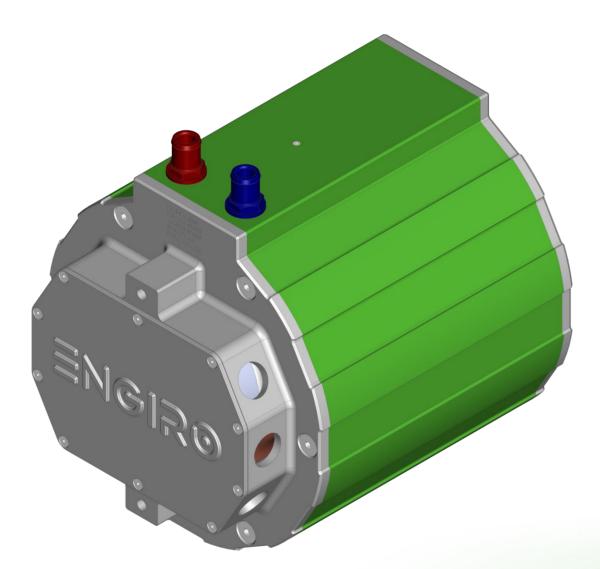


# 205W-08011-ABC

water-cooled motor / generator with up to 30 kW continuous power



### **KEY FEATURES**

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

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### 205W-08011-ABC

### Technical Data Machine



ProverPraneIIIIIIISpeednomNomIII<		Nominal Operation (S	61, cooling as s	pecified belo	w)		
Speednon1933381a's1933381a's1933381a's1933381a's1933 <th>Torque</th> <th>T<sub>nom</sub></th> <th></th> <th>77</th> <th></th> <th>72</th> <th>Nm</th>	Torque	T <sub>nom</sub>		77		72	Nm
hase ms-currentfmmII </td <td>Power</td> <td>P<sub>nom</sub></td> <td></td> <td>17</td> <td></td> <td>30</td> <td>kW</td>	Power	P <sub>nom</sub>		17		30	kW
anima 	Speed	n <sub>nom</sub>		1930		3870	rpm
Electric frequencyf cos(\$\u00ef\$)129129129129129129120 <td>Phase rms-current</td> <td>I<sub>nom</sub></td> <td></td> <td>416<sup>1,2)</sup></td> <td></td> <td>384<sup>1,2)</sup></td> <td>А</td>	Phase rms-current	I <sub>nom</sub>		416 <sup>1,2)</sup>		384 <sup>1,2)</sup>	А
Power factorCos(q)	Battery voltage (DC)	U <sub>nom</sub>		48		96	V
Prover factor  cos(y)	Electric frequency	f <sub>el,nom</sub>		129		258	Hz
TorqueTmax188Import188NmPowerPmax28J1363KWKWPhase ms-currentImax11363J1363KWKWBattery voltage (DC)UmaxC200VVSpeednmaxCSeedKWKWKWSpeednmaxCSeedKWKWKWElectric frequencyfac maxCSeedKWKWKWVumber of phasesCCSeedKWKWKWNumber of pole pairsCCSeedKWKWKWMaximal efficiencyCCSeedKWKWKWVin constant (AC) at a temperature of 30°Crms:13.4peak:V(1000rprVind constant (AC) at a temperature of 30°Crms:13.4peak:V(1000rprKg constant (AC) at a temperature of 30°Crms:13.4peak:V(rd*s*)Chort constant (AC) at a temperature of 30°Crms:0.032peak:V(rd*s*)Maximal motor temperatureSee page 4'C'C'CMaximal motor temperatureSee page 4'C'C'CCooling (medium, flow rate, inlet temperature, pressure)Water/glycol 50/50, 8 //min, 54/57, 50, 55'CMaximal motor temperatureSee page 4'C'C'CCooling (medium, flow rate, inlet temperature, pressure)Water/glycol 50/50, 8 //min, 54/57, 50, 55'CToppe approvalCC <t< td=""><td>Power factor</td><td></td><td></td><td>0.70</td><td></td><td>0.69</td><td></td></t<>	Power factor			0.70		0.69	
ProwerPromePromPromeProm		Maximal Values (S2, 1	0s, cooling as s	specified belo	ow)		
ProwerPromePromPromeProm	Torque	T <sub>max</sub>		188		188	Nm
Mark Battery voltage (DC) $U_{max}$ $U_{max}$ $U$ <th< td=""><td>Power</td><td></td><td></td><td>28</td><td></td><td>57</td><td>kW</td></th<>	Power			28		57	kW
Speed $n_{max}$ <th< td=""><td>Phase rms-current</td><td>I<sub>max</sub></td><td></td><td>1136<sup>2)</sup></td><td></td><td>1136<sup>2)</sup></td><td>А</td></th<>	Phase rms-current	I <sub>max</sub>		1136 <sup>2)</sup>		1136 <sup>2)</sup>	А
Identify frequency $f_{d max}$ Image: Identify frequencyIdentify freq	Battery voltage (DC)	U <sub>max</sub>		200 V			
Electrical Data        Number of phases      Signal connectors	Speed	n <sub>max</sub>		8000 rpm			
Number of phasesImage: Second se	Electric frequency	f <sub>el, max</sub>		533			
Number of pole pairs $\  \  \  \  \  \  \  \  \  \  \  \  \  $		Ele	ectrical Data				
Maximal efficiency $(====================================$	Number of phases					3	
T/l constant (l<1,nom) $(l<1,nom)$ <t< td=""><td colspan="2">Number of pole pairs</td><td></td><td colspan="3">4</td><td></td></t<>	Number of pole pairs			4			
Un constant (AC) at a temperature of 30°C    rms:    13.4    peak:    22.8    V/(1000rpr      K <sub>c</sub> constant (AC) at a temperature of 30°C    rms:    0.032    peak:    0.054    V/(rad*s*)      Additional Data      Weight (w/o cables)    See page 4    see page 4 <td>Maximal efficiency</td> <td></td> <td></td> <td colspan="3">96 %</td> <td>%</td>	Maximal efficiency			96 %			%
Kg constant (AC) at a temperature of 30°C      rms:      0.032      peak:      0.054      V/(rad*s*)        Additional Data        Weight (w/o cables)       See page 4	T/I constant (I <i<sub>nom)</i<sub>		0.20		Nm/A <sub>rms</sub>		
Additional DataWeight (w/o cables)see page 4Rotor moment of inertia0.0124Rotor moment of inertia0.0124Protection categoryIP6K9K3Maximal motor temperature100Allowed ambient temperature-20 454Allowed ambient temperature-20 454Cooling (medium, flow rate, inlet temperature, pressure)water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 barType approvalCE, EN 60034Customs tariff number8501 5230Power terminals3 x M25 cable glandSignal connectorsM16, 10 Pin	J/n constant (AC) at a temperature of 30°C		rms:	13.4	peak:	22.8	V/(1000rpm)
Weight (w/o cables)see page 4Rotor moment of inertia0.0124Rotor moment of inertiakg*m²Protection categoryIP6K9K3Maximal motor temperature°CAllowed ambient temperature20454Cooling (medium, flow rate, inlet temperature, pressure)water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 barToppe approvalCE, EN 60034Customs tariff number3 content	K <sub>e</sub> constant (AC) at a temperature	e of 30°C	rms:	rms: 0.032 peak: 0.054		V/(rad*s-1)	
Rotor moment of inertia0.0124kg*m²Protection categoryIP6K9K3Maximal motor temperature140°CAllowed ambient temperature-20 454°CCooling (medium, flow rate, inlet temperature, pressure)water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 barITemperature monitoring1 x KTY84-130CType approvalCE, EN 60034ICustoms tariff number8501 5230IPower terminals3 x M25 cable glandISignal connectorsM16, 10 PinI		Ade	ditional Data				
Protection categoryIP6K9K3Maximal motor temperature140Allowed ambient temperature*********************************	Weight (w/o cables)					see page 4	
Maximal motor temperature°CAllowed ambient temperature-20 454°CCooling (medium, flow rate, inlet temperature, pressure)water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 barTemperature monitoring1 x KTY84-130Type approvalCE, EN 60034Customs tariff number8501 5230ConvectorsPower terminals3 x M25 cable glandSignal connectorsM16, 10 Pin	Rotor moment of inertia					0.0124	kg*m²
Allowed ambient temperature-20 45°°CCooling (medium, flow rate, inlet temperature, pressure)water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 barTemperature monitoring1 x KTY84-130Type approvalCE, EN 60034Customs tariff number8501 5230ConnectorsPower terminals3 x M25 cable glandSignal connectorsM16, 10 Pin	Protection category		IP6K9K <sup>3)</sup>				
Cooling (medium, flow rate, inlet temperature, pressure)water/glycol 50/50, 8 l/min, ≤ 45°C, ≤ 0.5 barTemperature monitoring1 x KTY84-130Type approvalCE, EN 60034Customs tariff number8501 5230ConnectorsPower terminals3 x M25 cable glandSignal connectorsM16, 10 Pin	aximal motor temperature		140	°C			
Temperature monitoring1 x KTY84-130Type approvalCE, EN 60034Customs tariff number8501 5230ConnectorsPower terminals3 x M25 cable glandSignal connectorsM16, 10 Pin	Allowed ambient temperature					-20 454)	°C
Type approval CE, EN 60034 Customs tariff number 8501 5230 Connectors Power terminals 3 x M25 cable gland Signal connectors M16, 10 Pin	Cooling (medium, flow rate, inlet temperature, pressure)		wat	water/glycol 50/50, 8 l/min, $\leq$ 45°C, $\leq$ 0.5 bar			
Customs tariff number  8501 5230    Connectors    Power terminals  3 x M25 cable gland    Signal connectors  M16, 10 Pin	Temperature monitoring	ionitoring 1 x KTY84-13		KTY84-130			
Connectors    Power terminals  3 x M25 cable gland    Signal connectors  M16, 10 Pin	Type approval		CE, EN 60034				
Power terminals  3 x M25 cable gland    Signal connectors  M16, 10 Pin	Customs tariff number		8501 5230				
Signal connectors M16, 10 Pin		C	connectors				
	Power terminals		3 x M25 cable gland				
Cooling connectors2 x ¾" / 19 mm	Signal connectors		M16, 10 Pin				
	Cooling connectors				2 x 3	¼" / 19 mm	

<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> 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.

<sup>4)</sup> other range on request

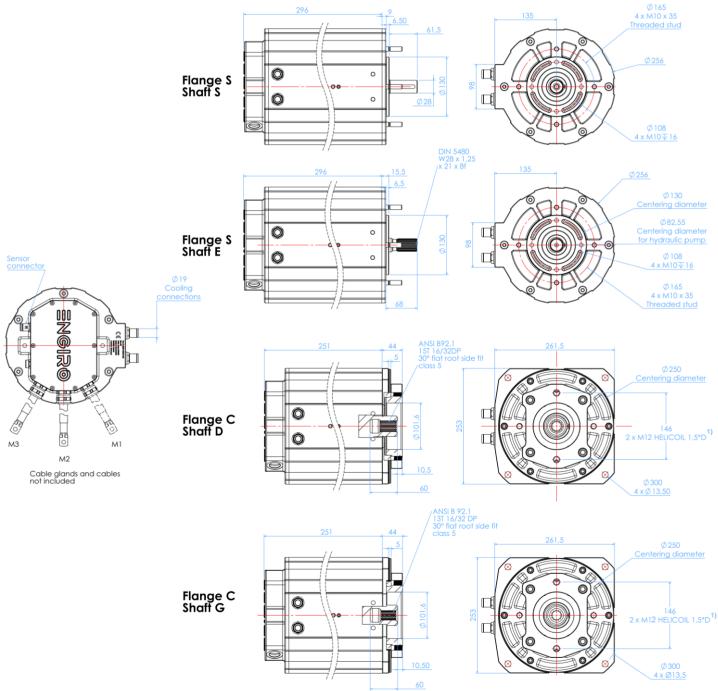
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### 205W-08011-ABC

# **Technical Drawings**



Available Type Variants						
type number	A: flange	B: shaft	C: position sensor			
	S: standard	S: cylindrical shaft with keyway Ø28mm	E: sin/cos encoder			
205W-08011-	C: flange for fan without insert	E: external splines, DIN 5480				
		D: hollow shaft with internal splines ANSI B 92.1 15T				
		G: hollow shaft with internal splines ANSI B 92.1 13T				



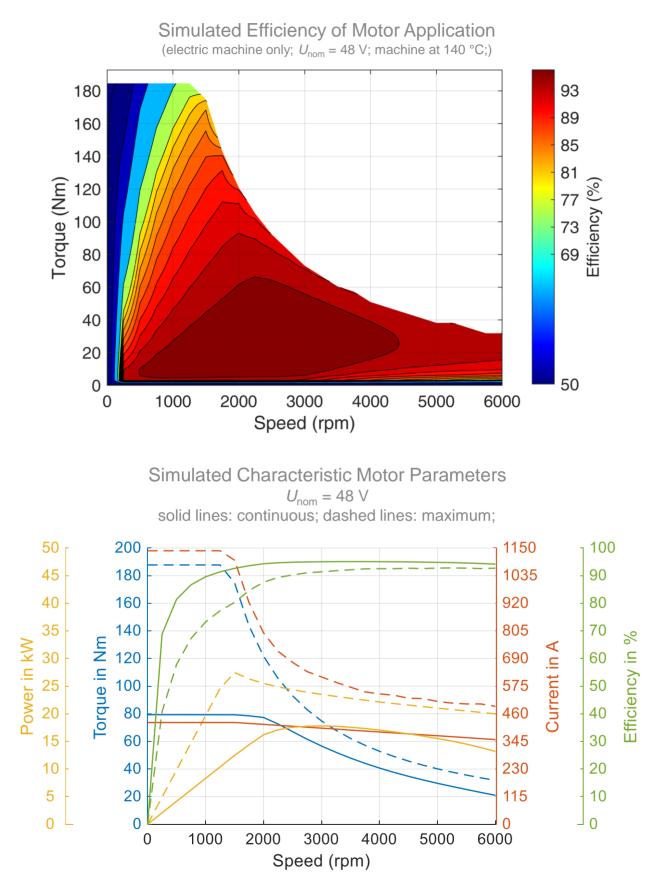
<sup>1)</sup> Machines with C-Flange and a revision number smaller than Rev15 have an M14 Helicoil 1,5\*D. Revision number is printed on each machine on the rear flange below the water-cooling hose barbs.

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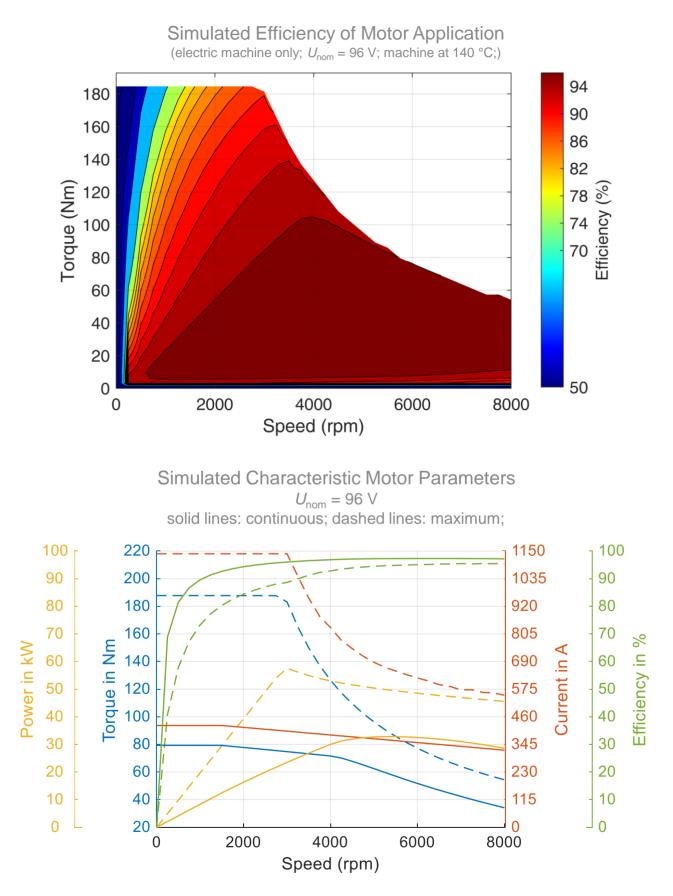


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