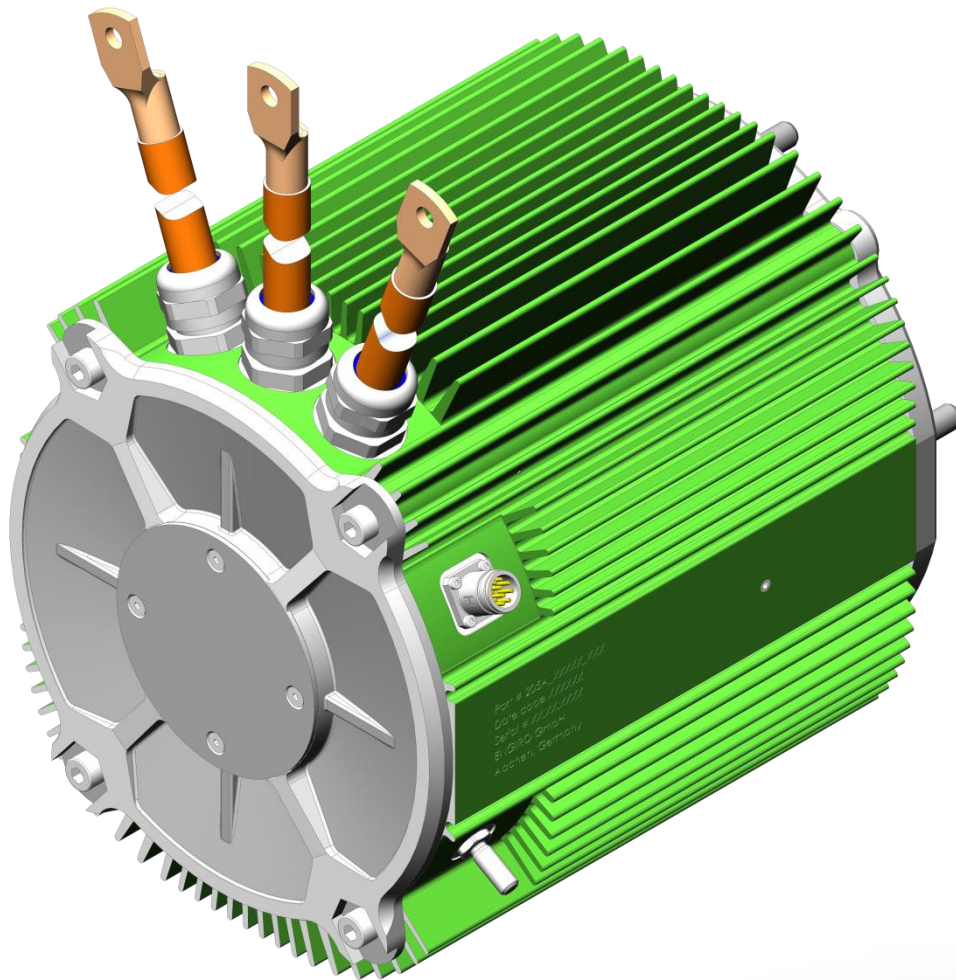


# 205A-04013-ABC

air-cooled motor / generator with up to 10 kW continuous power



## KEY FEATURES

- permanent magnet synchronous machine
- air-cooled
- high peak power for motor applications
- convincing cost-benefit ratio
- recommended voltage range from 48V to 200V
- delivery with controller possible

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Nominal Operation (S1, cooling as specified below)				
Torque	$T_{nom}$		26	Nm
Power	$P_{nom}$		10	kW
Speed	$n_{nom}$		3750	rpm
Phase rms-current	$I_{nom}$		226 <sup>1,2)</sup>	A
Battery voltage (DC)	$U_{nom}$		48	V
Electric frequency	$f_{el,nom}$		250	Hz
Power factor	$\cos(\varphi)$		0.65	
Nominal Operation (S1, cooling as specified below)				
Torque	$T_{max}$		99	Nm
Power	$P_{max}$		23	kW
Phase rms-current	$I_{max}$		961 <sup>2)</sup>	A
Battery voltage (DC)	$U_{max}$		200	V
Speed	$n_{max}$		8000	rpm
Electric frequency	$f_{el,max}$		533	Hz
Electrical Data				
Number of phases			3	
Number of pole pairs			4	
Maximal efficiency			96	%
$T/I$ constant ( $I < I_{nom}$ )			0.11	Nm/ $A_{rms}$
$U/n$ constant (AC) at a temperature of 30°C	rms:	7.4	peak:	12.6 V/(1000rpm)
$K_e$ constant (AC) at a temperature of 30°C	rms:	0.018	peak:	0.03 V/(rad*s <sup>-1</sup> )
Additional Data				
Weight (w/o cables)			21	kg
Rotor moment of inertia			0.009	kg*m <sup>2</sup>
Protection category			IP65	
Maximal motor temperature			120	°C
Allowed ambient temperature			-20 ... 45 <sup>3)</sup>	°C
Cooling (medium, flow rate, inlet temperature, pressure)			air, >12 m/s, ≤ 25°C	
Temperature monitoring			1 x KTY84-130	
Type approval			CE, EN 60034	
Customs tariff number			8501 5230	
Connectors				
Power terminals			3 x 50mm <sup>2</sup> cables with M8 cable lugs	
Weight power cables			3.3	kg
Length power cables			2	m
Signal connectors			M16, 10 Pin	

<sup>1)</sup> Nominal current strongly dependent on cooling as specified below.

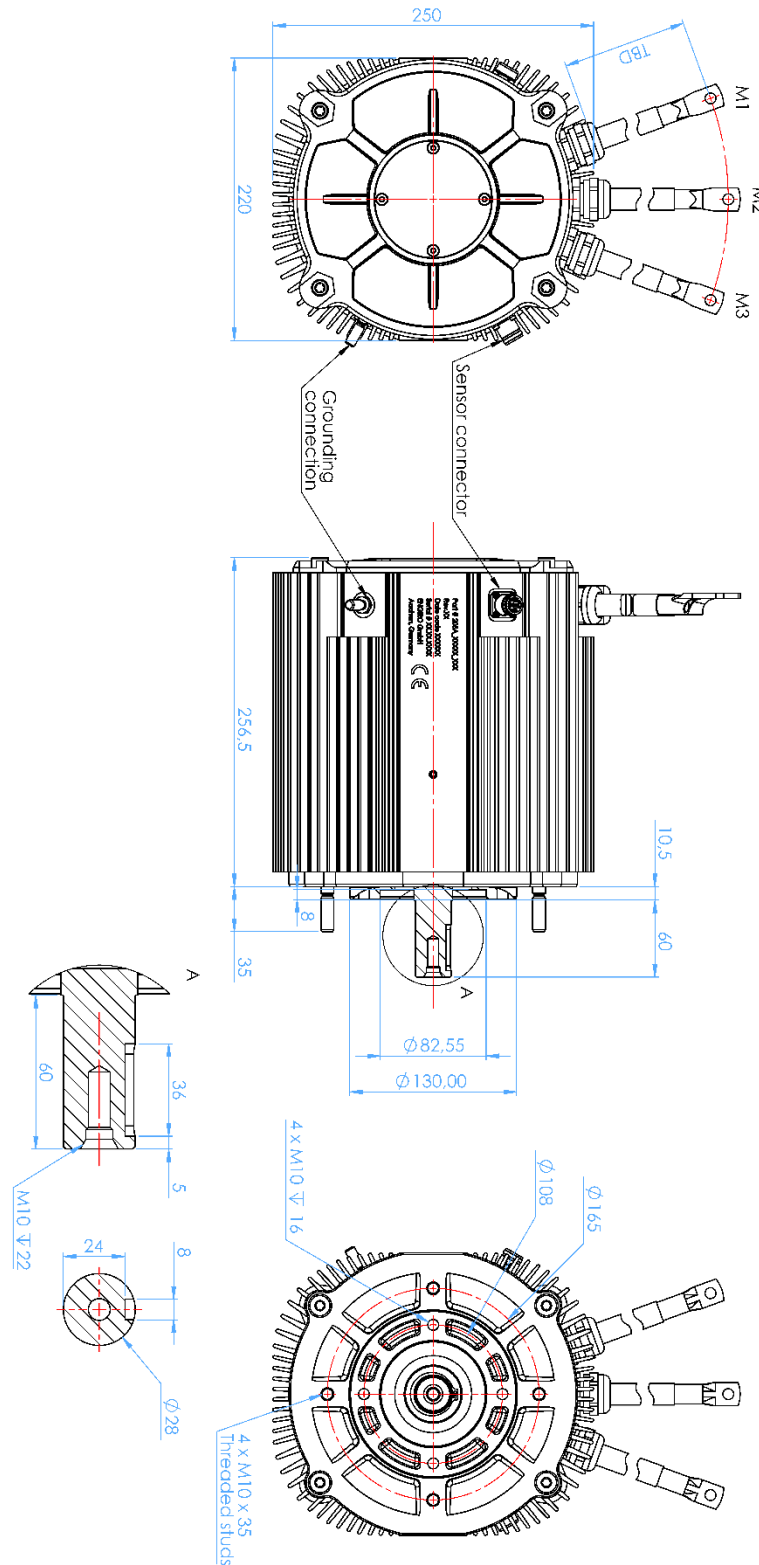
<sup>2)</sup> The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition.

<sup>3)</sup> other range on request

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## Available Type Variants

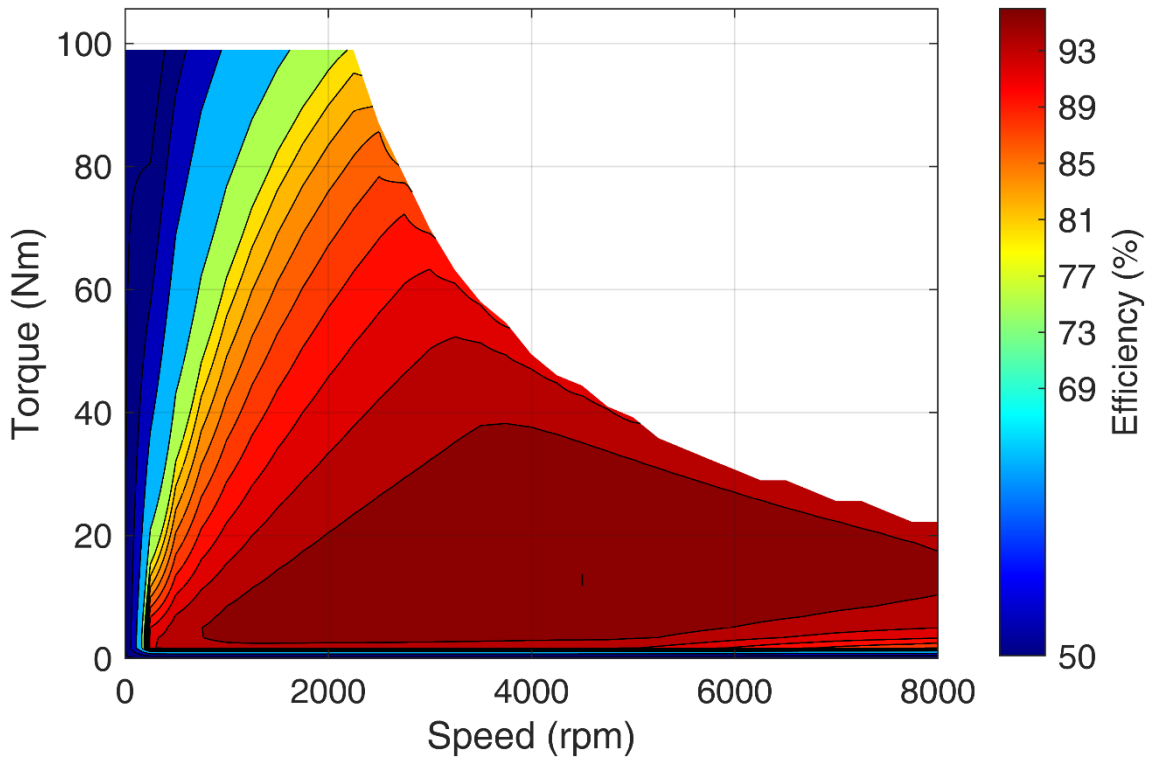
type number	A: flange	B: shaft	C: position sensor
205A-04013-	S: standard	S: cylindrical shaft with keyway	E: sin/cos encoder
			N: none



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Simulated Efficiency of Motor Application

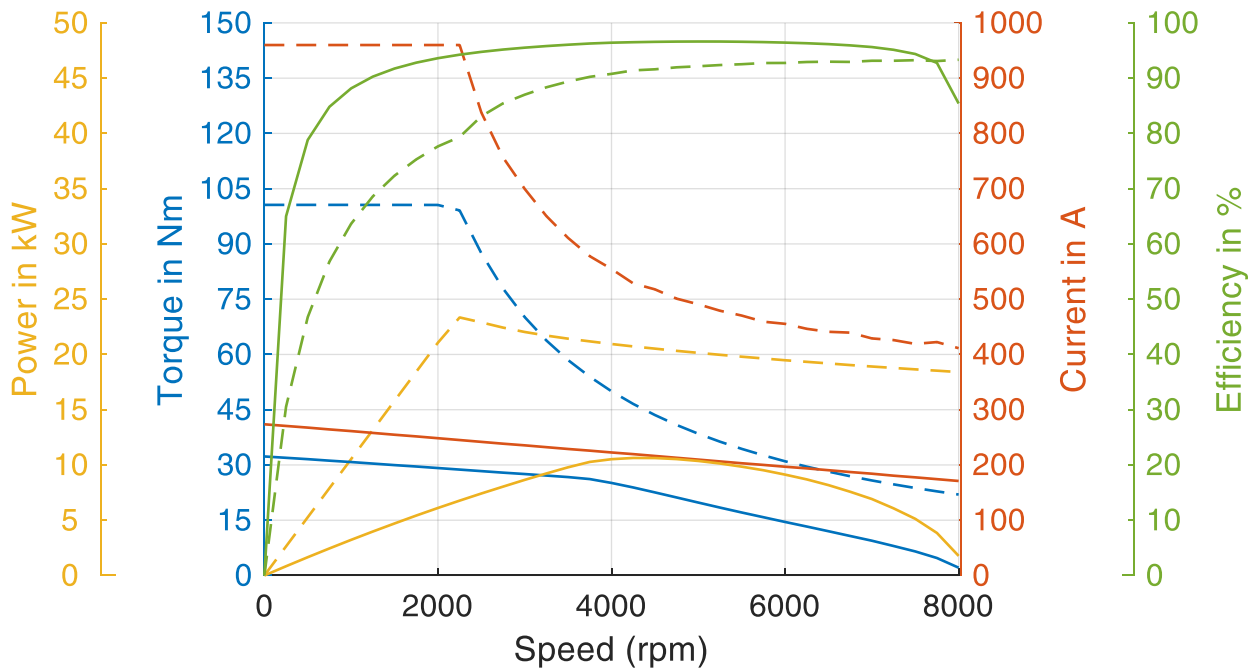
(electric machine only;  $U_{nom} = 48\text{ V}$ ; machine at  $140\text{ °C}$ ;)



Simulated Characteristic Motor Parameters

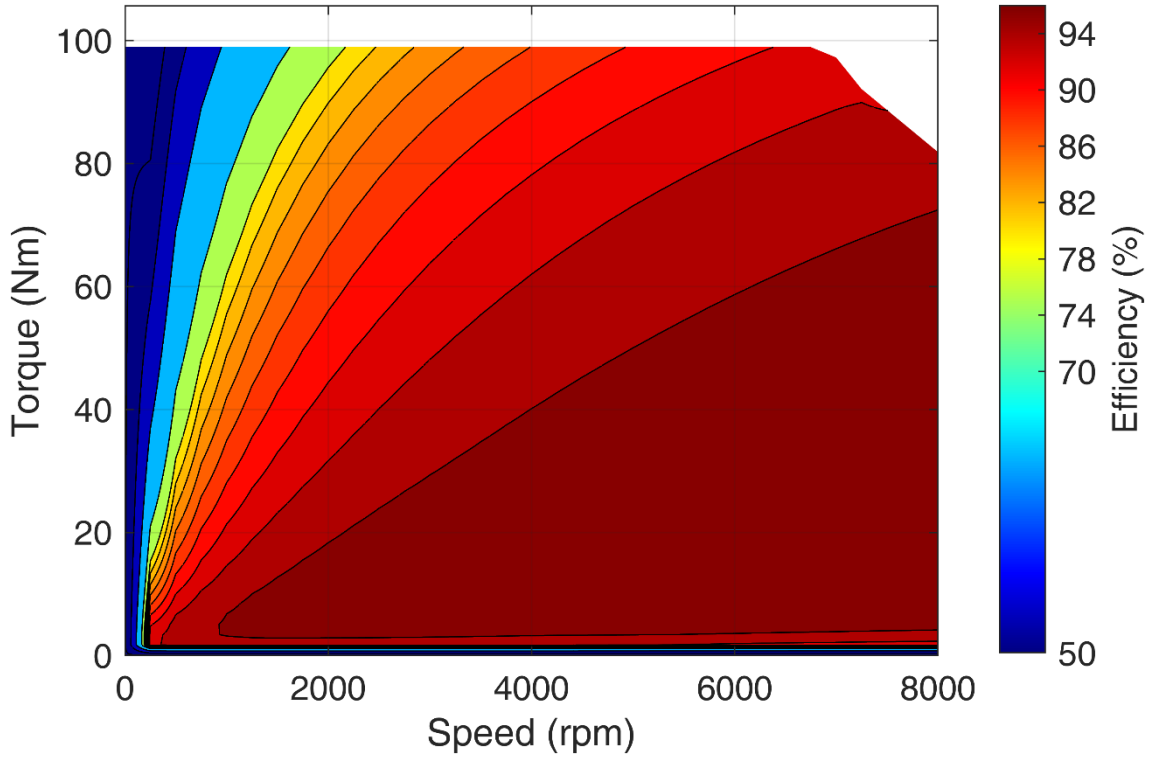
$U_{nom} = 48\text{ V}$

solid lines: continuous; dashed lines: maximum;



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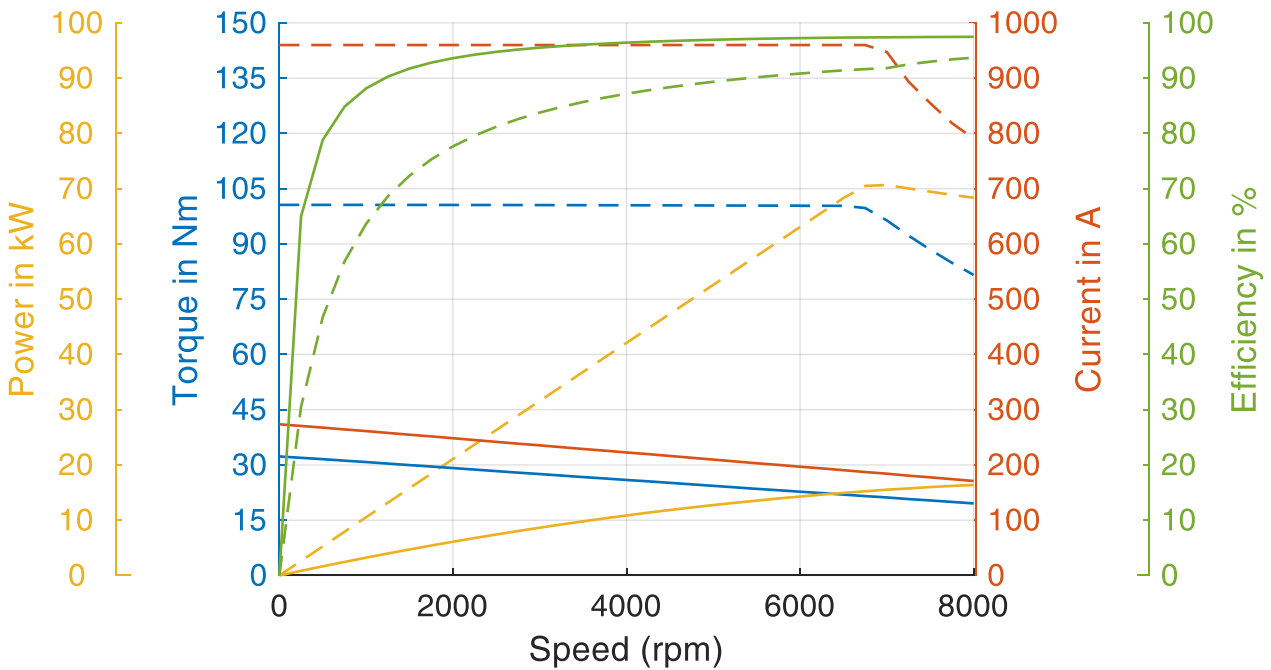
Simulated Efficiency of Motor Application  
(electric machine only;  $U_{nom} = 140\text{ V}$ ; machine at  $140\text{ °C}$ ;) )



Simulated Characteristic Motor Parameters

$U_{nom} = 140\text{ V}$

solid lines: continuous; dashed lines: maximum;



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