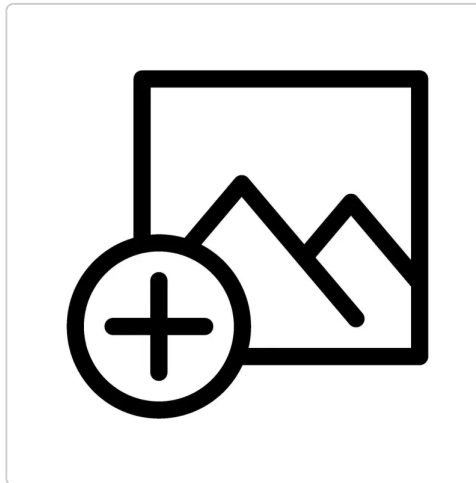
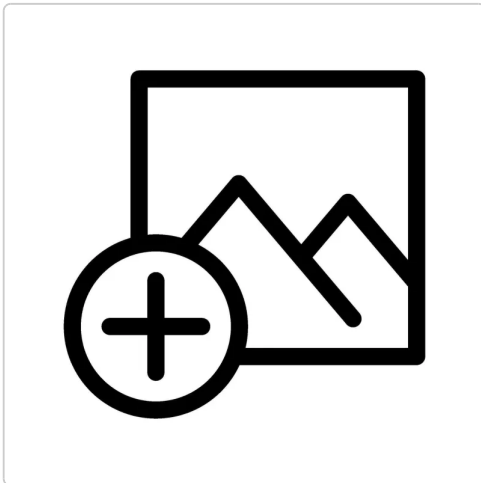


ZAPI - BLE-4 - 48V 875Arms motor controller



Reference : ZAP-BLE4-48V-875A

Brand : ZAPI

Options :

No variants

3D Model : Available

EAN-13 : 3762552429199

The ZAPI BLE-4 48V 875 Arms is an AC motor controller designed for low-voltage traction systems requiring both high current density, environmental robustness and flexible parameterization. Intended for embedded architectures in industrial vehicles, electric utility platforms, special machines or electric conversion projects, it combines 48 V supply, 14 kW continuous power, CANopen communication and IP65 protection in a compact format suitable for constrained integrations.

This 48 V motor controller is designed to drive several motor technologies depending on the selected architecture: ACIM, BLDC, PMAC or PMSM. The BLE-4 therefore fits projects where controller selection is not only about peak current, but also about control strategy, communication with other control units and actual operating conditions on electric vehicles or mobile machines.

Within an electric traction chain, the ZAPI BLE-4 motor controller handles energy conversion and modulation between the 48 V battery and the motor, with a control logic suited to propulsion, motion assist or effort management on rolling machines. Its 875 Arms current rating positions it for applications where dynamic response, torque control and load handling matter, especially on equipment exposed to repeated acceleration, restart and load variation cycles.

The value of the BLE-4 is not limited to its current rating. Its technical positioning also relies on compatibility with several motor families and on the presence of a CANopen interface, useful when the controller must integrate into a broader system including on-board supervision, operator interface, BMS, PLC or diagnostic gateway. For engineering teams, this opens up standardization options for the control architecture while preserving adaptation capacity according to the selected motorization and target machine behavior.

The 204 x 235 x 103 mm format is also an important integration point. On a compact vehicle, electrified utility platform, AGV base or light agricultural machine, controller size directly affects power cable routing, air circulation and proximity to other electrical components. Here, the volume remains compatible with constrained technical compartments,

provided that cable bend radius, connector accessibility and service clearance are properly anticipated.

The IP65 protection rating improves relevance for environments exposed to dust, water splashes and demanding outdoor use. This is especially useful in material handling, municipal equipment, agriculture, light industrial mobility or retrofit vehicles operating outside clean environments. However, IP65 does not remove the need for rigorous system design: cable gland quality, connector choice, low-point management, mechanical mounting and harness protection remain essential to preserve overall installation durability.

The CANopen interface is another concrete benefit for integrators. It supports exchange of status data, commands, alarms and parameters with the other subsystems of the vehicle or machine, simplifying supervision and diagnostics. In a modern architecture, this reduces reliance on scattered control wiring and supports cleaner integration. In return, it is advisable to define message mapping, bus priorities, degraded modes and restart strategy early in the project to avoid moving complexity into commissioning.

The ZAPI BLE-4 48V is particularly suitable for applications requiring a low-voltage traction controller able to adapt to different motor technologies without restarting the project from scratch each time. It can be used in compact electric vehicles, rolling platforms, special-purpose machines, material handling equipment, small utility vehicles, electrified agricultural applications or electric conversion projects requiring a robust and communicative motor controller. This versatility is useful when the platform must be deployed in several power or usage variants from a consistent electronic base.

In practice, this type of controller delivers value mainly when it is selected as the core element of a well-designed architecture. Its relevance increases when motor choice, control parameterization, safety strategy, battery quality and cooling logic are all mastered. Conversely, in projects where the electrical environment is unstable, the CAN network is not properly defined or power routing is improvised, the performance of a controller at this level can be degraded by the system itself. It is therefore a relevant product for serious integrations focused on reliability and repeatability.

Key technical data

Brand: ZAPI

Model: BLE-4

Product type: Speed controller / AC motor controller

Nominal voltage: 48 V

Current: 875 Arms

Continuous power: 14 kW

Protection rating: IP65

Communication: CANopen

Motor compatibility: ACIM, BLDC, PMAC, PMSM

Dimensions: 204 x 235 x 103 mm

Operating temperature: -40 °C to +40 °C

Connector: Ampseal 35

Target use: low-voltage electric traction, vehicle and electric machine

Installation: embedded integration in constrained environments

System role: motor control, power modulation, network communication

Short FAQ

Is the BLE-4 suitable for a 48 V electric vehicle architecture?

Yes, it is clearly positioned for 48 V low-voltage traction systems, provided that battery, motor, electrical protection and parameterization are consistent.

Can the controller communicate with a supervision system?

Yes, the CANopen interface allows integration into a communicative onboard architecture with supervision, diagnostics and command exchange.

Can it be used with several motor types?

Yes, this controller is intended for configurations using ACIM, BLDC, PMAC or PMSM motors, making it a strong base for multi-architecture projects.

Is IP65 enough for an exposed machine?

It is a major advantage, but actual durability still depends on cable integration quality, connectors, mounting and overall compartment protection.

The ZAPI BLE-4 48V 875 Arms is intended for projects requiring a technically credible, communicative speed controller suitable for demanding low-voltage traction environments. Its value is real for integrators and engineering teams looking for a robust base for electric vehicles or machines, provided that the full motor, battery, network, cooling and safety architecture is validated before commissioning.

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