

## DC-DC Step-Down Converter



### Summary & Applications

This product is designed to provide a reduced supply to power auxiliary electrical systems, is configured specifically for electric vehicles. The NQZB Series DC/DC Converters achieve unmatched power levels of high efficiency and safety.

The devices provide provide a regulated output of 12.5 or 24.5 volts for vehicles lamps and solar applications etc, also provides 13.5 or 27.0 volts for charging auxiliary batteries.

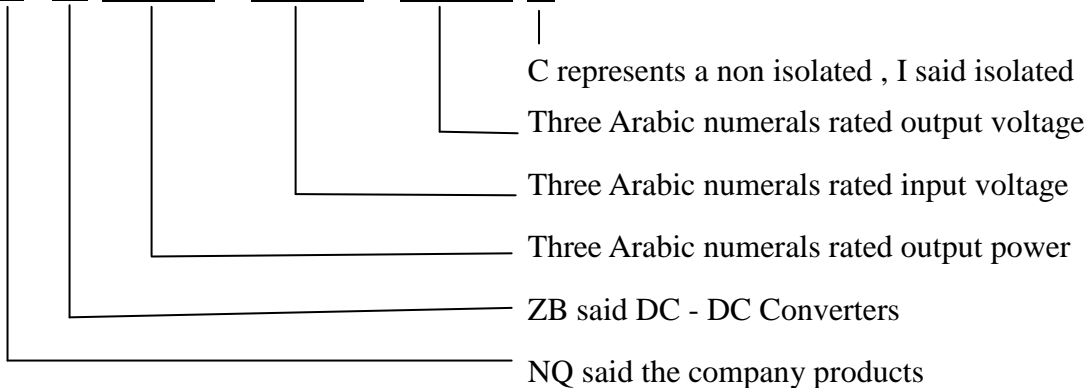
### Features

- ◆ Replace diode rectification with synchronous, over 93% efficient as high power density
- ◆ Available for maximum pulse power exceeds 120% of the nominal rating
- ◆ Wide voltage input , suitable for battery applications ( cell voltage of 1.65V ~ 2.50V)
- ◆ Smaller, lighter and significantly more quiet than conventional converters
- ◆ Short circuit / overload output protection (resume after the short circuit disappear)
- ◆ Applicable to a variety of environmental , protection class IP54

### Naming rules

The naming rules of DC-DC converter in Figure 1.

NQ ZB □ □ □ - □ □ □ - □ □ □ □



### Specification

◆ <60V input range converters major technical indicators

Model	Input Voltage	Input Voltage Range	Output Voltage	Output Current	Size (L)
NQZB050-024-012C	24V	19.2V~28.8V	12V	0~05A	80mm
NQZB080-024-012C			12V	0~08A	80mm
NQZB100-024-012C			12V	0~10A	80mm
NQZB050-036-012C	36V	27V~45V	12V	0~05A	80mm
NQZB080-036-012C			12V	0~08A	80mm
NQZB100-036-024C			24V	0~05A	80mm
NQZB050-048-012C	48V	36V~60V	12V	0~05A	80mm
NQZB080-048-012C			12V	0~08A	80mm
NQZB040-048-024C			24V	0~02A	80mm

>60V input range converters major technical indicators

Model	Input Voltage	Input Voltage Range	Output Voltage	Output Current	Size (L)
NQZB050-060-012C	60V	45V~75V	12V	0~05A	80mm

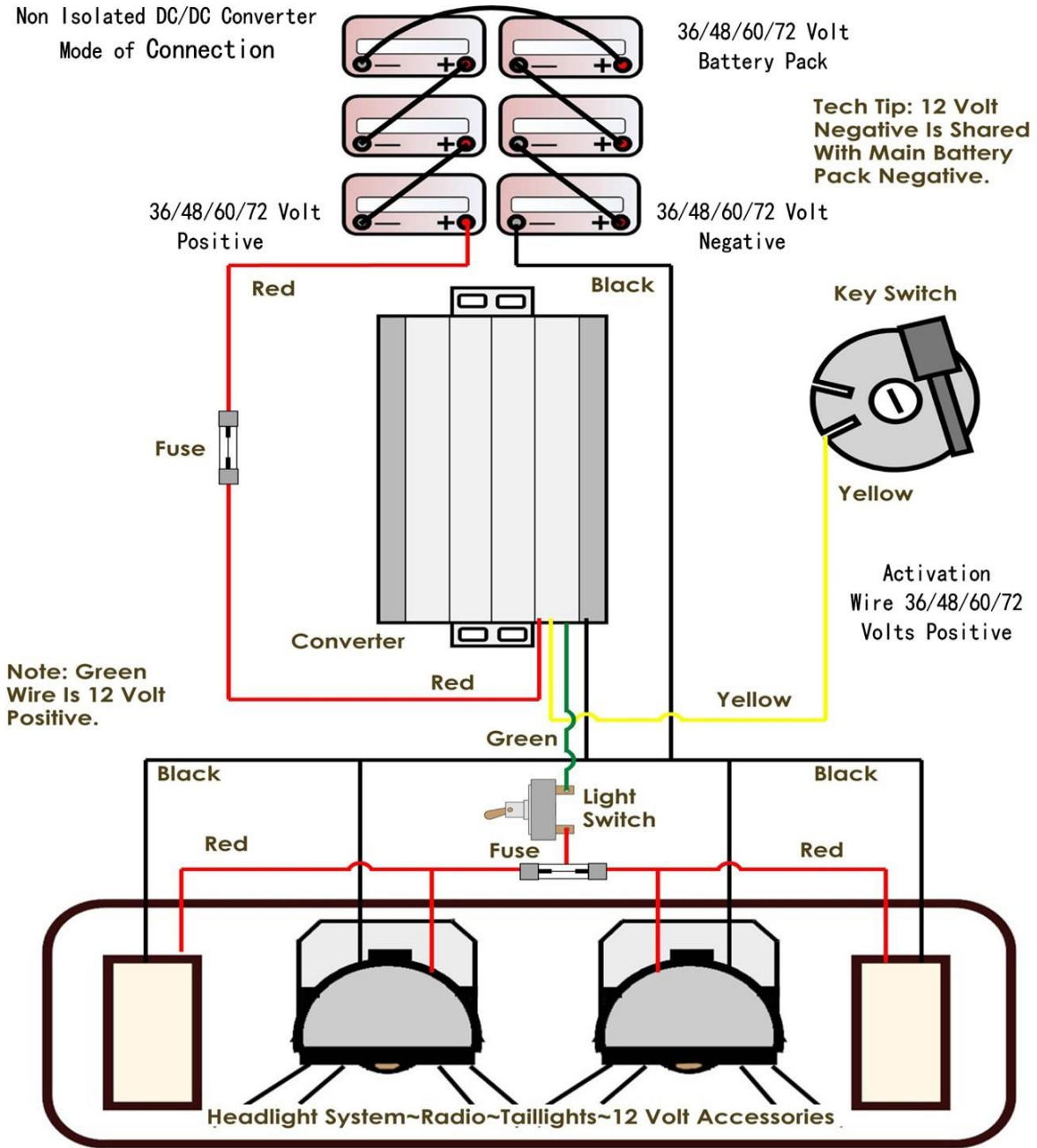
NQZB080-060-012C			12V	0~08A	80mm
NQZB040-060-024C			24V	0~02A	80mm
NQZB050-072-012C	72V/80V	54V~90V	12V	0~05A	80mm
NQZB080-072-012C			12V	0~08A	80mm
NQZB040-072-024C			24V	0~02A	80mm
NQZB050-072-012C	36-80V	27V~100V	12V	0~05A	80mm

**Mode of connection**

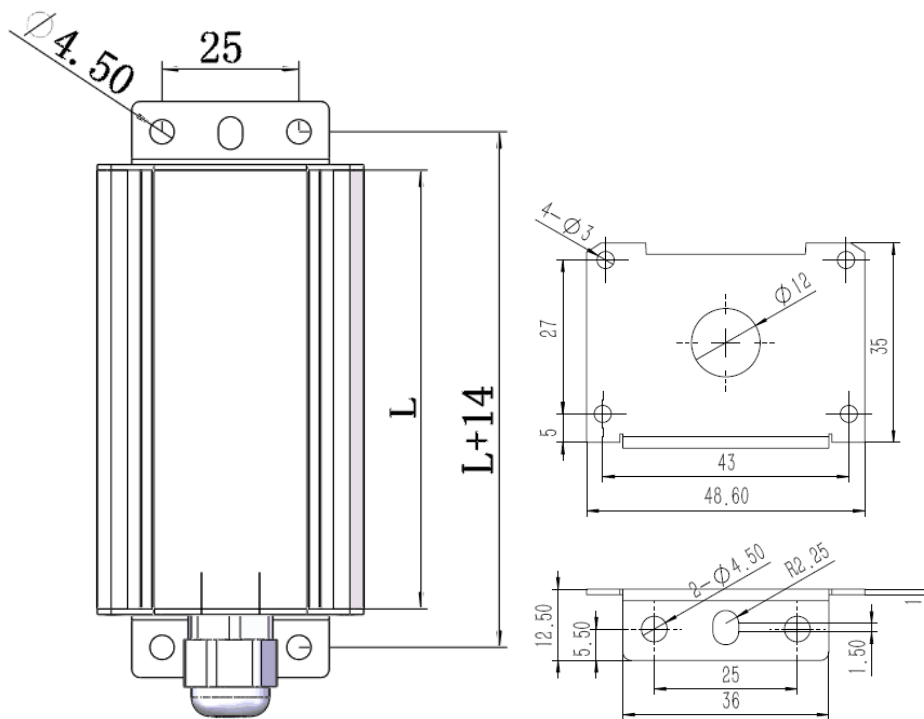
Isolated power ports defining and wiring as shown below

Port number	Color	Port Definition
1	red	input positive
2	yellow	Key Switch( if no key switch , please connect input positive)
3	black	Input & output negative
4	green	output Positive

Non Isolated DC/DC Converter  
Mode of Connection



**Installation size ( Unit: mm )**



Note: L=80mm

Figure 4 Installation Size

**Precautions**

**Installation & safety instructions**

- ◆ The converter must be mounted on solid metal, aluminum for heat dissipation. The converter will be very hot during use, keep wiring from touching the converter and or do not touch it !
- ◆ Confirm battery pack main positive and negative potentials !
- ◆ For older cars using a negative through key switch you must use a relay for converter activation. Consult technical services for this application. For radio memory you must either leave the key switch in the on position or hardwire the yellow and red wire to 36/48/60/72 volt positive. Doing this you will have a constant drain on the battery pack and long extended period of “setting” will help drain the battery pack. It is advised for long storage to disconnect the converter.

- ◆ Anytime a battery pack is disconnected manufacturers instructions must be followed. Always make sure if the car has a run/tow switch the switch is placed in the tow position before disconnecting anything. Torque battery cable nuts to 80 to 100 inch pounds. Spray coat connections with anti corrosion spray. Tech Note: loose connection create heat and arcing make sure all wiring connections are clean and tight.
- ◆ Make sure all wiring is free from moving parts, sharp objects or extreme hot area's! Tie up any loose wiring
- ◆ use process equipment will pay attention to timely remove surface dust and other debris impact of heat dissipations .
- ◆ Please don't disassemble the DC-DC converter yourself . it may cause electric shock or other injuries .
- ◆ In order to avoid damaging the power cord , don't put any object on the line and place the line where it will not be stepped on . If the cord is frayed or damaged , replace it immediately

**Warranty: 12 months Limited Warranty from time of delivery**