

The ZBENY logo is located in the top left corner, featuring a stylized lightning bolt symbol followed by the brand name in a bold, white, sans-serif font, all contained within a red rectangular background.

**ZBENY**

# EV Charger Selection Guide

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





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 OCPP1.6J is optional.

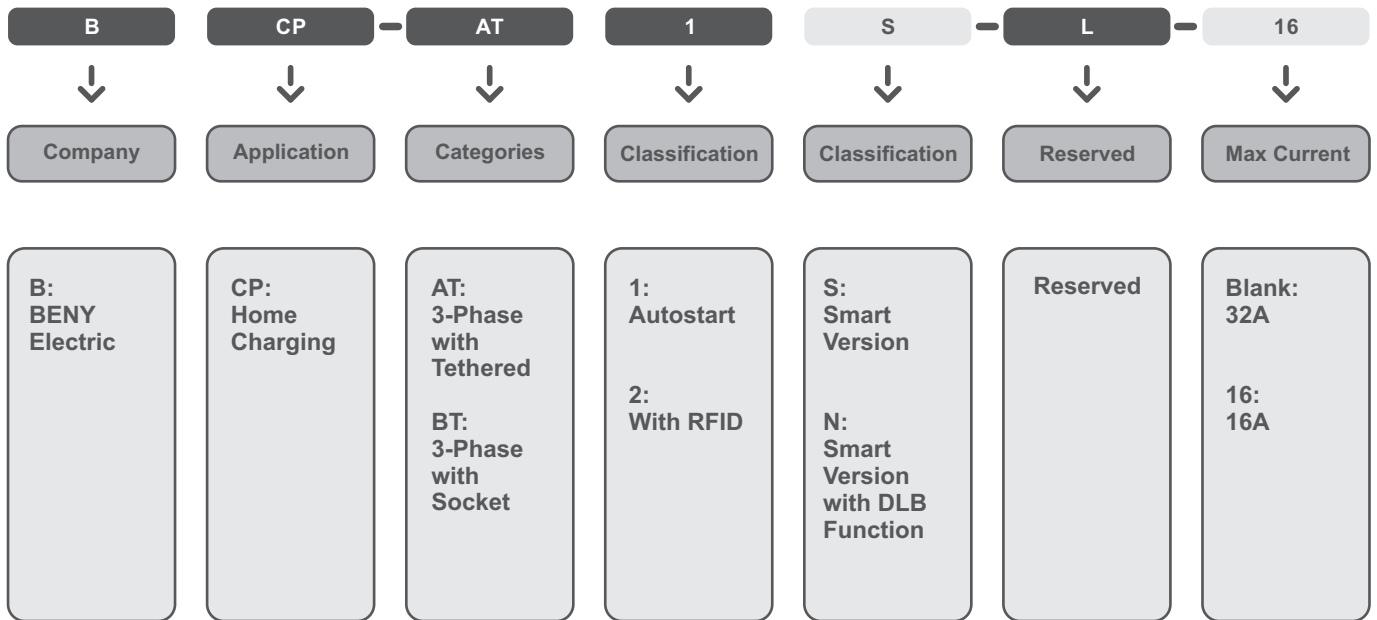


# Model Number

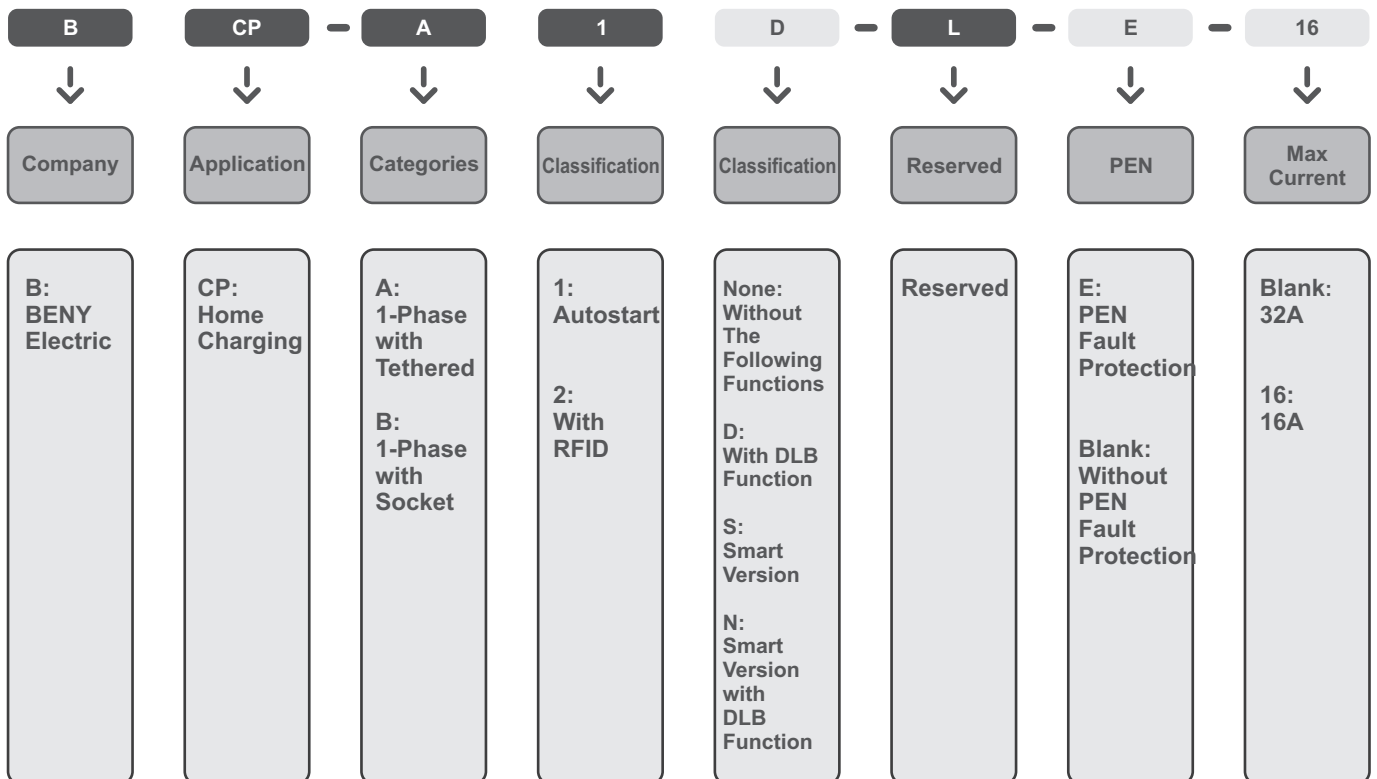
## EV Charger Selection Guide



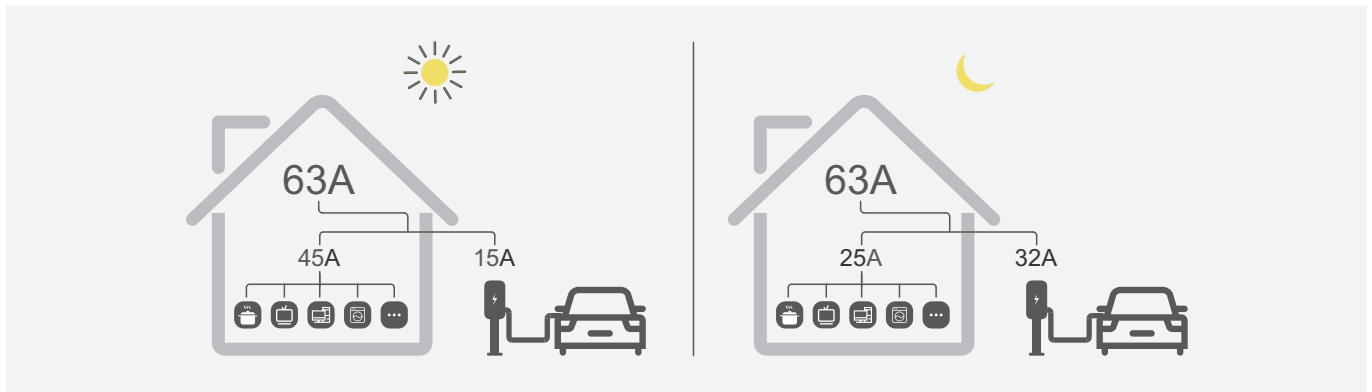
### Three Phase EV Charger Model



### Single Phase Model (PEN Function Is Only For UKCA Certificate)



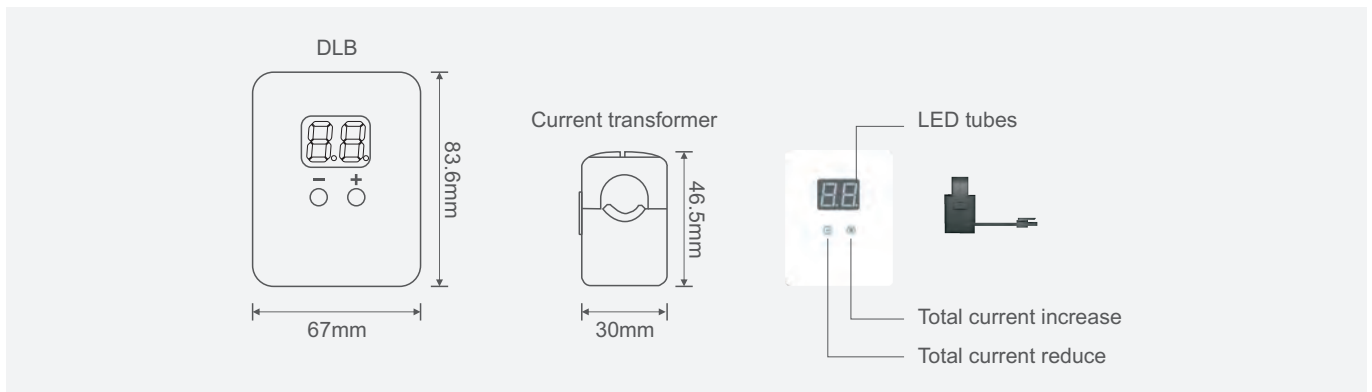
# Functions Explain



### ✔ **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.

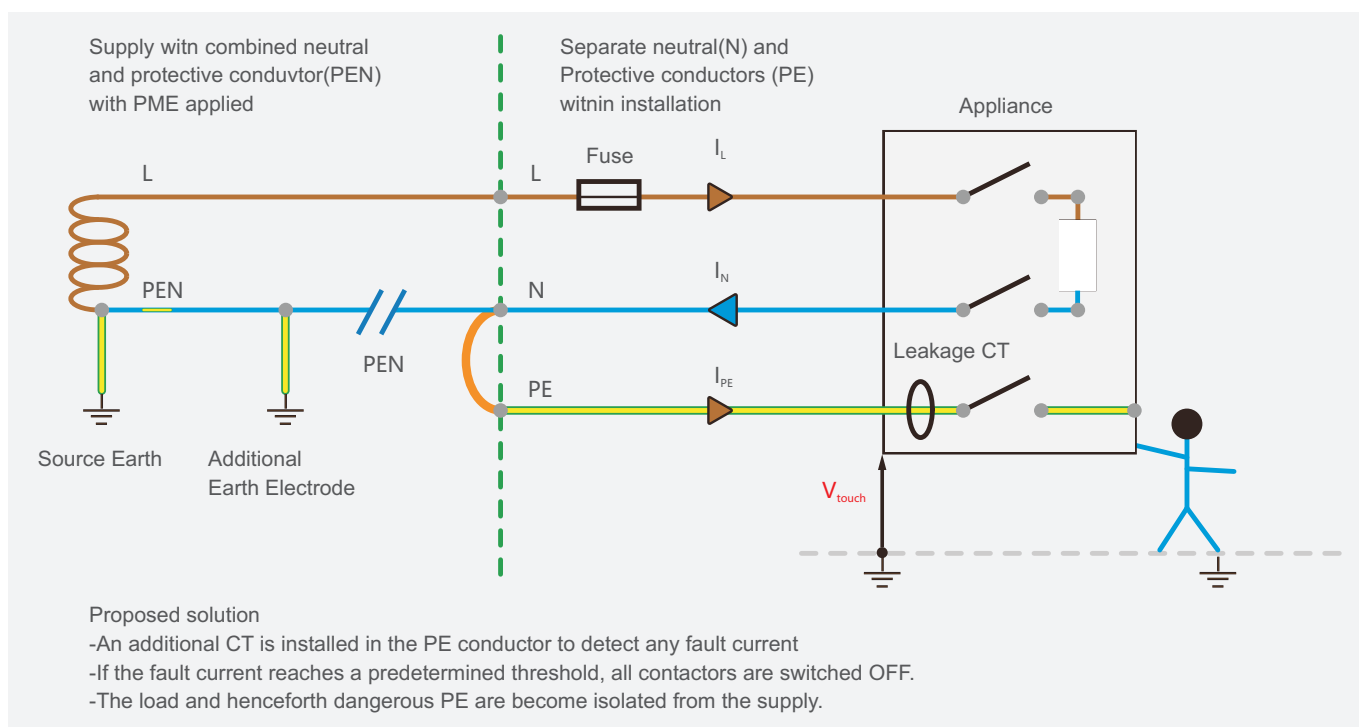


# Functions Explain

## EV Charger Selection Guide



### PEN Fault Detection

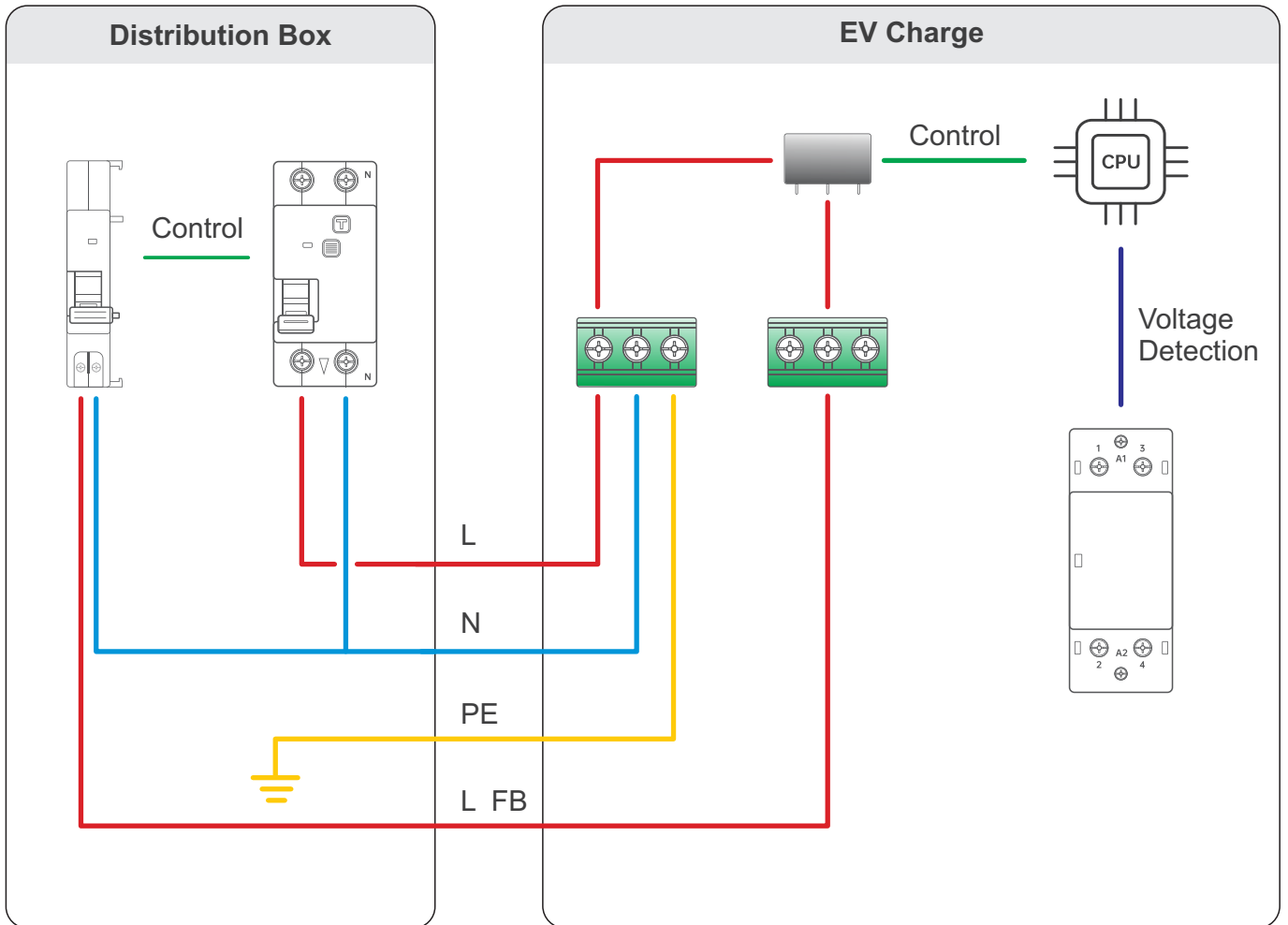


For TN-C-S systems without grounding at the user's end (as shown above), when the PEN line to the household is cut off due to a line fault and the rear end of the PEN line is in suspension without repeated grounding, and the distribution box RCD is not working properly at this time, the voltage of the protective ground PE is equal to the voltage of the fire line L. If not equipped with this protection, the shell of the EV in charging will be charged with a voltage equal to the fire line L voltage. If there are no other appliances except the EV charger, the leakage current will exceed 30mA and the person will not be able to disengage himself, which is a safety hazard; if there are even other appliances, the leakage current can easily exceed 100mA, which is very fatal.

If the user uses a EV charger equipped with PEN protection as shown above (model with -E suffix), its internal design has a contactor to cut off the ground, once the PEN line is cut off, the contactor KM1 and KM2 immediately and automatically disconnected, there is only a weak leakage current between CP and PE to L line, its current value is less than 1mA, which is the smallest perceived leakage current of the human body, people can disengage themselves, no safety risks.



### ✔ 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.

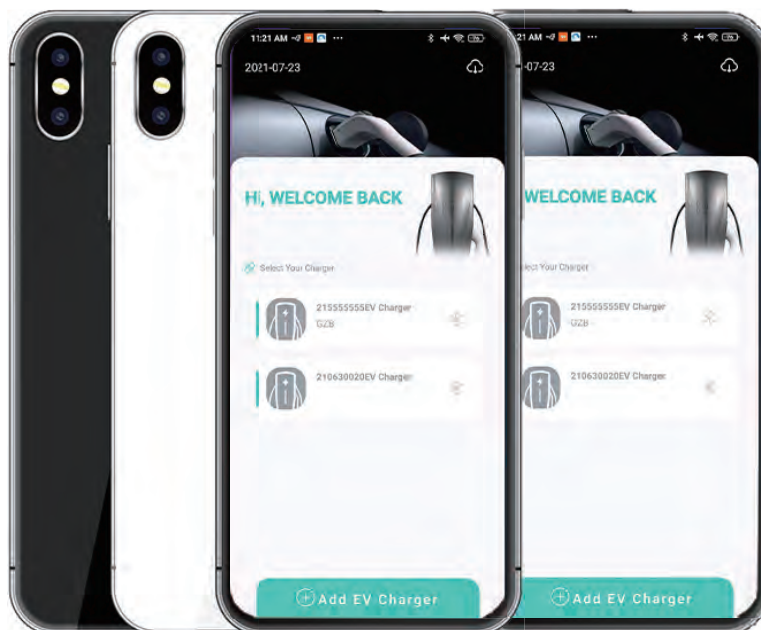
### How contactor adhesion protection works?

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.



### **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;
- 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, CB, RCM

### Connectivity

Authorization	Auto-start standard / RFID card option
Status Indication	LED ring
WLAN Communication	Wi-Fi / Bluetooth 4.2 option
Charging Protocol	OCPP1.6J optional

### Mechanical

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



# Specifications



## WIFI

Operating Frequency Range	2412 - 2484MHz
WI-FI Protocols	IEEE 802.11 b/g/n
Channels	13
TX Power	<20dbm
EIRP	0.459

## BlueTooth BLE

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

## OCPP Introduction

Protocol 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

# Model Selection

## EV Charger Selection Guide



Classification	Single / Three Phase	Model Number	Connections	RFID	DLB	Bluetooth / WIFI	PEN	16A	OCPP	
<b>Non-smart Version</b>	Single	BCP-A1-L	Tethered							
		BCP-A2-L		✓						
		BCP-A1D-L			○					
		BCP-A2D-L		✓	○					
		BCP-B1-L	Socket							
		BCP-B2-L		✓						
		BCP-B1D-L			○					
		BCP-B2D-L		✓	○					
		BCP-A1-L-E	Tethered							
		BCP-A2-L-E		✓						
		BCP-A1D-L-E			○			✓		
		BCP-A2D-L-E		✓	○					
		BCP-B1-L-E	Socket					✓		
		BCP-B2-L-E		✓						
		BCP-B1D-L-E			○			✓		
		BCP-B2D-L-E		✓	○					
		BCP-A1-L-16	Tethered					✓	✓	
		BCP-A2-L-16		✓						
		BCP-A1D-L-16			○				✓	
		BCP-A2D-L-16		✓	○					
		BCP-B1-L-16	Socket						✓	
		BCP-B2-L-16		✓						
		BCP-B1D-L-16			○				✓	
		BCP-B2D-L-16		✓	○					
		BCP-A1-L-E-16	Tethered					✓	✓	
		BCP-A2-L-E-16		✓						
		BCP-A1D-L-E-16			○			✓	✓	
		BCP-A2D-L-E-16		✓	○					
BCP-B1-L-E-16	Socket					✓	✓			
BCP-B2-L-E-16		✓								
BCP-B1D-L-E-16			○			✓	✓			
BCP-B2D-L-E-16		✓	○							
<b>Smart Version</b>	Single	BCP-A1S-L	Tethered			✓				
		BCP-A2S-L		✓		✓				
		BCP-A1N-L			○	✓				
		BCP-A2N-L		✓	○	✓			○	
		BCP-B1S-L	Socket			✓				
		BCP-B2S-L		✓		✓				
		BCP-B1N-L			○	✓				
		BCP-B2N-L		✓	○	✓			○	

“✓”: Standard “○”: Optional

# Model Selection

## EV Charger Selection Guide



Classification	Single / Three Phase	Model Number	Connections	RFID	DLB	Bluetooth / WIFI	PEN	16A	OCPP	
<b>Smart Version</b>	Single	BCP-A1S-L-E	Tethered			✓	✓			
		BCP-A2S-L-E		✓		✓	✓			
		BCP-A1N-L-E			○	✓	✓			
		BCP-A2N-L-E		✓	○	✓	✓		○	
		BCP-B1S-L-E	Socket			✓	✓			
		BCP-B2S-L-E		✓		✓	✓			
		BCP-B1N-L-E			○	✓	✓			
		BCP-B2N-L-E		✓	○	✓	✓		○	
		BCP-A1S-L-16	Tethered			✓			✓	
		BCP-A2S-L-16		✓		✓		✓		
		BCP-A1N-L-16			○	✓		✓		
		BCP-A2N-L-16		✓	○	✓		✓		
		BCP-B1S-L-16	Socket			✓			✓	
		BCP-B2S-L-16		✓		✓		✓		
		BCP-B1N-L-16			○	✓		✓		
		BCP-B2N-L-16		✓	○	✓		✓		
		BCP-A1S-L-E-16	Tethered			✓		✓	✓	
		BCP-A2S-L-E-16		✓		✓		✓	✓	
		BCP-A1N-L-E-16			○	✓		✓	✓	
		BCP-A2N-L-E-16		✓	○	✓		✓	✓	
BCP-B1S-L-E-16	Socket			✓		✓	✓			
BCP-B2S-L-E-16		✓		✓		✓	✓			
BCP-B1N-L-E-16			○	✓		✓	✓			
BCP-B2N-L-E-16		✓	○	✓		✓	✓			
<b>Three Phase Version</b>	Three Phase	BCP-AT1S-L	Tethered			✓				
		BCP-AT2S-L		✓		✓				
		BCP-BT1S-L				✓				
		BCP-BT2S-L		✓		✓				
		BCP-AT1N-L	Socket		○	✓				
		BCP-AT2N-L		✓	○	✓			○	
		BCP-BT1N-L			○	✓				
		BCP-BT2N-L		✓	○	✓			○	
		BCP-AT1S-L-16	Tethered			✓			✓	
		BCP-AT2S-L-16		✓		✓		✓		
		BCP-BT1S-L-16				✓		✓		
		BCP-BT2S-L-16		✓		✓		✓		
		BCP-AT1N-L-16	Socket		○	✓			✓	
		BCP-AT2N-L-16		✓	○	✓		✓		
BCP-BT1N-L-16		○		✓		✓				
BCP-BT2N-L-16	✓	○		✓		✓				

“✓”: Standard “○”: Optional

## **ZHEJIANG BENYI ELECTRICAL CO., LTD.**

Address : Wenzhou Daqiao Industry Park, Yueqing City Zhejiang Province,325603 China.

TEL : +86-577-5717 7008 Email : benyi@zjbeny.com

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For the latest version of specification, please refer to [www.beny.com](http://www.beny.com) or contact to [benyi@zjbeny.com](mailto:benyi@zjbeny.com)  
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