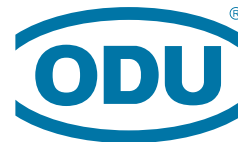


A PERFECT ALLIANCE.



# ODU AUTOMOTIVE

Advanced eMobility connector solutions







# ”ODU AUTOMOTIVE

## YOUR PARTNER FOR EMOBILITY



Rudolf Dechantsreiter  
Business Unit Manager Automotive



Richard Espertshuber  
Global Business Development Automotive

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.

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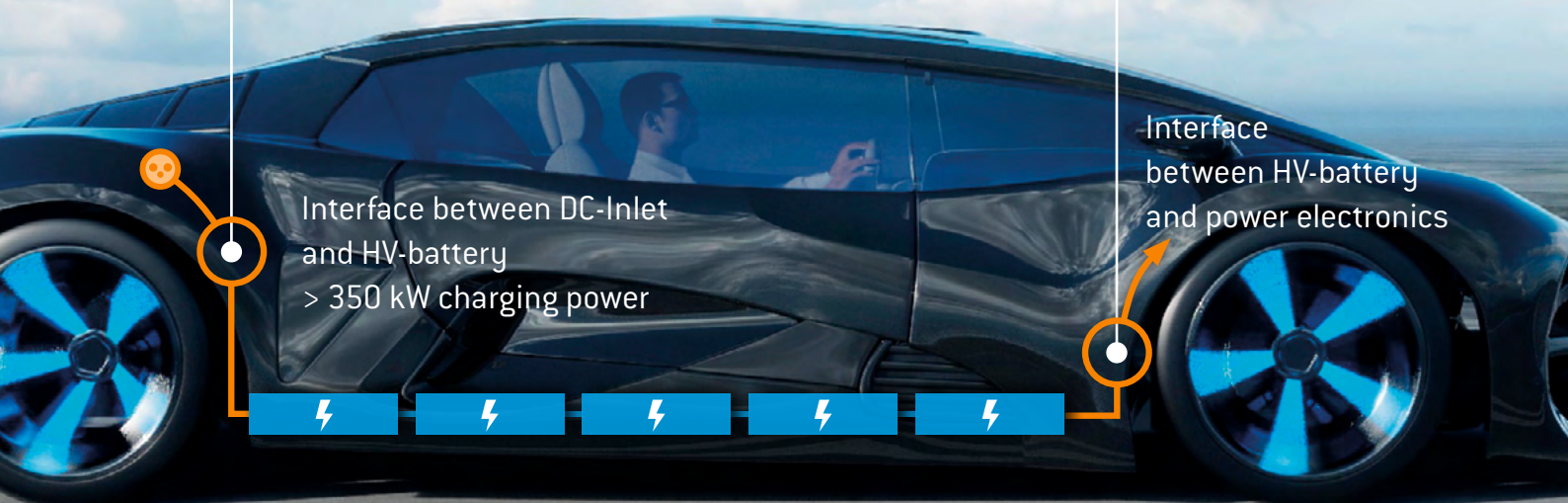


HIGH VOLTAGE

# ”SPACE IS THE GOLD OF THE FUTURE



## APPLICATION POTENTIAL



Interface between DC-Inlet  
and HV-battery  
> 350 kW charging power

Interface  
between HV-battery  
and power electronics

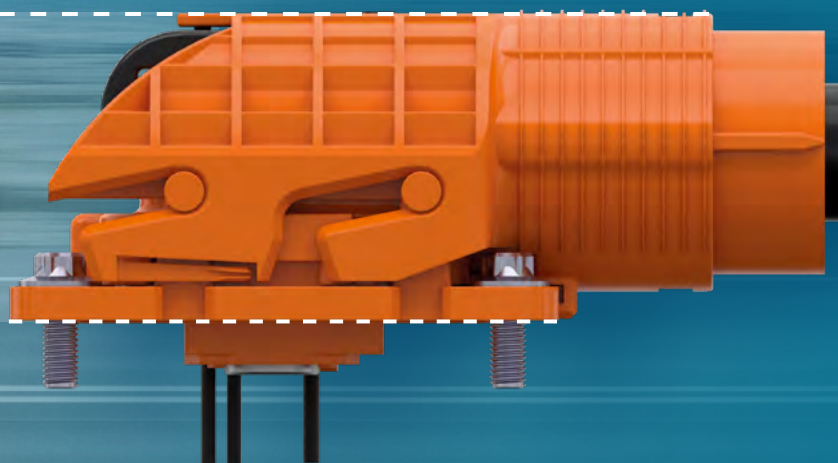
## ODU POWER MATE® 400 WITH NEW ODU LAMTAC® CONTACT TECHNOLOGY

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 4
- + Up to 95 mm cable connection possible



LOW  
PROFILE





CHARGING

# ” HIGHER CHARGING CURRENTS

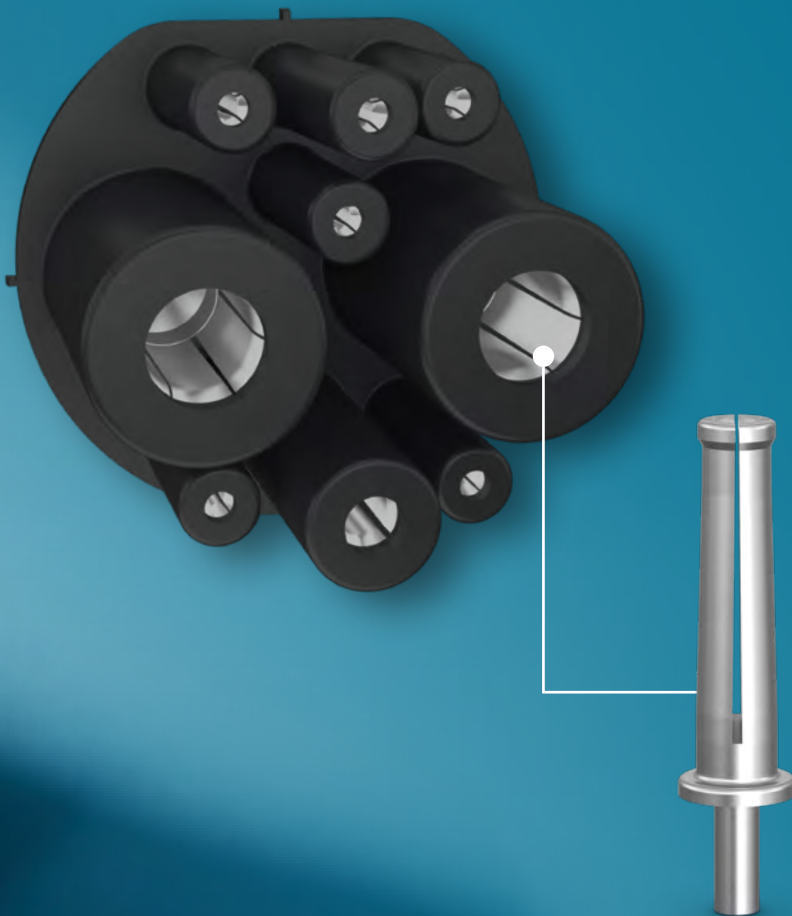
LOW MATING FORCES



## 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

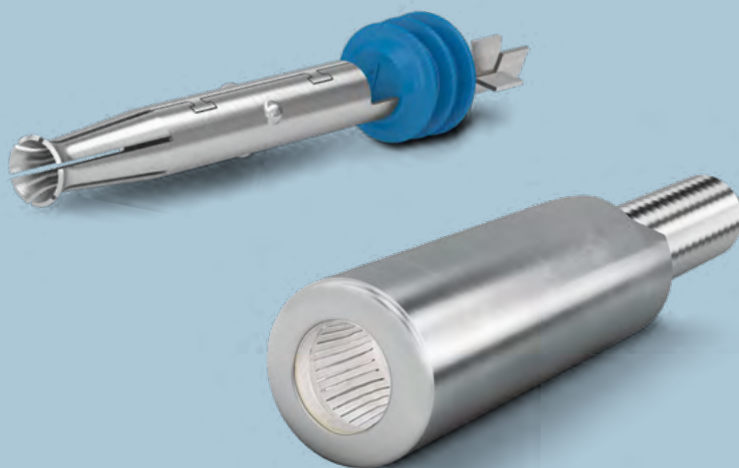


The ODU TURNTAC® design has been specially developed for charging technology applications. The turned contacts provide a high level of flexibility and ensure more than 10,000 charging cycles.

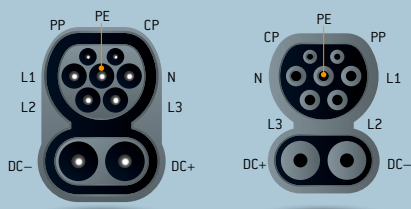
# PROVEN CONTACT TECHNOLOGY IN INNOVATIVE DESIGNS

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)

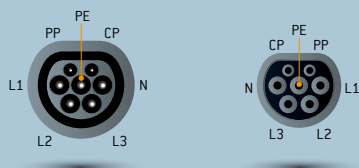


DC – DIRECT CURRENT



AC – ALTERNATING CURRENT

Nominal current	Nominal current CP/PP	Number of contacts
16 A / 32 A (2.5/6 mm <sup>2</sup> ) 63 A (16 mm <sup>2</sup> )	2 A	2 (Contact-Ø: 3 mm) 5 (Contact-Ø: 6 mm)
DC – 400 A	2 A	2 (Contact-Ø: 8 mm)



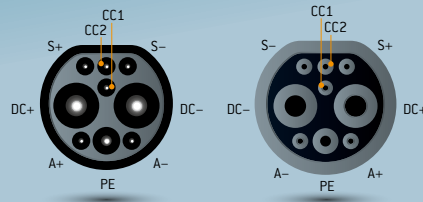
AC – ALTERNATING CURRENT

Nominal current 1-Phase / 3-Phase	Nominal current CP/PP	Number of contacts
16 A / 32 A (2.5/6 mm <sup>2</sup> ) 63 A (16 mm <sup>2</sup> )	2 A	2 (Contact-Ø: 3 mm) 5 (Contact-Ø: 6 mm)



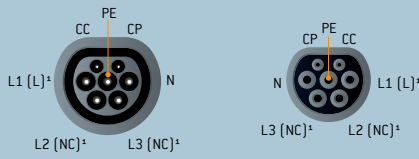


## GB/T 20234



### DC – DIRECT CURRENT

Nominal current DC	Nominal current S	Nominal current CC1/CC2	Nominal current A	Number of contacts
125 A / 250 A	2 A	2 A	20 A	6 (Contact-Ø: 3 mm) 1 (Contact-Ø: 6 mm) 2 (Contact-Ø: 12 mm)



¹ Single phase current

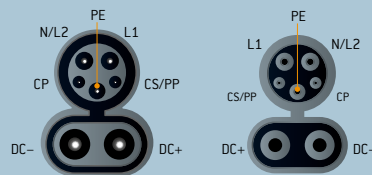


### AC – ALTERNATING CURRENT

Nominal current 1-Phase / 3-Phase	Nominal current CC/PP	Number of contacts
10 A / 16 A / 32 A (250 V) 16 A / 32 A / 63 A (440 V)	2 A	2 (Contact-Ø: 3 mm) 5 (Contact-Ø: 6 mm)



## SAE J1772

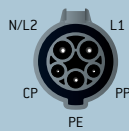


### DC – DIRECT CURRENT



### AC – ALTERNATING CURRENT

Nominal current	Nominal current CP/PP	Number of contacts
Up to 80 A	2 A	2 (Contact-Ø: 1.5 mm) 1 (Contact-Ø: 2.8 mm) 2 (Contact-Ø: 3.6 mm)
DC – 200 A	2 A	2 (Contact-Ø: 8 mm)

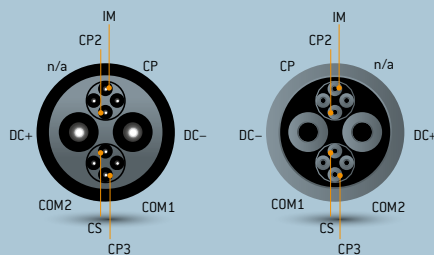


### AC – ALTERNATING CURRENT

Nominal current 1-Phase / 3-Phase	Nominal current CP/PP	Number of contacts
Up to 80 A	2 A	2 (Contact-Ø: 1.5 mm) 1 (Contact-Ø: 2.8 mm) 2 (Contact-Ø: 3.6 mm)



## CHADEMO



### DC – DIRECT CURRENT

Nominal current DC	Nominal current CP/CP2	Number of contacts
50 A – 200 A	2 A	2 (Contact-Ø: 9 mm) 8 (Contact-Ø: 1.5 mm)

# ”RELIABLE CONNECTIONS

FOR EXTREME CONDITIONS

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

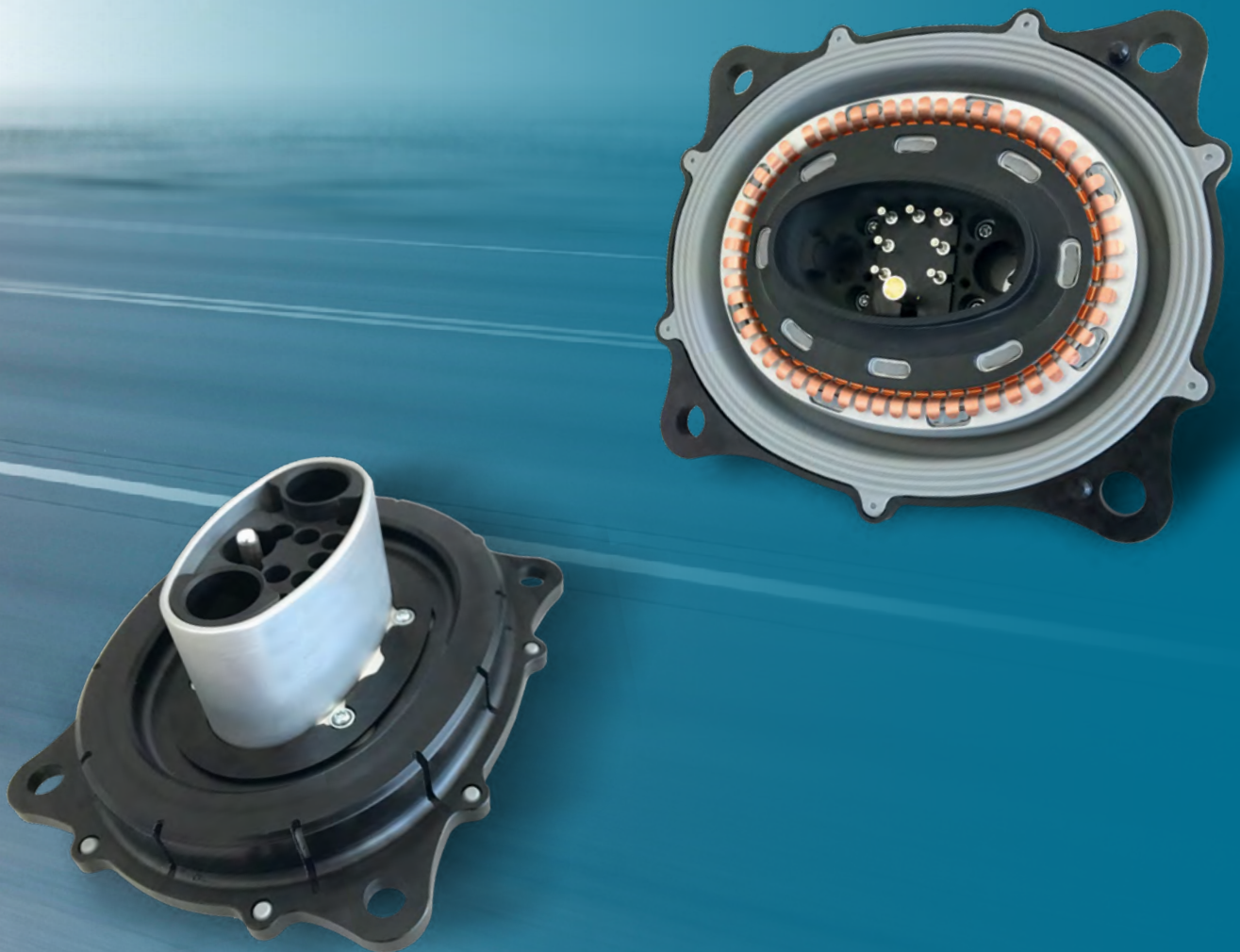




## ODU DOCKING MATE®

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  $\pm 5$  mm
- + Highest ampacity levels up to  $> 400$  A, scalable



CUSTOM SOLUTIONS

# ” SPECIFIC TO YOUR NEEDS

CUSTOMIZED PROJECTS WELCOME



**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](mailto: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
- + Fulfills highest vibration resistance class 4
- + 90° high power/low cost stamped lamella contact system

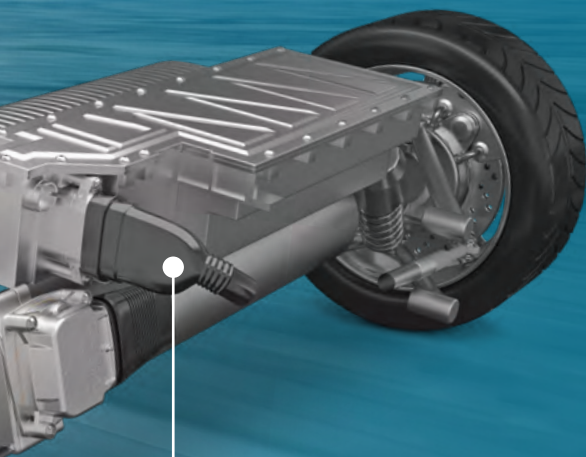


## K8 – ODU 3-PIN HV CONNECTOR SYSTEM 180°

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



INHOUSE COMPETENCE

# ”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 DVA approvals
- UL Wiring Harnesses certified



## FAST DEVELOPMENT

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



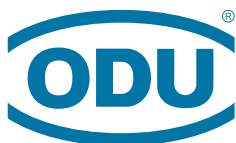
## PRODUCTION

under one roof means high added value:

- Toolmaking
- Injection Shop
- Turnery
- Stamping
- Surface Technology & Electroplating Shop
- Assembly
- Cable Assembly

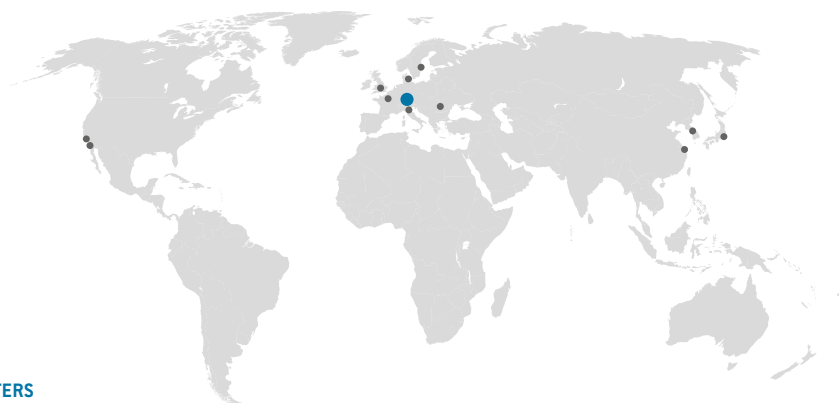
## LABORATORY

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



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## ODU GROUP WORLDWIDE



### HEADQUARTERS

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[www.odu.se](http://www.odu.se)

### PRODUCTION AND LOGISTICS SITES

**Germany** Otto Dunkel GmbH

**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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