75 Ω Miniature Coaxial Connectors with Push-Pull Lock
PL76 Series

Features

1. Miniature 75 Ω Push-Pull Lock
   Features Hirose’s unique positive locking system

2. Top-Touch Mechanism
   The top touch mechanism imparts a high degree of precision for reliably matching each side of the connection.

3. 40% downsized compared with BNC type connectors
   The diameter is reduced by approx 40%. (See Fig. 1.)

4. Suited for FA cameras using a 75 Ω design
   Accepts a 75 Ω impedance, 3.2 GHz bandwidth and 1 A of current

5. RoHS Compliant
   All materials and substances used to produce these parts fully comply with RoHS standards.

Mating Diagram

Plug Side

- Straight Plug
  PL76-P-2.5CV

Receptacle Side

- Bulkhead Receptacle
  PL76-BR-PC
  PL76-BR-PC-1

Adapter Side

- PL76-HFL Conversion Adapter
  PL76J-H.FLJ-BPA
  PL76J-H.FLJ-BPA-1

In cases where the application will demand a high level of reliability, such as automotive, please contact a company representative for further information.

Rated at 75 Ω and 3.2 GHz

Size Comparison with BNC

Typical BNC connector

PL76

42% reduction in required mounting area

44% height reduction

Mating Operation

No tool is required to mate or un-mate this connector. The outer shell has a smooth function and creates an easy push-pull operation.

Positive Lock

The positive lock will not release unless the outer shell is dis-engaged.

The lock stays engaged even when accidental force is applied to the cable.
### Product Specifications

<table>
<thead>
<tr>
<th>Items</th>
<th>Specifications</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ratings</strong></td>
<td>Characteristic impedance : 75 Ω</td>
<td>Operating Temp. Range: -30°C to +85°C</td>
</tr>
<tr>
<td></td>
<td>Frequency Rating : DC to 3.2 GHz</td>
<td>Operating Humid. Range: 95% or less</td>
</tr>
<tr>
<td></td>
<td>Current Rating : 1 A</td>
<td></td>
</tr>
<tr>
<td><strong>1. Contact resistance</strong></td>
<td>Center: 15 mΩ Max.</td>
<td>Measured at 100 mA or less</td>
</tr>
<tr>
<td></td>
<td>Outer: 4 mΩ Max.</td>
<td></td>
</tr>
<tr>
<td><strong>2. Insulation resistance</strong></td>
<td>Minimum of 1,000 MΩ</td>
<td>Measured at DC 250 V</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Withstand voltage</strong></td>
<td>No flashover or breakdown</td>
<td>Apply AC 500 V for 1 minute</td>
</tr>
<tr>
<td><strong>4. Voltage standing wave ratio(VSWR)</strong></td>
<td>Maximum of 1.3</td>
<td>DC to 3.2 GHz</td>
</tr>
<tr>
<td><strong>5. Durability</strong></td>
<td>Contact resistance Center: 19 mΩ Max.</td>
<td>500 mating cycles</td>
</tr>
<tr>
<td></td>
<td>Outer: 10 mΩ or less</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No breakage, cracks or loose parts</td>
<td></td>
</tr>
<tr>
<td><strong>6. Vibration resistance</strong></td>
<td>No electric outage of 1µs or more</td>
<td>10 cycles in each of the 3 axes at a</td>
</tr>
<tr>
<td></td>
<td>No magnetic field, cracks or loose parts</td>
<td>frequency of 10-500 Hz, half amplitude 0.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mm and acceleration 196 m/s²</td>
</tr>
<tr>
<td><strong>7. Shock resistance</strong></td>
<td>No electric outage of 1µs or more</td>
<td>Acceleration 490 m/s²; duration 11 ms,</td>
</tr>
<tr>
<td></td>
<td>No breakage, cracks or loose parts</td>
<td>half-sine wave, 3 times each for 3 axial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>directions</td>
</tr>
<tr>
<td><strong>8. Moisture-resistance</strong></td>
<td>Insulation resistance: Minimum of 10 MΩ (high humidity)</td>
<td>Temperature -10 to 65°C, humidity 90 to 96%</td>
</tr>
<tr>
<td>Temperature-humidity cycles</td>
<td>Insulation resistance: Minimum of 100 MΩ (low humidity)</td>
<td>10 cycles (240 hours)</td>
</tr>
<tr>
<td></td>
<td>No breakage, cracks or loose parts</td>
<td></td>
</tr>
<tr>
<td><strong>9. Temperature cycles</strong></td>
<td>No breakage, cracks or loose parts</td>
<td>Temperature: -30°C ← → +85°C ← → -C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time: 30 min ← 3 min ← 30 min ← 3 min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 cycles</td>
</tr>
<tr>
<td><strong>10. Salt water spray</strong></td>
<td>No significant corrosions</td>
<td>Continuous 48 hours with 5 % salt water</td>
</tr>
</tbody>
</table>

*Measurement system for Voltage Standing Wave Ratio (VSWR)*

Specification values of VSWR above are those measured on the measurement system set up in the diagram below.

![Network Analyzer Diagram](image)

**Test Port Cable**

### Materials

<table>
<thead>
<tr>
<th>Item</th>
<th>Materials</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell</td>
<td>Brass</td>
<td>Nickel plating</td>
</tr>
<tr>
<td>Insulation</td>
<td>PTFE</td>
<td>−</td>
</tr>
<tr>
<td>Male Contact</td>
<td>Brass</td>
<td>Gold plating</td>
</tr>
<tr>
<td>Female Contact</td>
<td>Phosphorous bronze</td>
<td>Gold plating</td>
</tr>
</tbody>
</table>

### Product Number Structure

Refer to the chart below for determining specific part number characteristics.

Please select connectors listed in this catalog when placing orders and be sure to check the latest delivery specifications at the time of ordering the product.

**PL76 - [□] - [□]**

1. Series name: PL76
2. Connector type
   - P : Straight Plug
   - BR : Bulkhead Receptacle
3. Applicable cables or mounting styles
   - 2.5CV: 2.5C-2V
   - PC : DIP mount to PCB

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PL76 Series® 75Ω Miniature Coaxial Connectors with Push-Pull Lock

### Plug

![Plug Image]

- **Part No.**: PL76-P-2.5C V
- **HRS No.**: CL334-0087-0
- **Applicable Cables**: 2.5C-2V

### Receptacle

![Receptacle Image]

- **Part No.**: PL76-BR-PC
- **HRS No.**: CL334-0085-5 (Spanner)
- **HRS No.**: CL334-0086-8 (Hexagonal)

### Conversion Adapter

![Conversion Adapter Image]

- **Part No.**: PL76J-H.FLJ-BPA
- **HRS No.**: CL311-0470-2 (Spanner)
- **HRS No.**: CL311-0471-5 (Hexagonal)
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The characteristics and the specifications contained herein are for reference purpose. Please refer to the latest customer drawings prior to use.

The contents of this catalog are current as of date of 1/2014. Contents are subject to change without notice for the purpose of improvements.

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