ACE4

THE MID-TO-HIGH RANGE CHAMPION

INFORMATION

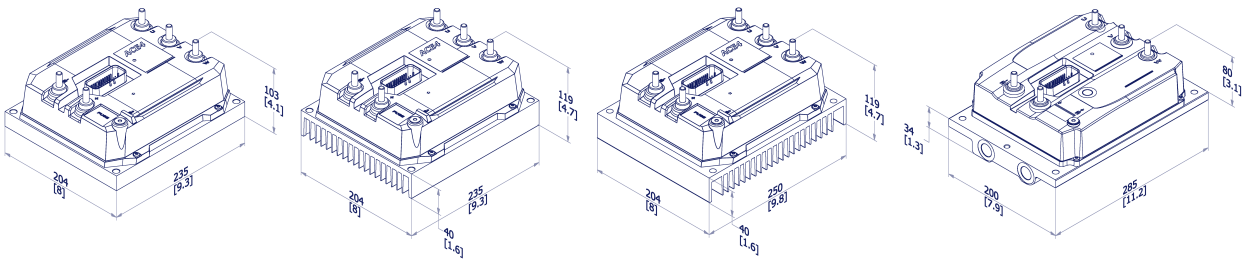
ACE4 is suitable for controlling several types of motors (AC induction, SPM, IPM, SRM, SRPM), in the range from 15 kW to 30 kW continuous power adopted in battery-powered electric and hybrid vehicles. Speed or torque control are available. The I/Os accommodate a wide range of vehicle controls and sensors. ACE4 can also interface with a wide range of external devices via CAN bus.

APPLICATIONS

- Tow tractors and airport ground support vehicles
- Material handling and AGV
- Aerial-access equipment (AWP)
- Construction equipment
- E-mobility
- Agriculture

DIMENSIONS

mm [in]



Base plate | Longitudinal heatsink | Transversal heatsink | Liquid cooled

Available with or without power fuse.

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FEATURES

Description	Standard	Premium
Connector	23 pins Ampseal	35 pins Ampseal
Digital inputs, active high	3	8
Digital inputs, active low	2	3
Analog inputs	2	4
ON/OFF outputs	-	2
PWM voltage-controlled outputs	2	4
PWM current-controlled output	1	1
CAN bus interface	1	1
Input for motor thermal sensor	1	1
Encoder interface	1	1
3-Hall interface	-	1
Auxiliary supply output (+12/+5V)	2 (max 150 mA each)	
Sin-cos/Resolver interface	1 on demand	
Microcontrollers	2	
Ambient temperature, operating	-40 °C ÷ +40 °C	(-40 °F ÷ 104 °F)
Ambient temperature, storage	-40 °C ÷ +85 °C	(-40 °F ÷ 185 °F)

Speed/position sensor interfaces different from single incremental encoder reduce the number of available digital/analog inputs.

MODEL CHART

Nominal DC voltage	DC Voltage range	Maximum AC current [Arms] 1)	S2 60min AC current rating [Arms] 2)
36/48 V	10 V ÷ 62 V	1000 (1'30'') 800 (1'30'')	480 400
72/80 V	30 V ÷ 115 V	700 (1'30'') 600 (2') 500 (2')	350 300 250
96 V	30 V ÷ 130 V	700 (1'30'')	300
120 V	30 V ÷ 150 V	400 (1'30'')	200

Current ratings are based on an initial heat sink temperature of 40 °C and a maximum heat sink temperature of 85 °C.
1) No airflow through the heat sink. 2) 100 m3/h airflow through the heat sink.

REGULATIONS

UL certificate	UL 583 compliant (AU3503)
EMC	EN 12895:2015+A1:2019
Functional safety	Designed to achieve EN1175 - 2020 requirements. Designed to achieve CATEGORY 2 according to EN13849; CATEGORY 3 achievable Designed to achieve requirements of EN280.
IP code	IP65