—	12.55	19.28	10.72	0.76	6.17	1.14	10.90	3.05	9.52
DAC-15P	39.14	—	25.24	33.32	—	8.36	12.55	27.51	10.72	0.76	5.99	1.14	10.72	3.05	9.52
DAC-15S	39.14	24.58	—	33.32	7.82	—	12.55	27.51	10.72	0.76	6.17	1.14	10.90	3.05	9.52
DBC-25P	53.03	—	38.96	47.04	—	8.36	12.55	41.27	10.72	0.99	5.87	1.52	10.82	3.28	9.52
DBC-25S	53.03	38.30	—	47.04	7.82	—	12.55	41.27	10.72	0.76	6.17	1.14	10.90	3.05	9.52
DCC-37P	69.31	—	55.42	63.50	—	8.36	12.55	57.71	10.72	0.99	5.87	1.52	10.82	3.28	9.52
DCC-37S	69.31	54.76	—	63.50	7.82	—	12.55	57.71	10.72	0.76	6.17	1.14	10.90	3.05	9.52
DDC-50P	66.92	—	52.81	61.11	—	11.07	15.37	55.32	13.56	0.99	5.87	1.52	10.82	3.28	9.52
DDC-50S	66.92	52.37	—	61.11	10.67	—	15.37	55.32	13.56	0.76	6.17	1.14	10.90	3.05	9.52

• Dimensions B, D, G, and H are measured as outside dimensions at the bottom of the draw.
NOTE: B* and D* are the O.D. dims. for socket side, B' and D' are the I.D. dims. for pin side.

STAMPED CRIMP CONTACTS

Stamped contacts are furnished on reels for use with the semi-automatic crimp and strip/crimp machines. These contacts will accommodate wire sizes #18 thru #32 AWG stranded wire.

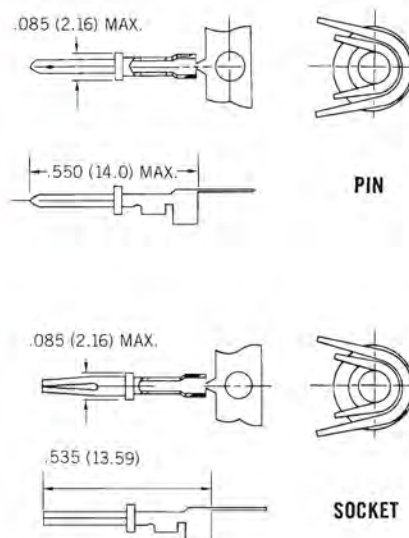
NON-INSULATION SUPPORT



Contact Size	Wire Accommodation	Contact Part Number		Contacts Per Reel
		Pin	Socket	
20-18	AWG #18 thru 22 (For AWG #24 consult factory)	D110238-165	D110238-166	7,500
20	AWG #20 thru 28 (For AWG #30 consult factory)	D110238-34	D110238-35	10,000

INSULATION SUPPORT

Wire Accommodation	Contact Part Number		Contact Per Reel
	Pin	Socket	
AWG #22-#26	J110238-428	D110238-434	7,500
AWG #28 thru #32	D110238-431	D110238-436	7,500

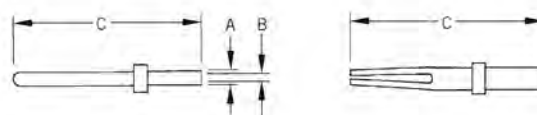


MACHINED CRIMP CONTACTS

Machined contacts are furnished loose piece for use with manual and semi-automatic machines.

NOTE for Size 20-18 contacts only: Shrink sleeving is suggested on the crimp pot to prevent contacts from touching.

Description	Part Number	Wire Accommodation	A ±.002 (±0.05)	B ±.002 (±0.05)	C Max.
Pin 20	030-1952-000	20, 22, 24	.067(1.70)	.045(1.14)	.537(13.64)
Pin 20-18	030-1954-000	(1) 18 or (2) #22	.086(2.18)	.066(1.68)	.874(22.20)
Pin 20-26	030-1952-002	26, 28, 30	.067(1.70)	.025(0.63)	.537(13.64)
Socket 20	030-1953-000	20, 22, 24	.067(1.70)	.045(1.14)	.523(13.28)
Socket 20-18	030-1955-000	(1) 18 or (2) #22	.086(2.18)	.066(1.68)	.852(21.64)
Socket 20-26	030-1953-002	26, 28, 30	.067(1.70)	.025(0.63)	.523(13.28)



CONTACT CRIMPING

A full range of manual to fully automatic crimp equipment is available from Cannon to meet all volume requirements.

Machined contact needs are met by Mil standard hand crimp tools for low volumes. For volume applications the CBT-491 is a pneumatically operated, vibra-bowl crimper offering a more economical approach than belt-fed contacts.

For low volume **stamped contact** applications CCT type hand tools deliver a reliable crimp with minimal expense. For higher volumes the pneumatically operated ABT-607 is available for lease. For maximum savings the ABT-500 stripper and crimper uses stamped reeled contacts and terminates in one easy operation. Our newest machine the ABT-620 is also designed for highest volume lowest installed cost applications. When you think crimp, think Cannon!



995-0002-206
995-0002-207



CCT-D*C-1



CBT-491



ABT-620



ABT-500

SEMI-AUTOMATIC TOOLING

Contact Type	Volume	Contact Size	Tool Part No.	Lease/Purchase
Machined	Low/Medium	All	CBT-565	Purchase
	High Volume	All	CBT-491	Both
Stamped	Low Volume	All	CPT-D*C	Purchase
	Medium/High	All	ABT-607	Lease
	High	All	ABT-500 ABT-620	Lease

HAND TOOLS

Contact Type	Contact Size	Wire Accommodation	Hand Tool Part No.	Hand Tool Description
Machined	20	20, 22, 24	995-0002-206	CCT-DCM-1
			995-0002-207	CCT-DCM-2
	20-18	1 #18, 2 #22	995-0002-206	CCT-DCM-1
	20-26	26, 28, 30	995-0002-207	CCT-DCM-2
Stamped	20	20-28	995-0001-662	CCT-D*C-1
	20-18	18, 20, 2 #22	995-0001-870	CCT-D*C-4
Stamped Insulation Support	All	All	995-0002-107	CCT-D*C-10

INSERTION/EXTRACTION TOOLS

Contact Type	Contact Size	Wire Accommodation	Plastic Insertion/Extraction		Metal Extraction	
			Part No.	Description	Part No.	Description
Machined	20	20, 22, 24	274-7006-000	CIET-20HD	995-0001-695	CET-20D
	20-18	1 #18, 2 #22	274-5016-002	CET-20-15	995-0001-695	CET-20D
	20-26	26, 28, 30	274-7006-000	CIET-20HD	995-0001-695	CET-20D
Stamped	All	20-32	274-7006-000	CIET-20HD	995-0001-695	CET-20D
Stamped	20-18	#18	Not Available		995-0001-695	CET-20D



CPT-D*C



CBT-565



ABT-607



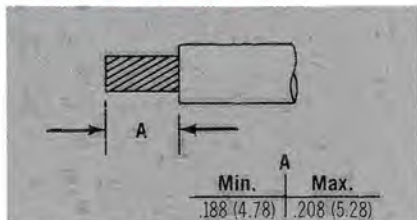
CET-20D



CIET-20HD

ASSEMBLY OF BURGUN-D D*C/D*U

WIRE STRIPPING— MACHINED CONTACTS



1. Cut wires to length. Strip insulation per above illustration. Check for broken or frayed wires.

CONTACT CRIMPING



2. Insert contact and wire into proper crimp tool (and locator, if required). Crimp contact to wire. Inspect crimp.

CONTACT INSERTION



3. Center wired contact in groove of insertion tool with tool tip butting contact shoulder. Insert contact into cavity until a positive stop is felt. Inspect insertion.



4. To be sure contact is locked securely, pull back lightly on wire. Repeat for balance of contacts working row by row across the insulator.



5. Place wire into extraction tool tip.



6. Insert tool tip into contact cavity until tip bottoms against contact shoulder, releasing tines. Hold wire against tool with finger and remove tool and contact. Repeat for balance of contacts.