

Electric Vehicle Infrastructure

Terra DC Wallbox UL



The Terra DC Wallbox is a compact 24 kW DC fast charger with one or two outlets supporting CCS and CHAdeMO protocols.

Operating the Terra DC Wallbox is easy thanks to a full color, daylight readable touchscreen display. This includes starting and stopping of charge sessions, progress indication during charging, help menus, language selection, and PIN code access control.

As connectivity is the key to successful EV charging installations, the Terra DC Wallbox features ABB Ability Connected Services to enable authentication, payment, monitoring, remote diagnostics and repair, as well as over-the-air updates and upgrades.

Applications

- Office, workplace
- Commercial parking
- Dealerships
- Urban fleets
- Hotel and hospitality
- Multi-family residential
- Public or private campus
- High voltage fleet applications
- Sites with sensitive load concerns

The UL certified Terra DC Wallbox is a compact 24 kW DC fast charger perfect for offices, parking facilities, shopping areas and car dealerships.

With its low-power and high-voltage configuration, the Terra DC Wallbox can be installed at sites with defined or limited available power service, all while serving vehicles of today and in the future.

Benefits of low power DC solutions

Low power DC is an ideal solution for use cases demanding shorter charging times and higher charging asset utilization than can be provided by AC charging solutions. With a low power DC solution, charging needs can be met in balance with load demands and infrastructure costs.

In AC charging solutions, the EV's onboard converter is usually the limiting factor on the charging power that can be supplied to the car. With typical onboard ratings ranging from 3 to 11 kW, any additional power the AC charger could provide is left unused. With the Terra DC Wallbox, 24 kW peak DC power is provided directly to the battery, bypassing the limitations of an EV's onboard converter.

High voltage charging capabilities

As electric vehicles and their use cases diversify, high voltage DC charging has become more important to increase charging power while ensuring as much efficiency, safety and usability in DC charging systems. The Terra DC Wallbox can meet EV battery capabilities up to 920V to enhance power output across a wider range of today's and tomorrow's EVs, including both passenger and fleet vehicles.

Main features

- Future proof DC output voltage range from 150 to 920 V_{DC} supporting EVs today and in the future
- Single or dual outlet: CCS and CHAdeMO
- Daylight readable 7" full color touchscreen display
- Future proof connectivity:
 - OCPP 1.6
 - Capability for remote services
- Compact design
- Robust all-weather enclosure for indoor and outdoor use
- RFID reader

Key optional features

- On-screen PIN code authorization
- Input current limiting software to match site requirements
- Web tools for statistics, configuration, access management, remote diagnostics and repair
- Integration with back offices and payment platforms
- Customized branding possibilities

Configurations

The Terra DC Wallbox is available in the following configurations:

- Single outlet CCS-1
- Dual outlet CCS-1 + CHAdeMO



Specifications

Electrical	
AC Input voltage range	(1) 208- 240 V _{AC} +/- 10% (60Hz) (2) 480 V _{AC} +/-10% (60 Hz)
AC input power connection	(1) 1-phase, 208-240 Vac: L1, L2, GND (2) 3-phase: 480Y / 277Vac: L1, L2, L3, N, GND
Max rate input current	(1) 100 A (2) 32 A Current limiting options available
Upstream circuit breaker	(1) 125A (2) 40 A
Power Factor	>.96
Current THD	Compliant with IEC 61000-3-12
DC output power	(1) 19.5kW @208V (1) 22.5 kW @240V (2) 24 kW peak; 22.5kW continuous
DC output voltage	CCS: 150 - 920 VDC CHAdeMO: 150 - 500 VDC
DC output current	60 A
Efficiency	94% at nominal output power
Interface and Control	
Charging protocols	CCS-1 CHAdeMO
User interface	7" full color touchscreen display
RFID system	ISO/IEC14443A/B, ISO/IEC15693, NFC reader mode, Mifare, Calypso
Network connection	GSM / 4G modem 10/100 Base-T Ethernet
Communication	OCPP 1.6 enabled
Support languages	English (others available on request)
Environment	
Operating temperature	-35 °C to +45 °C (+45 °C to +55 °C with linear derating)
Protection	IP54, NEMA 3S; indoor and outdoor
Humidity	< 95%, non-condensing
Altitude	2500 m (8200 ft)
General	
Charge cable	3.5m or 7m (12' or 23')
Dimensions (H x W x D)	770 x 584 x 300 mm 30.3 x 23 x 11.8 in
Weight	60kg / 132 lbs excluding backplate (10 kg / 22 lbs) and cables
Compliance and safety	UL, FCC

- (1) Single phase configuration
- (2) Three phase configuration



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