

HPK

The Rosenberger HPK system can achieve 275 A at up to 1000 V. With their excellent vibration and current capacity performance the HPK connectors are well-suited to typical high voltage electric vehicle applications such as the connection between battery, inverter and PDU.

The range includes 1-, 2-, or 3-pole connectors which for maximum flexibility can be used with copper or aluminum cables in four different cable cross sections. Straight and angled cable couplers as well as corresponding headers are available, either with or without HVIL (high-voltage interlock).

Technical Properties

- IP class mated acc. to IP6K9K / IPX8 / IPXXD
- IP class unmated acc. to IPXXB
- Current capacity (50 mm²): 275 A at 85 °C
- Working voltage 1000 V DC
- Test voltage 3200 V DC

Features and Benefits

- Highest power with minimum installation space
- Versatile product range
- High temperature and vibration performance
- Design makes these series easier to assemble, creating faster processes and higher quality
- With or without HVIL (high-voltage interlock)

Applications

- Battery connection
- Inverter
- E-machine – PDU

Cables

Copper

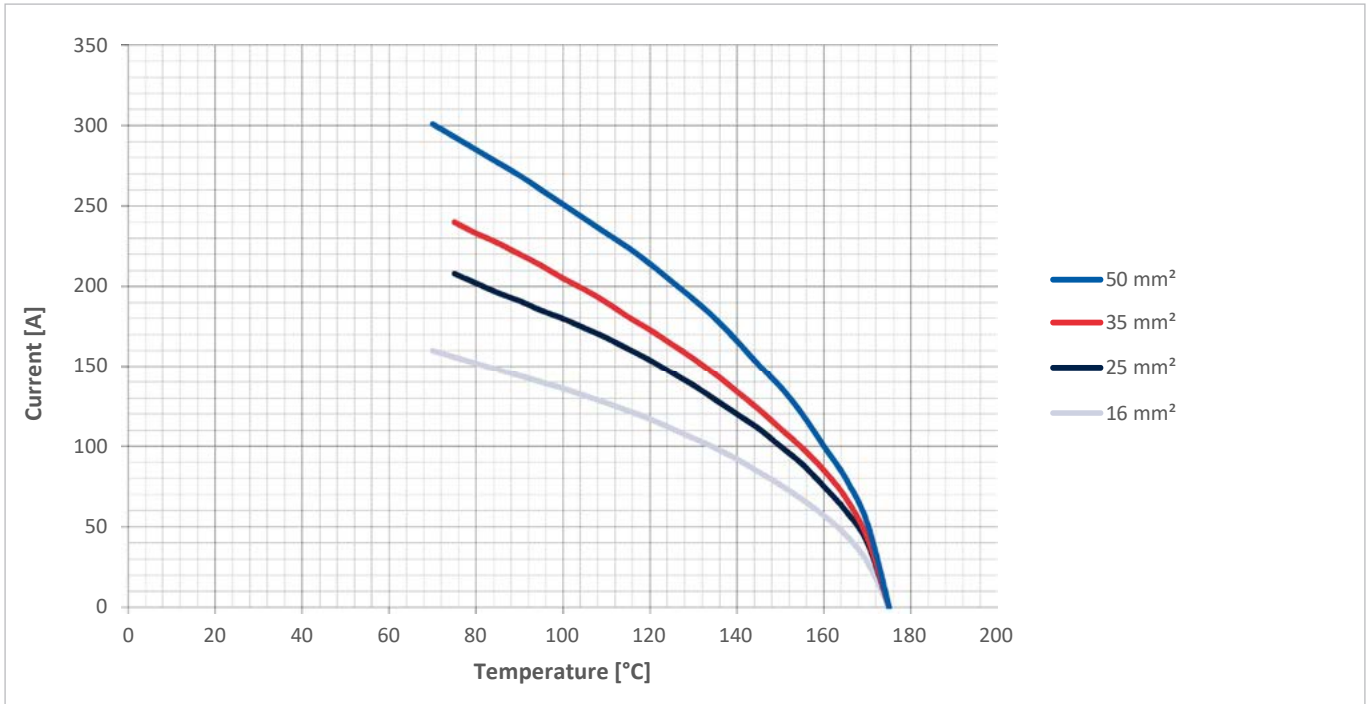
- FHLR2GCB2G 16 mm² / 0.21
- FHLR2GCB2G 25 mm² / 0.21
- FHLR2GCB2G 35 mm² / 0.21
- FHLR2GCB2G 50 mm² / 0.21

Aluminum

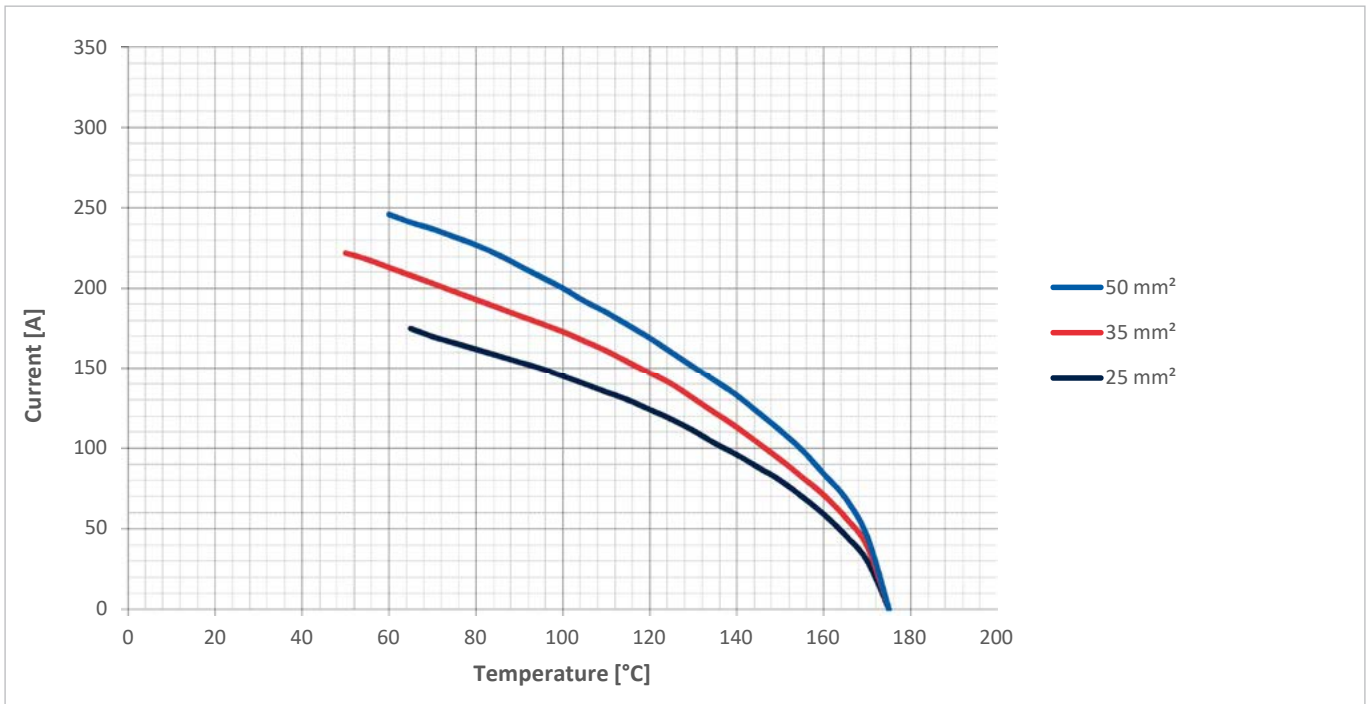
- FHLALR2GCB2G 25 mm²
- FHLALR2GCB2G 35 mm²
- FHLALR2GCB2G 50 mm²



Derating Graph HPK acc. to DIN EN 60512-5-2

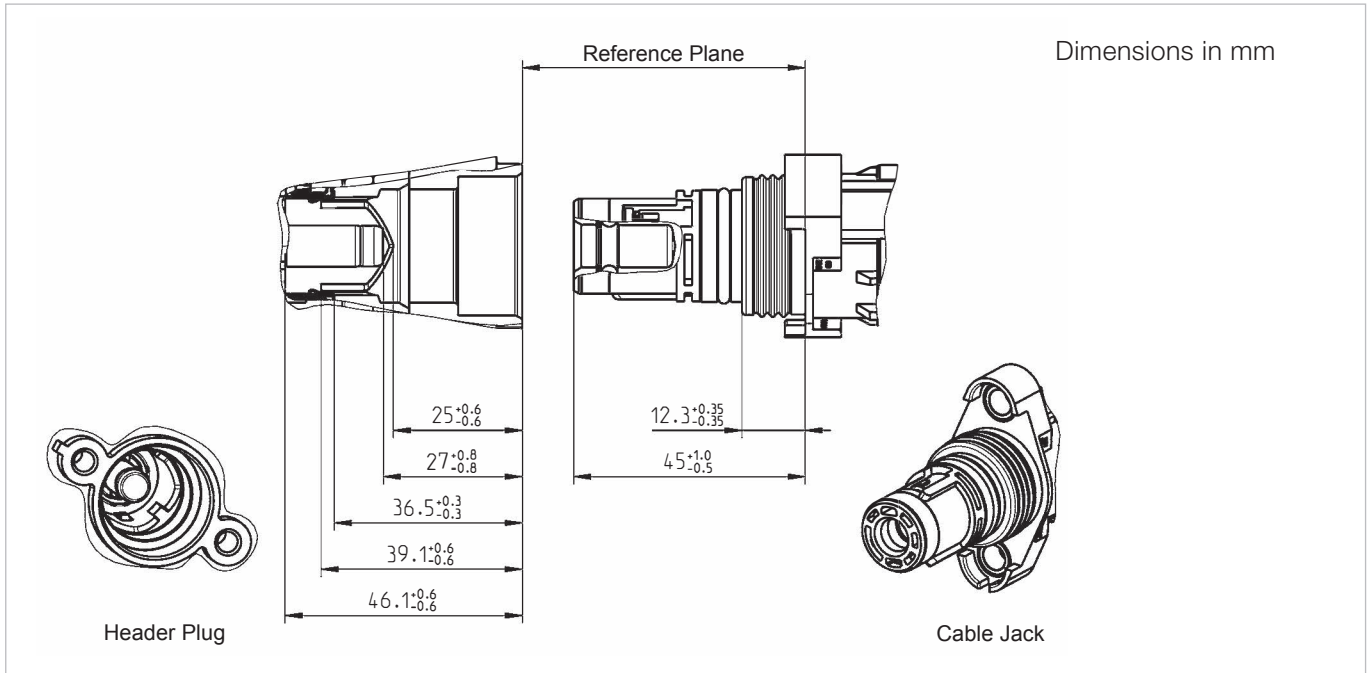


HPK Straight Copper Cables



HPK Straight Aluminum Cables

Interface Dimensions HPK (Code H4)



Coding HPK

Coding Housing		Coding Jack	Color/RAL-No. (Similar)		Jack
Z		A	Red/ 3001		
Z		B	Black/ 9005		
Z		C	Waterblue/ 5021		

Coding Housing		Coding Jack	Color/RAL-No. (Similar)		Jack
B		B	Black/ 9005		
		A	Red/ 3001		
C		B	Black/ 9005		
		C	Waterblue/ 5021		

Colors of the plastic housings are in accordance with the listed RAL colors, minor color differences during manufacturing are possible.

Technical Data HPK (Code H4)

Applicable Standards

Interface according to	Rosenberger RN_084-01 Rosenberger RN_087-01 Rosenberger RN_087-04
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Electrical Data

Insulation resistance	$\geq 200 \text{ M}\Omega$
Voltage class	B 60 V DC < U \leq 1500 V DC 30 V AC < U \leq 1000 V AC
Center contact resistance	$\leq 0.26 \text{ m}\Omega$
Outer contact resistance	$\leq 10 \text{ m}\Omega$
Current capacity for 50 mm ²	275 A at 85 °C
Test voltage	3200 V DC
Working voltage	1000 V DC
High-Voltage Interlock (HVIL)	available

Mechanical Data

Mating cycles	≥ 50
Engagement force	1-pole: < 75 N 2-pole: < 100 N
Coding efficiency	$\geq 300 \text{ N}$
Cable cross sections copper	16 mm ² , 25 mm ² , 35 mm ² , 50 mm ²
Cable cross sections aluminum	25 mm ² , 35mm ² , 50 mm ²
Cable connection angle	90°, 180°
Vibration class	LV215 PG17 – II
IP class (mated)	IP6K9K / IPX8 / IPXXD
IP class (unmated)	IPXXB
Touch proof	acc. to DIN EN 60529

Environmental Data

Temperature range	-40 °C to +140 °C
RoHS	compliant

Rosenberger connectors fulfill in principle the indicated data of the technical data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.