



power connection cable series

Liquid-Cooled High-Power DC Charging Cable

1000–1500 V DC 500–850 A liquid-cooled HPC / MCS fast-charging cable



1000–1500 V DC · 500–850 A

IEC 62893-4-2 / UL 2263

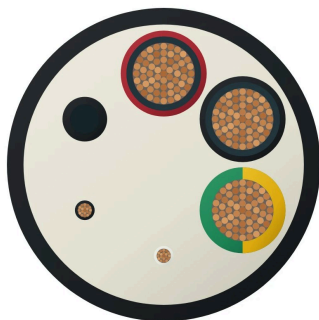
Water-Glycol / Dielectric Cooled

Application

Liquid-Cooled High-Power DC Charging Cable (HPC / MCS) engineered per IEC 62893-4-2 and UL 2263 for 350 kW to 1+ MW electric vehicle dispensers—integrating two internally cooled DC+ and DC– fine-stranded copper conductors (35–95 mm²).

Typical uses: 350–600 kW Passenger EV HPC Stations (CCS / NACS), 1+ MW Heavy-Truck Megawatt Charging (MCS), Electric Bus, Mining Haul Truck & Port AGV Depots, Electric Marine Ferry & eVTOL Fast Turnaround, High-Current Battery Test Bench Load Tethers

Construction



Cross-section, not to scale

- 1 2 × Liquid-cooled Class 6 copper DC+ & DC– cores + PE
- 2 Closed-loop coolant supply & return tubing
- 3 1,000–1,500 V DC TPE-E / EPR power core insulation
- 4 Shielded CP / PP / PLC control + PT1000 sensor pairs
- 5 Dual-layer wear-indicating E-TPU (PUR) outer sheath

Technical data

Typical values

Rated DC power voltage	1,000 V DC / 1,500 V DC (control cores: 30–60 V DC)	Continuous DC current	500 A (2×50 mm²) · 650 A (2×70 mm²) · 850 A (2×95 mm² @ 2.5 L/min)
Dielectric test voltage	3,500–5,000 V AC on DC power cores · 1,000 V AC on control cores	Pilot / PLC impedance	Shielded twisted pair supports HomePlug GreenPHY (ISO 15118)
Ambient operating temp.	-40 °C to +60 °C (surface touch temp kept ≤ +50 °C per IEC 61851)	Max. conductor / coolant temp.	+90 °C max core temp (monitored by dual PT1000 / NTC loops)
Heat dissipation capacity	Removes 150 to 320 W/m of I²R Joule heating via 2–4 L/min chiller	Nominal outer diameter	29.5 mm (500 A) · 32.8 mm (650 A) · 35.8 mm (850 A MCS)
Min. bend radius	5 × OD to 6 × OD (without coolant flow restriction < 90 %)	Flexing & torsion life	≥ 50,000 bending cycles & ±180°/m torsion per IEC 62893-4-2
Vehicle wheel crush test	Passes 5,000 N / 11,000 N vehicle drive-over without tube leak	Coolant burst pressure	Working pressure 2–5 bar · Burst pressure ≥ 15 bar @ +85 °C
Weather, oil & halogen-free	UV, gasoline, diesel, de-icing salt resistant & IEC 60754-1 LSZH	Standards	IEC 62893-4-2 & UL 2263 (EV Cable with Thermal Management)

Sizes

4 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	DC power + PE + control	Outer Ø mm	Dry weight kg/m	Cont. DC A	Coolant flow L/min
1000–1500 V DC Liquid-Cooled EV Fast-Charging Cables 4 sizes					
☐ HPC-LC 2×35+16+CP (400A)	2×35 mm² DC + 16PE + 6×0.5C · 1000V	28.8	1.42	400	1.8
☐ HPC-LC 2×50+25+CP (500A)	2×50 mm² DC + 25PE + 6×0.5C · 1000V	30.8	1.75	500	2.2
☐ HPC-LC 2×70+25+CP (650A)	2×70 mm² DC + 25PE + 8×0.5C · 1200V	33.2	2.15	650	2.8
☐ MCS-LC 2×95+35+CP (850A)	2×95 mm² DC + 35PE + 8×0.75C · 1500V	35.8	2.68	850	3.5

– Continuous DC current ratings assume +25 °C coolant inlet temperature and +40 °C ambient air per IEC 62893-4-2.

Standards and approvals

- ✓ IEC 62893-4-2 Compliant
- ✓ UL 2263 EV Charging
- ✓ RoHS 2 & REACH Compliant

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/liquid-cooled-high-power-dc-charging-cable



Typical values for this cable type, based on IEC 62893-4-2 / UL 2263 / EN 50620. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.