

## **Go-Ahead Bus Centre**

### **External Lighting & Electrical Vehicle Charging Information**

July 2020

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**Waterman Moylan**  
Engineering Consultants

**Client Name:** Go Ahead Bus Depot  
**Document Reference:** 17-133 – Bus Depot External Lighting & Vehicle Charging Information  
**Project Number:** 17-133

### Quality Assurance – Approval Status

This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015)

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Issue	Date	Prepared by	Checked by	Approved by
01	29/07/21	K Farrell	N Coughlan	N Coughlan 

### Comments

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**Waterman Moylan**  
Engineering Consultants

### Disclaimer

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## Akra LED Floodlight

External Lighting



LED floodlight, available in 9 wattages and 3 sizes with a choice of optics.

**Construction:** Die-cast Aluminium housing with tempered glass Lens. IP66. Asymmetric as standard. Other beams on request.

**Mounting:** Via Adjustable U bracket.

**Finish:** Black as standard.

**LED:** 40w-240w, 4000K CRI70 as standard. 3000K or 5000K on request.

**Lifetime:**

L70 B10 > 100,000 hours (at 25°C)

**Driver:** 100-240V AC, 50/60Hz

Lifetime 100,000 hrs (at 25°C)

**Mains Surge Protection:** 10kV device included as standard.

**Options:** Dimming (1-10V), DALI, various optics and CCT available .

**Product Compliance:** EN 60598, CE.

## APPLICATION GUIDE

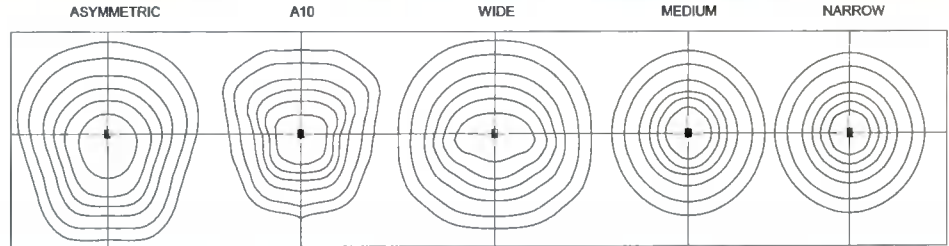
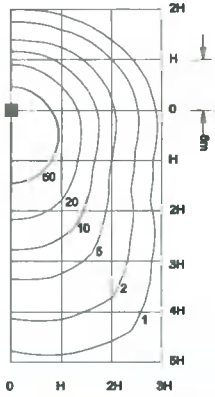
AkraLED Series

150w LED - 10° Tilt

6m Height

Contours in Lux

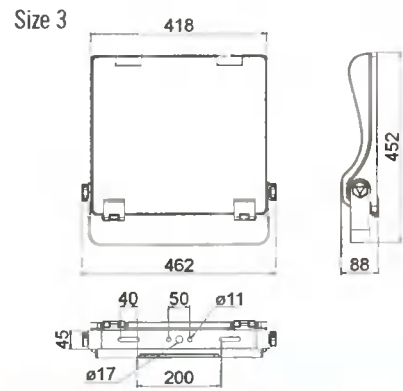
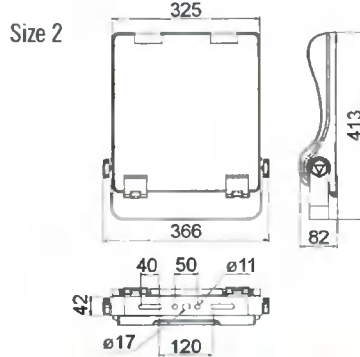
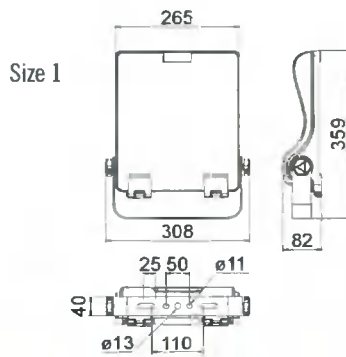
M. Factor = 0.9



## DIMENSIONS

	EPA - 0° Tilt	EPA - 90° Tilt	Weight
Size 1	0.03m <sup>2</sup>	0.10m <sup>2</sup>	5kg
Size 2	0.035m <sup>2</sup>	0.14m <sup>2</sup>	7kg
Size 3	0.04m <sup>2</sup>	0.18m <sup>2</sup>	9.5kg

All Dimensions are in mm.



## ORDERING CODE

Watt	Size	Code	Description	BUG Rating	Lumens
40w	1	5SF040LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B2 - U1 - G1	5860 lm
60w	1	5SF060LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B2 - U1 - G1	8780 lm
80w	1	5SF080LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B3 - U1 - G1	11300 lm
100w	2	5SF100LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B3 - U1 - G2	14000 lm
120w	2	5SF120LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B3 - U0 - G2	16600 lm
150w	2	5SF150LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B3 - U1 - G3	21050 lm
180w	3	5SF180LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B3 - U1 - G3	25850 lm
200w	3	5SF200LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B3 - U1 - G3	28450 lm
240w	3	5SF240LBA	LED Floodlight, U Bracket, 4K, Asymmetric	B4 - U1 - G3	32450 lm

## OPTIONS

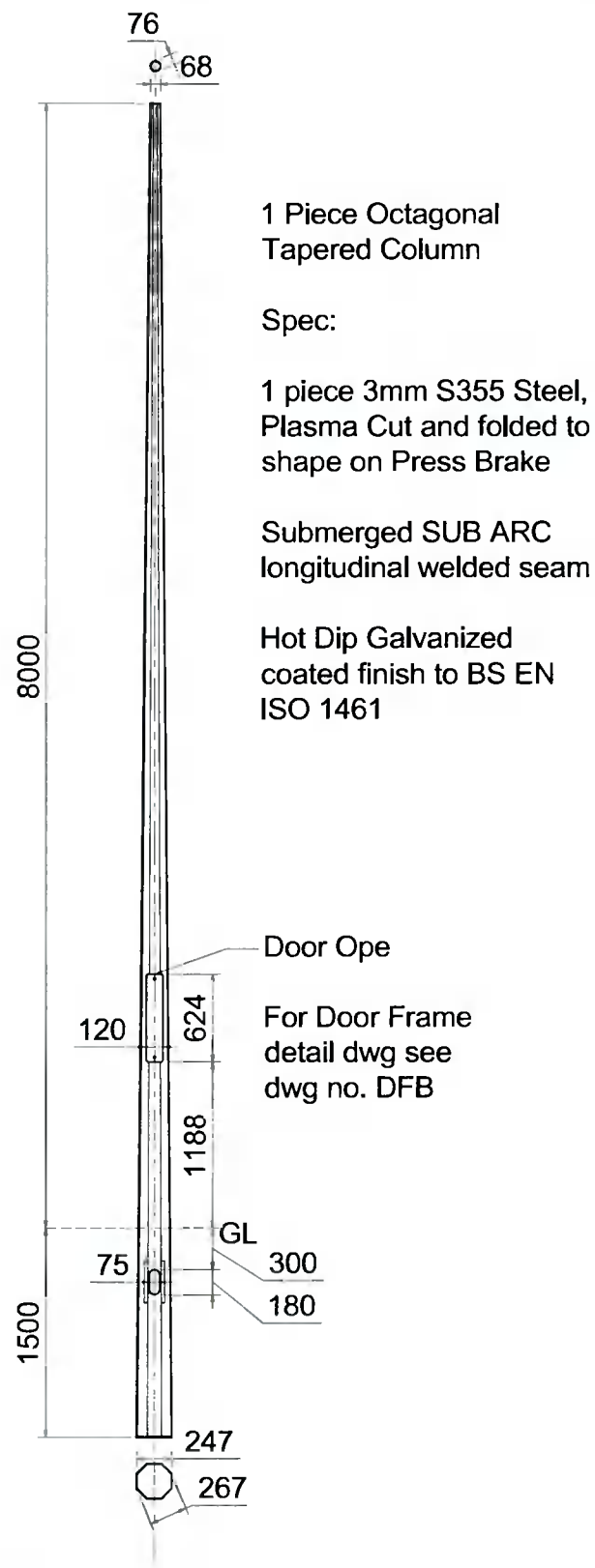
DALI: DALI Dimming
3K: 3000K Colour Temperature
5K: 5000K Colour Temperature
15D: 15° Narrow beam Optic
30D: 30° Medium beam Optic
W: Wide Beam
A10: 10° Forward Beam

Further info on request - email: [info@light.ie](mailto:info@light.ie) - [www.light.ie](http://www.light.ie)

Specifications may change without prior notification. Ref: 616

**Veelite**

RevNo	Revision note	Date	Signature	Checked
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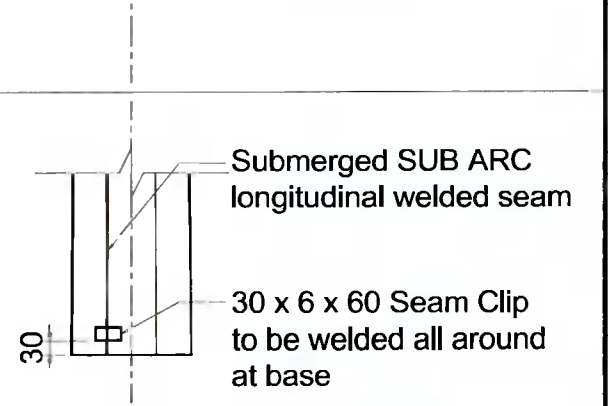
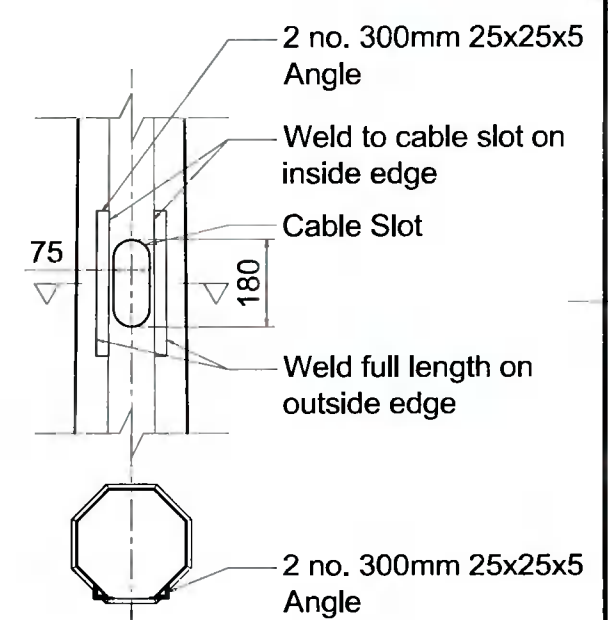
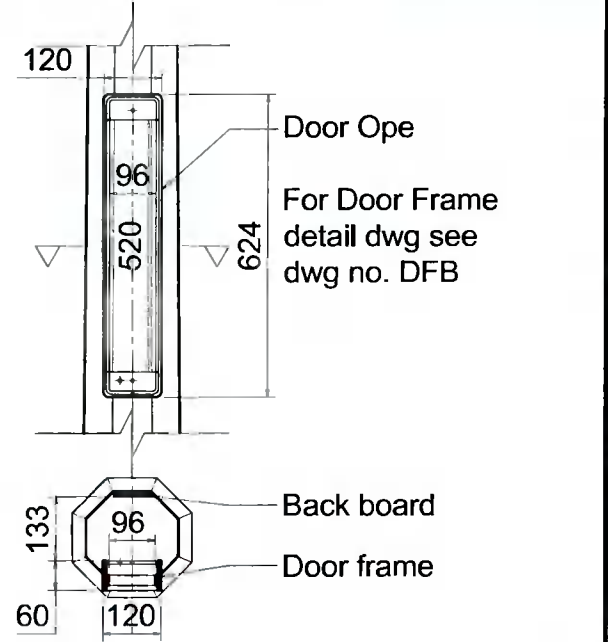
1 Piece Octagonal Tapered Column

Spec:

1 piece 3mm S355 Steel, Plasma Cut and folded to shape on Press Brake

Submerged SUB ARC longitudinal welded seam

Hot Dip Galvanized coated finish to BS EN ISO 1461



Itemref	Quantity	Title/Name, designation, material, dimension etc			Article No./Reference	
Designed by PAUL MC GRATH	Checked by J CUMMINS	Approved by - date J CUMMINS 20/03/15	File name	Date 20/03/15	Scale NTS	
PILTOWN ENG LTD			OCTAGONAL COLUMN 8MT X 76MM - 1 PIECE			
			OC 8X76-1P	Edition Rev. A	Sheet 1/1	



# Electrify the road

Terra DC fast chargers. The most successful EV fast chargers in the market, ideal for urban applications, retail and refueling stations.



- Compact footprint
- Maximized revenue generation
- Future ready

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**The Terra DC fast chargers, including Terra 94, Terra 124, Terra 184, are an extension of the DC fast chargers product line. They are designed for convenient charging of all electric vehicles, including future models with high voltage battery systems. The compact size makes it perfect for urban use, with flexibility to upgrade charging power up to 180kW and ability to charge up to 3 vehicles at the same time.**



# Terra 94/124/184 DC Fast Charger

## At a glance

**CONNECTED** by cellular modem for 24/7 remote services, receiving updates over-the-air to support every new EV on the road - plus easy remote OCPP integration.

**LCD** touchscreen with high brightness and graphical visualization of the charging process

**SAFETY:** Emergency stop push button to immediately stop charging operation

**GREATER** revenue potential with simultaneous charging for 2 electric vehicles, including CCS and CHAdeMO combinations

**COMPACT, UPGRADABLE** power modules to support increasing demand from more EVs with bigger batteries - in a very easy to service package.

**ROBUST** all-weather powder-coated stainless steel enclosure

**CONVENIENCE** and hassle-free reach for users - with retractable cable management option

**EASY** installation design with fast remote commissioning and start-up

**AUTOMATIC** authentication capability via CCS connector in the vehicle thanks to easy OCPP integration and Autocharge functionality

### MAX CHARGING POWER

Terra 94: 90 kW  
Terra 124: 120 kW (and 2 x 60 kW)  
Terra 184: 180 kW (and 2 x 90 kW)

### MAX CHARGING VOLTAGE

CCS 920 VDC  
CHAdeMO 500 VDC

### DIMENSIONS

Height 1900 mm / 74.8 in  
Width 5655 mm / 222.6 in  
Depth 880 mm / 34.6 in  
Weight 395 kg / 871 lbs

## Why Terra 94/124/184?

Advanced, flexible, compact and smart



### Power sharing for high utilization

- Terra 124 and Terra 184 can charge two vehicles simultaneously
- High utilization of charging assets benefit both public and fleet business models
- Supports all open charging standards in flexible configurations
- Safety certified to the highest standards



### Future-proof, flexible high-voltage technology

- Flexible, redundant power architecture supports high uptime
- High-voltage charging range up to 920 V
- Fully compatible with current and future EVs
- Option to upgrade power over time, from 90 kW up to 180 kW, to follow EV market growth



### Reliable, compact and flexible design

- Based on the Terra platform, the most widely deployed DCFC family in the world
- Space-saving, all-in-one footprint with very easy installation and servicing
- Robust construction for all operational environments
- Cable management options enhance longevity



### Always connected, always smart

- 24/7 connectivity, 99.5% ABB network uptime
- Remote services with remote firmware updates and upgrades
- OCPP integration-ready as well as ABB Web Tools functionality
- Autocharge and ISO 15118-ready for plug and charge operation

## Fast charging beyond 50 kW

Power sharing delivers high utilization

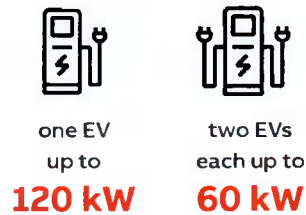
### 90kW Charging Points

Terra chargers can provide a quick refill adding 100 miles of range in as little as 15 minutes (Terra 94) or 30 minutes (Terra 54).\*



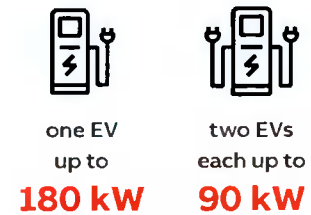
### Retail/Shopping Sites

The Terra 124 charger can provide a full battery charge to two vehicles simultaneously while drivers are shopping, dining or at the movies.



### Highway corridors and Fleets

The Terra 184 chargers can add 100 miles of range in as little as 10 minutes as well as fast-charge two vehicles at the same time in less than 20 minutes.\*



\* actual charging speed depends on the electric vehicle model(s) and charging conditions



Simultaneous charging with high power fast chargers can deliver maximum charging asset utilization while serving an ever-growing population of large battery electric vehicles.

# High voltage charging explained

## A future-proof strategy

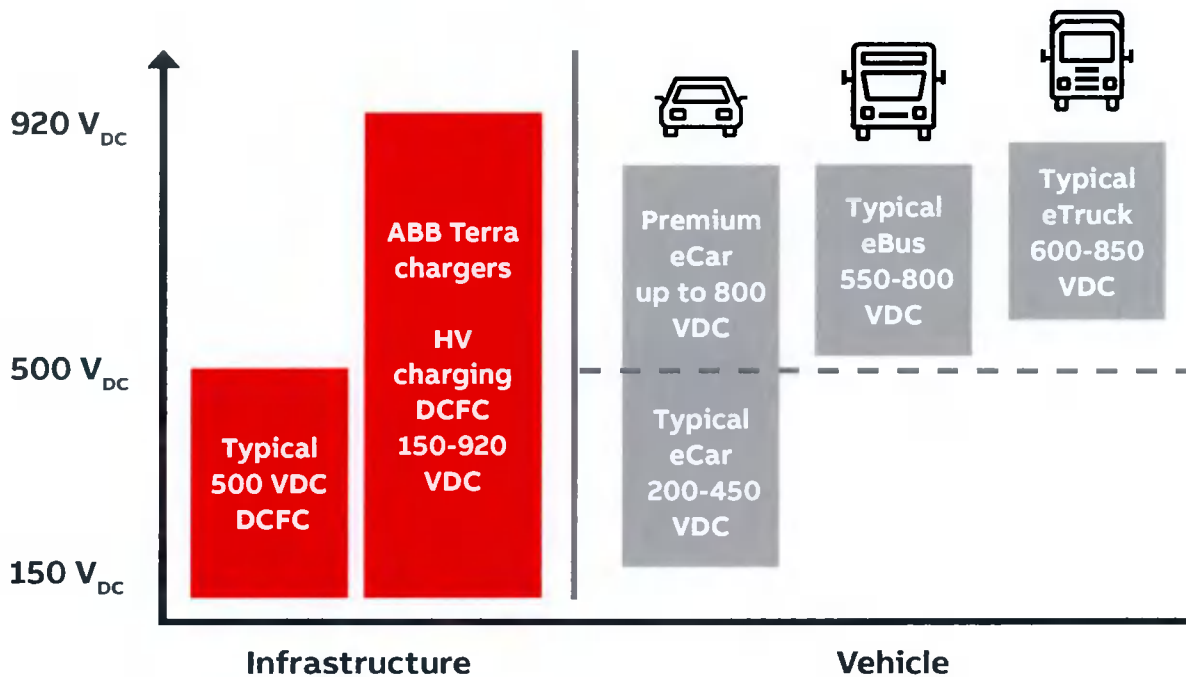
### High voltage charging capabilities

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.

Traditional passenger vehicle battery packs are usually designed for 400 VDC charging, so many standard charging systems do not exceed 500 VDC capability. However, some newer vehicles may have battery packs that exceed 400 VDC, often in the 600 to 800 VDC range.

Some EV battery packs, such as with vehicles designed for fleet usage, may only charge at high voltage ratings, demanding charging infrastructure that can deliver power tailored to HV battery packs.

ABB's Terra 94, Terra 124 and Terra 184 chargers are designed to meet EV battery voltage capabilities up to 920V to deliver charging services across a wider range of today's and tomorrow's EVs.



A high range of DC voltage capability is demanded to deliver efficient charging service to every EV and use case.

## Terra charging times

All-in-one charging for every EV

		Charging time (minutes)					
		50 kW Terra 54 Terra 54HV	90 kW Terra 94	120 kW Terra 124		180 kW Terra 184	
				2 EVs	1 EV	2 EVs	1 EV
<b>Car</b>	60 kWh BEV 400 VDC	50	25	40	20	25	13
	90 kWh BEV 400 VDC	70	40	60	30	40	20
	100 kWh BEV 800 VDC	80	45	65	33	45	22
<b>Bus/Truck</b>	120 kWh BEV School Bus 400 VDC	95	53	80	40	55	26
	150 kWh BEV Delivery Van 800 VDC	120	65	100	50	65	33
	200 kWh BEV Work Truck 800 VDC	160	88	133	66	88	44
	300 kWh BEV 60' Transit Bus 800 VDC	240	130	200	100	130	66

Charge times shown based on average vehicle battery management system (BMS) requesting charging power from 20% to 80% under mild environmental conditions. Data assumes vehicles capable of charging at cited power levels.

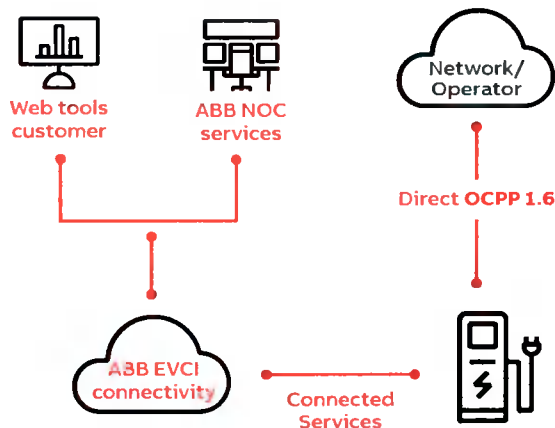
# Flexible OCPP enablement

## Back-office integrations backed by ABB connectivity

### Network communications

ABB has integrated with nearly every major charging network around the world for OCPP support across public and fleet charging operations. ABB chargers can be operated using a direct OCPP connection while linking to ABB's advanced diagnostics and firmware update services for additional intelligence, technical support as well as reduced maintenance.

Leading the industry in implementing authentication technologies, ABB enables Autocharge coupled with an OCPP server. This functionality offers access control at the vehicle level, ideal for fleet asset telematics. ABB's software engineers work with the latest standardized protocols in the EV charging industry including roaming platforms, energy management software and next generation authentication solutions.



**Better and faster support:** Chargers connected to ABB's network operations center can achieve the fastest remote support from ABB network engineers. This leads to higher uptime of a charger network, minimizes the number of unplanned on-site visits, and significantly reduces overall operational costs.

**Scalability and security:** IT resources can scale in the ABB Ability cloud while connectivity monitoring is supported by ABB around the clock. ABB leverages Microsoft Azure based security with fewer backend connections to monitor.



### OCPP Integrations

The Open Charge Point Protocol (OCPP) includes a broad set of messages with a wide range of functionality for enterprise telematics and usage data. The transaction-based set-up of the messages makes it easy to connect to a back-end system to process charging sessions, define usage models and handle data. Other capabilities include integration with apps and energy management, such as with OCPP Smart Charging Profiles.



### Plug and charge

Eliminating manual authentication methods for drivers while delivering granular data sets to network operators and fleets has never been easier with 'plug and play' charging solutions.

ABB supports Autocharge, in conjunction with an OCPP network integration, to meet vehicle-based authentication demands seamlessly with any CCS vehicle.

Additionally, ABB has proactively enabled ISO 15118 (Plug & Charge) for its charging systems to deliver more advanced plug and play charging experience for the next generation of electric vehicles.

# ABB EV Infrastructure services

For highest utilization and lowest downtime

## Operational excellence

Charging infrastructure must be optimized for the highest utilization and lowest downtime. ABB's remote and real-time services meets that demand, incorporating a decade of experience with thousands of intelligent fast chargers deployed across the globe.

ABB's Terra family of all-in-one chargers are the easiest chargers in the market to service, with high uptime due to its innovative modularity, round the clock connectivity and experience-led design.



## Remote services

- 24/7 connectivity
- Remote services
- Remote diagnostics
- Firmware upgrades
- Driver care web tools
- Charger Care web tools



## Parts and warranty services

- Full service warranty process
- Extended warranties
- Preventive service and maintenance
- Network spare parts programs
- Fleet spare parts programs



## Custom software services

- OCPP integration
- Autocharge integration testing
- Interoperability testing and validation
- Customized enterprise software support



## Training

- Standardized online training
- Customized service training
- Third-party service training programs

# Technical specification

	Terra 184	Terra 124
<b>Product information</b>		
Charging type	DC fast charging and AC type-2 charging	DC fast charging and AC type-2 charging
Outlet options	C: CCS cable, J: CHAdeMO cable, T: AC Type-2 socket	C: CCS cable, J: CHAdeMO cable, T: AC Type-2 socket
Input AC power rating	C,CC, CJ: 280 A, 192 kVA @ 50Hz CCT/CJT: 310 A, 214 kVA @ 50Hz	C,CC, CJ: 187 A, 128 kVA @ 50Hz CCT/CJT: 217 A, 150 kVA @ 50Hz
Input voltage range	400 VAC +/- 10% (50 Hz or 60 Hz) - CE Version, 480 VAC or 270 VAC +/- 10% (50 Hz or 60 Hz) - UL Version	
DC output power rating (max)	180 kW	120 kW
AC output power rating (optional)	22 kW	22 kW
DC output voltage	150-920 Vdc	
Number of EV served	Up to 3 (CCT, CJT models) Up to 2 (CC, CJ, JJ models) Up to 1 (C models)	Up to 3 (CCT, CJT models) Up to 2 (CC, CJ, JJ models) Up to 1 (C models)
Cable length	3.9 m Optional: 6.0 m / 8.0 m	3.9 m Optional: 6.0 m / 8.0 m
CCS cables maximum current	Standard: 200 A High current: 400 A (peak), 300 A (nominal)	Standard: 200 A High current: 400 A (peak), 300 A (nominal)
CHAdeMO cables maximum current	200 A, 125 A (Optional)	
Electro-Magnetic Compatibility	Class A (optional Class B) conducted and Class A (optional Class B) radiated emissions according to EN 61000-6-3:2007	
Network type	TN-S, TN-C, TN-C-S, TT (Requires external RCD)	
Connector types	3P + N + PE	
Protection	Overcurrent, overvoltage, undervoltage, ground fault including DC leakage protection, integrated surge protection	
Overvoltage category	Type II	
Power factor (full load)	> 0.96	
THDi	< 4.5%	
Efficiency	> 95% (peak)	
Standby power	80 W	
Short circuit current	10 kA	
Pre-charge current	< 1 A	
Inrush current	< 100 A	
Leakage current	0.8 mA	
Energy metering	Optional: MID metering for AC and DC outlets Optional: Eichrecht/PTB compliant metering solution for AC and DC outlets	
Cellular communication	GSM / 4G / LTE	
<b>User interface</b>		
Connectivity	Internet access via 4G / 3G / Ethernet (RJ45)	
User authentication	App, ISO 15118 Plug'n'Charge, RFID, PIN code	
User interface	7" LCD high-contrast touchscreen	
Communication protocols	OCPP 1.5 / 1.6 / 2.0 and OPC-UA	
RFID Reader	ISO 14443 A + B to part 4 and ISO/IEC 15693, Mifare, NFC, Calypso, Ultralight, PayPass, HID; and more	
Emergency button	Yes. The button can be removed with a retrofit kit.	
<b>Configuration</b>		
Software update	over-the-air updates via ABB web portal, OCPP 1.6	
Control and configuration	ABB web portal, on-board Service Portal, OCPP 1.6, OPC-UA	



Terra 94	Terra 54	Terra 24
DC fast charging and AC type-2 charging C: CCS cable, J: CHAdeMO cable, T: AC Type-2 socket C,CC, CJ: 140 A, 96 kVA @ 50Hz CCT/CJT: 170 A, 118 kVA @ 50Hz	DC fast charging and AC type-2 charging C: CCS cable, J: CHAdeMO cable, G: AC Type-2 cable, T: AC Type-2 socket C, CJ: 88 A, 55 kVA @ 50Hz CT, CJT, CG, CJG: 112A, 77 kVA CG, CJG: 143 A, 98 kVA @ 50Hz	DC fast charging and AC type-2 charging C: CCS cable, J: CHAdeMO cable, G: AC Type-2 cable, T: AC Type-2 socket CJ: 32 A, 23 kVA @ 50Hz CT, CG, CJG with 22 kW AC outlet: 63 A, 43 kVA @ 50Hz
400 VAC +/- 10% (50 Hz or 60 Hz) - CE Version	480 VAC or 270 VAC +/- 10% (50 Hz or 60 Hz) - UL Version	
90 kW	50 kW	20 kW
22 kW	43 or 22 kW	43 or 22 kW
150-920 Vdc	150-920 Vdc (HV), 150-500 Vdc	150-500 Vdc
Up to 2 (CCT, CJT models) Up to 1 (C, CJ models)	Up to 2 (CT, CJT, CG, CJG models) Up to 1 (C, CJ models)	Up to 2 (CT, CJT, CG, CJG models) Up to 1 (C, CJ models)
3.9 m Optional: 6.0 m / 8.0 m Standard: 200 A High current: 300 A 200 A, 125 A (Optional)	3.9 m Optional: 6.0 m / 8.0 m 125 A 125 A	3.9 m Optional: 6.0 m / 8.0 m 125 A 125 A
Class A (optional Class B) conducted and Class A (optional Class B) radiated emissions according to EN 61000-6-3:2007	Class B conducted and Class B radiated emissions according to EN 61000-6-3:2007	
TN-S, TN-C, TN-C-S, TT (Requires external RCD) 3P + N + PE	TN-S, TN-C, TN-C-S, IT, TT (Requires external RCD) 3P + N + PE	TN-S, TN-C, TN-C-S, IT, TT (Requires external RCD) 3P + N + PE
Overcurrent, overvoltage, undervoltage, ground fault including DC leakage protection, integrated surge protection		
Type II > 0.96 < 4.5% > 95% (peak) 80 W 10 kA < 1 A < 100 A 0.8 mA	Type II > 0.96 < 5% > 94% (peak) 80 W 10 kA < 1 A < 100 A 0.8 mA	Type II > 0.96 < 5% > 94% (peak) 80 W 10 kA < 1 A < 100 A 0.8 mA
Optional: MID metering for AC and DC outlets Optional: Eichrecht/PTB compliant metering solution for AC and DC outlets GSM / 4G / LTE	GSM / 4G / LTE	GSM / 4G / LTE
Internet access via 4G / 3G / Ethernet (RJ45) App, ISO 15118 Plug'n'Charge, RFID, PIN code 7" LCD high-contrast touchscreen OCPP 1.5 / 1.6 / 2.0 and OPC-UA ISO 14443 A + B to part 4 and ISO/IEC 15693, Mifare, NFC, Calypso, Ultralight, PayPass, HID; and more Yes. The button can be removed with a retrofit kit.	Internet access via 4G / 3G / Ethernet (RJ45) App, ISO 15118 Plug'n'Charge, RFID, PIN code 7" LCD high-contrast touchscreen OCPP 1.5 / 1.6 / 2.0 and OPC-UA	Internet access via 4G / 3G / Ethernet (RJ45) App, ISO 15118 Plug'n'Charge, RFID, PIN code 7" LCD high-contrast touchscreen OCPP 1.5 / 1.6 / 2.0 and OPC-UA
over-the-air updates via ABB web portal, OCPP 1.6 ABB web portal, on-board Service Portal, OCPP 1.6, OPC-UA		

# Technical specification

	Terra 184	Terra 124
Multilanguage system	English, Italian, Spanish, Germany and more than 50 languages available and new languages configurable via ABB Web Tool	
<b>General characteristics</b>		
IP and IK rating	IP-54 and IK-10 (cabinet) / IK-8 (touchscreen)	
Enclosure type	Stainless steel 430 and Aluminium	
Operational altitude	Up to 2000 m	Up to 2000 m
Operating temperature range	-35 °C to +55 °C	-35 °C to +55 °C
Storage temperature range	-40 °C to +70 °C	-40 °C to +70 °C
Humidity	20-95 % Rh non-condensing	20-95 % Rh non-condensing
Mounting	Free-standing cabinet	Free-standing cabinet
Dimensions (H x W x D)	1900 x 565 x 880 mm	1900 x 565 x 880 mm
Mass	395 kg	365 kg
<b>Certification and standards</b>		
Charging system	IEC 61851-1 ed 3, IEC 61851-21-2 ed 1, IEC 61851-23 ed 1, IEC 61851-24 ed 1, IEC 62196-2, IEC 62196-3, IEC 61000	
Communication to the EV	DIN 70121, ISO/IEC 15118 series ed 1 with PnC and EIM, CHAdeMO 1.2	
Communication to the backend	OCPP 1.6 JSON	
Safety	Risk assessment, Fire analysis	
Warranty	Base warranty 24 months after Site Acceptance Test or 30 months after factory delivery. Warranty extensions available	

**Terra 94**

**Terra 54**

**Terra 24**

IP-54 and IK-10 (cabinet) / IK-8 (touchscreen)

Stainless steel 430 and Aluminium

Up to 2000 m

Up to 2000 m

Up to 2000 m

-35 °C to +55 °C

-35 °C to +55 °C

-35 °C to +55 °C

-40 °C to +70 °C

-40 °C to +70 °C

-40 °C to +70 °C

20-95 % Rh non-condensing

20-95 % Rh non-condensing

20-95 % Rh non-condensing

Free-standing cabinet

Free-standing cabinet

Free-standing cabinet

1900 x 565 x 880 mm

1900 x 565 x 780 mm

1900 x 565 x 780 mm

350 kg

325 kg

275 kg

IEC 61851-1 ed 3, IEC 61851-21-2 ed 1, IEC 61851-23 ed 1, IEC 61851-24 ed 1, IEC 62196-2, IEC 62196-3, IEC 61000

DIN 70121, ISO/IEC 15118 series ed 1 with PnC and EIM, CHAdEMO 1.2



OCPP 1.6 J20

Risk assessment, Fire analysis

Base warranty 24 months after Site Acceptance Test or 30 months after factory delivery. Warranty extensions available

# Ordering codes

## IEC Markets

	Rated power (kW)	DC connector 1	DC connector 2	AC connector	Cable Length (in meters)	
	<b>Low voltage power trains (150 - 500 Vdc)</b>					
	20	CCS-2	CHAdEMO	-	-	4
		CCS-2	-	-	AC Cable (22 kW)	4
		CCS-2	-	-	AC Cable (22 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (22 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	-	-	AC Socket (22 kW)	4
	50	CCS-2	CHAdEMO	-	AC Socket (22 kW)	4
		CCS-2	-	-	-	4
		CCS-2	-	-	AC Cable (22 kW)	4
		CCS-2	-	-	AC Cable (43 kW)	6
		CCS-2	-	-	AC Cable (43 kW)	4
		CCS-2	-	-	AC Cable (43 kW)	4
		CCS-2	-	-	AC Socket (22 kW)	4
		CCS-2	CCS-1	-	AC Socket (22 kW)	4
		CCS-2	CHAdEMO	-	-	4
		CCS-2	CHAdEMO	-	AC Cable (22 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (22 kW)	4
CCS-2		CHAdEMO	-	AC Cable (22 kW)	4	
	<b>High voltage power trains (150 - 900 Vdc)</b>					
	50	CCS-2	CHAdEMO	-	AC Cable (43 kW)	6
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
		CCS-2	CHAdEMO	-	AC Cable (43 kW)	4
CCS-2		CHAdEMO	-	AC Socket (22 kW)	4	
CCS-2	-	-	-	8		
CCS-2	CCS-1	-	AC Socket (22 kW)	8		

Cable rating (in A)	Other features	Type	Order code
125		TERRA CE 24 CJ 4-7M-0-0;IT	ABB6AGC073424
125		TERRA CE 24 CG22 4-7M- M-0	ABB6AGC084119
125		TERRA CE 24 CG22 4-7M-0-0;IT	ABB6AGC073442
125		TERRA CE 24 CJG22 4-7M-0-0;IT	ABB6AGC084120
125		TERRA CE 24 CJG 4-7M-0-0;IT	ABB6AGC073423
125		TERRA CE 24 CT 4-7M-0-0;IT	ABB6AGC074672
125		TERRA CE 24 CJT 4-7M-0-0;IT	ABB6AGC100991
125		TERRA CE 54 C 4-7M-0-0;IT	ABB6AGC075211
125		TERRA CE 54 CG22 4-7M-0-0;IT	ABB6AGC073428
125	Upgradable to add CHAdeMO outlet	TERRA CE 54 CG 6-7M-0-SLA;IT	ABB6AGC076637
125		TERRA CE 54 CG 4-7M-0-0;IT	ABB6AGC066382
125	Upgradable to add CHAdeMO outlet	TERRA CE 54 CG 4-7M-0-SLA;IT	ABB6AGC071786
125		TERRA CE 54 CT 4-7M-0-0;IT	ABB6AGC071873
125		TERRA CE 54 C1C2T 4-7M-0-0;IT	ABB6AGC071535
125		TERRA CE 54 CJ 4-7M-0-0;IT	ABB6AGC063492
125	6 meters long AC cable	TERRA CE 54 CJG22 4-7M-0-D;IT	ABB6AGC073952
125	Nayax Payment Terminal factory mounted	TERRA CE 54 CJG22 4-7MN-0-0;IT	ABB6AGC080552
125		TERRA CE 54 CJG22 4-7M-0-0;IT	ABB6AGC071735
125	CCV Payment Terminal (B/S PayOne) factory mounted	TERRA CE 54 CJG22 4-7MB-0-0;IT	ABB6AGC080554
125	CCV Payment Terminal (Card Process, Germany only) factory mounted	TERRA CE 54 CJG22 4-7MA-0-0;IT	ABB6AGC080555
125	Nayax Payment Terminal factory mounted	TERRA CE 54 CJG 6-7MN-0-0;IT	ABB6AGC077820
125		TERRA CE 54 CJG 4-7M-0-0;IT	ABB6AGC063056
125	CCV Payment Terminal (B/S PayOne) factory mounted	TERRA CE 54 CJG 4-7MB-M-0	ABB6AGC084126
125	CCV Payment Terminal (B/S PayOne) factory mounted	TERRA CE 54 CJG 4-7MB-0-0;IT	ABB6AGC071860
125	Nayax Payment Terminal factory mounted	TERRA CE 54 CJG 4-7MN-0-0;IT	ABB6AGC071817
125	CCV Payment Terminal (Card Process, Germany only) factory mounted	TERRA CE 54 CJG 4-7MA-0-0;IT	ABB6AGC073426
125	CCV Payment Terminal (Card Process, Germany only) factory mounted	TERRA CE 54 CJG 4-7MA-M-0	ABB6AGC084125
125		TERRA CE 54 CJT 4-7M-0-0;IT	ABB6AGC071512
125		TERRA CE 54HV-C-4-7M-0-0	ABB6AGC070818
125		TERRA CE 54HV CG22 4-7M-0-0	ABB6AGC080559
125		TERRA CE 54HV CG 4-7M-0-0	ABB6AGC076835
125		TERRA CE 54HV-CJ-4-7M-0-0	ABB6AGC076568
125		TERRA CE 54HV CJG22 4-7M-0-0	ABB6AGC080560
125		TERRA CE 54HV-CJG-4-7M-0-0	ABB6AGC066474
125		TERRA CE 54HV-CT-4-7M-0-0	ABB6AGC077783
125		TERRA CE 54HV-CJT-4-7M-0-0	ABB6AGC077781
125		TERRA CE 54HV C 8-7M-0-0	ABB6AGC072019
125		TERRA CE 54HV CCT 8-7M-0-0	ABB6AGC077836

# Ordering codes

## IEC Markets

Rated power (kW)	DC connector 1	DC connector 2	AC connector	Cable Length (in meters)
<b>High voltage power trains (150 - 900 Vdc)</b>				
90	CCS-2	-	-	4
	CCS-2	CCS-2	-	4
	CCS-2	CHAdemo	AC Socket (22 kW)	4
	CCS-2	CHAdemo	-	4
120	CCS-2	-	-	7
	CCS-2	-	-	4
	CCS-2	CCS-1	AC Socket (22 kW)	4
	CCS-2	CCS-2	AC Socket (22 kW)	4
	CCS-2	CCS-2	-	7
	CCS-2	-	-	4
	CHAdemo	CHAdemo	-	4
	CCS-2	CCS-2	-	6
	CCS-2	CHAdemo	-	6
	CCS-2	CHAdemo	-	4
	CCS-2	CCS-2	-	4
	CCS-2	CCS-2	-	4
	CCS-2	CHAdemo	-	4
	CCS-2	CCS-2	AC Socket (22 kW)	4
	CCS-2	CCS-1	AC Socket (22 kW)	4
	CCS-2	CHAdemo	AC Socket (22 kW)	4
180	CCS-2	-	-	4
	CCS-2	CCS-2	-	4
	CCS-2	-	-	4
	CCS-2	CCS-1	AC Socket (22 kW)	4
	CCS-2	CCS-1	AC Socket (22 kW)	4
	CCS-2	CCS-2	AC Socket (22 kW)	4
	CCS-2	CCS-2	-	7
	CCS-2	CCS-2	-	8
	CCS-2	CCS-2	-	7
	CCS-2	CCS-2	AC Socket (22 kW)	4
	CCS-2	CCS-2	-	8
	CCS-2	CCS-2	-	4
	CCS-2	CCS-2	-	7
	CCS-2	CCS-2	-	4
	CCS-2	CHAdemo	-	8
	CCS-2	CHAdemo	AC Socket (22 kW)	4
	CCS-2	CHAdemo	-	4
	CCS-2	CHAdemo	-	8
	CHAdemo	CHAdemo	AC Socket (22 kW)	4
	CCS-2	CHAdemo	-	4
CHAdemo	CHAdemo	-	6	



Cable rating (in A)	Other features	Type	Order code
200		TERRA CE 94 C 4-7M-0-0	ABB6AGC080803
200		TERRA CE 94 CC 4-7M-0-0	ABB6AGC080804
200		TERRA CE 94 CJT 4-7M-0-0	ABB6AGC080806
200		TERRA CE 94 CJ 4-7M-0-0	ABB6AGC080805
200	Customization for fleet operators	TERRA CE 94 C 7-7M-0-HVC	ABB6AGC085500
200		TERRA CE 124 C 4-7M-0-0	ABB6AGC083318
200		TERRA CE 124 C1C2T 4-7M-0-0	ABB6AGC085471
200		TERRA CE 124 CCT 4-7M-0-0	ABB6AGC082795
200	Customization for fleet operators	TERRA CE 124 CC 7-7M-0-HVC	ABB6AGC085164
200	Customization for fleet operators	Terra CE 124 C 7-7M-0-HVC	ABB6AGC100409
200		TERRA CE 124 JJ 4-7M-0-0	ABB6AGC085464
200		TERRA CE 124 CC 6-7M-0-0	ABB6AGC100960
200		TERRA CE 124 CJ 6-7M-0-0	ABB6AGC100961
200		TERRA CE 124 CJ 4-7M-0-0	ABB6AGC082793
200		TERRA CE 124 CC 4-7M-0-0	ABB6AGC082794
400		TERRA CE 124 CC 4-7M-0-HC	ABB6AGC085475
400		TERRA CE 124 CJ 4-7M-0-HC	ABB6AGC085474
400		TERRA CE 124 CCT 4-7M-0-HC	ABB6AGC085482
400		TERRA CE 124 C1C2T 4-7M-0-HC	ABB6AGC085496
400		TERRA CE 124 CJT 4-7M-0-HC	ABB6AGC085476
400		TERRA CE 124 C 4-7M-0-HC	ABB6AGC085473
400		TERRA CE 124 CC 4-7M-0-HC	ABB6AGC084253
200		TERRA CE 184 C 4-7M-0-0	ABB6AGC080810
400		TERRA CE 184 C 4-7M-0-HC	ABB6AGC085488
200		TERRA CE 184 C1C2T 4-7M-0-0	ABB6AGC085472
400		TERRA CE 184 C1C2T 4-7M-0-HC	ABB6AGC085497
200		TERRA CE 184 CCT 4-7M-0-0	ABB6AGC085461
200	Customization for fleet operators	TERRA CE 184 CC 7-7M-0-HVC	ABB6AGC084662
200		TERRA CE 184 CC 8-7M-0-0	ABB6AGC085463
400		TERRA CE 184 CC 7-7M-0-HC	ABB6AGC085491
400		TERRA CE 184 CCT 4-7M-0-HC	ABB6AGC085489
400		TERRA CE 184 CC 8-7M-0-HC	ABB6AGC085492
200		TERRA CE 184 CC 4-7M-0-0	ABB6AGC080811
200		TERRA CE 184 CC 7-7M-0-0	ABB6AGC084193
400		TERRA CE 184 CC 4-7M-0-HC	ABB6AGC082856
200		TERRA CE 184 CJ 8-7M-0-0	ABB6AGC085551
200		TERRA CE 184 CJT 4-7M-0-0	ABB6AGC085462
400		TERRA CE 184 CJ 4-7M-0-HC	ABB6AGC082857
400		TERRA CE 184 CJ 8-7M-0-HC	ABB6AGC085552
400		TERRA CE 184 CJT 4-7M-0-HC	ABB6AGC085490
200		TERRA CE 184 JJ 4-7M-0-0	ABB6AGC085465
200		TERRA CE 184 CJ 4-7M-0-0	ABB6AGC080812
200		TERRA CE 184 JJ 6-7M-0-0	ABB6AGC085466

# Ordering codes

## UL Markets

Rated power (kW)	DC connector 1	DC connector 2	AC connector	Cable Length (in meters)
<b>Low voltage power trains (150 - 500 Vdc)</b>				
50	CCS-1	-	-	4
	CCS-1	-	-	4
	CCS-1	-	-	4
	CCS-1	CHAdEMO	-	4
	CCS-1	CHAdEMO	-	4
	CCS-1	CHAdEMO	-	4
	CCS-1	CHAdEMO	-	4
	CCS-1	-	-	6
	CCS-1	CHAdEMO	-	6
	CCS-1	CHAdEMO	-	6
	CCS-1	CHAdEMO	-	6
	<b>High voltage power trains (150 - 900 Vdc)</b>			
50	CCS-1	-	-	4
	CCS-1	-	-	4
	CCS-1	-	-	6
	CCS-1	-	-	6
	CCS-1	CHAdEMO	-	6
	CCS-1	CHAdEMO	-	6
90	CCS-1	-	-	6
	CCS-1	CCS-1	-	6
	CCS-1	CHAdEMO	-	6
100	CCS-1	CCS-1	-	6
	CCS-1	CHAdEMO	-	6
	CCS-1	CHAdEMO	-	6
	CCS-1	CCS-1	-	6
120	CCS-1	-	-	6
	CCS-1	CCS-1	-	6
	CCS-1	CHAdEMO	-	6
	CCS-1	-	-	6
	CCS-1	CCS-1	-	6
	CCS-1	CHAdEMO	-	6
180	CCS-1	-	-	6
	CCS-1	CCS-1	-	6
	CCS-1	CCS-2	-	6
	CCS-1	CHAdEMO	-	6
	CCS-1	CCS-1	-	6
	CCS-1	CCS-2	-	6





Cable rating (in A)	Other features	Type	Order code
125	SCCR 65 kA	TERRA UL 54 C 4-7M-0-65K;IT	ABB6AGC081369
125	Nayax Payment Terminal factory mounted, SCCR 65 kA	TERRA UL 54 C 4-7MN-0-65K;IT	ABB6AGC081370
125		TERRA UL 54 C 4-7M-0-0;IT	ABB6AGC072953
125		TERRA UL 54 CJ 4-7M-0-0;IT	ABB6AGC063054
125	Nayax Payment Terminal factory mounted	TERRA UL 54 CJ 4-7MN-0-0	ABB6AGC071946
125	SCCR 65 kA	TERRA UL 54 CJ 4-7M-0-65K;IT	ABB6AGC081371
125	Nayax Payment Terminal factory mounted, SCCR 65 kA	TERRA UL 54 CJ 4-7MN-0-65K;IT	ABB6AGC081372
125		TERRA UL 54 C 6-7M-0-0;IT	ABB6AGC076297
125	Nayax Payment Terminal factory mounted, SCCR 65 kA	TERRA UL 54 CJ 6-7MN-0-65K;IT	ABB6AGC085697
125		TERRA UL 54 CJ 6-7M-0-0;IT	ABB6AGC071648
125	Nayax Payment Terminal factory mounted	TERRA UL 54 CJ 6-7MN-0-0	ABB6AGC076298
125		TERRA UL 54HV C 4-7M-0-0	ABB6AGC072018
125	SCCR 65 kA	TERRA UL 54HV C 4-7M-0-65K	ABB6AGC082822
125	SCCR 65 kA	TERRA UL 54HV C 6-7M-0-65K	ABB6AGC084934
125		TERRA UL 54HV C 6-7M-0-0	ABB6AGC076299
125		TERRA UL 54HV CJ 6-7M-0-0	ABB6AGC082684
125	SCCR 65 kA	TERRA UL 54HV CJ 6-7M-0-65K	ABB6AGC082821
200		TERRA UL 94 C 6-7M-0-0	ABB6AGC080807
200		TERRA UL 94 CC 6-7M-0-0	ABB6AGC080808
200		TERRA UL 94 CJ 6-7M-0-0	ABB6AGC080809
200		TERRA UL 104 CC 6-7M-0-0	ABB6AGC085468
200		TERRA UL 104 CJ 6-7M-0-0	ABB6AGC085469
400		TERRA UL 104 CJ 6-7M-0-HC	ABB6AGC085495
400		TERRA UL 104 CC 6-7M-0-HC	ABB6AGC085494
200		TERRA UL 124 C 6-7M-0-0	ABB6AGC083319
200		TERRA UL 124 CC 6-7M-0-0	ABB6AGC082796
200		TERRA UL 124 CJ 6-7M-0-0	ABB6AGC082797
400		TERRA UL 124 C 6-7M-0-HC	ABB6AGC085477
400		TERRA UL 124 CC 6-7M-0-HC	ABB6AGC085481
400		TERRA UL 124 CJ 6-7M-0-HC	ABB6AGC085478
200		TERRA UL 184 C 6-7M-0-0	ABB6AGC080813
200		TERRA UL 184 CC 6-7M-0-0	ABB6AGC080815
200		TERRA UL 184 C1C2 6-7M-0-0	ABB6AGC085467
200		TERRA UL 184 CJ 6-7M-0-0	ABB6AGC080816
400		TERRA UL 184 CC 6-7M-0-HC	ABB6AGC100820
400		TERRA UL 184 C1C2 6-7M-0-HC	ABB6AGC085493

# Ordering codes for accessories

## Customizations, upgrades and accessories

Tx4 cabinet color customization	
Cable management system (one connector)	for Terra 23/53, Terra 24/54/54HV, Terra 94/124/184
Payment kit CCV	Version for Europe (CardProcess)
	Version for Europe (B/S PayOne)
Payment kit Nayax	Version for North America
	Version for Europe
	Version for Asia
Tilt sensor	
Tx4 pre-cast concrete foundation	
Air filter kit replacement	Kit for inlet air filters
	Kit for outlet air filters
4G Modem upgrade for legacy chargers	Version for APAC region
	Version for EMEA and NAM regions
CHAdEMO-upgrade kit ("SLAM")	for Terra 54 "SLAM"
Power Module (10 kW) for upgrade	for Terra 24/54/54HV, CE and UL models
Power Module (30 kW) for upgrade	for Terra 94/124/184, CE models
	for Terra 94/124/184, UL models
Remotely resettable RCD (for chargers equipped with AC outlet)	for Terra 54HV/54/24

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**Ordering code**

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4EPY420003R1

6AGC084211

6AGC072870

6AGC072870

6AGC072758

6AGC072759

6AGC073030

6AGC084252

4EPY420074R1

4EPY140039R1

4EPY140040R1

6AGC079202

6AGC077126

6AGC077234

6AGC078445

6AGC100134

6AGC081158

6AGC080337

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## Designed for flexibility

A configuration for every use case



**Terra 94/124/184 C**  
Single outlet CCS with cable management system



**Terra 94/124/184 CC**  
Dual outlet CCS with cable management system



**Terra 94/124/184 CJ**  
Dual outlet CCS and CHAdeMO with cable management system and credit card reader



### Power levels

- 50 kW
- 90 kW
- 120 kW / 60 kW shared
- 180 kW / 90 kW shared



### Charging standards

- CCS+CHAdeMO
- CCS-only single outlet
- CCS-only dual outlet



### Cable management

- Reliable, tested system
- Factory or field install



### User access / payment

- OCPP Integration
- Credit card reader
- PIN via Web Tools
- Autocharge/ISO 15118





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# UK and Ireland Office Locations

