



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 [0.76 μ] 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 [0.76 μ] 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 [0.76 μ] 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.

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

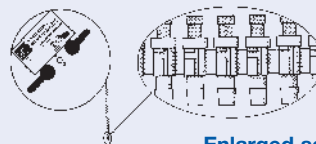
RoHS OPTIONS:

/AA Environmental Compliance Option (RoHS), compliant per EU Directive 2002/95/EC 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

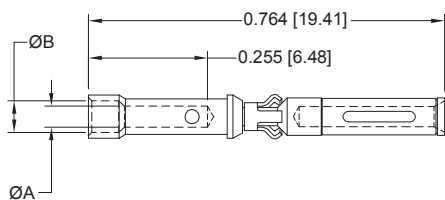
REMOVABLE CRIMP SIGNAL CONTACT

FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS

CONTACTS MUST BE ORDERED SEPARATELY

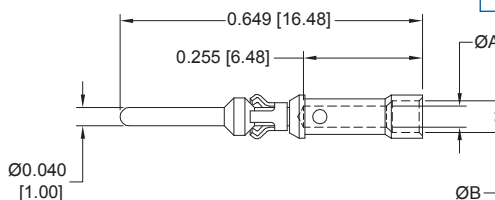
SIZE 20

FEMALE CONTACT



PART NUMBER	WIRE SIZE AWG/[mm ²]	ØA	ØB
FC720N2	20 / 22 / 24 [0.5 / 0.3 / 0.25]	0.045 [1.14]	0.068 [1.73]

MALE CONTACT



PART NUMBER	WIRE SIZE AWG/[mm ²]	ØA	ØB
MC720N3	20 / 22 / 24 [0.5 / 0.3 / 0.25]	0.045 [1.14]	0.068 [1.73]

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

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

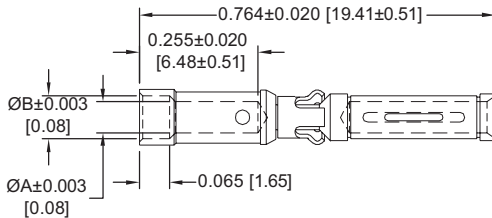


See page 9 for
current ratings.

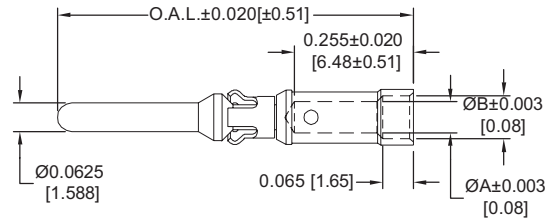
REMOVABLE CRIMP CONTACT FOR USE WITH PCS SERIES CONNECTORS CONTACTS MUST BE ORDERED SEPARATELY SIZE 16

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

FEMALE CONTACT "CLOSED ENTRY" DESIGN



MALE CONTACT



PART NUMBERS	WIRE SIZE AWG/[mm ²]	ØA	ØB
FC112N2	12 [4.0]	0.098 [2.49]	N/A
FC112N2S	12 [4.0]	0.098 [2.49]	N/A
FC114N2	14-16 [2.5-1.5]	0.081 [2.06]	0.105 [2.67]
FC116N2	16-18 [1.5-1.0]	0.067 [1.70]	0.093 [2.36]
FC120N2	20-22-24 [0.5-0.3-0.25]	0.045 [1.14]	0.068 [1.73]

"S" in
part number
indicates high
conductivity
material.

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

PART NUMBERS	WIRE SIZE AWG/[mm ²]	ØA	ØB	OAL
MC112N	12 [4.0]	0.098 [2.49]	N/A	0.764 [19.41]
MC112NS	12 [4.0]	0.098 [2.49]	N/A	0.764 [19.41]
*MC112N-133.0	12 [4.0]	0.098 [2.49]	N/A	0.684 [17.37]
*MC112N-133.1	12 [4.0]	0.098 [2.49]	N/A	0.724 [18.39]
*MC112N-133.2	12 [4.0]	0.098 [2.49]	N/A	0.744 [18.90]
*MC112N-133.3	12 [4.0]	0.098 [2.49]	N/A	0.804 [20.42]
MC114N	14-16 [2.5-1.5]	0.081 [2.06]	0.105 [2.67]	0.764 [19.41]
MC116N	16-18 [1.5-1.0]	0.067 [1.70]	0.093 [2.36]	0.764 [19.41]
*MC116N-133.0	16-18 [1.5-1.0]	0.067 [1.70]	0.093 [2.36]	0.684 [17.37]
*MC116N-133.1	16-18 [1.5-1.0]	0.067 [1.70]	0.093 [2.36]	0.724 [18.39]
*MC116N-133.2	16-18 [1.5-1.0]	0.067 [1.70]	0.093 [2.36]	0.744 [18.90]
*MC116N-133.3	16-18 [1.5-1.0]	0.067 [1.70]	0.093 [2.36]	0.804 [20.42]
MC120N	20-22-24 [0.5-0.3-0.25]	0.045 [1.14]	0.068 [1.73]	0.764 [19.41]

* indicates Sequential mate contacts,
see page 25 for more information
regarding Sequential Mating System.

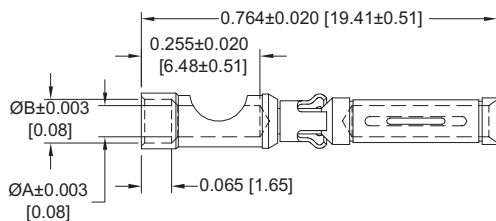
REMOVABLE CONTACT

See page 9 for
current ratings.

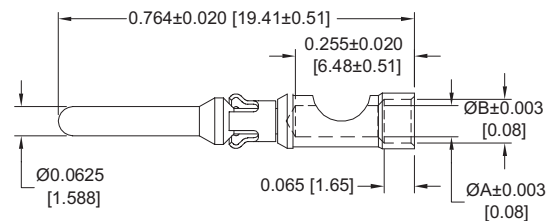
REMOVABLE SOLDER CUP CONTACT FOR USE WITH PCS SERIES CONNECTORS CONTACTS MUST BE ORDERED SEPARATELY SIZE 16

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

FEMALE CONTACT "CLOSED ENTRY" DESIGN



MALE CONTACT



PART NUMBERS	WIRE SIZE AWG/[mm ²]	ØA	ØB
FS112N2	12 [4.0]	0.098 [2.49]	N/A
FS112N2S	12 [4.0]	0.098 [2.49]	N/A
FS114N2	14 [2.5]	0.081 [2.06]	0.105 [2.67]
FS116N2	16 [1.5]	0.067 [1.70]	0.093 [2.36]
FS120N2	20 [0.5]	0.045 [1.14]	0.065 [1.65]

"S" in
part number
indicates high
conductivity
material.

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

PART NUMBERS	WIRE SIZE AWG/[mm ²]	ØA	ØB
MS112N	12 [4.0]	0.098 [2.49]	N/A
MS112NS	12 [4.0]	0.098 [2.49]	N/A
MS114N	14 [2.5]	0.081 [2.06]	0.105 [2.67]
MS116N	16 [1.5]	0.067 [1.70]	0.093 [2.36]
MS120N	20 [0.5]	0.045 [1.14]	0.065 [1.65]

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



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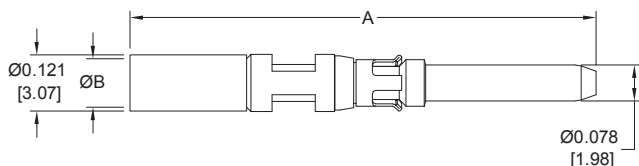
REMOVABLE SHIELDED AND CRIMP CONTACT SIZE 16 AND SIZE 12

Power
Connection
Systems

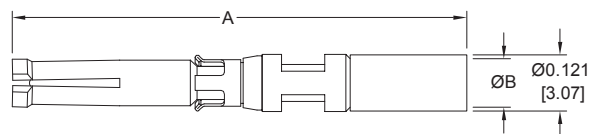
REMOVABLE CRIMP SHIELDED CONTACT FOR USE WITH PCS SERIES CONNECTORS CONTACTS MUST BE ORDERED SEPARATELY SIZE 16

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

MALE CONTACT



FEMALE CONTACT



PART NUMBERS	CABLE SIZE	CHARACT. IMPED.	A	ØB
MCS126N	RG 178 B/U	50 ohms	0.993 [25.22]	0.045 [1.14]
	RG 196 B/U	50 ohms		
MCS226N	RG 179 B/U	75 ohms	1.022 [25.96]	0.070 [1.78]
	RG 316 /U	50 ohms		

PART NUMBERS	CABLE SIZE	CHARACT. IMPED.	A	ØB
FCS126N2	RG 178 B/U	50 ohms	0.967 [24.56]	0.045 [1.14]
	RG 196 B/U	50 ohms		
FCS226N2	RG 179 B/U	75 ohms	1.022 [25.96]	0.070 [1.78]
	RG 316 /U	50 ohms		

REMOVABLE CRIMP CONTACT

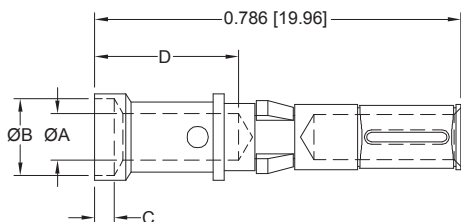
FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS
CONTACTS MUST BE ORDERED SEPARATELY

SIZE 12

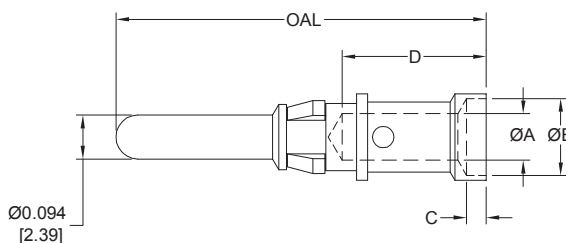
See page 33 for current ratings.

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 CONTACT



REMOVABLE SOLDER CUP CONTACT

FOR USE WITH SHROUDED AND POWER INPUT CONNECTORS

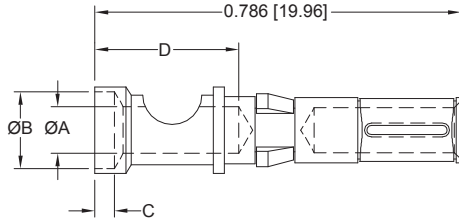
CONTACTS MUST BE ORDERED SEPARATELY

SIZE 12

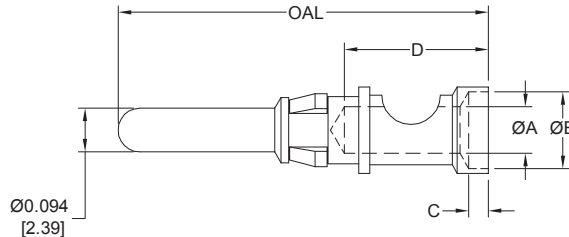
See page 33
for current ratings.

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/[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

REMOVABLE CRIMP CONTACT

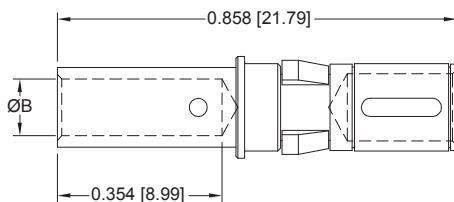
FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS

CONTACTS MUST BE ORDERED SEPARATELY

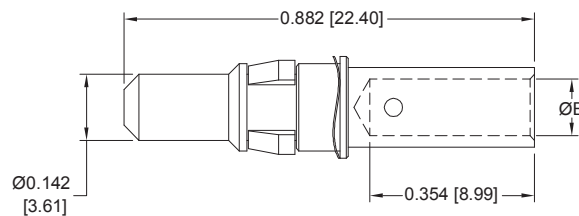
SIZE 8

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/[mm ²]	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/[mm ²]	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.

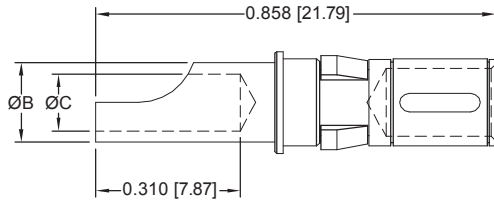


REMOVABLE HIGH VOLTAGE CONTACT SIZE 8

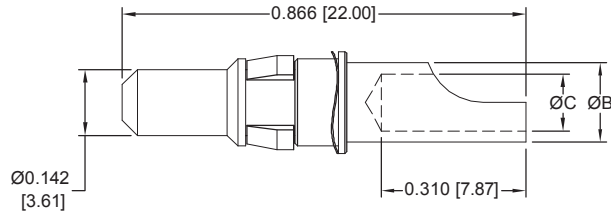
REMOVABLE SOLDER CUP CONTACT FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS CONTACTS MUST BE ORDERED SEPARATELY SIZE 8

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/[mm ²]	ØB	ØC
FS4008D	40 amperes	8 / [10.0]	0.219 [5.56]	0.188 [4.78]
FS4012D	20 amperes	12 / [4.0]	0.143 [3.63]	0.112 [2.84]
FS4016D	10 amperes	16 / [1.5]	0.100 [2.54]	0.069 [1.75]

PART NUMBER	CURRENT RATING	WIRE SIZE AWG/[mm ²]	ØB	ØC
MS4008D	40 amperes	8 / [10.0]	0.219 [5.56]	0.188 [4.78]
MS4012D	20 amperes	12 / [4.0]	0.143 [3.63]	0.112 [2.84]
MS4016D	10 amperes	16 / [1.5]	0.100 [2.54]	0.069 [1.75]

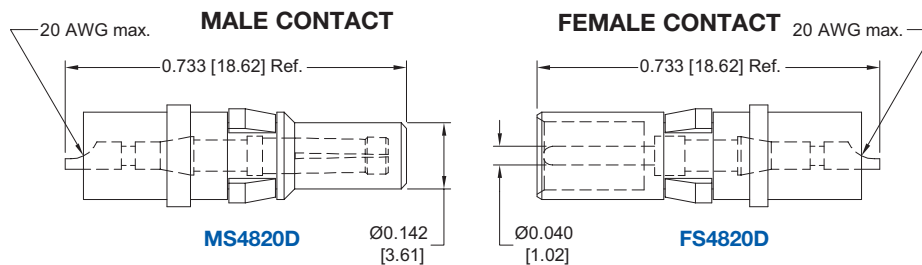
*NOTE: Female contacts feature Large Surface Area (L.S.A.) closed entry contact design which provides maximum mating surfaces between male and female contact and reduced contact resistance during operation.

REMOVABLE CONTACT

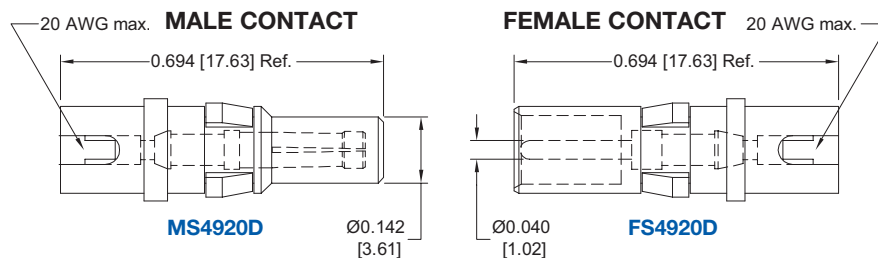
REMOVABLE HIGH VOLTAGE CONTACT FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS CONTACTS MUST BE ORDERED SEPARATELY SIZE 8

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

STRAIGHT SOLDER WIRE TERMINATION



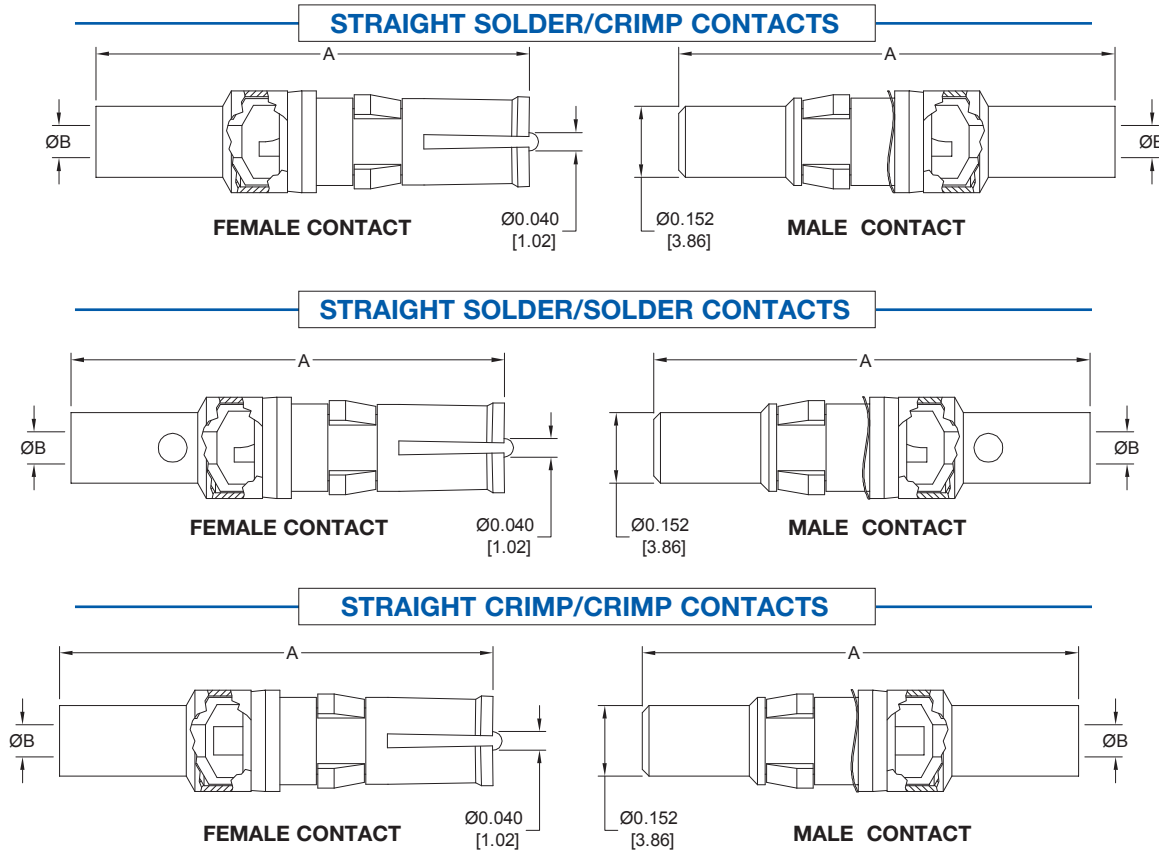
RIGHT ANGLE (90°) SOLDER WIRE TERMINATION



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



REMOVABLE SHIELDED CONTACT FOR USE WITH PCS MIXED DENSITY SERIES CONNECTORS CONTACTS MUST BE ORDERED SEPARATELY SIZE 8



REMOVABLE CONTACT

TYPE OF CONTACT	PART NUMBER		A	ØB	RG CABLE NUMBER
	MALE	FEMALE			
SOLDER/CRIMP	MC4101D	FC4101D	0.929 [23.60]	0.040 [1.02]	178 B/U 196 B/U
SOLDER/CRIMP	MC4102D	FC4102D	0.929 [23.60]	0.067 [1.70]	179 B/U 316 /U
SOLDER/CRIMP	MC4103D	FC4103D	1.037 [26.34]	0.108 [2.74]	180 B/U
SOLDER/CRIMP	MC4104D	FC4104D	1.037 [26.34]	0.120 [3.05]	58 B/U
SOLDER/SOLDER	MS4101D	FS4101D	0.929 [23.60]	0.040 [1.02]	178 B/U 196 B/U
SOLDER/SOLDER	MS4102D	FS4102D	0.929 [23.60]	0.067 [1.70]	179 B/U 316 /U
SOLDER/SOLDER	MS4103D	FS4103D	1.037 [26.34]	0.108 [2.74]	180 B/U
SOLDER/SOLDER	MS4104D	FS4104D	1.037 [26.34]	0.120 [3.05]	58 B/U
CRIMP/CRIMP	MCC4101D	FCC4101D	0.929 [23.60]	0.040 [1.02]	178 B/U 196 B/U
CRIMP/CRIMP	MCC4102D	FCC4102D	0.929 [23.60]	0.067 [1.70]	179 B/U 316 /U
CRIMP/CRIMP	MCC4103D	FCC4103D	1.037 [26.34]	0.108 [2.74]	180 B/U
CRIMP/CRIMP	MCC4104D	FCC4104D	1.037 [26.34]	0.120 [3.05]	58 B/U

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



SHIELDED CONTACTS

Two-step crimping action for signal and shielding conductors.

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