FEATURES:

- **Compatible** with existing power connectors for use in **drawer** applications
- Variety of contact sizes in a single package
- Available in cable, **right angle** and straight **board mount** versions
- Selective loading available on request
- Sequential mating options
- Outstanding **blind mating**
About Us

Founded in 1966, Positronic Industries is a vertically integrated manufacturer of high quality interconnect products. Positronic has earned the worldwide reputation as a service oriented, quick-reaction, top quality connector supplier. We are committed to maintaining this reputation by continuous implementation of our Complete Capability concept.

Complete Capability

Design & Development
- Designs new connectors and modifies existing connectors to meet industry requirements
- Continuously conducts marketing studies to identify industry needs for new products
- Ongoing interest in unique connector designs

Tooling
- Tooling support for all manufacturing areas within company
- Provides 80% of new tooling, punch press dies, molds, jigs and fixtures used at Positronic factory locations worldwide

Machining
- Automatic screw machines produce finely crafted contacts and hardware for connector bodies
- Trained technicians operate machines from Tornos, Bechler and Brown & Sharpe

Molding
- Molds all plastic connector components such as insulators, hoods, angle brackets and more
- Overmold capability available

Plating
- Applies gold and other metal finishes to connector components to any required thickness
- Plating conforms to all military specifications

Quality Assurance Lab
- Quality assurance system certified to ISO 9001
- Maintains aggressive TQM program
- Able to test to IEC, EIA, UL, MIL-DTL-24308, MIL-DTL-28748, MIL-C-39029 and MIL-C-85049 requirements

Finished Stock Inventory
- Each main factory location maintains a large inventory of connector components and accessories
- Same day shipments available on many standard connector products
- Stocking agreements available for qualified customers

Worldwide Sales & Service
- Responsive attitude toward customer needs
- Fully trained sales staff located worldwide

Unless otherwise specified, dimensional tolerances are:

1) ±0.03 mm [0.001 inches] for male contact mating diameters.
2) ±0.08 mm [0.003 inches] for contact termination diameters.
3) ±0.13 mm [0.005 inches] for all other diameters.
4) ±0.38 mm [0.015 inches] for all other dimensions.

Products described within this catalog may be protected by one or more of the following US. patents:

#4,721,472 #4,900,261 #5,255,580
#5,329,697 #6,260,268 #6,835,079
Patented in Canada, 1992 Other Patents Pending

Positronic Industries believes the data contained herein to be reliable. Since the technical information is given free of charge, the User employs such information at his own discretion and risk. Positronic Industries assumes no responsibility for results obtained or damages incurred from use of such information in whole or in part.

Positronic Industries’ FEDERAL SUPPLY CODE (Cage Code) FOR MANUFACTURERS is 28198
STANDARD TECHNICAL CHARACTERISTICS

MATERIALS AND FINISHES:
Insulator: Glass-filled polyester, UL 94V-0, blue color.
Contacts: Precision-machined copper alloy with gold flash over nickel. Solder-coated terminations optional. Other finishes available upon request.
Blind Mate Guides: Stainless steel, passivated.
Float Mount Screw: Stainless steel, passivated.

ELECTRICAL CHARACTERISTICS:
Contact Current Rating, per UL 1977:
- Size 0 Contact: 200 amperes, continuous.
- Size 12 Contact: 35 amperes, continuous.
- Size 16 Contact: 15 amperes, continuous.
- Size 20 Contact: 5 amperes.
Temperature Rise Curves per IEC 512-3, Test 5a. See next page for performance curves.
Initial Contact Resistance (in free air at rated current):
- Size 0 Contact: 0.074m ohms.
- Size 12 Contact: 0.12m ohms.
- Size 16 Contact: 0.32m ohms.
- Size 20 Contact: 1.90m ohms. Per IEC 512-2, Test 2b.
Insulator Resistance: 5 G ohms per IEC 512-2, Test 3a.
Voltage Proof:
- Size 0 Contact: 3,000 VAC
- Size 12 Contact: 3,000 VAC
- Size 16 Contact: 2,000 VAC
- Size 20 Contact: 1,700 VAC
Creepage Distances: Consult Technical Sales.
Clearance Distance: Consult Technical Sales.
Working Voltage:
- Size 0 Contact: 250 V
- Size 12 Contact: 600 V
- Size 16 Contact: 250 V
- Size 20 Contact: 250 V

MECHANICAL CHARACTERISTICS:
Blind Mating System: Blind mate guides allow for misalignment up to 4.00 mm [0.157 inch]
Polarization: Provided by connector body design.
Removable Contacts: Insert contact in rear face of insulator; release from front face of insulator. Female contacts feature “Closed Entry” design.
Removable Contact Retention in Connector Body:
- Size 0 Contact: 67N [15 lbs.] per IEC 512-8, Test 15a.
- Size 12 Contact: 67N [15 lbs.] per IEC 512-8, Test 15a.
- Size 16 Contact: 67N [15 lbs.] per IEC 512-8, Test 15a.
- Size 20 Contact: 44N [10 lbs.] per IEC 512-8, Test 15a.
Fixed Contacts: Printed board terminations, both straight and right angle. Size 12 and 16 female contacts feature “Closed Entry” design. Size 20 female contacts feature “Rugged Open Entry” design.
Fixed Contact Retention in Connector Body: 44N [10 lbs.], minimum.
Resistance to Solder Heat: 260˚C [500˚F] for 10 seconds duration per IEC 512-6, Test 12e, 25-watt soldering iron.
Sequential Contact Mating System: Three level systems featured for size 12, 16 and 20. Consult Technical Sales for application assistance with contact sequencing.
Printed Board and Panel Mounting Holes: Mounting holes provided in connector body for both printed board and panel mounting.
Float Mount Shoulder Screw: Provides up to 2.36 mm [0.093 inch] float.
Mechanical Operations: 200 couplings.

CLIMATIC CHARACTERISTICS:
Working Temperature: -55˚C to +125˚C.
NOTE:
1) These temperature rise curves were developed in free air.
SUMO STRAIGHT PRINTED BOARD MOUNT CONNECTORS

MALE CONNECTOR

Typical Part Number
SUM13M600A1

CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

FEMALE CONNECTOR

Typical Part Number
SUM13F600A1

CONTACT HOLE PATTERN

Suggest ø2.90 [0.114] holes for size 12 contact holes.
Suggest ø2.11 [0.083] holes for size 16 contact holes.
Suggest ø1.47 [0.058] holes for Size 20 contact holes.
Suggest ø3.96 [0.156] holes for connector mounting holes.
MALE CONNECTOR

Typical Part Number
SUM14M6RS0A1

Contact Terminations:
Size 12: ø2.29 [0.090]
Size 16: ø1.60 [0.063]
Size 20: ø1.02 [0.040]

CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

FEMALE CONNECTOR

Typical Part Number
SUM14F6RS0A1

Suggest ø2.90 [0.114] holes for size 12 contact holes.
Suggest ø2.11 [0.083] holes for size 16 contact holes.
Suggest ø1.47 [0.058] holes for Size 20 contact holes.
Suggest ø3.96 [0.156] holes for connector mounting holes.

CONTACT HOLE PATTERN

Note: See below for suggested printed board hole sizes.

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

Typical Part Number
SUM10M0000

**FEMALE CONNECTOR**

Typical Part Number
SUM10F0000

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

FLOAT MOUNT

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

10-32 UNF 2A THREAD OR M5 X 0.8 THREAD

PANEL CUTOUT
MAXIMUM PANEL THICKNESS 4.76 [0.188]

SUM10M0FS00 SHOWN FOR REFERENCE

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

SUMO
BLIND MATING SYSTEMS
AND
SEQUENTIAL MATING CONTACTS

SUM10M00110
SHOWN FOR REFERENCE

PANEL CUTOUT

CONTACT SIZE

<table>
<thead>
<tr>
<th>CONTACT SIZE</th>
<th>FIRST MATE</th>
<th>STANDARD</th>
<th>LAST MATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size 12</td>
<td>11.68 [0.460]</td>
<td>10.92 [0.430]</td>
<td>9.90 [0.390]</td>
</tr>
<tr>
<td>Size 16</td>
<td>12.19 [0.480]</td>
<td>8.38 [0.330]</td>
<td>7.36 [0.290]</td>
</tr>
<tr>
<td>Size 20</td>
<td>11.93 [0.470]</td>
<td>8.12 [0.320]</td>
<td>6.85 [0.270]</td>
</tr>
</tbody>
</table>
SIZE 12, 16 AND 20 REMOVABLE CRIMP CONTACTS

Contacts are rear insertion front release style

SIZE 12

SIZE 16

SIZE 20

PART NUMBER | WIRE SIZE mm² [AWG] | A | ØB | ØC | SEQUENTIAL MATE
-------------|----------------------|---|----|----|-------------------
SMC1210AN    | 5.3 [10]             | 23.46 [0.924] | N/A | 3.73 [0.147]    | FIRST
SMC1210BN    | 5.3 [10]             | 22.70 [0.894] | N/A | 3.73 [0.147]    | STANDARD
SMC1210CN    | 5.3 [10]             | 21.68 [0.854] | N/A | 3.73 [0.147]    | THIRD
SMC1212AN    | 4.0 [12]             | 23.46 [0.924] | 2.54 [0.100] | 4.19 [0.165]  | FIRST
SMC1212BN    | 4.0 [12]             | 22.70 [0.894] | 2.54 [0.100] | 4.19 [0.165]  | STANDARD
SMC1212CN    | 4.0 [12]             | 21.68 [0.854] | 2.54 [0.100] | 4.19 [0.165]  | THIRD

PART NUMBER | WIRE SIZE mm² [AWG] | A | ØB | ØC | SEQUENTIAL MATE
-------------|----------------------|---|----|----|-------------------
SMC1612AN    | 4.0 [12]             | 23.68 [0.932] | N/A | 2.49 [0.098]    | FIRST
SMC1612BN    | 4.0 [12]             | 19.87 [0.782] | N/A | 2.49 [0.098]    | STANDARD
SMC1612CN    | 4.0 [12]             | 18.85 [0.742] | N/A | 2.49 [0.098]    | THIRD
SMC1614AN    | 2.5 [14]             | 23.68 [0.932] | 2.06 [0.081] | 2.67 [0.105]  | FIRST
SMC1614BN    | 2.5 [14]             | 19.87 [0.782] | 2.06 [0.081] | 2.67 [0.105]  | STANDARD
SMC1614CN    | 2.5 [14]             | 18.85 [0.742] | 2.06 [0.081] | 2.67 [0.105]  | THIRD
SMC1616AN    | 1.5 [16]             | 23.68 [0.932] | 1.70 [0.067] | 2.36 [0.093]  | FIRST
SMC1616BN    | 1.5 [16]             | 19.87 [0.782] | 1.70 [0.067] | 2.36 [0.093]  | STANDARD
SMC1616CN    | 1.5 [16]             | 18.85 [0.742] | 1.70 [0.067] | 2.36 [0.093]  | THIRD
SMC1620AN    | 0.5 [20]             | 23.68 [0.932] | 1.14 [0.045] | 1.73 [0.068]  | FIRST
SMC1620BN    | 0.5 [20]             | 19.87 [0.782] | 1.14 [0.045] | 1.73 [0.068]  | STANDARD
SMC1620CN    | 0.5 [20]             | 18.85 [0.742] | 1.14 [0.045] | 1.73 [0.068]  | THIRD

PART NUMBER | WIRE SIZE mm² [AWG] | A | ØB | ØC | SEQUENTIAL MATE
-------------|----------------------|---|----|----|-------------------
SMC2020AN    | 0.5 [20]             | 23.93 [0.942] | 1.14 [0.045] | 1.73 [0.068]  | FIRST
SMC2020BN    | 0.5 [20]             | 20.12 [0.792] | 1.14 [0.045] | 1.73 [0.068]  | STANDARD
SMC2020CN    | 0.5 [20]             | 18.80 [0.740] | 1.14 [0.045] | 1.73 [0.068]  | THIRD

MATERIALS:
Contacts: Copper Alloy.
Retention Clips: Beryllium copper.
FINISH:
Gold flash over nickel plate.

DIMENSIONS ARE IN MILLIMETERS [INCHES].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
SUMO FEMALE REMOVABLE CONTACTS

SIZE 12, 16 AND 20 REMOVABLE CRIMP CONTACTS
Contacts are rear insertion front release style

**SIZE 12**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>WIRE SIZE mm² [AWG]</th>
<th>øA</th>
<th>øB</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFC1210N2</td>
<td>5.3 [10]</td>
<td>3.73 [0.147]</td>
<td>N/A</td>
</tr>
<tr>
<td>SFC1212N2</td>
<td>4.0 [12]</td>
<td>2.54 [0.100]</td>
<td>4.19 [0.165]</td>
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**SIZE 16**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>WIRE SIZE mm² [AWG]</th>
<th>øA</th>
<th>øB</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFC1612N2</td>
<td>4.0 [12]</td>
<td>N/A</td>
<td>2.49 [0.098]</td>
</tr>
<tr>
<td>SFC1614N2</td>
<td>2.5 [14]</td>
<td>2.06 [0.081]</td>
<td>2.64 [0.104]</td>
</tr>
<tr>
<td>SFC1616N2</td>
<td>1.5 [16]</td>
<td>1.70 [0.067]</td>
<td>2.36 [0.093]</td>
</tr>
<tr>
<td>SFC1620N2</td>
<td>0.5 [20]</td>
<td>1.14 [0.045]</td>
<td>1.73 [0.068]</td>
</tr>
</tbody>
</table>

**SIZE 20**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>WIRE SIZE mm² [AWG]</th>
<th>øA</th>
<th>øB</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFC2020N2</td>
<td>0.5 [20]</td>
<td>1.14 [0.045]</td>
<td>1.73 [0.068]</td>
</tr>
</tbody>
</table>

**MATERIALS:**
- Contacts: Copper Alloy.
- Retention Clips: Beryllium copper.

**FINISH:**
Gold flash over nickel plate.

DIMENSIONS ARE IN MILLIMETERS [INCHES].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
**SIZE 1/0 REMOVABLE CRIMP CONTACTS**

**MALE CONTACTS**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>&quot;T&quot; Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMET10S</td>
<td>1/4-20 UNC 2A</td>
</tr>
<tr>
<td>SMET10M</td>
<td>M6 X 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>&quot;T&quot; Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFSIT10S</td>
<td>1/4-20 UNC 2A</td>
</tr>
<tr>
<td>SFSIT10M</td>
<td>M6 X 1</td>
</tr>
</tbody>
</table>

**FEMALE CONTACTS**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>&quot;T&quot; Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFET10S</td>
<td>1/4-20 UNC 2A</td>
</tr>
<tr>
<td>SFET10M</td>
<td>M6 X 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>&quot;T&quot; Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFSIT10S</td>
<td>1/4-20 UNC 2A</td>
</tr>
<tr>
<td>SFSIT10M</td>
<td>M6 X 1</td>
</tr>
</tbody>
</table>

**MATERIALS:**
- Contacts: Copper Alloy.
- Retention Clips: Beryllium copper.

**FINISH:**
Gold flash over nickel plate.

DIMENSIONS ARE IN MILLIMETERS [INCHES].
ALL DIMENSIONS ARE SUBJECT TO CHANGE.
CRIMPING INFORMATION FOR SUMO SERIES CRIMP CONTACTS

Step 1: Strip wire to indicated length.

- Correctly Stripped Wire:
- Strands damaged or removed by stripping tool.
- Insulation cut incorrectly.
- Strands untwisted.
- Insulation

- Stripped Wire

- "L"

- Stranded Wire

Examples of Stripping Faults:

- Strands overtwisted.
- Particles of insulation left on the stripped part of the wire.
- Wire insulation damaged.

- Take care not to:
  - Damage or remove strands.
  - Untwist or overtwist strands.
  - Leave insulation particles on strands.
  - Damage insulation.

<table>
<thead>
<tr>
<th>CONTACT SIZE</th>
<th>±0.51 [0.020]</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>7.37 [0.290]</td>
</tr>
<tr>
<td>16</td>
<td>5.84 [0.230]</td>
</tr>
<tr>
<td>20</td>
<td>5.84 [0.230]</td>
</tr>
</tbody>
</table>

Step 2: Crimp wire to contact.

For Hand Crimp Tool:
- Place contact into crimping tool.
- Insert wire into contact.
- Center contact by slowly closing crimping tool until crimp indenters make contact with crimp barrel.
- Complete the cycle of the crimping tool in one smooth motion.
- Remove the crimped contact.

For Automatic Pneumatic Crimp Tool:
- Insert wire into the contact, positioned in the crimp tool by the plastic carrier.
- Depress the activating device of the crimping tool to start crimping cycle.
- Remove the crimped contact.
CRIMPING INFORMATION FOR SUMO SERIES CRIMP CONTACTS

Step 3: Inspect crimp.

For All Tools:
- Strands to be visible through the inspection hole.
- Strands not to be visible beyond the insulation support.
- Crimped contact to meet recommended conductor tensile force shown in chart (below, left).
- Check for peeled gold and bent contact.

Correctly Crimped Contact

Cross-section of Correctly Crimped Contact

Examples of Crimping Faults

WIRE SIZE | AXIAL LOAD
---|---
4.0 mm² [12 AWG] | 489N [110 lbs.]
2.5 mm² [14 AWG] | 311N [70 lbs.]
1.5 mm² [16 AWG] | 222N [50 lbs.]
1.0 mm² [18 AWG] | 125N [28 lbs.]
0.5 mm² [20 AWG] | 89N [20 lbs.]
0.3 mm² [22 AWG] | 53N [12 lbs.]
0.25 mm² [24 AWG] | 36N [8 lbs.]
0.12 mm² [26 AWG] | 22N [5 lbs.]

<table>
<thead>
<tr>
<th>TOOL DESCRIPTION</th>
<th>SIZE 12 CONTACT</th>
<th>SIZE 16 CONTACT</th>
<th>SIZE 20 CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Crimp Tool</td>
<td>9501 with 9502-19-0-0 positioner</td>
<td>9501 with 9502-17-0-0 positioner for Male Contacts</td>
<td>9507 with 9502-21-0-0 positioner for Male Contacts</td>
</tr>
<tr>
<td>Contact Removal Tool</td>
<td>2711-0-0-0</td>
<td>9081-6-0-0</td>
<td>9081-5-0-0</td>
</tr>
</tbody>
</table>
# SUMO ORDERING INFORMATION

## ORDERING INFORMATION - CODE NUMBERING SYSTEM

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

### STEP 1 - BASIC SERIES

<table>
<thead>
<tr>
<th>SUM</th>
<th>13</th>
<th>M</th>
<th>6</th>
<th>FS</th>
<th>22</th>
<th>A1</th>
<th>/AA</th>
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</thead>
</table>

### STEP 2 - CONNECTOR VARIANTS

<p>| | | | | | | | |</p>
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>10</td>
<td>52W8</td>
<td>Crimp connector</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>13</td>
<td>52W8</td>
<td>Solder, Straight Printed Board Mount</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>52W8</td>
<td>Solder, Right Angle Printed Board Mount</td>
<td></td>
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</tbody>
</table>

### STEP 3 - CONNECTOR GENDER

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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Male Insulator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Female Insulator</td>
<td></td>
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### STEP 4 - CONTACT TERMINATION TYPE

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>No size 0 contacts, ordered separately</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>Size 0 contact with 1/4-20 UNC 2A External Threads</td>
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<tr>
<td>7</td>
<td>Size 0 contact with M6 x 1 External Threads</td>
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<tr>
<td>8</td>
<td>Size 0 contact with 1/4-20 UNC 2A Internal Threads</td>
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<tr>
<td>9</td>
<td>Size 0 contact with M6 x 1 Internal Threads</td>
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<tr>
<td>81</td>
<td>Size 0 contact with 1/4-20 UNC 2A Internal Threads</td>
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</table>

### STEP 5 - MOUNTING STYLE

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
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<tr>
<td>FS</td>
<td>Float Mount Shoulder Screw with 10-32 UNF 2A Threads</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>FM</td>
<td>Float Mount Shoulder Screw with M5 x 0.8 Threads</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>RS</td>
<td>Inserts with 6-32 UNC 2B Threads, for Right Angle Mounting</td>
<td></td>
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<td>RM</td>
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### STEP 6 - BLIND MATE GUIDES

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<td>6-32 UNC 2A threaded guides located at positions A and D</td>
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<td>6-32 UNC threaded guides located at positions B and C</td>
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### NOTE: Once you have made a connector selection, contact Technical Sales if you would like to receive a drawing in DXF, PDF format or a 3-dimensional IGES file.

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**DIMENSIONS ARE IN MILLIMETERS (INCHES). ALL DIMENSIONS ARE SUBJECT TO CHANGE.**
**Positronic Products**

**Power**
- **Contact Sizes:** 0, 8, 12, 16, 20 and 22
- **Current Ratings:** To 150 amperes
- **Terminations:** Crimp, wire solder, straight solder, right angle solder, straight press-fit and right angle press-fit
- **Configurations:** Multiple variants in a variety of package sizes
- **Compliance:** PICMG 2.11, PICMG 3.0, VITA 41

**Features:**
- Hot swap capability
- AC/DC operation in a single connector
- Signal contacts for hardware management
- Blind mating
- Sequential mating
- Large Surface Area Contact Mating System
- Wide variety of accessories
- Customer specified contact arrangements

**D-Subminiature**
- **Contact Sizes:** 8, 20 and 22
- **Current Ratings:** To 40 amperes nominal
- **Terminations:** Crimp, wire solder, straight solder, right angle solder and straight press-fit
- **Configurations:** Multiple variants in both standard and high densities
- **Qualifications:** MIL-DTL-24308, Goddard Space Flight 311P, MIL-C-39029, IP65, IP67

**Features:**
- Three performance levels available: professional quality, military quality and space-flight quality provide multiple performance to cost choices
- Options include thermocouple contacts, filtered, environmentally sealed and dual port package including mixed density
- Broad selection of accessories

**Rectangular**
- **Contact Sizes:** 16, 20 and 22
- **Current Ratings:** To 13 amperes
- **Terminations:** Crimp, wire solder, straight solder and right angle solder
- **Configurations:** Multiple variants in both standard and high densities
- **Qualifications:** MIL-DTL-28748, MIL-C-39029, CCITT V.35

**Features:**
- Two performance levels available: industrial quality and military quality provide two performance to cost choices
- Large Surface Area Contact Mating System
- A wide variety of accessories
- Broad selection of contact variants and package sizes

**Circular**
- **Contact Sizes:** 12, 16, 20 and 22
- **Current Ratings:** To 25 amperes nominal
- **Terminations:** Crimp, wire solder, straight solder and right angle solder
- **Configurations:** Multiple variants in two package sizes
- **Qualifications:** Environmental protection to IP67

**Features:**
- Non-corrodible / lightweight composite construction
- EMI/RFI shielded versions
- Thermocouple contacts
- Environmentally sealed versions
- Rear insertion/front release of removable contacts
- Two level sequential mating
- Overmolding available on full assemblies

**Cable**
- **Contact Sizes:** 8, 12, 16, 20 and 22
- **Current Ratings:** To 40 amperes nominal
- **Terminations:** Feed through is standard; flying leads and board mount available upon request
- **Configurations:** See D-Subminiature and Circular Configurations above
- **Qualifications:** Space-D32

**Features:**
- Intended for use as an electrical feedthrough in high vacuum applications
- Leakage rate: 1 x 10^-9 mbar.l/s
- Signal, power, coax and high voltage versions available
- Connectors can be mounted on flange assembly per customer specification

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For more information, visit [www.connectpositronic.com](http://www.connectpositronic.com) or call your nearest Positronic sales office as given on the back of this catalog.
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