

# BC K900 EVO

## LEAD-ACID/LITHIUM + CAN-BUS



**BC K900 EVO is the only battery charger compatible with CAN-BUS for lead-acid and lithium batteries: in fact, "Ld-Acid CAN-Bus" and "Lithium CAN-Bus" programmes allow to charge the battery directly from the DIN 4165 socket installed on BMW motorcycles with any kind of 12V battery.**

Not only is BC K900 EVO ideal for the recovery, the charge and the maintenance of all motorcycle, scooter and ATV batteries, but it can be also used for the maintenance of car batteries, and it is designed to be always connected to the battery, without any risks or needs to disconnect the battery from the vehicle, even for months, when bikes or cars are not used.

Selecting the programme is extremely easy, it is enough to push a button to choose one of the four available programmes. The operating mode appears on the LED bar and it is kept in memory for the next use.

The internal microprocessor automatically executes a multi-cycle charging algorithm (8 cycles for lead-acid batteries, 7 cycles for LiFePO4 batteries). The algorithm for lead-acid batteries allows the recovery of deeply discharged batteries (1,25 Volt), the charge, the desulfation and the maintenance of all 12V batteries (traditional, gel, sealed...) from 1,2 to 100 Ah. The charging program LiFePO4 executes a fast and efficient charge, it balances the charge of each cell and it allows a perfect maintenance for long periods. Safety is guaranteed in each step: in case of low temperatures, detected by the integrated sensor, the charging mode POLAR turns on.

BC K900 EVO supplies a maximum current of 0,9 Amp. Two LEDs indicate the charging cycle and any operating anomalies to the user. The device does not produce sparks and it is protected against short circuit, polarity inversion, overcharge and overheating. The package includes a waterproof cable with eyelets (cod. STD2V), to be left always installed onboard of the vehicle, and a cable with isolated clamps (cod. 30AMPPZ). A 12/18 mm universal adapter is available as well (cod. ACC612V - optional) to recharge the battery from the cigar-lighter socket. Warranty up to 3 years.

### 4 PROGRAMS

|           |                   |
|-----------|-------------------|
| LEAD-ACID | LEAD-ACID CAN-BUS |
| LITHIUM   | LITHIUM CAN-BUS   |

CAN BUS COMPATIBLE

12 VOLT  
0.9 AMP

LEAD/ACID  
PROGRAM  
(8 CYCLES)

LITHIUM  
PROGRAM  
(7 CYCLES)

CAN-BUS  
COMPATIBLE





#### TECHNICAL DATA

|                                |   |
|--------------------------------|---|
| Input Voltage                  | 220÷240 Vac, 50÷60 Hz   |
| Charge Voltage                 | 13,8 V / 14,4 V - nominal 12 V (mode 12 Volt)   |
| Charge Current                 | 0,9 A max   |
| Battery type                   | 12 V Lead Acid (sealed, gel, MF, VRLA, AGM, Ca/Ca, etc.) & 12V LiFePO4  |
| Charging Algorithm - Lead/Acid | 8 cycles, automatic (Inizialization, Recovery, Soft Charge, Bulk Charge, Desulfation, Battery Analysis, Maintenance and Equalization) |
| Battery Capacity - Lead/Acid   | From 1,2 Ah to 100 Ah (Maintenance)   |
| Charging Algorithm - LiFePO4   | 7 cycles, automatic (Inizialization, Recovery, Soft Charge, Bulk Charge, Equalization, Battery Analysis and Maintenance)              |
| Battery Capacity - LiFePO4     | From 1 Ah to 100 Ah   |
| Operating temperature          | from -20° to +50°C  |
| IP Class                       | IP44 - Weatherproof - Protection against water splash, suitable for outdoor use   |



Wall mounting system with fast dismantling

#### HOW IT WORKS - MODE SELECTION

##### 1. Charging program selection

Connect BC K900 EVO to the 220V power outlet and select the right charging programme for your battery, by pushing the button "MODE". On the right of the button there are 3 LEDs which indicate the active mode: "Lead-Acid" for lead-acid batteries, "Lithium LiFePO4" for lithium batteries, "CAN-Bus" that turns on when the modes "Lead-Acid CAN-Bus" or "Lithium CAN-Bus" are activated. BC K900 EVO keeps the last selected mode in memory: if you always use the device with the same battery, you do not need to change the charging programme every time you use it.

##### 2. Charge, reconditioning and maintenance - 100% automatic and complete

Once selected the right programme for your battery, you have just to connect BC K900 EVO to the battery to start the charging procedure, that is completely automatic. BC K900 guides your battery until the maintenance, lightly recovering it if necessary, giving it back power and acceleration during the charging steps (and desulfation for lead-acid batteries) and always monitoring it, from the initial test to the analysis, up to the end of the charge.

#### LEAD/ACID BATTERIES - 8 CYCLE CHARGING TECHNOLOGY

**BC K900 EVO** is a battery charger and charge maintainer with digital technology: it is run by a **latest-generation microprocessor**, which is in charge of monitoring the battery parameters in real time and of executing a **new charging algorithm with 8 pulsing cycles**:

- 1. Initialization:** the device checks if one or more cells are shorted, in order to verify that the battery is in a proper condition to be recharged/recovered.
- 2. Recovery:** if the battery is deep discharged (battery voltage starting from 1.25 V), the device tries to recover it, taking it back to a higher voltage.
- 3. Soft Charge:** if the battery is in a condition of significant undercharge, the device provides a light pulsing current to the battery, to overcome this critical phase.
- 4. Bulk Charge:** the device provides full current to the battery, recovering about 85-90% of the battery capacity.
- 5. Desulfation / Absorption:** the device provides a "controlled overcharge" to recover the remaining 10-15% of the battery capacity, through the desulfation/recovery of the lead-acid cells (for low or medium sulfation).
- 6. Battery Analysis:** the device stops providing current to the battery for a short time, in order to verify whether the battery is able to retain the charge received. This test is periodically repeated during the Maintenance.
- 7. Maintenance:** the device keeps the battery in the best charge conditions for very long periods (even months) during which your vehicle is left unused, without any possible drawback (battery overcharge, battery overheating, water and/or electrolyte loss, etc).
- 8. Equalization:** every 30 days during long term maintenance, the device executes an equalization charge in order to balance the battery lead-acid cells, avoiding electrolyte stratification within the cells.

## LiFePO4 LITHIUM BATTERIES - 7 CYCLE CHARGING TECHNOLOGY

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1. **Initialization**: the device checks if one or more cells are shorted, in order to verify that the battery is in a proper condition to be recharged/recovered.
2. **Recovery**: if the battery is deep discharged (battery voltage starting from 1.25 V), the device tries to recover it, taking it back to a higher voltage.
3. **Soft Charge**: if the battery is in a condition of significant undercharge, the device provides a light pulsing current to the battery, to overcome this critical phase.
4. **Bulk Charge**: the device provides full current to the battery, recovering about 85-90% of the battery capacity.
5. **Equalization**: in this phase the remaining 10-15% of the battery capacity is recovered and the level of charge of the battery cells is rebalanced.
6. **Battery Analysis**: the device stops providing current to the battery for a short time, in order to verify whether the battery is able to retain the charge received. This test is periodically repeated during the Maintenance.
7. **Maintenance**: thanks to an electronic circuit especially designed, the battery charger executes a pulsing maintenance of the charge when the battery is not used, in a very safe way, without any risk of overheating or overcharge.

## SAFETY AND PROTECTIONS

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**BC K900 EVO** features a series of **8 protections and active guard mechanisms** that make it easy to install and to use, without any risks even for users without expertise:

- **No interferences the vehicle's on board electronics** (control unit, ABS, GPS...)
- Protection from output lines short circuit, even for an indefinite time: **no sparks!**
- Protection from battery polarity inversion
- Protection from battery overcharge/overheating
- Thermal protection from overtemperature
- No need to disconnect the battery from your vehicle
- Very few gas development during the charge: no need to remove the battery plugs

Laboratory Tests ensure the manufacturing of products in conformity to the regulations in force on safety and electro-magnetic compatibility. Norms and Regulations: EN55014-1, EN55014-2, EN60335-1, EN60335-2-29, EN61000-3-2, EN61000-3-3.

## BATTERY TYPES AND CAPACITY

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**BC K900 EVO** is specifically designed for charging and maintaining **all 12V lead-acid batteries** (traditional, VRLA, MF, AGM, GEL, Ca/Ca, etc) **and 12V Lithium-Iron-Phosphate (LiFePO4) batteries**. BC K900 EVO is addressed to recharge **lead/acid batteries with a capacity from 3 to 100 Ah and LiFePO4 batteries from 1 to 100 Ah**.

## ACCESSORIES

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The package includes:

- the battery charger and maintainer **BC K900 EVO** for long term battery maintenance, provided with a 220V power cable (2 meters long) and a battery output cable;
- STD2V waterproof battery cable with eyelets, which can be left always installed on board;
- 30AMPZ battery cable with clamps;
- according to the selected kit, the universal 12/18mm cigar socket adapter (cod. ACC612V) may be included;
- a copy of the User Manual..