

High-Voltage and Low-Voltage Products

Connector Systems for E-Mobility

AUTOMOTIVE





Rosenberger Automotive – a Synonym for Quality and Innovation

On the following pages we present the high-quality Rosenberg high-voltage connector systems developed in our automotive business area. They fulfill the tough requirements of the automotive industry.



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The Rosenberger online catalog contains the current power connector systems for e-mobility with specific details, including data sheets, assembly instructions and panel piercings.



www.rosenberger.com/ok/hv

Rosenberger Automotive

At Rosenberger, we firmly believe in developing technology for the future. We are currently working on products and solutions that will shape our lives in the future.

We want to get faster and smarter in what we do and how we do it. Advanced driver assistance systems, connected car technology, electric mobility, infotainment systems – Rosenberger is extremely committed to designing innovative connector systems for future automotive electronics.

Rosenberger Automotive Data Connector Systems

In 2000, Rosenberger started working in the automotive sector, designing and producing customized and standard products for these specific markets.

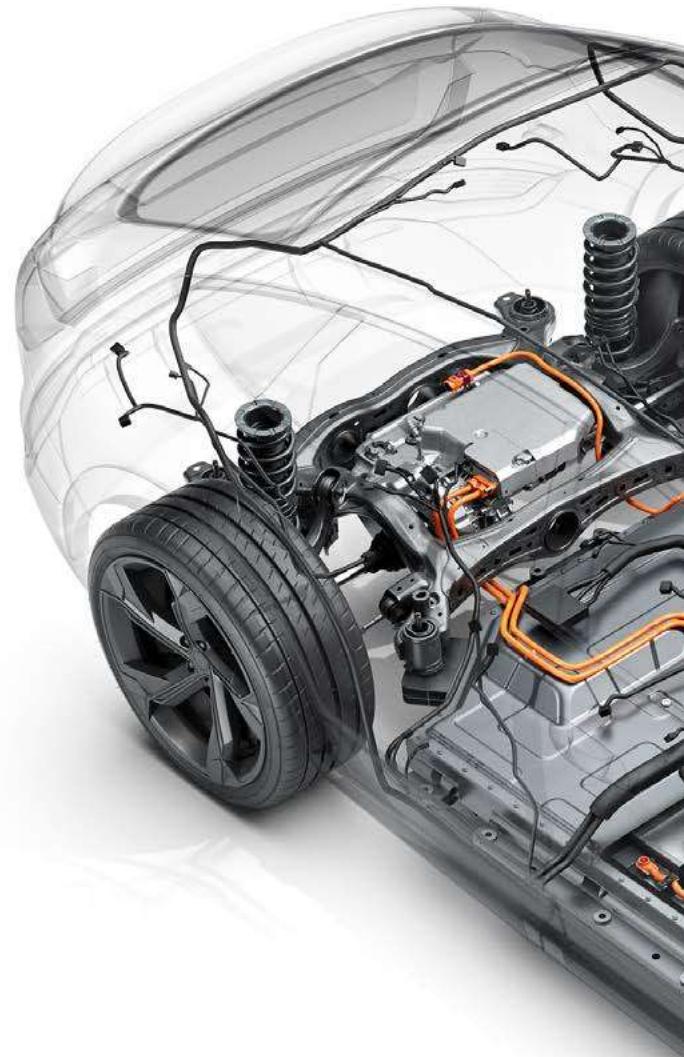
Rosenberger Automotive is a specialist development partner when it comes to integrating connector designs and customer-specific solutions with the highest quality and best performance – while continuing to meet customer price targets.

The contact systems have been specially designed to fulfill the tough requirements of the automotive industry. From the beginning, Rosenberger has developed a close and open relationship with its customers.

The priority in the most automotive applications, such as autonomous driving and driver assistance systems, is to ensure safety. It is necessary to determine exact positions, continuously calculate routes, and detect and classify objects. High data volumes from several cameras, various sensors, and navigation sources must be combined and transported for this purpose – in real time.

Application Areas

- Autonomous driving
- Driver assistance systems
- Navigation
- Infotainment
- Rear entertainment
- Internet and mobile communication
- “WiGig” (Wireless Gigabit)

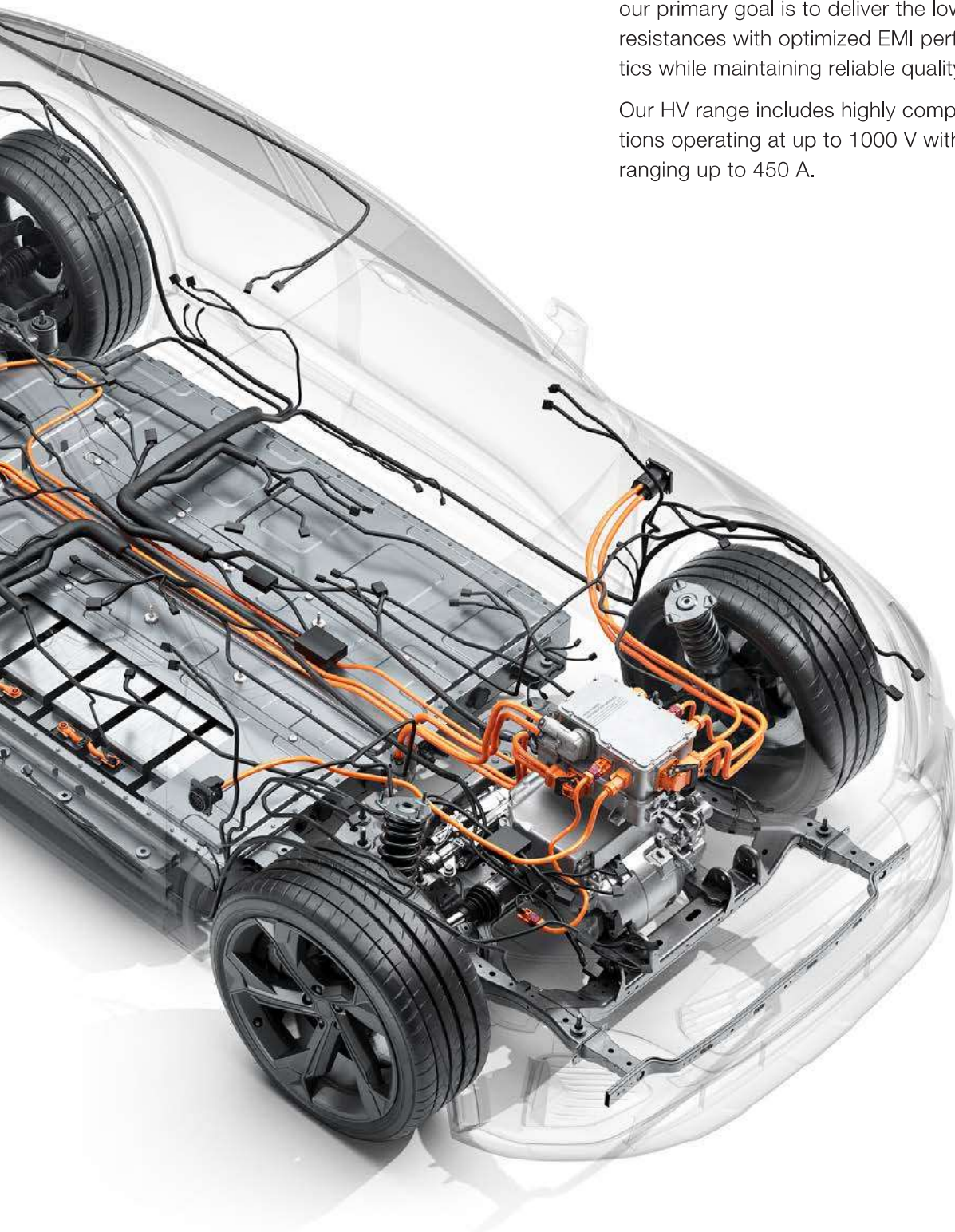


Rosenberger Power Connector Systems for E-Mobility

The ongoing shift from combustion engines towards hybrid and electric motors in vehicles calls for continuous innovation in connector technology.

Electrical components must not only be robust and as space-saving as possible, but also capable of safe operation at high voltages and extreme currents. Therefore, our primary goal is to deliver the lowest possible contact resistances with optimized EMI performance characteristics while maintaining reliable quality standards.

Our HV range includes highly compact connection solutions operating at up to 1000 V with continuous currents ranging up to 450 A.



Rosenberger Connector Systems for E-Mobility

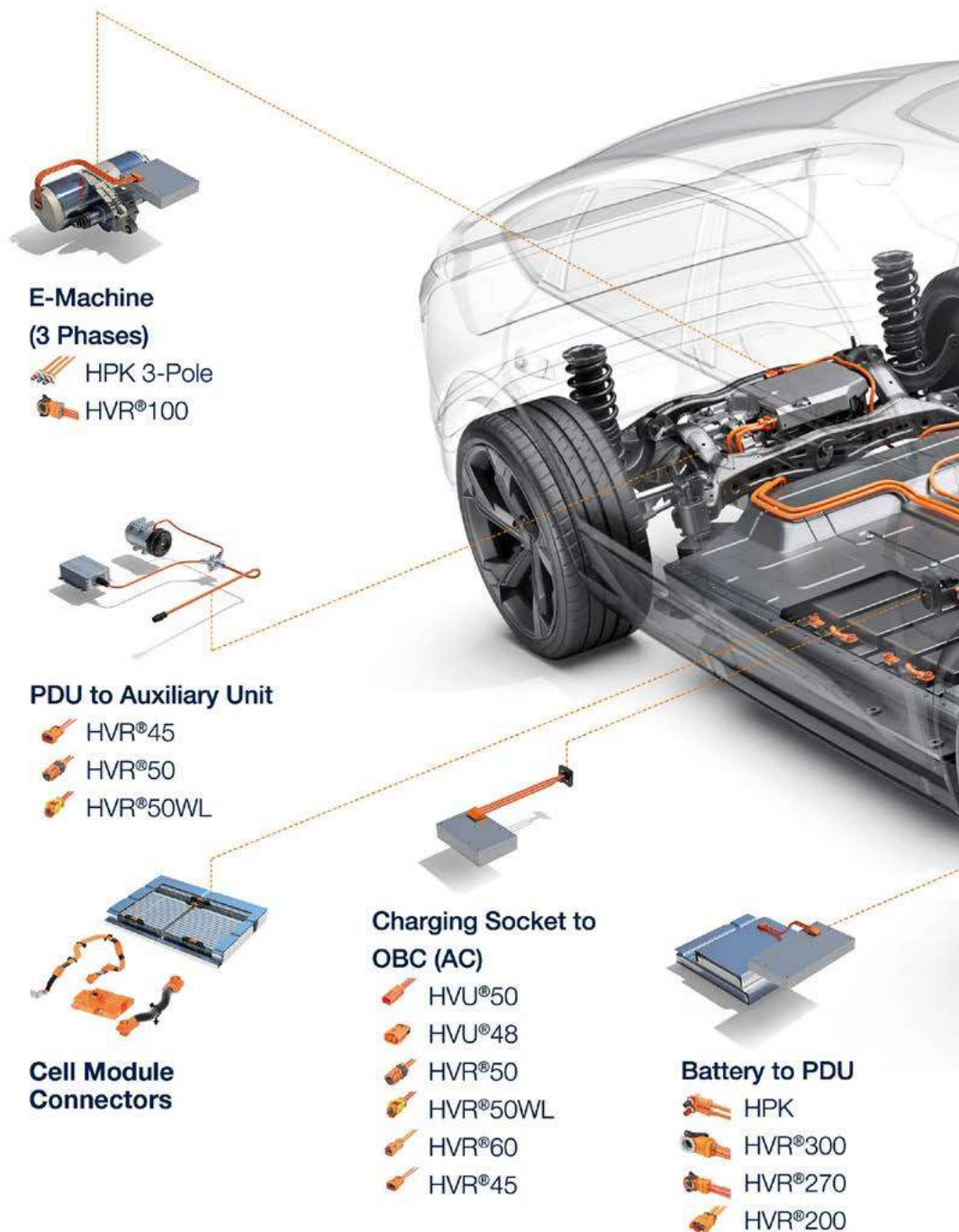
Developed especially for optimized power transmission in electric and hybrid vehicles, the extensive portfolio of Rosenberger power connectors is designed to meet customer requirements for maximum quality, reliability, performance, at best costs.

Maximum currents ranging from 50 A to 450 A and cable cross sections from 3 mm² to 120 mm² are covered, as well as power distribution units for customer-specific assemblies.

When electrical power transmission performance really counts Rosenberger has the perfect connection.

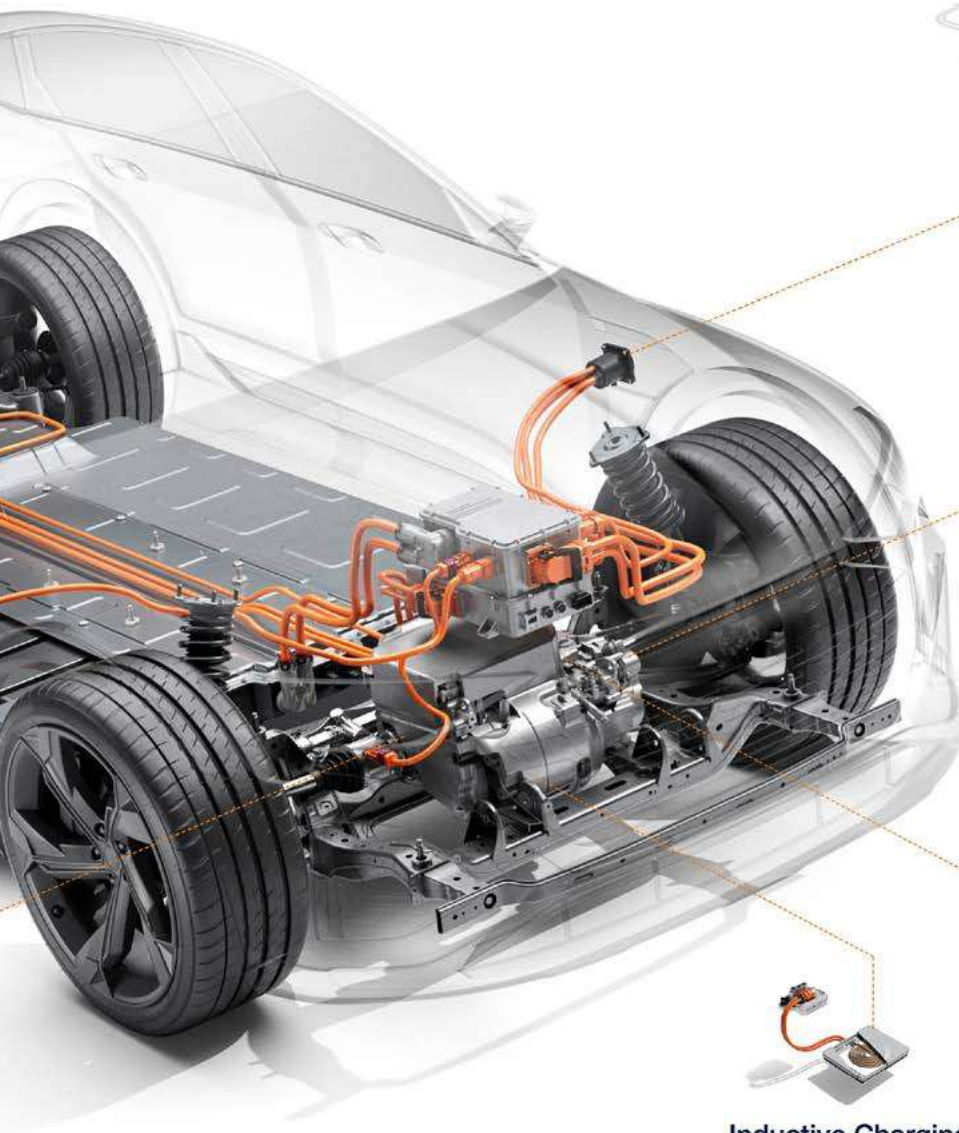
Product Portfolio

- High-voltage connectors shielded (HVR series)
- High-voltage connectors unshielded (HVU series)
- High-power connectors (HPK series)
- HV components (power distribution units, splitter, cell module connectors)
- Low-voltage connectors
- LEV connectors



Features and Benefits

- High current performance
- Minimum installation space
- Highest vibration classes
- In-house thermal simulation
- Contact system and connecting technology
- Assembly
- Best EMI performance after aging due to silver plated contacts and special screw technology
- Detailed assembly instruction for cable-side and device-side
- Qualified to national and international standards (LV215, USCAR ...)



Charging Socket to Battery (DC)

- HVR®420
- HVR®300
- HVU®400



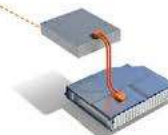
PDU to E-Machine (2 Phases)

- HPK
- HVR®300
- HVR®270



Inductive Charging

- HVR®50
- HVR®50WL



OBC to Battery

- HVR®45
- HVR®50
- HVR®50WL
- HVR®200

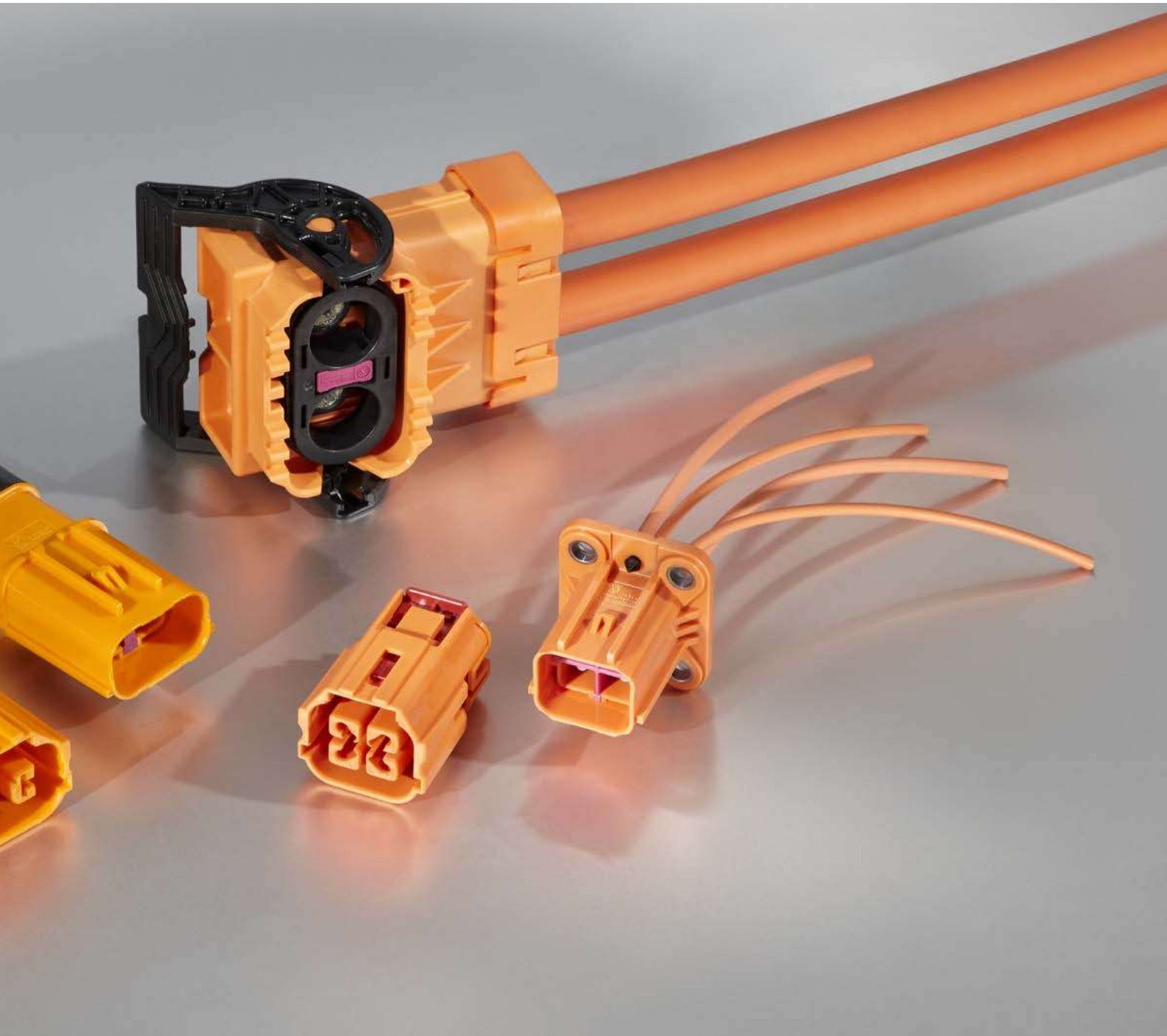
HVU[®] High-Voltage Unshielded Connectors

New and additional to the shielded product portfolio, Rosenberger develops and offers several unshielded high-voltage product series (HVU[®]) e.g. HVU[®]48, HVU[®]50, HVU[®]400.

Cost-effective and tailored to the usecase, these connectors are reduced to the purpose of transmitting power while maintaining high voltage safety.

Current capacity ranges from 60 A, 87.5 A up to 340 A at a working voltage of 1000 V DC.





HVU®50

Unshielded Rosenberger HVU®50 connector series in small dimensions enables a maximum current capacity of 60 A at a cable cross section of 6 mm² and a working voltage of 1000 V DC. HVU®50 cable connectors for cable cross sections of 3 mm², 5 mm², 6 mm² are available in straight and inline variants as well as headers. HVU®50 connectors are mainly used for charging sockets to OBC (AC).

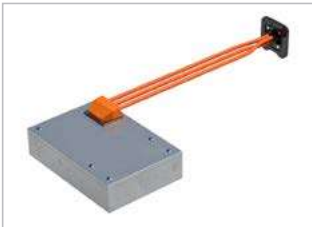
Product Portfolio

- Cable connectors
- Inline connectors
- Header
- Cable assemblies

Features

- Unshielded
- Current capacity (6 mm²) 60 A at 85 °C
- Working voltage 1000 V DC
- Creepage ≥ 12.58 mm
- Clearance ≥ 12.45 mm
- Cross sections 3 mm², 5 mm², 6 mm²
- Engine vibration SG2 according to LV similar to V1 according to USCAR
- Locking mechanism with CPA (Connector Position Assurance)

Applications



Charging socket to OBC (AC)

Benefits

- Small dimensions
- For unshielded cables
- For inline or header applications


Applicable Standards

- Rosenberger series code HUD
- Interface according to Rosenberger RN_201-01
- RoHS compliant




Products


HVU®50 Straight Jack Unshielded

Rosenberger No.	Description	Cable Cross Section	Assembly Instruction	Product
HUDK103-940005X1-Y	Straight jack 4-pole Unshielded	4×5 mm ² /4×6 mm ²	MA_HV0217	
HUDK113-940005X1-Y		2×5 mm ² /2×6 mm ² 2×3 mm ²		
HUDK123-940005X1-Y		2×5 mm ² /2×6 mm ² 2×blind		

HVU®50 Inline Plug Unshielded

Rosenberger No.	Description	Cable Cross Section	Assembly Instruction	Product
HUDS102-940005X1-Y	Straight plug 4-pole Unshielded	4×5 mm ² /4×6 mm ²	MA_HV0218	
HUDS112-940005X1-Y		2×5 mm ² /2×6 mm ² 2×3 mm ²		
HUDS122-940005X1-Y		2×5 mm ² /2×6 mm ² 2×blind		

HVU®50 Header Plug Unshielded

Rosenberger No.	Description	Cable Cross Section	Assembly Instruction	Panel Piercing	Product
HUDL102-940005X1-Y	Straight plug 4-pole 4-hole flange Unshielded	4×5 mm ² /4×6 mm ²	MA_HV0219	MB_806	
HUDL112-940005X1-Y		2×5 mm ² /2×6 mm ² 2×3 mm ²			
HUDL122-940005X1-Y		2×5 mm ² /2×6 mm ² 2×blind			

-Y please fill in requested coding

For more information
refer to our website:
www.rosenberger.com/hvu50

