CHARGING SOLUTIONS

for e-mobility

LAPP

E-MOBILITY WITHOUT LIMITS

LAPP HELPS YOU REACH YOUR DESTINATION WITH CERTIFIED PRODUCTS FOR CHARGING AT CHARGING STATIONS AND WALL BOXES, ALONG WITH SOCKETS FOR HOUSEHOLDS AND INDUSTRY.

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MODE 3 CHARGING CABLES

FOR USE ON PUBLIC CHARGING STATIONS AND WALL BOXES

CABLE VARIANTS

>> SMOOTH

THE SIMPLE SOLUTION

>> HELIX

FOR SIMPLE HANDLING

The patented LAPP HELIX is a quick-charge cable that rolls back up to automatically take its original shape after charging is complete. As such, users don't have to spend time rolling it up by hand – the HELIX is quick and safe to store away.

>> SPIRAL

THE COMPACT VARIANT

POWER VARIANTS

Cable type	Current strength	Variant	Cable design	Charging power
Smooth, Spiral, Helix	32 A	1-phase	3G6 mm² + 0.5 mm²	7.4 kW
	32 A	3-phase	5G6 mm² + 0.5 mm²	22 kW

CONNECTOR TYPES

Type 2 coupling

Type 2 coupling
32 A Up to 22 kW IEC certified Silver-plated contacts

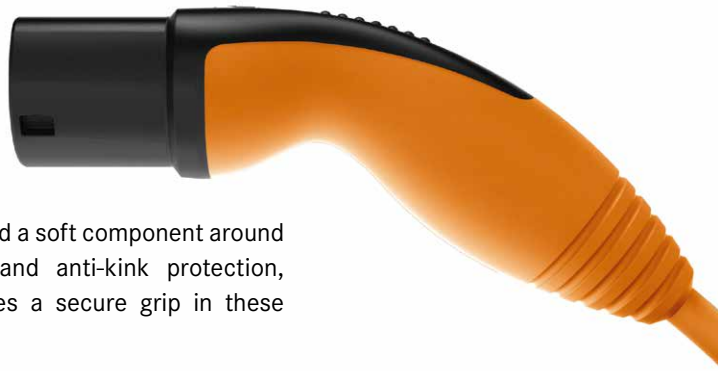
Type 2 connector

Type 2 connector
32 A Up to 22 kW IEC certified Silver-plated contacts

CONNECTOR DESIGN

LOGO AND COLOURS

Using custom logos and company colours ensures that the connectors reflect your corporate design, making the charging cable part of your product family.



HEAVY DUTY LINE

The robust HEAVY DUTY connector is suitable for particularly demanding professional applications, e.g. public charging stations, carsharing or parcel services.

The connector, which is made of solid material and is directly injection moulded, consists of a hard component in the connector and a soft component around the handle and anti-kink protection, which ensures a secure grip in these areas.

The HEAVY DUTY connector is hazard free, even under extremely high levels of stress. This reduces your maintenance and service costs.

DESIGN LINE

The DESIGN connector's housing consists of three shells, although customised design variations are possible in all colour combinations.

The light material and slim shape of the DESIGN connector makes it ideal for everyday use in the private sector.

MODE 2 CHARGING CABLES

FOR CHARGING ON HOUSEHOLD OR INDUSTRIAL SOCKETS

PROPERTIES

VARIABLE

- For charging on household or industrial sockets (country-specific variants available)
- Control box fitted with a type 2 coupling on the vehicle side
- Custom design with variable cable and coupling colour

USER FRIENDLY

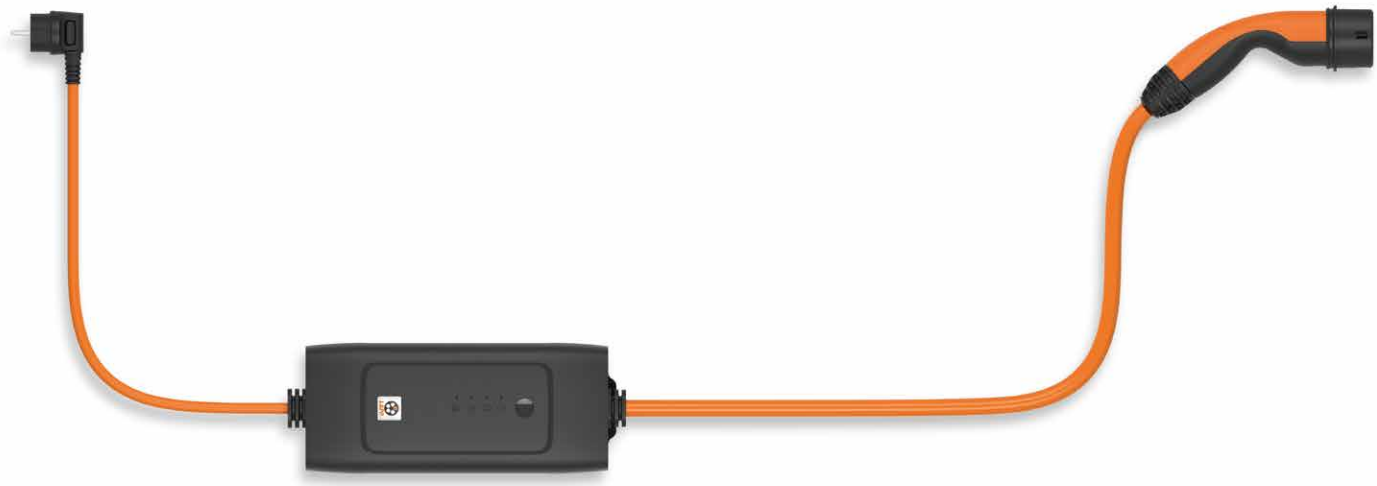
- Simply plug-in and charge
- Automatically detects the maximum charging current through coding in the power cable
- The charging procedure is fully automatic and ends as soon as the battery is charged

SAFE

- IEC certified
- Meets IEC standard 62752
- Integrated differential current sensor for excellent safety
- Temperature sensors in the power connector and control box detect impermissible heat build-up, and reduce the charging current or interrupt the charging procedure if the permissible temperature is exceeded
- Protection rating IP55 (control box)
- Rollover safe

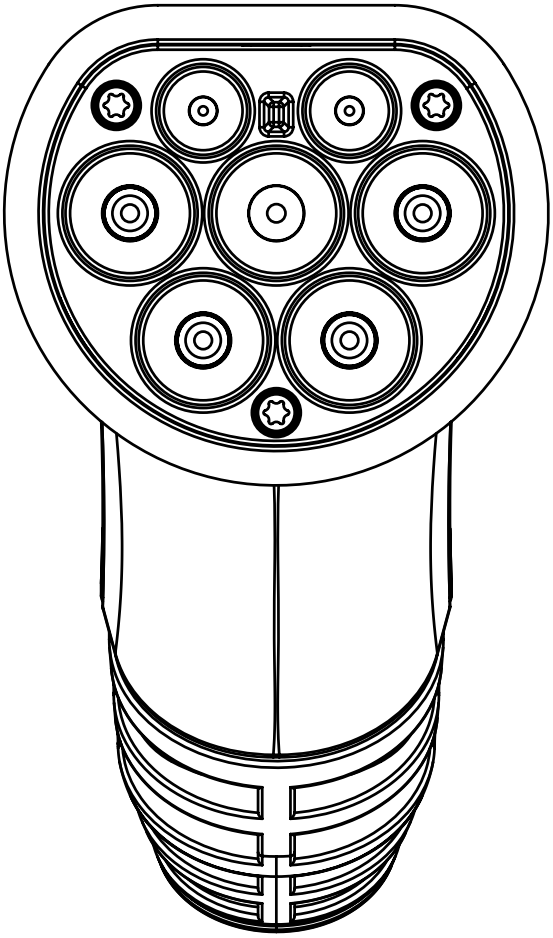
POWERFUL

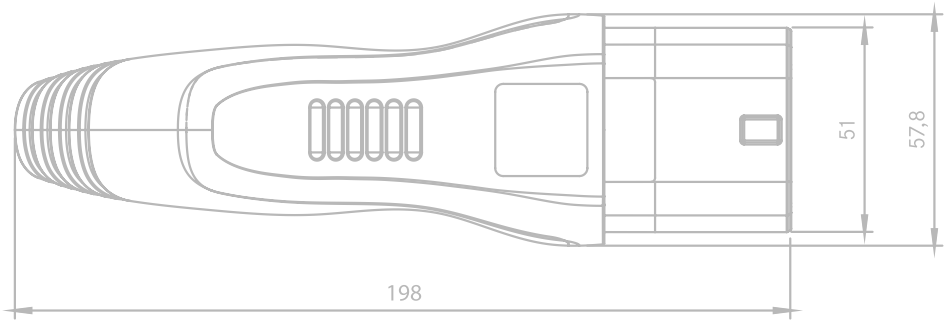
- Up to 22 kW possible (with CEE connector and 32 A power cable)



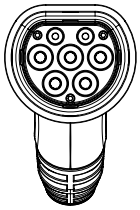
SPECIFICATIONS

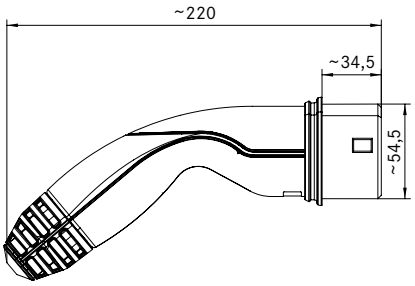
MODE 3 AND MODE 2 CHARGING CABLES

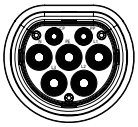




LAPP CHARGE CHARGING COUPLING TYPE 2 · DESIGN LINE







The LAPP CHARGE charging cable with coupling type 2 is a connector for charging electric vehicles that establishes the connection between the electric vehicle and the charging cable set. The three-part shell construction means that various colour variants can be taken into consideration if customised colours are requested. Standard colours: orange/ black. Dust cap is included.

Optional:
Customer logo

The slim design guarantees ergonomic use.

Variants

1 phase 32 A - type LC2-KU321	Cable 3G6+0.5 mm² (prEN 50620)
3 phase 32 A - type LC2-KU323	Cable 5G6+0.5 mm² (prEN 50620)

Electrical properties

Assembly 1 phase	L1, N, PE, PP, CP
Assembly 3 phase	L1, L2, L3, N, PE, PP, CP
Current in the power contacts	32 A (L1, L2, L3, N, PE)
Current in the control contacts	2 A (CP, PP)
Rated operating voltage	
Power contacts	1 phase 250 VAC/3 phase 450 VAC
Rated operating voltage	
Control contacts	30 VDC (CP, PP)
Isolation voltage	500 V
Coding resistance (between PP and PE)	680 Ω ±1% (20 A), 220 Ω ±1% (32 A)

Contact resistances reduced by more than the standard requirement through optional soldering of the power contacts

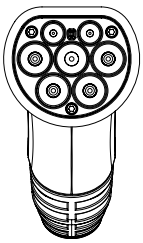
Mechanical properties

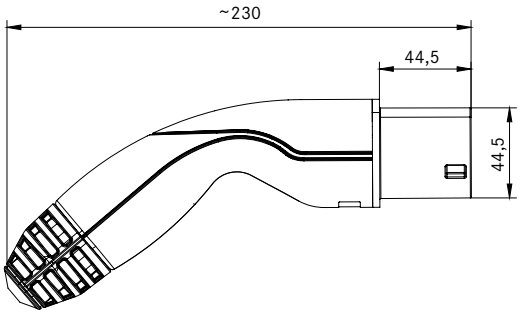
Power contacts (L1, L2, L3, N, PE)	Lamella contacts silver-plated brass
Control contacts (CP, PP)	Lamella contacts silver-plated brass
Material housing	Reinforced thermoplastic moulding material

General properties

Protection rating	IP44 (mated or unmated with dust cap)
Operating temperature range	-30 °C to +50 °C
Standard	IEC 62196-1 and IEC 62196-2
Approvals	CE-compliance, VDE-certified

LAPP CHARGE CHARGING CONNECTOR TYPE 2 · DESIGN LINE





The LAPP CHARGE charging plug type 2 is a connector for charging electric vehicles that establishes the connection between the charging cable set and the infrastructure's charging socket. The three-part shell construction means that various colour variants can be taken into consideration if customised colours are requested. Standard colours: orange/ black.

Optional:
Customer logo

The slim design guarantees ergonomic use.

Variants

1 phase 32 A - type LC2-KU321,	Cable 3G6+0.5 mm² (prEN 50620)
3 phase 32 A - type LC2-KU323	Cable 5G6+0.5 mm² (prEN 50620)

Electrical properties

Assembly 1 phase	L1, N, PE, PP, CP
Assembly 3 phase	L1, L2, L3, N, PE, PP, CP
Current in the power contacts	32 A (L1, L2, L3, N, PE)
Current in the control contacts	2 A (CP, PP)
Rated operating voltage	
Power contacts	1 phase 250 VAC/3 phase 450 VAC
Rated operating voltage	
Control contacts	30 VDC (CP, PP)
Isolation voltage	500 V
Coding resistance (between PP and PE)	680 Ω ±1% (20 A), 220 Ω ±1% (32 A)

Contact resistances reduced by more than the standard requirement through optional soldering of the power contacts

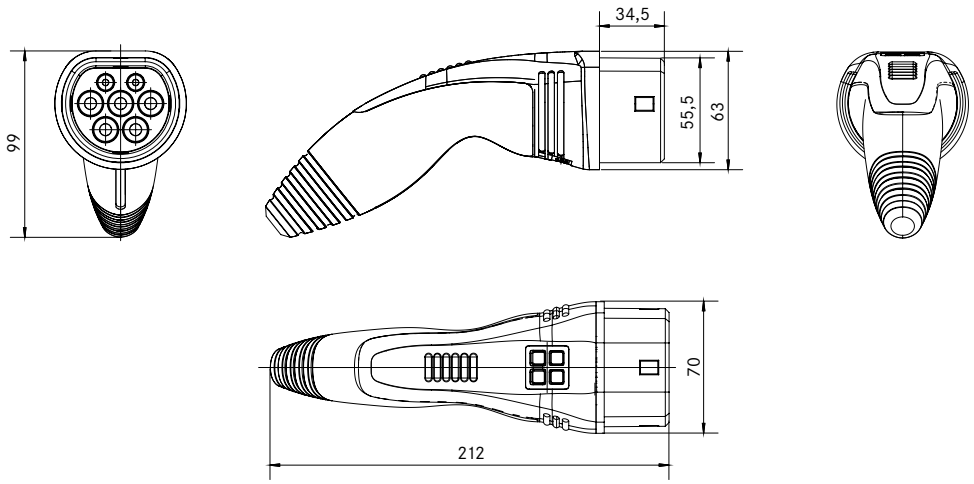
Mechanical properties

Power contacts (L1, L2, L3, N, PE)	Nickel-plated or silver-plated brass
Control contacts (CP, PP)	Nickel-plated or silver-plated brass
Material housing	Reinforced thermoplastic moulding material

General properties

Protection rating	IP44 (mated)
Operating temperature range	-30 °C to + 50 °C
Standard	IEC 62196-1 and IEC 62196-2
Approvals	CE-compliance, VDE-certified

LAPP CHARGE CHARGING COUPLING TYPE 2 · HEAVY DUTY LINE



The LAPP CHARGE charging cable with coupling type 2 is a connector for charging electric vehicles that establishes the connection between the electric vehicle and the charging cable set. The coupling, which is made of solid material and is directly injection moulded, consists of a black hard component in the connector and a soft component around the handle and anti-kink protection, which creates a comfortable grip in these areas. Customised colour requests can be taken into consideration here. Standard colours: orange (RAL 2003) and grey (RAL 7000). Dust cap is included.

Optional:
Customer logo

Electrical properties

Assembly (contacts) 1 phase	L1, N, PE, PP, CP
Assembly (contacts) 3 phase	L1, L2, L3, N, PE, PP, CP
Current in the power contacts	32 A (L1, L2, L3, N, PE)
Current in the control contacts	2 A (CP, PP)
Rated operating voltage	
Power contacts	200/346 V - 240/415 V
Rated operating voltage	
Control contacts	30 V (CP, PP)
Isolation voltage	500 V
Coding resistance (between PP and PE)	680 Ω ±1% (20 A), 220 Ω ±1% (32 A)

Contact resistances reduced by more than the standard requirement through optional soldering of the power contacts

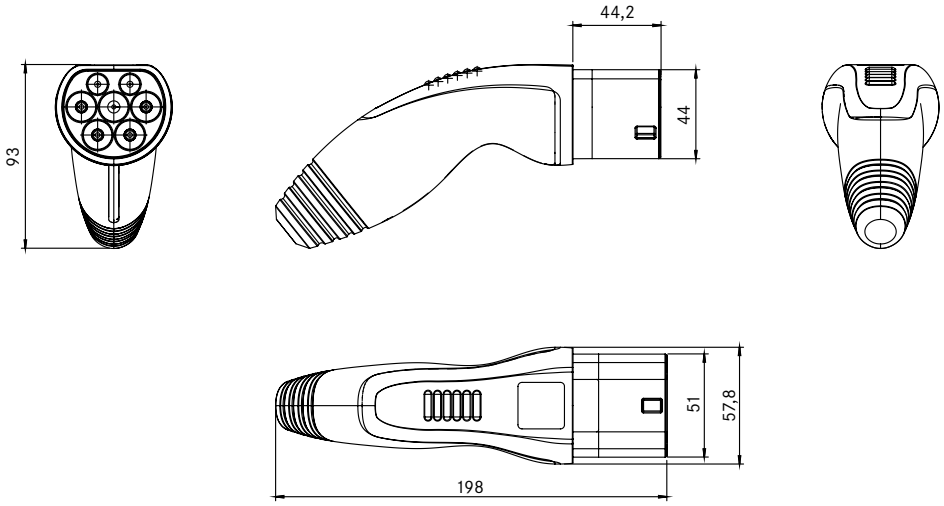
Mechanical properties

Power contacts (L1, L2, L3, N, PE)	Silver-plated brass
Control contacts (CP, PP)	Nickel-plated brass
Hard components material	PA6 (30% glass fibre filling)
Soft components material (handle area)	TPE

General properties

Protection rating	IP44 (mated)
Operating temperature range	-30 °C to +50 °C
Standard	IEC 62196
Approvals	CE-compliance, VDE-certified

LAPP CHARGE CHARGING CONNECTOR TYPE 2 · HEAVY DUTY LINE



The LAPP CHARGE charging plug type 2 is a connector for charging electric vehicles that establishes the connection between the charging plug on the charging infrastructure and the charging cable set. The connector, which is made of solid material and is directly injection moulded, consists of a black hard component in the connector and a soft component around the handle and anti-kink protection, which creates a comfortable grip in these areas. Customised colour requests can be taken into consideration here. Standard colours: orange (RAL 2003) and grey (RAL 7000).

Optional:
Customer logo

Electrical properties

Assembly (contacts) 1 phase	L1, N, PE, PP, CP
Assembly (contacts) 3 phase	L1, L2, L3, N, PE, PP, CP
Current in the power contacts	32 A (L1, L2, L3, N, PE)
Current in the control contacts	2 A (CP, PP)
Rated operating voltage	
Power contacts	200/346V - 240/415V
Rated operating voltage	
Control contacts	30 V (CP, PP)
Isolation voltage	500 V
Coding resistance (between PP and PE)	680 Ω ±1% (20 A), 220 Ω ±1% (32 A)

Contact resistances reduced by more than the standard requirement through optional soldering of the power contacts

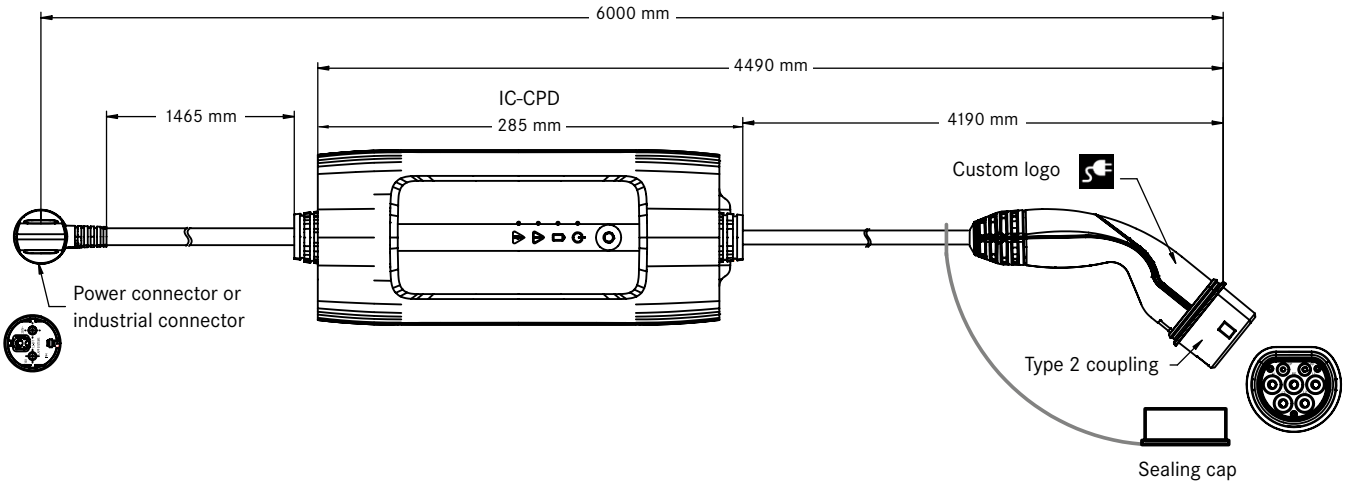
Mechanical properties

Power contacts (L1, L2, L3, N, PE)	Nickel-plated brass
Control contacts (CP, PP)	Nickel-plated brass
Hard components material	PA6 (30% glass fibre filling)
Soft components material	TPE

General properties

Protection rating	IP44 (mated)
Operating temperature range	-30 °C to +50 °C
Standard	IEC 62196
Approvals	CE-compliance, VDE-certified

LAPP CHARGE
MODE 2 CHARGING CABLE



Variants

Basic	vehicle cable and power cable hard-wired with IC-CPD
Vehicle connector	Type 2 (IEC 62196) Type GB (GB/T 20234)
Power connector 8 A - 10 A	Types EF, G, J, K, B (US), I (AUS/NZ)
Industrial connector 16 A - 32 A	CEE 230V 16A, CEE 400V 16A, CEE 230V 32A

Electrical data

Charging power	1-phase 16 A ➔ 3.6 kW 1-phase 32 A ➔ 7.4 kW 3-phase 32 A ➔22 kW
Nominal voltage	110 – 240 V
Mains frequency	50 – 60 Hz
Residual current circuit breaker (RCD)	Type A ≤ 30 mA AC, ≤ 6 mA DC
Safety functions	• Self-test • Monitoring of CP communication • Monitoring of protective conductor (not IT-Variant) • Relay monitoring • Detection of overcurrent, undervoltage, overvoltage • Temperature monitoring IC-CPD • Temperature monitoring Power connector (country specific) • Leakage current detection

Properties

Operating temperature	IEC -25 °C to +50 °C, UL -30 °C to +40 °C
Protection class	IP55 and 3R
Dimensions	
IC-CPD	285 x 125 x 84 mm
Weight	
IC-CPD	approx. 1.3 kg
Total weight of mode 2 charging cable	3.66 kg

EU Directives, Standards

2014/35/EU	Low Voltage Directive
2014/30/EU	Electromagnetic Compatibility Directive
2011/65/EU	RoHS
2012/19/EU	Waste of Electrical and Electronic Equipment
IEC 61851-1	Electric vehicle conductive charging system
IEC 62752	In-cable control and protection device for mode 2 charging of electric road vehicles (IC-CPD)

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www.lappmobility.com

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