

Electric Vehicle Infrastructure

Terra HP high power charging UL



ABB's Terra HP is a modular 175-350 kW ultra-fast EV charging system supporting all 150-920 VDC compatible vehicles. The Terra HP is ideally suited for highway corridor and EV fleet operations.

Modular architecture

ABB's Terra HP system can be configured as:

- 175 kW: one charge post and one cabinet
- 350 kW: one charge post and two cabinets
- 175-350 kW: two charge posts and two cabinets

Scalable and future-proof

The Terra HP system is expandable over time by adding additional power cabinets and charge posts after initial site installation. This capability delivers site planning flexibility by offering a cost-efficient way to build expandable charge points that can grow with EV market demand.

Dynamic DC capability

With ABB Dynamic DC power sharing technology, power cabinets can be connected to charge one vehicle at up to 350kW or two vehicles simultaneously at up to 175kW. This architecture enables higher utilization of charging assets.

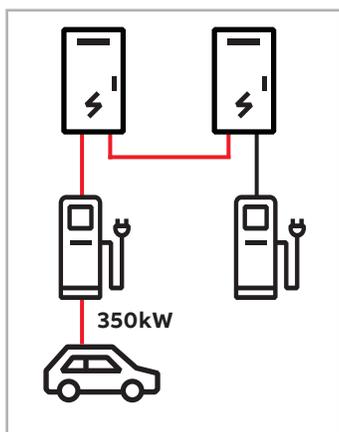
Industry leading cable cooling technology

Every Terra HP charge post is equipped with an integrated chiller and environmentally-friendly cooled cables offering higher peak and continuous output power performance. This technology enables faster charging for vehicles where typical 200A rated systems cannot deliver above 80kW to 400V electric vehicles.

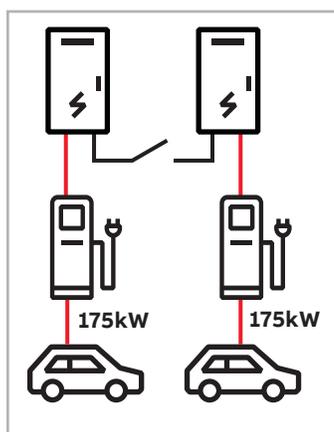
Dynamic DC illustrated

Dynamic DC utilization scenarios with varied vehicle demand profiles.

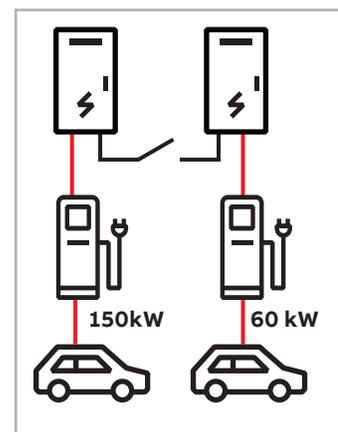
When one vehicle is fully charged, the power will be redistributed automatically.



Max charging dedicated to premium EV at up to 350kW on either charge post.



Shared power delivery for premium EV utilization at up to 175 kW to each vehicle.



Shared delivery tailored to varied EV model demands.

ABB Terra HP key features

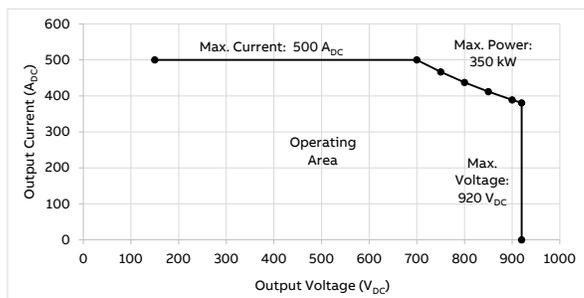
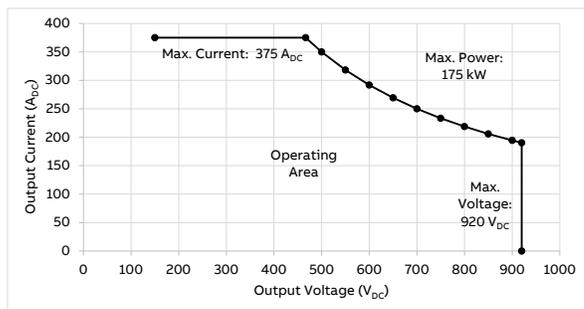
- Non-refrigerant-based, cooled cable system
- Distance between power cabinet(s) and charge post(s) up to 60 m/200 ft
- Daylight readable, intuitive touchscreen display
- Integrated RGB LED strips with customizable color
- Energy management via OCPP Smart Charging Profile
- ADA compliant

ABB Terra HP optional features

- Dynamic DC functionality
- Customizable user interface
- Integrated payment terminal
- Buy America option available

Why charging operators prefer ABB

- ABB Ability Connected Services
 - Charger Connect: Easily connect chargers to OCPP back offices, over-the-air software updates
 - Charger Care: Remote diagnostics and resolution, manage service cases, notifications, data export
- ABB's decade of EV charging experience and close cooperation with EV OEMs, networks and fleets
- High volume, high OpEx production with a globally distributed manufacturing base
- Industry leading uptime with a global and local service presence



Terra HP 175 and Terra HP 350 output load and operational curves. De-rating characteristics apply.

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Specifications	Terra HP 175	Terra HP 350
Electrical		
Max output power	175 kW peak 160 kW continuous	350 kW peak 320 kW continuous
AC Input voltage range	UL: 3-phase, 480V/277 V_{AC} +/- 10% (60 Hz) CSA: 3-phase, 600 V_{AC} +/-10% (60 Hz)	
AC input connection	L1, L2, L3, GND (no neutral)	
Nominal input current and input power rating	UL: 231 A, 192 kVA CSA: 185 A, 192 kVA	UL: 2x231 A, 384 kVA CSA: 370 A, 384 kVA
Recommended upstream circuit breaker(s)	UL: 1 x 300 A CSA: 1 x 250 A	UL: 2 x 300 A CSA: 2 x 250 A
Power Factor	≥ 0.97	
Current THD	IEEE 519 Compliant; <8%; option for 5%	
DC output voltage	150 – 920 VDC	
DC output current	375 A CCS-1 200 A CHAdeMO	500 A CCS-1 200 A CHAdeMO
Efficiency	95% at full load	
Interface and Control		
Charging protocols	CCS-1 and CHAdeMO	
User interface	7" high brightness full color touchscreen display Option for 15" display	
RFID system	ISO/IEC 14443A/B, ISO/IEC 15393, FeliCa™1, NFC, Mifare, Calypso (option: Legic)	
Network connection	GSM/3G/4G; 10/100 base-T Ethernet	
Communication	OCPP 1.5 and OCPP 1.6 enabled	
Support languages	English (others available on request)	
Environment		
Operating temperature	-35 °C to +55 °C (de-rating characteristics apply)	
Storage Temperature	-10 °C to +70 °C	
Protection	IP 54, outdoor use	
Humidity	5% to 95%	
Altitude	2000 m / 6560 ft	
General		
Charge cable	3.2 m (10 ft 6 in) CHAdeMO 3.2 m (10 ft 6 in) or 3.8 m (12 ft 6 in) for CCS-1	
Dimensions (H x W x D)	Power cabinet: 2030 x 1170 x 770 mm / 79.9 x 46.1 x 30.3 in Charge post: 2390 x 620 x 440 mm / 94 x 24.4 x 17.3 in	
Weight	Power cabinet: 1340 kg / 2954 lbs Charge post: 250 kg / 551 lbs	
Compliance and safety	UL/cUL UL 2202, NEC Article 625, EN 61851, EN 62196; CHAdeMO 1.2; DIN 70121, ISO 15118; IEC 61000-6-3 EMC Class B; BA Rule 49 CFR Part 661.5	

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