PWC Series

Electrical Connectors with Quick-disconnect, double-start Threads

MIL-C-26482, Series I Commercial & Military QPL’d
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Array Connector Corporation’s PWC Connectors offer the answer to your requirements for the most critical electrical circuits. PWC Connectors accommodate almost 3 times as many circuits, size for size, as comparable MS connectors (MIL-C-26482). PWC Connectors incorporate a quick-disconnect, double-start thread main coupling.

Complete mechanical assistance in both engaging and disengaging. Single keyway and key polarization represents maximum simplicity in a design field proven over years of service.

- Gold plated pin and socket contacts made from high-grade copper alloy
- Closed-entry, probe-proof socket contacts
- Resilient inserts-performance proved in thousands of applications
- Quality-machined components, available in a variety of finishes to meet your application specific requirements

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Wall-Mounting Receptacle
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Cable-To-Cable Receptacle
Page 10

PWC06

PWC02
Box-Mounting Receptacle
Page 11

PWC07
Jam Nut Receptacle pages 13 and 14
Product Data

**Electrical**

<table>
<thead>
<tr>
<th>Contact Termination</th>
<th>(PWC) Solder Pot or PC Tail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Contacts</td>
<td>2 to 55</td>
</tr>
<tr>
<td>Wire Size, AWG</td>
<td>12 to 24</td>
</tr>
<tr>
<td>Wire Range Accommodations</td>
<td>Insulation 0.0. Limits</td>
</tr>
<tr>
<td>Contact Size</td>
<td>AWG Wire Size</td>
</tr>
<tr>
<td>20</td>
<td>24, 22 and 20</td>
</tr>
<tr>
<td>16</td>
<td>20, 18 and 16</td>
</tr>
<tr>
<td>12</td>
<td>14 and 12</td>
</tr>
<tr>
<td>Contact Size</td>
<td>Rated Amps</td>
</tr>
<tr>
<td>20</td>
<td>7.5</td>
</tr>
<tr>
<td>16</td>
<td>13.0</td>
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<tr>
<td>12</td>
<td>23.0</td>
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**Contact Rating**

<table>
<thead>
<tr>
<th>Voltage Rating</th>
<th>Service Rating</th>
<th>Test Voltage</th>
<th>AC (rms)</th>
<th>DC</th>
<th>Max. Working Voltage</th>
<th>AC (rms)</th>
<th>DC</th>
</tr>
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<tbody>
<tr>
<td>Sea Level</td>
<td>1</td>
<td>1500</td>
<td>2100</td>
<td>600</td>
<td>850</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2300</td>
<td>3200</td>
<td>1000</td>
<td>1400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70,000 ft.</td>
<td>1</td>
<td>375</td>
<td>535</td>
<td>300</td>
<td>510</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>2</td>
<td>500</td>
<td>770</td>
<td>450</td>
<td>740</td>
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<td></td>
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</table>

**Standard Material and Finishes**

<table>
<thead>
<tr>
<th>Shell (Mil-Std)</th>
<th>Aluminum alloy, conductive yellow chromate over cadmium finish per QQ-P-416. (Consult Factory for Commercial options.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulator</td>
<td>Synthetic rubber</td>
</tr>
<tr>
<td>Grommet and Seal</td>
<td>Synthetic rubber</td>
</tr>
<tr>
<td>Contacts</td>
<td>Copper alloy, gold plate per MIL-G-45204 type II</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-55°C to +125°C</td>
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**Mechanical**

<table>
<thead>
<tr>
<th>Shell Styles</th>
<th>00 - Wall mounting receptacle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01 - Cable in line receptacle</td>
</tr>
<tr>
<td></td>
<td>02 - Box mounting receptacle</td>
</tr>
<tr>
<td></td>
<td>06 - Straight plug</td>
</tr>
<tr>
<td></td>
<td>07 - Jam .nut receptacle</td>
</tr>
<tr>
<td>Shell Size</td>
<td>8 thru 24</td>
</tr>
<tr>
<td>Polarization/Coupling</td>
<td>Thread</td>
</tr>
<tr>
<td></td>
<td>A - General duty</td>
</tr>
<tr>
<td></td>
<td>B - General duty with strain relief</td>
</tr>
<tr>
<td></td>
<td>C - Pressurized</td>
</tr>
<tr>
<td></td>
<td>E - Grommet seal</td>
</tr>
<tr>
<td></td>
<td>F - Grommet seal with strain relief</td>
</tr>
<tr>
<td></td>
<td>J - Straight backshell with O-ring seal</td>
</tr>
<tr>
<td></td>
<td>JF - Same as MIL-C-26482 J available in commercial PWC only</td>
</tr>
<tr>
<td></td>
<td>N - No back end, no termination</td>
</tr>
<tr>
<td></td>
<td>P -Potied</td>
</tr>
</tbody>
</table>

Array Connector Corporation produces high quality products. These products are intended to be used in accordance with the specifications described in this catalog. Any use or application that deviates from the stated operating specifications is not recommended and may be unsafe. A limited warranty is applicable. Except for obligations assumed by Array Connector Corporation under warranty, Array will not be liable for any loss, damage, repairs, incidental or consequential damages of any kind, whether or not based upon expressed or implied warranty, contract, negligence, or liability arising from the application or manufacture or repair of these products. This catalog is not a contractual offering; it is for informational purposes only.
Nomenclature Guide

Example

<table>
<thead>
<tr>
<th>SERIES PREFIX</th>
<th>SHELL STYLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWC = ARRAY</td>
<td>00 = wall mount receptacle</td>
</tr>
<tr>
<td></td>
<td>01 = cable to cable receptacle</td>
</tr>
<tr>
<td></td>
<td>02 = box mount receptacle</td>
</tr>
<tr>
<td></td>
<td>06 = straight plug</td>
</tr>
<tr>
<td></td>
<td>07 = jam nut mount receptacle</td>
</tr>
<tr>
<td></td>
<td>08 = 90° plug</td>
</tr>
<tr>
<td>SERVICE TYPE (Class)</td>
<td></td>
</tr>
<tr>
<td>A = general duty</td>
<td></td>
</tr>
<tr>
<td>B = general duty with strain relief</td>
<td></td>
</tr>
<tr>
<td>C = pressurized</td>
<td></td>
</tr>
<tr>
<td>E = grommet seal</td>
<td></td>
</tr>
<tr>
<td>F = same as E with strain relief</td>
<td></td>
</tr>
<tr>
<td>J = straight back shell with O’ ring seal</td>
<td></td>
</tr>
<tr>
<td>JF = same as J with strain relief</td>
<td></td>
</tr>
<tr>
<td>P = potting shell</td>
<td></td>
</tr>
<tr>
<td>N = no back end, no termination hardware</td>
<td></td>
</tr>
<tr>
<td>SHELL SIZE 8 thru 22 available</td>
<td></td>
</tr>
</tbody>
</table>

Example

<table>
<thead>
<tr>
<th>Example</th>
<th>PWC</th>
<th>01</th>
<th>06</th>
<th>F</th>
<th>E</th>
<th>22</th>
<th>-</th>
<th>55</th>
<th>C</th>
<th>P</th>
<th>P</th>
<th>Y</th>
<th>'A612</th>
</tr>
</thead>
</table>

MODIFICATION CODES

- A602 = Black Anodize Plating
- A610 = Aluminate Plating
- A612 = Electroless Nickel Plating
- A617 = Tin Plating
- F602 = Clinch Nuts
- M901 = Stainless Steel Construction

*For modification codes not listed, consult factory.

POLARIZATION

(See Chart, page 6)

CONTACT TYPE

- P = pins
- S = sockets

CONTACT ARRANGEMENT

(See pages 4 and 5)

Cross Reference

<table>
<thead>
<tr>
<th>ARRAY</th>
<th>BENDIX</th>
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<tbody>
<tr>
<td>PWC00A</td>
<td>PC00A</td>
</tr>
<tr>
<td>PWC00B</td>
<td>PC00A**(SR)</td>
</tr>
<tr>
<td>PWC00E</td>
<td>PC00E</td>
</tr>
<tr>
<td>PWC00F</td>
<td>PC00E**(SR)</td>
</tr>
<tr>
<td>PWC00J</td>
<td>PC00W</td>
</tr>
<tr>
<td>PWC00JF</td>
<td>-</td>
</tr>
<tr>
<td>PWC00P</td>
<td>PC00P</td>
</tr>
<tr>
<td>PWC01A</td>
<td>PC01A</td>
</tr>
<tr>
<td>PWC01B</td>
<td>PC01A**(SR)</td>
</tr>
<tr>
<td>PWC01E</td>
<td>PC01E</td>
</tr>
<tr>
<td>PWC01F</td>
<td>PC01E**(SR)</td>
</tr>
<tr>
<td>PWC01J</td>
<td>PC01W</td>
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<tr>
<td>PWC01JF</td>
<td>-</td>
</tr>
<tr>
<td>PWC02A</td>
<td>PC02A</td>
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</table>

<table>
<thead>
<tr>
<th>ARRAY</th>
<th>BENDIX</th>
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<tbody>
<tr>
<td>PWC02E</td>
<td>PC02E</td>
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<tr>
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<td>PC02A</td>
</tr>
<tr>
<td>PWC02C</td>
<td>PC02C</td>
</tr>
<tr>
<td>PWC02E</td>
<td>PC02E</td>
</tr>
<tr>
<td>PWC02F</td>
<td>PC02F**(SR)</td>
</tr>
<tr>
<td>PWC02E</td>
<td>PC02E</td>
</tr>
</tbody>
</table>
Contact Arrangement (Engaging Face of Pin Insert)

(For contact arrangements not shown, contact factory)

08
2 No. 20 Contacts
3 No. 20 Contacts
3 No. 20 Contacts
4 No. 20 Contacts

10
6 No. 20 Contacts
6 No. 20 Contacts
7 No. 20 Contacts

12
3 No. 16 Contacts
8 No. 20 Contacts
10 No. 20 Contacts
14 No. 20 Contacts

14
5 No. 16 Contacts
4 No. 20 Contacts
4 No. 12 Contacts
4 No. 16 Contacts

16
8 No. 16 Contacts
1 No. 16 Contact
22 No. 20 Contacts
26 No. 20 Contacts
Contact Arrangement (Engaging Face of Pin Insert)

** Commercial arrangement.
- Available with solder or straight PC contacts.
- MIL-C-26482 Series 1 Contact arrangements, per MIL-STD-1669.
- Consult with factory.

Consult Array factory for shell size 24 versions.
Polarization

The diagrams indicate alternate insert position. The five positions (W, X, Y, Z and Normal) differ in degree of rotation for various size and layouts. The exact angle of rotation for the combinations are listed in the table below. Use letters W, X, Y, Z to specify alternate polarizations. For normal polarization, no indication is required.

### Table of Polarization Angles

<table>
<thead>
<tr>
<th>Shell Size</th>
<th>Layout</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W</td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>58°</td>
<td>122°</td>
</tr>
<tr>
<td>3</td>
<td>60°</td>
<td>210°</td>
</tr>
<tr>
<td>4</td>
<td>45°</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>90°</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>90°</td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>90°</td>
<td>180°</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>90°</td>
<td>112°</td>
</tr>
<tr>
<td>10</td>
<td>60°</td>
<td>155°</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>40°</td>
<td>90°</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>43°</td>
<td>90°</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>17°</td>
<td>110°</td>
</tr>
<tr>
<td>18</td>
<td>15°</td>
<td>90°</td>
</tr>
<tr>
<td>19</td>
<td>30°</td>
<td>165°</td>
</tr>
<tr>
<td>22</td>
<td>45°</td>
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</tr>
</tbody>
</table>

### Table of Polarization Angles

<table>
<thead>
<tr>
<th>Shell Size</th>
<th>Layout</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W</td>
<td>X</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>54°</td>
<td>152°</td>
</tr>
<tr>
<td>23</td>
<td>158°</td>
<td>270°</td>
</tr>
<tr>
<td>26</td>
<td>60°</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>62°</td>
<td>119°</td>
</tr>
<tr>
<td>32</td>
<td>85°</td>
<td>138°</td>
</tr>
<tr>
<td>16</td>
<td>238°</td>
<td>318°</td>
</tr>
<tr>
<td>24</td>
<td>70°</td>
<td>145°</td>
</tr>
<tr>
<td>27</td>
<td>72°</td>
<td>144°</td>
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<tr>
<td>39</td>
<td>63°</td>
<td>144°</td>
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<td>41</td>
<td>45°</td>
<td>126°</td>
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<tr>
<td>21</td>
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<td>41</td>
<td>39°</td>
<td>135°</td>
</tr>
<tr>
<td>55</td>
<td>30°</td>
<td>142°</td>
</tr>
</tbody>
</table>

**NOTE:** For polarization data for other contact arrangements, consult factory.
Panel Mounting Data

Wall & Box Mounting
Receptacle 00, 02

Square flange PWC receptacles are normally front panel mounted, using dimensions indicated. Hole location “R” is true position and is located within .005 dia. of (TP).

<table>
<thead>
<tr>
<th>SHELL SIZE</th>
<th>PW00</th>
<th>PW02</th>
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<tbody>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
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<td></td>
</tr>
<tr>
<td>14</td>
<td>0.087</td>
<td>0.087</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.212</td>
<td>0.212</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All dimensions relate to distance in front of flange required for proper mating.

Series PW Panel Cutout Dimensions

Jam Nut Receptacle 07

PWC series jam nut receptacle mounts in a round hole and can be pinned to prevent rotation.

<table>
<thead>
<tr>
<th>SHELL SIZE</th>
<th>INCHES</th>
<th>MILLIMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>.479</td>
<td>12.17</td>
</tr>
<tr>
<td>10</td>
<td>.603</td>
<td>15.32</td>
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<tr>
<td>12</td>
<td>.730</td>
<td>18.54</td>
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<tr>
<td>14</td>
<td>.855</td>
<td>21.72</td>
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<td>.979</td>
<td>24.87</td>
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<tr>
<td>18</td>
<td>1.103</td>
<td>28.02</td>
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<td>20</td>
<td>1.223</td>
<td>32.56</td>
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<tr>
<td>22</td>
<td>1.350</td>
<td>33.78</td>
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</table>

<table>
<thead>
<tr>
<th>SHELL SIZE</th>
<th>INCHES</th>
<th>MILLIMETERS</th>
</tr>
</thead>
<tbody>
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<td>.331</td>
<td>8.41</td>
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<tr>
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<td>.375</td>
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<td>.442</td>
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<td>.486</td>
<td>12.34</td>
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<td>13.46</td>
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<td>18</td>
<td>.573</td>
<td>14.55</td>
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<tr>
<td>20</td>
<td>.641</td>
<td>16.28</td>
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<tr>
<td>22</td>
<td>.685</td>
<td>17.40</td>
</tr>
</tbody>
</table>

Max Panel & Screw Heads

Note: All dimensions relate to distance in front of flange required for proper mating.

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cinch.com
# Printed Circuit Termination

## PW02 - Shell Dimensions

<table>
<thead>
<tr>
<th>SHELL SIZE</th>
<th>C±.016</th>
<th>D+ .005 - .015</th>
<th>Customer to Specify</th>
<th>G± .001</th>
<th>L</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>0.062</td>
<td>0.725</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.062</td>
<td>0.725</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>0.062</td>
<td>0.725</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0.062</td>
<td>0.725</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>16</td>
<td>0.062</td>
<td>0.725</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>0.062</td>
<td>0.725</td>
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<td></td>
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<td>0.906</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>0.094</td>
<td>0.906</td>
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<td></td>
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## PW07 - Shell Dimensions

<table>
<thead>
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Array Connector Corporation stocks a wide range of contacts for printed circuit board mounting in a variety of length and diameter. The PC types PW02 and PW07 (with printed circuit termination) mate with all PWC plugs. They are competitively priced with the solder version, and a substantial savings can be realized when terminated by wave or reflow soldering.

If you require special plating (other than cadmium) or other modifications (i.e., clinch nuts), please advise requirements.

Array can also supply these connectors with custom flex circuitry attached. Please discuss your requirements with your local sales representative.

**Note:** to define PC tail length(s), specify either “L” or “M” and “G” dimensions.

### Recommended PC Tail Diameter “G”

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<td>20 gauge</td>
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Other dimensions available. Consult with factory.

Combinations of different PC tail lengths can be provided.
### Series PWCOO Wall Mount Receptacle

#### RECEPTACLE FRONT VIEW

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**Note:** L = Total connector length including cable accessory.

#### SHELL SIZE

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<th>CLASS E</th>
<th>CLASS P</th>
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<td>2.071</td>
</tr>
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</table>

**Note:**

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### Series IPWC01 Cable-to-Cable Receptacle

#### Note:

- **L** = Total connector length including cable accessory.

![diagram](image)

**Diagram Explanation:**
- **Class N:** Typically used for general electrical applications.
- **Class E:** Designed for high-temperature resistance.
- **Class F or B:** Suitable for environments requiring enhanced flexibility.
- **Class A:** Commonly used in industrial settings.
- **Commercial JF MIL Class J:** Specialized for military applications.
- **Commercial Class J:** Enhanced durability.
- **Class P:** Ideal for power distribution systems.

#### Table: Shell Sizes and Dimensions

<table>
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<tr>
<th>Shell Size</th>
<th>Plug Front View</th>
<th>Receptacle Side View</th>
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**References:**
- Cinch Connectors - Connectivity Solutions
- MIL-DTL-26482, Mil-Spec Connectors

---

**Technical Notes:**
- Dimensions are in millimeters (mm) and inches (in).
- All dimensions are subject to manufacturing tolerances.
Series PWC02 Box Mount Receptacle

For PC tail configurations, see page 15.

Dimensions in Inches

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<th>M+ .010/-.000</th>
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## Series IPWC06 Straight Plug

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**Series PWC07 AJC Jam Nut Receptacle**

For PC tail configurations, see page 15.

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Series PWC07E/P/F or B Jam Nut Receptacle

Note: front view dimension see PWC07A/C

Common Dimension

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<tr>
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Dust Cap
Receptacle Protection Cap PWCOODC

**Add shell size to complete order number.**

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Plug Protection Cap PWC06DC

**Add shell size to complete order number.**

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<td>Rugged Acme Thread Connectors</td>
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Proven Excellence

In operation since 1917, Cinch supplies high quality, high performance connectors and cables globally to the Aerospace, Military/Defense, Commercial Transportation, Oil & Gas, High End Computer, and other markets. We provide custom solutions with our creative, hands on engineering and end to end approach.

Our diverse product offerings include: connectors, enclosures and cable assemblies utilizing multiple contact technologies including copper and fiber optics. Our product engineering and development activities employ cutting edge technologies for design and modeling, and our various technologies and expertise enable us to deliver custom solutions and products for our strategic partnerships. We also serve a broad range of commercial markets, largely through our highly efficient distribution network.

We aim to exceed our customer’s expectations, and to continually provide innovative solutions to the rapidly changing needs of the markets, and customers, we serve.