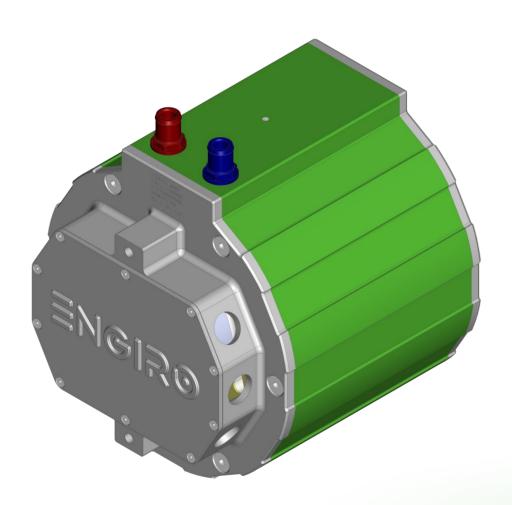


205W-08095-P-ABC

water-cooled motor / generator with up to 28 kW continuous power

This datasheet refers to art.no.: see page 2



KEY FEATURES

- permanent magnet synchronous machine
- water-cooled
- high peak power for motor applications
- convincing cost-benefit ratio
- recommended voltage range from 350 V to 850 V
- delivery with controller possible
- various mechanical interfaces available

Hc



Section	Page
Operating Range	3
Available Type Variants	4
Technical Drawing	5
Performance Plots 400V	6
Performance Plots 700V	7

Note:

On September 1st, 2024, **we transferred our ERP systems to SAP**. Due to this change, **we are altering our current part numbers**. To see how our article numbers and motor naming scheme has changed, please consider the conversion table below:

Article Number Conversion				
Part. No.	Old Part. No.	Flange	Shaft	Position Sensor
4872312	205W_08095_BCF_P	B1	C1	F
4872347	205W_08095_BCN_P	B1	C1	N
4872370	205W_08095_SHF_P	S1	H1	F
4872349	205W_08095_BDF_P	B1	D1	F
4872351	205W_08095_CDF_P	C1	D1	F
4872367	205W_08095_CDN_P	C1	D1	N
4872374	205W_08095_SSF_P	S1	S1	F
4872378	205W_08095_SSN_P	S1	S1	N

To be noted:

The information in this technical data sheet is based on our current knowledge and experience. Due to the wide range of possible influences during application, they do not exempt the processor and user from carrying out their own tests and trials. Although the suitability for a specific application can be estimated from our information, a legally binding assurance is by no means possible. Depending on the individual case, we recommend consultation with us. Any industrial property rights and applicable laws must be observed by the recipient of our products on his own responsibility.

Operating Range



Procest		Nominal Operation (S	1, cooling as sp	ecified belo	w)			
Page	Torque	M_{nom}		88		82	Nm	
Page	Power	P_{nom}		17		28	kW	
Selectric frequency Selectric frequenc	Speed			1750		3270	rpm	
Page	Phase rms-current	I_{nom}		541,2)		511,2)	А	
Power factor cos(φ) 0.70 0.72 Maximal Values (S2, 10s, cooling as specified below) Forque M _{max} 188 189 Nm Power P _{max} 26 48 kW Phase ems-current I _{max} 132°a 132°a A Speed P _{max} 6100 rpm Hz Electric frequency f _{et max} 407 Hz Electrical Data Number of phases 3 4 Number of pole pairs 4 4 Maximal efficiency 96 % Maximal efficiency 96 % Micronstant (Ic1) at a temperature of 30°C rms: 116 peak: 197.2 V/(1000rp K _c constant (AC) at a temperature of 30°C rms: 0.277 peak: 0.471 V/(read's-1) Additional Data Weight (w/o cables) see page 4 colspan="4">Colonic moment of inertia 0.0149 kg'm² Allowed ambient tempe	Battery voltage (DC)	U_{nom}		400		700	V	
Maximal Values (S2, 10s, cooling as specified below) Forque	Electric frequency	$f_{el,nom}$		117		218	Hz	
Prove	Power factor	$cos(\phi)$		0.70		0.72		
Power Pmax 26 48 kW Phase rms-current Imax 132° 132° A Battery voltage (DC) Umax 850 V Speed nmax 6100 rpm Electric frequency fet max 407 Hz Electrical Data Warmer of phases 3 S Number of phases 3 S Warmer of pole pairs 4 F Wa		Maximal Values (S2, 10	s, cooling as sp	ecified belo	ow)			
## Phase rms-current Image	Torque	M_{max}		188		189	Nm	
### Speed ### S	Power	P_{max}		26		48	kW	
Speed Pmax Automate Auto	Phase rms-current	I _{max}		1322)		1322)	А	
Electric frequency f _{el. max} Electrical Data	Battery voltage (DC)	U_{max}				850	V	
Electrical Data Number of phases 3 Number of pole pairs 4 Maximal efficiency 96 7// constant (I 1.69 Nm/Arms 1.69 V// constant (AC) at a temperature of 30°C rms: 0.277 Additional Data Weight (w/o cables) see page 4 Rotor moment of inertia 0.0149 kg*m² Protection category IP6K9K³ Maximal motor temperature 140 °C Allowed ambient temperature -20 45° °C Cooling (medium, flow rate, inlet temperature, pressure) water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 bar °C Temperature monitoring 1 x KTY84-130 °C Temperature monitoring CE, EN 60034 °C Customs tariff number 8501 5230 Connectors Onnectors M16, 10 Pin Hummel Connector	Speed	n_{max}				6100	rpm	
Number of phases Number of pole pairs Maximal efficiency Minor constant (I <i<sub>nom) Minor constant (AC) at a temperature of 30°C Maximal motor temperature Meight (w/o cables) Rotor moment of inertia Protection category Maximal motor temperature Meight (w/o cables) Minor (AC) Minor (AC)</i<sub>	Electric frequency	f _{el, max}				407	Hz	
Number of pole pairs 4 Maximal efficiency 96 % If I constant (I≺I _{nom}) 1.69 Nm/A _{rms} Un constant (AC) at a temperature of 30°C rms: 116 peak: 197.2 V/(1000rp Additional Data Weight (w/o cables) see page 4 4 Rotor moment of inertia 0.0149 kg*m² Protection category Maximal motor temperature 140 °C *C Allowed ambient temperature *20 45°l °C *C Cooling (medium, flow rate, inlet temperature, pressure) water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 bar *C Temperature monitoring 1 x KTY84-130 *C Type approval CE, EN 60034 *C Customs tariff number 8501 5230 *C Connectors Power terminals 3 x M25 cable gland *C Signal connectors M16, 10 Pin Hummel Connector *C								
Maximal efficiency Maximal efficiency Maximal efficiency Mil constant ($I < I_{hom}$) Min c	Number of phases					3		
To constant ($) Un constant () Un constant (AC) at a temperature of 30°C rms: 116 peak: 197.2 V/(1000rp K0 constant (AC) at a temperature of 30°C rms: 0.277 peak: 0.471 V/(rad*s*1) Additional Data Weight (AC) at a temperature of 30°C Additional Data Weight (AC) at a temperature of 30°C Additional Data Weight (AC) at a temperature see page 4 Rotor moment of inertia 0.0149 kg*m² Protection category IP6K9K³) Maximal motor temperature 140 °C Allowed ambient temperature -20 45°l °C Cooling (medium, flow rate, inlet temperature, pressure) Temperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector$	Number of pole pairs			4				
Un constant (AC) at a temperature of 30°Crms:116peak:197.2 $V/(1000000000000000000000000000000000000$	Maximal efficiency		96		%			
K ₆ constant (AC) at a temperature of 30°C rms: 0.277 peak: 0.471 V/(rad*s*¹) Additional Data Weight (w/o cables) see page 4 Rotor moment of inertia 0.0149 kg*m² Protection category IP6K9K³) Maximal motor temperature 140 °C Allowed ambient temperature -20 45⁴) °C Cooling (medium, flow rate, inlet temperature, pressure) water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 bar Temperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	T/I constant (I <i<sub>nom)</i<sub>		1.69		Nm/A _{rms}			
Additional Data Weight (w/o cables) Rotor moment of inertia Rotor m	U/n constant (AC) at a temperature of 30°C		rms:	116	peak:	197.2	V/(1000rpm	
Weight (w/o cables) see page 4 Rotor moment of inertia 0.0149 kg*m² Protection category IP6K9K³ Protection category IP6K9K³ Maximal motor temperature 140 °C Allowed ambient temperature -20 45⁴ °C Cooling (medium, flow rate, inlet temperature, pressure) water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 bar Temperature monitoring 1 x KTY84-130 Type approval CE, EN 60034 Customs tariff number 8501 5230 Power terminals 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	K _e constant (AC) at a temperature of 30°C		rms:	0.277	peak:	0.471	V/(rad*s-1)	
Rotor moment of inertia $0.0149 \text{ kg}^*\text{m}^2$ Protection category IP6K9K3) Maximal motor temperature 140 °C Allowed ambient temperature $-20 \dots 454 \text{ °C}$ Cooling (medium, flow rate, inlet temperature, pressure) water/glycol 50/50, 8 l/min, $\leq 45 \text{ °C}$, $\leq 0.5 \text{ bar}$ Temperature monitoring $1 \times \text{KTY84-130}$ Type approval CE, EN 60034 Customs tariff number $8501 5230$ Connectors Power terminals $3 \times \text{M25}$ cable gland Signal connectors $M16, 10 \text{ Pin Hummel Connector}$		Add	litional Data					
Protection category Maximal motor temperature Allowed ambient temperature Allowed ambient temperature Cooling (medium, flow rate, inlet temperature, pressure) Temperature monitoring Type approval Customs tariff number Connectors Connectors Signal connectors IP6K9K³ *C *C *C *C *C *C *C *C *C *	Weight (w/o cables)				S	see page 4		
Maximal motor temperature Allowed ambient temperature -20 45⁴⟩ °C Cooling (medium, flow rate, inlet temperature, pressure) Femperature monitoring 1 x KTY84-130 Type approval Customs tariff number Connectors Connectors Power terminals 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	Rotor moment of inertia				kg*m²			
Allowed ambient temperature -20 45⁴) °C Cooling (medium, flow rate, inlet temperature, pressure) Temperature monitoring 1 x KTY84-130 Type approval Customs tariff number Connectors Connectors 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	Protection category							
Cooling (medium, flow rate, inlet temperature, pressure) Temperature monitoring Type approval Customs tariff number Connectors Power terminals Signal connectors Water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 bar 1 x KTY84-130 CE, EN 60034 8501 5230 Connectors 3 x M25 cable gland M16, 10 Pin Hummel Connector	Maximal motor temperature			140			°C	
Temperature monitoring 1 x KTY84-130 Type approval Ce, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	Allowed ambient temperature		-20 45 ⁴⁾			°C		
Customs tariff number Connectors Connectors 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	Cooling (medium, flow rate, inlet to	emperature, pressure)	water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 bar					
Customs tariff number Connectors Connectors 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	Temperature monitoring		1 x KTY84-130					
Connectors 2 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	Type approval		CE, EN 60034					
Power terminals 3 x M25 cable gland Signal connectors M16, 10 Pin Hummel Connector	ustoms tariff number 8501 5230							
Signal connectors M16, 10 Pin Hummel Connector	Connectors							
	Power terminals		3 x M25 cable gland					
Cooling connectors 2 x 3/4" / 19 mm	Signal connectors		M16, 10 Pin Hummel Connector					
	Cooling connectors		2 x ¾" / 19 mm					

 $^{^{\}rm 1)}\,{\rm Nominal}$ current strongly dependent on cooling as specified below.

Page: 3

Version: 001

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

Available Type Variants



Shaft and Flange Combinations for 205W-08095-P-ABC		Flange (A)				
		S1 (Standard with 4xM10x35 threaded stud)	B1 (Hydraulic pump ANSI 127-4 / SAE C - Ø127 mm centering shoulder)	C1 (Hydraulic Pump ANSI 101-2 / SAE B - Ø101,6 mm centering hole)		
	H1 (Hollow shaft with internal splines ANSI B 92.1 9T)	● (~35kg)				
Shaft (B)	D1 (Hollow shaft with internal splines ANSI B 92.1 15T)		• (~39kg)			
	S1 (Cylindrical shaft with keyway Ø 28mm)	• (~36kg)				
	C1 (cylindrical shaft with keyway Ø35mm)		• (~39kg)			
	D1 (hollow shaft with internal splines ANSI B 92.1 15T)			• (~39kg)		
Position Sensor (C)		N: None F: resolver gain 0.29 R: resolver gain 0.5 (Please note: The R resolver is a phase-out version with a 0.5 gain, which is replaced by the F resolver with a 0.29 gain)				

Other individual combinations are also possible on request.

Page: 4

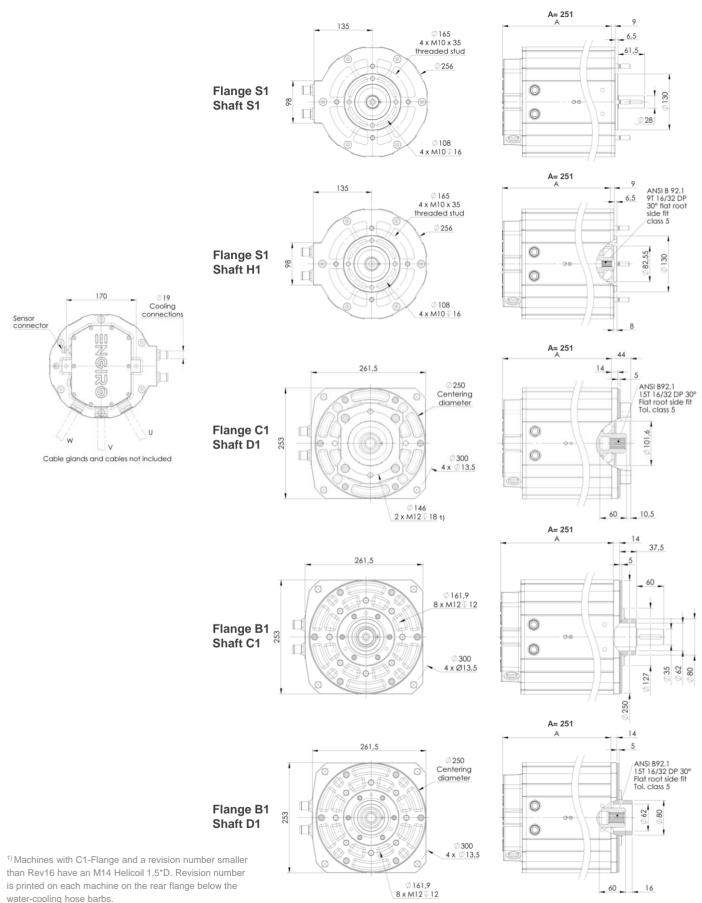
Version: 001

Page: 5

Version: 001

Technical Drawings

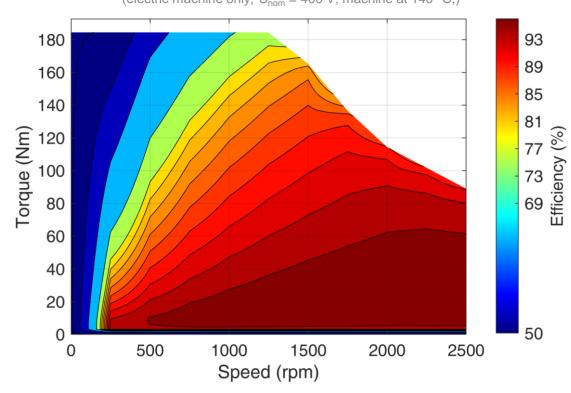




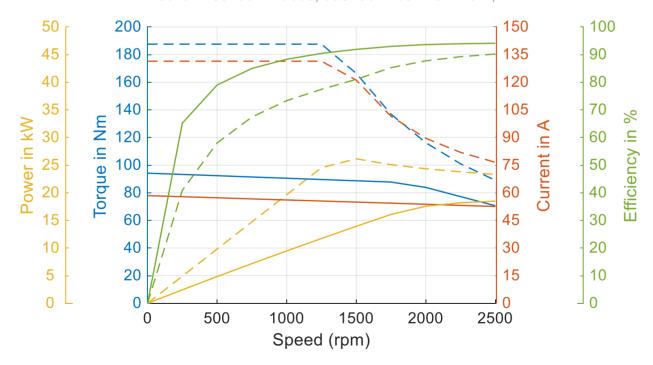
Page: 6 Version: 001



Simulated Efficiency of Motor Application (electric machine only; $U_{\text{nom}} = 400 \text{ V}$; machine at 140 °C;)



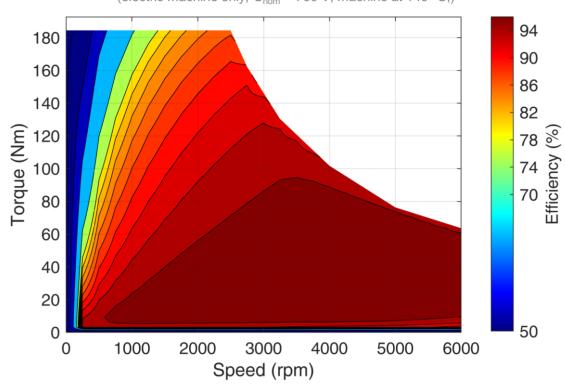
Simulated Characteristic Motor Parameters $U_{\text{nom}} = 400 \text{ V}$ solid lines: continuous; dashed lines: maximum;



Page: 7 Version: 001



Simulated Efficiency of Motor Application (electric machine only; $U_{\text{nom}} = 700 \text{ V}$; machine at 140 °C;)



Simulated Characteristic Motor Parameters $U_{\text{nom}} = 700 \text{ V}$ solid lines: continuous; dashed lines: maximum;

