

# DC-DC converter ZK-4KX buck-boost with LCD, CC/CV, 5-30V to 0.5-30V, 0-4A, 50W

Reference: AM6843  
EAN13: -  
HS code: 85044090



## Product attributes:

## Product features:

Input voltage: 5-30 V DC  
Output voltage: 0,5-30 V DC  
Output power: 50 W  
Waterproof grade: IP20  
Max. current: 4 A  
Inverter type: Boost (step-up)

## Product description:

The ZK-4KX is a DC-DC step-up/step-down (buck-boost) converter with constant voltage (CV) and constant current (CC) control. It allows for continuous adjustment of the output voltage and current limit, displays operating parameters on the LCD, and is suitable as an adjustable power supply for powering from DC inputs in the range of 5-30 V.

## Technical specifications

- Model: ZK-4KX
- Type: DC-DC buck-boost regulator, CC/CV modes
- Input voltage: 5-30V DC
- Output voltage: 0.5-30V DC
- Output current setting (limit): 0-4.0 A
- Output power: 35 W with natural cooling, up to 50 W with enhanced cooling
- Voltage display resolution: 0.01 V
- Current display resolution: 0.001 A
- Switching frequency: 180 kHz
- Conversion efficiency: 88%
- Dimensions: 79 x 43 x 26 mm
- Weight: 92 g (including packaging)

## Functions and features

- LCD display: input voltage, output voltage, output current, output power, capacity (Ah) and time
- Output setting using rotary encoder, SW and U/I buttons
- Output ON/OFF option
- Soft start
- Input polarity protection (anti-reverse connection)
- Output reverse current protection (external blocking diode required for battery charging)
- Integrated PI filter for ripple reduction
- Aluminum heatsink on the power section
- Adjustable software protections with automatic output disconnection when thresholds are exceeded
- Supported protections: input undervoltage (LUP), output overvoltage (OUP), overcurrent (OCP), overpower (OPP), overtemperature (OTP), timeout (OHP), capacity limit (OAP)

## Ideal for

- Adjustable DC power supply for development, service and laboratory use
- Powering devices requiring stabilized voltage during input fluctuations
- LED applications and loads requiring current limiting (CC)
- Charging applications with current limit (with the addition of an external blocking diode depending on the battery type)
- Installation in devices and switchboards with DC power supply 5-30 V

## Package contents

- DC-DC converter ZK-4KX

## Why choose this product?

- The combination of buck and boost modes allows you to maintain the desired output voltage over a wide input voltage

range

- CC/CV modes allow you to set both voltage and current limit simultaneously for safer load operation
- LCD provides direct control over key parameters in real time
- Adjustable protections and automatic output disconnection when limits are exceeded

## Installation and operating instructions

- Observe the correct connection of the IN and OUT terminals; direct connection of IN and OUT is prohibited and will cause the CC control to malfunction.
- For long-term operation above 35 W or above 3 A, ensure increased cooling (e.g. airflow)
- For full power, choose an input voltage with sufficient margin for the desired output and load power.
- When charging batteries, add an external reverse current blocking diode to the output according to the application requirements.

## Safety notice

- This is a power DC-DC converter; at higher currents and powers there is a risk of overheating of the wires and terminals, use appropriate wire cross-sections and high-quality tightening of the terminals
- Incorrect polarity, short circuit or insufficient cooling may damage the module or the connected load.
- Follow ESD and safe handling of electronic devices when working

