

ZBENY

EV Charger Selection Guide

1-Phase from 1.3kW to 7.4kW
3-Phase from 4.1kW to 22kW

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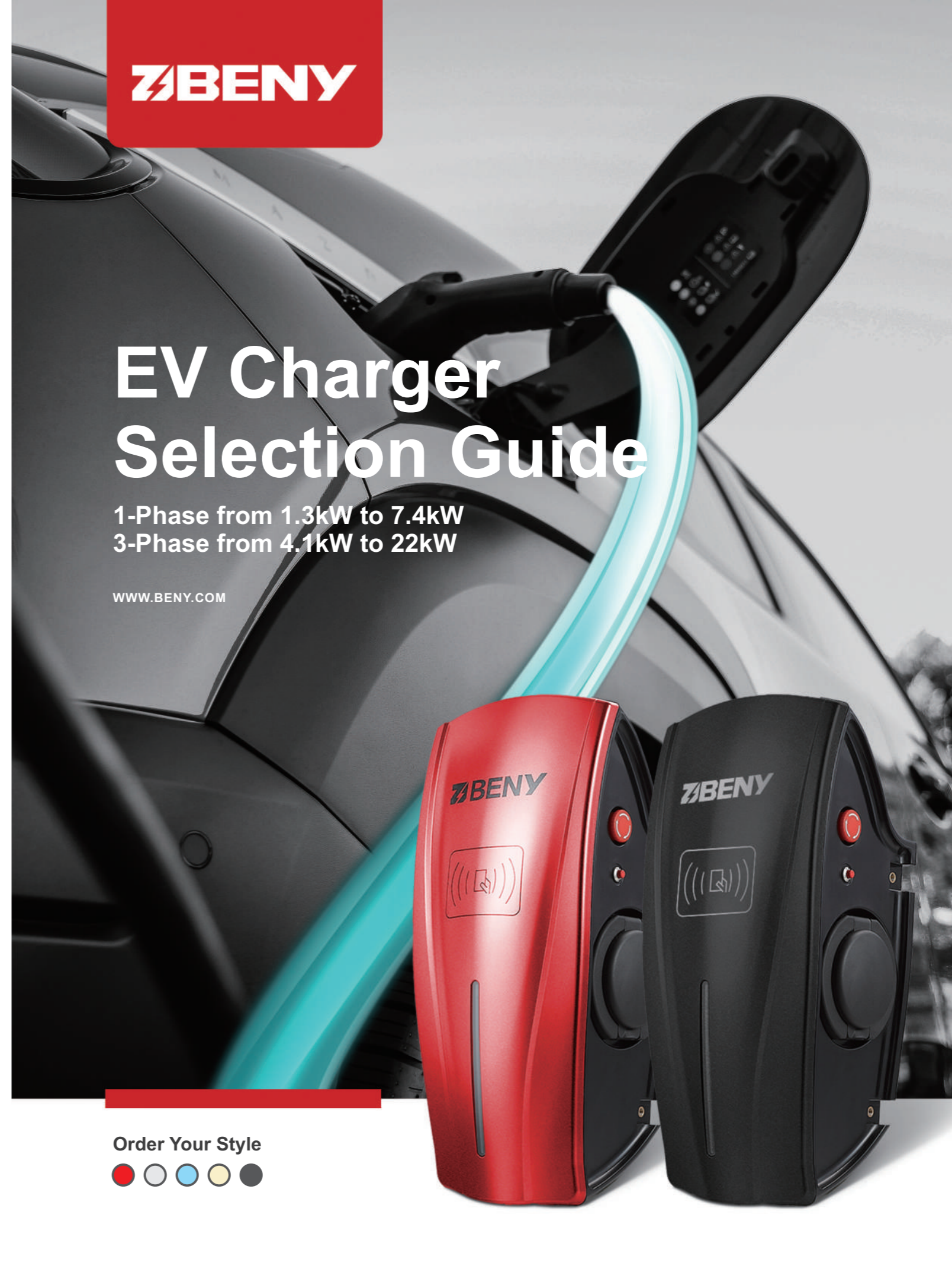
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BCP Series EV chargers have an IP65 patented designcase for outdoor and indoor use.



The type 2 (IEC 62196-2) charging connector makes highly flexible and compatible with all electric vehicles.



Plug and start to charge automatic. (RFID card for option)



The EV charger output power can be adjusted from 6A all the way up to 32A.

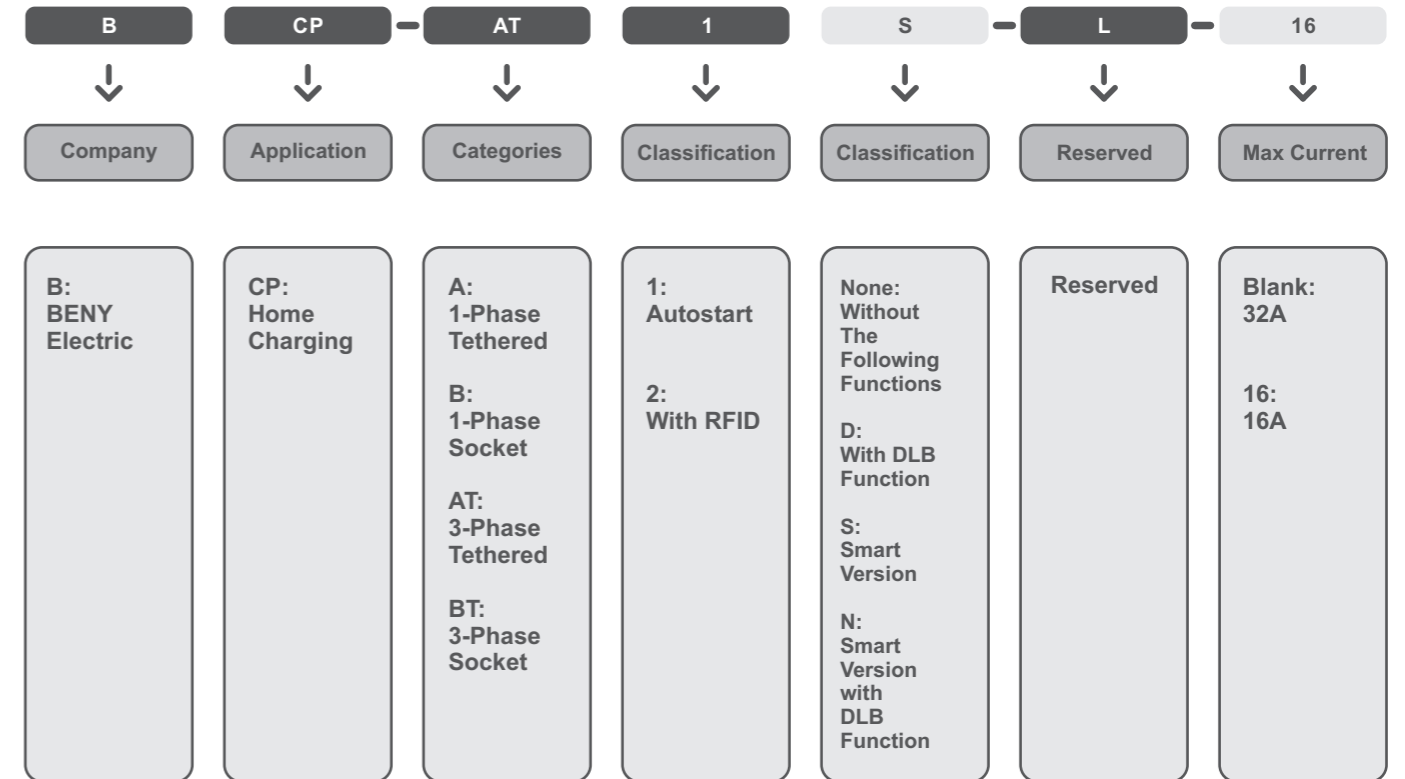


Model Number

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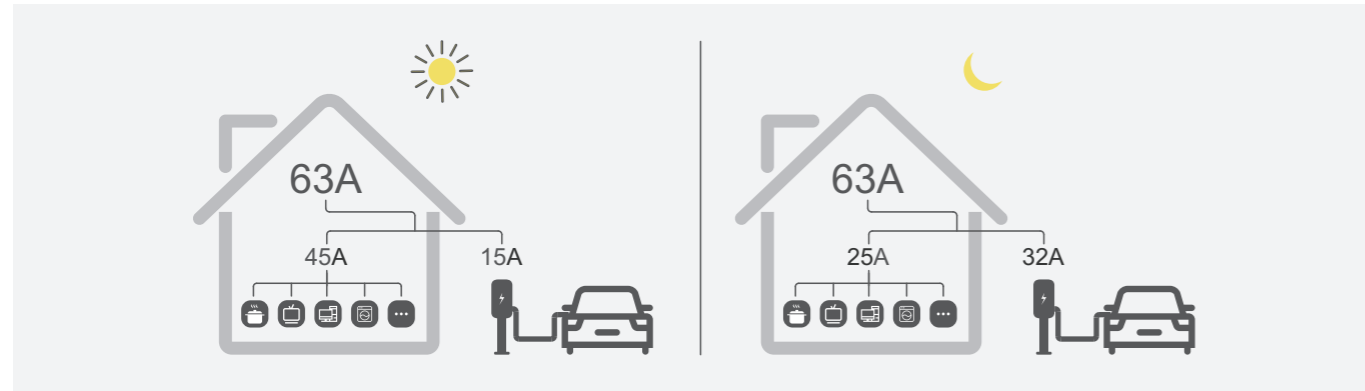


EV Charger Model



Functions Explain

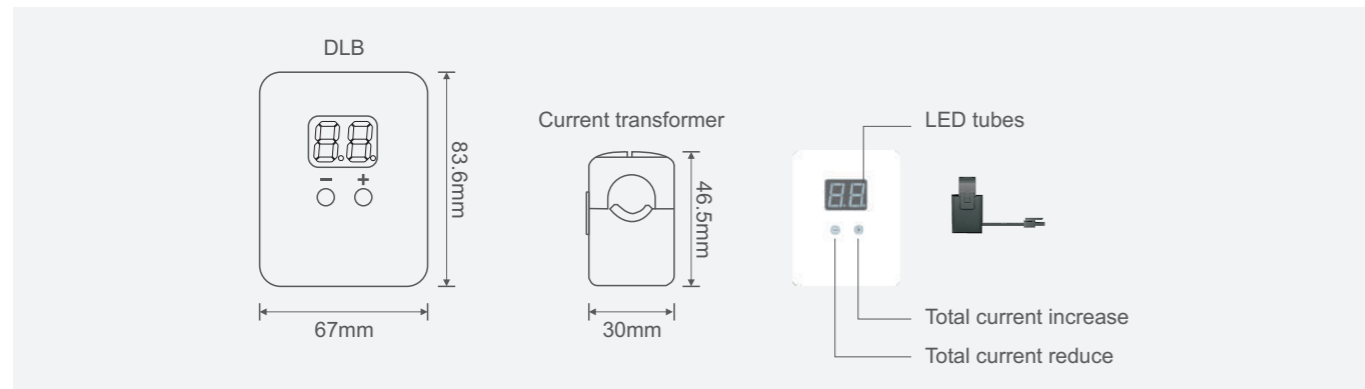
EV Charger Selection Guide



✓ Dynamic Load Balancing

DLB (Dynamic Load Balancing) is available in the BCP series AC EV Charger for home use, when the EV charger is working with other household appliances at the same time, the DLB box can maintain the dynamic balance of the total household current and ensure the safety of electricity to avoid home over load.

Set the Max current value of the main line on the DLB box. The charger will read this current value and automatically adjust the charging current (6A-32A) according to the idle load quota, so that the total household current will not be overloaded due to charging. This function can effectively use the power supply without providing additional power for the charging or home line update.



✓ RFID(Radio Frequency Identification Card)

RFID card reader enabled to start up charging function while approaching the swipe area.

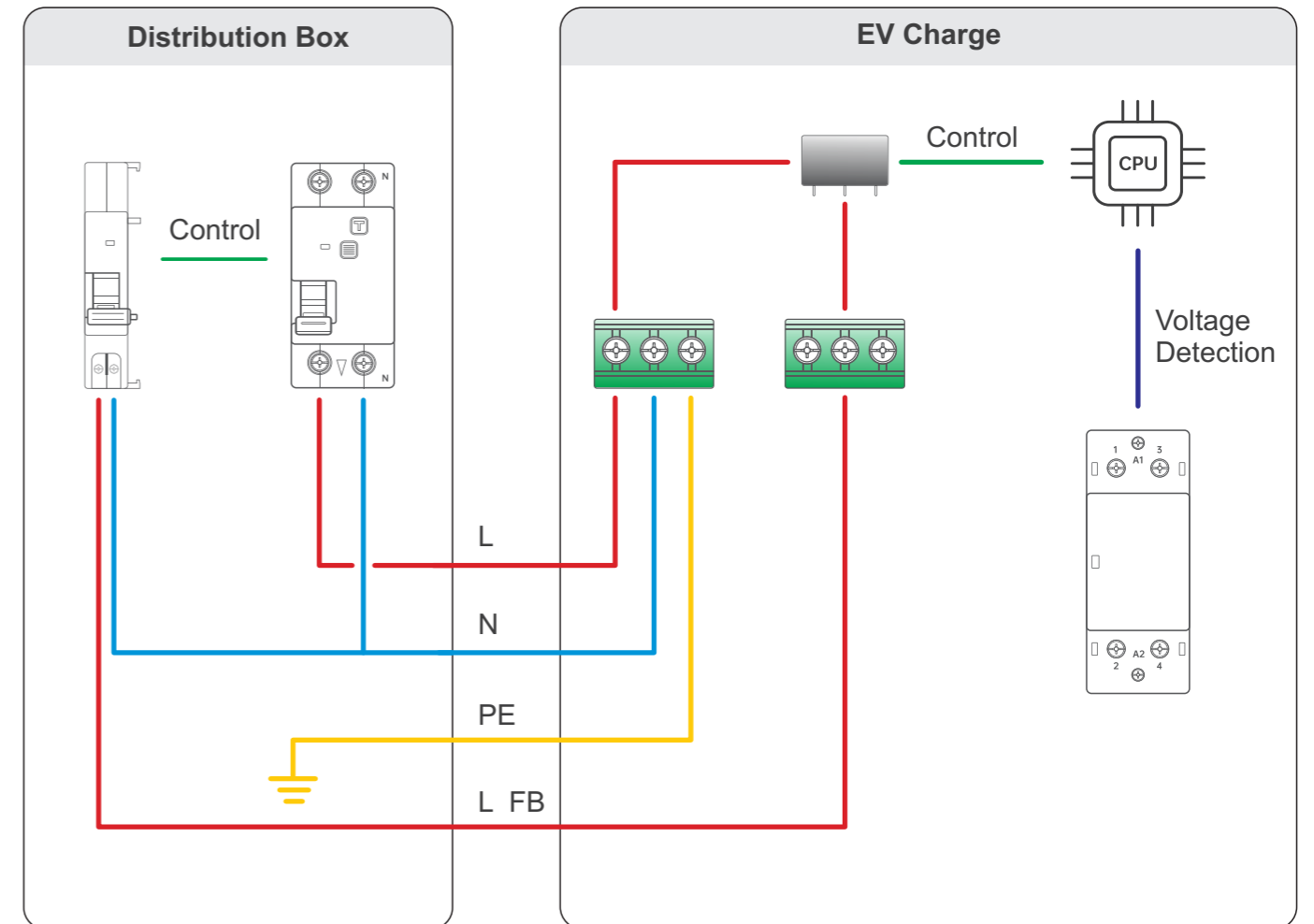


Functions Explain

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✓ Contactor Adhesion Protection



- Single-Phase



- Three-Phase



About contactor adhesion protection and why?

When the contactor in the charger is stuck due to current or short-circuit failure, the charger gun or the wires in the socket type charger will be live, brings the danger of electric shock to people.

The charger with contactor adhesion protection can avoid the danger.

How contactor adhesion protection works?

The main control chip of the charger keeps detecting the voltage of the contactor output;

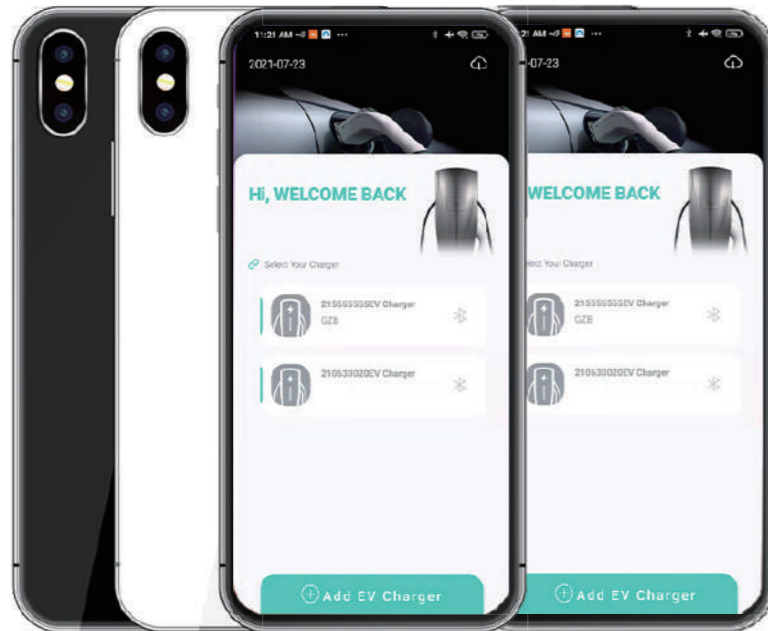
If there is an AC voltage is detected at the output of the contactor when the charger is not in operating.

Then the charger will run the fault protection routine to alarm the lights and control the on-board relay to close.

As shown in the figure, the trip unit will drive the leakage protector to trigger and disconnect the power supply.

Functions Explain

EV Charger Selection Guide



Smart APP

- The EV charger can be controlled by smart APP via WIFI or bluetooth connection;
- One to one binding EV charger by reset the password, prevent the EV charger being stolen;
- View charging data and status;
- Set up various charging configurations, charging current,DLB mode,etc.
- Scheduled charging;
- View historical charging records;
- Setting monthly maximum charging values;
- Firmware update;

Specifications

EV Charger Selection Guide



Electrical

Charging Capacity	1.3kW – 7.4kW / 4.1kW – 22kW
Charge Mode	Mode 3 (IEC 61851-1)
Output Power	Selectable 1-phase or 3-phase, 230-400V 6A -32A, 50-60Hz
Connector Options	Fixed cable type 2 plug or type 2 Socket
Fixed Cable Length	6m (18 ft)
Cable Entry	Rear or bottom

Protection and certification

Build-in RCD	TYPE A + DC6mA leakage sensor built-in
With Cable	IP65, IK07
Socket	IP55, IK07
Housing Fire Ratings	V0
Operating Temperature	-25~+55°C
Compliance	IEC61851-1,IEC61851-21-2,IEC61000-4 CE EMC EU/2014.CE Low Voltage EU/2014/35
Certificate	CE, UKCA, RCM

Connectivity

Authorization	Auto-start standard / RFID card option
Status Indication	LED ring
WLAN Communication	Wi-Fi / Bluetooth 4.2 option

Mechanical

Housing	Polycarbonate
Dimension	W169 x H380 x D151 mm
Mounting	Wall or Pole

Specifications

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WIFI

Operating Frequency Range	2412 - 2484MHz
WI-FI Protocols	IEEE 802.11 b/g/n
Channels	13
TX Power	<20dbm
EIRP	0.459
TX bandwidth	20MHz/40MHz
Modulation type	OFDM & DSSS
Transmitting Duty Cycle	10%

BlueTooth BLE

Sensitivity @30.8% PER	-93 dbm
Co-channel C/I	+10db
RF Power Control Range	-12 ~ 9dbm

NFC





Modulation Type	ASK
Operating Frequency	13.56MHz
H-field strength	21.31 dBuA/m@3m distance
Antenna Type	Coil Antenna

Model Selection

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1-Phase Un-smart Version

Wallbox Models	BCP-A1-L	BCP-A2-L	BCP-B1-L	BCP-B2-L
				
Categorization	Un-smart Version			
Maximum Power	7.4kW			
Input Voltage /Output voltage	AC230 1-Phase			
Input Frequency	50/60Hz			
Meter	Metering Chip			
Display	LED Lights			
RFID	✗	✓	✗	✓
DLB	✗	✗	✗	✗
Wi-Fi	✗	✗	✗	✗
APP	✗	✗	✗	✗
Bluetooth	✗	✗	✗	✗
Over Voltage &Under Voltage Protection	✓	✓	✓	✓
Emergency Stop	✓	✓	✓	✓
Over Current Protection	✓	✓	✓	✓
CP Signal Short Circuit Protection	✓	✓	✓	✓
Over Temperature Protection	✓	✓	✓	✓
Lightning Protection	✓	✓	✓	✓
Contactors Adhesion Protection	✓	✓	✓	✓
Protection Degree	IP65	IP65	IP55	IP55
Environment Temperature	-25°C~+55°C			
Maximun Altitude	< 2000m			





✓ : Standard ✗ : Without

Model Selection

EV Charger Selection Guide



● 1-Phase Un-smart Version

Wallbox Models	BCP-A1D-L	BCP-A2D-L	BCP-B1D-L	BCP-B2D-L
				
Categorization	Un-smart Version			
Maximum Power	7.4kW			
Input Voltage /Output voltage	AC230 1-Phase			
Input Frequency	50/60Hz			
Meter	Metering Chip			
Display	LED Lights			
RFID	✘	✔	✘	✔
DLB	○	○	○	○
Wi-Fi	✘	✘	✘	✘
APP	✘	✘	✘	✘
Bluetooth	✘	✘	✘	✘
Over Voltage &Under Voltage Protection	✔	✔	✔	✔
Emergency Stop	✔	✔	✔	✔
Over Current Protection	✔	✔	✔	✔
CP Signal Short Circuit Protection	✔	✔	✔	✔
Over Temperature Protection	✔	✔	✔	✔
Lightning Protection	✔	✔	✔	✔
Contactors Adhesion Protection	✔	✔	✔	✔
Protection Degree	IP65	IP65	IP55	IP55
Environment Temperature	-25°C~+55°C			
Maximun Altitude	< 2000m			





✔ : Standard ○ : Optional ✘ : Without

Model Selection

EV Charger Selection Guide



● 1-Phase Smart Version

Wallbox Models	BCP-A1S-L	BCP-A2S-L	BCP-B1S-L	BCP-B2S-L
				
Categorization	Smart Version			
Maximum Power	7.4kW			
Input Voltage /Output voltage	AC230 1-Phase			
Input Frequency	50/60Hz			
Meter	Metering Chip			
Display	LED Lights			
RFID	✘	✔	✘	✔
DLB	✘	✘	✘	✘
Wi-Fi	✔	✔	✔	✔
APP	✔	✔	✔	✔
Bluetooth	✔	✔	✔	✔
Over Voltage &Under Voltage Protection	✔	✔	✔	✔
Emergency Stop	✔	✔	✔	✔
Over Current Protection	✔	✔	✔	✔
CP Signal Short Circuit Protection	✔	✔	✔	✔
Over Temperature Protection	✔	✔	✔	✔
Lightning Protection	✔	✔	✔	✔
Contactors Adhesion Protection	✔	✔	✔	✔
Protection Degree	IP65	IP65	IP55	IP55
Environment Temperature	-25°C~+55°C			
Maximun Altitude	< 2000m			





✔ : Standard ✘ : Without

Model Selection

EV Charger Selection Guide



● 1-Phase Smart Version

Wallbox Models	BCP-A1N-L	BCP-A2N-L	BCP-B1N-L	BCP-B2N-L
				
Categorization	Smart Version			
Maximum Power	7.4kW			
Input Voltage /Output voltage	AC230 1-Phase			
Input Frequency	50/60Hz			
Meter	Metering Chip			
Display	LED Lights			
RFID	✘	✔	✘	✔
DLB	○	○	○	○
Wi-Fi	✔	✔	✔	✔
APP	✔	✔	✔	✔
Bluetooth	✔	✔	✔	✔
Over Voltage &Under Voltage Protection	✔	✔	✔	✔
Emergency Stop	✔	✔	✔	✔
Over Current Protection	✔	✔	✔	✔
CP Signal Short Circuit Protection	✔	✔	✔	✔
Over Temperature Protection	✔	✔	✔	✔
Lightning Protection	✔	✔	✔	✔
Contactors Adhesion Protection	✔	✔	✔	✔
Protection Degree	IP65	IP65	IP55	IP55
Environment Temperature	-25°C~+55°C			
Maximun Altitude	< 2000m			





✔ : Standard ○ : Optional ✘ : Without

Model Selection

EV Charger Selection Guide



● 3-Phase Smart Version

Wallbox Models	BCP-AT1S-L	BCP-AT2S-L	BCP-BT1S-L	BCP-BT2S-L
				
Categorization	Smart Version			
Maximum Power	22kW			
Input Voltage /Output voltage	AC400 3-Phase			
Input Frequency	50/60Hz			
Meter	Metering Chip			
Display	LED Lights			
RFID	✘	✔	✘	✔
DLB	✘	✘	✘	✘
Wi-Fi	✔	✔	✔	✔
APP	✔	✔	✔	✔
Bluetooth	✔	✔	✔	✔
Over Voltage &Under Voltage Protection	✔	✔	✔	✔
Emergency Stop	✔	✔	✔	✔
Over Current Protection	✔	✔	✔	✔
CP Signal Short Circuit Protection	✔	✔	✔	✔
Over Temperature Protection	✔	✔	✔	✔
Lightning Protection	✔	✔	✔	✔
Contactors Adhesion Protection	✔	✔	✔	✔
Protection Degree	IP65	IP65	IP55	IP55
Environment Temperature	-25°C~+55°C			
Maximun Altitude	< 2000m			




✔ : Standard ✘ : Without

Model Selection

EV Charger Selection Guide



● 3-Phase Smart Version

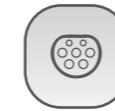
Wallbox Models	BCP-AT1N-L	BCP-AT2N-L	BCP-BT1N-L	BCP-BT2N-L
				
Categorization	Smart Version			
Maximum Power	22kW			
Input Voltage /Output voltage	AC400 3-Phase			
Input Frequency	50/60Hz			
Meter	Metering Chip			
Display	LED Lights			
RFID	✘	✔	✘	✔
DLB	○	○	○	○
Wi-Fi	✔	✔	✔	✔
APP	✔	✔	✔	✔
Bluetooth	✔	✔	✔	✔
Over Voltage &Under Voltage Protection	✔	✔	✔	✔
Emergency Stop	✔	✔	✔	✔
Over Current Protection	✔	✔	✔	✔
CP Signal Short Circuit Protection	✔	✔	✔	✔
Over Temperature Protection	✔	✔	✔	✔
Lightning Protection	✔	✔	✔	✔
Contactors Adhesion Protection	✔	✔	✔	✔
Protection Degree	IP65	IP65	IP55	IP55
Environment Temperature	-25°C~+55°C			
Maximum Altitude	< 2000m			

✔ : Standard ○ : Optional ✘ : Without

OCP Version



BCP Series EV chargers have an IP65 patented designcase for outdoor and indoor use.



The type 2 (IEC 62196-2) charging connector makes highly flexible and compatible with all electric vehicles.



Plug and start to charge automatic.(RFID card for option)



The EV charger output power can be adjusted from 6A all the way up to 32A.



Charging protocol OCPP1.6-J



Model Selection

EV Charger Selection Guide



Wallbox Models	BCP-A2N-L	BCP-B2N-L	BCP-AT2N-L	BCP-BT2N-L	BCP-DT2S-L
Maximum Power	7.4kW		22kW		2x22kW
Input Voltage /Output voltage	AC230 1-Phase		AC400 3-Phase		AC400 3-Phase
Input frequency	50/60Hz				50/60Hz
Tethered/Socket	Tethered	Socket	Tethered	Socket	2xSocket
Meter	Metering Chip				MID Meter
Display	LED Lights				LCD Screen+LED Lights
RFID	✓	✓	✓	✓	✓
DLB	○	○	○	○	✗
Wi-Fi	✓	✓	✓	✓	✓
Ethernet	✗	✗	✗	✗	○
4G	✗	✗	✗	✗	○
Over Voltage & Under Voltage Protection	✓	✓	✓	✓	✓
Emergency Stop	✓	✓	✓	✓	✓
Over Current Protection	✓	✓	✓	✓	✓
CP Signal Short Circuit protection	✓	✓	✓	✓	✓
Over Temperature Protection	✓	✓	✓	✓	✓
Lightning Protection	✓	✓	✓	✓	✓
Contactors Adhesion Protection	✓	✓	✓	✓	✓
Protection degree	IP65	IP55	IP65	IP55	IP55
Environment temperature	-25°C ~ +55°C				
Maximum altitude	<2000m				

OCPP Specification

EV Charger Selection Guide



1. OCPP Specification

Version	OCPP1.6-J
TLS	support
HTTP Basic Authentication	support
Feature Profiles	Core, Firmware Management, Local Auth List Management, Remote Trigger, Reservation, Smart Charging
Get Diagnostics Protocol	FTP
Update Firmware Protocol	HTTP

2. Security Profile

Level	Details	Yes or No
Security Profile 0	Regular OCPP 1.6J without security	✓
Security Profile 1	OCPP 1.6J with Basic Authentication	✓
Security Profile 2	OCPP 1.6J with TLS (Only Server-side certificate) and Basic Authentication	✓
Security Profile 3	OCPP 1.6J with TLS using Server and client-side certificates	X

3.OCPP Configurations

Name	Support	(R)/ (RW)
Allow Offline Tx For UnknownId	YES	RW
Authorization Cache Enabled	YES	RW
Authorize Remote Tx Requests	YES	RW
Blink Repeat	NO	RW
Clock Aligned DataInterval	YES	RW
Connection Time Out	YES	RW
Connector Phase Rotation	YES	RW
Connector Phase Rotation MaxLength	YES	R
Get Configuration MaxKeys	YES	R
Heartbeat Interval	YES	RW

OCPP Specification

EV Charger Selection Guide



Name	Support	(R)/ (RW)
Light Intensity	NO	RW
Local Authorize Offline	YES	RW
Local Pre Authorize	YES	RW
Max Energy OnInvalidId	NO	RW
Meter Values Aligned Data	YES	RW
Meter Values Aligned Data Max Length	YES	R
Meter Values Sampled Data	YES	RW
Meter Values Sampled Data Max Length	YES	R
Meter Value Sample Interval	YES	RW
Minimum Status Duration	YES	RW
Number Of Connectors	YES	R
Reset Retries	YES	RW
Stop Transaction On EVSide Disconnect	YES	RW
Stop Transaction OnInvalidId	YES	RW
Stop Txn Aligned Data	NO	RW
Stop Txn Aligned Data Max Length	NO	R
Stop Txn Sampled Data	NO	RW
Stop Txn Sampled Data Max Length	NO	R
Supported Feature Profiles	YES	R
Supported Feature Profiles Max Length	YES	R
Transaction Message Attempts	YES	RW
Transaction Message Retry Interval	YES	RW
Unlock Connector On EVSide Disconnect	YES	RW
Web Socket Ping Interval	YES	RW
Local Auth List Enabled	YES	RW
Local Auth List Max Length	YES	R
Send Local List Max Length	YES	R

OCPP Specification

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Name	Support	(R)/ (RW)
Reserve Connector Zero Supported	YES	R
Charge Profile Max Stack Level	YES	R
Charging Schedule Allowed Charging RateUnit	YES	R
Charging Schedule Max Periods	YES	R
Connector Switch 3 to 1 Phase Supported	YES	R
Max Charging Profiles Installed	YES	R