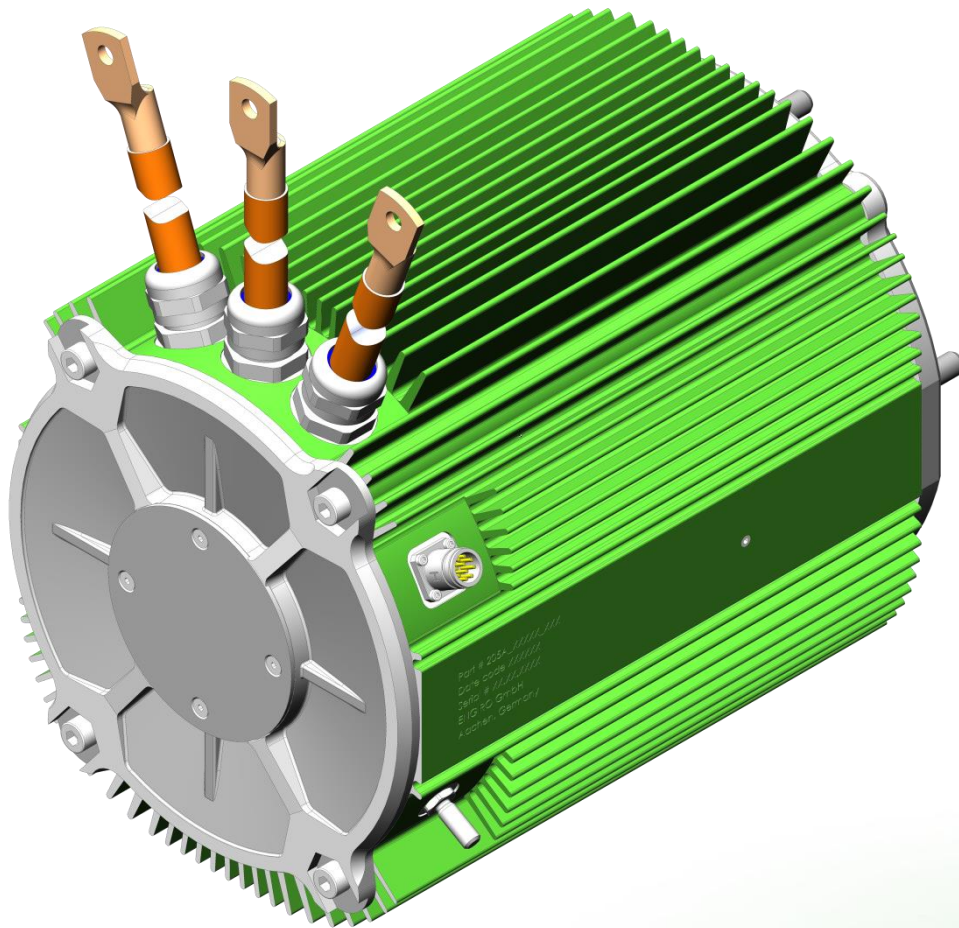


205A-08011-ABC

air-cooled motor / generator with up to 23 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
Available Type Variants	4
Technical Drawings	5
Characteristics Machine – 48V	6
Characteristics Machine – 96V	7
Characteristics Machine – 140V	8

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Nominal Operation (S1, cooling as specified below)					
Torque	T_{nom}				51 Nm
Power	P_{nom}				23 kW
Speed	n_{nom}				4250 rpm
Phase rms-current	I_{nom}				260 ^{1,2)} A
Battery voltage (DC)	U_{nom}				96 V
Electric frequency	$f_{\text{el,nom}}$				283 Hz
Power factor	$\cos(\varphi)$				0.75
Maximal Values (S2, 10s, cooling as specified below)					
Torque	T_{max}				200 Nm
Power	P_{max}				58 kW
Phase rms-current	I_{max}				1136 ²⁾ A
Battery voltage (DC)	U_{max}				200 V
Speed	n_{max}				8000 rpm
Electric frequency	$f_{\text{el, max}}$				533 Hz
Electrical Data					
Number of phases					3
Number of pole pairs					4
Maximal efficiency					96 %
T/I constant ($I < I_{\text{nom}}$)					0.19 Nm/A _{rms}
U/n constant (AC) at a temperature of 30°C		rms:	12.5	peak:	21.3 V/(1000rpm)
K_{e} constant (AC) at a temperature of 30°C		rms:	0.030	peak:	0.051 V/(rad*s ⁻¹)
Additional Data					
Rotor moment of inertia					0.0152 kg*m ²
Protection category					IP6K9K ³⁾
Maximal motor temperature					120 °C
Allowed ambient temperature					-20 ... 45 ⁴⁾ °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

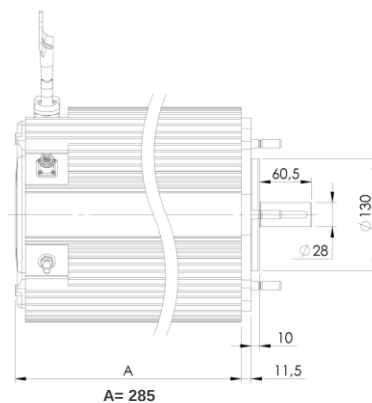
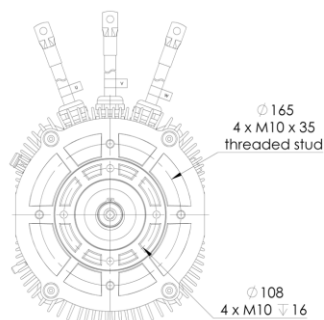
¹⁾ Nominal current strongly dependent on cooling as specified below. / ²⁾ The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition. / ³⁾ Please note that the IP6K9K rating is only valid if the machine is installed with suitable cable glands and an appropriate sealed interface at the drive side of the motor (flange and/or shaft). Please contact ENGIRO for further questions. / ⁴⁾ other range on request

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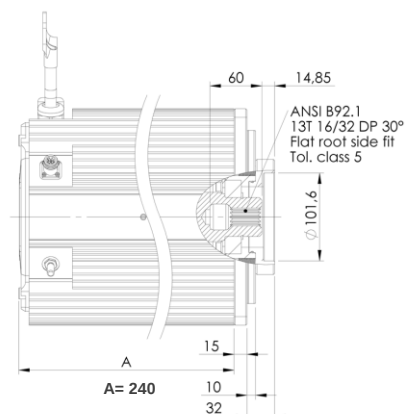
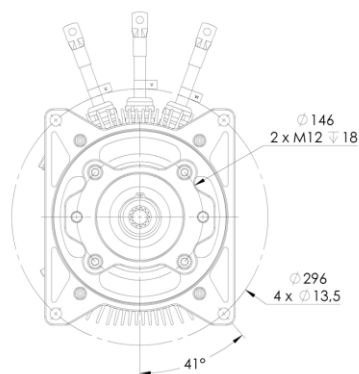
Shaft and Flange Combinations For 205A-08011-ABC		Flange (A)		
		S (Standard)	H (Hydraulic Pump Ø101,6mm)	J (Hydraulic Pump Ø82,55mm)
Shaft (B)	S (Ø 28mm shaft with Keyway)	● (~33 kg)		
	G (Internal splined shaft)		● (~34 kg)	
	H (Internal splined shaft)			● (~33 kg)
	D (Internal splined shaft)		● (~34 kg)	
Position Sensor (C)		E: Sin/cos encoder		

Other individual combinations are also possible on request.

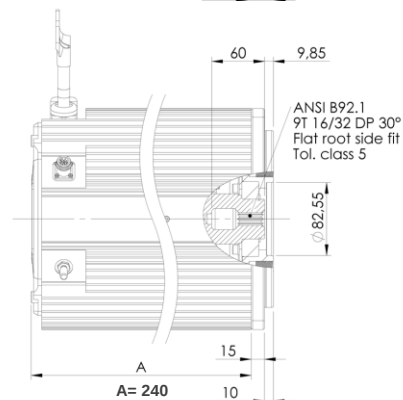
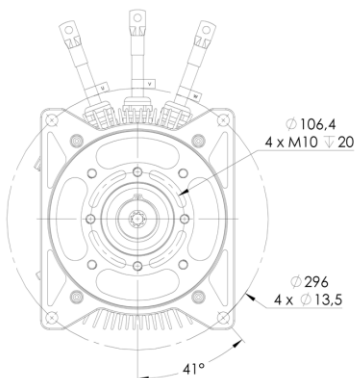
**Flange S
Shaft S**



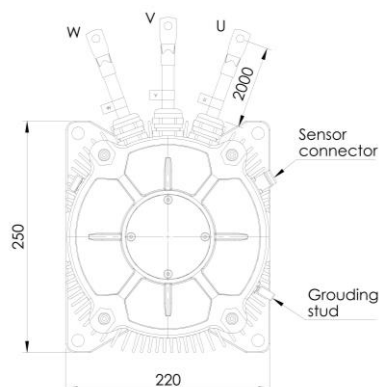
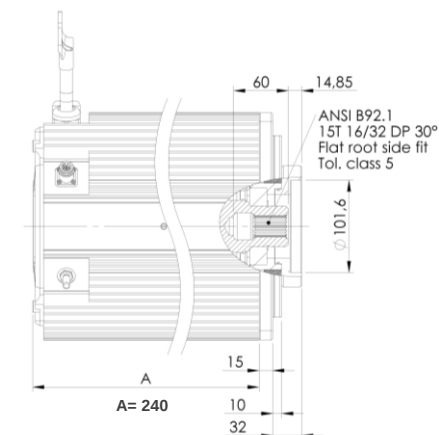
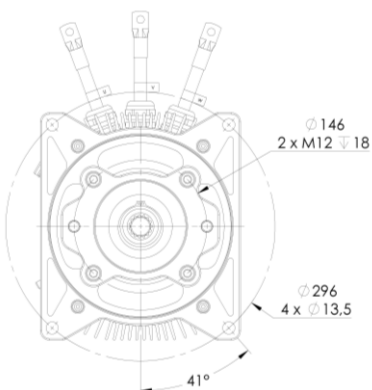
**Flange H
Shaft G**



**Flange J
Shaft H**



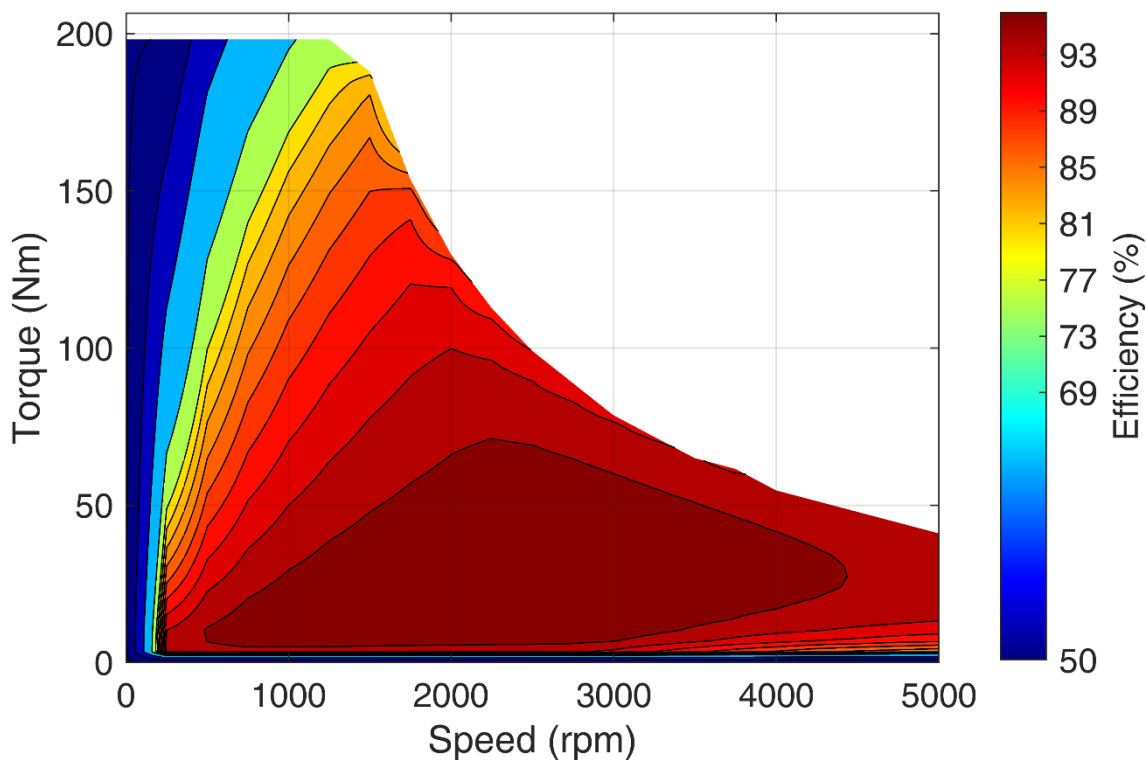
**Flange H
Shaft D**



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Simulated Efficiency of Motor Application

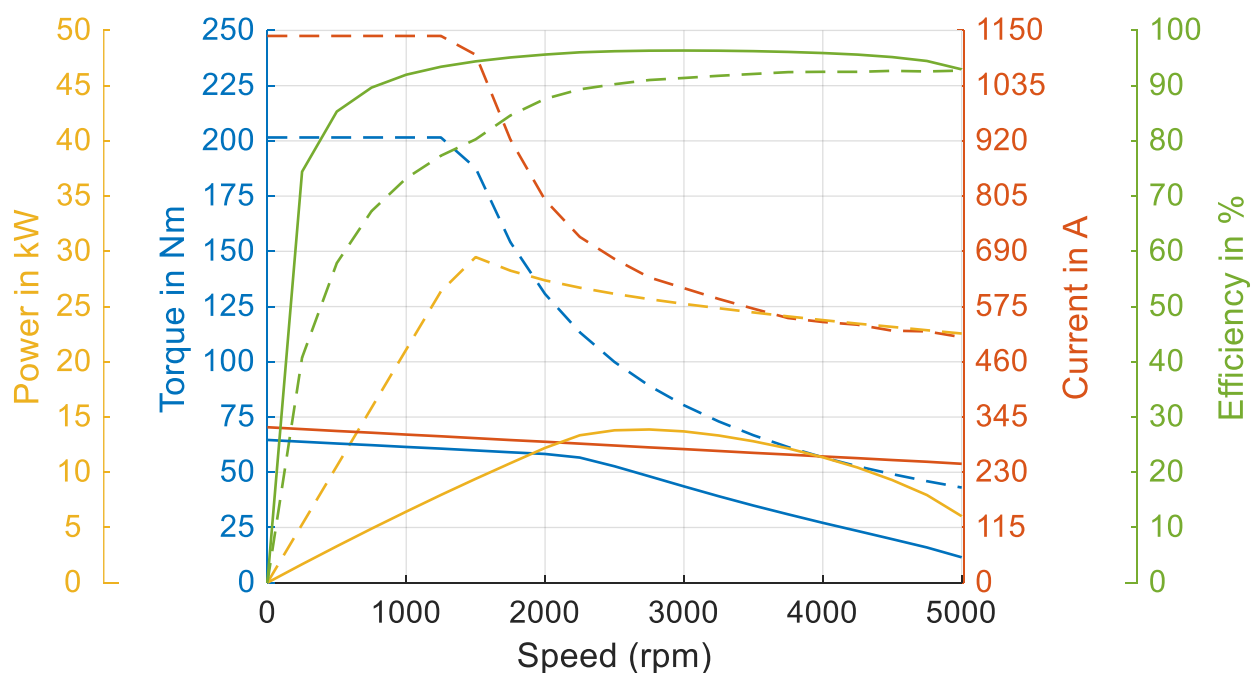
(electric machine only; $U_{nom} = 48\text{ V}$; machine at 140 °C ;))



Simulated Characteristic Motor Parameters

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

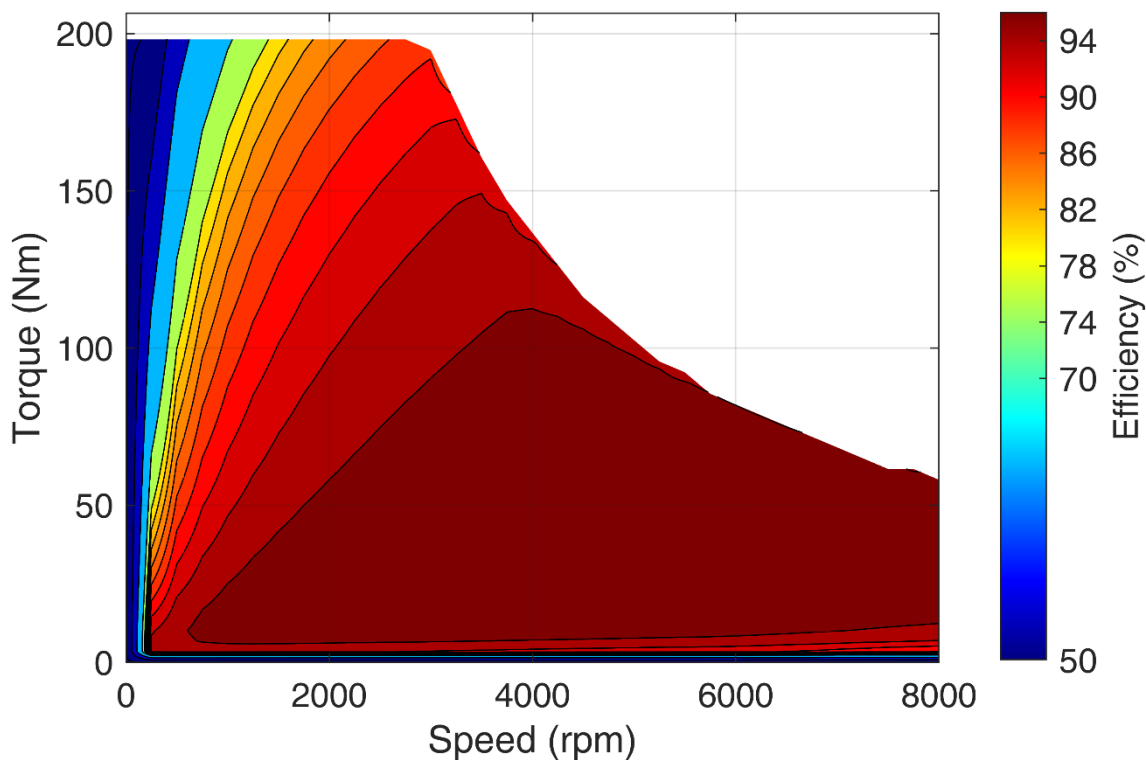
solid lines: continuous; dashed lines: maximum;



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Simulated Efficiency of Motor Application

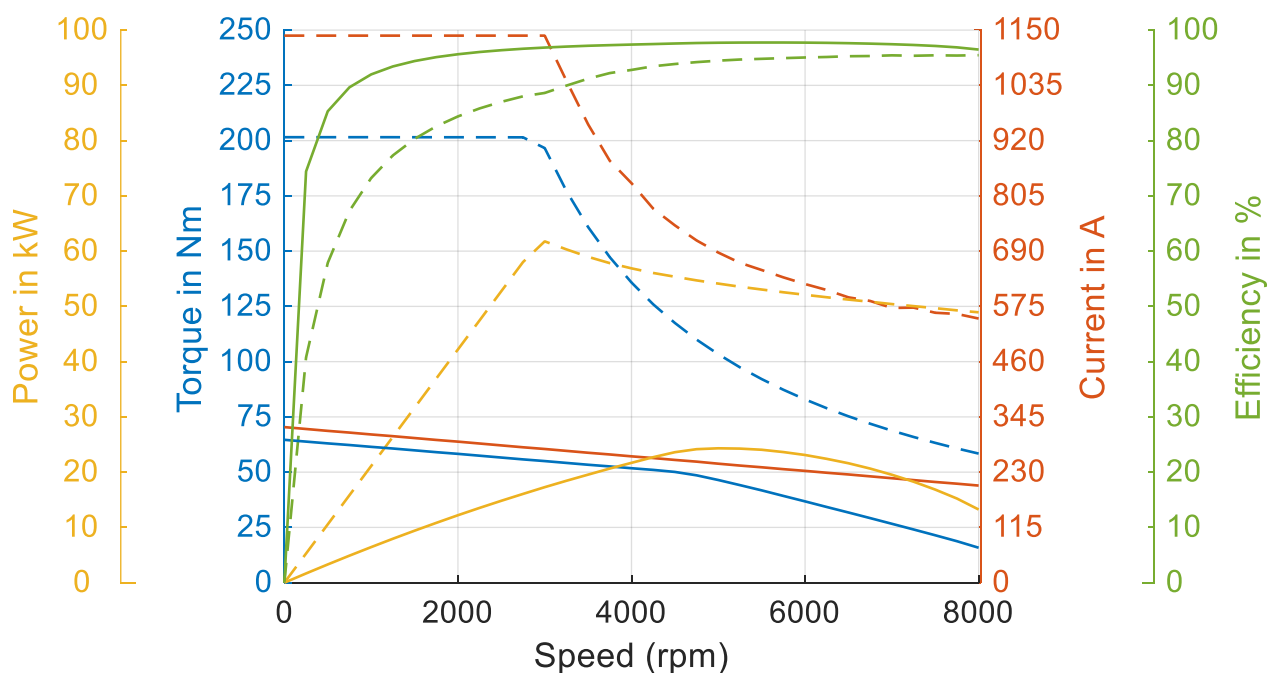
(electric machine only; $U_{nom} = 96\text{ V}$; machine at 140 °C ;))



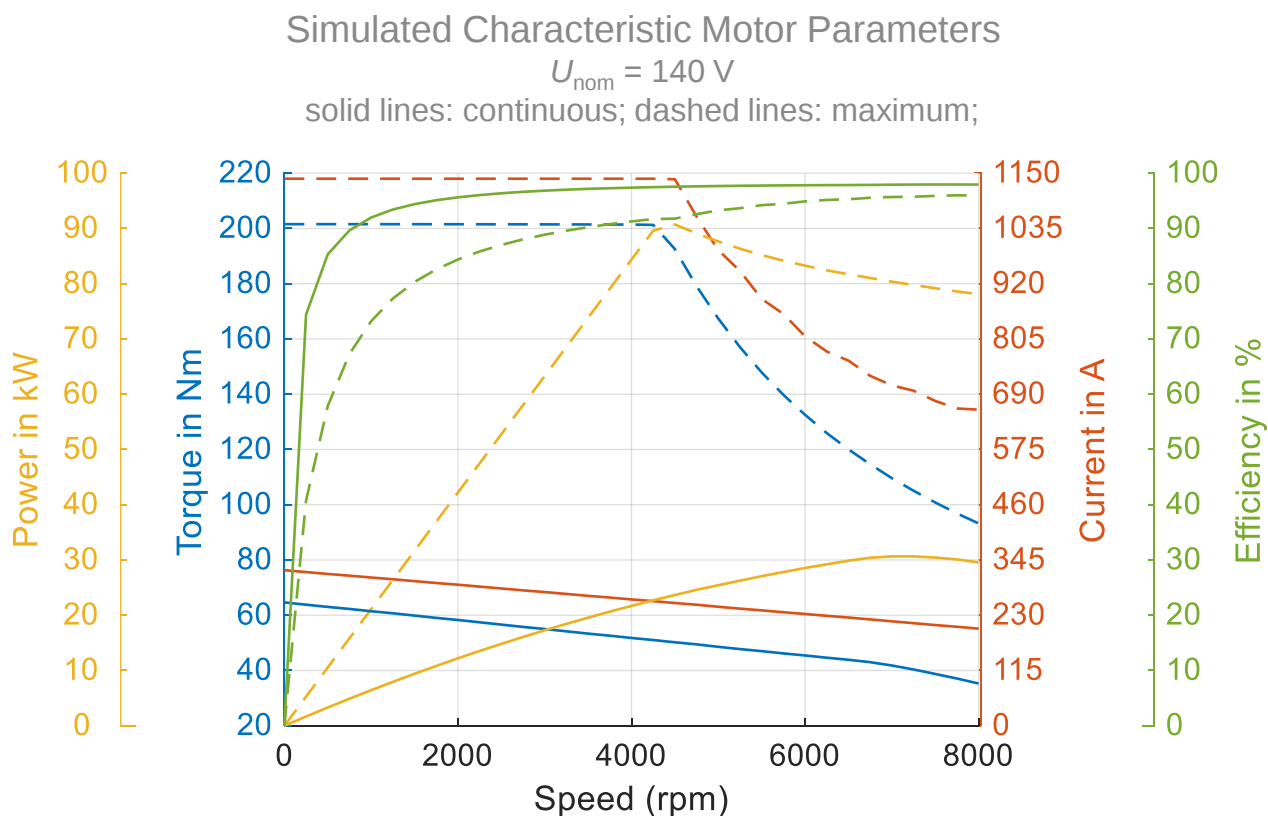
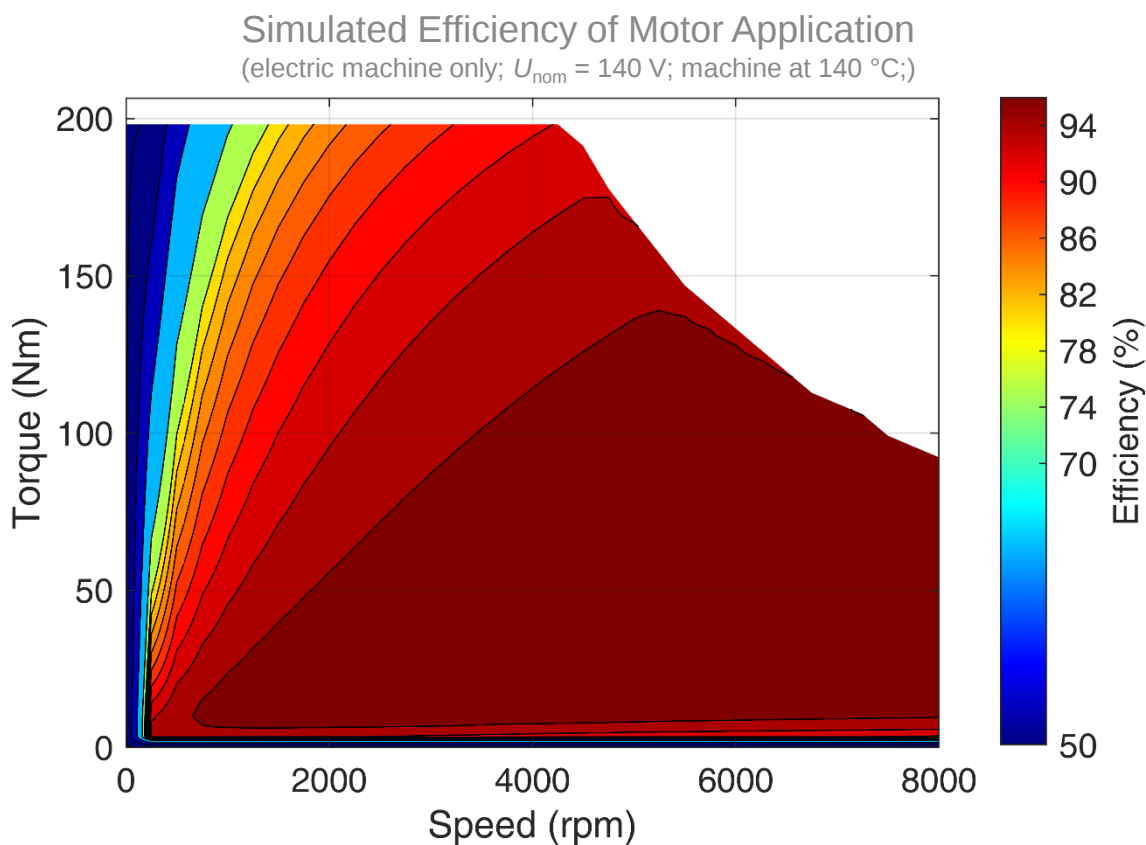
Simulated Characteristic Motor Parameters

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

solid lines: continuous; dashed lines: maximum;



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