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# BENY
# Datasheet

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BENY

# Product Overview

This is a mode 3 type AC EV Charger which is designed according to IEC-61851-21-2 standard. Experience effortless interaction with its 5.0-inch LCD Screen interface. Take control of your charger via a smart app and various connectivity choices.

## Product Advantages

- 5.0-inch LCD screen
- IP65 Rating
- Wi-Fi/Ethernet /Bluetooth/4G
- OCPP 1.6J
- T2S Socket Option
- DLB and Solar Compatible
- Full Protection

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# OCPP AC EV Charger

## Protection Functions

Charging protocol OCPP1.6-J

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

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

The type 2 socket and type 2 connector are with IEC 62196-2, makes highly flexible and compatible with all electric vehicles.

## 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 |
| Socket Type | Type 2 |

## Protection and certification

| | |
|---|---|
| Build-in RCD | Built-in Type A RCBO , Built-in DC6mA Leakage Sensor |
| Socket | IP65, IK10 |
| Operating Temperature | -30~+55°C |
| Compliance | IEC61851-1,IEC61851-21-2,IEC61000-4<br>CE EMC EU/2014.CE Low Voltage EU/2014/35 |
| Certificate | CE |

## Mechanical

| | |
|---|---|
| Housing | Metal |
| Dimension | W260 x H360 x D152 mm |
| Mounting | Wall or Pole |

## Connectivity

| | |
|---|---|
| Authorization | Auto-start standard / RFID card option |
| Status Indication | LCD Screen+LED Lights |
| WLAN Communication | Wi-Fi / Bluetooth 4.2 option |
| Charging Protocol | OCPP1.6-J |

## Wi-Fi

| | |
|---|---|
| Operating Frequency Range | 2412 - 2484MHz |
| Wi-Fi Protocols | IEEE 802.11 b/g/n |
| Channels | 14 |
| TX Power | 18.5~20.5dBm |
| 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 | 13.29 dBuA/m@3m distance |
| Antenna Type | PCB antenna (coil) |

### 4G

| | |
|---|---|
| **Frequency Bands:** | LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28 |
| | LTE-TDD: B38/B39/B40/B41 |
| **Data:** | LTE-FDD: Max. 150 Mbps (DL)/Max. 50 Mbps (UL) |
| | LTE-TDD: Max. 130 Mbps (DL)/Max. 30 Mbps (UL) |
| **Output Power:** | LTE-FDD: Class 3 (23 dBm ±2 dB)<br>LTE-TDD: Class 3 (23 dBm ±2 dB) |

### 3G

| | |
|---|---|
| **Frequency Bands:** | WCDMA: B1/B2/B4/B5/B6/B8/B19 |
| **Data:** | WCDMA: Max. 384 kbps (DL)/Max. 384 kbps (UL) |
| **Output Power:** | WCDMA: Class 3 (24 dBm +1/-3 dB) |

### 2G

| | |
|---|---|
| **Frequency Bands:** | GSM: B2/B3/B5/B8 |
| **Data:** | EDGE: Max. 296 kbps (DL)/Max. 236.8 kbps (UL) |
| | GPRS: Max. 107 kbps (DL)/Max. 85.6 kbps (UL) |
| **Output Power:** | GSM850: Class 4 (33 dBm ±2 dB)<br>GSM850 8-PSK: Class E2 (27 dBm ±3 dB) |



# Model Selection

| Wallbox Models | BCPCM-A2N-P | BCPCM-AT2N-P-16 | BCPCM-AT2N-P |
|---|---|---|---|
| | | | |
| Maximum Power | 7.4kW | 11kW | 22kW |
| Input Voltage /Output voltage | AC230V 1-Phase | AC400V 3-Phase | AC400V 3-Phase |
| Input Frequency | 50/60Hz | | |
| Tethered/Socket | Tethered | | |
| Meter | Built-in MID Meter | | |
| Display | Five-inch LCD Screen + LED Lights | | |
| RFID | ✓ | ✓ | ✓ |
| DLB | ○ | ○ | ○ |
| Wi-Fi | ✓ | ✓ | ✓ |
| Ethernet | ✓ | ✓ | ✓ |
| Bluetooth | ✓ | ✓ | ✓ |
| 4G | ○ | ○ | ○ |
| Over Voltage &Under Voltage Protection | ✓ | ✓ | ✓ |
| Emergency Stop | ✓ | ✓ | ✓ |
| Over Current Protection | ✓ | ✓ | ✓ |
| CP Signal Short Circuit Protection | ✓ | ✓ | ✓ |
| Over Temperature Protection | ✓ | ✓ | ✓ |
| Lightning Protection | ✓ | ✓ | ✓ |
| Contactor Adhesion Protection | ✓ | ✓ | ✓ |
| Built-in Electric Meter | ✓ | ✓ | ✓ |

| | | | |
|---|---|---|---|
| Length of gun cable | | 5M | |
| Rate Charging Current | 6-32A | 6-16A | 6-32A |
| Protection Degree | | IP65 | |
| Environment Temperature | | -30°C~+55°C | |
| Storage Temperature | | -40°C~+85°C | |
| Gross Weight | | 13KG | |
| Maximum Altitude | | <2000m | |

✓ : Standard ○ : Optional

# Model Selection

| Wallbox Models | BCPCM-B2N-P | BCPCM-BT2N-P-16 | BCPCM-BT2N-P |
|---|---|---|---|
| | | | |
| Maximum Power | 7.4kW | 11kW | 22kW |
| Input Voltage /Output voltage | AC230V 1-Phase | AC400V 3-Phase | AC400V 3-Phase |
| Input Frequency | | 50/60Hz | |
| Tethered/Socket | | Socket | |
| Meter | | Built-in MID Meter | |
| Display | | Five-inch LCD Screen + LED Lights | |
| T2S Socket | ○ | ○ | ○ |
| RFID | ✓ | ✓ | ✓ |
| DLB | ○ | ○ | ○ |
| Wi-Fi | ✓ | ✓ | ✓ |
| Ethernet | ✓ | ✓ | ✓ |
| Bluetooth | ✓ | ✓ | ✓ |
| 4G | ○ | ○ | ○ |
| Over Voltage &Under Voltage Protection | ✓ | ✓ | ✓ |
| Emergency Stop | ✓ | ✓ | ✓ |
| Over Current Protection | ✓ | ✓ | ✓ |
| CP Signal Short Circuit Protection | ✓ | ✓ | ✓ |
| Over Temperature Protection | ✓ | ✓ | ✓ |
| Lightning Protection | ✓ | ✓ | ✓ |
| Contactor Adhesion Protection | ✓ | ✓ | ✓ |
| Built-in Electric Meter | ✓ | ✓ | ✓ |

| | | | |
|---|---|---|---|
| Rate Charging Current | 6-32A | 6-16A | 6-32A |
| Protection Degree | | IP65 | |
| Environment Temperature | | -30°C~+55°C | |
| Storage Temperature | | -40°C~+85°C | |
| Gross Weight | | 9.3KG | |
| Maximum Altitude | | <2000m | |

● : Standard ○ : Optional

## OCPP Specification

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

## 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 |

## 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 Configurations

| | | |
|---|---|---|
| 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 Configurations

| | | |
|---|---|---|
| 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 |

## Custom Configuration Items

| Items | Type | Accessibility | Range | Default | Explain |
|---|---|---|---|---|---|
| DLBEnabled | boolean | RW | false/true | false | false: Disable DLB All the following configurations will become invalid<br>true: Enable DLB |
| DLBAPPConfigEnabled | boolean | RW | false/true | false | false: "DLBNormalModeMaxCurrent", "DLBPVModeMaxGridCurrent" will become invalid |
| DLBType | integer | R | 0-2 | 0 | According to the type of DLB box already connected to the EV charger, the APP displays the corresponding configuration page. The value of this configuration item.<br>0 is Normal DLB<br>1 is Solar DLB<br>2 is External edge equipment |
| DLBNormalModeMax Current | integer | RW | 0-99 | 40 | To set the max current of DLB |
| DLBNormalExtreme ModeEnabled | boolean | RW | false/true | false | False: Extreme mode disabled<br>True: Extreme mode enable |
| DLBPVModeMax GridCurrent | integer | RW | 0-99 | 0 | To set the max grid current<br>0: Pure photovoltaic mode<br>1-98: Hybrid mode (corresponding to 1-98A)<br>99: Full speed mode |
| DLBPVMode NightSpeedEnabled | boolean | RW | false/true | false | Full speed mode at night under PV mode<br>true: Full-speed mode charging will start automatically from 8:00 pm to 6:00 am. |
| DLBDataTransfer Interval | integer | RW | 0-9999 | 0 | 0: Disable<br>1-9999: DLB current will be reported in DataTransfer during charging. |

## Custom Configuration Items

| | | | | | |
|---|---|---|---|---|---|
| DLBDataTransfer AnytimeEnabled | boolean | RW | false/true | false | Fales: DLBDataTransfer will be not reported<br>True: DLBData transfer will be reported real time. |
| DLBPVMode MaxSpeedStart | integer | RW | 0-23 | 20 | |
| DLBPVMode MaxSpeedStop | integer | RW | 0-23 | 6 | |
| ChargePointURL | csl | RW | | | max length 200 byte |
| ChargePointVendor | csl | RW | | | max length 19 byte |
| ChargePointModel | csl | RW | | | max length 49 byte |
| ChargePointAuthKey | csl | RW | | | max length 49 byte |
| ChargePointAuthEnable | boolean | RW | | | |
| ChargePointQRCode_1 | csl | RW | | | (Only supported with LCD models) |
| ChargePointQRCode_2 | csl | RW | | | (Only supported with LCD models) |
| RandomDelayMin | integer | RW | 0-1800 | 0 | Minimum random delay at each start of charging<br>(Only supported for single connector models) |
| RandomDelayMax | integer | RW | 0-1800 | 0 | Maximum random delay at each start of charging<br>(Only supported for single connector models) |
| UserCurrentLimit | integer | RW | 6-32(one socket)<br>12-64(two socket) | 32(one socket)<br>64(two socket) | |
| EmergencyStopEnable | boolean | RW | false/true | true | |
| GndDetectEnable | boolean | RW | false/true | true | |