| SPLIFT-M | BLDC/PMSM MOTOR CONTROLLER |

- **Advanced vector control:** Utilizes a vector control algorithm for precise management of motor speed and torque.
- **Wide applicability**: Designed for electric vehicles such as AGVs, pallet trucks, electric cargo tricycles, and electric motorcycles.
- **High performance**: Ensures stability and reliability through extensive motor load and on-vehicle testing.
- **Integrated safety**: Includes multiple protection mechanisms to ensure user safety.
- **Customizable software**: The controller software can be tailored to the user's specific operating conditions.
- **Traction control**: Optimized to meet the traction requirements of electric vehicles.

CE

TECHNICAL DATA

|	
BATTERY VOLTAGE	24-48 VDC
2 MIN CURRENT	90 A
1 HOURS CURRENT	40 A
MAX OUTPUT FREQUENCY	200 Hz
MOTOR CONTROL METHOD	Indirect magnetic field orientated vector control with sensors
NETWORK FEATURES	CAN BUS PORT 2.0B COMPLIANT - (11, 29 BIT) - ISO 11898 - UP TO 1MBIT/S
CONNECTIONS	SYSTEM CONNECTOR: 22-PIN SOCKET POWER CONNECTORS: THREAD M6X1
WEIGHT	0.70 Kg
WORKING TEMPERATURE	-40+50°C
CONTROLLER PROTECTION TEMPERATURE	Output is reduced from 85°C to 95°C and stopped when it exceeds 95°C; -40-25°C cut output, stop output below -40℃.
COOLING METHOD	Self-refrigeration
INPUTS	DIGITAL INPUTS: 11

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CiA member

ELECTRONIC FEATURES

NETWORK INTEGRATION	CUSTOM MESSAGE
PROGRAMMING	WITH DEDICATED SOFTWARE TOOL

SIZE (mm)
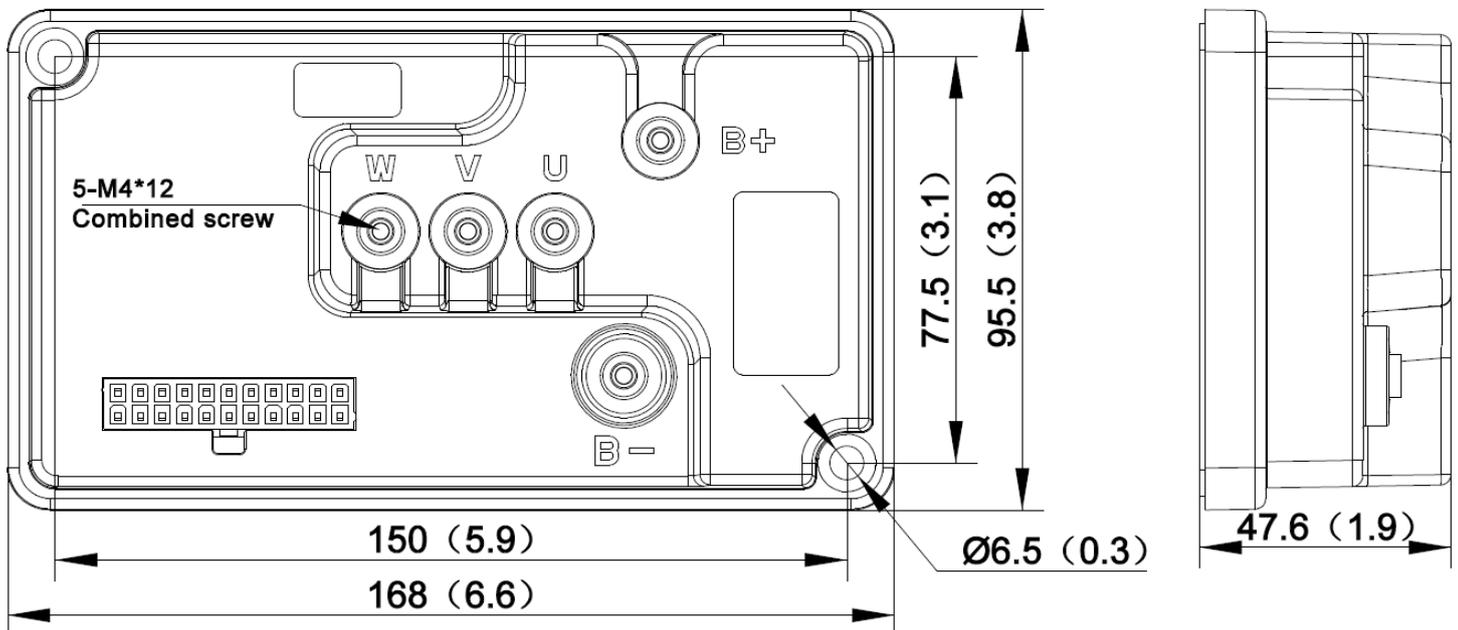
STANDARDS

ELECTROMAGNETIC (EMC)	CE mark: ACCORDING TO DIRECTIVE 2014/30/EU: EN 12895:2015+a1:2019
SAFETY	EN 1175:2020 EN ISO13849-1:2015 (PLc) UL 583
PROTECTION	Vibration: EN 60068-2-6 Impact: EN 60068-2-27 Protection class: EN 60529 (IP65)

We reserve the right to make technical alterations without prior notice

CONNECTIONS

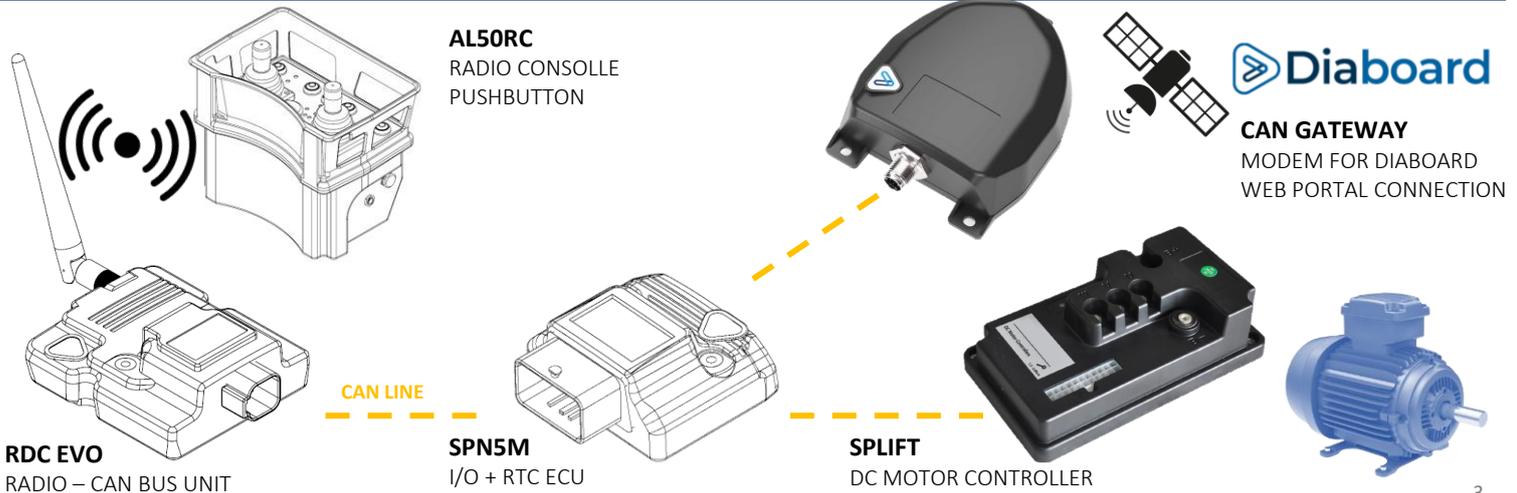| PIN Serial Number	PIN Definition	Signal Type and Description
1	CAN-H	CAN communication signal: 125kbps-500kbps
2	POT WIPER	Analogue slide terminal, voltage input range: 0-5V
3	POT HIGH	Analogue slide terminal, voltage input range: 0-5V
4	SWITCH 1	Switching signal input, receivable voltage range: 12V to system voltage
5	SWITCH 5	
6	KSI	Input power: Controller auxiliary power input
7	DRIVER 1	Output signal:0-100% adjustable PWM output, maximum current 2A
8	DRIVER 2	
9	HALL-U	Motor Hall Sensor U-phase
10	5V-OUT	Output power supply: for parts with 5V power supply, maximum current 100mA
11	DRIVER 3	Output signal:0-100% adjustable PWM output, maximum current 2A
12	CAN-L	CAN communication signal: 125kbps-500kbps
13	MOTOR-TMP	Motor Temperature Sensor: Sensor Model: KTY84-150, PT1000
14	I/O GND	Analogue Signal Negative: Analogue Signal Ground
15	SWITCH 2	Switching signal input, receivable voltage range: 12V to system voltage
16	SWITCH 3	
17	SWITCH 4	
18	COIL RETURN	Output power supply: can form a loop with the drive output, drive coil common terminal
19	COIL RETURN	
20	I/O GND	Analogue Signal Negative: Analogue Signal Ground
21	HALL-V	Motor Hall Sensor V-phase
22	HALL-W	Motor Hall Sensor W-phase
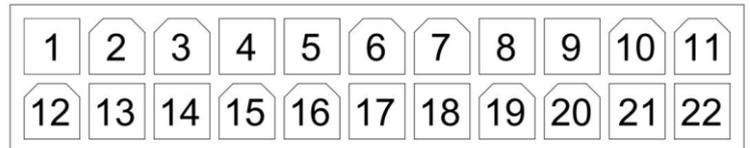
Table 2 High current connections	
Terminals	Functionality
B+	Power Positive Connection Controller
B-	Negative Power Connection Controller
U	Motor phase U
V	Motor phase V
W	Motor phase W

SYSTEM INTEGRATION example

AL50RC
RADIO CONSOLLE PUSHBUTTON

CAN GATEWAY
MODEM FOR DIABOARD WEB PORTAL CONNECTION

RDC EVO
RADIO – CAN BUS UNIT

CAN LINE

SPN5M
I/O + RTC ECU

SPLIFT
DC MOTOR CONTROLLER

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