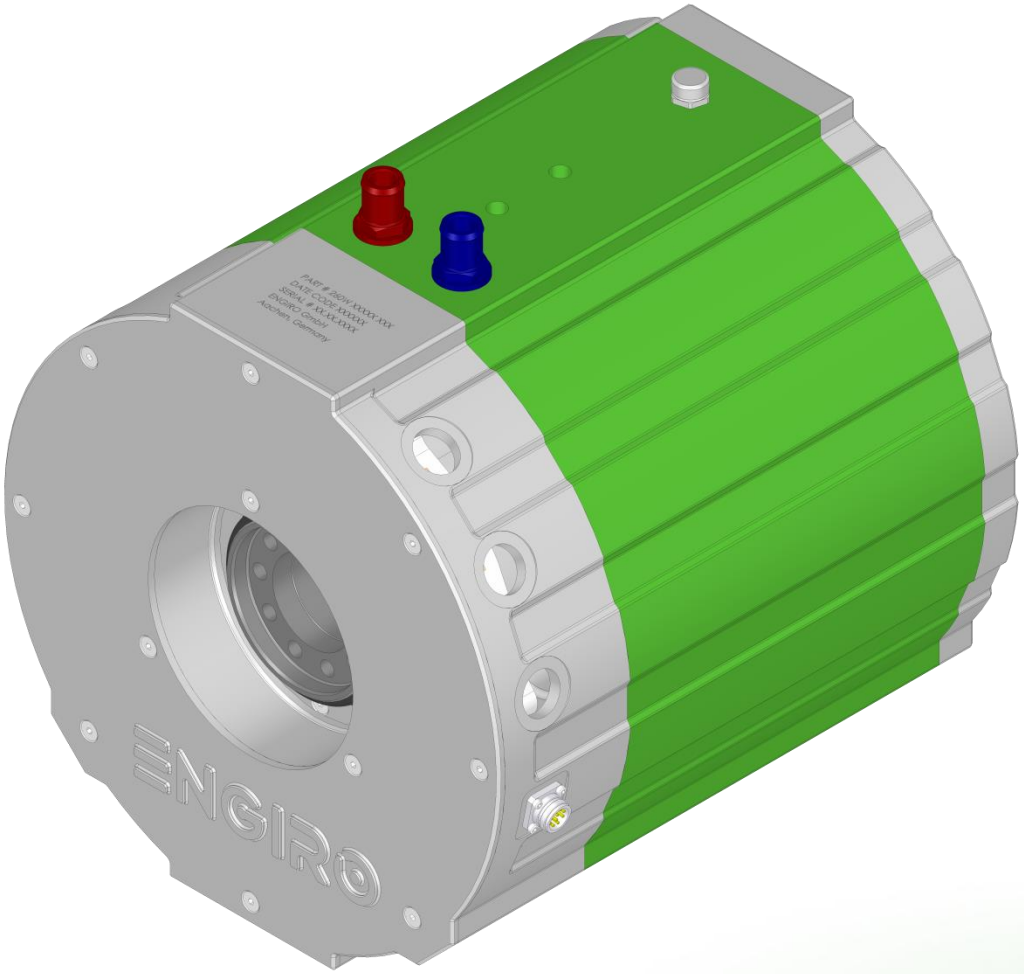
260W-08011-ABC

water-cooled motor/generator with up to 32 kW power



KEY FEATURES

- permanent magnet synchronous machine
- water-cooled
- high peak power for motor applications
- convincing cost-benefit ratio
- recommended voltage range from 48V to 96V
- delivery with controller possible
- Double shaft end with screw flange

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Table of Content

Note:

On September 1st , 2024, **we transferred our ERP systems to SAP**. Due to this change, **we are altering our current part numbers**.

From now on, configurations regarding the rear interface of the motor (e.g., accessible rear shaft end, closed, …) will be specified in a separate part of the motor naming. Therefore, all 260W **D1-flanges will be renamed to S1-flanges** with the according B-side specification.

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**	**B-side interface**
4807274	260W_08011_SFR	S1	F1	R	…S11
4807273	260W_08011_DFR	S1	F1	R	…D01

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.

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Operating Range

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Nominal Operation (S2, 30min, cooling as specified below)			
Torque	T_{nom}	221	Nm
Power	P_{nom}	32	kW
Speed	n_{nom}	1400	rpm
Phase rms-current	I_{nom}	379[1,2)]	A
Battery voltage (DC)	U_{nom}	96	V
Electric frequency	$f_{el,nom}$	116	Hz
Power factor	cos(φ)	0.74	
Maximal Values (S2, 10s, cooling as specified below)			
Torque	T_{max}	444	Nm
Power	P_{max}	57	kW
Phase rms-current	I_{max}	895[2)]	A
Battery voltage (DC)	U_{max}	200	V
Speed	n_{max}	3500	rpm
Electric frequency	$f_{el,\ max}$	291	Hz
Electrical Data			
Number of phases		3	
Number of pole pairs		5	
Maximal efficiency		96	%
T/*I* constant (I<I_{nom})		0.62	Nm/A_{rms}
U/*n* constant (AC) at a temperature of 30°C	rms: 37.0	peak: 57.4	V/(1000rpm)
K_e constant (AC) at a temperature of 30°C	rms: 0.071	peak: 0.11	V/(rad*s^{-1})
Additional Data			
Weight (w/o cables)		68	kg
Rotor moment of inertia		0.067	kg*m²
Protection category		IP6K9K[3)]	
Maximal motor temperature		140	°C
Allowed ambient temperature		-20 … 45[4)]	°C
Cooling (medium, flow rate, inlet temperature, pressure)		water/glycol 50/50,14 l/min, ≤ 45°C, ≤ 0.5 bar	
Temperature monitoring		1 x KTY84-130	
Type approval		CE, EN 60034	
Customs tariff number		8501 5381	
Connectors			
Power terminals		3 x M32 cable gland	
Signal connectors		M16, 10 Pin	
Cooling connectors		2 x ¾" / 19 mm	

[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. / Only applies to variants with closed B-side / 4) other range on request

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Available Type Variants

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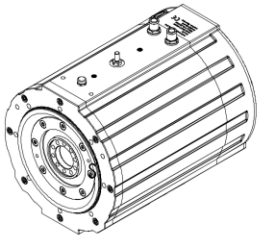
Available Type Variants				
Flange	**Shaft**	**Pos. sensor**	**B-side interface**	**Weight (kg)**
S1 Flange with mounting threads (Ø230 mm centering, Ø250 PCD 8 x M10)	**F1** Hollow shaft with screw flange (Ø90 and Ø50 mm centering, Ø66 mm PCD 10 x M10)	**R** Resolver	**S11** Closed B-side	≈ 68 kg
			D01[1)] Shaft interface on b-side (Ø90 and Ø50 mm centering, Ø66 mm PCD 10x M10)	

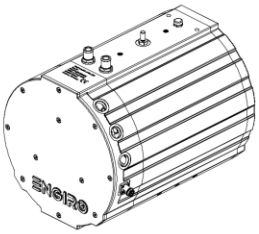
Other individual combinations are also possible on request.

1) Only approved for n ≤ 3500 rpm

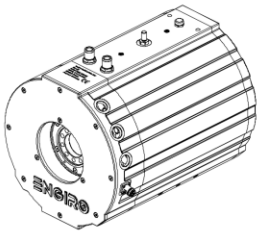
Technical Drawings



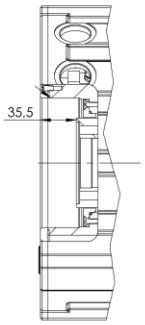
Front view



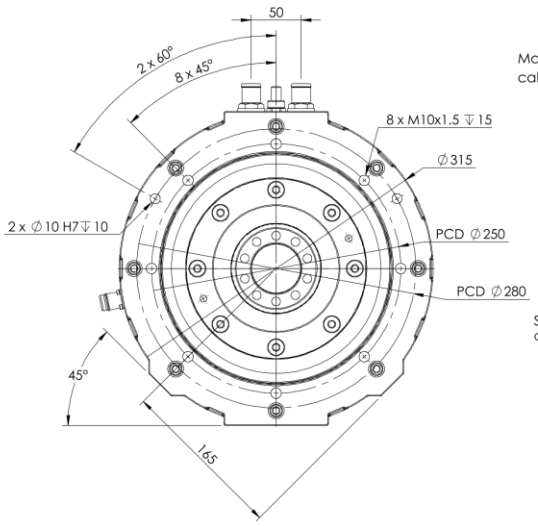
Rear view

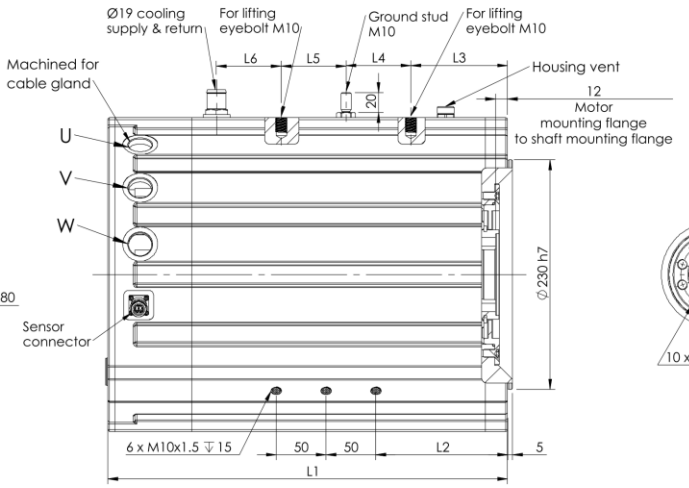


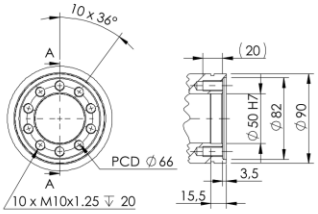
Accessible rear shaft



Rear shaft detail







Shaft end
both sides identical

Model	L1	L2	L3	L4	L5	L6	Moment of Inertia [kg.m²]	Cooling channel volume [L]
260W_080xx	331	97	92	40	30	60	0,0671	1,28
260W_100xx	351	107	97	45	35	65	0,0899	1,38
260W_130xx	381	112	107	55	35	75	0,0944	1,53
260W_150xx	401	132	97	65	65	65	0,1006	1,64

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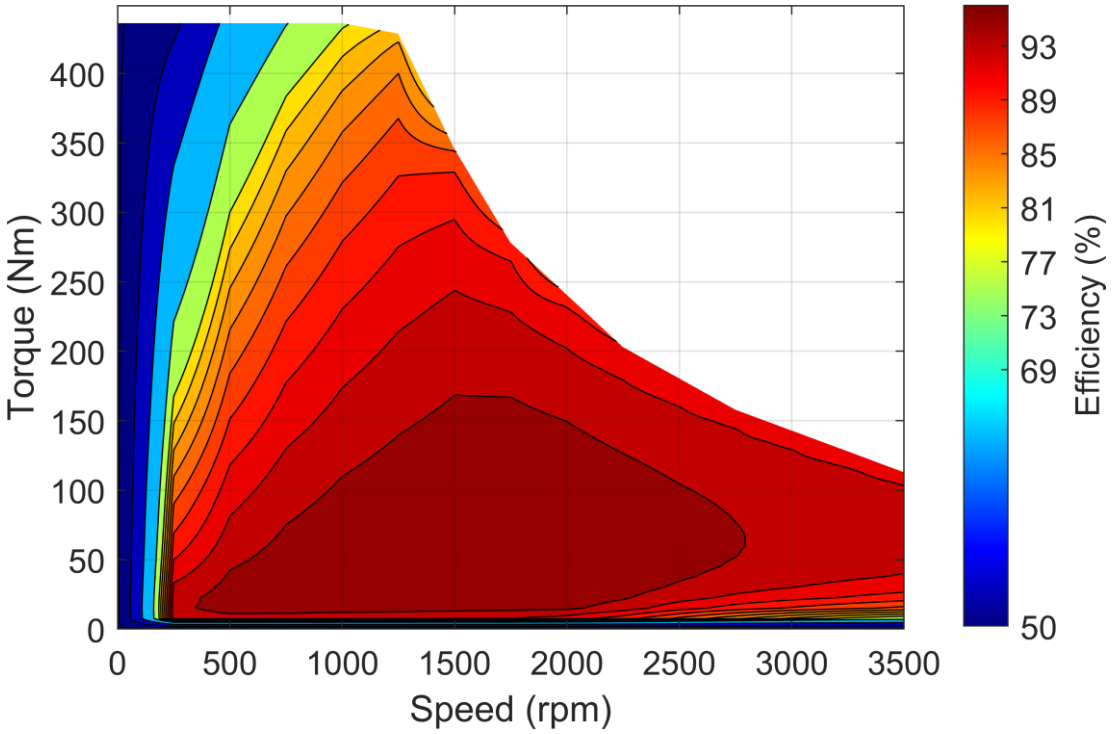
Simulated Efficiency of Motor Application

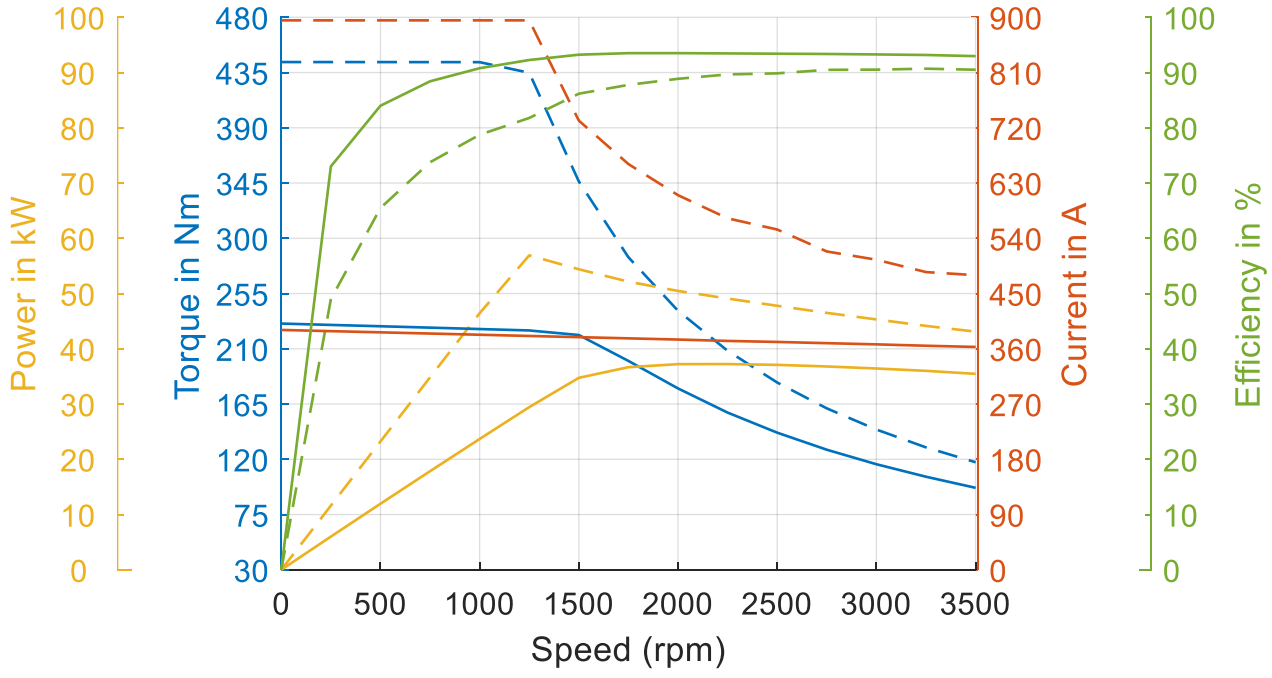
(electric machine only; U_{nom} = 96 V; machine at 140 °C;)



Simulated Characteristic Motor Parameters

U_{nom} = 96 V

solid lines: S2 30min; dashed lines: maximum;



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