ORDERING INFORMATION - CODE NUMBERING SYSTEM

Specify Complete Connector By Selecting An Option From Step 1 Through 7

STEP	1	2	3	4	5	6	7	8	—	9
EXAMPLE	PLB	3W3	F	3	0	0	A1	/AA	—	

STEP 1 - BASIC SERIES

PLB - PLB Series
PLBH - High conductivity contacts.

STEP 2 - CONNECTOR VARIANTS

3W3 - Three size 12 contacts

STEP 3 - CONNECTOR GENDER

M - Male
F - Female

STEP 4 - CONTACT TERMINATION TYPE

0 - Order contacts separately for cable connectors for connection systems 5, 6, 7, 8 and 9, see pages 47-53.
*[1] 1 - Removable contact, panel mount connector for connection system 8. Order contacts separately, see pages 47-53.
*[1] 3 - Solder, Straight Printed Board Mount with 0.146 [3.71] tail extension for connection systems 1, 4, and 6.
4 - Solder, Right Angle (90°) Printed Board Mount with 0.146 [3.71] tail extension for connection systems 1, 2 and 5.
71 - Screw termination cable connector. Supplied with 3 contacts.
*[1] 93 - Press-in, Compliant Termination for 0.090 [2.29] to 0.175 [4.45] thick P.C. board, for connector systems 1, 4, and 6.

STEP 5 - MOUNTING STYLE

0 - None
B - Metal Right Angle (90°) Mounting Bracket.
BN - Metal Right Angle (90°) Mounting Bracket with Push-on Fastener.
N - Push-On Fastener For Straight Printed Board Mount Connectors
ST2 - Self-tapping steel screws 2-28 x 0.250±0.030 [6.35±0.76] length for 0.093 [2.36] thick board.
ST3 - Self-tapping steel screws 2-28 x 0.312±0.030 [7.92±0.76] length for 0.125 [3.18] thick board.
ST4 - Self-tapping steel screws 2-28 x 0.375±0.030 [9.53±0.76] length for 0.175 [4.45] thick board.
SS2 - Self-tapping stainless steel screws 2-28 x 0.250±0.030 [6.35±0.76] length for 0.093 [2.36] thick board.
SS3 - Self-tapping stainless steel screws 2-28 x 0.312±0.030 [7.92±0.76] length for 0.125 [3.18] thick board.
SS4 - Self-tapping stainless steel screws 2-28 x 0.375±0.030 [9.53±0.76] length for 0.175 [4.45] thick board.

*[1] **Mounting screws are available with code 1, 3 and 93. To order mounting screws separately, see page 59 for part numbers.**

STEP 6 - CABLE ADAPTER AND BLIND MATE SYSTEM

0 - None.
5 - Top Opening Hood.
11 - Blind Mating System for 0.040 [1.02] thick panel.
12 - Blind Mating System for 0.060 [1.52] thick panel.
13 - Blind Mating System for 0.090 [2.29] thick panel.
14 - Blind Mating System for 0.120 [3.05] thick panel.

STEP 7 - CONTACT PLATING FOR PRINTED BOARD CONNECTORS

0 - Crimp Contacts ordered separately, see pages 47-53.
A1 - Gold flash over nickel on mating end and termination end.
A2 - Gold flash over nickel on mating end and 0.00020 inch [5.00µ] tin-lead solder coat on termination end. Not available with contact code 71 or 93.
C1 - 0.000030 inch [0.76µ] gold over nickel on mating end and termination end.
C2 - 0.000030 inch [0.76µ] gold over nickel on mating end and 0.00020 inch [5.00µ] tin-lead solder coated termination end. Not available with contact code 71 or 93.
D1 - 0.000050 inch [1.27µ] gold over nickel on mating end and termination end.
D2 - 0.000050 inch [1.27µ] gold over nickel on mating end and 0.00020 inch [5.00µ] tin-lead solder coated termination end. Not available with contact code 71 or 93.

STEP 8 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - RoHS Compliant)

NOTE: If compliance to environmental legislation is not required, this step will not be used. Example: PLB3W3F300A1

STEP 9 - SPECIAL OPTIONS

-338.0 - Sequential mating. Position 3 first mate, last break. Available on 3, 4, and 93 only.

CONTACT TECHNICAL SALES FOR SPECIAL OPTIONS

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

REMOVABLE CONTACT TECHNICAL CHARACTERISTICS

SIZE 20 REMOVABLE CONTACT

MATERIALS AND FINISHES:

STANDARD: Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

MECHANICAL CHARACTERISTICS:

STANDARD: Insert contact to rear face of insulator, release from front face of insulator. Size 20 contacts, 0.040 inch [1.02 mm] diameter male contacts, closed entry design female contacts.

ELECTRICAL CHARACTERISTICS:

Contact Current Rating: 7.5 amperes nominal.
Initial Contact Resistance: 0.007 ohms max. per IEC 60512-2, test 2b.

SIZE 16 REMOVABLE CONTACT

MATERIALS AND FINISHES:

STANDARD: Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

HIGH CONDUCTIVITY: Tellurium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

SHIELDED:
Dielectric Material: PCTFE
Inner Contacts: Phosphor bronze, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
Outer Contacts: Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14.

MECHANICAL CHARACTERISTICS:

STANDARD AND HIGH CONDUCTIVITY: Insert contact to rear face of insulator, release from front face of insulator. Size 16 contacts, 0.0625 inch [1.588 mm] diameter male contacts. Female contact closed entry for highest reliability.

SHIELDED:
Contact Retention In Insulator: 18 lbs. [80N].
Removable Contacts: Rear insertion, front removable.
Insertion Force Per Contact: 8 oz. [2.2N] per contact maximum
Durability: 100 cycles minimum.
Vibration: 20g from 10 Hz to 500 Hz
Shock: 30g - 11 ms

ELECTRICAL CHARACTERISTICS:

STANDARD:
Contact Current Rating: See page 9 for detail information.
Initial Contact Resistance: 0.0016 ohms max. per IEC 60512-2, test 2b.

HIGH CONDUCTIVITY:
Contact Current Rating: See page 9 for detail information.
Initial Contact Resistance: 0.0007 ohms max. per IEC 60512-2, test 2b.

SHIELDED:
Dielectric Strength At Sea Level: 600 V rms
Initial Contact Resistance: 0.012 ohms maximum
Insulation Resistance: 5 G ohms
Insertion Loss: 0.2 dB at 500 MHz for 126N contacts
1.0 dB at 500 MHz for 226N contacts
VSWR: 170 at 0 to 200 MHz
2.25 at 200 to 500 MHz

SIZE 12 REMOVABLE CONTACT

MATERIALS AND FINISHES:

STANDARD: Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

HIGH CONDUCTIVITY: Tellurium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

MECHANICAL CHARACTERISTICS:

STANDARD AND HIGH CONDUCTIVITY: Insert contact to rear face of insulator, release from front face of insulator. Size 12 contacts, 0.094 inch [2.39 mm] diameter male contacts. Female contact closed entry for highest reliability.

ELECTRICAL CHARACTERISTICS:

STANDARD:
Contact Current Rating: 40 amperes continuous, derated per IEC 60512-3, test 5b.
Initial Contact Resistance: 0.001 ohms max. per IEC 60512-2, test 2b.

HIGH CONDUCTIVITY:
Contact Current Rating: See page 33 for detail information.
Initial Contact Resistance: 0.0007 ohms max. per IEC 60512-2, test 2b.

SIZE 8 REMOVABLE CONTACT

MATERIALS AND FINISHES:

STANDARD: Precision machined copper alloy with gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

HIGH CONDUCTIVITY: Tellurium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14 and -15.

HIGH VOLTAGE:
Insulator Material: PTFE teflon
Contacts: Male contacts, brass. Female contacts, phosphor bronze. Male and female contacts, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.

SHIELDED:
Dielectric Material: PTFE teflon
Inner Contacts: Phosphor bronze, 0.000030 inch [0.76µ] gold over nickel. Other finishes are available, see optional plating finishes for -15.
Outer Contacts: Brass and beryllium copper, gold flash over nickel. Other finishes are available, see optional plating finishes for -14.

. . . continued on next page

For information regarding CRIMP TOOLS & CRIMPING TOOL TECHNIQUES, *see page 54.*

REMOVABLE CONTACT TECHNICAL CHARACTERISTICS

continued from previous page . . .

MECHANICAL CHARACTERISTICS:

STANDARD AND HIGH CONDUCTIVITY: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts, 0.142 inch [3.61 mm] diameter male contacts, closed entry design female contacts.

HIGH VOLTAGE: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts. Straight and right angle (90°) terminations. 0.041 inch [1.04 mm] minimum hole diameter.

Durability: 500 cycles minimum.

Vibration: 20g from 10 Hz to 500 Hz.

Shock: 30g-11ms.

SHIELDED: Insert contact to rear face of insulator, release from front face of insulator. Size 8 contacts. See page 53 table of cable sizes for contact Termination dimensions.

ELECTRICAL CHARACTERISTICS:

STANDARD:

Contact Current Rating: See temperature rise curves on page 40. For additional information see page 51-52.

Initial Contact Resistance: 0.001 ohms max. per IEC 60512-2, test 2b.

HIGH CONDUCTIVITY:

Contact Current Rating: See temperature rise curves on page 40.

Initial Contact Resistance: 0.0003 ohms max. per IEC 60512-2, test 2b.

HIGH VOLTAGE:

Flash over Voltage: 3600 V r.m.s.

Proof Voltage: 2700 V r.m.s.

Initial Contact Resistance: 0.008 ohms maximum.

SHIELDED:

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.

OPTIONAL PLATING FINISHES

-14 0.000030 [0.76 µ] gold over nickel by adding "-14" suffix onto part number. *Example: FC720N2-14.*

-15 0.000050 inch [1.27µ] gold over nickel by adding "-15". *Example: FC720N2-15.*

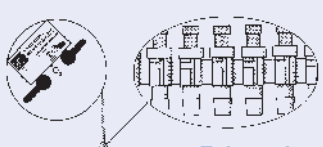
RoHS OPTIONS:

/AA Environmental Compliance Option: RoHS compliant can be achieved by adding "/AA" suffix onto part number. *Examples: FC720N2/AA or for optional plating finishes use FC720N2/AA-14.*

REELED CONTACTS:

Contacts may be supplied in plastic carriers, packaged in reels holding 2,000 contacts for use with the automatic pneumatic crimp tools, catalog part numbers 9550-0 and 9550-1; packaged in reels holding 1,000 contacts for use with the automatic pneumatic crimp tools, catalog part number 9555-0-2. The same type carrier is used for both male and female contacts.

All male and female crimp contacts can be ordered in reels by adding letter "R" after the contact part number, such as MC6020DR for a male contact and FC6026DR for a female contact.



Enlarged section of plastic contact carriers

REMOVABLE CRIMP CONTACT

FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS

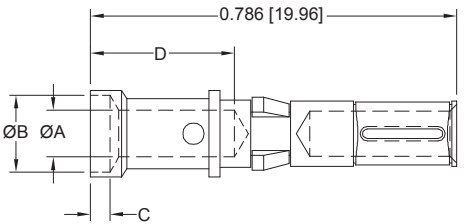
CONTACTS MUST BE ORDERED SEPARATELY

SIZE 12

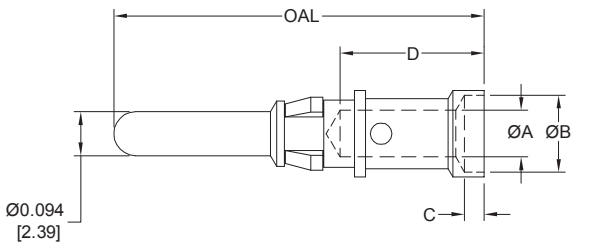
See page 33 for current ratings.

Note: Connectors can be kitted with all applicable crimp/ solder contacts, contact Technical Sales for connector part number.

FEMALE CONTACT



MALE CONTACT



PART NUMBER	WIRE SIZE AWG/[mm²]	ØA	ØB	C	D
FC610N2S	10 [6.0]	0.147 [3.73]	N/A	N/A	0.254 [6.45]
FC612N2	12 [4.0]	0.100 [2.54]	0.165 [4.19]	0.042 [1.06]	0.309 [7.85]

"S" in part number indicates high conductivity material.

Compatible with PLBH3W3 or PLSH PCB mount connecto rs. See ordering information.

PART NUMBER	WIRE SIZE AWG/[mm²]	ØA	ØB	C	D	OAL
MC610NS	10 [6.0]	0.147 [3.73]	N/A	N/A	0.254 [6.45]	0.795 [20.19]
MC610NS-228.2	10 [6.0]	0.147 [3.73]	N/A	N/A	0.254 [6.45]	0.714 [18.14]
MC612N	12 [4.0]	0.100 [2.54]	0.165 [4.19]	0.042 [1.06]	0.309 [7.85]	0.795 [20.19]
MC612N-228.2	12 [4.0]	0.100 [2.54]	0.165 [4.19]	0.042 [1.06]	0.309 [7.85]	0.714 [18.14]

For information regarding CRIMP TOOLS & CRIMPING TOOL TECHNIQUES, *see page 54.*

DIMENSIONS ARE IN INCHES [MILLIMETERS].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

REMOVABLE SOLDER CUP CONTACT

FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS

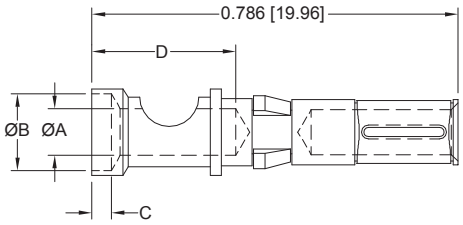
CONTACTS MUST BE ORDERED SEPARATELY

SIZE 12

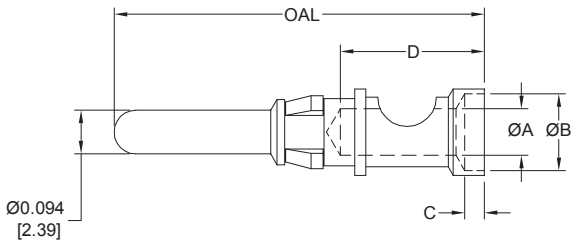
See page 33 for current ratings.

Note: Connectors can be kitted with all applicable crimp/ solder contacts, contact Technical Sales for connector part number.

FEMALE CONTACT



MALE CONTACT



PART NUMBER	WIRE SIZE AWG/[mm²]	ØA	ØB	C	D
FS610N2S	10 [6.0]	0.147 [3.73]	N/A	N/A	0.254 [6.45]
FS612N2	12 [4.0]	0.100 [2.54]	0.165 [4.19]	0.042 [1.06]	0.309 [7.85]

"S" in part number indicates high conductivity material.

Compatible with PLBH3W3 or PLSH PCB mount connecto rs. See ordering information.

PART NUMBER	WIRE SIZE AWG/[mm²]	ØA	ØB	C	D	OAL
MS610NS	10 [6.0]	0.147 [3.73]	N/A	N/A	0.254 [6.45]	0.795 [20.19]
MS610NS-228.2	10 [6.0]	0.147 [3.73]	N/A	N/A	0.254 [6.45]	0.714 [18.14]
MS612N	12 [4.0]	0.100 [2.54]	0.165 [4.19]	0.042 [1.06]	0.309 [7.85]	0.795 [20.19]
MS612N-228.2	12 [4.0]	0.100 [2.54]	0.165 [4.19]	0.042 [1.06]	0.309 [7.85]	0.714 [18.14]

REMOVABLE CRIMP CONTACT

FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS

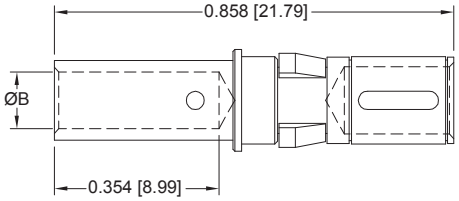
CONTACTS MUST BE ORDERED SEPARATELY

SIZE 8

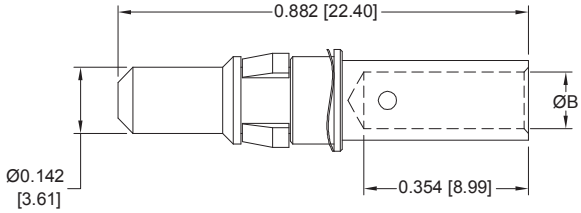
Note: Connectors can be kitted with all applicable crimp/ solder contacts, contact Technical Sales for connector part number.

* FEMALE CONTACT

CLOSED ENTRY, L.S.A.



MALE CONTACT



PART NUMBER	CURRENT RATING	WIRE SIZE AWG/[mm²]	ØB
FC4008D	See Temp. Rise Curve, page 40.	8 / [10.0]	0.181 [4.60]
FC4008DS	See Temp. Rise Curve, page 40.	8 / [10.0]	0.181 [4.60]
FC4010D	30 amperes	10 / [6.0]	0.122 [3.10]
FC4012D	20 amperes	12 / [4.0]	0.101 [2.57]
FC4016D	10 amperes	16 / [1.5]	0.067 [1.70]

"S" in part number indicates high conductivity material.

Compatible with PL*H PCB mount connectors. See ordering information.

PART NUMBER	CURRENT RATING	WIRE SIZE AWG/[mm²]	ØB
MC4008D	See Temp. Rise Curve, page 40.	8 / [10.0]	0.181 [4.60]
MC4008DS	See Temp. Rise Curve, page 40.	8 / [10.0]	0.181 [4.60]
MC4010D	30 amperes	10 / [6.0]	0.122 [3.10]
MC4012D	20 amperes	12 / [4.0]	0.101 [2.57]
MC4016D	10 amperes	16 / [1.5]	0.067 [1.70]

***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.

For information regarding CRIMP TOOLS & CRIMPING TOOL TECHNIQUES, *see page 54.*