ODU AUTOMOTIVE

Advanced eMobility connector solutions
The eMobility sector is one of the most rapidly growing markets – and it’s driving innovation into the future. Notable mobility trends include connectivity and personalized, individual solutions, autonomous driving, alternative car engines and “shared mobility”.

When it comes to tackling new challenges and finding solutions for complex tasks, the automotive industry is working ever more closely with technology companies.

ODU is an ideal partner for complex solutions, we bring to the task more than 75 years of expertise in innovative contact technology, a high level of vertical integration as well as specialist testing knowhow.

When it comes to be a partner and expert, to develop work in close technological collaboration, we know how to keep an eye on every details while never losing sight of the overall system architecture.

Rudolf Dechantsreiter  
Business Unit Manager Automotive

Richard Espertshuber  
Global Business Development Automotive

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SPACE
IS THE GOLD OF THE FUTURE

APPLICATION POTENTIAL

Interface between DC-Inlet and HV-battery
> 350 kW charging power
ODU POWER MATE® 400 WITH NEW ODU LAMTAC® CONTACT TECHNOLOGY

More powerful batteries and long distance-ranges require high charging currents and increased safety. With intelligent design and future-proof solutions, ODU applies its contact competence in the new ODU POWER MATE® 400: it combines high contact currents, low overall height, slide-locking and high resistance against flameability thanks to innovative plastics.

- Up to 400 A and 1,000 V
- Vibration class up to class 3
- Up to 95 mm cable connection possible
HIGHER CHARGING CURRENTS
LOW MATING FORCES
GB/T INLET WITH ODU TURNTAC® CONTACT TECHNOLOGY

Charging interfaces are subjected to a high degree of stress. The contacts in particular must optimally fulfill numerous requirements. The ODU TURNTAC® contact technology provides the ideal framework conditions for durability and reliability in this regard: repeatedly proven design, ideal selection of materials and special surface coatings.

- Compensates misalignment during mating process
- Ensures lifetime > 10,000 mating cycles
- Scaleable to OEM specific vehicle constraints and requirements

The ODU TURNTAC® design has been specially developed for charging technology applications. The turned contacts provide a high level of flexibility and ensure more than 10,000 charging cycles.
ODU offers a wide variety of the highest-quality contacts for use in and around the serial production of both electric and hybrid electric vehicles. ODU thereby provides contact systems for the important charging standards in the markets of Europe, the USA, China and Japan. This includes the contact system with lamella technology ODU LAMTAC® as well as the stamped contact solution ODU STAMPTAC®. The robust and universal contact system ODU TURNTAC®, however, is almost always used for this, since it is perfectly suited for these applications.

**IEC 62196 (VDE 0623-5)**

<table>
<thead>
<tr>
<th>DC – DIRECT CURRENT</th>
<th>AC – ALTERNATING CURRENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal current</td>
<td>Nominal current</td>
</tr>
<tr>
<td>CP/PP</td>
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</tr>
<tr>
<td>16 A / 32 A (2.5 / 6 mm²)</td>
<td>2 A (Contact-Ø: 3 mm)</td>
</tr>
<tr>
<td>63 A (16 mm²)</td>
<td>5 (Contact-Ø: 6 mm)</td>
</tr>
<tr>
<td>DC – 400 A</td>
<td>2 A (Contact-Ø: 8 mm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nominal current 1-Phase / 3-Phase</th>
<th>Nominal current CP/PP</th>
<th>Number of contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 A / 32 A (2.5 / 6 mm²)</td>
<td>2 A</td>
<td>2 (Contact-Ø: 3 mm)</td>
</tr>
<tr>
<td>63 A (16 mm²)</td>
<td>5 (Contact-Ø: 6 mm)</td>
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</tbody>
</table>
GB/T 20234

**DC – DIRECT CURRENT**

<table>
<thead>
<tr>
<th>Nominal current DC</th>
<th>Nominal current S</th>
<th>Nominal current CC1/CC2</th>
<th>Nominal current A</th>
<th>Number of contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>125 A / 250 A</td>
<td>2 A</td>
<td>2 A</td>
<td>20 A</td>
<td>6 (Contact-Ø: 3 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 (Contact-Ø: 6 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 (Contact-Ø: 12 mm)</td>
</tr>
</tbody>
</table>

**AC – ALTERNATING CURRENT**

<table>
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<th>Nominal current CC/PP</th>
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</thead>
<tbody>
<tr>
<td>10 A / 16 A / 32 A (250 V)</td>
<td>2 A</td>
<td>2 (Contact-Ø: 3 mm)</td>
</tr>
<tr>
<td>16 A / 32 A / 63 A (440 V)</td>
<td>2 A</td>
<td>5 (Contact-Ø: 6 mm)</td>
</tr>
</tbody>
</table>

*Single phase current

**SAE J1772**

**DC – DIRECT CURRENT**

<table>
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<tr>
<th>Nominal current CP/PP</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Up to 80 A</td>
<td>2 (Contact-Ø: 1.5 mm)</td>
</tr>
<tr>
<td>DC – 200 A</td>
<td>2 (Contact-Ø: 3.6 mm)</td>
</tr>
</tbody>
</table>

**AC – ALTERNATING CURRENT**

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<td>2 A</td>
<td>2 (Contact-Ø: 1.5 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (Contact-Ø: 2.8 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 (Contact-Ø: 3.6 mm)</td>
</tr>
</tbody>
</table>

**CHADEMO**

**DC – DIRECT CURRENT**

<table>
<thead>
<tr>
<th>Nominal current DC</th>
<th>Nominal current CP/CP2</th>
<th>Number of contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 A – 200 A</td>
<td>2 A</td>
<td>2 (Contact-Ø: 9 mm)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 (Contact-Ø: 1.5 mm)</td>
</tr>
</tbody>
</table>
RELIABLE CONNECTIONS
FOR EXTREME CONDITIONS

ODU DOCKING MATE® –
CUSTOMIZE SIZE AND INSERTS TO YOUR NEEDS:

variable size

A

B

C

variable inserts

A

B

C

A

B

C
ODU DOCKING MATE®

Autonomous driving systems and automated production lines revolutionize vehicle construction and industrial production of the future. Even in harsh environmental conditions, self-finding changeover and contact systems must function permanently and reliably.

- Self-finding docking of HV-battery & drivetrain modules
- Tolerance compensation up to +/−5 mm
- Highest ampacity levels > 400 A, scaleable
Please note: The solutions shown on this page are specific tailor-made custom solutions. Contact us for your tailored connector solution at sales@odu-automotive.de
K12 – ODU 3-PIN
HV CONNECTOR SYSTEM 90°

This connector is characterized by its extremely high vibration resistance. It uses all the standard ODU design features: ODU LAMTAC® high-performance contacts, a corrosion-resistant aluminum housing and simple assembly processes.

These features provide a high shielding attenuation, combined with a high current carrying capacity and cost effective connector assembly.

- Low profile design
- Fulfils highest vibration class 4
- 90° high power/low cost stamped lamella contact system

K8 – ODU 3-PIN
HV CONNECTOR SYSTEM 180°

This is also a connector that is specifically adjusted to customer specifications.

Consequently, it also has all of the typical ODU features. In addition, the concept of this connector has been shown to be highly adaptable to assembly spaces.

- Low profile design
- High shielding attenuation
- ODU LAMTAC® technology
ALL UNDER ONE ROOF
ODU SHOWS HOW FAST DEVELOPMENT CAN BE

CERTIFICATES & APPROVALS

- ISO 9001
- IATF 16949
- ISO 13485
- ISO 14001
- ISO 50001

- Wide range of UL, CSA, VG and VDE approvals
- UL Wiring Harnesses certified
ALL UNDER ONE ROOF

ODU SHOWS HOW FAST DEVELOPMENT CAN BE

• ISO 9001
• IATF 16949
• ISO 13485
• ISO 14001
• ISO 50001

FAST DEVELOPMENT

• Simulation software
• Highest level of vertical integration
• Local R&D centers in America, Europe and China

LABORATORY

ODU Technology Test Center for continuous strict quality control delivers data and a unique important knowledge base through the complete development process.

PRODUCTION

under one roof means high added value:
• Toolmaking
• Injection Shop
• Turnery
• Stamping
• Surface Technology & Electroplating Shop
• Assembly
• Cable Assembly
ODU GROUP WORLDWIDE

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Further information and specialized representatives can be found at:
www.odu-connectors.com/contact

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China
ODU (Shanghai) Connectors Manufacturing Co.Ltd

Mexico
ODU Mexico Manufacturing S.R.L. de C.V.

Romania
ODU Romania Manufacturing S.R.L.

USA
ODU North American Logistics

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