Cablemedia.pl **ZA 12/24V** **Battery Protection**

Features:

- Input voltage: 9-15V / 20-30V
- Output current from 50 to 100A
- Thermal overload protection @ 75°C
- Overcurrent protection
- Voltage measurement tolerance: <0.5%
- Compliance with CE, RoHS, 97/24/EC-C08, EN1175 standards
- Compatibility with 12V or 24V systems with automatic detection
- Voltage drop in open state: <100mV
- Compatible with automotive, gel, AGM, and traction batteries
- Configurable battery activation / deactivation voltage
- No mechanical elements for disconnecting the battery
- Monitoring input - compensatory for voltage measurement (ZA100 version)
- Low current consumption < 2mA
- OC-type signaling output
- Remote activation input (ZA100 version)

Applications:

- Low-voltage emergency power systems UPS
- Alarms, CCTV
- Service and camper vehicles
- All types of vehicles with internal combustion engines, including trucks, buses, vehicles
- PV systems

Parameters:

Model	ZA50	ZA100
Permissible current	50A	100A
Overcurrent protection threshold	60A	150A
Voltage value for threshold 1 (deactivation)	10,6 \ 21,2 V	
Voltage value for threshold 2 (deactivation)	11,2 \ 22,4 V	
Voltage value for threshold 3 (deactivation)	11,8 \ 23,6 V	
Voltage value for threshold 4 (deactivation)	12,2 \ 24,4 V	
Voltage value for threshold 1 (deactivation)	12,5 \ 25,0 V	
Recommended fuse value	40A	80A

Operating principle:

The device is designed to protect the battery from excessive discharge. It's possible to connect multiple devices to a single battery, allowing different additional circuits to be used with varying priority - the duration of each circuit's operation. Upon activation, the circuit has a maximum voltage drop of 100mV. When in the disconnected state, all LEDs are off, and the device enters an energy-saving mode to protect the battery. Additionally, in the disconnected state, the circuit protects against current flow in both directions. The circuit automatically activates when a voltage higher than 12.7V is detected on the battery.

Alarm states indication:

In the case of thermal protection activation, rapid blinking of the "SW ON" LED at 2Hz occurs, and when the high temperature situation ends, the alarm automatically disappears without requiring any action.

In the case of overcurrent protection activation, all LEDs blink rapidly. This alarm can only be cleared by holding the button for 1 second or using the DRV input.

SSR mode:
By short-circuiting the DRV contact to the ground (negative), the device operates in a semiconductor mode; the high-efficiency SSR relay is engaged.

Mounting method:

ALWAYS place a fuse as close to the battery's positive terminal as possible when setting up installations with batteries. For proper operation, it's necessary to connect the negative terminal with a thin wire directly to the battery. To compensate for current measurements on the wire, connect a thin wire to the main battery's positive terminal to the "MON" input; this applies only to the 100A version. This wire should be equipped with a 100mA - 1A fuse.

The OC output provides a ground to the signaling LED, while the positive is connected via a resistor (if the LED isn't, for example, a 12V type, in which case the resistor can be omitted), to be taken from any suitable place in the vehicle.

The DRV input works as a button, requiring the supply voltage positive to be connected through any normally open momentary button.

Connect the current wires through appropriately sized eyelet connectors.

The device's housing is insulated from the device's terminals; however, keep in mind that after mounting the device in the vehicle, it's likely that the housing will carry the ground potential, usually negative. The housing is made of aluminum and thus conducts electricity!!

Install the device in a dry, preferably cool place in the vehicle. It's not recommended to install it in the engine compartment. The device is not waterproof.

Mounting template: