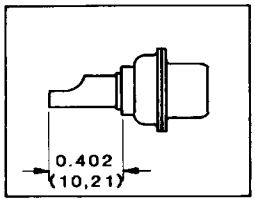
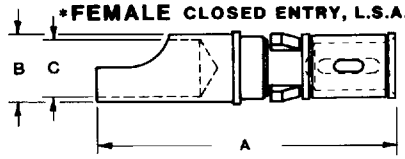
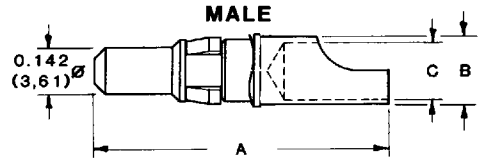
REMOVABLE POWER CONTACTS

SOLDER POWER CONTACTS







Solder power contacts may be supplied kitted with connector or ordered separately.

PART NO.	CURRENT RATING	WIRE SIZE	A REF.	B Ø	C Ø
FS4008D	40 Amps	8	0.858 (21,79)	0.219 (5,56)	0.188 (4,78)
FS4012D	20 Amps	12	0.858 (21,79)	0.143 (3,63)	0.112 (2,84)
FS4016D	10 Amps	16	0.858 (21,79)	0.100 (2,54)	0.069 (1,75)

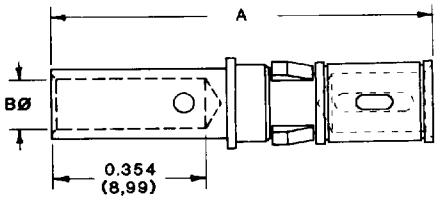
PART NO.	CURRENT RATING	WIRE SIZE	A REF.	B Ø	C Ø
MS4008D	40 Amps	8	0.868 (22,05)	0.219 (5,56)	0.188 (4,78)
MS4012D	20 Amps	12	0.868 (22,05)	0.143 (3,63)	0.112 (2,84)
MS4016D	10 Amps	16	0.868 (22,05)	0.100 (2,54)	0.069 (1,75)

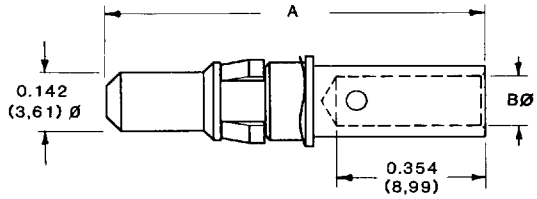
Material - High conductivity copper alloy.
Plating - Gold flash over nickel.

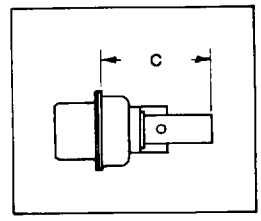
REMOVABLE CRIMP CONTACTS

Crimp power contacts may be supplied kitted with connector or ordered separately.

POWER CONTACTS





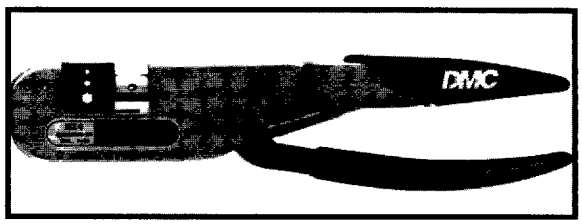


Material- High conductivity copper alloy.
Plating- Gold flash over nickel.

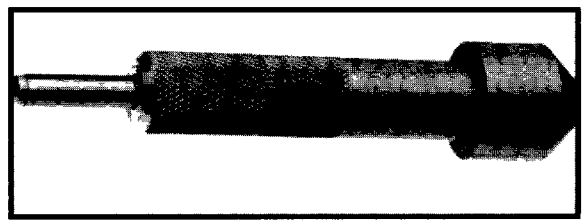
PART NO.	CURRENT RATING	WIRE SIZE	A	BØ	C MAX.
FC4008D	40 amps	8	0.858 (21,79)	0.181 (4,60)	0.640 (16,26)
FC4012D	20 amps	12	0.858 (21,79)	0.101 (2,57)	0.640 (16,26)
FC4016D	10 amps	16	0.858 (21,79)	0.067 (1,70)	0.640 (16,26)

PART NO.	CURRENT RATING	WIRE SIZE	A	BØ	C MAX.
MC4008D	40 amps	8	0.882 (22,40)	0.181 (4,60)	0.640 (16,26)
MC4012D	20 amps	12	0.882 (22,40)	0.101 (2,57)	0.640 (16,26)
MC4016D	10 amps	16	0.882 (22,40)	0.067 (1,70)	0.640 (16,26)

Note: Female contacts feature Large Surface Area (L.S.A.) closed entry contact design which provides maximum mating surfaces between male and female contact and reduced contact resistance during operation.



9509-0-0 Power Contact Hand Crimp Tool



4311-0-0 Power Contact Removal Tool

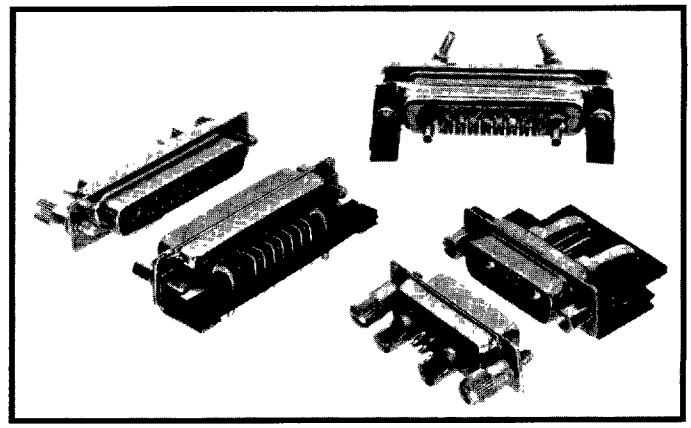
DIMENSIONS ARE IN INCHES (MILLIMETERS)
ALL DIMENSIONS SUBJECT TO CHANGE

Combo-D Series

INDUSTRIAL AND MILITARY QUALITY SUBMINIATURE-D CONNECTORS
FOR MILITARY AND SHELTERED INDOOR/OUTDOOR ENVIRONMENTAL APPLICATIONS

Size 20 Fixed Signal Contacts
Size 8 Removable Power, Shielded and High Voltage Contacts
Military/Industrial Quality Connectors

U.L. Recognized File #E49351
CSA Recognized File #LR54219
D.E.S.C. 85039
Telecommunication U.L. File #E140980



Combo-D Series connectors permit mixed contact combinations of power, shielded, high voltage and signal contacts within the same connector body. Twenty connector variants are offered in six standard shell sizes.

Two performance levels of Combo-D Series connectors are offered. The CBD Series connectors are professional quality connectors recommended for use in sheltered, noncorrosive indoor and outdoor environments having normal ventilation, but without temperature or humidity controls. The CBM Series connectors are military quality connectors recommended for use in sheltered, mildly corrosive environments having a wide range of temperature, pressure and humidity changes. These connectors will meet the applicable performance and dimensional requirements of IEC 807-2, Performance Level One and Two, and D.E.S.C. 85039.

Combo-D Series connectors utilize precision machined signal contacts. Connector variants are available with contact terminations for solder and straight and 90° printed board mount terminations featuring a choice of inch or metric printed board footprints.

Power, shielded and high voltage contacts are removable, having solder and straight and 90° printed board mount terminations. Power and shielded contacts are available with crimp terminations.

For low level shielding requirements, ferrite inductors may be attached to both signal and power contacts of connectors having contact terminations which are straight or 90° angled for printed board mounting applications. Additional details may be obtained from the factory Applications Engineering Department.

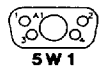
The female power contacts feature the Large Surface Area (L.S.A.) closed entry contact design which provides maximum mating surfaces between male and female contacts and reduced contact resistance during operation.

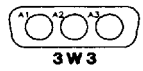
A wide assortment of printed board mounting hardware, cable support hoods, and locking systems is available from stock.

A blind mating system is available for applications requiring connector coupling in recessed areas or mobile power coupling systems.

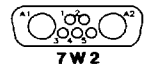
CBD SERIES CONTACT VARIANTS
FACE VIEW OF MALE OR REAR VIEW OF FEMALE

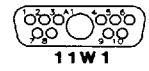
SHELL SIZE 1


5W1


3W3

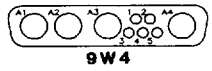
SHELL SIZE 2

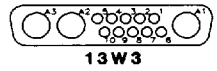

7W2

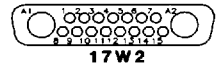

11W1

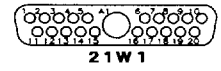
SHELL SIZE 3


5W5

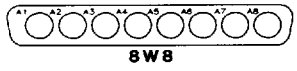

9W4


13W3

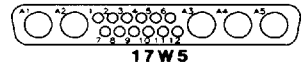

17W2


21W1

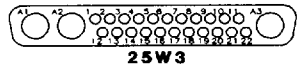
SHELL SIZE 4

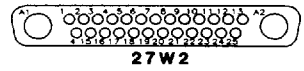

8W8


13W6

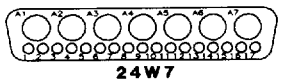

17W5

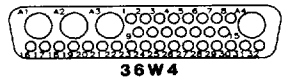

21WA4

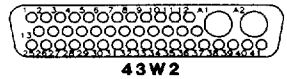

25W3

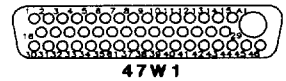

27W2

SHELL SIZE 5

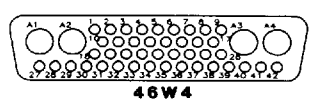

24W7


36W4


43W2


47W1

SHELL SIZE 6


46W4

POSITRONIC INDUSTRIES, INC.

COMBO-D SERIES TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator:	Glass filled polyester per MIL-M-24519 UL 94V-0, blue color, and composite.
Signal Contacts:	Male contacts-precision machined brass alloy. Female contacts-precision machined high tensile phosphor bronze.
Signal Contact Plating:	Gold flash over nickel plate and gold 0 000050 (1,25 microns) over nickel plate.
Power Contacts:	Machined of high conductivity copper alloy for both male and female contacts.
Power Contact Plating:	Gold flash over nickel.
Shielded and High Voltage Contacts:	Male contacts-precision machined brass. Female contacts-precision machined high tensile phosphor bronze.
Shielded and High Voltage Contact Plating:	Signal contact-gold flash over nickel.
Shells:	Steel or brass with tin plate; zinc plate with dichromate seal, stainless steel passivated.
Mounting Spacers and Brackets:	Nylon plastic, or brass with tin plate; zinc plate with dichromate seal.
Push-On Fasteners:	Phosphor bronze and beryllium copper with tin plate.
Jackscrew Systems:	Steel with zinc plate and dichromate seal, or clear zinc plate.
Hoods:	Composite and plastic, UL 94V-0, brass or steel with zinc plate and dichromate seal

ELECTRICAL CHARACTERISTICS:

SIGNAL CONTACTS

Contact Current Rating:	7.5 amperes nominal.
Initial Contact Resistance:	0.008 ohms maximum.
Proof Voltage:	1000 V r.m.s.

POWER CONTACTS

Contact Current Rating:	10, 15, 20, 30 and 40 amperes nominal.
Initial Contact Resistance:	0.005 ohms maximum
Proof Voltage:	1000 V r m s.

SHIELDED CONTACTS

Initial Contact Resistance:	0 008 ohms maximum.
Nominal Impedance:	50 ohms.
Insertion Loss:	-0 46 dB at 1 GHz -1.5 dB at 2 GHz
VSWR:	1.15 average at 1 GHz 1.56 average at 2 GHz

Above values measured using frequency domain techniques.

Proof Voltage:	1000 V r.m.s.

HIGH VOLTAGE CONTACTS

Flash over Voltage:	3600 V r.m.s.
Proof Voltage:	2700 V r m s.
Initial Contact Resistance:	0.008 ohms maximum

CONNECTOR

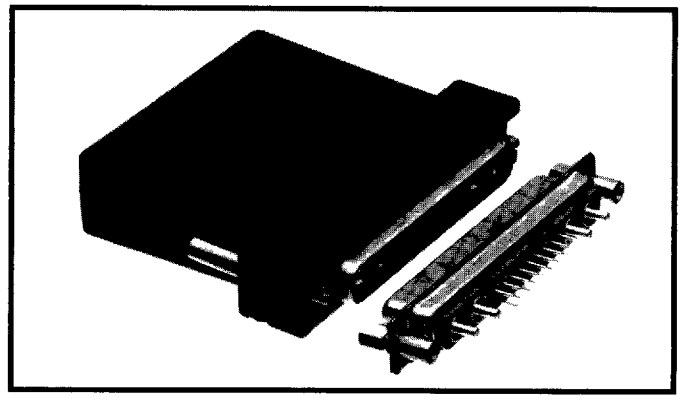
Insulator Resistance:	5 G ohms.
Clearance and Creepage Distance:	0.039 inch (1.0mm) minimum.
Working Voltage:	300 V r.m.s.

MECHANICAL CHARACTERISTICS:

Signal Contacts, Fixed:	Size 20 contacts, male contact-0.040 inch (1,02mm) diameter. CBD Series has open entry design female contact. CBM Series has closed entry design female contacts.
Contact Retention in Insulator:	Signal-9 lbs. (40N). Power, shielded and high voltage-22 lbs (98N).
Resistance To Solder Iron Heat:	500°F (260°C) for 10 seconds duration per IEC 512-6.
Signal Contact Terminations:	Solder contacts-0.042 inch (1,06mm) minimum hole diameter for 20 AWG ($0,5mm^2$) wire maximum.
	Straight Printed Board Mount – 0.028 inch (0,71mm) diameter.
	90° Printed Board Mount – 0.028 inch (0,71 mm) diameter.
Power Contacts, Removable, Crimp or Solder Termination:	Size 8 contact, male contact – 0.142 inch (3,61mm) diameter. Female contact features Large Surface Area (L.S.A.) closed entry contact design utilizing BeCu mechanical retention member. Male and female contacts have terminations for wire sizes 8, 12 and 16 AWG
Power Contacts, Printed Board Mount:	Size 8 contact, male contact – 0.142 inch (3,61mm) diameter. Printed board terminations with 0.078 inch (1,98mm), 0.093 inch (2,36mm) and 0.125 inch (3,18mm) diameters.
Shielded Contacts, Removable:	See table of maximum cable sizes for contact termination dimensions.
High Voltage Contacts:	Straight and 90° terminations – 0 041 inch (1,04mm) minimum hole diameter.
Shells:	Male shells may be dimpled for EMI/ESD ground paths
Polarization:	Trapezoidally shaped shells and polarized jackscrews.
Mounting To Angle Brackets:	Jackscrews and riveted fasteners with 0.120 inch (3,05mm) diameter hole, and threaded riveted fasteners with 4-40 threads and nylon inserts
Mounting To Printed Board:	Rapid installation push-on fasteners and threaded posts.
Locking Systems:	Jackscrews.
Mechanical Operations, Signal Contacts:	CBD Series, 500 operations, CBM Series, 1,000 operations per IEC 512-5.

CLIMATIC CHARACTERISTICS:

Temperature Range:	-55°C to +125°C.
Damp Heat, Steady State:	10 days.



CBD21WA4M20Z00
WITH MS4016D CONTACTS

CBD21WA4F35S0T20