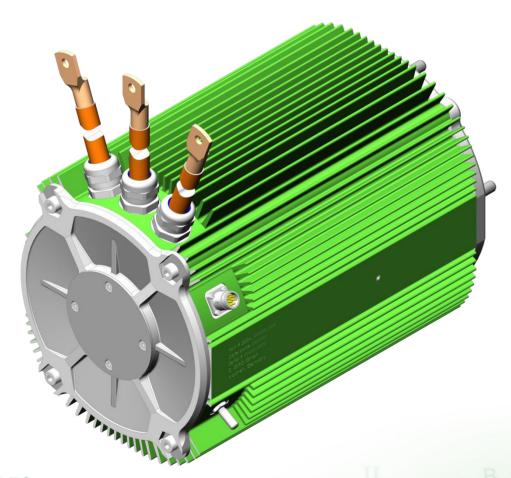


205A-12010-ABC

air-cooled motor / generator with up to 28 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

Hc

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Technical Data Machine



Nominal Operation (S1, cooling as specified below) Torque			
Power Pow			
Speed n _{nom} 3250 ppm Phase rms-current I _{nom} 3001-20 ppm A Battery voltage (DC) U _{nom} 96 V Electric frequency f _{el.nom} 216 Hz Power factor cos(φ) 0.75 Maximal Values (S2, 10s, cooling as specified below) Torque T _{max} 295 Nm Power P _{max} 70 kW Phase rms-current I _{max} 1250-20 A Battery voltage (DC) U _{max} 200 V Speed n _{max} 80000 ppm Electric frequency f _{el. max} 3 Hz Electrical Data Number of phases 3 Number of pole pairs 4 Maximal efficiency 96 % % 7/I constant (I <i<sub>nom) 0.27 Nm U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(r K_e constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/r Additional Data Protection category</i<sub>			
Phase rms-current Inom 3001-20 A Battery voltage (DC) Unom 96 V Electric frequency fetnom 216 Hz Power factor Cos(φ) 0.75 Maximal Values (S2, 10s, cooling as specified below) Torque Tmax 295 Nm Power Pmax 70 kW Phase rms-current Imax 1250-20 A Battery voltage (DC) Umax 200 V Speed nmax 8000 rpm Electric frequency fet max 533 Hz Electrical Data Number of phases 3 Number of pole pairs 4 Maximal efficiency 96 % T/I constant (I < Inom) 0.27 Nm U/In constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(7 Kg constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(r Additional Data Protection category IP6KSK3			
Battery voltage (DC) U _{nom} 96 V			
Electric frequency $f_{el.nom}$ 216 Hz Power factor $\cos(\phi)$ 0.75 **Maximal Values (S2, 10s, cooling as specified below)** Torque T_{max} 295 Nm Power P_{max} 70 kW Phase rms-current I_{max} 12502 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}) 0.27 Nm **U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(r Additional Data** Rotor moment of inertia 0.021 kg** Protection category 1P6K9K3*			
Power factor cos(φ) 0.75 Maximal Values (S2, 10s, cooling as specified below) Torque Torque 295 Nm Power Pmax 1250°2 A kW Phase rms-current Image:			
Torque T _{max} 295 Nm Power P _{max} 70 kW Phase rms-current I _{max} 1250-20 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<sub>nom) 0.27 Nm U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(√ K_o constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(r Additional Data Rotor moment of inertia 0.021 kg* Protection category IP6K9K3°</i<sub>			
Power P _{max} 70 kW Phase rms-current I _{max} 1250²²² 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 % % 7// constant (I 0.27 Nm 0.27 Nm U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(7 kg* constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(r Additional Data Rotor moment of inertia 0.021 kg* temperature of 30°C Protection category IP6K9K³³			
Power P _{max} 70 kW Phase rms-current I _{max} 1250³² 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 % % 7/I constant (I <l<sub>nom) 0.27 Nm U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(² K_g constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(r Additional Data Rotor moment of inertia 0.021 kg* Protection category IP6K9K³³</l<sub>			
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// constant (I <i_{nom}) (<math="" (ac)="" 0.27="" 17.1="" 29.1="" 30°c="" a="" at="" constant="" n="" nm="" of="" peak:="" rms:="" temperature="" u="" v="">r K_e constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(r Additional Data Rotor moment of inertia 0.021 kg* Protection category IP6K9K³)</i_{nom})>			
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 % 7// constant (I< I_{nom}) 0.27 Nm U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(I_{nom}) 7.1 peak: 29.1 V/(I_{nom}) 7.2 Nm 0.041 peak: 0.069 V/(I_{nom}) 7.3 Additional Data** Rotor moment of inertia 0.021 kg** Protection category IP6K9K³)			
Electric frequency $f_{el, \max}$ 533 Hz Electrical Data Number of phases 3 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5			
Electrical Data Number of phases 3 Number of pole pairs 4 Maximal efficiency 96 % 7/I constant (I <i<sub>nom) 0.27 Nm U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(7 K_e constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(r Additional Data Rotor moment of inertia 0.021 kg* Protection category IP6K9K³</i<sub>			
Number of phases Number of pole pairs Administration of pole pairs Maximal efficiency 7/I constant (I <i<sub>nom) U/In constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(7 K_e constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(respectively) Additional Data Rotor moment of inertia Protection category IP6K9K³</i<sub>			
Number of pole pairs Maximal efficiency Maximal efficiency 7/I constant (I <i<sub>nom) U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(1 peak: 29.1 v/(1 peak: 29.1 peak: 0.069 v/(1 peak: 0.069 v/(1 peak: 29.1 peak: 29.1 peak: 0.069 v/(1 peak: 29.1 peak: 29.1 peak: 29.1 peak: 0.069 v/(1 peak: 29.1 p</i<sub>			
Maximal efficiency 96 % $T/I \text{ constant } (I < I_{\text{nom}})$ 0.27 Nm $U/n \text{ constant } (AC) \text{ at a temperature of } 30^{\circ}\text{C}$ rms: 17.1 peak: 29.1 $V/(7 \times 10^{\circ})$ peak: 0.069 $V/(7 \times 10^{\circ})$ Rotor moment of inertia 0.021 kg* Protection category			
T/I constant ($I < I_{nom}$) U/n constant (AC) at a temperature of 30°C rms: 17.1 peak: 29.1 V/(7 Ke constant (AC) at a temperature of 30°C Rotor moment of inertia Protection category 0.27 Nm 17.1 peak: 29.1 V/(7 Constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(reconstant (AC) at a temperature of 30°C Additional Data 17.1 peak: 29.1 V/(7 Constant (AC) at a temperature of 30°C Rotor moment of inertia 17.1 peak: 29.1 V/(7 Constant (AC) at a temperature of 30°C Rotor moment of inertia			
U/n constant (AC) at a temperature of 30° Crms:17.1peak:29.1V/($^{\circ}$ C $K_{\rm e}$ constant (AC) at a temperature of 30° Crms:0.041peak:0.069V/($^{\circ}$ CAdditional DataRotor moment of inertia0.021kg*($^{\circ}$ CProtection categoryIP6K9K3)			
$K_{\rm e}$ constant (AC) at a temperature of 30°C rms: 0.041 peak: 0.069 V/(reconstant (AC) at a temperature of 30°C and $K_{\rm e}$ constan	'A _{rms}		
Additional Data Rotor moment of inertia 0.021 kg*i Protection category IP6K9K³)	000rpm		
Rotor moment of inertia 0.021 kg*i Protection category IP6K9K ³⁾	ad*s ⁻¹)		
Protection category IP6K9K ³⁾			
	n²		
Maximal motor temperature 120 °C			
aximal motor temperature 12			
Allowed ambient temperature -20 45 ⁴⁾ °C			
oling (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 50mm² cables with M8 cable lugs	3 x 50mm² cables with M8 cable lugs		
Weight power cables 3.3 kg	3.3 kg		
ength power cables 2			
Signal connectors M16, 10 Pin	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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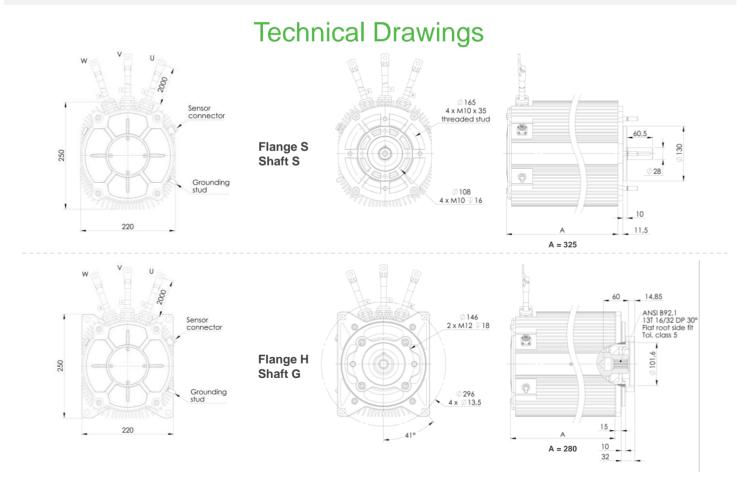
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Available Type Variants



Shaft and Flange Combinations for 205A-12010-ABC		Flange (A)	
		S (Standard)	H (Hydraulic Pump Ø101,6mm)
Shaft (B)	S (Ø28mm shaft with keyway)	● (~43 kg)	
	G (Internal splined shaft)		• (~37 kg)
Position Sensor (C)		E: Sin/cos encoder	

Other individual combinations are also possible on request.

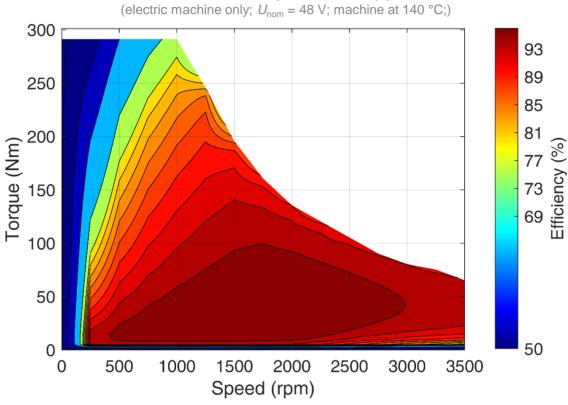


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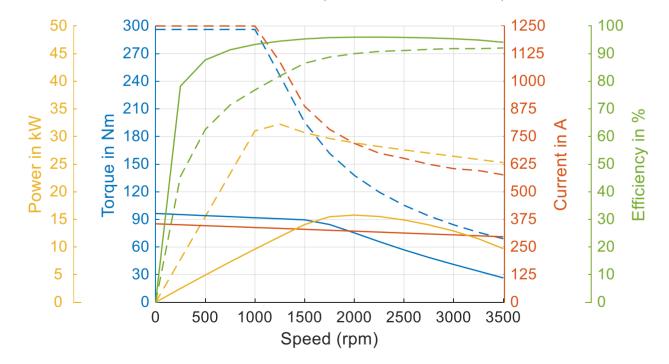
Characteristics Machine







Simulated Characteristic Motor Parameters $U_{\text{nom}} = 48 \text{ V}$ solid lines: continuous; dashed lines: maximum;

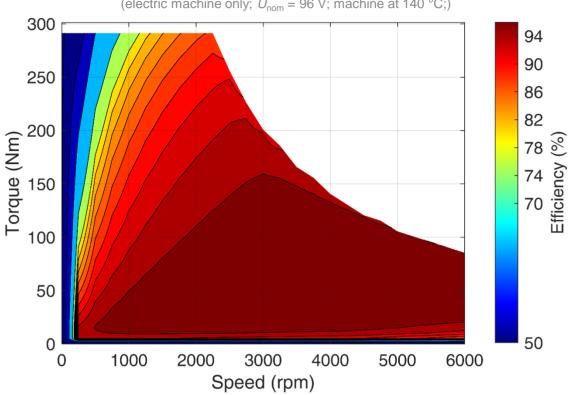


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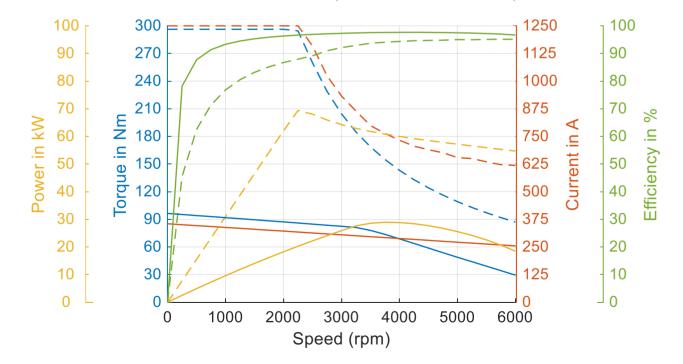
Characteristics Machine







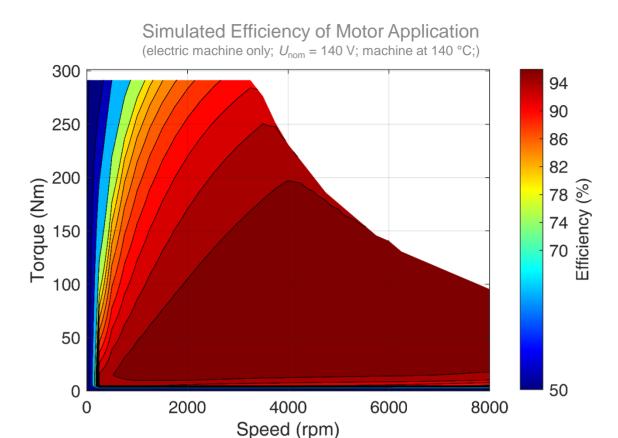
Simulated Characteristic Motor Parameters $U_{\text{nom}} = 96 \text{ V}$ solid lines: continuous; dashed lines: maximum;



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Characteristics Machine





Simulated Characteristic Motor Parameters $U_{\text{nom}} = 140 \text{ V}$ solid lines: continuous; dashed lines: maximum;

