

Electric Vehicle Infrastructure

Terra 54 and Terra 54HV UL DC fast charging station



Building off a decade of EV fast charging experience, ABB's Terra 54 joins the Terra family of bestselling DC fast charging stations for enhanced usability and reliability. The Terra 54 enables continuous 50 kW charging up to 500V, while 200 – 920 V is supported by Terra 54HV.

ABB's Terra 54 supports CCS and CHAdeMO functionality and complies with all relevant international standards, including EMC Class B, required for safe operation at residential, office, retail and fuel station locations. All Terra chargers feature integrated Connected Services for remote monitoring, diagnostics, statistics, and software upgrades.

ABB's Terra chargers are the most preferred DC fast charging solution in the world.

The future-proof solution

ABB EV infrastructure is committed to a future-proof strategy that includes full interoperability, operational reliability, a 24/7/365 service network, best-in-class connected services, and a proactive product roadmap built on close work with OEMs around the world.

The Terra 54 enables the highest uptime due to redundancy on both power and communication. All ABB chargers come with Internet based Connected Services to allow customers to easily connect their chargers to different software systems like back-

offices, payment platforms or smart grid energy systems. This enables remote assistance, tailored diagnostic trouble shooting and repair, and remote updates and upgrades.

Applications

- Commercial shopping and dining areas
- Metropolitan / urban areas
- Highway fuel and convenience stores
- Commercial fleet operators
- EV infrastructure operators and service providers

General specifications	
Environment	Indoor / outdoor
Operating temperature	-35 °C to +55 °C / -31 °F to +131 °F (de-rating characteristics apply)
Storage temperature	-40 °C to +70 °C / -40 °F to +158 °F
Altitude	2500m / 8200 ft (de-rating applies at max altitude)
Compliance and safety	Compliance to UL 2202 and CSA 107.1 and CHAdeMO 1.0
EMC emission EMC immunity	IEC 61000-6-3 Class B - Residential IEC 61000-6-2 Industrial
Input AC power connection	3P + PE (no neutral)
Input voltage range	480 V _{AC} +/- 10% (60 Hz)
Max. rated input current & power	80 A, 55 kVA; power limiting options available
Power factor (full load)	> 0.96
Efficiency	95% at nominal output power
RFID system	ISO/IEC 14443A/B, ISO/IEC 15393, FeliCa™ 1, NFC reader mode, Mifare, Calypso, (option: Legic)
Network connection	GSM / 3G modem, 10/100 Base-T Ethernet
Protection	NEMA Type 3R / IP54
User interface	High brightness full color touchscreen; ADA Compliant RFID, PIN and credit card kit options
Communication	OCPP 1.5 and OCPP 1.6 enabled
Dimensions (D x W x H)	780 mm x 565 mm x 1900 mm 30.7" x 22.2" x 74.8"
Weight	350 kg / 775 lbs
Shipping dimensions (D x W x H)	1200 mm x 800 mm x 2150 mm 48" x 32" x 85"
Shipping weight	375 kg / 830 lbs

Outlet specifications	C	J
Charging standard	CCS	CHAdeMO
Maximum output power	50 kW	50 kW
Output voltage Terra 54	200 - 500 V _{DC}	50 - 500 V _{DC}
Output voltage Terra 54HV	200 - 920 V _{DC}	50 - 500 V _{DC}
Maximum output current	125 A _{DC}	125 A _{DC}
Connector/socket type	CCS-1 / SAE J1772	CHAdeMO / JEVS G105
Cable length	12' and 20' options	12' and 20' options

Main features

- 50 kW DC fast charger supporting CCS and CHAdeMO
- Designed to deliver full output power continuously and reliably over its lifetime
- EMC Class B certified for industrial and residential areas (supports fuel stations, retail outlets, offices, retail)
- Future proof connection via open industry standards, including remote uptime monitoring and assistance, updates and upgrades
- High brightness, daylight readable touchscreen display
- Graphic visualization of charging progress
- RFID authorization
- Robust all weather powder-coated stainless steel enclosure
- Quick and easy installation
- Spare parts are backwards and forwards compatible with Terra 53 product line

New features for Terra 54

- CCS cable exit on the left side for even easier cable management and improved cable handling usability
- Charging EV batteries at 50 – 500 V (Terra 54), or at 200 – 920 V (Terra 54HV)
- New sophisticated connector holders, for easier handling and more stable holding
- Enhanced payment terminal, suited for an increasing number of countries
- Prepared for options like DC metering, integration with building management systems, cable management, etc.

Further optional features

- Customized branding possibilities, including customizable user interface
- Parking bay occupancy detection
- PIN code authorization
- Site load management, for one or more chargers, to avoid expensive grid upgrades
- Web tools for statistics and access management
- Integration with back-offices, payment platforms and smart grid energy systems; can enable OCPP 1.5 and 1.6



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