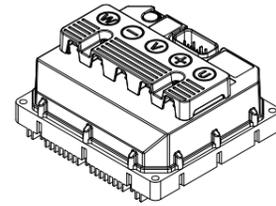# MAIN CHARACTERS

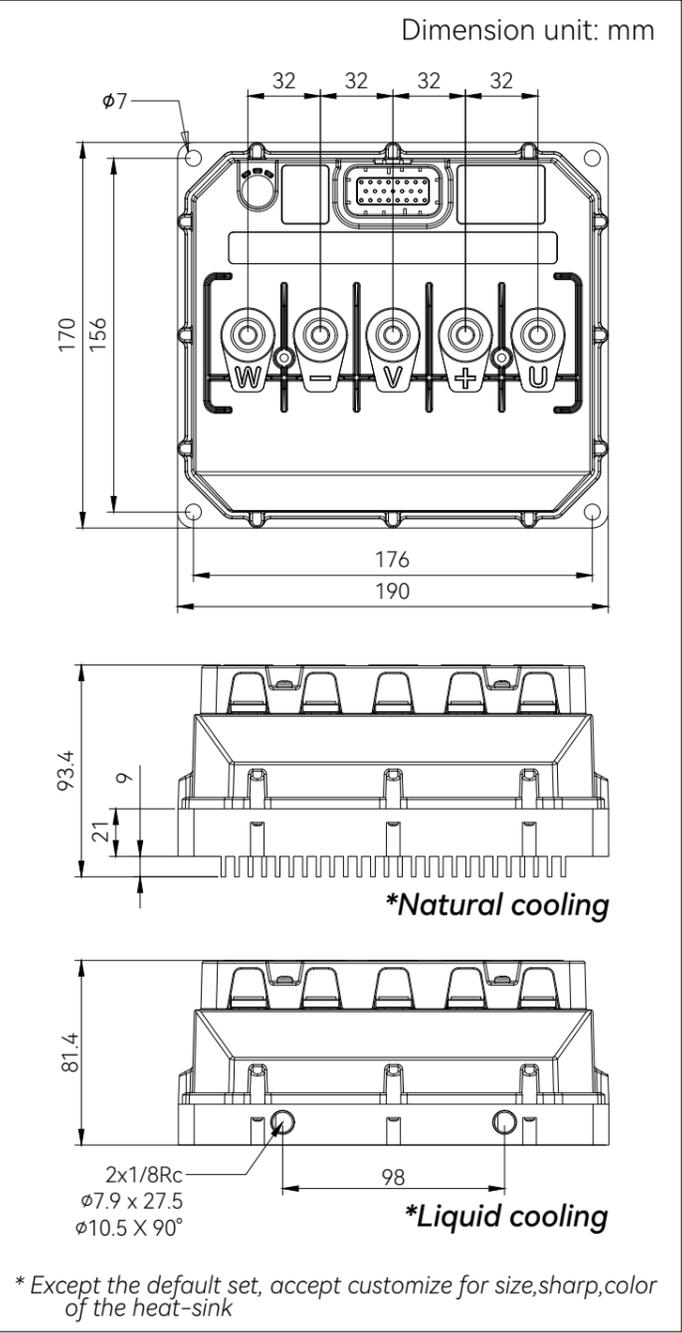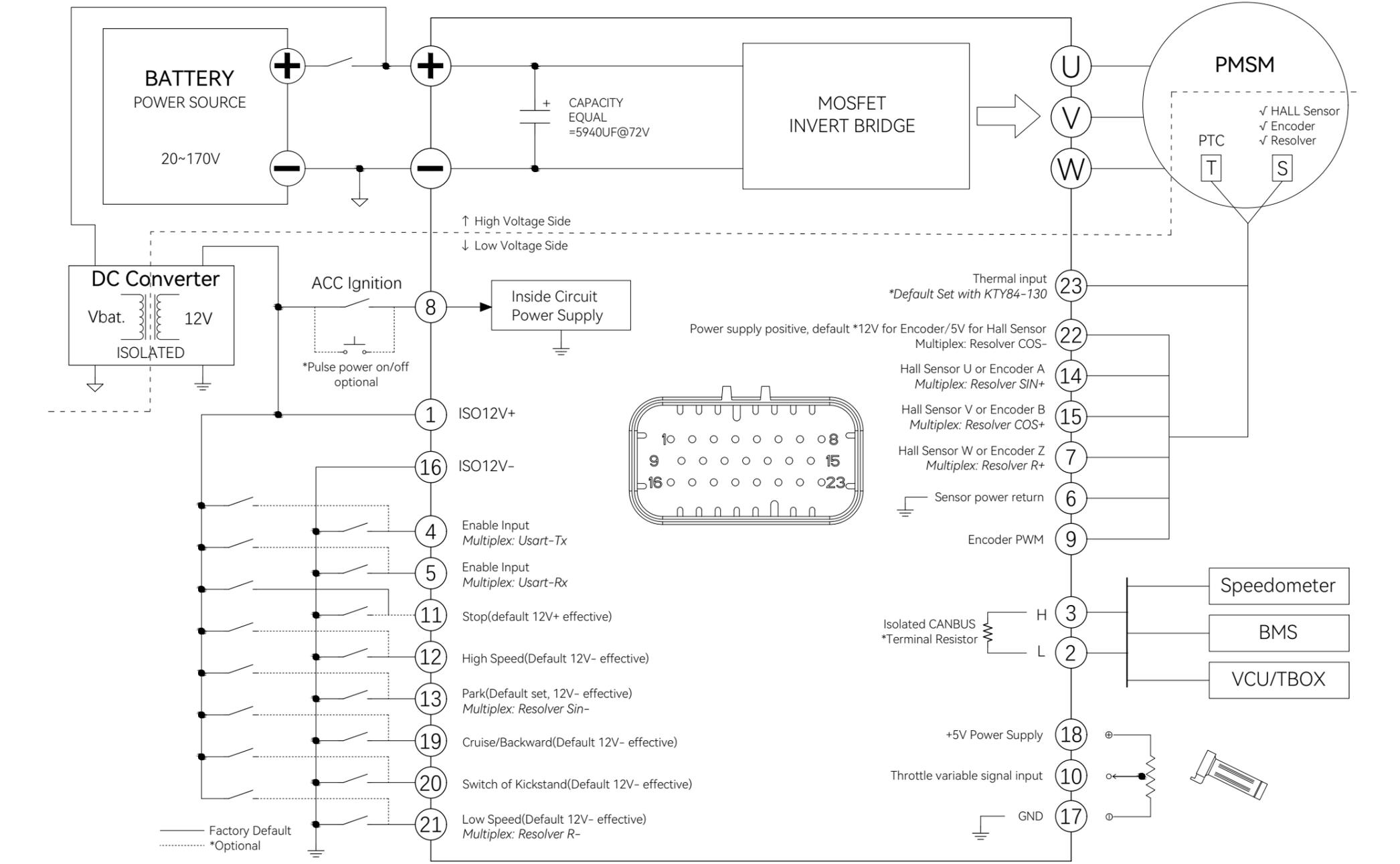|			
Rated invert capability 30 minutes continue	7~18KVA Variable radiator	Max. invert capability 60 seconds continue	44KVA Under good heat dissipation condition
DC input capability	500A	Control mode	FOC SVPWM
Invert efficiency Max	99%	Communication	CANBUS
Host software	Windows/Android/ios	Debug Interface	Usart, BlueTooth
Ambient temperature	–40~55℃	Altitude	4000m
Protect grade	IP67	Weight	2.7kg@7.5KVA
Protection	LVP, OVP, OCP, Temperature monitor, Short Circuit protect		

AVAILABLE MODELS FOR ORDERING

Model	Rated Voltage	Safe Voltage	AC Current limit	DC Current Limit	*NOTES for Optional
A8.72S	72V	<90V	600A	200A	1. CANBUS Terminal Resistor 2. Hall sensor/Encoder/Resolver 3. (If)Encoder power supply 5V/12V 4. Thermistor model 5. Nature cooling/liquid cooling/customize 6. Electric level of Control port 7. Control port defination customize 8. Ignition constant or one key on/off
A8.72M	72V	<90V	700A	240A	
A8.72L	72V	<90V	800A	270A	
A8.72U	72V	<90V	1000A	350A	
A8.96M	96V	<120V	700A	250A	
A8.120M	120V	<35V	600A	200A	
A8.144M	144V	<170V	450A	150A	

A8 VER.2209

PMSM & BLDC DRIVER UP TO 30kW

- FOC Control
- SVPWM SINEWAVE
- DTC & MTPA
- BLUETOOTH EXTEND
- ISOLATED CANBUS
- 100% AGING TEST
- SLIM SIZE
- IP67 PROTECT

Dimension unit: mm

*Natural cooling

*Liquid cooling

2x1/8Rc
φ7.9 x 27.5
φ10.5 X 90°

* Except the default set, accept customize for size, sharp, color of the heat-sink

BATTERY POWER SOURCE
20~170V

CAPACITY EQUAL =5940UF@72V

MOSFET INVERT BRIDGE

PMSM
√ HALL Sensor
√ Encoder
√ Resolver
PTC

U / V / W

↑ High Voltage Side
↓ Low Voltage Side

DC Converter
Vbat. | 12V
ISOLATED

ACC Ignition

Inside Circuit Power Supply

*Pulse power on/off optional

(8)

(1) ISO12V+
(16) ISO12V-

(4) Enable Input *Multiplex: Usart-Tx
(5) Enable Input *Multiplex: Usart-Rx
(11) Stop(default 12V+ effective)
(12) High Speed(Default 12V- effective)
(13) Park(Default set, 12V- effective) *Multiplex: Resolver Sin-
(19) Cruise/Backward(Default 12V- effective)
(20) Switch of Kickstand(Default 12V- effective)
(21) Low Speed(Default 12V- effective) *Multiplex: Resolver R-

—— Factory Default
········· *Optional

(23) Thermal input *Default Set with KTY84-130
(22) Power supply positive, default *12V for Encoder/5V for Hall Sensor Multiplex: Resolver COS-
(14) Hall Sensor U or Encoder A *Multiplex: Resolver SIN+
(15) Hall Sensor V or Encoder B *Multiplex: Resolver COS+
(7) Hall Sensor W or Encoder Z *Multiplex: Resolver R+
(6) Sensor power return
(9) Encoder PWM

Isolated CANBUS *Terminal Resistor
H (3)
L (2)

Speedometer
BMS
VCU/TBOX

(18) +5V Power Supply
(10) Throttle variable signal input
(17) GND

Version	YY-MM-DD	Design	Confirm	Content updated

Draw: 2025.11.27
Reviewer
Approver: 2026.01.06

Name

Specification of A8

FILE ID. APT2209.A0.00E.V1.96

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