

# eMobile Charging cables





## Over half a century competence and experience

Bals is a quality brand for innovation, reliability and service worldwide. For more than 65 years we have been producing connectors for the world market, and we are known for the highest quality "Made in Germany".

In our plants a team of highly qualified and motivated colleagues is manufacturing in an uncompromised quality approach multiple thousand state-of-the-art devices per day. With an extraordinary

high production depth we are covering the areas of product design and development, contact manufacturing, tooling, injection moulding, assembly and quality control. From the first idea to the final product, all this takes place in-house, to ensure constant supply chain and limiting the carbon footprint.



## Three modern factories one consistent quality standard

From the beginning the headquarters of our company is located in Kirchhundem-Albaum (North-Rhine-Westphalia). Product development, marketing and sales, as well as administration are located here. In addition, plug and socket systems and special products are manufactured in the Kirchhundem-Albaum factory. The factory in Freiwalde (Brandenburg), built in 1994 and expanded many times since, has state-of-the-art production facilities for fully-automatic manufacturing of unique CEE plugs and connectors as well as a highly-effective logistics centre. Bals is active since decades in the manufacturing of components for the electric vehicle charging infrastructure. From 2021 in a dedicated new factory in Kirchhundem-Würdinghausen.



## Future solutions for global markets

The proximity and partnership with our customers has guided our products in over 80 countries around the world. We are active participants of standardisation procedure on international and national area and commit with input into the legislation works of compliance topics on multiple stakeholder levels. We remain at the pulse of time, and challenge future topic well in advance, to ensure product compliance not only to today's requirements, but also future standards.



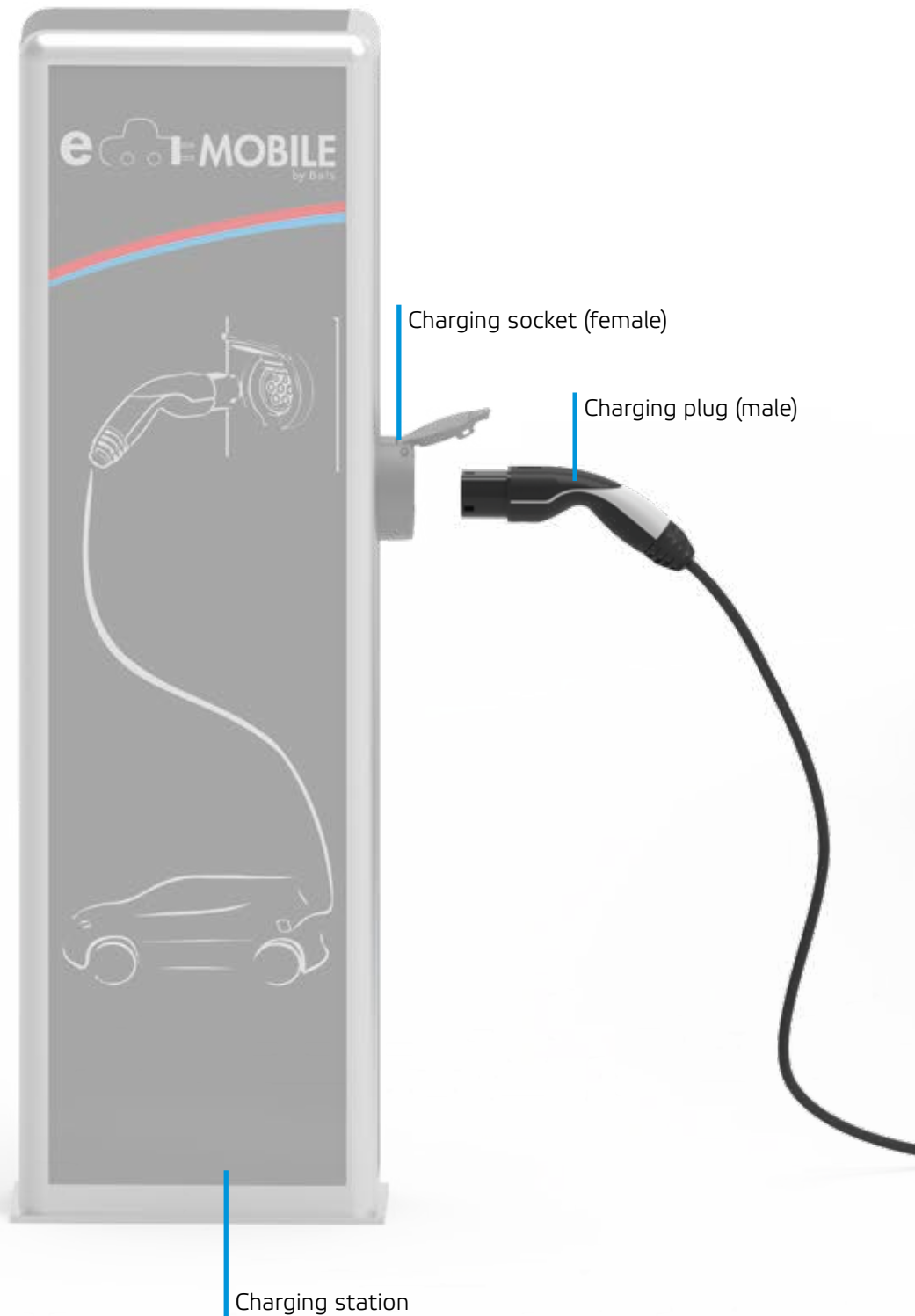
## Our responsibility to the highest quality

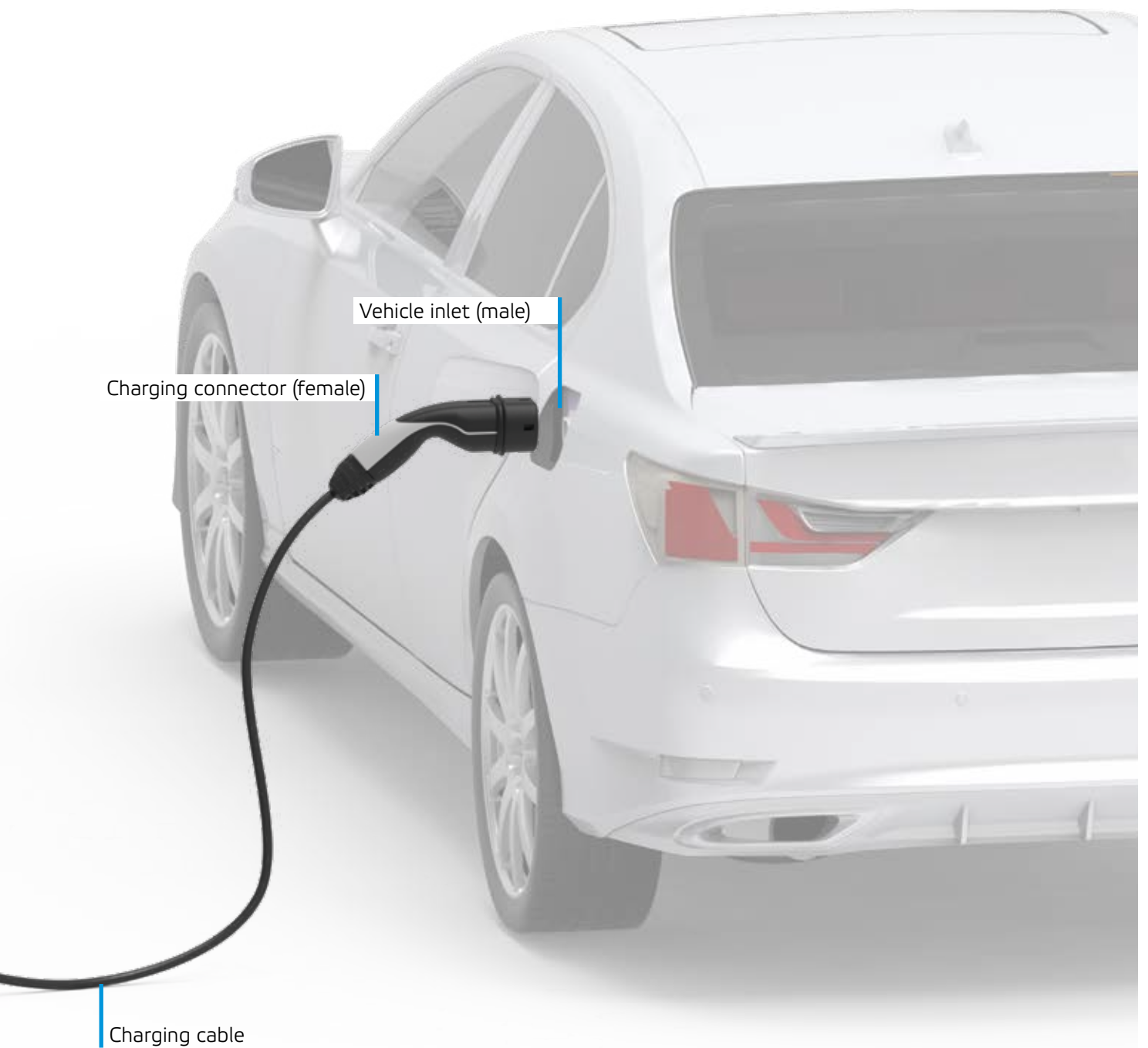
Quality does not permit any compromise. Besides having an ISO-9001-certified production process in all factories, we are implementing additional IATF based quality process beyond. Full automated and controlled assembly lines, electrical and mechanical quality control or extended process documentation are only few of them. The products are undergoing additional market driven evaluations in our in-house test laboratory which is under the positive assessment of VDE and ASEFA. We remain proactive on customer needs and validation requests.

The weakest link in the charging chain determines the maximum allowed charging current: The charging current from the vehicle is limited depending on the output of the charging station and the resistance coding in the charging line.

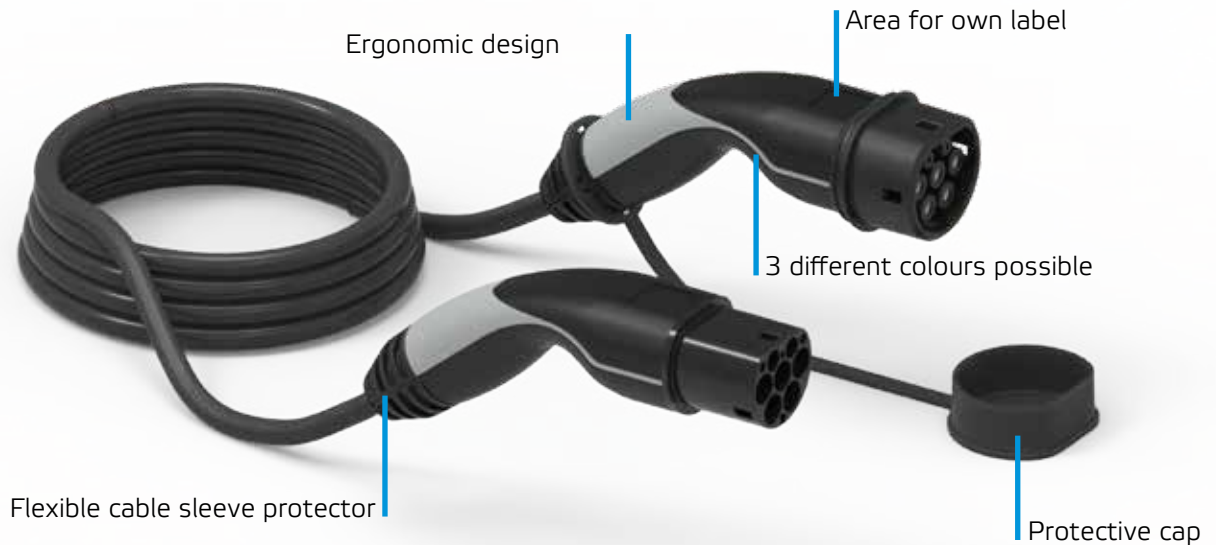
The possible resistance codes:

- 20A - 680 Ohm
- 32A - 220 Ohm
- 63A - 100 Ohm



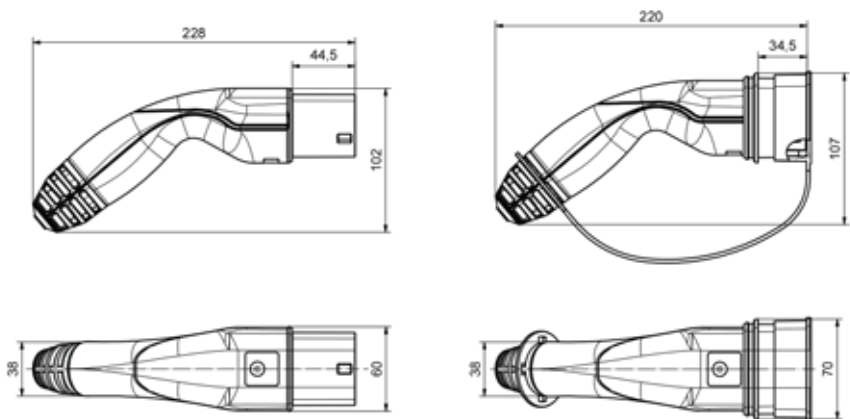


**Charging mode 3 - type 2, cable type: flat**



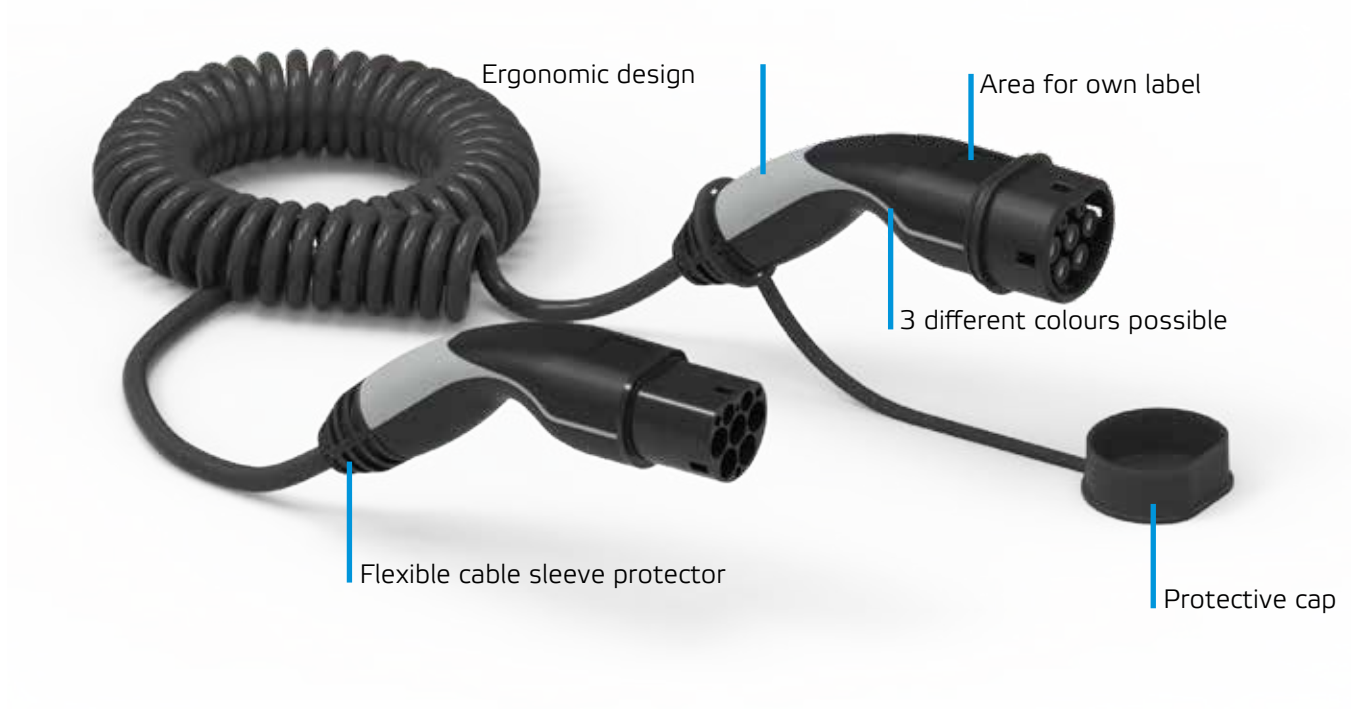
- Vehicle side (EV): type 2 charging connector
- Infrastructure side (EVCS): type 2 charging plug

Colour of connectors: black - grey - black



Charging capacity	Cable length	Phase	Resistance	Cable variant	Part No.
up to 20A - up to 3,7kW	5m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-329151X050B
up to 20A - up to 3,7kW	8m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-329151X080B
up to 32A - up to 7,4kW	5m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-330151X050B
up to 32A - up to 7,4kW	8m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-330151X080B
up to 20A - up to 11kW	5m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-331151X050B
up to 20A - up to 11kW	8m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-331151X080B
up to 32A - up to 22kW	5m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-332151X050B
up to 32A - up to 22kW	8m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-332151X080B

## Charging mode 3 - type 2, cable type: coiled



- Vehicle side (EV): type 2 charging connector
- Infrastructure side (EVCS): type 2 charging plug

Colour of connectors: black - grey - black

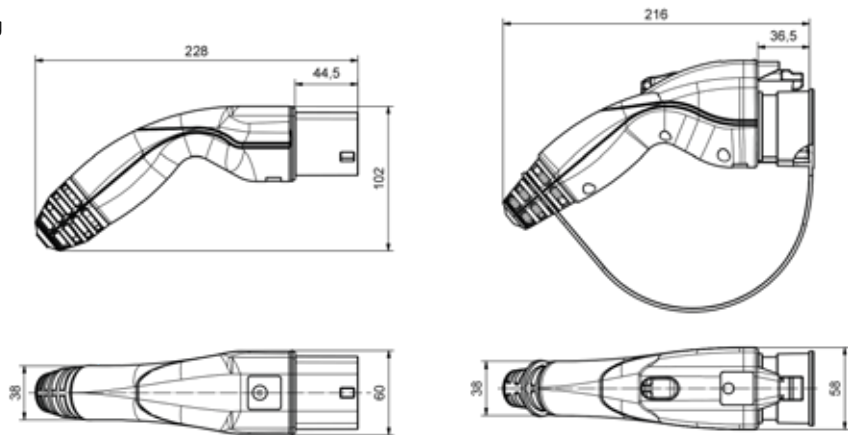
Charging capacity	Working length	Phase	Resistance	Cable variant	Part No.
up to 20A - up to 3,7kW	4m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-329151XG040B
up to 20A - up to 3,7kW	5m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-329151XG050B
up to 20A - up to 3,7kW	6m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-329151XG060B
up to 32A - up to 7,4kW	4m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-330151XG040B
up to 32A - up to 7,4kW	5m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-330151XG050B
up to 32A - up to 7,4kW	6m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-330151XG060B
up to 20A - up to 11kW	4m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-331151XG040B
up to 20A - up to 11kW	5m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-331151XG050B
up to 20A - up to 11kW	6m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-331151XG060B
up to 32A - up to 22kW	4m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-332151XG040B
up to 32A - up to 22kW	5m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-332151XG050B
up to 32A - up to 22kW	6m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-332151XG060B

Charging mode 3 - type 1 to type 2, cable type: flat



- Vehicle side (EV): type 1 charging connector
- Infrastructure side (EVCS): type 2 charging plug

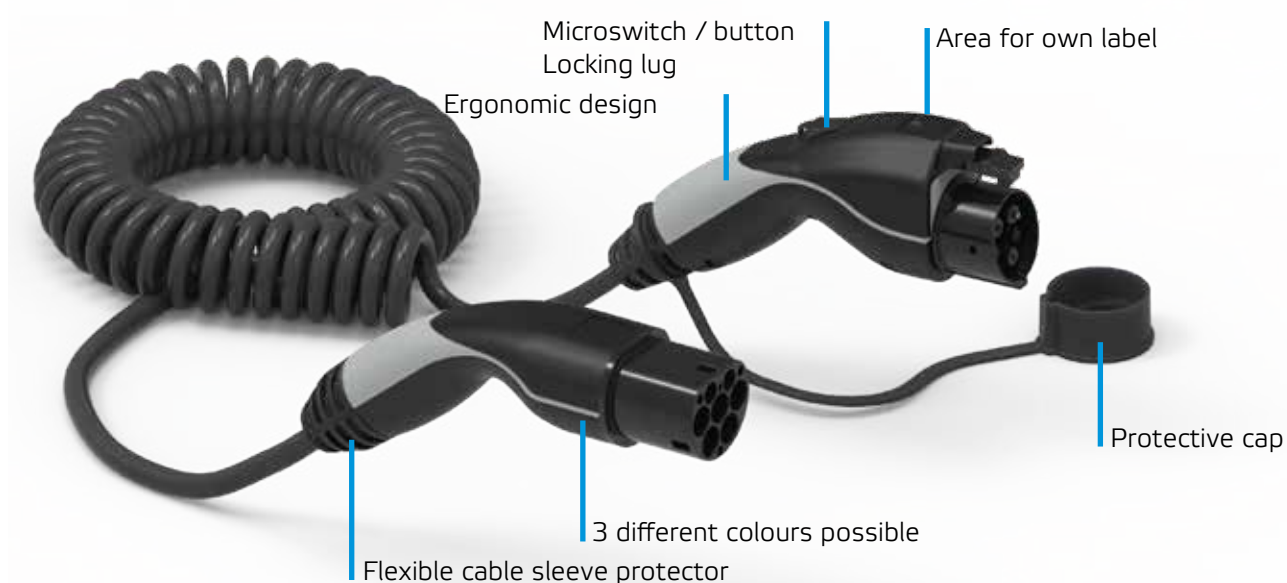
Colour of connectors: black - grey - black



Charging capacity	Cable length	Phase	Resistance	Cable variant	Part No.
up to 20A - up to 3,7kW	5m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-322151X050
up to 20A - up to 3,7kW	8m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-322151X080
up to 32A - up to 7,4kW	5m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-323151X050
up to 32A - up to 7,4kW	8m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-323151X080



## Charging mode 3 - type 1 to type 2, cable type: coiled



- Vehicle side (EV): type 1 charging connector
- Infrastructure side (EVCS): type 2 charging plug

Colour of connectors: black - grey - black

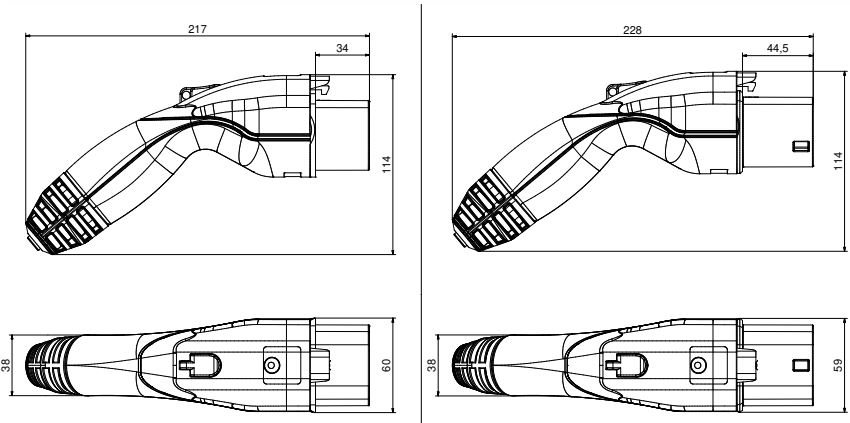
Charging capacity	Working length	Phase	Resistance	Cable variant	Part No.
up to 20A - up to 3,7kW	4m	1-phase	680 $\Omega$	3x2,5+1x0,5 mm <sup>2</sup>	E-322151XG040
up to 20A - up to 3,7kW	5m	1-phase	680 $\Omega$	3x2,5+1x0,5 mm <sup>2</sup>	E-322151XG050
up to 20A - up to 3,7kW	6m	1-phase	680 $\Omega$	3x2,5+1x0,5 mm <sup>2</sup>	E-322151XG060
up to 32A - up to 7,4kW	4m	1-phase	220 $\Omega$	3G6+1x0,5 mm <sup>2</sup>	E-323151XG040
up to 32A - up to 7,4kW	5m	1-phase	220 $\Omega$	3G6+1x0,5 mm <sup>2</sup>	E-323151XG050
up to 32A - up to 7,4kW	6m	1-phase	220 $\Omega$	3G6+1x0,5 mm <sup>2</sup>	E-323151XG060

**Charging mode 3 - type GB/T, cable type: flat**



- Vehicle side (EV): type GB/T charging connector
- Infrastructure side (EVCS): type GB/T charging plug

Colour of connectors: black - grey - black



Charging capacity	Cable length	Phase	Resistance	Cable variant	Part No.
up to 20A - up to 3,7kW	5m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-249151X050
up to 20A - up to 3,7kW	8m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-249151X080
up to 32A - up to 7,4kW	5m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-250151X050
up to 32A - up to 7,4kW	8m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-250151X080
up to 20A - up to 11kW	5m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-251151X050
up to 20A - up to 11kW	8m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-251151X080
up to 32A - up to 22kW	5m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-252151X050
up to 32A - up to 22kW	8m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-252151X080

## Charging mode 3 - type GB/T, cable type: coiled



- Vehicle side (EV): type GB/T charging connector
- Infrastructure side (EVCS): type GB/T charging plug

Colour of connectors: black - grey - black

Charging capacity	Working length	Phase	Resistance	Cable variant	Part No.
up to 20A - up to 3,7kW	4m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-249151XG040
up to 20A - up to 3,7kW	5m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-249151XG050
up to 20A - up to 3,7kW	6m	1-phase	680 Ω	3x2,5+1x0,5 mm <sup>2</sup>	E-249151XG060
up to 32A - up to 7,4kW	4m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-250151XG040
up to 32A - up to 7,4kW	5m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-250151XG050
up to 32A - up to 7,4kW	6m	1-phase	220 Ω	3G6+1x0,5 mm <sup>2</sup>	E-250151XG060
up to 20A - up to 11kW	4m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-251151XG040
up to 20A - up to 11kW	5m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-251151XG050
up to 20A - up to 11kW	6m	3-phase	680 Ω	5G2,5+1x0,5 mm <sup>2</sup>	E-251151XG060
up to 32A - up to 22kW	4m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-252151XG040
up to 32A - up to 22kW	5m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-252151XG050
up to 32A - up to 22kW	6m	3-phase	220 Ω	5G6+1x0,5 mm <sup>2</sup>	E-252151XG060

 made  
 in  
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Simply. Well. Connected.

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