

# HVR<sup>®</sup>420

The compact HVR<sup>®</sup>420 connectors have the highest current carrying capacity in the Rosenberger product portfolio. They achieve a current intensity of 420 A even in the 95 mm<sup>2</sup> variant. With the largest cable cross section of 120 mm<sup>2</sup>, current intensities of up to 450 A can be achieved at a temperature of 85 °C. The additional slide locking mechanism (CPA – Connector Position Assurance) prevents the connection from unmating accidentally. Typical applications include the supercharging of electric vehicle batteries with up to 450 kWh.

## Technical Properties

- Current capacity (120 mm<sup>2</sup>): 450 A at 85 °C
- Working voltage 1000 V DC / test voltage 2500 V DC
- Cross sections 70 - 120 mm<sup>2</sup> (on request 35 mm<sup>2</sup>)
- IPClass mated acc. to IP6K9K / IPX8
- IP class unmated acc. to IPXXB
- Vibration class II according to LV 215 PG17
- Optional for 120 mm<sup>2</sup> cable (Al/Cu) and double header in design (test voltage 4300 V DC)

## Applications

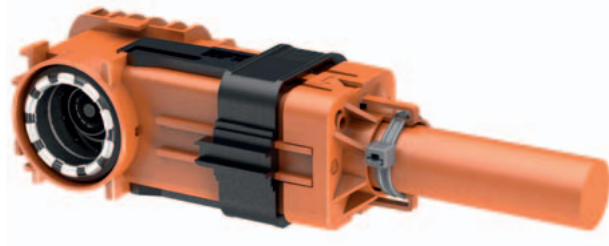
- Charging and supercharging unit for E-car application

## Cables

- FHLR2GCB2G / 70 mm<sup>2</sup> / 0.20 mm / LV216-2
- FHLR2GCB2G / 95 mm<sup>2</sup> / 0.20 mm / LV216-2
- FHLR2GCB2G / 120 mm<sup>2</sup> / 0.20 mm / LV216-2

## Features and Benefits

- Highest performance up to 450 A
- With HVIL
- Right angle connector, header

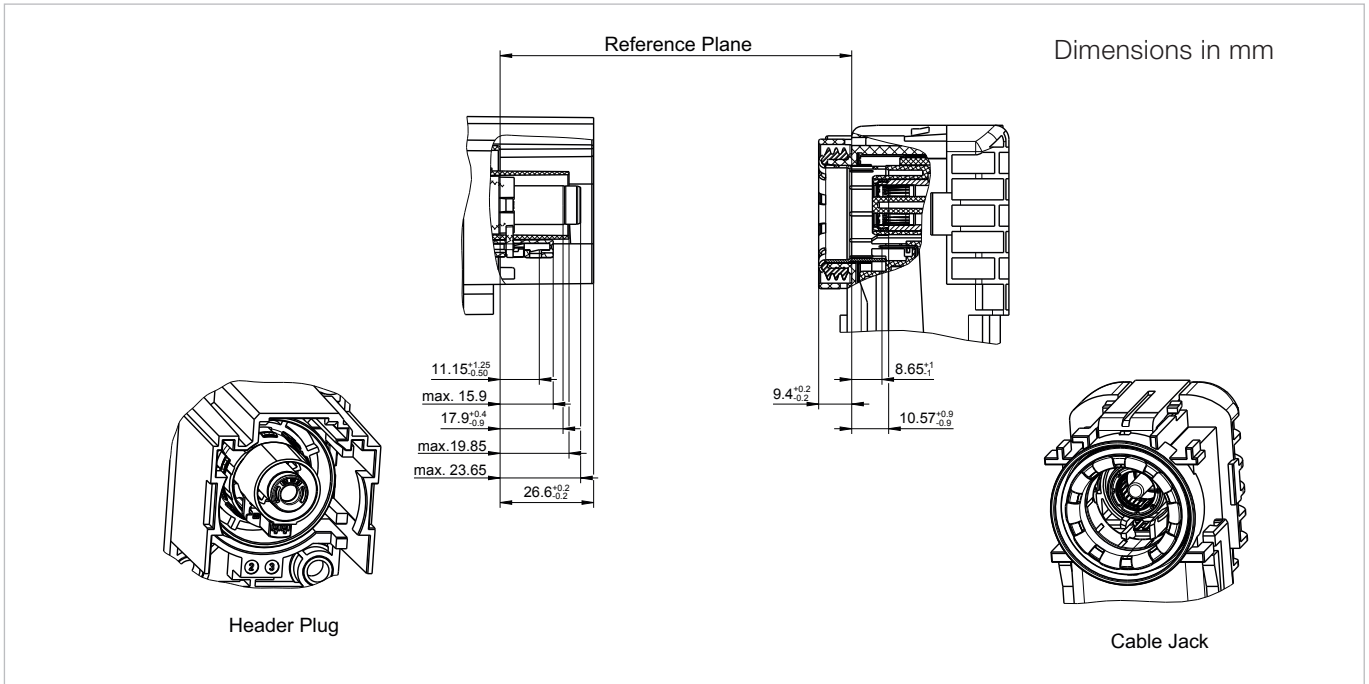


## Coding HVR<sup>®</sup>420

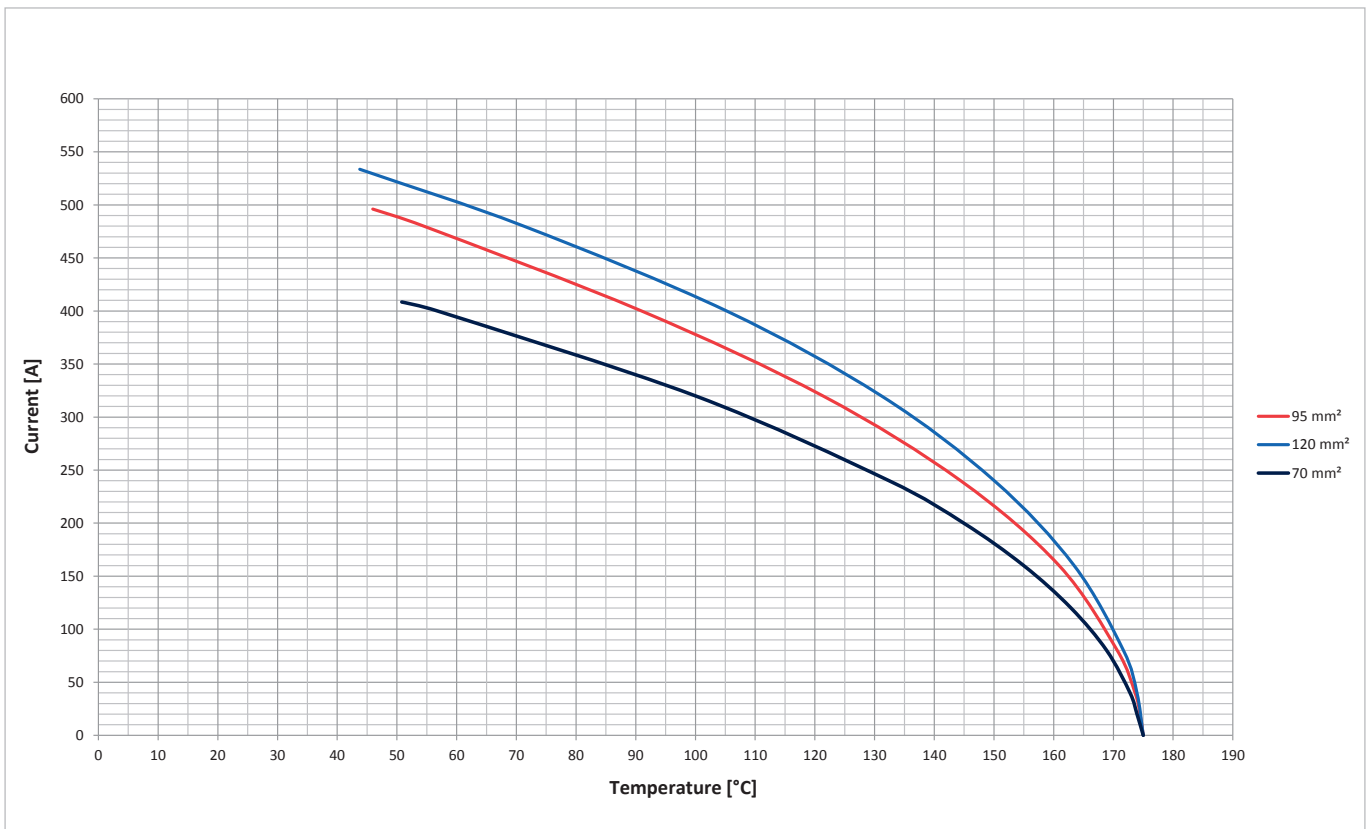
Coding	Slider Jack Color/RAL-No. (Similar)	Jack	Plug
A	Black/ 9005		
B	White/ 9010		
C	Blue/ 5012		
D	Violet/ 4004		
E	Green/ 6017		
F	Brown/ 8011		

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

Interface Dimensions HVR®420 (Code HA)



Derating Graph HVR®420 acc. to DIN EN 60512-5-2



## Technical Data HVR®420 (Code HA)

### Applicable Standards

Interface according to	RN_113-01
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### Electrical Data

Insulation resistance	≥ 200 MΩ at 1000 V DC
Voltage class	B 60 V DC <U ≤ 1500 V DC 30 V AC <U ≤ 1000 V AC
Center contact resistance	≤ 0.22 mΩ
Outer contact resistance	≤ 2.00 mΩ
Current capacity for 120 mm <sup>2</sup>	450 A at 85 °C (Cu-cable)
Test voltage	2500 V DC
Working voltage	1000 V DC
High-Voltage Interlock (HVIL)	yes

### Mechanical Data

Mating cycles	≥ 50
Engagement force	≤ 100 N
Disengagement force	≤ 100 N
Coding efficiency	≥ 300 N
Cable cross sections	35 mm <sup>2</sup> on request, 70 mm <sup>2</sup> , 95 mm <sup>2</sup> , 120 mm <sup>2</sup>
Cable connection angle	90°
Vibration class	according to LV215 PG17 – II*
IP class (mated)	IP6K9K / IPX8
IP class (unmated)	IPXXB

\* depending on cable fixation

### Environmental Data

Temperature range	-40 °C to +125 °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.