ABB

Electric Vehicle Infrastructure
Terra 53 multi-standard DC charging station

ABB Terra 53 is the best-selling 50 kW DC charging station in Europe and North America, supporting CCS, CHAdeMO and simultaneous 43 kW AC charging. It complies with all relevant international standards, including the EMC Class B norm mandated for safe user operation on residential, office, retail and petrol station locations.

Terra 53 can deliver its full 50 kW DC continuously, thus supporting increasing EV battery capacities and charger utilisation levels. All chargers come with integrated Connected Services, allowing remote monitoring, diagnostics, software upgrades, and integration with back office applications.

Terra 53 is ideally suited for highway rest stops and petrol stations, as well as for retail and office locations, car dealerships, fleet applications, etc. Depending on the customer needs, it supports CCS and CHAdeMO 1.0, as well as AC charging. Besides the CE certified charger series, ABB also offers North American UL and Chinese GB versions.

Terra 53 has the highest uptime due to redundancy on 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 allows for remote assistance, tailored diagnostic trouble shooting and repair, remote updates and upgrades. A reliable, secure, cost-efficient and future-proof connectivity solution, based on open industry interfaces.

Main features
- 50 kW DC fast charger supporting CCS and CHAdeMO, designed to deliver full output power continuously
- Simultaneous AC charging via optional 22/43 kW cable or 22 kW socket
- IEC 61000 EMC Class B certified for industrial and residential areas (including petrol stations, retail outlets, offices, etc.)
- Future proof connection via open industry standards:
  - Flexible interfacing with added value systems
  - Remote uptime monitoring and assistance
  - Remote updates and upgrades
- Daylight readable touch screen display
- Graphic visualization of charging progress
- RFID/PIN/Remote authorization

Applications
- Highway petrol/service station operators
- Commercial fleet operators
- EV Infrastructure operators and service providers
- EV dealers and importers

Key optional features

- Customized branding possibilities, including customizable user interface
- Integrated payment terminal
- Pin code authorization
- Input power limiting software to avoid expensive grid upgrades
- Web tools for statistics and access management
- Integration with back offices, payment platforms and smart grid energy systems
- Wider temperature range: -35 °C to +55 °C

Advantages of connected charging

real-time status   notifications   access management

statistics   secure payment

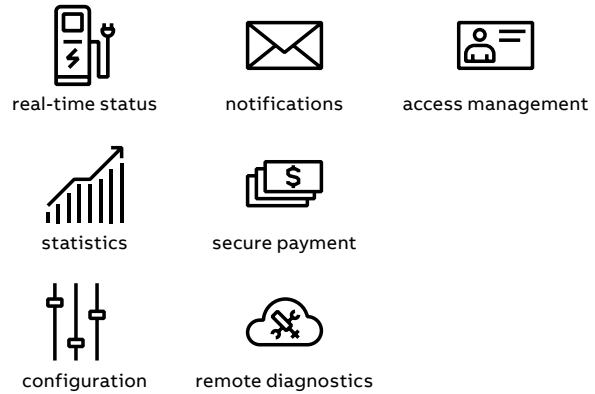configuration   remote diagnostics

Possible configurations

Terra 53 is available in the following configurations:

- Terra 53 CT: CCS and 22kW AC socket
- Terra 53 CJ: CCS and CHAdeMO
- Terra 53 CG: CCS and 43 kW AC connector
- Terra 53 CJT: CCS, CHAdeMO and 22 kW AC socket
- Terra 53 CJG: CCS, CHAdeMO and 43 kW AC connector

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Possible configurations (from left to right): Terra 53 CT, Terra 53 CJ, Terra 53 CJG with optional payment terminal (not shown, amongst other, Terra 53 CJT, Terra 53 CG, Terra 53 CJ UL, and Terra 53 Z)

General specifications	
Environment	Indoor / outdoor
Operating temperature	standard: -10 °C to +55 °C optional: -35 °C to +55 °C
Compliance and safety	CE, RMC, EAC, CHAdeMO 1.0
EMC emission	IEC 61000-6-3 Class B - Residential
EMC immunity	IEC 61000-6-2 Industrial
Input AC power connection	3P + N + PE
Input voltage range	400 V_{AC} +/-10% (50 Hz or 60 Hz)
Max. rated input current & power	CJ: 80 A, 55 kVA CT, CJT: 112 A, 77 kVA CJG, CG: 143 A, 98 kVA
Power factor (full load)	> 0.96
Efficiency	94% at nominal output power
RFID system	ISO/IEC 14443A/B, ISO/IEC 15393, FeliCa™1,NFC, Mifare Calypso, (option: Legic)
Network connection	GSM / 3G modem, 10/100 Base-T Ethernet
Protection	IP54
Dimensions (D x W x H)	780 mm x 565 mm x 1900 mm
Mass	350 kg

Outlet specifications	C (default)	J (option)	G (option)	T (option)
Charging standard	CCS	CHAdeMO	Type 2 cable	Type 2 socket
Maximum output power	50 kW	50 kW	43 kW	22 kW
Output voltage range	50 - 500 V_{DC}	50 - 500 V_{DC}	400 V +/- 10%	400 V +/- 10%
Maximum output current	125 A_{DC}	125 A_{DC}	63 A	32 A
Connector/socket type	CCS 2	CHAdeMO / JEVS G105	IEC62196 Mode-3 Type-2	IEC62196 Mode-3 Type 2
Cable length	3.9 m	3.9 m	3.9 m	-

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