

# COMBIAC0

THE EVERGREEN FOR THE MID-TO-LOW RANGE



## INFORMATION

COMBIAC0 is suitable for controlling several types of motors (AC induction, SPM, IPM, SRM, SRPM), in the range from 4 kW to 12 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. COMBIAC0 can also interface with a wide range of external devices via CAN bus.

## APPLICATIONS



Material handling  
and AGV



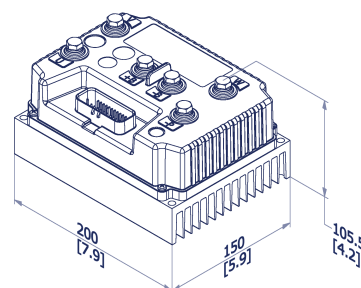
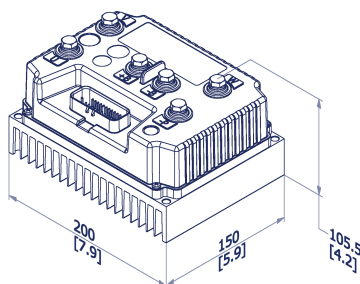
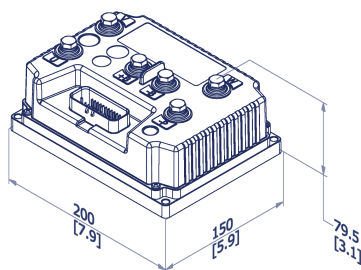
Aerial-access equipment  
(AWP)



E-mobility

## DIMENSIONS

mm [in]



# COMBIACO

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## FEATURES

Connector	35-pins Ampseal
Digital inputs	up to 13
Analog inputs	2
PWM voltage-controlled output	4
PWM current-controlled output	2
ON/OFF outputs	4
CAN bus interface	1
Input for motor thermal sensor	1
Encoder interface	1
Sin-cos / 3-Hall interface / resolver interface	1 on demand
High-side driver	1 only for 24 V
Auxiliary supply output (+12/+5V)	1 or 2 on demand (max 150 mA each)
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 rating (2') [Arms] <sup>1)</sup>	S2 60-min AC current rating [Arms] <sup>2)</sup>	DC maximum current [A]
24 V	10 V ÷ 35 V	220, 320	110, 160	270, 400
36/48 V	10 V ÷ 65 V	180, 280, 320	90, 140, 140	220, 300
72/80 V	30 V ÷ 115 V	200	100	200
96 V	30 V ÷ 130 V	100	50	-

Current ratings are based on an initial heat sink temperature of 40 °C (104 °F) and a maximum heat sink temperature of 85 °C (185 °F).

1) No airflow through the heat sink.

2) 100 m<sup>3</sup>/h airflow through the heat sink.

## REGULATIONS

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