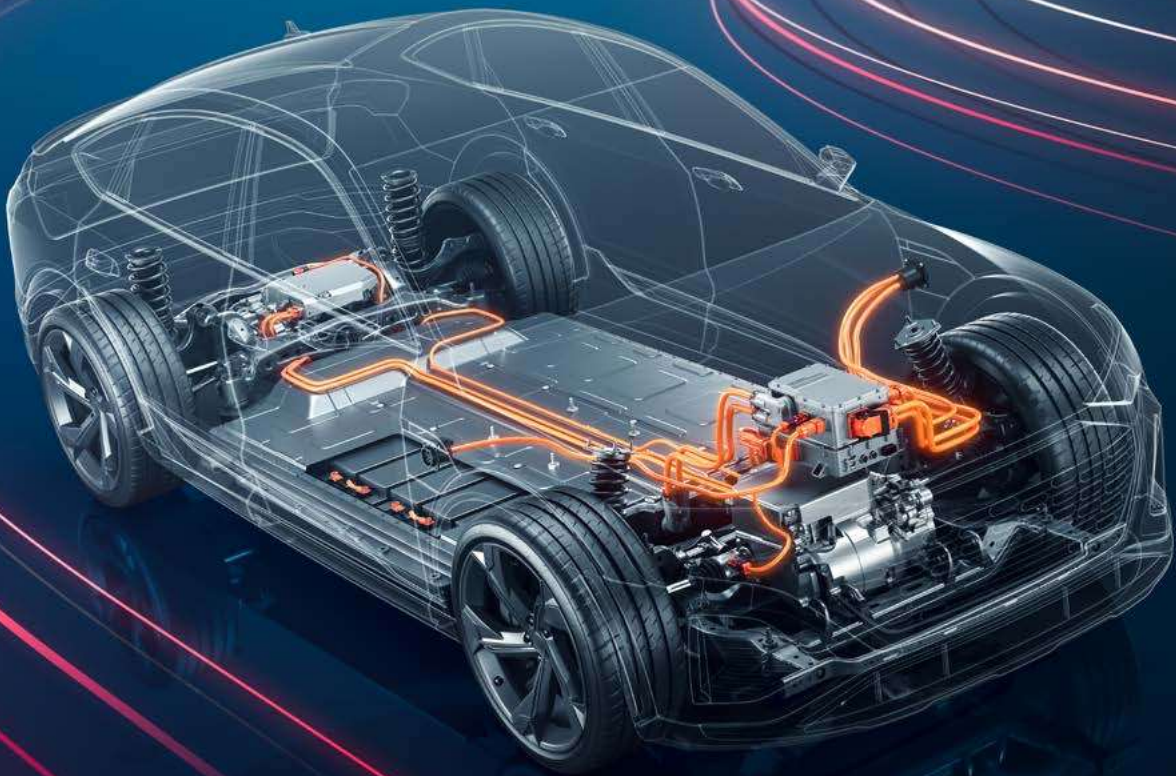


High-Voltage and Low-Voltage Products

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.



Rosenberger Automotive	4
Rosenberger Connector Systems for E-Mobility	6
Rosenberger Number Code	8
HVR® Shielded Connectors	10
HVR®45	12
HVR®50	14
HVR®50WL	16
HVR®60	18
HVR®100	20
HVR®200	22
HVR®270	24
HVR®300	26
HVR®420	28
HPK	30
HVU® Unshielded Connectors	36
HVU®48	38
HVU®50	40
HVU®400	42
HV Components	44
Low-Voltage Connectors	46
LVR®120	48
MagCode®	50
LEV Connectors	52
RoPD®	54
RoPO	58
Competencies & Technology	60
HV Contact Systems	62
Connection Technologies	63
Computational Engineering	66
Quality & Environment	72
Rosenberger Global Network	74
Index	76

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)

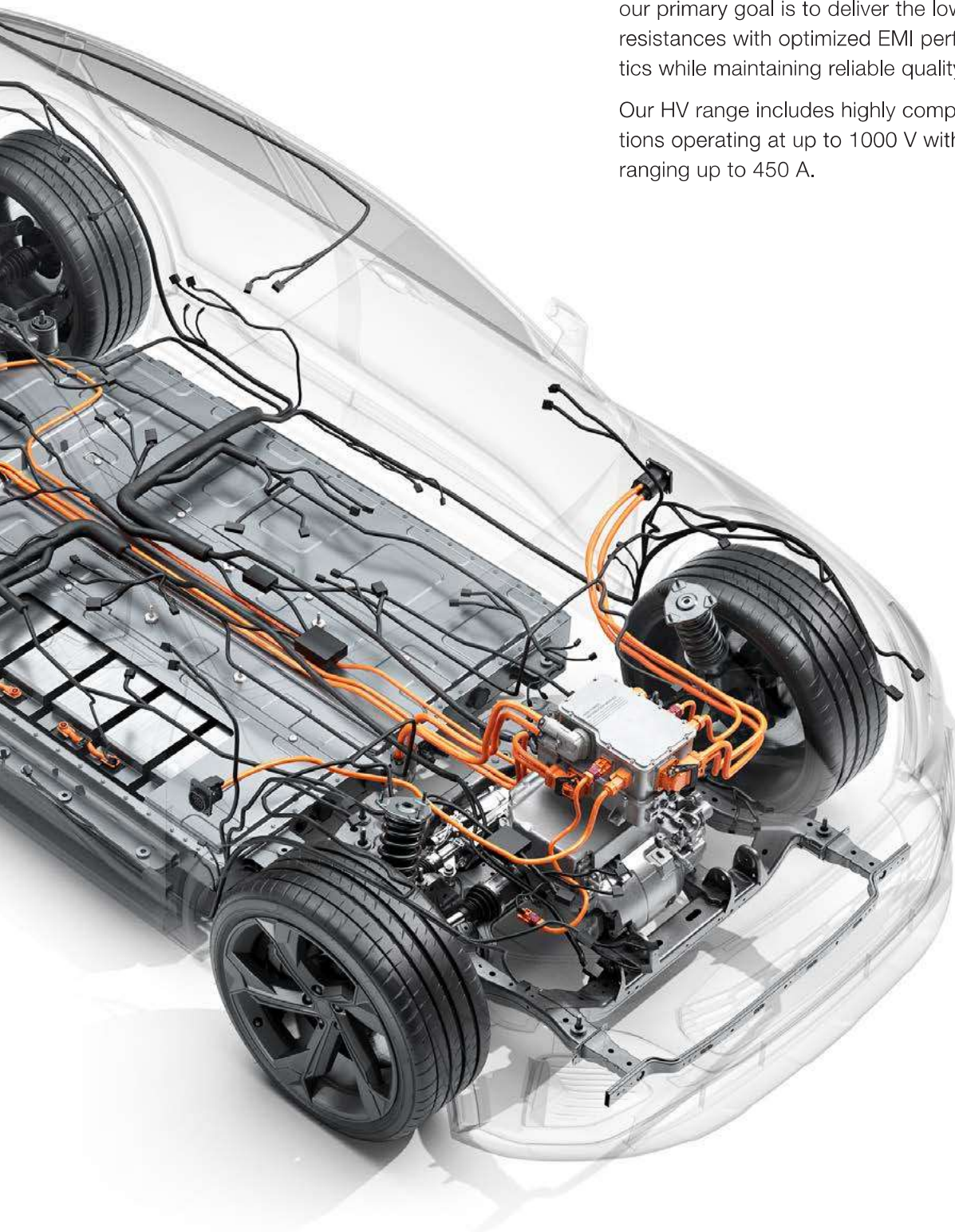


Rosenberger Power Connector Systems for E-Mobility

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

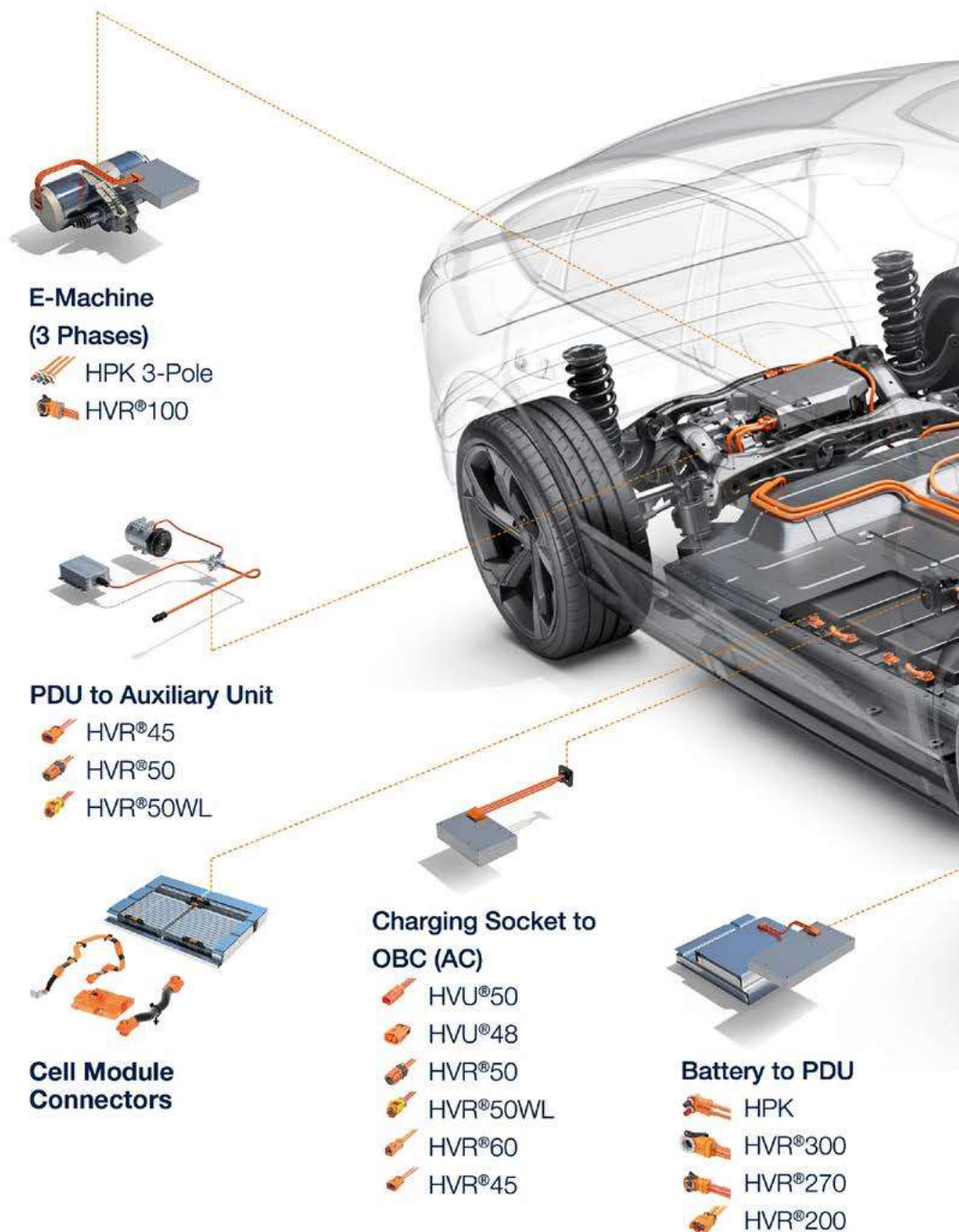
Developed especially for optimized power transmission in electric and hybrid vehicles, the extensive portfolio of Rosenberger power connectors is designed to meet customer requirements for maximum quality, reliability, performance, at best costs.

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.

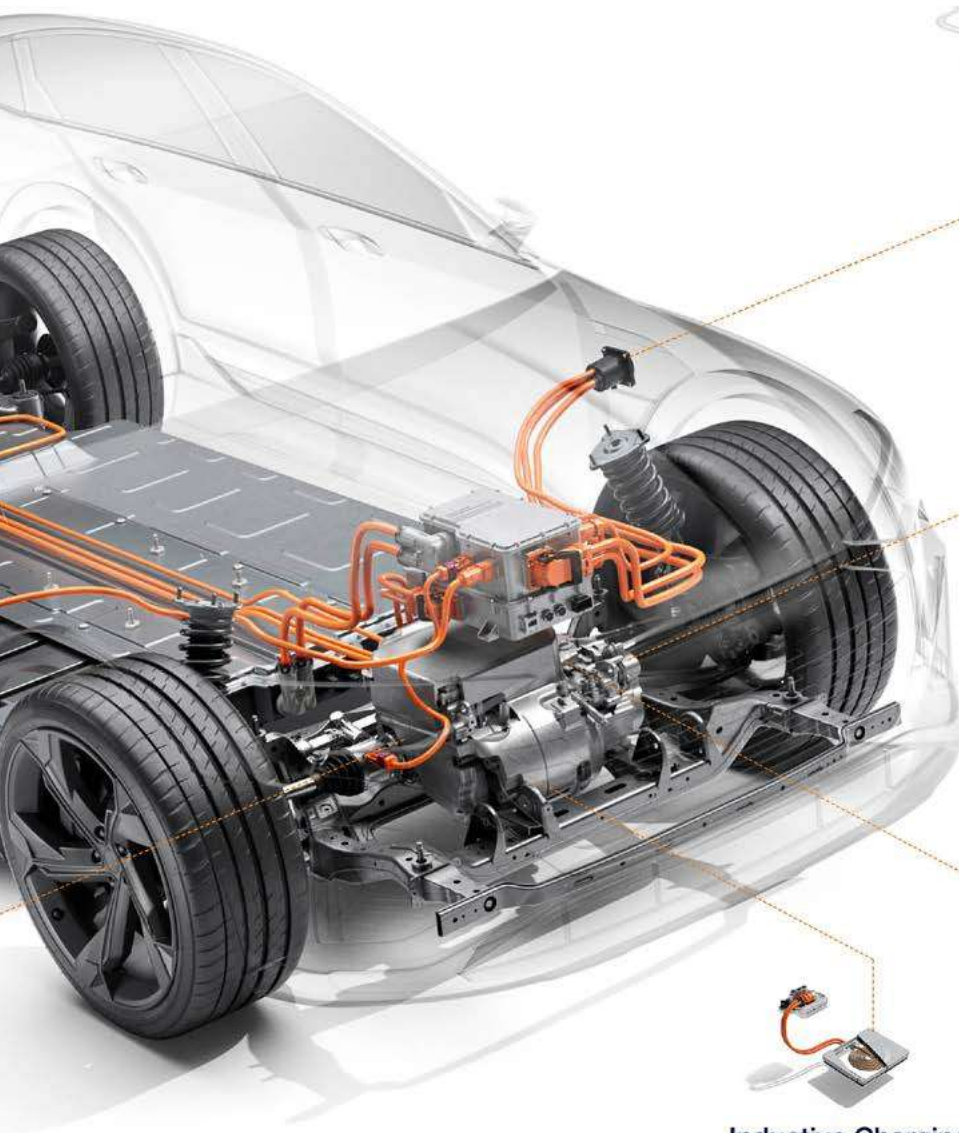
Product Portfolio

- 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



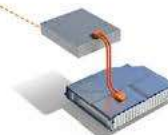
PDU to E-Machine (2 Phases)

- HPK
- HVR®300
- HVR®270



Inductive Charging

- HVR®50
- HVR®50WL



OBC to Battery

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

Rosenberger Number Code

HV Connectors

H2	K	1	01-	W	2	A	035	B1	-A
									Coding
									Plating
									Cable size specified in mm ²
									Cable group
									Number of center contacts
									Backend type
									0 screw version outer and center contact
									1 crimped outer and center contact
									2 mated outer contact – screwed center contact
									5 press-fitted outer contact – crimped center contact
									9 special types
									V crimped outer contact – crimp-welded center contact
									W crimped outer contact – welded center contact
									Successive number
									Configuration
									1 straight
									2 right angle
									Gender
									K jack
									S plug
Connector series									

HV Device Socket (Header)

HV	L	1	02-	5	B-	002	B1	-A
								Coding
								Plating
								Successive number
								Cable dimension
								0 no cable
								A 2.5 mm ²
								B 4 mm ²
								C 6 mm ²
								D 16 mm ²
								E 25 mm ²
								F 35 mm ²
								G 50 mm ²
								H 70 mm ²
								J 90 mm ²
								Backend type
								Successive number
								Configuration
								1 straight
								2 right angle
								L/S Header plug
Connector series								

HVR[®] High-Voltage Shielded Connectors

Rosenberger's extensive portfolio of shielded high-voltage connectors has been developed especially for optimized power transmission in electric vehicles.

For Rosenberger, the product development goal is clear: minimum contact resistance plus high power density coupled with excellent EMC performance properties.

They meet customer requirements in terms of quality, reliability, performance and price. The shielded HV product line includes extremely compact connection solutions up to 1000 V with continuous currents up to 450 A, that can be operated over entire product lifetimes.





HVR[®]45

Rosenberger HVR[®]45 – our smallest shielded connector series enables a maximum current capacity of 54 A at cable cross section of 6 mm² and a working voltage of 1000 V DC. HVR[®]45 cable connectors are available in straight and inline variants as well as headers. HVR[®]45 connectors are mainly used for PDU to auxiliary units, charging sockets to OBC (AC) and OBC to batteries.

Product Portfolio

- Cable connectors
- Inline connectors
- Headers
- Cable assemblies

Features

- Shielded
- Current capacity (6 mm²) 54 A at 85 °C
- Working voltage 1000 V DC
- Creepage ≥ 3.18 mm
- Clearance ≥ 1.39 mm
- Cross section 6 mm²
- Engine vibration SG2 according to LV similar to V1 according to USCAR
- Locking mechanism with CPA (Connector Position Assurance)

Benefits

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

Applicable Standards

- Rosenberger series code HMA
- Interface according to RN_157-01
- RoHS compliant



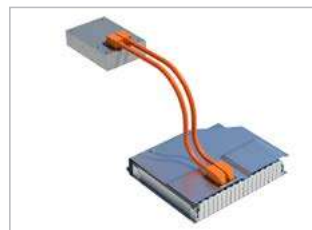
Applications



PDU to auxiliary units





Charging socket to OBC (AC)




OBC to batteries

Products


HVR®45 Cable Jack

Rosenberger No.	Description	Cable Cross Section	Assembly Instruction	Product
HMAK106-520006T1-Y	Straight jack Shielded	2×6 mm ²	MA_HV0235	
HMAK115-520000XX-Y	Straight jack dummy Shielded			

HVR®45 Inline Plug

Rosenberger No.	Description	Cable Cross Section	Assembly Instruction	Product
HMAS107-520006T1-Y	Straight plug Shielded	2×6 mm ²	MA_HV0180	

HVR®45 Header Plug

Rosenberger No.	Description	Cable Cross Section	Assembly Instruction	Panel Piercing	Product
HMAL105-320006T1-Y	Straight plug 4-hole flange Shielded	2×6 mm ²	MA_HV0170	MB_803	

-Y please fill in requested coding

For more information
refer to our website:
www.rosenberger.com/hvr45

