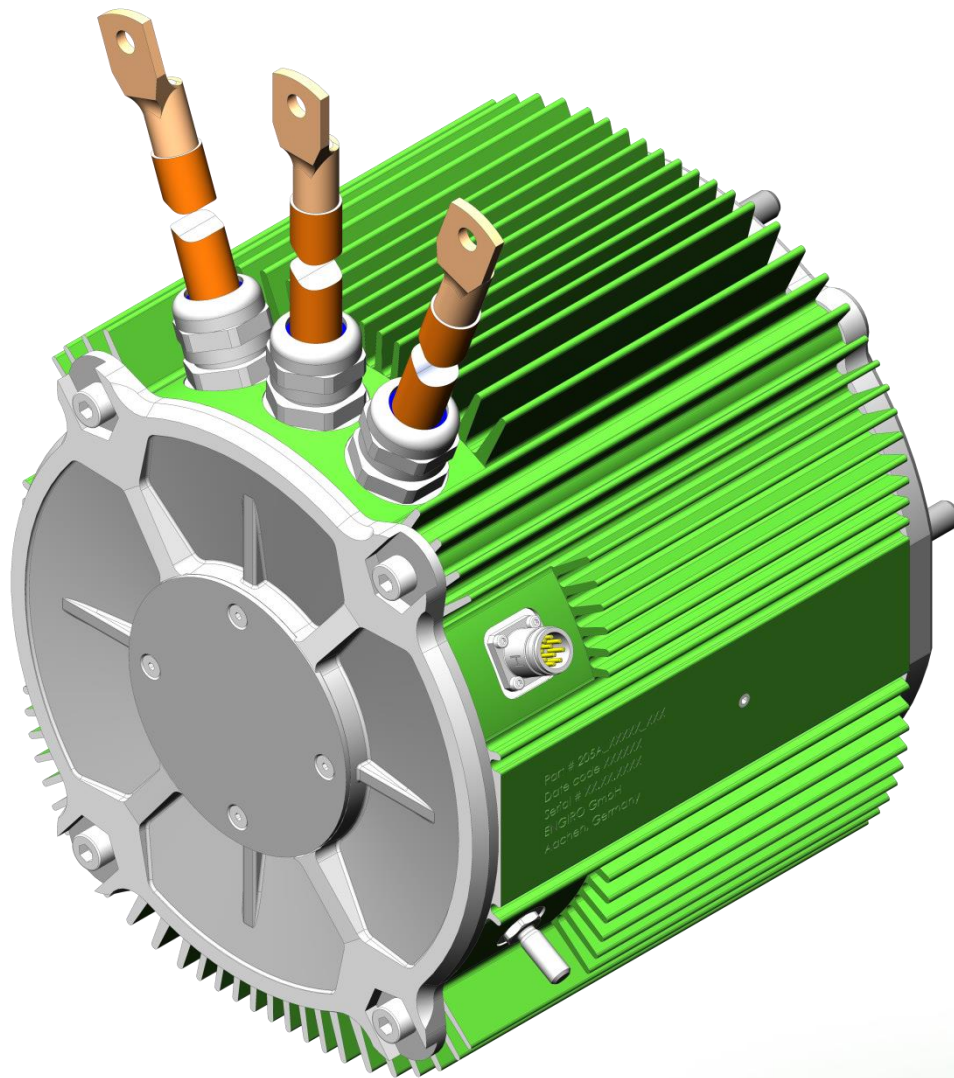


205A-04035-ABC

air-cooled motor / generator with up to 8 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

Section	Page
Technical Data Machine	3
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Characteristics Machine 96V	6
Characteristics Machine 140V	7

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Nominal Operation (S1, cooling as specified below)				
Torque	T_{nom}		27	Nm
Power	P_{nom}		8	kW
Speed	n_{nom}		2750	rpm
Phase rms-current	I_{nom}		88 ^{1,2)}	A
Battery voltage (DC)	U_{nom}		96	V
Electric frequency	$f_{el,nom}$		183	Hz
Power factor	$\cos(\varphi)$		0.75	
Maximal Values (S2, 10s, cooling as specified below)				
Torque	T_{max}		100	Nm
Power	P_{max}		16	kW
Phase rms-current	I_{max}		357 ²⁾	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 ($I < I_{nom}$)			0.31	Nm/A _{rms}
U/n constant (AC) at a temperature of 30°C		rms: 19.9	peak: 33.8	V/(1000rpm)
K_e constant (AC) at a temperature of 30°C		rms: 0.047	peak: 0.081	V/(rad*s ⁻¹)
Additional Data				
Weight (w/o cables)			20	kg
Rotor moment of inertia			0.009	kg*m ²
Protection category			IP65	
Maximal motor temperature			120	°C
Allowed ambient temperature			-20 ... 45 ³⁾	°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 ² cables with M8 cable lugs	
Weight power cables			3.3	kg
Length power cables			2	m
Signal connectors			M16, 10 Pin	

¹⁾ Nominal current strongly dependent on cooling as specified below.

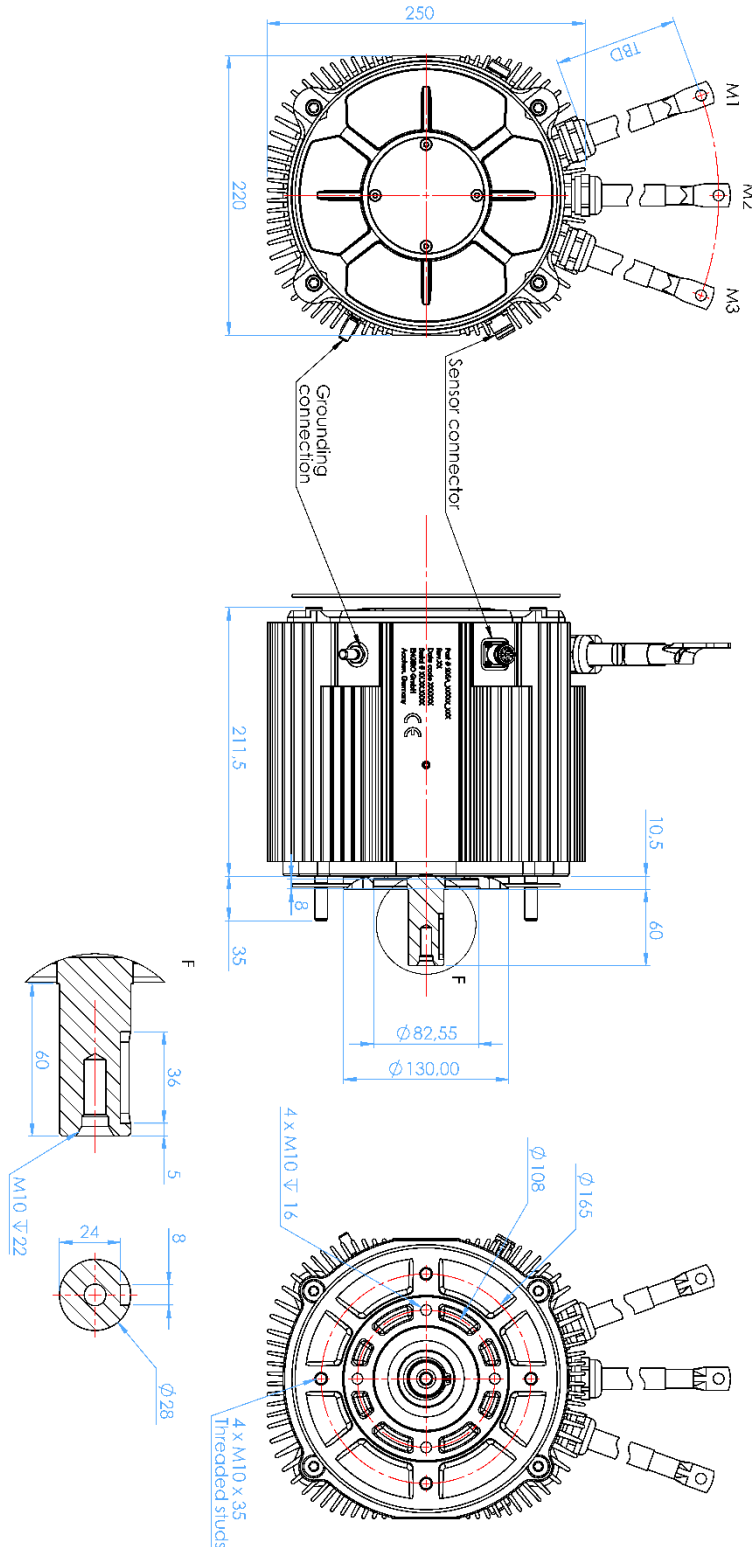
²⁾ The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition.

³⁾ other range on request

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Available Type Variants

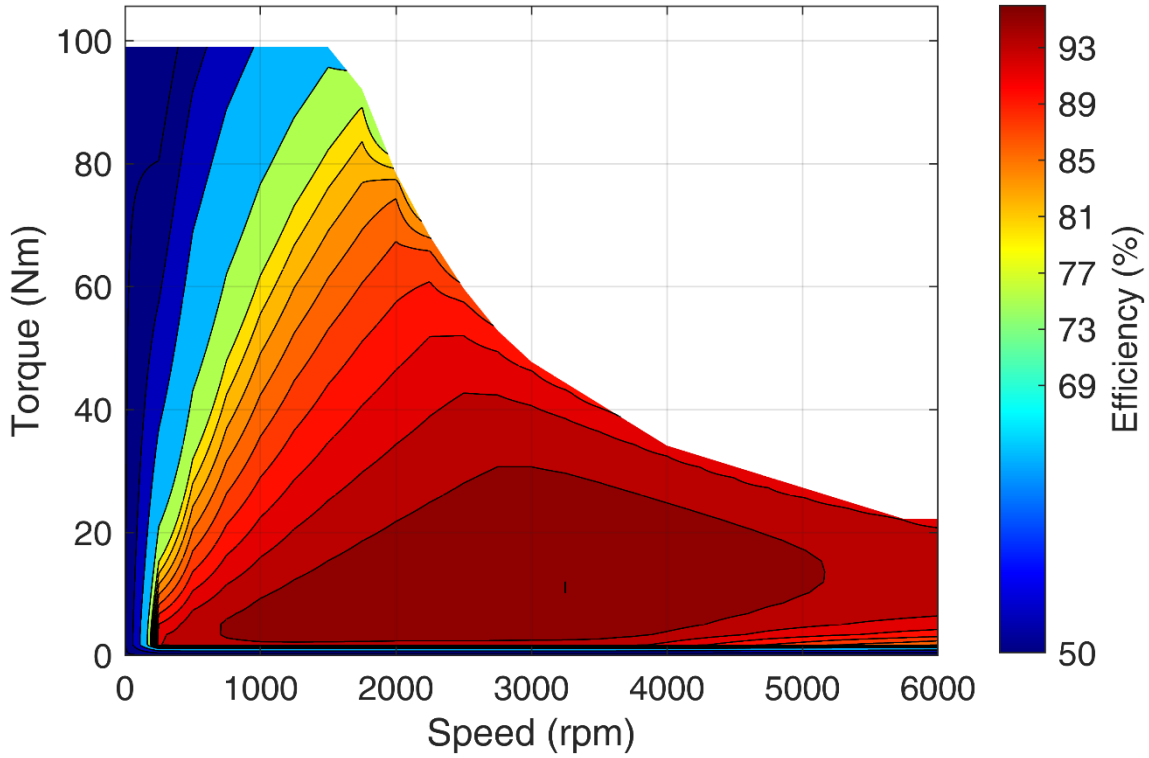
type number	A: flange	B: shaft	C: position sensor
205A-04035-	S: standard	S: cylindrical shaft with keyway	E: sin/cos encoder
			N: none



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Simulated Efficiency of Motor Application

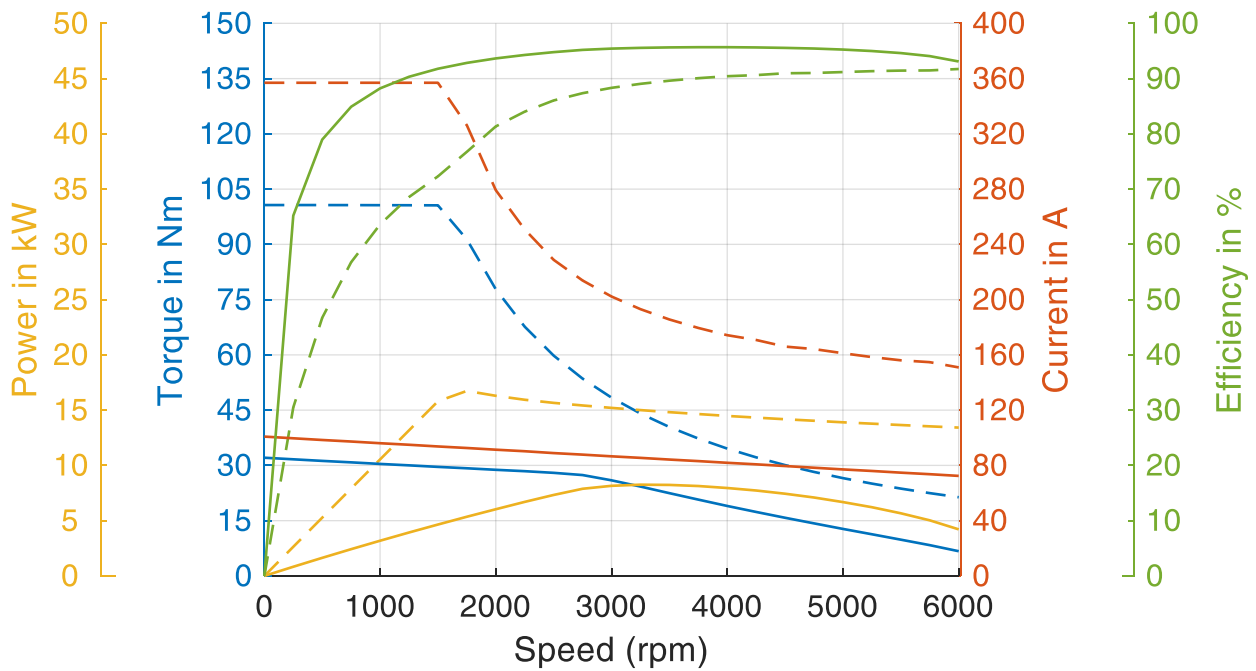
(electric machine only; $U_{nom} = 96\text{ V}$; machine at 140 °C ;)



Simulated Characteristic Motor Parameters

$U_{nom} = 96\text{ V}$

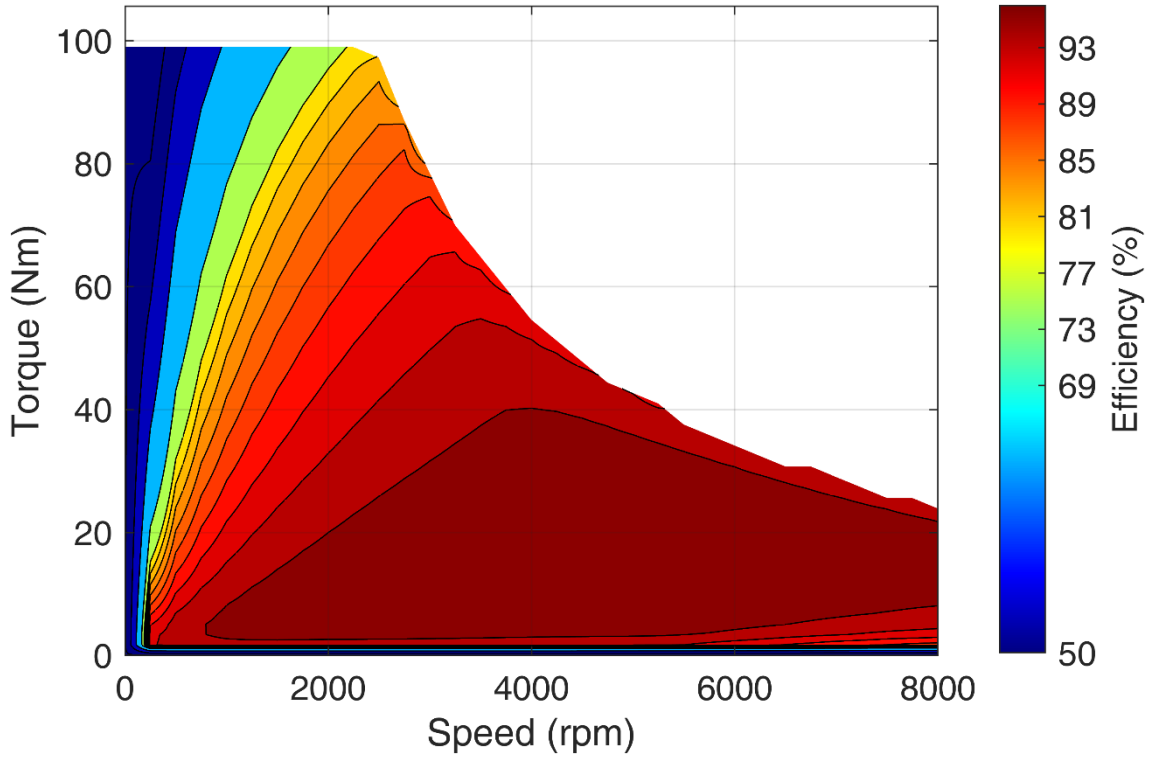
solid lines: continuous; dashed lines: maximum;



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Simulated Efficiency of Motor Application

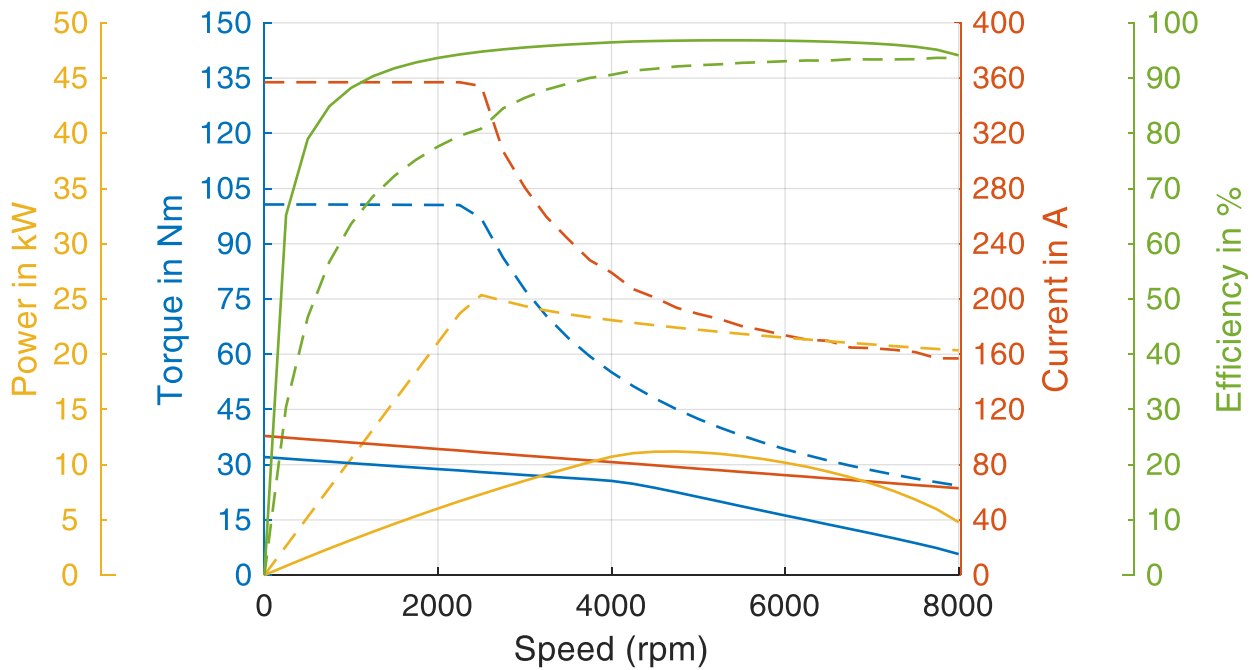
(electric machine only; $U_{nom} = 140\text{ V}$; machine at 140 °C ;)



Simulated Characteristic Motor Parameters

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

solid lines: continuous; dashed lines: maximum;



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