

RADOX® High Power Charging System, HPC500 CCS Type-1, CC56, Standard

Description

Continuous High Power Charging at 500 kW
 Robust, safe ergonomic design
 Easy to handle, thin and light flexible Cable
 Short assembly time, maintenance free, easy replaceable
 Shutdown in case of overheating
 Temperature sensors for overheating protection
 Ready for metering system



The RADOX® High Power Charging System allows to use much smaller and lighter cables than a conventional non cooled system. The cooled cable technology can handle high continuous current up to 500 Ampère / 1000V. The ergonomic connector can be easily operated with small or large hands and allows to use the system in a convenient, safe way.

Technical data

Electrical specification

| Description | Value |
|----------------------------|-----------|
| Nominal continuous current | 500A |
| Nominal voltage | 1000 V DC |
| Test voltage cable | 7000 V DC |
| Test voltage system | 4200 V DC |

Mechanical data

| Characteristics | Value [approx.] | Value [approx.] | |
|---|-----------------|-----------------------|--|
| Weight of outer cable (including coolant) | 1.6 kg/m | | |
| Weight of Connector | 0.9 kg | | |
| Number of mating cycles | > 10'000 | | |
| Plug mating force | < 100 N | | |
| Bending radius | Fixed: 200 mm | Free movement: 305 mm | |

Environmental data

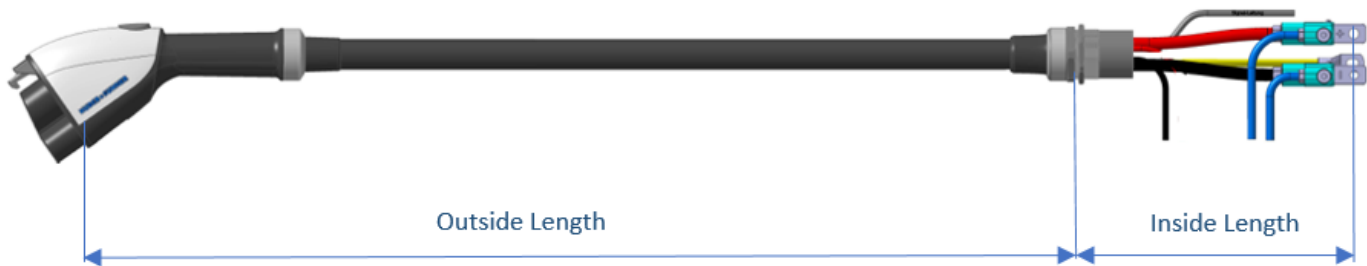
| Characteristics | Conditions | Tested acc. to | Values |
|---|-------------------------|----------------|---------------------|
| Temperature range | Operational temperature | IEC 62196 | -35°C up to +50°C |
| Coolant, readily biodegradable Details coolant: C3P-002 datasheet DOC-0000784407 | | OECD 301 B | > 80 % |
| Fire resistant | | UL 62 / FT2 | |
| RoHS compliant | | | |
| IP-Code: | | | 3R / IP67 (housing) |

Additional properties

| Signal Wires for Metering | Connected to | | |
|----------------------------|-------------------------------|--|--|
| 0.5mm2 Pink (PK) | DC+ | | |
| 0.5mm2 Turquoise (TQ) | DC- | | |
| Contacts | Execution | | |
| Exchangeable Body Contacts | DC+ / DC- | | |
| Temperature sensors | Position at the hottest point | | |

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Technical drawing



Ordering information

| Description | Weight nom. [kg] | Outside Length [m] | Inside length | nom. [m] | Item number |
|----------------------------|------------------|--------------------|--|---------------------------------|-------------|
| HPC500 CCS1 3.50/0.55 CC56 | 8.4 | 3.5 | Power DC+ Power DC- Earth Signal/Metering wires Tubes | 0.5 | 85136760 |
| HPC500 CCS1 4.50/0.55 CC56 | 9.9 | 4.5 | | 0.55 | 85138963 |
| HPC500 CCS1 5.50/0.55 CC56 | 11.8 | 5.5 | | 1.0 | 85138964 |
| HPC500 CCS1 6.50/0.55 CC56 | 13.3 | 6.5 | | 1.0 | 85138966 |
| HPC500 CCS1 6.50/1.50 CC56 | 13.6 | 6.5 | Power DC+ Power DC - Earth Signal/Metering wires Tubes | 1.5 1.5 1.5 1.5 1.5 | 85136764 |
| | Tolerance | +/- 0.060 | +/- 0.025 | | |

Normative references

| | |
|-----------------------------------|--|
| UL 2251 | UL Standard for Safety Plugs, Receptacles, and Couplers for Electric Vehicles Third Edition, Dated February 22, 2013 Control No.: 50xxxxx |
| UL 62 | UL Standard for Safety for Flexible Cords and Cables, Electric vehicles cables |
| IEC 62893-1 | Charging cables for electric vehicles |
| IEC 62893-4-2 WD ¹⁾ | Cables for DC charging according to mode 4 of IEC 61851-1 |
| IEC 62196-3 | Plugs socket-outlets, vehicle connectors and vehicle inlets |
| IEC TS 62196-3-1 CD ¹⁾ | DC Charging vehicle coupler and cable assembly with thermal management system |
| IEC 61851-23 | Electric vehicle conductive charging system-DC electric vehicle charging station |



1) under consideration of the newest draft

Change notes

| Chapter | Description |
|---------------------------------|----------------------|
| Description / Technical drawing | New pic of connector |
| Ordering information | Correct tolerance |