

A.C. / D.C. INPUT CONNECTOR

- * Hot Plug Capability
- * Screw Termination Contacts
- * Size 12 Power Contacts
- * Large Surface Area Mating System
- * Contact Current Rating to 40 Amperes
- * Sequential Mating Options
- * Discriminating Locking System

TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:

Insulator:	Glass-filled polyester, UL 94V-0. Contact technical sales for availability of high temperature insulator material.
Contacts:	Precision machined copper alloy with gold flash over nickel, or 0.000030 inch [0.76µ] gold over nickel, or 0.000050 [1.27µ] gold over nickel. Solder coated terminations optional.
Hood:	Glass-filled polyester, UL 94V-0.
Mounting Bracket:	Brass, tin plate.
Push-on Fastener:	Spring tempered copper alloy, tin plate.
Mounting Screw:	Steel, zinc plate, or stainless steel passivated.

ELECTRICAL CHARACTERISTICS:

CONTACT CURRENT RATING:

Standard Contact Material:	40 amperes. See page 33 for details.
High Conductivity Contact Material:	55 amperes. See page 33 for details.

INITIAL CONTACT RESISTANCE:

Standard Contact Material:	0.001 ohms max. per IEC 60512-2, test 2b.
High Conductivity Contact Material:	0.00037 ohms max. per IEC 60512-2, test 2b.
Insulation Resistance:	5 G ohms per IEC 60512-2, test 3a.
Voltage Proof:	3,750 V r.m.s. per IEC 60512-2, test 4a, method A.

Clearance and

Creepage Distance:	0.125 [3.18] minimum
Working Voltage:	1,250 V. r.m.s.
Hot Pluggable [50 couplings per UL 1977 paragraph 15]:	Contact technical sales
Working Temperature:	-55°C to +125°C Contact technical sales for availability of high temperature insulator material.

MECHANICAL CHARACTERISTICS:

Removable Contacts:	Rear insertion/ front release. Female contact features "Closed Entry" design for highest reliability. 0.094 [2.39]
Removable Contact Retention in Insulator:	20 lbs. [89N] per IEC 60512-8, test 15a.
Fixed Contacts:	Printed board terminations, both straight and right angle (90°). Female contact features "Closed Entry" design for highest reliability. 0.094 [2.39] diameter male contact.
Fixed Contact Retention in Insulator:	10 lbs. [44N], minimum.
Resistance to Soldering Iron Heat:	260°C [500°F] for 10 seconds duration per IEC 60512-6, test 12e, 25 watt soldering iron.
Contact Terminations:	Crimp removable contacts and solder cup removable contacts for wire size 12 AWG [4.0 mm ²]. Straight and right angle (90°) solder printed board mount, 0.090 [2.29] tail diameter. Compliant termination press-in.
Connection Systems:	Cable to cable, cable to printed board, cable to panel mount, and printed board to printed board.
Sequential Mating Systems:	Male contacts can provide two mating lengths.
Locking System:	Insulators provide locking between cable to cable, cable to printed board, and cable to panel mount applications.
Polarization:	Provided in insulator design.
Mounting to P.C. Board:	Rapid installation push-on fasteners.
Mechanical Operations:	500 operations

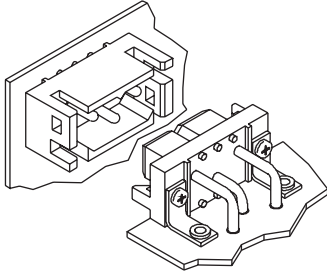


For RoHS options
see page 38.

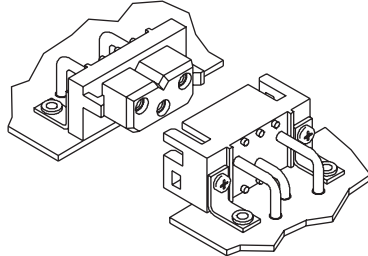


CONNECTION SYSTEMS

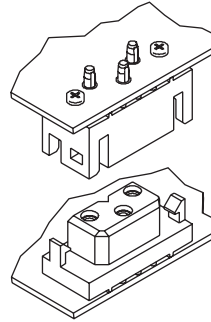
System 1
Mother Board -
Daughter Board



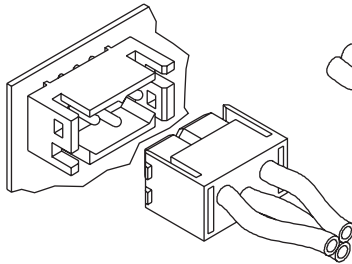
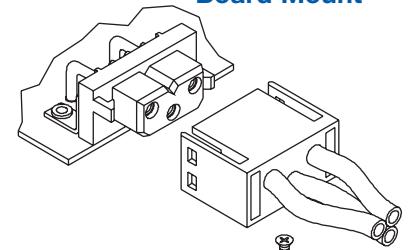
System 2
Side to Side
Board Mounting



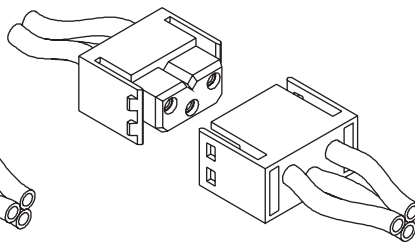
System 4
Sandwich Board
Mounting



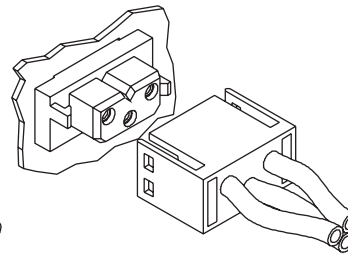
System 5
Cable to Right
Angle (90°)
Board Mount



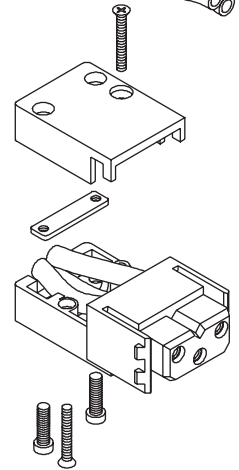
System 6
Cable to Straight
Board Mount



System 7
Cable to Cable



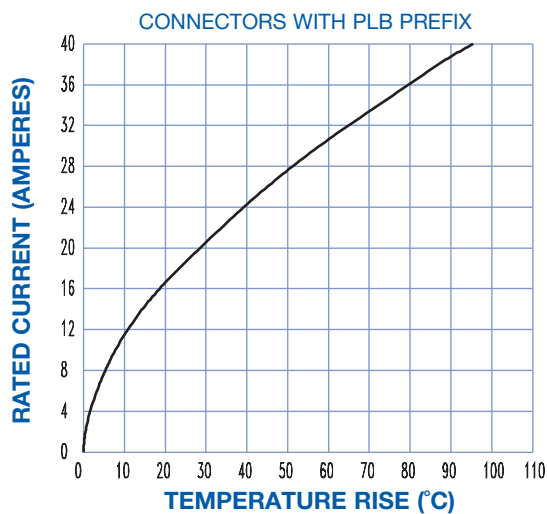
System 8
Panel Mounting
to Cable



System 9
Cable Connector with
Cable Adapter

TEMPERATURE RISE CURVE

STANDARD CONTACT MATERIALS

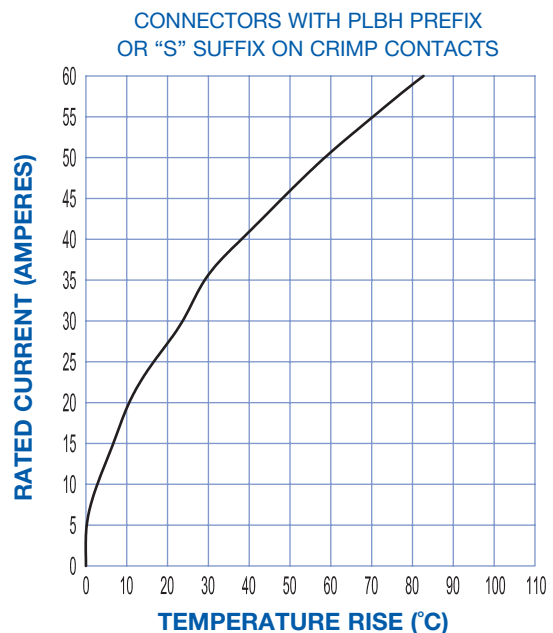


Test conducted per IEC Publication 60512-3, Test 5a.
All power contacts under load.

Standard Density: Curve developed using PLB3W3M4BN0A1 and PLB3W3F300A1 mated connector terminated to 12 AWG wire.

High Conductivity: Curve developed using PLBH3W3M9300A1 and PLBH3W3F9300A1 mated connector terminated to 12 AWG wire

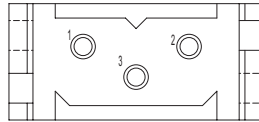
HIGH CONDUCTIVITY CONTACT MATERIALS



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



CONNECTOR VARIANT FACE VIEW OF MALE CONNECTOR

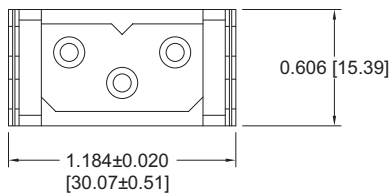


PLB3W3

CABLE CONNECTOR FOR USE WITH SIZE 12 REMOVABLE CONTACTS CODE 0

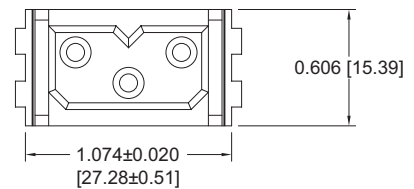
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

MALE

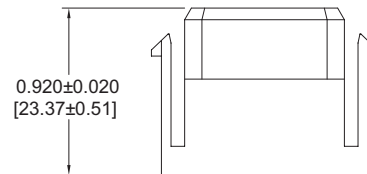
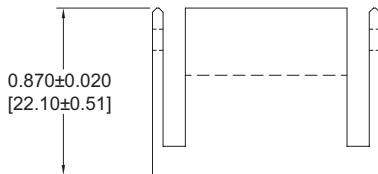


Part Number: PLB3W3M0000

FEMALE



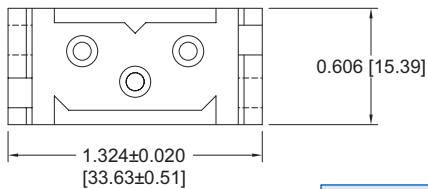
Part Number: PLB3W3F0000



PANEL MOUNT CONNECTOR FOR USE WITH SIZE 12 REMOVABLE CONTACTS CODE 1

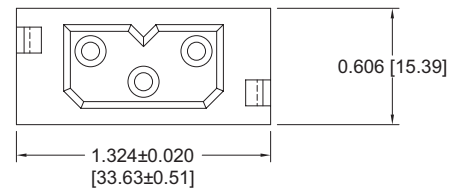
CONTACTS ARE NOT SUPPLIED WITH CONNECTOR AND MUST BE ORDERED SEPARATELY

MALE

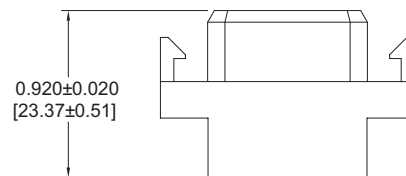
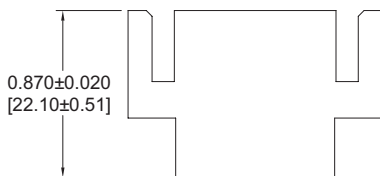


Part Number: PLB3W3M1000

FEMALE



Part Number: PLB3W3F1000



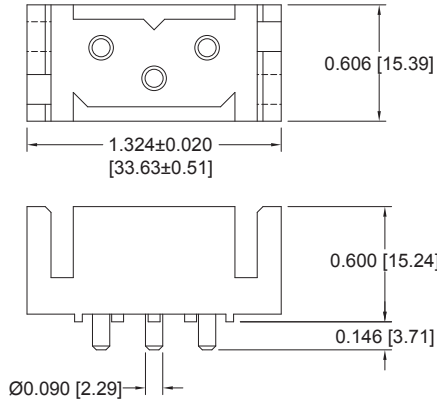
NOTE: MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 26. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.

For information regarding size 12 removable contacts, see Removable Contact section, pages 47-53.

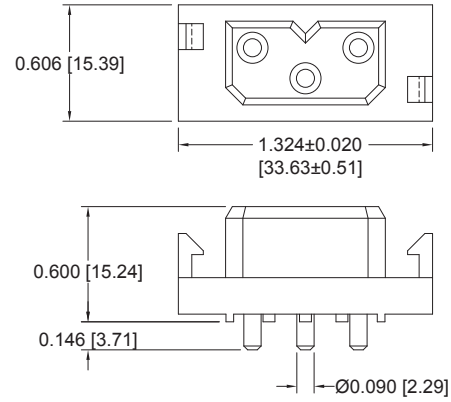


STRAIGHT PRINTED BOARD MOUNT CONNECTOR
CODE 3, 0.146 [3.71] CONTACT EXTENSION

NOTE: MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 26. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.



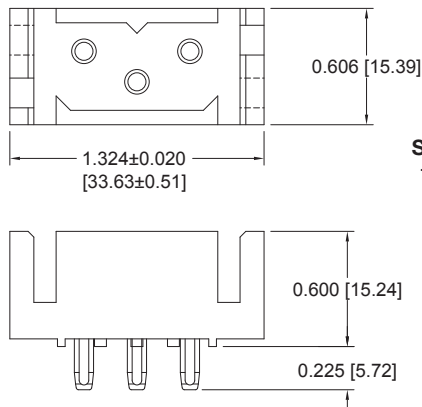
Part Number: PLB3W3M300A1



Part Number: PLB3W3F300A1

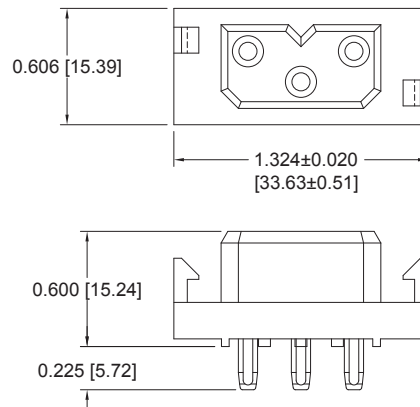
COMPLIANT PRESS-IN CONNECTOR
CODE 93, 0.225 [5.72] CONTACT EXTENSION

NOTE: MOUNTING SCREWS CAN BE SUPPLIED WITH CONNECTORS USING STEP 5 IN ORDERING INFORMATION ON PAGE 26. MOUNTING SCREWS CAN ALSO BE ORDERED SEPARATELY BY PART NUMBER. SEE PAGE 59.



Part Number: PLB3W3M93ST30A1

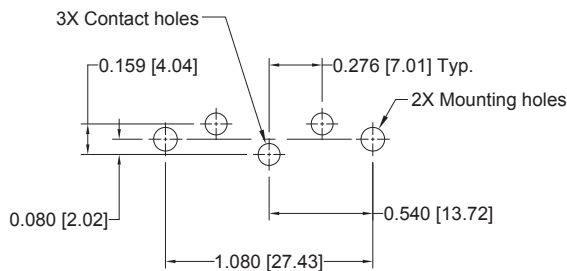
See page 56-57
for Compliant
Press-in
information.



Part Number: PLB3W3F93ST30A1

CONTACT HOLE PATTERN

FOR STRAIGHT PRINTED BOARD MOUNT AND COMPLIANT PRESS-IN CONNECTORS



SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest Ø 0.114 [2.90] finished holes in printed board for straight solder printed board mount contacts.

Suggest Ø 0.123±0.003 [3.15±0.08] holes in printed board for mounting connector with push-on fasteners or 0.100 [2.54] for mounting connector with #2 screws.

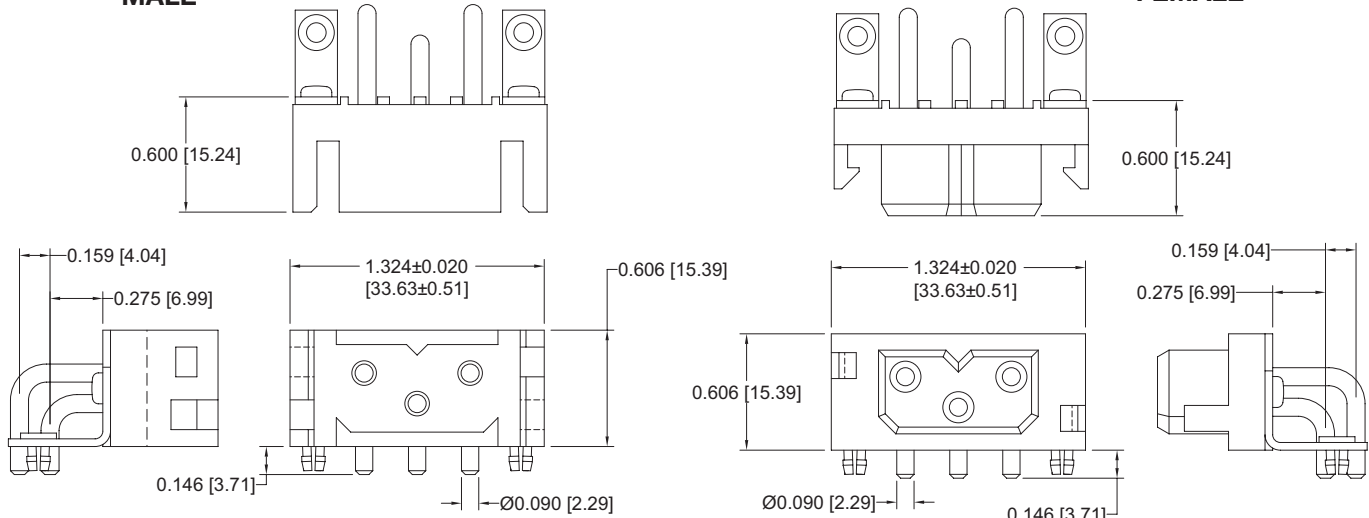
NOTE: See page 61 for suggested printed board drill hole sizes, recommended plating and finished hole sizes for compliant contact termination positions.



RIGHT ANGLE (90°) PRINTED BOARD MOUNT CONNECTOR CODE 4, 0.146 [3.71] CONTACT EXTENSION

MALE

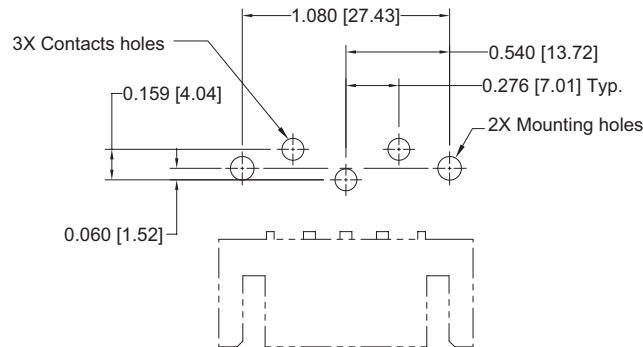
FEMALE



Part Number:
PLB3W3M4BN0A1

Part Number:
PLB3W3F4BN0A1

CONTACT HOLE PATTERN RIGHT ANGLE (90°) ANGLE PRINTED BOARD MOUNT CONNECTORS



SUGGESTED PRINTED BOARD HOLE SIZES:

Suggest Ø 0.114 [2.90] finished holes in printed board for right angle (90°) solder printed board mount contacts.

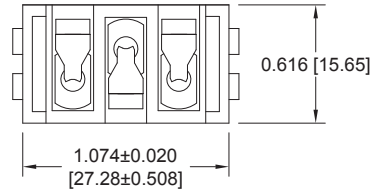
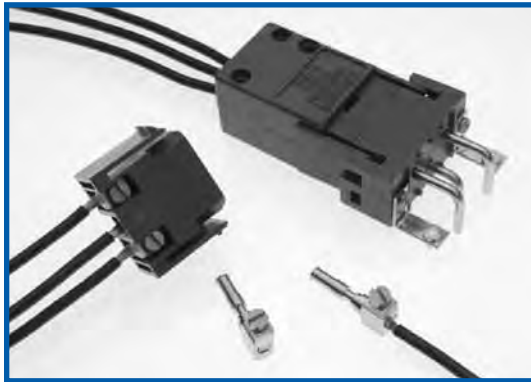
Suggest Ø 0.123±0.003 [3.15±0.08] holes in printed board for mounting connector with push-on fasteners.

SCREW TERMINATION CONNECTOR

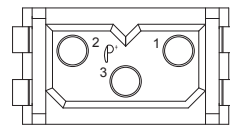
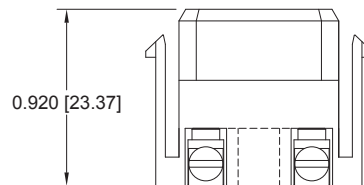
SCREW TERMINATIONS ALLOWS FOR CONVENIENT FIELD INSTALLATION WHEN REQUIRED

CODE 71

CONTACTS MAY BE SUPPLIED WITH CONNECTOR OR ORDERED SEPARATELY

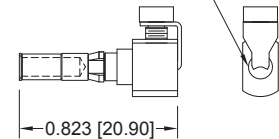


Typical Part Number:
PLB3W3F7100A1
supplied with 3 contacts



REPLACEMENT CONTACT

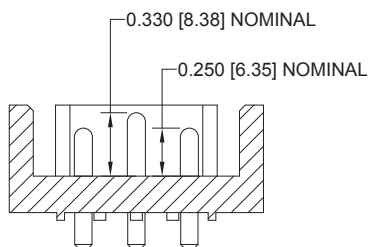
For use with wire
size 12 awg [4.0mm²]
or smaller



Typical Part Number:
FST612N2

SEQUENTIAL MATING CONTACTS

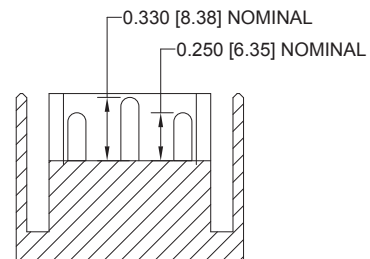
BOARD MOUNT CONNECTORS



Modification number -338.0 (see step 8 of the ordering information) allows for board mount connector to have position 3 loaded with a 0.330 [8.38] nominal mating length contact and positions 1 and 2 loaded with 0.250 [6.35] nominal mating length contacts.

Contact technical sales for additional sequencing options.

CRIMP AND PANEL MOUNT CONNECTORS



MC610NS and **MC612N** crimp contacts and **MC610NS** and **MC612N** solder cup contacts to be used for 0.330 [8.38] nominal mating length. **MC610NS-228.2** and **MC612N-228.2** crimp contacts and **MS610NS-228.2** and **MS612N-228.2** solder cup contacts to be used for 0.250 [6.35] nominal mating length.



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 - Removable contact, panel mount connector for connection system 8. Order contacts separately, see pages 47-53.
- *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.
- *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 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



STEP 8 - ENVIRONMENTAL COMPLIANCE OPTIONS

/AA - Compliant per EU Directive 2002/95/EC (RoHS)

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

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 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.

REMOVABLE CRIMP CONTACT

FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS

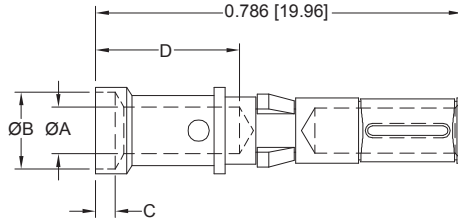
CONTACTS MUST BE ORDERED SEPARATELY

SIZE 12

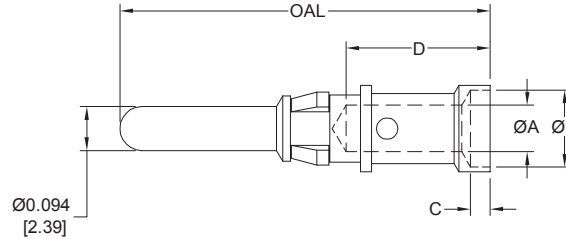
See page 33
for current ratings.

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/[mm ²]	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 connectors. See ordering information.

PART NUMBER	WIRE SIZE AWG/[mm ²]	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.

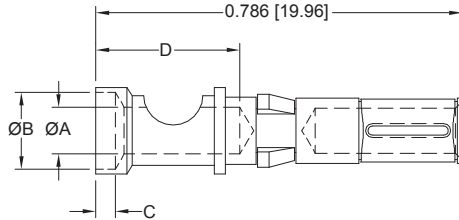
REMOVABLE SOLDER CUP CONTACT

FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS
CONTACTS MUST BE ORDERED SEPARATELY
SIZE 12

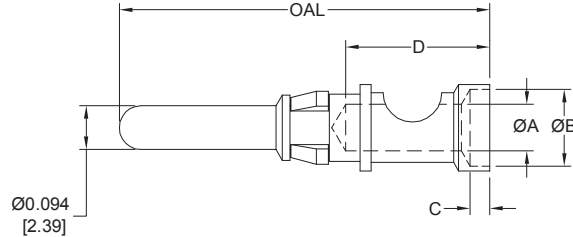
Note: Connectors can be kitted with all applicable crimp/solder contacts, contact Technical Sales for connector part number.

See page 33
 for current ratings.

FEMALE CONTACT



MALE CONTACT



PART NUMBER	WIRE SIZE AWG/[mm ²]	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 connectors. See ordering information.

PART NUMBER	WIRE SIZE AWG/[mm ²]	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 CONTACT

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