**HC52 Series**

**20KV - STRAIGHT COAXIAL CONNECTOR SERIES**

**FEATURES**
- Rated Voltage 20kVoc
- Recessed contacts
- Coaxial design
- Bayonet Coupling
- Intermateable with industry standard 20KV coaxial connectors
- Completed cable assemblies available
- RoHS compliant

**APPLICATIONS**
- Instrument High Voltage Connections
- High voltage power supplies / amplifiers
- Medical electronics
- Nuclear instrumentation
- Test and measurement equipment
- High voltage laboratory wiring
- General high voltage testing

20kV reverse polarity coaxial high voltage connectors designed to minimize the risk of electrical shock to personnel through the use of recessed contacts. Both the cable connectors and the bulkhead receptacles have recessed contacts and will withstand the rated voltage in unmated condition. The front mount receptacles are hermetically sealed.

The straight crimp cable plug HC52P and the rear mount crimp receptacles HC52RB are compatible with RG 213 or RG 214 coaxial cable. The straight cable plug HC52P-HTV35S is compatible with our 30kV rated HTV-30S-22-2 coaxial cable.

A suitable crimping tool is available on request. The connectors are RoHS compliant.

The connectors should never be mated or unmated when energized.

Please see the HC51 series for 10kVoc models. HC52 series connectors are not intermateable with SHV or HC51 series connectors.

**SPECIFICATIONS**

- Operating voltage: max. 20kVoc [at sea level]
- Test voltage: 30kVoc
- Impedance: non constant
- Insulation resistance: 1000GΩ
- Center contact resistance: ≤ 3mΩ
- Outer contact resistance: ≤ 2mΩ
- Operating temperature: -55 to +85°C
- Leak rate: < 1x10^-9 mbar*V/s @ 1bar differential pressure (applies to front mount bulkhead receptacles only)

Ratings listed above apply to clean mated connector pairs in standard atmospheric conditions. When connectors are used in an adverse environment [such as high temperature, humidity, pollution content, extreme mechanical exposure, etc.] the connector should be derated. The fitness for use must be proved by extended operational tests.

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## MODEL OVERVIEW - PLUGS

<table>
<thead>
<tr>
<th>Part Number Description</th>
<th>Termination Center Contact</th>
<th>Contact Pin Material/Plating</th>
<th>Insulator Material</th>
<th>Body Material/Plating</th>
<th>Gasket Material</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HC52P-213 /-214 Straight Crimp Cable Plug</td>
<td>Crimp</td>
<td>Beryllium Copper/ Au over Ni over Cu</td>
<td>High Density PE</td>
<td>Brass/ Ni over Cu</td>
<td>Silicone</td>
<td>51.2g</td>
</tr>
<tr>
<td>HC52P-HTV30S Straight Crimp Cable Plug</td>
<td>Crimp</td>
<td>Beryllium Copper/ Au over Ni over Cu</td>
<td>High Density PE</td>
<td>Brass/ Ni over Cu</td>
<td>Silicone</td>
<td>51.2g</td>
</tr>
</tbody>
</table>

## MODEL OVERVIEW - RECEPTACLES

<table>
<thead>
<tr>
<th>Part Number Description</th>
<th>Termination Center Contact</th>
<th>Contact Pin Material/Plating</th>
<th>Insulator Material</th>
<th>Body Material/Plating</th>
<th>Gasket Material</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>HC52RB-213 Rear Mount Bulkhead Crimp Receptacle</td>
<td>Crimp</td>
<td>Brass/ Au over Ni over Cu</td>
<td>High Density PE</td>
<td>Brass/ Sn-Zn-Cu Alloy over Cu</td>
<td>Silicone</td>
<td></td>
</tr>
<tr>
<td>HC52RB-A Front Mount Bulkhead Receptacle (long insulator)</td>
<td>Solder</td>
<td>Brass/ Au over Ni over Cu</td>
<td>High Density PE</td>
<td>Brass/ Sn-Zn-Cu Alloy over Cu</td>
<td>Silicone</td>
<td>58g</td>
</tr>
<tr>
<td>HC52RB-B Front Mount Bulkhead Receptacle (short insul.)</td>
<td>Solder</td>
<td>Brass/ Au over Ni over Cu</td>
<td>High Density PE</td>
<td>Brass/ Ni over Cu</td>
<td>Silicone</td>
<td>61g</td>
</tr>
</tbody>
</table>
HC52 Series

- DIMENSIONS

HC52P-213 /-214

HC52RB-213

HC52RB-A

HC52RB-B

PANEL CUT-OUT FOR RECEPTACLES

- All dimensions are in mm [inch]; drawings not to scale.
- All values and dimensions without given tolerances are nominal.
HC52 Series

ORDERING INFORMATION

20kV Straight Crimp Cable Plug (female) for RG 213                HC52P-213
20kV Straight Crimp Cable Plug (female) for RG 214              HC52P-214
20kV Straight Crimp Cable Plug (female) for HTV-305-22-2         HC52P-HTV305
20kV Rear Mount Bulkhead Crimp Receptacle [male] for RG 213     HC52RB-213
20kV Front Mount Bulkhead Receptacle [male, long insulator]    HC52RB-A
20kV Front Mount Bulkhead Receptacle [male, short insulator]   HC52RB-B

Bespoke ready-to-use high voltage cable assemblies based on different high voltage cable types are available. The cable assemblies are fully tested. Please contact hivolt.de for details.

Examples:
Cable: HTV-305-22-2; Length: 2m; HC52P-HTV305 plug assembled on both ends HCA-020-H52C-002-H52C-T
Cable: RG 213; Length: 10m; HC52P-213 plug assembled on one end, HC52RB-213 receptacle on the other end HCA-020-H52A-010-H52R-X