



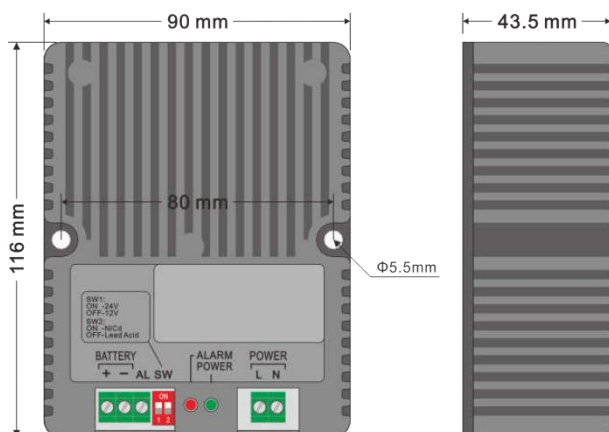
## AUTOMATIC BATTERY CHARGER : WT BAC 01

### Introduction:

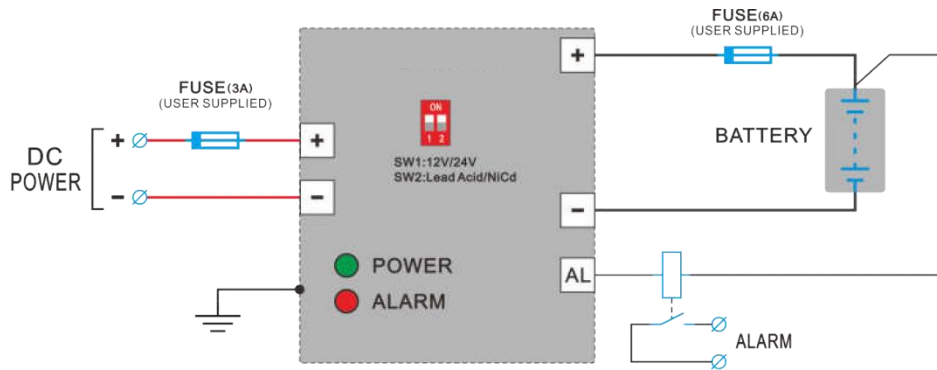
**WT-BAC** is an intelligent charger for engine, is used for engine starting, tele-com base stations and power back-up power supply which used lead-acid batteries and nickel-cadmium batteries charging to design, the professional design makes it suitable for all kinds of harsh environments. Feature:

- Microprocessor control measure
- Compatible with 12 / 24VC battery, panel micro switch selection
- 3 stage charging 3A/5A Float Charge ,Constant Charge , Boost charger
- Full range DC power input
- High efficiency of switch power supply circuit
- Precision die-cast aluminum case, compact appearance
- Fan less design, natural air-cooled
- Built-in multiple battery types Charge mode selection
- Perfect protection function: battery high and low voltage, over current, high temperature, reverse polarity protection and so on.

### 2 Shape and installation dimensions:



**3 Typical wiring diagram:**



**Charging process:**

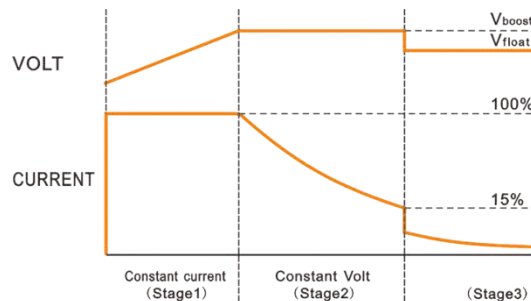
According to the features of the battery charging to design, the charger have 3 stage charging method, charging process as follows:

Stage 1 (constant current): charger at a constant current for the battery, at this stage the battery voltage is gradually increased, when the battery voltage reaches  $V_{boost}$  voltage, the charger into the charging phase 2.

Stage 2 (constant pressure): charger at a constant voltage  $V_{boost}$  (Boost charge voltage) for the battery, the charging current at this stage will gradually decline, when the charge current drops to 15% of rated current, the charger into the charging phase 3.

Stage 3 (float): charger at a constant voltage  $V_{float}$  (Float voltage) for the battery. Float process, the charging current is generally less for maintaining the battery fully charged.

**Charging Curve:**



**4 LED indicating lamp:**

**POWER:** When connected to the AC power, and in the normal range, the indicator illuminate. **ALARM:** When the charging failure occurs, the LED flashes. According shiny frequencies representing different fault.

**5 Protection function:**

**Reverse polarity protection :** When the battery charger output port positive and negative reverse , output fault effectively, fault indicator light flashes once every 3 seconds, such cycle. Charge stop.

**High and low voltage:** When the battery voltage is detected to be higher or lower than the limit voltage, the fault output is effectively, when continuous fault indicator flashes twice and stopped 3 seconds, then continuous flash 2 times, such cycle. Charge stop.

**Over current fault:** When the detected charge current is greater than the limit current, the fault output is effectively, fault indicator continuous flashes 3 times, and stopped 3 seconds, then continuousflashes three times, such cycle.

**High temperature fault / Over heat:** when detecting the charger internal temperature is higher than the built- in protection value (95 °C), duration of 30 seconds, high-temperature failure, the fault output is effectively, fault indicator continuous flashes 4 times, and stopped 3 seconds, then continuous flashes 4,such cycle. Charge stop.

**Open circuit Battery :** When detected battery fail, short circuit the from supply ans any cause , the protection relay will automatic open to separate circuit charger from battery and charger’s stop operation.

**6 Electrical Specifications**

Selector switch ( SW2 )	Lead Acid (Maintenance free lead Acid)	NiCd
Vboost	14.4V / 28.8V	14.5V / 29.0V
Vfloat	13.6V / 27.2V	14.1V / 28.2V
Rated output current	5A (12V / 3A (24V)	
AC input voltage	45 to 65VDC	
Maximum output power	90W	
AC Input supply charge (Volt)	100-340 VAC	
Frequency range (Hz)	45-65	
Operating temperature range	-40 to 70°C	
Storage temperature range	-40 to 80°C	

