



BLDC Motor Controller

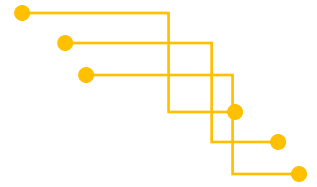
KIAN series BLDC motor controllers are specially designed for high reliability and performance controlling of light electric vehicle brushless DC motor drives for electric vehicles and industrial applications. The controllers are designed in high end driving technology and reliable hardware which provide the silent and smooth operation for the brushless motors. The controllers are manufactured with high quality components and materials. The casing is completely sealed to meet IP65 protection.



Specification

| Electrical Data | KIAN 3052 | KIAN 3060 | Unit |
|-----------------------------|-----------|-----------|------|
| Output Max. Current | 63 | 54 | A |
| Input DC Link Voltage Range | 40-60 | 40-72 | V |
| Output Max. Power | 3.3 | 3.3 | kW |
| Switching Frequency | 20 | 20 | kHz |
| Operating Ambient Temp. | -20 to 45 | -20 to 45 | °C |





Key Features

- Low noise, high efficiency
- New driving technology
- Sensor type: Hall sensor
- Compact Design
- Speed Control Mode
- Real time current control
- IP65 protection
- 33-pin waterproof connector
- EEPROM to store important system parameters
- Two driving mode: economy and sport
- Real time status LED
- Designed to the requirement of EMC Standard: ISIRI 19601
- Designed to the requirements of Safety Standards: ISIRI 18373

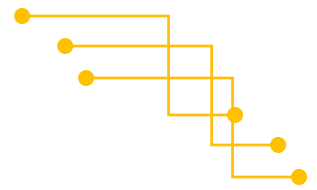
Protection Function

- Maximum current protection
- Motor thermal protection
- Controller thermal protection
- Battery thermal protection
- Hall sensor failure detection
- Motor stall protection
- Throttle failure detection
- Single phasing detection
- I/O protection

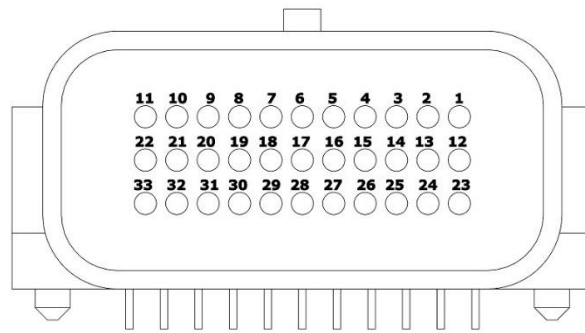
Communication interfaces

- 1x RS232 or 1x CAN 2.0B





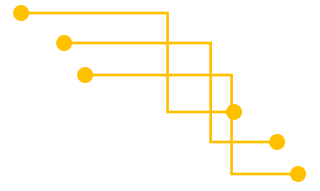
33-Pin Connector with detailed Pin Numbering table



| Pin | Name | Description |
|-----|------------|--|
| 1 | BAT_VCC | Battery voltage |
| 2 | * | Reserved. Only for factory use |
| 3 | Throttle | Analog input (0-3.3 V). Throttle input |
| 4 | GND | Ground. Used to throttle supply |
| 5 | 3v3 | 3.3 V to throttle supply |
| 6 | 3v3 | 3.3 V to motor hall sensors supply |
| 7 | GND | Ground. Used to motor hall sensors supply |
| 8 | HALL W | Hall sensor input (phase w) |
| 9 | HALL V | Hall sensor input (phase v) |
| 10 | HALL U | Hall sensor input (phase u) |
| 11 | CAN L | CAN bus low signal |
| 12 | BAT_GND | Battery voltage |
| 13 | * | Reserved. Only for factory use |
| 14 | NC | Not connected |
| 15 | Drive Mode | Digital Input. Used to change the driving mode. "12v" True |
| 16 | GND | Ground |
| 17 | Charger | Charger sensor input." GND" True |
| 18 | SOH | State of health Display ¹ |
| 19 | TempBAT | Temperature sensor input (PTC) |
| 20 | TempMot_1 | Temperature sensor input (PTC) |
| 21 | TempMot_2 | Temperature sensor input (PTC) |
| 22 | CAN H | CAN bus High signal |
| 23 | Earth | This pin must connect to the driver's heatsink |
| 24 | DC/DC+ | 12v DC/DC input. Reference of this voltage is BAT_GND |
| 25 | * | Reserved. Only for factory use |
| 26 | * | Reserved. Only for factory use |
| 24 | * | Reserved. Only for factory use |
| 28 | Brake | Digital Input. "12v" True |
| 29 | GND | Ground. Used to temperature sensors |
| 30 | * | Reserved. Only for factory use |
| 31 | * | Reserved. Only for factory use |
| 32 | * | Reserved. Only for factory use |
| 33 | * | Reserved. Only for factory use |

¹ This pin is connected to BAT_GND when be activated.





Dimensions (mm)

