

Electric Car

INSIDER

COMMERCIAL EVSE BUYERS GUIDE

INDEPENDENT REVIEWS

ELECTRIC CAR Insider

ELECTRIC CAR Guest Drive

REBATES GUIDE Mobile App



Comprehensive Specifications

ClipperCreek HCS40R



ChargePoint CT4000



US: \$9.45 CA: \$11.45

EV Charger Matrix

Specification Quick Reference



Mfg	Model	Yr Intro	Volts	Amps	kW	MSRP Base	Hardwire	Page
ABB	Terra DC Wallbox	2020	150-920	60	24	--	Yes	18
BTCPower	70A Single Port	2020	240	70	19.8	--	Yes	8
ChargePoint	CT4000	2013	240	16, 24, 30	3.8, 5.8, 7.2	\$8,000-\$12,000	Yes	11
Clipper Creek	HCS40R	2020	208-240	40	7.7	\$665	Yes	10
DCC Electric	DCC-9 and -10	2015	240	60	11.5	\$950	Yes	30
Eaton	xChargeIn	--	230	10-32	7.4-22	--	Yes	17
EDF Renewables	PowerFlex	2015	N/A	N/A	N/A	\$6,000/yr	N/A	28
Efacec	Public Charger	2010	208-240	30	3.7-22	\$4,920	Yes	14
Enel X	Juice Box Pro	--	--	40	9.6	\$1,399	Yes	16
EV Box	BusinessLine	2016	208-240	16, 32	7.4	On Request	Yes	15
EV Connect	Software Platform	2012	N/A	N/A	N/A	On Request	N/A	27
Evercharge	EV Connector	2013	208-240	30	7.2	On Request	Yes	19
EVSE LLC	3703 Charge-Works	--	240	30	7.2	--	Yes	23
Freewire	Mobi EV	2015	120/240	32	11	--	No	25
GreenLots	EV Charging Station Serv	2016	N/A	N/A	N/A	N/A	N/A	26
JuiceBar	Gen 3	2020	240	40	9.6	\$225/mo	Yes	22
Leviton	Evr-Green	2012	240	30	7.2	On Request	Yes	12
Liberty Plugins	Hydra	2013	110-240	32	7.7	\$6,750	N/A	31
Opconnect	EV Charger Mgt Platform	2019	N/A	N/A	N/A	On Request	N/A	29
SemaConnect	Series 6 EV Charger	2011	240	30	7.2	On Request	Yes	17
SparkCharge	Portable EV Charger	2020	150-500	40	20	On Request	No	24
Tellus Power	Level 2	2015	208-240	40	7.2	\$2,899	Yes	13
Valent Power	Quick-e	--	110-130	20, 50, 75	10, 15	--	Yes	9
Volta Charging	Level 2	2010	--	40	10	N/A	Yes	7
Webasto	TurboDX	2019	240	32	7.7	--	Yes	20

Products not available for sale within the next 12 months of printing deadline will appear in subsequent editions of ECI magazine. Subscriptions available at electric-car-insider.com. Dashes in the matrix represent specs not available at time of printing.

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Level 2



2020

Enel X Juice Box Pro

ENEL X Juice Box Pro

Although typically known as a residential charger, JuiceBox also functions as a commercial charger with its Pro line. Enel X offers the JuiceBox Pro in 32A and 40A currents with 7.7kW and 9.6kW of power, respectively. Pro chargers are Level 2 stations that can be plugged into a 240V outlet or hardwired depending on the owner's preference. For the plug-in model, wall and pedestal mounts are available. The JuiceBox Pro's design is simple and attractive with dynamic LED lights that display power, WiFi connectivity, and charge status. The Pro is equipped with a 25-foot cable and a J1772 connector. The charger's enclosure is NEMA 4X certified to protect against harsh weather conditions and dust. Enel X provides a three-year manufacturer's warranty on the unit.

Enel X offers a software service called JuiceNet at two tiers: Business Edition and Enterprise Edition. For \$60 a year per unit, the former provides owners with station information and use data and allows them to set station availability. For \$120 a year per unit, the latter adds on features such as personalized privilege-granting capabilities, time-of-use pricing, and multi-property support that allows owners to coordinate stations at multiple locations.

Enel X has a mobile app that lets users monitor their charging status and notifies them when their charging session is complete. JuiceBox Pro chargers are made in America.



ACQUISITION

MSRP **\$1,399**
Availability --
Warranty **3-year**

RATING

Volts
Amps **40A**
Watts **9.6kW**

WIRING

Hardwire **Yes**
Plug Type **Hardwire or 240V**
Breaker --

CABLE

Connector **J1772**
Cord Length (ft) **25 ft**

USER INTERFACE

Interface Type **Manual, QR code**
Communications **WiFi**
Software ... **JuiceNet, mobile app**

DIMENSIONS

Dimension **18.5"H x 6.8"W x 5.8"D**
Weight **15 lbs**
Enclosure **NEMA 4X**
Rating **Indoor/Outdoor**
Temperature --

Level 2



ChargePoint CT4000

ACQUISITION

MSRP **\$8,000-\$12,000**
Availability **2013-Present**
Warranty **1-5 years**

RATING

Volts **240VAC**
Amps **16A, 24A, 30A**
Watts **3.8, 5.8, 7.2kW**

WIRING

Hardwire **Yes**
Plug Type **Hardwired**
Breaker ... **40A**

CABLE

Connector **J1772**
Cord Length (ft) **18 ft, 23 ft**

USER INTERFACE

Interface Type **LCD display**
Communications ... **WiFi, 4G LTE**
Software ... **CP Cloud, CP Assure**

DIMENSIONS

Dimensions **6 ft x 13 in**
Weight **Varies by model**
Enclosure **NEMA 3R**
Rating **Indoor/Outdoor**
Temperature **-40F to 122F**

2013 - 2020

CHARGEPOINT CT4000

ChargePoint's CT4000 is a Level 2 networked commercial charging station available in single and dual port options. It is a 30A unit that charges at a rate of 7.2 kW. The CT4000 is designed for indoor and outdoor use. It can be mounted to a bollard or the wall. ChargePoint offers 6- and 8-foot models with 18 and 23-foot self-retracting cables, respectively. The CT4000 contains branding areas for owners to advertise their businesses. The CT4000's center features a 5.7-inch, full-motion color screen with a touch-button interface that is operable in all weather conditions and with gloves. Owners can display custom images and videos on the screen. If owners are in need of more charging spots, they can upgrade from a single to a dual port unit without the need for additional electrical services thanks to ChargePoint's intelligent power management. The CT4000 is UL and ENERGY STAR® certified efficient, which saves owners money on their utility bill. Software updates can be conveniently completed over the air.

ChargePoint assists owners from start to finish, supplying site-planning, installation, maintenance, diagnostics, and repair services. It also provides a cloud service that gives owners access to valuable data such as revenue generation and energy consumption and the ability to set custom Time of Day (TOD) pricing. ChargePoint also offers 24/7 customer service phone support. ChargePoint's popular app includes a map that directs nearby drivers to your charging station.





Access Controls

Provisioning, Security and Revenue

BY RICK DURST

Some access controls are physical, while others are software- or app-based. Examples of access controls include switches, cards, keypads, & smartphones.

SYSTEM TYPES

A charging station's access controls refer to the different ways that users can obtain the ability to utilize or otherwise manipulate the charger. There are owner-specific and customer-specific access controls. Some access controls are physical, while others are software- or app-based. Examples of access controls include switches, cards, keypads, and smartphones. For details regarding each access control method, see below.

OWNER MANUAL CONTROLS

Manual controls consist of simply turning off the power that supplies the charger or locking the charger up by some physical means.

Adding a relay that can be controlled by a switch near the

front desk could be expensive if the front desk is quite a distance from the path of the power flow between the electric panel and where the charger is located.

CHARGING EQUIPMENT VENDOR SUPPLIED CONTROLS

MANUAL CONTROLS

At least one vendor offers a simple key switch mounted on the charging station to turn on and off the control mechanism. With the key switch off, the charger will not supply power to the vehicle.

SOFTWARE-RELATED ACCESS CONTROLS

Many EV Charging vendors offer access controls using various types of controls, from card access and Bluetooth™ to kiosk and Smartphone network apps. Some

vendors can lock the charging cord in place on the charger and allow it to be unlocked or released from the holder when a charging session is activated.

Registering with a Network Operator can enhance your charging experience by providing features and notifications such as charge status (complete, charging, interrupted, etc.) energy consumption, charging duration.

Radio Frequency Identification (RFID) Cards

RFID cards have a small electronic chip inside. Holding this card up to a charger allows the charging station to read the chip and, if authorized, grant access. There are different types of RFID cards. Check with your security or IT department if you

plan to use employee or tenant access cards to see if they are compatible with the type of equipment you wish to purchase. Some vendors can sync chargers to pre-existing employee id cards. (This method will typically require coordination between the network provider and the security department.)

Magnetic Stripe Cards

Swipe cards can be special cards by a certain vendor or regular credit and debit cards. Card compatibility is determined by the type of card reader used by the station. Typically, these cards are used with a back-end payment system by a Network Operator (see section on Network Operators).

Payment Kiosk/Keypad

As an alternative to having each individual station use its own payment card and communications connected to a back-end network, a payment kiosk may be used. Users access a central payment kiosk that controls the operation of each individual charger. A payment kiosk may use a variety of different payment mechanisms such as cash or credit card and is comparable to those used for parking payments. The station is then activated with a code provided at the Kiosk using the keypad on the charger.



Smartphone Apps

Bluetooth™ controls: Controlling the operation of charging equipment using Bluetooth via computer or smartphone is a simple, low-cost method of managing access to chargers without a monthly access fee. Bluetooth™ allows an owner to program a series of access codes to grant to select users. Users then enter the codes into their charging app to access the charger. Codes can be changed an unlimited number of times and added or removed from each charger as desired.

Vendor Apps: Most network providers have their own in-house app to find and control in-network charging stations. While some vendors display other

charging spots in the area, they can only control the chargers within their specific network.

Pay with PlugShare: Plugshare is an app that is used to locate chargers along a route, in a given vicinity, or anywhere a driver selects. Plugshare has teamed up with network providers to facilitate payment via the PlugShare app. This allows users to pay with PlugShare and avoid the need to join a specific network provider.

Apple Pay™: AppleMaps™ shows Chargepoint charging stations that can be activated using the ApplePay™ service.

Paypal: Certain vendors provide the ability to pay with Paypal using their apps.

Make a Phone Call: If you lack a smartphone or misplaced your network card, most networked stations will allow you to make a call to the network support number on the charger to start a charge session. If you do not have an account with that vendor, you might need to make a payment with a credit card or join their network.

Fleet Operator Fuel Payment Cards: A few vendors can support Fleet Operator Fuel Payment cards. If you are a fleet user and want to track fueling on your electric fleet vehicles, then select one of these vendors. ❌

Bluetooth™ allows an owner to program a series of access codes to grant to select users. Users then enter the codes into their charging app to access the charger.

Plugshare has teamed up with network providers to facilitate payment via the PlugShare app. This allows users to pay with PlugShare and avoid the need to join a specific network provider.



EV Educational Resources

Supporting EV Adoption from Awareness to Advocacy

Electric Car INSIDER

EV Buyers Guide



Compare electric cars with comprehensive, full-page profiles of the latest models

Electric Car Guest Drive



Test drive the latest electric cars and learn from EV owners

Discount Pricing Guide



The app that can save you thousands of dollars on EV purchases

Educational Pillars



Large scale interactive exhibits for indoor and outdoor events

ECI creates electric vehicle educational resources for groups, organizations and individuals.

Call for our full catalog and pricing

EV Navigator



Online, interactive app to guide prospective EV drivers on the path to ownership and advocacy